

# Appendix A



# APPENDIX A:

## TABLE OF GOALS, OBJECTIVES, AND ACTIONS

### A. SCIENCE BASED DECISION MAKING

**GOAL:** Improve decision-making through use of best available science by state entities and agencies charged with ocean and coastal stewardship. Capitalize on and leverage the scientific community to support management and policy directions.

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#### Issue 1: Improving the Use and Sharing of Scientific and Geospatial Information

**Objective 1.1: Provide leadership to ensure the availability and use of authoritative geospatial information in decision-making.**

##### PROPOSED ACTIONS

- Work with agencies, industry, NGOs, scientists, and other key stakeholders to implement COPA and AB 2125.
- Increase the availability of scientific and geospatial information products and analytical tools useful for informing policy and advancing ecosystem-based management.
- Compile and translate data into accessible information products that can be efficiently applied by coastal managers and decision-makers, as well as prospective permit applicants and the public.
- Continue to provide leadership on state technical working groups, such as the California Coastal and Marine Geospatial Working Group, to promote efficient communication and collaboration.
- Craft memoranda of understanding (MOUs) among partners, agencies, and others that encourage entities to support best practices, data sharing, and collaboration.
- Consider support for agencies to access data and integrate into improved decision-making.
- Identify opportunities for collaborating with California's West Coast regional partners to meet common needs for collecting, managing, and sharing scientific and geospatial information.

#### Issue 2: Identifying High Priority Management Information Needs

**Objective 2.1: Identify high priority management information needs.**

##### PROPOSED ACTIONS

- In partnership with OST and others, determine and prioritize information needs of state agencies.
- Support agency decision making with scientific syntheses that serve their information needs. Provide leadership by writing letters and resolutions, convening workshops and panels, and drawing upon the expertise of the OPC-SAT.

## Issue 3: Developing Strategies—and Building Institutional Capacity—to Incorporate Scientific Information into Management Decisions

**Objective 3.1: Promote and encourage the institutional support, capacity, and leadership role of the OPC-SAT and harness the substantial scientific expertise within California and beyond to inform policy and management decisions.**

### PROPOSED ACTIONS

- Work closely with OST and other partners to ensure that the outcomes of previously funded OPC research projects are effectively communicated to managers and, to the extent possible, meet their needs.
- Draw upon the OPC-SAT's expertise to inform OPC policy recommendations, project proposals, and project deliverables (e.g., studies, reports, etc.).
- Support the OPC-SAT and promote its service to and coordination with other state and local agencies that would benefit from scientific expertise.

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## B. CLIMATE CHANGE

**GOAL:** Prepare for and reduce harmful impacts of climate change on coastal development and infrastructure, public health and safety, the economy, and ecosystems by encouraging adaptation to climate change and engaging decision makers at all levels of government.

## Issue 4: Impacts to Coastal Communities by Storms, Erosion, and Sea-Level Rise

**Objective 4.1: Improve knowledge and understanding of climate change impacts among state, regional, and local decision-makers.**

### PROPOSED ACTIONS

- Facilitate regular, structured updates to the SLR Guidance Document as appropriate.
- Support development and dissemination of analyses that synthesize science and policy information about impacts, vulnerabilities, and adaptation options, possibly including a five-year update to the 2011 statewide vulnerability study coordinated by the California Energy Commission's Public Interest Energy Research (PIER) Program.
- Promote the standardized collection and sharing of monitoring data related to coastal flooding, erosion, sea level rise, storm surges, wave heights, and related impacts.
- Seek to ensure that coastal hazard maps are based upon the latest projections.
- Highlight critical gaps in the available data and the implications of these gaps for decision-making and recommend measures to fill those gaps.

## **Objective 4.2: Encourage the development and adoption of sea-level-rise adaptation strategies.**

### **PROPOSED ACTIONS**

- Identify and recommend emerging “best” and innovative practices, such as model ordinances and habitat protection measures, and promote and support their implementation.
- Work with other entities to develop useful materials to improve adaptation planning and implementation tools and guidance for decision-makers at the local, regional, and state level.
- As appropriate, recommend changes in laws, regulations, guidance documents, and processes that will reduce risks and protect public resources related, for example, to tidal wetlands restoration and shoreline protection.
- As appropriate, directly consult with state agencies to ensure key plans—such as the Statewide Flood Management Planning Program—integrate planning for climate-related coastal flooding.

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## **Issue 5: Ecosystem Impacts of the Changing Climate**

### **Objective 5.1: Provide for improved understanding of how changing climate and ocean chemistry will alter California’s ocean and coastal ecosystems and the benefits they produce.**

#### **PROPOSED ACTIONS**

- Promote and support the development and implementation of monitoring protocols that will provide policy and management relevant information.
- Provide coordination and support to synthesize current scientific understanding of how our marine and coastal ecosystems and ecological assemblages will change in the coming decades as the climate and ocean chemistry changes.

### **Objective 5.2: Based on improved understanding of ocean acidification, identify opportunities to reduce impacts by modifying management approaches.**

#### **PROPOSED ACTIONS**

- Support development of scenario-based analyses of the timing, magnitude, and possible impacts of acidification along the California coastline.
- Work with existing entities such as the California Current Acidification Network (C-CAN) to convene experts from across federal, state, and local government, academia, NGOs, and the private sector to identify practical steps to address acidification impacts on fisheries and ecosystems.
- Promote monitoring, data sharing, and data standardization that will provide information about past and projected acidification trends and its impact on biological resources in a form that is useful for policymaking or management.

## C. SUSTAINABLE FISHERIES AND MARINE ECOSYSTEMS

**GOAL:** Promote the long-term health of marine ecosystems and sustainability of marine fisheries in order to protect California’s living marine resources and the communities that rely upon them.

### Issue 6: Supporting Sustainable Fisheries Management

#### **Objective 6.1: Support science-based approaches to inform fisheries management.**

##### PROPOSED ACTIONS

- Support, encourage, and help implement as appropriate, the findings of the Strategic Vision process for California fish and wildlife.
- Support improved analytical methods and data reporting tools, and promote their integration into fisheries management; support cost-effective approaches for informing fishery management plan development in data-poor environments.
- Develop recommendations for scientific guidelines to help advance ecosystem-based fisheries management and consider adapting management to respond to climate change impacts.
- Explore new and innovative approaches to fisheries management and support their integration based on evaluation of best practices.
- Support studies to integrate ocean-observing data into fisheries management where appropriate.

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#### **Objective 6.2: Advance improved governance of California fisheries.**

##### PROPOSED ACTIONS

- Develop recommendations for removing ambiguities in state fisheries management laws and policies.
- Document lessons learned from community-based fishery management efforts and cooperative research projects between fishermen, scientists, and managers, and support the incorporation of these findings into management practices.
- Develop and administer a Dungeness crab task force to advise DFG’s development of a Dungeness crab trap limits program as specified in Senate Bill 369 (Evans, 2011).

### Issue 7: Sustainable Seafood

#### **Objective 7.1: Promote and provide incentives for sustainable fisheries in California’s coastal communities.**

##### PROPOSED ACTIONS

- Continue to develop and implement California’s voluntary sustainable seafood program, the CSSI.
- Support efforts of relevant state and federal agencies and others, to improve testing and better inform the public about seafood contamination and toxicity issues.

## Issue 8: Leveraging Investments and Realizing Benefits of the State's Marine Protected Areas

**Objective 8.1: Support effective implementation of MPAs consistent with the MLPA through strategic partnerships.**

### PROPOSED ACTIONS

- Support the MPA Monitoring Enterprise to develop and coordinate effective MPA monitoring and deliver timely and meaningful information to support adaptive MPA management.
- Support efforts to increase public awareness of MPAs by participating in a working group with appropriate local, state and federal agencies, tribal governments, private foundations, NGOs, educators, and other relevant entities to facilitate development and implementation of a coordinated public education strategy about MPAs.

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**Objective 8.2: Coordinate MLPA implementation with other ocean management agencies to improve management effectiveness.**

### PROPOSED ACTIONS

- Support coordination of MLPA partners to facilitate communication, collaboration, and cost effective implementation of the MLPA.
- Develop multi-agency guidance that provides clear information about permit and regulatory requirements for activities or impacts in or around MPAs.
- Identify opportunities to reduce pollution impacts to MPAs by working with the SWRCB and other appropriate entities.
- Advance recommendations from OST's Aquatic Invasive Species (AIS) vector risk assessment research to reduce risk of AIS introduction into coastal and marine environments, including MPAs.

## D. COASTAL AND OCEAN IMPACTS FROM LAND

**GOAL:** Reduce the negative impacts of land-based activities on marine ecosystems and the state's coastal and ocean economy.

### Issue 9: Downstream Impacts

**Objective 9.1: Support an integrated approach to water management that minimizes harm to the health of downstream ocean and coastal ecosystems.**

### PROPOSED ACTIONS

- Work with appropriate agencies to ensure that impacts on ocean and coastal resources are adequately addressed and integrated in the state's water management policies and plans. Important near-term opportunities include the 2013 update to the California Water Plan spearheaded by the Department of

Water Resources and the ongoing revision to the California Ocean Plan led by the State Water Resources Control Board.

- Conduct workshops or fund studies to advance management, improve understanding, and identify opportunities to improve policies to reduce land-based impacts to the ocean related to nutrient pollution, HABs, urban runoff, or other issues.
- Support efforts to improve understanding of or reduce the impacts of water pollution on MPAs and other critical ocean resources.

## Issue 10: Marine Debris

**Objective 10.1: Support collaborative efforts and effective partnerships that measurably reduce existing and new marine debris.**

**Objective 10.2: Provide information to support implementation of policy initiatives and other efforts to reduce marine debris and its impacts.**

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### PROPOSED ACTIONS

- Reconvene the Marine Debris Steering Committee to coordinate statewide efforts to reduce trash in the ocean.
- Work with partner agencies and stakeholders to execute the priority actions identified in the OPC's 2008 Implementation Strategy to Reduce and Prevent Ocean Litter.
- Support the SWRCB and other agencies in adopting and implementing a statewide trash policy and other relevant trash regulations.
- Work with the State's Ocean Observing Systems, NOAA, and others to track, identify, and prepare for potential California impacts of the debris field from the 2011 Japanese tsunami.
- Collaborate with a broad array of stakeholders, including industries, to support efforts to reduce marine debris from packaging and other products through product redesign, product stewardship, expanded recycling, and other initiatives.
- Inform statewide policy discussions related to marine debris by conducting workshops, sharing information, and funding studies such as an economic analysis of marine debris and derelict fishing gear.
- Identify lessons learned from local or regional efforts to reduce marine debris including local plastic bag ordinances and trash total maximum daily loads (TMDLs).

## Issue 11: Sediment Management

**Objective 11.1: Improve policies and regulatory practices in ways that restore natural sediment processes, while increasing opportunities for sediment reuse.**

**Objective 11.2: Increase the availability of data and tools that can influence sediment-related planning decisions.**

**Objective 11.3: Further the understanding of coastal impacts resulting from hard structures along the California coast.**

## PROPOSED ACTIONS

- Make available to agencies and other users various existing tools and information for improved planning and decision-making related to sediment disposal, reuse, and sea-level rise. These will include results from completed studies (such as the Tijuana Estuary Sediment Fate and Transport Study) and models that are under development that can potentially change sediment management regulatory standards, or from new studies as appropriate.
- Encourage pilot projects that test the efficacy of alternative regulatory standards, such as the existing “80:20 rule of thumb,” to better protect coastal resources while allowing beneficial sediment reuse.
- Support agencies and other stakeholders in efforts to restore natural sediment processes, such as via dam removal.
- Support the Coastal Commission, San Francisco Bay Conservation and Development Commission, and other relevant agencies and partners in efforts to better understand and quantify impacts (both positive and negative) from shoreline armoring and nourishment projects.

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## E. EXISTING AND EMERGING OCEAN USES

**GOAL:** Ensure that existing and emerging uses of California’s coast and ocean are planned and managed in a manner that balances their social and economic benefits with the long-term protection and sustainability of the state’s marine and coastal resources.

### Issue 12: Desalination

**Objective 12.1: Work with all appropriate entities in updating and revising the California Water Plan to provide statewide and regional context for policy recommendations on desalination, and the California Ocean Plan to better define and address impacts from industrial uses.**

#### PROPOSED ACTIONS

- Coordinate with DWR, SWRCB, the Coastal Commission and other agencies and entities that have a role in setting policy and guidelines for desalination, and support studies that will be useful in the California Water Plan Update and California Ocean Plan update.

**Objective 12.2: Work with relevant state agencies to develop and help implement policies that are consistent with OPC resolutions related to existing and emerging uses, such as development of a statewide desalination policy that addresses marine intakes, in-plant dilution, and brine disposal.**

#### PROPOSED ACTIONS

- Coordinate agencies and entities that have a role in setting policy, guidelines, or regulations for desalination, including the Coastal Commission and others, to assist the SWRCB in better-defining impacts from desalination facilities, and identifying criteria related to siting, design, appropriate technology, feasibility, and mitigation.

- Seek review of existing information about alternative intake system designs that can minimize damage to marine life.
- Work with the SWRCB, the Coastal Commission, and other appropriate entities to assess the effectiveness of interim mitigation projects proposed through the OTC policy process to address impacts to the marine environment from OTC intake structures.

## Issue 13: Marine Renewable Energy

**Objective 13.1: Anticipate and address regulatory issues, policy development, and information needs associated with the development of marine renewable energy through coordination activities and other means.**

### PROPOSED ACTIONS

- With the California Marine Renewable Energy Working Group, lead the development of statewide guidance for pilot and test hydrokinetic developers.
- Continue to implement the MOU between California and FERC, and facilitate other coordination strategies with the Bureau of Ocean Energy Management (BOEM) and other federal entities, as appropriate to ensure the development and application of clear criteria and standards related to siting, design, appropriate technology, feasibility, and mitigation.
- Improve access to information for marine renewable energy siting, planning, and regulatory processes.

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## Issue 14: Offshore Aquaculture

**Objective 14.1: Anticipate and assess the impacts of emerging aquaculture technologies on the health of California's coast and oceans and encourage science-based decision-making.**

### PROPOSED ACTIONS

- The OPC will continue to work with the California Department of Fish and Game toward developing an aquaculture PEIR that provides a forward-looking, scientifically-robust framework to regulate current and future ocean aquaculture facilities.
- Coordinate with state agencies regarding emerging aquaculture operations in adjacent federal waters to promote sustainable aquaculture operations consistent with the OPC's mandate to protect California's ocean ecosystems.
- Support the completion of the Guide to Aquaculture Registration, Permits, Licenses, Laws, and Regulations in California to facilitate coordination of permit review.
- Articulate state funding and research needs to federal agencies, help position California to receive federal funds should they become available, and promote research that addresses potential issues associated with expansion of marine aquaculture in adjacent federal waters.