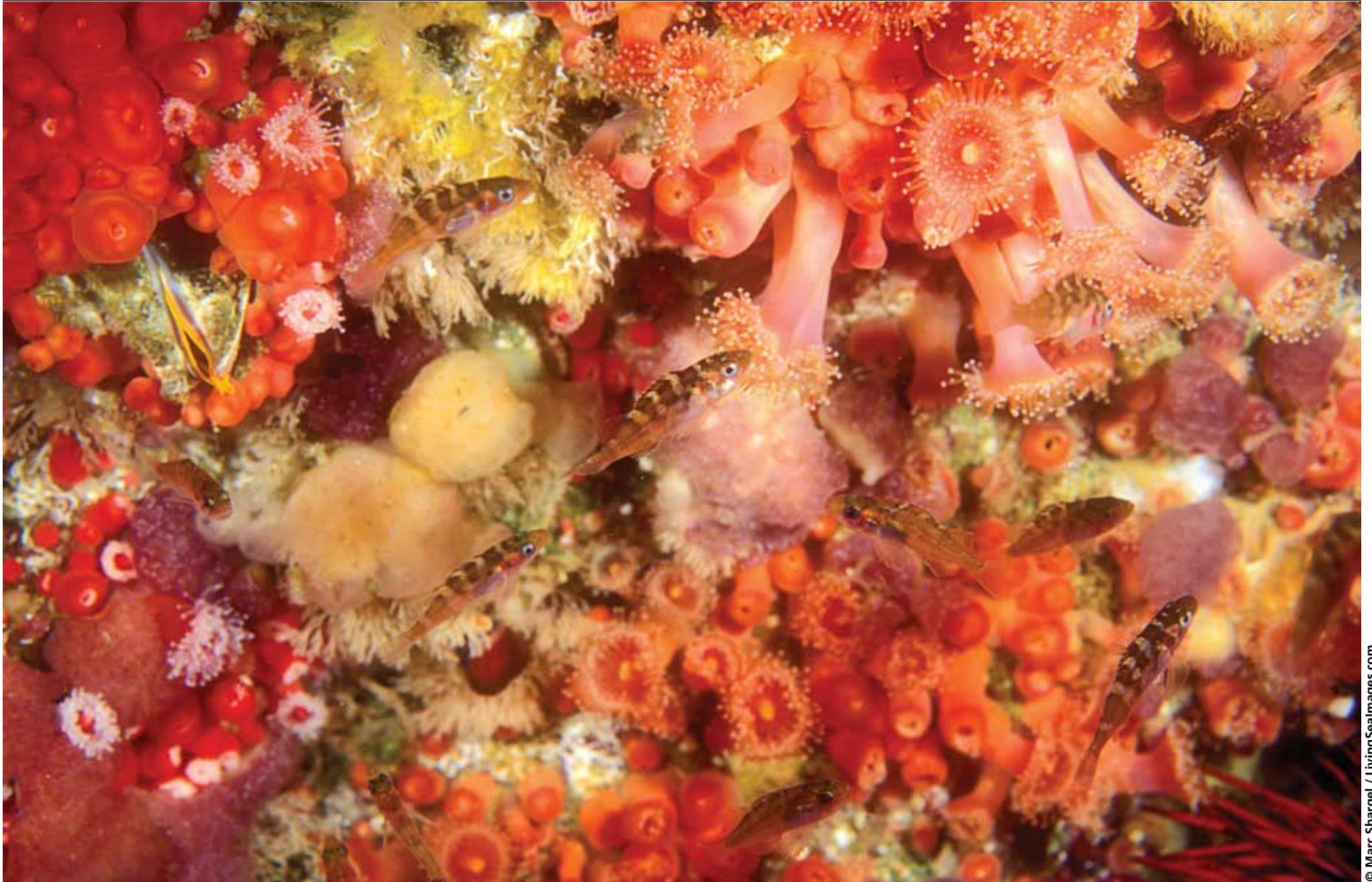


Marine Life Protection Act

National Park Service
U.S. Department of the Interior

Pacific Coast Science and Learning Center
Point Reyes National Seashore



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The Critical Need for Ocean Protection

“GREAT FISH WILL GO THE WAY OF THE DINOSAURS,” claimed the late Dr. Ransom Myers, co-author with Dr. Boris Worm, of a 2003 scientific study that published a controversial finding: currently, the oceans worldwide have lost 90% of all large, predatory fish such as sharks and tuna due to the commercial overfishing and exploitation of these creatures.

If this is true, the consequences would be staggering. Large, top predators drive the food chain in many ecosystems and control the population of many mid- and low-level animals, maintaining the health and natural balance of an ecosystem. (An ecosystem is a community of organisms and the physical environment in which they interact). Losing the majority of these top predators would be devastating, since healthy ecosystems have been shown again and again to be more resilient to and quicker to recover from natural and man-made disasters such as El Niño events, hurricanes, tsunamis, oil spills, and the like. But is it true? Are the scientists right in sounding the alarm, or is it another one of those “the sky is falling!” cries?

In the five years since Myers and Worm’s paper, many more researchers have examined the issue of “over-fishing”, the destruction of ocean habitats, and their effect on the ocean ecosystem. What were their conclusions? They are saying that our collective human impacts on the ocean environment are far greater than we initially imagined, and the issue isn’t just the fishing of top predators. Dr. Jeremy Jackson, a marine scientist in San Diego writes in a recent scientific paper published in August 2008, “The degrading effects of fishing, habitat destruction, introduced species, and eutrophication reinforce each other through positive feedbacks.” Other issues that Dr. Jackson cites are “warming, acidification, toxins, and massive runoff of nutrients.” He writes, “Today, the synergistic effects of human impacts are laying the groundwork for a comparably great [human related] mass extinction in the oceans with unknown ecological and evolutionary consequences.”

All these warning cries by top scientists are backed up by data from their research. Dr. Jackson and a group of scientists recently performed an exhaustive review of twelve coastal seas and estuaries worldwide where historical data were available, and they examined eighty different species in all the major groups of marine plants and animals. They found that across the board, the patterns of degradation are consistent in many different marine environments and with many different species, whether coral reefs, estuaries, or coastal seas, fish and sharks, or whether in the open ocean and continental shelf.

Compared to historic pristine conditions, globally, wetlands have decreased by 67% and eelgrasses by 65%. In estuaries and coastal seas worldwide, fish such as salmon that travel between freshwater rivers and the ocean are depleted by 81%, large marine carnivores are 77% degraded, ground fish have a 62% loss, and even the least depleted marine fauna, the crustaceans, have experienced a 39% decline.

In an independent study from 2006, Dr. Boris Worm predicts that based on current rates of fisheries declines, one hundred percent of the current commercial fisheries will collapse by 2048. The future of the ocean looks bleak indeed.

Yet we are not left without hope. In the same article where Dr. Worm projected a global commercial fishery crash, he provides scientific evidence for our hope in a solution to the ocean woes we are facing. Marine protected areas are underwater areas set aside and protected for the sake of preserving a portion of our oceans and their inhabitants for the future. These areas are usually selected because they are vulnerable, exceptional, biologically critical, or culturally important. They are protected from fishing pressures and other extractive uses in hopes of protecting a whole ecosystem. Scientists have shown worldwide that marine protected areas, particularly no-take marine reserves, have been successful at reversing the loss of marine biodiversity, at least on a small scale. What’s more, scientists and managers have shown that this kind of recovery also translates to increased productivity, resulting in commercial revenue from increased fish catches around reserves and tourism revenue within reserves.



© Chuck Savall

Cover photo: Young-of-the-year gopher rockfish amid a jumble of invertebrates including strawberry anemones at the Farallon Islands.

Above: A grey reef shark preparing to feed at Blue Corner, Palau.

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The coastal ocean off California's 1120 miles of shoreline has been strongly impacted over the last century. And no wonder—approximately 80% of California's 33 million residents live within 30 miles of the Pacific Ocean. California has the largest ocean economy of all the states. With this kind of impact and reliance upon our ocean resources, it is a wonder that we are not doing more to protect and preserve this natural resource of ours. Given the global state of fisheries nowadays, our state has much to lose if we do not act now to set aside some marine areas for the future.

Marine protected areas in California coastal waters have been established for over 50 years, but these areas were too permissive, too small, and too far apart from one another to ensure full ecosystem protection. The Marine Life Protection Act (MLPA) was passed by California legislators in 1999 in order to better evaluate the current state of California's coastal waters and to direct the state to create and manage a network of marine protected areas along the California coastline. These new marine protected areas are created in a network and based on the best available science, information from local stakeholders and scientists, and economic analysis.

A GROUP APPROACH

The MLPA Initiative is a public-private partnership of private funding organizations, California Department of Fish and Game and many individuals who volunteer their time. They have been instrumental to the establishment of marine protected areas, and include a science advisory board and local stakeholders: recreational and commercial fishermen, environmentalists, scientists, recreationists, and educators.

PHASES OF GROWTH

The MLPA is being implemented in five phases. The first phase was directed on the central coast where 29 marine protected areas were established in September 2007. The central coast study region extended north from Point Conception in Santa Barbara County to Pigeon Point in San Mateo County.

The second phase, which is currently under review, is the north central coast phase, which spans the coastal waters

from Pigeon Point (just south of Half Moon Bay) north to Point Arena in Mendocino County. Point Reyes is included in the north central coast study region.

NATIONAL PARK SERVICE INVOLVEMENT

The National Park Service through Point Reyes National Seashore has been very involved with the current phrase of the MLPA Initiative, contributing one member to the Science Advisory Team and two members to the Regional Stakeholders Group. For the last year and a half, they have put in countless hours to provide expert scientific knowledge and local understanding as well as a commitment to cooperation and compromise. The final product arising from the last Regional Stakeholders Group meeting was not anyone's first choice, but was a result of the balancing act between many competing needs and interests.

MARINE RESERVES IN ACTION

There are numerous and varied benefits to establishing marine protected areas. Marine protected areas protect ecosystems as a whole, which includes individual species of fish, invertebrates, and marine mammals as well as the habitats in which they live. Having robust ecosystems not only improves the output of these ecosystems (in terms of fisheries output) it also makes them more resilient to harmful climatic events and human-caused events such as oil spills.

On a broader scale, the main benefit of establishing a robust network of marine protected areas is to preserve the ocean for future generations to enjoy. Nearly 100 years ago, the National Park Service was established to protect special places on the land for the American public to enjoy for generations to come. We see the legacy of the National Park Service today at Point Reyes National Seashore. If this place were not set aside as a National Park then this location would most likely be developed and these natural, wild areas would be lost. Likewise, we now have an opportunity to establish marine protected areas in California state waters. These marine protected areas would preserve the health of these special marine areas for many future generations to come.

Why this publication?

A Note from the Author

Can you remember what our oceans were like fifty years ago? Can you remember the stories of the huge fish our fathers and grandfathers caught? Can you remember the wild seas?

We see but a glimpse of this glorious ocean today. Our coastal seas are but a poor reflection of what it once was and what it should have been today. The oceans are in trouble, and unfortunately, mankind has been largely to blame for all this.

But recovery is still possible. The oceans are resilient, if we only give it a chance—some time and space to recover. In a way, we too have been given our chance at redemption.

“It is vital that human society become knowledgeable about the importance of the sea, about why we should care and about what actions we can take that will enable us to secure a healthy ocean and a healthy future for ourselves.” - Dr. Sylvia Earle

All photos on this page © Galen Leeds / GalenLeeds.net



**CURRENTLY UNDER REVIEW:
THE INTEGRATED PREFERRED ALTERNATIVE**

The integrated preferred alternative is a proposal that was developed by the Blue Ribbon Task Force, the guiding body of MLPA Initiative, as a compromise between the three final stakeholders' proposals. It is currently being reviewed, along with the three final proposals, by the California Fish and Game Commission under the California Environmental Quality Act (CEQA).

In the integrated preferred alternative, there are a few marine protected areas proposed in waters of Point Reyes National Seashore:

Two **STATE MARINE RESERVES** in close proximity to one another:

- 1 the first, off the Point Reyes Headlands, including parts of Drakes Bay, and the southern part of Drakes Estero.
- 2 The second includes all of Limantour Estero.

The state marine reserves do not allow for any take, but do allow access (provided that fishing gear is stowed).

Two **STATE MARINE CONSERVATION AREAS:**

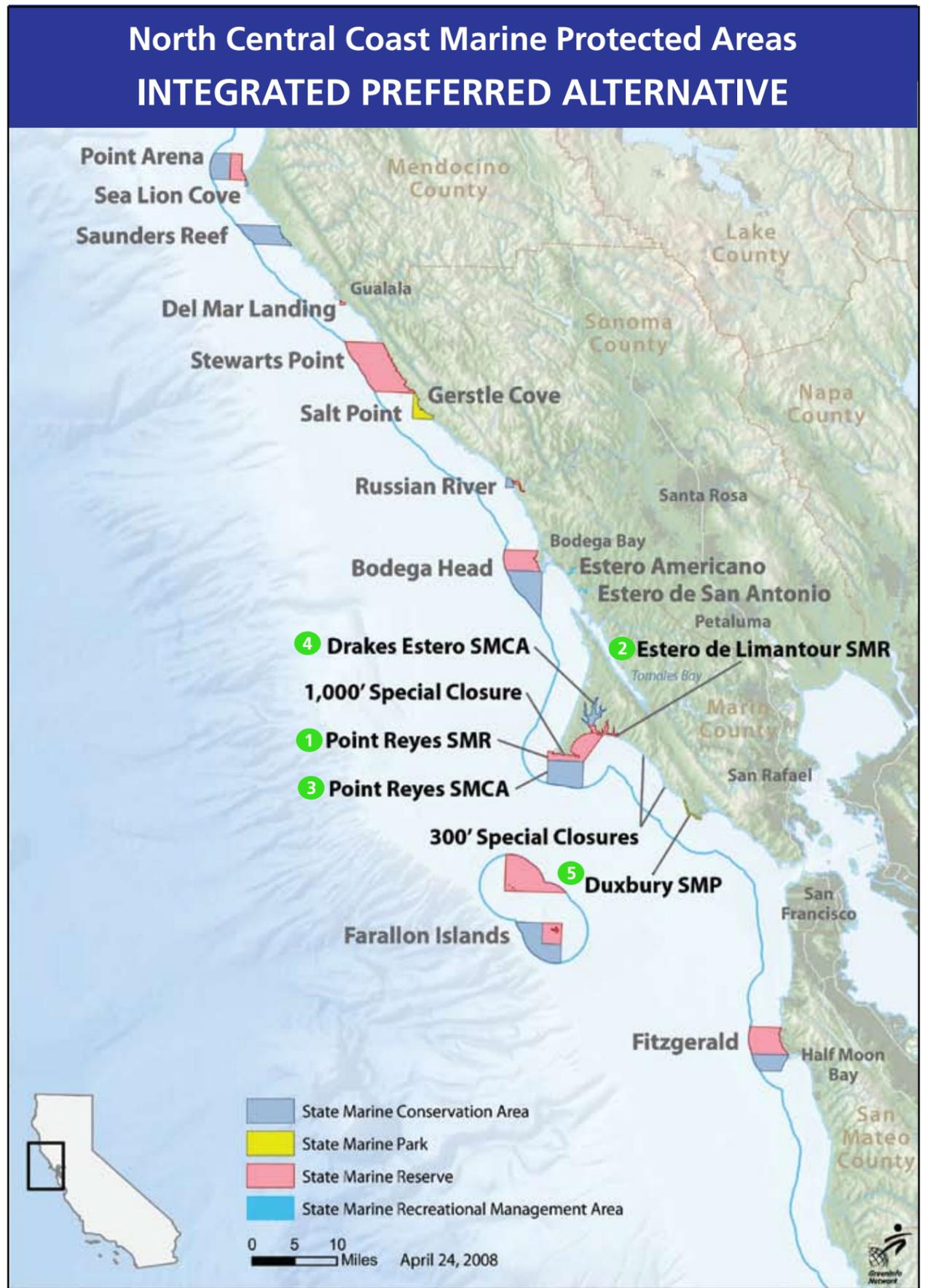
- 3 the first is off of Point Reyes Headlands, extending from the edge of the state marine reserve to the three mile state line. This marine conservation area prohibits all take except for commercial salmon trolling and Dungeness crab by trap.
- 4 The second is in Drakes Estero north of the state marine reserve, where shellfish mariculture and recreational clamming is allowed. Regarding this marine conservation area, the integrated preferred alternative states, "if at any time, it becomes feasible to create a [state marine reserve] at Drakes Estero, this proposal recommends doing so."

- 5 One small **STATE MARINE PARK** at Duxbury Reef, intended to protect intertidal invertebrates and algae in a restricted area, but this marine park does not extend beyond the intertidal zone.

Three proposed **SPECIAL CLOSURES** for bird and mammal colonies. These special closures are designed to protect some sensitive colonies of birds and marine mammals that live and breed in these areas. Special closures are the only places designed by the Marine Life Protection Act that limit access; all other marine protected areas allow for access. These special closures include:

- 1) 1000-ft special closure around the Point Reyes Headlands, except for the western end of the Headlands. This special closure is intended to protect nine nesting seabird species (more than 43,000 birds) as well as the marine mammals that pup and haul-out at the Headlands.
- 2) 300-ft special closure around Point Resistance, a seabird colony.
- 3) 300-ft special closure around Stormy Stack, a rock next to Double Point, which is a seabird colony.

For information on the other marine protected areas seen in the map on the right, visit the MLPA website: <http://www.dfg.ca.gov/mlpa>



Holly Fearnbach / NOAA



Josh Pederson / Monterey Bay National Marine Sanctuary



US Fish and Wildlife Service



© Kip Evans

Clockwise from top left: Pacific white-sided dolphins, yelloweye rockfish, common murre, and black and yellow rockfish. These are some of the species protected under the Marine Life Protection Act.



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Pacific Coast Science & Learning Center

The Pacific Coast Science and Learning Center is one of 21 Research Learning Centers at National Parks across the country working to increase the effectiveness and communication of research and science through:

- Facilitating the use of parks for scientific inquiry
- Supporting science-informed decision making
- Communicating relevance and providing access to research knowledge
- Promoting resource stewardship through partnerships

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Website

www.nps.gov/pore/parkmgmt/pcslc.htm

The National Park Service cares for the special places saved by the American people so that all may experience our heritage.



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Marine Life Protection Act Public Process

The California Fish and Game Commission (CFGF) will be deciding on a network of marine protected areas on the North Central Coast in the upcoming months, and they are soliciting your comments.

There are public comment periods at the CFGF meetings. The upcoming CFGF meetings are:

NOVEMBER 13-14, 2008	HUNTINGTON BEACH
DECEMBER 11-12, 2008	SACRAMENTO
FEBRUARY 5-6, 2009	SACRAMENTO
MARCH 5-6, 2009	MONTEREY

Agendas and details for these meetings can be found at <http://www.fgc.ca.gov>

If you're unable to attend the meetings, you can send your comments in to the Commissioners:

E-MAIL fgc@fgc.ca.gov

POSTAL MAIL

California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090

Additional Resources

The official MLPA website: <http://dfg.ca.gov/mlpa>

A Sheltered Sea: The Journey of the California Marine Life Protection Act
The entire 23-minute film can be viewed at:
<http://www.thebaumfoundation.org/ashelteredsea.html>

Wonders of the Sea: North Central California's Living Marine Riches
Book of photos by Marc Shargel

Central Coast Marine Protected Areas (between Point Conception in Santa Barbara County to Pigeon Point in San Mateo County):
http://www.dfg.ca.gov/mlpa/ccmpas_list.asp

“Ocean Updates” E-Mail List

We have an email list for updates on the MLPA, ocean science, and upcoming ocean film and lectures at Point Reyes National Seashore. To subscribe, send an email to Jessica_Luo@partner.nps.gov with “Subscribe Ocean Updates” in the subject line.