

**California MLPA Master Plan Science Advisory Team,
Species Likely to Benefit Work Group
Draft Criteria for the List of Species Likely to Benefit from
Marine Protected Areas in the MLPA South Coast Study Region
(revised November 5, 2008)**

The Marine Life Protection Act (MLPA) requires that species likely to benefit from marine protected areas (MPAs) be identified; identifying these species will contribute to the identification of habitat areas that will support achieving the goals of the MLPA. The draft *California Marine Life Protection Act Master Plan for Marine Protected Areas* (January 2008) includes a broad list of species likely to benefit from protection within MPAs. The master plan also indicates that regional lists will be developed by the MLPA Master Plan Science Advisory Team (SAT) for each study region. Species on each of the regional lists are likely to be prioritized for monitoring in the evaluation of MPAs effectiveness.

Included in Table 1 are potential revisions to the criteria that were used in previous MLPA study regions to create the list of species likely to benefit from MPAs. These revisions include a ranking scheme using “1” to indicate certain criteria were met or a “0” to indicate criteria that were not met. A higher, overall score suggests a species is more apt to benefit from or respond to MPAs.

In addition to a rank, certain criteria are used as an initial filter. Foremost a species must occur in the appropriate study region. A species must also score a “1” in at least one of the following criteria under human impacts: (1) removal, (2) discards, or (3) disturbance, and must also score a “1” in at least one of the following criteria under biological/ life history: (6) spatial life history traits or (7) feature association. Once a species satisfies these initial filters the remaining criteria apply in an additive fashion, resulting in a score based on the number of criteria it satisfies. Where there was insufficient data to determine if criteria are met or not, no score will be given and, as information becomes available over time, may be incorporated.

These criteria require SAT discussion before fully populating the list of species likely to benefit from MPAs in the MLPA South Coast Study Region. Therefore, only the revised criteria are presented here.

Table 1. Revised criteria for species to be added to the list of species likely to benefit from marine protected areas

Consideration	Criteria	Clarifying Questions	Ranking
Human Impact	1* - Removal: Taken directly or indirectly in commercial or recreational fisheries or are otherwise targeted for take or collection for other uses (including but not limited to aquariums, research, and tide pooling).	Is it taken DIRECTLY in a fishery (commercial, recreational, aquarium trade, biomedical research, tide pooling)?	1
		Is it taken INDIRECTLY in a fishery (commercial, recreational, aquarium trade, biomedical research, tide pooling)?	1
		Is a fishery causing or has caused a noticeable decline in the population?	

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Consideration	Criteria	Clarifying Questions	Ranking
Human Impact	2* - Discards: Are a bycatch species that cannot be returned to the water with a high rate of survival.	Is it returned to the water as a discard in a fishery?	1
		Is not expected to have a high rate of survival after being returned to the water?	1
		Has its capture in a fishery caused a noticeable decline in the population?	
Human Impact	3* – Disturbance: Species that suffer reduced survival or reproductive output as a result of human disturbance.	Does a human activity cause members of this species to change its behavior in a way that decreases its reproductive success?	1
Human Impact	4 - Habitat Degradation: Suffers negative impacts through ecological or habitat changes associated with human activities other than fishing.	Is its critical habitat disappearing or being degraded as a result of NON-FISHING human activity?	1
		Is that habitat disappearing or being degraded as a result of FISHING activities?	1
		Is it suffering negative population effects as a result of the loss or degradation of their critical habitat?	
Human Impact	5 - Depressed population: Are special status species or its abundance is below the range of natural fluctuations.	Is the species special status?	1
		Is the species suffering negative population effects as the result of any human activity (such as removal, disturbance, or habitat loss or degradation)	1
Biological/ Life History	6* - Spatial Life History Traits: Has a low dispersal tendency or limited home range, which would make it a good candidate for spatial management	What is its potential for migration as an ADULT and adult home range?	1
		What is its potential for dispersal in the LARVAL state?	1

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Consideration	Criteria	Clarifying Questions	Ranking
Biological/ Life History	7* - Feature Association: Would benefit (i.e. abundance or biomass is expected to increase) due to the protection of features (such as geographic, oceanographic, or biological), which they are known to use (such as for foraging, breeding, nesting, or resting sites).	Would its population increase significantly if any of its critical habitats were included in an MPA? If yes, which habitats?	1
Biological/ Life History	8 - Other Life History Traits: Has life history traits, which would make it a good candidate for protection	At what age does it reach maturity?	1
		How fecund is it?	1
		What is its average lifespan?	1
Biological/ Life History	9 - Limited distribution: A significant portion of its distribution occurs within habitats represented in the study region.	Does a SIGNIFICANT PORTION of its distribution occur within the study region?	1
		Does ALL of its U.S. distribution occur solely within habitats found in the study area?	1
Biological/ Life History	10 - Ecological importance: Are the dominant species whose removal would cause major ecological change (food chain, diversity, etc), or are a key species that defines or characterizes a habitat type.	Is it the dominant species in its ecosystem? Would its removal cause major ecological change?	1
		Is it a key species that defines or characterizes a habitat type?	1

Criteria and information were compiled by the Santa Monica Bay Restoration Commission in conjunction with MLPA staff.

*Criteria denoted by an asterisk indicate criteria that are an initial filter and a score of “1” must be achieved in one of the Human Impacts categories with an asterisk and one of the Biological/Life History categories with an asterisk.

Criteria that have been formatted with a strike through are criteria that are subsumed under 5 – depressed populations. These were left in this document to initiate SAT discussion around these criteria.