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# LESSONS FROM THE CALIFORNIA MARINE LIFE PROTECTION ACT INITIATIVE

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## Background

In 1999, the California legislature passed the Marine Life Protection Act (MLPA), a historic law calling for the establishment of a statewide, science-based network of marine protected areas (MPAs), the first such effort in the United States. Early attempts to implement the law stalled as California struggled with budget limitations and vocal opposition from some fishing interests. In 2004, with significant financial support from philanthropic donors, the nonprofit organization Resources Legacy Fund (RLF) signed a formal agreement with the State of California to advance a phased strategy for carrying out the law called the “Marine Life Protection Act Initiative” (MLPA Initiative).

From 2004-2012, the MLPA Initiative implemented an extensive, phased public MPA planning process, creating stakeholder groups in four coastal regions; a “blue ribbon” task force of political, business, legal, and academic leaders to provide policy guidance; and regional science advisory teams to provide

scientific design guidelines and evaluate proposed MPA networks. Over an eight-year planning effort, meetings, public workshops, and hearings were held throughout the state to collect public input and expert opinion on a range of MPA alternatives.

In June 2012, the State of California formally adopted the final set of MPAs, completing a statewide MPA network covering almost 17 percent of state waters, 9.5 percent in no-take protection. California’s MPA network includes all marine and estuarine habitat types in the state, from sandy beaches and intertidal areas to deep water canyons and islands.

California has since committed to and funded a rigorous, partnership-based MPA management program focused on community stewardship and education, scientific monitoring, and enforcement. California’s experience implementing the Marine Life Protection Act provides useful lessons that can help guide MPA network planning efforts in other regions worldwide. This document summarizes some of the critical factors that contributed to California’s success.

# Establishing and Maintaining a Strong Legal or Political Mandate

While there is international scientific consensus that MPAs provide important conservation benefits, in practice, designing and establishing protected areas is typically challenging. Planning MPAs or MPA networks often results in vocal opposition from fishing interests concerned about potential displacement and short-term economic impacts. Committed political leadership is needed to overcome initial opposition and recognize and elevate the long-term benefits of MPAs to ecosystems, the economy, and coastal communities.

## CALIFORNIA'S APPROACH

State legislators passed the MLPA, creating a strong legal mandate. Key state resources management agencies worked with RLF and others to create a clear, time bounded process under the MLPA Initiative to conduct MPA planning based on science and community input. A legal mandate and defined process helped to shift initial opposition into constructive engagement that was incorporated into MPA network design such as by avoiding siting of MPAs near harbors or important fishing access.

## LESSONS LEARNED

The mandate represented by the law itself, and consistent, high-level political support from top state officials including the Governor and Secretary of Natural Resources were critical to ensuring that MPA planning remained a state priority over the course of the eight-year planning process and stayed on track during periods when opposition was highest, legal challenges were filed, and state funding was constrained.

# STATUTORY GOALS OF CALIFORNIA'S MARINE LIFE PROTECTION ACT:

1. Protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.
2. Help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.
3. Improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and manage these uses in a manner consistent with protecting biodiversity.
4. Protect marine natural heritage, including protection of representative and unique marine life habitats in California waters for their intrinsic values.
5. Ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and that they are based on sound scientific guidelines.
6. Ensure the state's MPAs are designed and managed as a network, to the extent possible.

# The Role of Public-Private Partnerships

A legal or political mandate to create an MPA network is an important first step. However, in many cases, the agencies responsible for implementing MPAs may not have sufficient staffing, expertise, and funding to support a science-based process of designing MPAs and the meaningful engagement of stakeholders, whose support and buy-in is critical for effective MPA implementation. Partnering with philanthropic and nonprofit organizations can help to support more robust MPA planning than could be achieved by the government alone.

## CALIFORNIA'S APPROACH

California leaders recognized that the traditional state rule-making process was inadequate to the multi-faceted task of designing and evaluating a statewide MPA network. A robust preparatory process, supported in part by philanthropic funds, helped to develop MPA alternatives for consideration as a precursor to the state's formal decision-making process.

Under the MLPA Initiative, a series of formal memoranda of understanding (MOU) were executed between the state and RLF clearly defining the roles and responsibilities of the public and private partners and establishing milestones and end dates for specific stages of the MPA planning process. In the end, the public planning effort took eight years and generated significant financial investment (approximately \$19.5 million in private charitable foundation funds and \$18.5 million in public funds).

This level of philanthropic investment could not have been secured without a formal commitment by the state to completing the MPA designation effort (contained in the MOUs). The philanthropic funds were used to support external expertise in scientific and policy analysis, facilitation, public information and education, technical and mapping support, stakeholder engagement via travel grants and stipends, and many other needs.

Established in 2000, Resources Legacy Fund is a nonprofit organization that works closely with philanthropists to achieve significant conservation of land, ocean, and water resources, climate change resilience, and conservation funding and policies. RLF has experience working with federal, state, and local governments on conservation focused public-private partnerships. RLF staff has extensive legal, scientific, and financial expertise in managing complex projects involving multiple grants and contracts. This experience made RLF well suited to managing the MLPA Initiative.

The MLPA Initiative relied on three specialized volunteer advisory groups with clear and distinct roles relative to MPA planning as well as a support staff team made up of state employees, contractors, and other external experts.

- **Regional stakeholder groups**—Responsible for crafting MPA proposals and alternatives and served as link to broader public. These groups included fishermen, conservationists, business interests, educators, and others.
- **Science advisory teams**—Ensured that stakeholder designs were informed by scientific guidelines and evaluated for ecological benefit. These groups were made up of scientists from academic institutions and agencies.
- **Blue Ribbon Task Force**—Provided oversight, addressed difficult policy issues, and recommended a preferred MPA network alternative for each region to the state of California. This group included high level former elected officials and other leaders from the business, education, tribal, and non-profit sectors.

The California Department of Fish and Wildlife is responsible for managing MPAs through enforcement; monitoring, research, and evaluation; and outreach and education. The Department also played a central role in the MPA planning process, providing biological data and expertise to inform MPA decision-making. The California Fish and Game Commission, a five member body appointed by the Governor, is the entity responsible for adopting all fish and wildlife regulations in the state. The Commission formally approved the final MPA network design.

## LESSONS LEARNED

Private philanthropy helped support a much higher level of stakeholder input and scientific engagement in California’s MPA planning process than the government itself could have ensured. While philanthropic support helped support a robust planning process, the state agencies charged with marine resource management retained their regulatory, statutory, and constitutional authority under the MLPA Initiative. The California Fish and Game Commission had the final MPA decision-making role, ensuring the state’s objectives were considered and upholding the legitimacy of the public process.

## Scientific and Stakeholder Input

Without clear science guidelines and scientific evaluation of MPA design, inevitable political pressures are likely to result in MPAs that are too small, too remote, or too permissive to meaningfully advance conservation goals. MPA planning that does not incorporate public and stakeholder input typically results in conflict, and MPA proposals that do not incorporate community knowledge and local needs and values can drive resistance and non-compliance.

## CALIFORNIA’S APPROACH

The Marine Life Protection Act was adopted after analysis demonstrated that state’s existing MPAs, which has been created piecemeal over several decades, were too small and too permissive in their regulations to provide effective conservation benefits. The law required MPA planning in California to be based on the “best readily available science” and to incorporate public input. Regional scientific advisory teams helped the state to define basic scientific requirements for MPA network design, including a requirement to include no-take areas covering all representative habitats, and evaluated economic and ecological factors.

The MLPA Initiative used a wide range of tools and techniques to ensure a public and transparent process and incorporate stakeholder input including: assigning MPA design to regional teams of stakeholders;

conducting all key MPA business in public meetings, most of which were webcast live on the internet; hosting regular public outreach workshops; and posting meeting materials on the web. A sophisticated online mapping visualization tool was developed to help scientists and stakeholders design and evaluate MPAs. In addition, the MLPA Initiative collected extensive ecological and socio-economic data and made it available to the those engaged in the planning process. Information related to cultural and ceremonial values of native American tribes was also incorporated into MPA regulations in some areas.

## LESSONS LEARNED

Scale matters. To facilitate stakeholder and scientific input into MPA design, California’s 1,100-mile coastline was divided into four regions based on biogeography. This regional approach took advantage of local knowledge and interest, enabled more focused use of public and private capacity, and prevented the state and its partners from being overwhelmed by the scale of the planning required. Notably, two earlier efforts (between 1999 and 2003) that attempted to implement the MLPA statewide all at once were both unsuccessful due largely to the cost and difficulty of planning over a such a large area.



Photo: Anna Talken

# Networked MPAs are More Effective

Scientific research demonstrates that ecological benefits can be maximized by creating MPAs that are close enough together to act as a network where species that move out of one MPA may end up being protected in another. MPAs designed as a network provide more conservation value than a set of individual, unconnected MPAs. Furthermore, in many areas of the coastal ocean, networks of smaller MPAs, particularly no-take MPAs, can provide similar regional benefits as much larger MPAs while having less impact on fishing activities.

## CALIFORNIA'S APPROACH

Prior to the adoption of the Marine Life Protection Act, the state of California had established many MPAs over several decades. Many of these areas, however, were too small and/or too permissive to be effective. A comprehensive study of the state's more than 100 MPAs published in 1997 found that nearly all had been designated in an ad hoc fashion, lacked clear goals and objectives, and were providing little or no conservation benefit.

## LESSONS LEARNED

Under the MLPA Initiative, California created MPAs in regional networks designed to work synergistically together, rather than discretely. This approach recognized that many fishermen fish regionally and for multiple species, and made it possible to spread potential ecological and economic trade-offs involved in the design of individual MPAs over large areas, creating broader acceptance for a significant network of MPAs overall.

While the 2,197 km<sup>2</sup> of oceans waters contained in California's MPA network is small compared to the many large open-ocean MPAs created in recent years, they support some of the richest biodiversity in the world and also support intense human activity and related threats. Identifying important ecological areas to protect and resolving the many conflicts between different and competing interests took time. Planning networks of MPAs, rather than

# SCIENTIFIC GUIDELINES FOR DESIGNING CALIFORNIA MPAS:

1. Every "key" marine habitat should be represented in the MPA network, including: rocky shores, coastal marsh, tidal flats, estuarine waters, eelgrass, kelp, pinnacles, upwelling centers, etc.
2. MPAs should extend from the intertidal zone to deep waters offshore.
3. The minimum recommended area of an MPA is 14.5-30 square kilometers; the preferred size is 30-60 square kilometers. The alongshore span should be a minimum of 5-9.5 kilometers, preferably 9.5-20 kilometers
4. MPAs should be placed no further than 50-100 kilometers from each other to facilitate dispersal and connectedness among MPAs in a network.
5. Key marine habitats should be replicated in multiple MPAs across large environmental and geographic gradients.
6. Placement of MPAs should take into account local resource use and stakeholder activities.
7. Placement of MPAs should take into account the adjacent terrestrial environment and associated human activities.
8. The design of an MPA network should account for the need to evaluate and monitor biological changes within MPAs.

individual MPAs, requires patience, scientific data, and robust process to engage stakeholder input, but ultimately ensures a better return on planning cost and effort.

## Implementation is Key to Design

Post-planning implementation was a critical consideration in designing California's MPA network. Effective implementation was prioritized through planning guidelines that favored locations near terrestrial protected areas as well as educational and research institutions. In addition, the state assessed the feasibility of proposed MPAs in terms of enforceability and other management concerns, and recommended adjustments to proposed MPAs to improve their design relative to such factors.

### CALIFORNIA'S APPROACH

The California Ocean Protection Council coordinates activities of ocean-related agencies and other partners to improve the effectiveness of state efforts to protect ocean resources including MPAs. The regional engagement of a wide range of local stakeholders, agencies, and other organizations in MPA design helped bring about formation of county-based coalitions after MPA designation took place. These coalitions of public and private groups continue to partner with the state on a variety of MPA programs such as outreach, youth activities, and community volunteer based monitoring programs. This localized, public engagement has created important long-term buy-in and regional expertise that can support the state's MPA program at little or no cost.

Monitoring is critical to MPA success. In California, baseline data collection and ongoing scientific monitoring has been supported by a range of state and federal grants and by targeted foundation funding. Support for specific monitoring activities is guided by a comprehensive, statewide plan developed in collaboration with the scientific community and stakeholders and will contribute to a formal evaluation of the MPA network planned for

2022. Enforcement of MPA and fisheries regulations has been enhanced through the use of technology, additional state funding, and collaboration with local enforcement agencies.

### LESSONS LEARNED

The durability of MPAs relies on both continued state investment and local stewardship. Investment in public engagement can create long-term relationships and coalitions that ensure MPAs are implemented and protected into the future. California's MPA network now has champions across the state from academic, nonprofit, public, private, and business sectors that are all invested in being part of successful MLPA implementation.



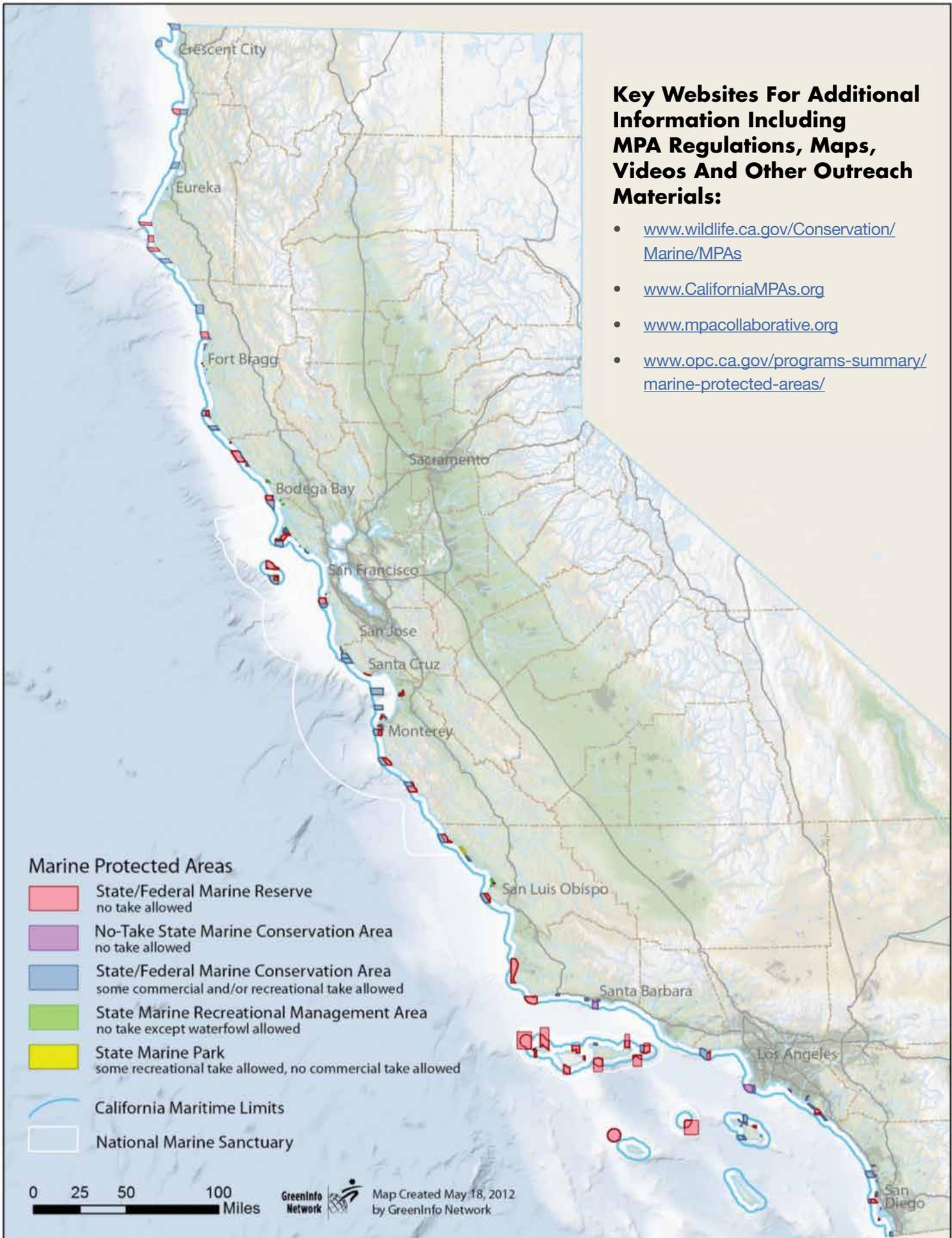
Photo: Steve Lonhart NOAA MBNMS



Photo: Chad King NOAA MBNMS

**Key Websites For Additional Information Including MPA Regulations, Maps, Videos And Other Outreach Materials:**

- [www.wildlife.ca.gov/Conservation/Marine/MPAs](http://www.wildlife.ca.gov/Conservation/Marine/MPAs)
- [www.CaliforniaMPAs.org](http://www.CaliforniaMPAs.org)
- [www.mpacollaborative.org](http://www.mpacollaborative.org)
- [www.opc.ca.gov/programs-summary/marine-protected-areas/](http://www.opc.ca.gov/programs-summary/marine-protected-areas/)



# Additional resources related to the MLPA Initiative

## SCIENTIFIC PUBLICATIONS:

- Gleason, M., et al. *Designing a network of marine protected areas in California: achievements, costs, lessons learned, and challenges ahead*. *Ocean & Coastal Management* 74: 90-101 (2013). Note this article is part of a special issue dedicated to California's Marine Protected Area Network Planning Process edited by Mary Gleason, John Kirlin, and Evan Fox. *Ocean & Coastal Management* 74: 1-102 (2013).
- Caselle, J.E. et al. *Recovery trajectories of kelp forest animals are rapid yet spatially variable across a network of temperate marine protected areas*. *Scientific Reports* 5: 14102 (2015).
- Gaines, S. et al. *Designing marine reserve networks for both conservation and fisheries management*. *Proceedings of the National Academy of Sciences* 107 (43) 18286-18293 (2010).
- Matthew S. Merrifield, et al. *MarineMap: A Web-based Platform for Collaborative Marine Protected Area Planning*. *Ocean & Coastal Management* 67 (2013).

## STATE OF CALIFORNIA MPA NETWORK MANAGEMENT DOCUMENTS:

- California Department of Fish and Wildlife. *California Marine Life Protection Act Master Plan for Marine Protected Areas*. Adopted by the California Fish and Game Commission on August 24, 2016. [www.wildlife.ca.gov/Conservation/Marine/MPAs/Master-Plan](http://www.wildlife.ca.gov/Conservation/Marine/MPAs/Master-Plan)
- California Department of Fish and Wildlife and California Ocean Protection Council. *Marine Protected Area Monitoring Action Plan*. October 2018. [www.wildlife.ca.gov/Conservation/Marine/MPAs/Management/monitoring/action-plan](http://www.wildlife.ca.gov/Conservation/Marine/MPAs/Management/monitoring/action-plan)
- Ocean Protection Council. *The California Collaborative Approach: Marine Protected Areas Partnership Plan* (2014). [www.opc.ca.gov/webmaster/ftp/pdf/agenda\\_items/20141202/Item5-master-final-partnership-plan.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20141202/Item5-master-final-partnership-plan.pdf)



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