

EVALUATION CRITERIA FOR EXISTING CENTRAL COAST MPAS

	<u>How measured?</u>	<u>Proposed Benchmark / Metric</u>	<u>Total amount in Region</u>	Big Creek SMR	Atascadero Beach SMCA	Morro Beach SMCA	Pismo SMCA	Pismo-Oceano SMCA	Vandenberg SMR	Data Sources
<b>REPRESENTATIVE HABITATS</b>										
<b>Intertidal</b>										
Sandy beaches	Linear	Amount in MPA/Region Total								
Rocky intertidal	Linear	Amount in MPA/Region Total								
Coastal marsh	Linear	Amount in MPA/Region Total								
Tidal flats	Linear	Amount in MPA/Region Total								
<b>Seagrass beds (0-30m): Surfgrass</b>	Linear	Amount in MPA/Region Total		2.64 nm2	0	0	0	0	5.15 nm2	Minerals Management Service/Tenera Inc.
<b>Seagrass beds (0-30m): Eelgrass</b>	Area	Amount in MPA/Region Total								
<b>Soft bottom</b>										
0-30 meters	Area	Amount in MPA/Region Total								
30-100 meters	Area	Amount in MPA/Region Total								
100-200 meters	Area	Amount in MPA/Region Total								
>200 meters	Area	Amount in MPA/Region Total								
<b>Rocky reef; hard bottom</b>										
0-30 meters	Area; Type if known	Amount in MPA/Region Total								
30-100 meters	Area; Type if known	Amount in MPA/Region Total								
100-200 meters	Area; Type if known	Amount in MPA/Region Total								
>200 meters	Area; Type if known	Amount in MPA/Region Total								
<b>Kelp forest (0-30m)</b>										
<b>1989 Kelp Data</b>	Area; Type	Amount in MPA/Region Total		0.27nm2	0	0	0	0	0	CDFG Kelp 1989 aerial survey
<b>1999 Kelp Data</b>	Area; Type	Amount in MPA/Region Total		0.05nm2	0	0	0	0	0	CDFG Kelp 1999 aerial survey
<b>2002 Kelp Data</b>	Area; Type	Amount in MPA/Region Total		0.21nm2	0	0	0	0	0	CDFG Kelp 2002 aerial survey
<b>2003 Kelp Data</b>	Area; Type	Amount in MPA/Region Total		0.13nm2	0	0.01nm2	0	0	<0.01nm2	CDFG Kelp 2003 aerial survey
<b>Pinnacles</b>										
0-30 meters	Count	Amount in MPA/Region Total								
30-100 meters	Count	Amount in MPA/Region Total								
100-200 meters	Count	Amount in MPA/Region Total								
>200 meters	Count	Amount in MPA/Region Total								
<b>Submarine canyon</b>										
0-30 meters	Area	Amount in MPA/Region Total								
30-100 meters	Area	Amount in MPA/Region Total								
100-200 meters	Area	Amount in MPA/Region Total								
>200 meters	Area	Amount in MPA/Region Total								
<b>Freshwater plume</b>	Presence/Absence	Amount in MPA/Region Total								
<b>Retention area</b>	Presence/Absence	Amount in MPA/Region Total								
<b>Upwelling cell</b>	Presence/Absence	Amount in MPA/Region Total								
<b>SIZE AND SPACING GUIDELINES</b>										
Area	Area	N/A	N/A	1.71nm2	4.78nm2	5.15nm2	0.06nm2	10.04nm2	1.87nm2	GIS analysis
Shoreline length	Straight length alongshore	2.5 to 11 nm	N/A	1.9nm	1.4nm	1.7nm	0.33nm	3.3nm	3.2nm	Nautical Chart
Distance Between	Straight distance to next MPA north and south	27 to 54 nm	N/A	5nm N, 53nm S	53nm N, 4nm S	4nm N, 15nm S	15nm N, 5nm S	5nm N, 22nm S	22nm N, 27nm S	GIS analysis
Shore to deep water	Depth range (average)	N/A	N/A	0-91m (29.2m)	0-72m (39.7m)	0-74m (39.0m)	0-3m (1.5m)	0-41m (23.9)	0-18m (12.4m)	Legal boundary; GIS analysis; Bathymetry
Offshore extent	Maximum linear distance offshore	N/A	N/A	1.0nm	3nm	3nm	1,000 feet	3nm	0.75nm	Legal boundary; Nautical Chart

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<b>CCRSg DESIGN CONSIDERATIONS</b>										
Minimize socio-economic impacts, and optimize positive socio-economic impacts for all users, to the extent possible, while following the Master Plan Framework design guidelines for the establishment of regional MPA network components.	Assess potential negative and positive impacts	?								
To the extent possible, site MPAs to prevent fishing effort shifts that would result in serial depletion.	Determine potential for effort shifts	Assess pre-MPA level of fishing								
Incorporate existing state and federal fishery management areas, to the extent possible, when designing new MPAs or modifying existing ones.	Compare MPA extent to other management measures	Percent overlap with year-round protected RCA boundary								
Protect populations of 19 finfish species per the objectives of the state's Nearshore Fishery Management Plan.	Are Nearshore FMP species protected by regulations and present in area?	# of the 19 nearshore finfish protected	19	19 (all protected)	0 (finfish take allowed)	19 (all protected)	Title 14, CCR			
Protect populations of red and black abalone in order to assist in their recovery per the objectives of the state's draft Abalone Recovery and Management Plan.	Are red and black abalone present?	Assess presence of 2 species	2	2	0	0	0	0	2	Title 14, CCR
To the extent possible, site MPAs adjacent to terrestrial federal, state, county, or city parks, marine laboratories, or other "eyes on the water" to facilitate management, enforcement, and monitoring.	Compare MPA locations to terrestrial protected areas, research institutions, etc	Assess coastal protection and potential partners	N/A	Landels-Hill Big Creek Reserve (on site manager)	?	?	?	?	Vandenberg AFB - Access Restricted	GIS
To the extent possible, site MPAs to facilitate use of volunteers to assist in monitoring and management.	Compare MPA locations to existing program areas	Assess presence of existing volunteer programs								
To the extent possible, site MPAs to take advantage of existing long-term monitoring studies.	Compare MPA locations to existing program areas	Assess presence of existing monitoring sites								
In evaluating the siting of MPAs for the purpose of enhancing nonconsumptive recreational activities, considerations shall include the needs and interest of other users.	?									
In evaluating the siting of MPAs, considerations shall include the impact of existing water quality on MPAs and the impact MPAs may have on other regulations to improve water quality.	Compare MPA location with areas of known water quality impairment	Determine if existing water quality will impact MPA or vice versa								
<b>REGIONAL GOALS AND PROVISIONAL OBJECTIVES</b>										
<b>Goal 1. To protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.</b>										
Obj1. Protect areas of high species diversity and maintain species diversity and abundance, consistent with natural fluctuations, of populations in representative habitats.	Amount (area) of each habitat and presence of areas of biodiversity (Section 3.3 profile)	qualitative assessment of presence of areas of biodiversity significance; quantity of each habitat								
Obj2. Protect areas with diverse habitat types in close proximity to each other.	habitats present; area	#habitats from above present / area of MPA	26 habitats / 865 nm <sup>2</sup>							
Obj3. Protect natural size and age structure and genetic diversity of populations in representative habitats.	Assume take affects natural size and age structure. go by take regulations; list of species protected	Initial Review: Number of "key" species from SAT list protected. Longterm: Predicted differential change in size or age structure inside vs. outside MPA.	13 (Note: List beign revised, this is Aug 30 version)	12 - red & black abalone, black, blue, bocaccio, canary, copper, cowcod, olive, widow, and yelloweye rockfish, lingcod	0	0	0	0	7 - red & black abalone, black, blue, copper, and olive rockfish, lingcod	Title 14, CCR, SAT key species list, SAT species by depth
Obj4. Protect natural trophic structure and food webs in representative habitats.	Assume take affects natural size and age structure. go by take regulations; list of species protected	Initial Review: Number of "key" species from SAT list protected. Longterm: Predicted differential change in size or age structure inside vs. outside MPA.	13 (Note: List beign revised, this is Aug 30 version)	12 - red & black abalone, black, blue, bocaccio, canary, copper, cowcod, olive, widow, and yelloweye rockfish, lingcod	0	0	0	0	7 - red & black abalone, black, blue, copper, and olive rockfish, lingcod	Title 14, CCR, SAT key species list, SAT species by depth

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Obj5. Protect ecosystem structure, function, integrity and ecological processes to facilitate recovery of natural communities from perturbations both natural and human-induced.	Act states that no-take reserves do this	Is the area no take?	N/A	Yes	No	No	No	No	Yes	MPA Designation
<b>Goal 2. To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.</b>										
Obj1. Help protect or rebuild populations of rare, threatened, endangered, depleted, or over fished species, where identified, and the habitats and ecosystem functions upon which they rely.	Presence of species of "key" species from SAT list.	Number of "key" species present	13 (Note: List beign revised, this is Aug 30 version)	12 - red & black abalone, black, blue, bocaccio, canary, copper, cowcod, olive, widow, and yelloweye rockfish, lingcod	0	0	0	0	7 - red & black abalone, black, blue, copper, and olive rockfish, lingcod	Title 14, CCR, SAT key species list, SAT species by depth
Obj2. Protect larval sources and enhance reproductive capacity of species most likely to benefit from MPAs through retention of large, mature individuals.	Assume take affects natural size and age structure. go by take regulations; list of species protected	Number of "key" species present	13 (Note: List beign revised, this is Aug 30 version)	12 - red & black abalone, black, blue, bocaccio, canary, copper, cowcod, olive, widow, and yelloweye rockfish, lingcod	0	0	0	0	7 - red & black abalone, black, blue, copper, and olive rockfish, lingcod	Title 14, CCR, SAT key species list, SAT species by depth
Obj3. Protect selected species and the habitats on which they deped while allowing the harvest of migratory, highly mobile, or other species where appropriate through the use of State Marine Conservation Areas and State Marine Parks.	Does the MPA meet objective 1 and allow surface fishing? / summarize regulations	N/A	N/A	No - Surface fishing not allowed	Objective 1 not met	Objective 1 not met	Objective 1 not met	Objective 1 not met	No - Surface fishing not allowed	Title 14, CCR, SAT key species list, SAT species by depth
<b>Goal 3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbances, and to manage these uses in a manner consistent with protecting biodiversity.</b>										
Obj1. Ensure some MPAs are close to population centers, research and education institutions, and areas of traditional nonconsumptive recreational use, and are accessible for recreational, educational, and study opportunities.	Distance to :Pop centers: Sta Cruz, Monterey, Moss Landing, Morro Bay, Avila Beach, Pismo; Distance to Research /Educational inst. access values such as parking, entry fees, facilities available.	Distance from pop centers and educational/ research instituions	N/A	38 nm to Monterey, Public Access prohibited, some onsite facilities for researchers	Adjacent to Morro Bay, Public beach access	Adjacent to Morro Bay, Public beach access	Adjacent to Pismo Beach, Public Beach Access	8 nm to Pismo Beach, Access?	40 nm to Pismo Beach, 50 nm to Santa Barbara, No public access, research access on limited basis	Nautical chart
Obj2. Based upon identified scientific study objectives, both basic and applied, replicate as necessary appropriate MPA designations, habitats or control areas (including areas open to fishing) to enhance the likelihood of scientifically valid studies.	Number of each type of MPA and indication of habitat replication inside and outside	List habitats that are replicated; identify which are not								
Obj3. Develop collaborative scientific monitoring and research projects evaluating MPAs that link with classroom science curricula, volunteer dive programs, and fishermen of all ages, and identify participants.	Do any of these MPAs have these programs? (PISCO, CRANE, etc)	Assess programs present	N/A	1 PISCO, 3 or more DFG Old Permanent Transects	0	0	0	0	DFG Abalone Intertidal Transects	
Obj4a. Protect or enhance consumptive recreation near state marine reserves and near or within other MPAs by increasing total abundance and individual sizes of previously fished populations within MPAs and increasing size and quantity of catch near state marine reserves and near or within other MPAs.	Short Term: Document most popular recreational species in area; List species subject to protection; Longterm: Measure relative change in size/abundance inside and near MPAs; Measure size and quantity of catch near SMRs and inside MPAs.	Initial Review: List of previously fished species protected; Longterm: Predicted differential change in size or age structure based on change inside vs. outside. Increase in catch/size near SMRs and inside MPAs								
Obj4b. Protect or enhance non-consumptive recreational experiences within and near MPAs, by maintaining minimal human impacts on the ecosystem within MPAs and increasing total populations and individual size of previously fished populations within MPAs.	Short Term: List species subject to protection; Longterm: Document attributes of areas desired by non-consumptive activities; measure relative change in size/abundance inside and near MPAs	Initial Review: List of previously fished species protected; Longterm: Predicted differential change in size or age structure based on change inside vs. outside. Increased level of user satisfaction								

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Obj5. Improve public outreach related to MPAs through the use of docents, improved signage, and production of an educational brochure for central coast MPAs.	What is currently happening w/ these MPAs; signage, brochure, etc?	Assess current outreach								
<b>Goal 4. To protect marine natural heritage, including protection of representative and unique marine life habitats in central California waters, for their intrinsic value.</b>										
Obj1. Include within at least one MPA the following habitat types: estuaries, heads of submarine canyons, pinnacles, upwelling centers, and larval retention areas.	Habitat amounts or presence	Amount of unique habitats in MPA relative to study region								
Obj2. Protect representatives of all marine habitats identified in the MLPA or the Master Plan Framework across a range of depths.	Habitat amounts or presence	Gap analysis of habitat amounts in MPA relative to study region								
<b>Goal 5. To ensure that central California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.</b>										
Obj1. For all MPAs in the region, develop objectives, a long-term monitoring plan that includes standardized biological and socioeconomic monitoring protocols, and a strategy for MPA evaluation, and ensure that each MPA objective is linked to one or more regional objectives.	Presence of MPA-specific objectives; Presence of monitoring plan/program; Presence of evaluation strategy	Assess current objectives, monitoring, and evaluation								
Obj2. In developing alternative MPA proposals, consider existing state and federal programs, including but not limited to those related to water quality, fisheries management, species recovery, and those of the Monterey Bay National Marine Sanctuary.	N/A									
Obj3. Develop regional management and enforcement measures, including cooperative enforcement agreements, adaptive management, and jurisdictional maps, which can be effectively used, adopted statewide, and periodically reviewed.	N/A									
Obj4. To the extent possible, design MPAs boundaries that facilitate ease of public recognition and ease of enforcement.	Query enforcement: are existing boundaries recognizable	Report on enforcement concerns	N/A	prefer straight line offshore as opposed to depth contour	prefer straight line offshore as opposed to distance	prefer straight line offshore as opposed to distance	Very small area difficult to enforce	prefer straight line offshore as opposed to distance	prefer straight line offshore as opposed to depth contour	DFG Staff
Obj5. To the extent possible, effectively utilize scientific guidelines in the Master Plan Framework, including size and spacing of MPAs, in the overall design of individual MPAs.	Size, spacing	Report out on size and spacing	N/A	Size - No Spacing - North Close, South Far	Size - No Spacing - North Far, South Close	Size - No Spacing - Close	Size - No Spacing - Close	Size - Yes Spacing - Close	Size - Yes Spacing - Close	Nautical Chart: GIS
<b>Goal 6. To ensure that the central coast's MPAs are designed and managed, to the extent possible, as a component of a statewide network.</b>										
Obj1. To the extent possible, effectively utilize scientific guidelines in the Master Plan Framework, including those related to size and spacing of MPAs, in the overall design of the central coast MPA network component.	Size, spacing	Report out on size and spacing	N/A	Size - No Spacing - North Close, South Far	Size - No Spacing - North Far, South Close	Size - No Spacing - Close	Size - No Spacing - Close	Size - Yes Spacing - Close	Size - Yes Spacing - Close	Nautical Chart: GIS
Obj2. Develop a regional review and evaluation of implementation effectiveness to determine if regional MPAs are an effective component of a statewide network	N/A; future									
Obj3. Develop a mechanism to coordinate with future MLPA Regional Stakeholder Groups in other regions to ensure that the statewide MPA network meets the goals of the MLPA.	N/A; future									