

Section 5. Enforcement

The MLPA identified the lack of enforcement as one of the chief deficiencies in California's existing MPAs (FGC Section 2851[a]). To remedy this deficiency, the MLPA requires that the Marine Life Protection Program provide for adequate enforcement [FGC Section 2853(b)(5)] and include enforcement measures for all MPAs in the system [FGC Section 2853(c)(2)].

This section of the master plan framework addresses these requirements by responding to two requirements for the master plan identified at FGC Section 2856(a)(2):

- (I) Recommendations for management and enforcement measures for the preferred alternative that apply system wide or to specific types of sites and that would achieve the goals of this chapter.
- (J) Recommendations for improving the effectiveness of enforcement practices, including, to the extent practicable, the increased use of advanced technology surveillance systems.

Any new, modified or existing marine protected areas will only be effective if their regulations are widely accepted, understood and adhered to by the public. To that end, the first requirement of effective enforcement of restrictions in the network of marine protected areas is solicit the input and participation of stakeholders in the first stages of MPA design. Where possible, it will also be important to enlist user communities in protecting the designated protected areas. In some contexts, such as specialized fisheries or recreational fishermen allowed access to marine conservation areas and/or parks, or non-consumptive users allowed access to marine reserves, enlisting those users in enforcement of their protected status will be important.

The Department of Fish and Game's enforcement staff is charged with enforcing marine resource management laws and regulations over an area encompassing approximately 1,100 miles of coastline and out to sea for 200 miles. The department currently deploys 50 law enforcement officers statewide (still well below the staffing level of the 1980's) who focus on the marine environment. Of these 50 officers, 21 are dedicated to on-water patrols utilizing patrol vessels as enforcement platforms. The department has two 65-foot patrol vessels, five new 54-foot vessels and two 40-foot vessels, all of which can patrol wide areas including offshore waters and islands. These large patrol vessels are equipped with 18-foot rigid hull inflatable skiffs. The department also has 21 skiffs (13-32 feet) for local patrols. Patrol vessels and skiffs are strategically stationed at various ports and other locations to provide the most effective coverage of California's marine waters. The department also maintains patrol aircraft that are available when needed to assist with marine enforcement activities.

The department shares jurisdiction for the Magnuson Fishery Conservation and Management Act, the Endangered Species Act, and the Lacey Act, all of which apply to resources residing within or transiting through the MPAs. How effectively these laws are enforced within and around the MPAs will affect the success of MPA management in conserving and protecting the resources. The department's enforcement program also works closely with the enforcement programs of a number of other governmental agencies (California Department of Parks and Recreation, NOAA Fisheries, National Marine Sanctuary Program, National Park Service, U.S.

Coast Guard, local harbor patrols and local police and sheriffs departments) on matters of mutual enforcement interest. During the regional MPA planning process the enforcement resources available in that area and any gaps or limitations to effective enforcement in that area will be identified. This will not only make planning for MPAs in the region more realistic, but also provide a basis for seeking more enforcement resources, if needed.

Enforcement of current marine protected area regulations is one of many responsibilities for the department's enforcement program. A new system of marine protected areas is likely to require additional enforcement effort; however, it is uncertain whether significant new sources of funding, personnel and equipment will be available to provide dedicated enforcement for those areas. If additional resources become available, they will most likely provide for increased attention to marine protected areas as part of the overall marine resources enforcement effort.

Marine Protected Area Enforcement Requirements

Appendix L is a draft enforcement action plan, which is intended to be part of the MPA planning process. Much of the information within the plan is based on the Department of Fish and Game's experience with its enforcement plan at the Channel Islands Marine Protected Area Network and from existing department and National Marine Sanctuary law enforcement plans.

A particular enforcement strategy's priority level within the enforcement action plan and within the master plan, will be based on its relative importance, feasibility, available funding, costs, personnel requirements, timing, etc. The action plan currently only contains two strategies: Additional enforcement staffing and expanding interagency agreements. Overall, these strategies will have a low level of implementation in the first year after establishing the central coast marine protected area and will expand with increased time and funding.

The law enforcement program is an essential component of resource protection within MPAs. A goal of MPA enforcement is to prevent adverse resource impacts. This preventive enforcement is best achieved by maintaining sufficient patrol presence within the MPAs to deter violations of the law. Successful enforcement relies on frequent on-water patrols and routine vessel boarding inspections. On-water patrols will ensure that users of the MPAs are familiar with the regulations and deter willful or inadvertent violations and/or emergencies.

Officers working within the MPAs should practice *interpretive enforcement*. This style of enforcement seeks voluntary compliance primarily through education of users. Interpretive law enforcement emphasizes informing the public through educational messages, literature and other programs about responsible behavior, before the resources in the MPAs are adversely impacted. For example, officers working within MPAs talk with users and distribute brochures in the field. These contacts allow officers to make direct, informative encounters with visitors, while conducting routine enforcement activity. Officers should also conduct interpretive programs throughout the local communities ((see the proposed education and outreach action plan in Appendix L).

Federal, state and local agencies are increasingly joining forces and targeting whole coastal ecosystems including rivers, bays, estuaries and coastlines for comprehensive management and enforcement actions. Federal, state and local laws provide government with a variety of tools to protect coastal resources. In so doing, these laws strengthen law enforcement capabilities by allowing agencies to build on each other's expertise and share physical resources. This example can readily be seen in the cooperative enforcement efforts in the Channel Island Marine Protected Areas Network. In addition, local residents and frequent MPA users can help by detecting and reporting various violations and groundings. Table 3 lists the various assets available for enforcement of natural resource laws and regulations in California.

Table 3. Natural Resource Enforcement Assets in California

Agency	Assets and Activities
<i>U.S. Coast Guard</i>	The U.S. Coast Guard has a primary role in protecting natural resources under the Oil Pollution Act of 1990, the Rivers and Harbors Act of 1899, and the Marine Plastic Pollution and Control Act. The U.S. Coast Guard works directly with the Department of Fish and Game's Office of Spill Prevention and Response (OSPR) on oil pollution incidents.
<i>U.S. Fish and Wildlife Service</i>	U.S. Fish and Wildlife Service agents and officers have the statutory authority to enforce the Marine Mammal Protection Act, Endangered Species Act and Lacey Act.
<i>NOAA Fisheries</i>	The Department of Fish and Game has a Joint Enforcement Agreement with NOAA Fisheries. NOAA Fisheries provides funding to the state to enforce federal regulations in state waters, federal offshore waters and in bays, estuaries, rivers and streams.
<i>National Marine Sanctuaries</i>	Currently, there are several sanctuary officers within the central coast area, patrolling both the Monterey Bay and the Channel Islands National Marine sanctuaries. Boats and aircraft available for law enforcement patrols. Law enforcement agreements coordinate enforcement efforts, share physical resources, cross deputize state officers and provide federal funds for state operations.
<i>National Park Service</i>	The National Park Service has enforcement personnel stationed at various federal parks along the California coast and at some of the off-shore islands.
<i>California Department of Fish and Game</i>	Seven large patrol boats and over twenty smaller craft dedicated to marine patrol efforts. One large patrol boat dedicated to the Channel Islands Marine Protected Areas law enforcement patrols. Two other large patrol boats are within the central coast area.
<i>California Department of Parks and Recreation</i>	The Department of Parks and Recreation has law enforcement personnel stationed in park units throughout California, many with on water patrol capability. These officers have the authority to enforce Fish and Game statutes.
<i>Harbor Police, City Police, and Sheriffs</i>	Local harbor districts, sheriff and police departments often employ peace officers to conduct on-water patrols within their jurisdictions.

Enforcement Program Objectives

Agreements/cooperative efforts

- Strengthen and develop partnerships with other agencies
- Develop partnerships with federal, state and local agencies in order to provide strong enforcement presence throughout the MPAs
- Maintain an active relationship with federal, state and local enforcement agencies to identify areas of mutual concern, and to develop cooperative responses to enforcement issues
- Develop and maintain an active relationship with stakeholders
- Explore cooperative relationships with stakeholders
- Enter into memoranda of understanding, cooperative enforcement agreements and joint operations plans with other enforcement agencies
- Facilitate communication among enforcement agencies to avoid duplication of effort
- Promote cooperation, standardization of gear, and coordination of limited resources such as vessels, radios, aircraft, etc.
- Promote training and cross deputization among enforcement agencies

Community involvement

- Encourage public involvement by encouraging site-specific interpretive patrols by volunteer groups
- Use volunteers for interpretive efforts
- Involve USCG, Civil Air patrols, power squadrons, charter boats and fishing organizations in promoting compliance
- Conduct a community outreach program to encourage compliance with marine reserve regulations and citizen involvement in reporting violations through CALTIP

Education

- Emphasize education as a tool to achieve compliance with regulations in conjunction with the department's Office of Natural Resource Education and Office of Communications
- Promote voluntary compliance and stewardship of the general public through specific outreach programs regarding enforcement of marine reserve regulations
- Train user groups about regulations and how to report violations
- Identify major user groups and disseminate specific materials through workshops

Operations

- Maintain an investigative capability to ensure quick response to purposeful unlawful acts
- Develop and maintain the capability to effectively respond to violations
- Establish an *Enforcement Advisory Committee* consisting of relevant regional law enforcement organizations
- Develop enforcement operation plans that identify specific enforcement strategies and priorities and outline the best means to achieve them; use the incident command system format

- Develop regulations that are understandable to the general public and are easily enforced

FINAL DRAFT

Appendix L: Draft Enforcement Action Plan

Strategy 1-A: Additional Enforcement

There will be a need to add five or more officers to enforce the selected MPA network in the central coast study region, especially in the high-use and sensitive areas. The Department will increase the presence of law enforcement officers on the water to protect resources and reduce user conflicts. Remote observation techniques may be used to aid enforcement efforts as identified in Activity 5 below. High use and sensitive areas will be identified.

Activity 1: Program supervision requirements

Depending of staffing levels, the Department's Law Enforcement Branch will assign one or more captains to coordinate operational enforcement within the MPAs. The Assistant Chief in charge of marine coordination, or designee, at the Branch level will work in close cooperation with the field Captains, Marine Region managers, representatives from other agencies and interest groups. The Branch will develop annual enforcement operation plans, including necessary revisions and updates of the plan throughout the fiscal year. These plans will include, but are not limited to, a summary of relevant regulations; a planned patrol schedule to include the number, type, frequency, and geographic area of the patrols; the priority of each patrol; a response protocol for each type of violation; and the number and type of violations that are filed.

Schedule: Law enforcement management and support staff are in position. Field level supervision will be completed as staffing levels are determined.

Activity 2: Identify High-use and Sensitive Areas

Because of the geographic spread of the MPAs, enforcement officers will be assigned primarily to high-use and sensitive areas, with priorities based on the protection of resources over the resolution of conflicts. High-use and sensitive areas must be identified prior to assigning additional enforcement officers to cover these areas. This is critical, because new officers will likely not be immediately available and will be phased in over a multi-year period. The number of visitors, visitor demographics, average length of stay, length of commercial and recreational seasons, seasonal variations, and visitation trends all affect the amount and type of law enforcement services required. The variety and impact of public use and special events or seasons are major influences on the scope of the MPA enforcement program. Overflight data will assist in identifying high-use and sensitive areas needing specific enforcement efforts.

Schedule: This activity will occur concurrently with MLPA regional processes.

Activity 3: Hire Additional Enforcement Officers and Ensure Adequate Support

Once high-use and sensitive areas are identified, an adequate level of enforcement must be determined and the corresponding officers hired. Given current funding limitations, additional funding sources will need to be identified and additional officers will be phased in over a multi-year period. Officers will require appropriate vehicles, vessels, and equipment to perform their duties.

Schedule: This activity will take a minimum of three years to fully implement and provide additional officers in the field at all locations.

Activity 4: Develop Remote Observation Techniques to Aid Enforcement Efforts and Reduce Costs

Remote observation techniques will be an invaluable tool not only for detecting and apprehending violators, but to allow a limited enforcement presence to be far more effective and efficient.

Aircraft.

Department and other agency aircraft are in place and should be used extensively throughout the marine reserves. They not only can locate violators, but can also observe overall activity, locate pollution incidents, aid mariners in distress, and be used as scientific platforms for resource surveys.

Night Vision.

Night vision equipment is currently being used by the Department in marine enforcement activities. This equipment makes night operations significantly more effective. Forward-Looking-Infrared (FLIR) is a technology that allows for observation at night and through cloud and fog cover.

Radar Linked to Global Position Systems.

Radar which is linked with Global Positioning Systems (GPS) and based on patrol vessels or aircraft can now provide accurate location information for suspect fishing vessels which may be operating in or near MPAs. GPS has been used successfully, for many years, in criminal prosecutions.

Vessel Monitoring.

Vessel monitoring systems (transponders) are already used in a number of areas world-wide to track the location of commercial fishing vessels and ensure that they avoid specific fishery closure areas. This especially useful for large areas which are remote, far offshore or difficult to observe consistently. Vessel monitoring could be readily implemented in the commercial fisheries. Implementation in recreational fleets may be difficult due to privacy and other concerns.

Remote Cameras.

Remote camera systems can be used for surveillance of the MPAs. Cameras can be mounted on poles, buildings or other structures at boat ramps, harbors or other areas in or adjacent to the MPAs. Video cameras can send images directly to web sites accessible to patrol boats and law enforcement offices. The web sites can be monitored, as needed, 24 hours a day.

These systems are readily available and inexpensive, but require staff to monitor and constant power sources. Thus their utility is limited to areas near permanent facilities.

Satellites.

Satellite imagery is becoming more accurate, obtainable and affordable. Satellites will be able to provide continuous coverage and will be able to collect sufficient evidence for successful court prosecution of marine reserve violators. Due to cost and technological limitations, it is unlikely that satellite imagery will be implemented in the near-term.

Geofencing/Ground Based Radar.

Other remote observation techniques could include geofencing and ground based radars, both with the limited capability to observe sections of the marine reserves for user activity. As with satellite technology, it is unlikely that this new technology will be implemented in the near-term.

Activity 5: *Straight Line Boundaries/Boundary Markers/Signs*

Straight-line boundaries, based on latitude/longitude coordinates, are recommended for all MPAs. These boundaries facilitate enforcement operations as well as provide clear and understandable edges of the MPAs to the public. Using north-south and east-west boundary lines allows for simple mapping and display of the MPAs. Straight lines are preferable to a specified distance offshore or depth contour as they are easier to determine on the water. While determining distance offshore requires the use of radar, which is fairly expensive, and depth contours require the use of sonar, which will vary with the unit's calibration and the tide, latitude/longitude coordinates are easily and accurately measured with Global Positioning Systems. These systems are not only accurate, but affordable and portable when compared to radar and sonar. Also, boundaries based on clear landmarks, that are easily defined on maps and seen from the water, should be utilized. In combination, these techniques will provide boundaries which are relatively understandable and enforceable.

Clear and consistent signage and boundary markers around the MPAs are to be used to communicate that the MPA has a special status. MPAs with defined access points (parking lots, visitor centers, boat ramps, harbors, etc.) lend themselves well to this strategy. Sign design (shape, color, logos, etc.) should be unique, easily recognizable, within the rules and regulations of the U.S. Coast Guard and other regulatory authorities, and consistent for similar types of MPAs. Sign text should be concise and easily convey the level of protection for the MPA while briefly describing the benefits of increased protection. To further increase public understanding and reduce confusion, the level of protection and its description should be the same for each category or type of MPA. Multiple language signage may be useful in certain areas of California with large non-English speaking populations. For offshore situations, distinctive buoys marking boundary locations could be used where feasible and cost effective.

Please see the Education and Outreach Action Plan for further details on MPA education and information signs and displays.

Schedule: This activity will not be implemented until year 2 or 3 due to the research required to explore system capabilities, availability and costs. Activity level will be low in year 1, but should begin during site planning and continue until successfully implemented.

Strategy 1-B: Expand Federal, State and Local Enforcement Programs and Prioritize Enforcement Areas

Activity 1: Develop Interagency Agreements, Authorities

It will be essential to expand Federal, State and local enforcement and cross-deputization programs and prioritize enforcement areas. A prerequisite to effective MPA enforcement will be to establish interagency agreements with various enforcement entities. These agreements will need to set forth Federal, State and local enforcement authority among all officers. Officers in the following agencies must be considered for cross-deputization:

Schedule: This activity will have a high level of activity in year 1. It will be an important component to providing adequate law enforcement in the marine reserves. It will also be an important component in developing funding for Department operations. Current agreements are describe in Table 1.

Table L-1. Current Marine Law Enforcement Agreements

<p>National Marine Sanctuaries. The Department has Memoranda of Understanding in place with the Monterey Bay and Channel Islands National Marine Sanctuaries through the Monterey Bay Sanctuary Foundation. These agreements provide Federal funding for Department concurrent enforcement patrols. Department peace officers are cross-deputized to enforce Sanctuary regulations. The Department has been providing enhanced law enforcement patrols at the State marine protected areas, within the Channel Islands National Marine Sanctuary and adjacent to the Channel Islands National Park.</p>
<p>National Marine Fisheries (NOAA Fisheries). The Department has Cooperative Enforcement Agreements in place with NOAA Fisheries. These agreements provide Federal funding for Department concurrent enforcement patrols. The current agreements cover at sea and dockside groundfish enforcement and bay, estuary and in-stream salmon enforcement.</p>
<p>California State Parks. California State Parks include underwater areas that will be part of the Marine Protected Areas program. State Parks also may have park units adjacent to newly created MPAs. State Park Peace Officers have full peace officer authority and are permitted, by law, to enforce Fish and Game Code regulations while on duty in a unit of the State Park System. A formal agreement needs to be developed to include the assets of the State Parks into the overall cooperative enforcement efforts in MPAs.</p>
<p>National Park Service. National Park law enforcement officers can play a similar role as State Park officers in enforcing regulations within the State marine reserves. Currently the National Park Service, Channel Islands National Park, officers provide patrols around the Channel Islands including the State Marine Reserves. This cooperative enforcement service is provided as part of the NOAA Cooperative Enforcement Agreement.</p>
<p>U.S. Coast Guard. The Department and U.S. Coast Guard have conducted cooperative patrols, without any formal agreement, for many years. The U.S. Coast Guard routinely provides Department officers with a working platform on their patrol boats and aircraft. Concurrent inspections of vessels by a Coast Guard member, Department peace officers and other agency officers has proven to be a reliable alternative patrol tactic for the Department. These past practices should be developed into a Cooperative Enforcement Agreement and consideration should be given to cross-training and deputization of Coast Guard members. This would be a more difficult task than cross deputization of other agency peace officers since Coast Guard members are not Federal peace officers.</p>

Activity 2: Develop Standard Operating Procedures

The development of Standard Operating Procedures for MPAs, as part of the Department's Law Enforcement Branch's Policy Manual, will increase the efficiency and effectiveness of enforcement efforts. It will establish coordination and cooperation among agencies and increase interagency communication by scheduling staff and equipment efficiently among all agencies; develop a process for handling violations; standardize radio communications (standard radio frequencies); promote cooperation with all agencies in detecting violations and educating the public; and determine priority enforcement areas.

Schedule: This activity would have a high priority in year 1 if additional positions are not allocated for Department officers and would have a moderate activity level if the new positions are allocated. It would take 24 months to complete once started.

Activity 3: Develop a Standardized Training Program

A cooperative training program should be developed to enable various enforcement agencies to educate each other about their respective statutes and codes. A specific course should be developed by the Department utilizing the Instructional Design System and Training Effectiveness Model. Adult learning methodologies should be used to insure training is effective and useful. This training course should contain learning modules on specific codes and regulations, policy and procedures, resource management, and interagency communications.

Schedule: This activity has no action planned in year 1. It would require 12 months to develop and deliver the training and would be on-going on an annual basis thereafter.

Implementation

Responsible institutions.

The Department's Marine Region and Law Enforcement Branch are responsible for the overall program with the Law Enforcement Branch responsible for developing and implementing this Action Plan. However, the success of the Action Plan, and ultimately the success of marine reserves and protected areas, depends on having adequate personnel and the cooperation of other State, Federal and local agencies.

Prioritization of Implementation.

Because of their importance, the cross-deputization strategy, other agency agreements strategy, funding strategy and the additional enforcement strategy are included in the high priority level. They should be considered among the highest-ranking strategies in the Management Plan.

Cost.

The costs associated with implementing this action plan are estimated to be significant. These costs are primarily associated with hiring and equipping additional peace officers. The actual costs will depend upon the final MPA network and locations, design and number of individual MPAs. While enforcing MPAs distant from port and urban areas may be more

difficult from a travel standpoint, high use in areas near ports and cities add to the need for frequent enforcement. Estimating the total cost will occur during the planning process. Additionally, program costs can be distributed among participating institutions. The funding could come from various State and Federal sources.

Evaluating Program Effectiveness and Efficiency.

A system should be designed for evaluating the effectiveness of enforcement efforts. It is recommended that the Incident Command System format be used for planning and follow-up purposes and the Law Enforcement Branch's planned data system be utilized. Adjustments to enforcement efforts should be made on a semi-annual basis after analysis of data. On a yearly basis, the various enforcement agencies should meet to discuss enforcement issues, including a discussion on the adequacy of enforcement efforts.

Enforcement Education and Outreach Plan

Introduction

One of the primary objectives of the Law Enforcement Action Plan (EAP) is to educate the public about the regulations, fisheries and marine environment within the Marine Protected Areas (MPA). The diverse habitats and resources to be sited within the MPAs offer opportunities for environmental interpretation. Education and outreach strategies in the action plan fall into two general categories: community involvement/community program strategies and product development strategies.

The first category includes education and outreach strategies designed as interactive programs for user groups (exhibit production, training programs, workshops, school programs, public involvement forums and special events). Strategies that result in the development of specific products (printed materials, audio-visual materials, signs and displays, public service announcements, visitor booths, display, etc.) are included in the second category. The education and outreach strategies need to be developed in conjunction with other agencies and departments (e.g., Department of Parks and Recreation, National Marine Sanctuaries, and National Park Service), Department subject matter experts, user groups, environmental educators and other involved citizens.

Management Strategies. Each strategy has been assigned an estimated activity level for year 1. This activity level is an estimate of the planned level of action that will occur in the first year after the Central Coast, and subsequent, MPAs are adopted. In addition, the time required, costs of implementation, and funding availability (from all sources) need to be estimated for all strategies. The component activities within each strategy and the institutions responsible for implementation have also been identified.

Education and Outreach Strategies. This action plan includes strategies that pertain to MPA protection. Other strategies concern developing printed materials, training programs and an advisory board. A summary of the education and outreach strategies and activities are listed in Table L-2:

Table L-2. Summary of Education and Outreach Strategies and Activities

1: Training, Workshops, School Programs

- Promote/support environment education in State schools
- Produce a California Marine Protected Areas Education Resource Directory
- Provide/support MPA education workshops for educators
- Provide MPA education for law enforcement personnel
- Sponsor adult MPA education
- Deliver education at the resource

2: Advisory Board

- Establish an education advisory board

3: Public Forum

- Establish public meeting program
- Develop a speakers bureau and lecture series
- Conduct a poster contest
- Conduct a photo contest

4: Special Events

- Develop and maintain trade show information booths
- Hold an MPA exposition
- Hold MPA grand openings
- Develop a series of non-consumptive competitive sporting events
- Design and implement a Kids's Week
- Design and implement an MPA Awareness Week

5: Professional Development of Education and Outreach Staff

MPA Education and Outreach Program Goals

The overall program goals include:

1. Providing educational leadership in marine conservation and protection efforts throughout the network of MPAs
2. Adopting an MPA network-wide unity and identity to promote statewide awareness, while encouraging site-specific individuality
3. Linking the MPAs to each other through a statewide environmental education program
4. Establish a standard of excellence that is attained through the instructional design systems utilized in the program

MPA Education and Outreach specific goals:

1. Staff and Education Provider Goals:
 - a. Facilitating environmental education opportunities for all segments of society
 - b. Promoting and supporting education and training opportunities for Department staff and entities providing education programs within the MPAs

2. Learner Outcome Goals to promote:
 - a. An 'Ecosystem' view of the MPAs as an interrelated and interdependent system of habitats
 - b. User stewardship by teaching strategies and skills which will help reduce the effects of resource impacts
 - c. A clear understanding of the economic, biological, recreational, educational and cultural values of the MPAs ecosystems
 - d. Understanding of the social and political issues associated with resource impacts
 - e. Understanding of the management and enforcement strategies intended to reduce or eliminate resource impacts
3. MPA Outcome Goals:
 - a. Promoting the awareness of, and support for, the MPA program through community partners in education, outreach, awareness, enforcement and management.

MPA Education and Outreach Program Objectives

MPA Program Objectives

1. Support, develop and establish cooperative agreements to promote innovative educational projects to educate the public about the MPAs ecosystems
2. Provide and support multi-disciplinary environmental education experiences
3. Provide and support training opportunities for resource users
4. Utilize existing educators and environmental education organizations and institutions including State Park Interpreters
5. Develop continuing education for Department personnel on ways to target groups about resources in the MPAs
6. Provide mechanisms so that new ideas and policies can be introduced and incorporated into the ongoing Education and Outreach Action Plan
7. Provide for a permitting mechanism for educational organizations to carry out educational activities with the MPAs

Learner Outcome Objectives

1. Provide the public with information obtained through research in a timely fashion
2. Provide educational information at technical and scientific meetings
3. Provide education for visitors to the MPAs
4. Provide a cognitive understanding of broad ecosystem interactions as well as a skill-based understanding
5. Facilitate specific education for California youth that emphasizes the interconnectedness of the MPA ecosystems through traveling sequential field trip programs
6. Provide education for audiences outside of the coastal zone
7. Provide on-site opportunities for resource education

MPA Outcome Objectives

1. Increase Agency and Department awareness of educational programming activities in the MPAs

2. Increase public awareness of any current MPA activities
3. Encourage community cooperation and participation in MPA educational programs
4. Improve the understanding of, and voluntary compliance with, MPA resource management and enforcement requirements
5. Provide the public information gained through research
6. Increase public awareness of cumulative environmental impacts in the MPAs
7. Provide opportunities for individuals to become caretakers of the MPAs
8. Provide information at high profile locations
9. Provide informative environmental education and outreach programs to school systems
10. Provide exposure to environmental education, introducing an ecosystem approach over time
11. Provide multilingual environmental education materials and programs
12. Provide environmental education opportunities for adults

Description of Strategies

Community Involvement/Program Strategies

Education and outreach strategies designed to include opportunities for interaction can be defined as community involvement/program strategies. These strategies include; educational exhibit production, training programs, workshops, school programs, public involvement forums, and special events. New strategies may be added as the program advances.

Strategy 1: Training, Workshops and School Programs

This strategy will help develop instruction and training opportunities, including programs conducted by teachers, Department and Agency staff, other non-formal educators, and volunteers. Training programs need to be provided for teachers, environmental professionals, business owners and operators, and law enforcement officials. Key elements of these training programs will include; 1) emphasis on an ecosystem approach; and 2) fostering a cognitive knowledge, as well as a skill-based knowledge of the MPA ecosystems.

Activity 1: Promote and Support Environmental Education in Schools Statewide with an Emphasis on the California Coastal Counties.

Project Wild, Project Aquatic Wild and similar programs should be utilized by adding an MPA component. The plan would need to include sequential exposure to MPA/marine ecosystem issues over the course of students' development. Department staff and other professional environmental educators should develop the needed educational materials, provide and support natural resources field trips and provide educators with information regarding MPA resources. Department staff should train volunteers and professional educators to provide presentations and support and conduct field trips to the MPAs.

Activity 2: Produce the California Marine Protected Areas Education Directory (CMPED).

A directory of MPA education activities, including a description and listing of the groups involved should be developed and distributed to interested parties. A survey of educators should be developed. The directory should be updated about every three years.

Activity 3: Provide and Support MPA Education Workshops for Educators.

This activity will enhance the knowledge base of local educators through MPA workshops regarding the MPA's natural resources. Co-sponsorship of educational workshops, with financial assistance, will be investigated.

Activity 4: Provide MPA Education for Law Enforcement Personnel

Ensure that all Department law enforcement personnel are current with resource identification and ecosystem management techniques. Officers cross deputized for MPA enforcement efforts should receive basic MPA education. All officers must understand the consequences that occur as result of violations. Department officers must enhance and improve their education and outreach skills so they can assume a more active role as environmental educators with the MPAs. Training courses should be developed utilizing Department law enforcement and scientific subject matter experts.

Activity 5: Sponsor and Support Adult MPA Education.

This activity is designed to support MPA education opportunities for local adults interested in learning more about the MPAs in their area. Education courses should include guest lectures, organizing field trips and providing brochures.

Activity 6: Provide Mechanisms Outside of the Law Enforcement Function that can Help Deliver Resource Education at the Site of the Resource.

This may include using Department and other Agency department's personnel as well as volunteers or seasonal personnel.

Strategy 2: Education Advisory Board

Establish an Education Advisory Board to advise educators on education goals, priorities, and funding sources for the MPAs. A part time position should eventually be provided to devote 100 percent of their time to Advisory Board matters. The Advisory Board should provide a mechanism to introduce new ideas into the overall MPA Education and Outreach Action plan. The Advisory Board should work to coordinate grant funding approaches.

Activity 1: Create an Education Advisory Board.

The Board should be composed of members that represent diverse sectors and interests. The activities of the Board should include: 1) providing information on current activities in the education community; 2) encouraging cooperative efforts; 3) providing direction for the MPA Education Program; 4) preventing the duplication of efforts; 5) promoting stewardship; and 6) guiding development of natural and cultural resource education products. Members should be identified from educational organizations based on regional or geographic location. Meeting frequency and protocols will be determined by the Board. Potential members might include persons from:

- 1) State and county environmental councils and groups
- 2) Elementary schools
- 3) Community colleges
- 4) Marine orientated foundations
- 5) Public information and education programs on public TV or radio stations

- 6) Sport and commercial fishing groups
- 7) Environmental organizations

Strategy 3: Public Forum

Establish a program to ensure public involvement in MPA educational activities by holding public forums on MPA educational issues. A program should be established to provide Department sponsorship of contests and awards.

Activity 1: Establish a Public Meeting Program.

A series of public meetings should be conducted throughout the coastal counties to provide information to encourage user participation in MPA management. Department staff and/or guest speakers should make presentations and dialogue between staff members and the public. This activity will 1) enhance communication between Department staff and the public; 2) provide an opportunity for periodic public input; and 3) provide an opportunity to educate the public about current management issues. These meetings are not connected with the public meetings established to implement the MPAs.

Activity 2: Conduct a Poster Contest.

A theme-oriented poster contest should be developed through the coastal counties school systems. The contest will provide a creative method for educating local students about the MPAs. This activity has a proven record of success within the Department.

Activity 3: Conduct a Photo Contest.

Underwater and top-side photo and/or video contests should be conducted to draw attention to the natural resources of the MPAs marine ecosystems. The objective is to focus public attention on the importance of the MPA habitats that most citizens are not able to view. This activity has a proven record of success within the Department.

Strategy 4: Special Events

Organize, support, and/or participate in special events (e.g., trade shows, expositions, outdoor sporting events, etc.) that allow for the exchange of MPA information. The Department should co-sponsor a number of conferences and workshops, with selected sole sponsorship of some events. This would include an MPA Awareness Week, MPA Grand Openings, and Open Houses. The Department would cosponsor other awareness events/weeks (e.g., National Fishing Week, etc.).

Activity 1: Develop and Maintain Trade Show Information Booths.

Department staff should attend trade shows, local festivals, and other events, and set up displays to provide the public with information about MPA resources.

Activity 2: Organize an Environmental Exposition.

This forum should display environmentally sensitive products and technologies (e.g., alternative fishing gear, pollution reduction technologies, etc.) to educate the public regarding environmentally safe products and services.

Activity 3: Hold an MPA Grand Opening or Open House.

A large scale social event should be held to announce the grand opening of new MPAs in each of the phase of implementation and open houses at existing MPAs throughout the state.

Activity 4: Design and Implement a Kid's Week.

A Kid's Week filled with special events for school students designed to enhance their awareness of the MPAs should be conducted. The events are intended to inspire a sense of stewardship for the environment, and illustrate that kids are direct participants in protecting the MPA resources.

Activity 6: Design and Implement a Marine Protected Areas Awareness Week.

A week of statewide activities should be designed to draw attention to the existence of the MPA program. The events will be designed to raise awareness of the MPAs and generate a sense of stewardship for the MPA resources. The Governor, state legislators, local elected officials, interest groups and others should be included.

Strategy 5: Professional Development of Education and Outreach Staff and Cooperating Educators.

Activity 1: Develop a set of activities that provide education for new and existing members in the Department who will have duties that include MPA management activities.

Product Development Strategies

This group of strategies includes those centered on the development of some type of product. Print, audio and video communication products are an integral component of the MPAs public education and outreach program. Products produced through these strategies will be used as tools for implementing many other strategies in the management plan. Activities include the development of printed materials to promote public awareness of the MPAs; the production of limited number of audio-visual materials; the establishment of signs and displays in high-use areas; the development of a program of public service announcements; and the establishment of visitor booths and displays for the distribution of educational materials. Materials should be multilingual when appropriate and necessary. A focus of these materials includes disseminating current research and results to the public in a timely fashion. Strategies in this group may be revised or deleted and new strategies may be added, based on the progress and success of the strategies proposed.

Strategy 6: Printed Materials

Develop printed materials to promote the public's awareness of the impact of their activities, both land and water related, on the MPAs resources and environmental quality. Promote the proper use of equipment used for these activities in order to minimize adverse impacts to natural resources. Materials will include periodicals, environmental nautical charts, color environmental atlases, and a color periodical. Distribute materials in bulk to high interception locations (like marinas, fishing piers, and other points of access) and include bulk mailings as a means of distribution.

Activity 1: Design and Print a MPA Brochure.

A brochure should be produced that contains comprehensive information about the MPAs. The Department currently produces various literature on the Channel Island MPAs which can be used as examples.

Activity 2: Produce a Monthly MPA Newsletter.

Department staff should produce a color periodical. This newsletter should include information about current developments in the MPAs management, featuring projects and programs in the MPAs. This could be produced as a web-based product to save on printing costs.

Activity 3: Provide Information to Commercial Interests.

Businesses that may transit the MPAs should be alerted to MPA regulations (e.g., waste discharges, areas to be avoided, etc.). Target audiences include commercial fishing companies, shipping companies, etc.

Activity 4: Provide Multilingual Information.

Multilingual information regarding MPA activities, including regulations and research activities should be developed to educate the public about MPA environmental issues.

Activity 5: Produce and Distribute a Fact Sheet on MPA Regulations to be Distributed with Annual DMV Boat Registrations, Department Commercial License Applications and with all Department Issued Fishing Licenses.

The fact sheet should be an effective means of disseminating information about MPA resources and regulations to boat owners and license holders.

Activity 6: Produce an Environmental Atlas for the MPAs.

Department staff, with the assistance of other departments, agencies and vendors, should produce a color atlas of MPA resources including habitat types, population, storm paths, and other environmental or social themes to be determined.

Strategy 7: Audio-Visual Material

Inventory and use existing videos, films, photographs, slides and audio-visual environmental education materials portraying activities in the MPAs, and their impacts on MPA resources. Produce a limited number of audios/videos to address gaps in available materials, and to address major activities including boating, commercial and recreational fishing, diving, etc. Materials should be available at designated Department offices and other key locations along the coast. Materials should be multilingual as necessary and appropriate.

Activity 1: Establish Audio and Video Library.

Audio-visual materials need to be collected and organized from the vast amount of available materials within the Department. The materials should be organized into a MPA library for use by Department staff and the public. Audio tape, videos, films, photographs, slides and audio visual materials need to be cataloged by type of media, subject, and length. New contributions to the MPA library will be solicited from amateur and professional photographers. Duplicates can be produced upon approved requests and within budget constraints.

Activity 2: Produce Audio and Video Tapes and Theme-Oriented Slide Presentations.

Topic-oriented audio and video tapes and slide presentations should be developed for specific age groups, and their complexity should vary according to the intended audience. Products may range from short instructional pieces to longer presentations that summarize the MPA development process. Videos should be 10-20 minutes in length and in a variety of languages. Topics could include the MPA array, programs and regulations, scientific research, educational projects, water quality, and habitat degradation issues.

Strategy 8: Signs, Displays and Exhibits

Develop signs and displays at high-use areas, all public and some private boat ramps, and some public beach access areas to inform participants in water-based activities of regulations and environmentally sound practices. Establish visitor centers/booths at locations along the coast at Department offices, chambers of commerce, etc. Portable displays should also be produced with information on the MPA resources, regulations, environmental quality, etc. The signs should be multilingual where necessary and appropriate. Targeted multimedia displays should be developed with information and impacts on the MPAs relevant to the activity targeted. A number of wayside exhibits should be installed.

Develop a user-friendly computer system containing information on regulations, access, recreational sites, environmentally sound practices, etc. for visitor use at selected sites along the coast.

Activity 1: Establish Wayside Exhibits Along the Coast.

Wayside exhibits, placed in strategic locations, could be an effective means of educating the public about MPAs. More than one exhibit may be established for location at popular fishing and disembarkation points along the coast. The exhibits should provide information about MPA boundaries, resources and regulations. Sites for wayside exhibits need to be identified and an exhibit needs to be designed, for each area, providing information on boundaries, resources and restrictions. Exhibits will need to be easily up-dated as regulations change. Exhibits can be one or two sided. Cooperative agreements with harbor masters should be developed. Partners and volunteers can be utilized to develop and/or place the signs.

Activity 2: Establish Static Displays at Appropriate Locations.

Displays about the MPAs should be set up in Department offices, National Marine Sanctuary offices, libraries, chambers of commerce and State Parks. These static displays should provide general information about the MPAs, and should educate visitors and residents about requirements and measures they can take to protect the MPA resources. These displays will have a broader range of topics than the wayside exhibits. They are also more flexible when it comes to making changes.

Activity 3: Develop Mobile Displays with Information on all Aspects of the MPA Program.

Several different displays should be developed, each with a different focus. The mobile displays could be used at conventions, trade shows, educational meetings, or scientific gatherings. General information regarding MPA locations and programs, regulations and MPA

resources should be communicated, along with current educational activities or research findings.

Activity 4: Develop Interactive Educational Computer Stations.

Interactive educational computer stations should be developed that convey information about MPA boundaries, regulations, resources, education programs, research programs, and volunteer opportunities should be developed for Department offices along the coast. Each station should include current MPA data that may be accessed by any visitor. These stations should have an audio and visual component and include a combination of stationary graphics, an interactive computer terminal, and audio recordings.

Strategy 9: Public Service Announcements

Establish a program to promote MPA goals and activities through public service announcements (PSAs) in the State, with some national and international public exposure. PSAs presenting an MPA overview, resources and their ecological significance should be developed for routine distribution to radio and television stations and newspapers. PSAs should focus on participants in water-related and other activities that affect the MPAs (boaters, divers, shore side users, etc.). Press packets should be developed by the Department's Communications Branch. One focus of these PSAs will be to distribute research results to the public in a timely fashion.

Activity 1: Develop a Program of PSAs.

A program of (PSAs) should be developed to educate the public about how their activities impact MPA resources. These PSAs should be broadcast on radio and television and should focus on boating, diving, fishing and other activities impacting MPA resources.

Activity 2: Develop and Produce a Series of Video News Releases.

The media should be provided with information on current MPA issues and activities through the development and production of a series of video news releases. Topics should address a broad range of subjects including MPA boundary awareness, regulations, education programs, research topics, etc.

Activity 3: Establish VHF and Dedicated AM Radio Stations.

A VHF radio information frequency should be secured and dedicated to provide information about boating and related activities. The broadcasts should include information about MPA regulations, navigation, and resources. Messages should also be developed to help boaters, divers, and fishermen avoid impacting the environment. Information should be broadcast in several languages.