S.E.A. Array

S.E.A. (Students for Environmental Action)
School of Natural Resources
Mendocino High School
Mendocino, CA
February 1, 2010

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S.E.A. Array Rationale

SEA (Students for Environmental Action) is a group of concerned citizens committed to the stewardship and conservation of marine life biodiversity and ocean resources. We recognize that we have evolved to be the only animals on our planet that can recognize how we affect the future. If we continue to focus on runaway economic growth, we forget that we are part of the natural world. Our obligation is not only to the well being of our species, but also to a sustainable future for this planet. We of the younger generation recognize that we are pivotal to ensuring the future of the Earth, and must begin by protecting our oceans.

SEA has developed an array of marine protected areas based on the best available scientific information, as well as interviews with local stakeholders including commercial and recreational fishermen, urchin and abalone divers, and seaweed harvesters. SEA proposes 14 marine protected areas (15.8% of the study region) along the north coast, including the protection of four of our local estuaries. The majority of our proposed protected areas meet the required goals and are especially focused on protecting the natural diversity of marine life found off our northern Californian coast, while aiming to have relatively minimal socio-economic impact. SEA recognizes that fish and other forms of marine life are sustainable resources, and that fisheries are important community assets. In all arrays it is expected that Traditional Tribal subsistence and ceremonial uses shall be allowed.

Our southern most MPA is Big River Estuary SMP. Big River Estuary is the longest unaltered, open-mouthed estuary in Northern California, which makes it an ideal ecosystem to protect. This proposed SMP protects the complex estuarine habitat, including eelgrass beds, marshlands, and mudflat ecosystems (G1, G2, G4), a significant nursery area for Dungeness crab, as well as numerous rockfish and flatfish species (G2). It protects an essential habitat for Black Brandt geese as well as a key foraging area for shorebirds, and coastal waterfowl (G2). It supports current DFG Coho and Steelhead salmon habitat conservation projects, creates a nursery for threatened anadromous fish including Pacific lamprey, and protects elephant seal molting haul-out sites (G2). Nearly the entire stretch of the estuary has access points making it more advantageous for research, long- term monitoring, and enforcement.

Traveling north we extended the current SMR off Point Cabrillo, clustering it with an SMCA which enlarges the existing Russian Gulch SMCA. By grouping the Russian Gulch SMCA with the Point Cabrillo SMR we have the ability to locate a substantially larger marine protected area that is both less economically constraining and more likely to serve the intended purpose of protecting biodiversity. In addition, SEA feels it is important to have educational and study opportunities. Having SMR and SMCA ecosystems side by side will allow one reserve to act as a control for biologists to compare the two areas.

Next we have the Ten Mile Reserve and Estuary reserve cluster. Like coral reefs and rainforests, estuaries are ecosystems with great biodiversity. The reserve and estuary covers a large variety of marine habitat, including shallow hard and soft bottom, kelp beds, rocky shore, mud flats, eelgrass, and marshland habitats. It protects larval sources and enhances the reproductive capacity of numerous invertebrate species (G1, G2, G4). It supports current DFG Coho and Steelhead salmon habitat conservation projects. It also creates a safe place for threatened anadromous fish (salmon species in particular) to move through the river mouth.

Further to the north, we propose Vizcaino SMCA. This will protect an area that is rich in numerous key habitats such as rocky shore and kelp, with a high diversity of benthic species characteristic of the north coast on both soft and hard bottoms (G1). This SMCA will help protect larval sources and enhance reproductive capacity of shelf species including rockfish(G2). Furthermore, this area will provide protection to an area that contains one of the most persistent and important upwelling plumes along the entire California coast and provides for significant downstream dispersal(G1). This dispersal will help restore depleted species, such as nearshore and deeper nearshore species(G2).

Next we propose the Punta Gorda SMR, an extension of the current Punta Gorda Reserve. This SMR captures a finger of the Mattole canyon, protecting an area of high benthic species diversity while maintaining species abundance (G1). It protects the natural trophic structure and food webs, including pelagic finfish that serve as prey for other fish, marine birds and marine mammals (G1). It also provides protection to an area that contains numerous rookeries for marine mammals and birds (G1, G2, G3).

Finally, past Punta Gorda, we have followed the proposals of our neighbors to the north using, and in some cases, slightly modifying the MPAs that were put forth by the North Coast Local Working Group. In addition, we have kept the False Klamath SMCA which was in one of their previous presented arrays. We removed the Eel River SMCA, and in it's place added the False Cape SMCA just to the south. These two changes were made to include more rocky shore habitat North of Punta Gorda.

SEA has aspired to an unbiased viewpoint and has welcomed comments and guest speakers representing a variety of interests throughout this whole process. Many of us have regularly attended MLPA, MOCA, and community meetings. We have diligently considered socio-economic interests, but see the supreme importance of creating "undersea Yosemites" to help ensure wild healthy oceans for future generations to use and enjoy. We believe that this array provides important protection for many marine species that exist in a variety of ecosystems, and could benefit local fishermen, urchin divers, and seaweed harvesters in the long term.

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