

Appendix L. Marine Protected Areas Enforcement Plan Framework

Enforcement Plan Challenges

Department of Fish and Game officers face many unique challenges as they enforce the laws relating to fish, wildlife, and habitat within the State and its offshore waters. The State of California includes 159,000 square miles of land area more than 1,100 miles of coastline, and more than 220,000 square miles of combined state and federal ocean waters. The State has more than 30,000 miles of rivers and streams, 4,800 lakes and reservoirs, and 80 major rivers.

California's habitat and wildlife diversity is unequaled by any other state. The state has three of the four North American Desert habitats and scores of high mountain peaks. California is home to more than 1,000 native fish and wildlife species and more than 6,300 native plant species. Of these, approximately 360 species are considered threatened or endangered.

The State's population is 32 million and growing. The Department issues nearly three million licenses and permits each year and commercial fisheries land in excess of 300 million pounds of fish and invertebrates annually. California's marine and freshwater recreational fisheries are a prime draw for both residents and visitors.

Enforcement Plan Options

Effective enforcement of Marine Protected Areas is an essential component to allow these areas to reach their potential in protecting and preserving the marine resources. The enforcement of MPAs can be difficult and time consuming even for highly trained personnel. Natural barriers to enforcement (such as placement of MPAs in remote or hard to access areas) must be considered and accounted for in the enforcement plan.

Remote observation techniques such as aircraft patrols, radar-linked global positioning system, vessel monitoring (transponders) for commercial vessels, and remote cameras are some of the options that could be part of any final plan. These options, however, still require some patrol effort to contact individuals or investigate possible violations.

Education and outreach is an essential part of the enforcement plan. One of the primary objectives in the enforcement action plan is to educate the public about the regulations, allowed fisheries (if any), and the marine environment within the MPAs. This can be accomplished utilizing school programs, workgroups, public involvement forums, printed materials, signs, displays, and public service announcements.

The first step in developing a final plan will be to evaluate the number and types of access points into the area. The existing level of use and potential for both intentional and unintentional infractions will be considered. The total number of MPAs and their proximity to one another will impact the total number of officers needed for patrol. Finally, the level and type of enforcement will depend on the goals and objectives of the areas.

Option 1 - Existing Enforcement

Option 1 would utilize the existing Department resources (personnel, equipment, and budget) to patrol MPAs. This option would allow minimum enforcement efforts directed at the MPAs, and would not give adequate protection to a new, more comprehensive, network of MPAs. Using existing resources requires that some of the existing workload be eliminated while other tasks would receive minimal time in order to accomplish the additional MPA mandates. This option is neither feasible nor desirable. The legislated goals of the MLPA acknowledge the need for additional Department resources. Given the increased emphasis on MPAs established by the MLPA as well as the act's requirement that MPAs function to the extent possible as a network, the existing Department resources are not adequate for enforcement.

Option 2 - Additional Enforcement

Option 2 would utilize additional Department resources (personnel, equipment, and budget) to patrol the new MPA network. Additional resources would allow for wardens with an emphasis on MPA enforcement to patrol the MPAs and adjacent areas to achieve the desired level of enforcement and protection as required by the MLPA.

Currently, the number and array of MPAs that will be recommended for each region is not known. The level of desired protection for individual areas (e.g., no take or limited take) is also not known. Final decisions on a specific enforcement plan will be incorporated in the management plan recommendations for each regional MPA process. The following discussion includes the framework for that plan and specific considerations for the level of enforcement necessary.

The plan assumes enforcement activities of eight hours a day, five days a week (randomized for coverage on a variety of days and times). This would give basic enforcement and average protection to the MPAs. The more areas included and/or the farther apart areas are, the greater the required enforcement staff to provide adequate protection will be.

To achieve a minimum amount of coverage for a comprehensive set of MPAs, one squad of wardens consisting of four wardens and one lieutenant would be required in each region. While this squad would operate within the overall Department enforcement strategy and patrol both marine and inland areas, their primary objective would be enhanced MPA patrol.

In the Central Coast process, if the MPAs are spread across the entire 190 mile coastline the ability for one squad to thoroughly patrol the area would be reduced and a second squad would be recommended. One squad would cover the area from Pigeon Point to Big Sur, and the second squad would cover the area from Big Sur to Point Conception. These squads would work in conjunction with existing enforcement personnel to provide what might be an acceptable level of enforcement and protection to the MPAs.

Two squads of wardens would put a total of ten new enforcement personnel in the field patrolling the 190-mile stretch covered by this plan. These ten enforcement personnel would be integrated into the enforcement framework already in place in the central coast area and provide additional support for the increased emphasis on MPAs. They would have access to

other DFG personnel to assist as needed, and would have access DFG boats and aircraft to assist as needed with enforcement of MPAs.

Cost of Additional Enforcement Assets

Approximate Enforcement Start up Costs (Budget Year 1)

Coverage	1 Squad (4 Wdns, 1 Lt)	2 Squads (8 Wdns, 2 Lts)
24 hours/7 days a week	\$ 4,250,000	\$ 8,500,000
16 hours/7 days a week	\$ 3,200,000	\$ 6,400,000
8 hours/5 days a week	\$ 1,500,000	\$ 3,000,000

The onetime start up costs include items like vehicles, vessels, radios, peace officer protective equipment, training, and related equipment.

Approximate Enforcement Yearly Costs*

Coverage	1 Squad (4 Wardens, 1 Lt)	2 Squads (8 Wardens, 2 Lts)
24 hours/7 days a week	\$2,000,000	\$ 4,000,000
16 hours/7 days a week	\$ 1,500,000	\$ 3,000,000
8 hours/5 days a week	\$ 500,000	\$ 1,000,000

The yearly costs include salaries and overhead as well as ongoing training.

* At intervals of between 5 and 10 years certain equipment would need to be replaced as well as new wardens hired and trained, increasing these annual costs.

Timeline for Implementation

If new enforcement staff are approved in the budgetary process, a minimum of one year is required to complete the hiring process and training to bring new wardens into the field. If State hiring lists are not pre-established, this time frame can be increased substantially. The ability to hire and train new staff is also dependent on State budget and hiring constraints. In any given area preliminary enforcement efforts will have to rely on existing enforcement staff with paid overtime or interagency agreements on a reimbursement basis. Final enforcement plans should take this into account and recommendations for implementation dates for MPA proposals should include this consideration.