

## FORM FOR DRAFT MPA ARRAYS

Please provide the following information for your draft "MPA Arrays". Note that your draft arrays should meet ALL of the requirements of the MLPA for the Central Coast study region.

### **MPA ARRAY NAME:**

Fishermen's Network (Fishermen's CFC Array)

### **PROPOSERS (Note: these should be GROUP, not individual concepts; list all names of proposers):**

Core area 1 (N. Monterey Bay) – Howard Egan, David Crabbe

Core area 2 (Monterey deep – P.Grove) – Dave Edlund, David Crabbe

Core area 3 ((Carmel – Pt. Lobos) – David Crabbe, Dave Edlund

Core area 4 (JP Burns – Big Creek) – Tom Hafer, Eric Endersby

Core area 5 (San Simeon – Morro Bay) – Tom Hafer, Rick Algert

Core area 6 (Diablo – Pismo/Oceano) – Rick Algert, Eric Endersby

Core area 7 (Vandenberg) – Tom Capen, Tom Hafer

### **NUMBER AND TYPE OF MPA CONCEPTS IN ARRAY (EG. 5 SMRS, 0 SMPS, 8 SMCAS):**

13 SMRs, 0 SMPs, 16 SMCAs

### **COMMENTS/RATIONALE:**

The approach used by the CFC stakeholders was to develop closely spaced combinations of MPAs with different protection levels that result in seven large 'core' areas that are intended to provide the majority of the protection to adult populations. These core areas are sited and spaced to assist the dispersal and retention of important bottom dwelling fish and invertebrates. These combinations are intended to maximize the area protected for the resident species that are likely to be most benefited from MPAs, while preserving important existing social, economic and recreational uses. The core areas have an average size of 17 sq nm and an average spacing of 21 nm and they comprise 121 sq nm of the total 152.6 sq nm in the Draft Proposal. Five of our core areas have MPAs extending from the shore to the edge of state waters and one is sited adjacent to a proposed federal no trawl zone providing continuous protection to benthic organisms from the shore to 50 nm offshore. We have also protected a very large area (39 sq nm) of the Monterey Submarine Canyon and placed extensive alongshore, intertidal reserves at Ano Nuevo, Sand Hill Bluff and Pacific Grove. The CFC Proposal has 29 MPAs and preliminary evaluations show that most of the common habitat types in the Central Region have more than 5 replicates.

The CFC recognizes that there is considerable controversy, and little scientific information available, concerning the relative merits of no take MPAs vs. MPAs that allow the take of non-resident predators, non-resident forage species, or high value resident invertebrates. There is also little information available regarding the merits of different sized MPAs for resident California fishes. The CFC Proposal therefore includes a variety of protection levels and a wide and balanced range of

MPA sizes; 7 MPAs are less than 1 sq nm, 5 are between 1-2 sq nm, 7 are between 2-5 sq nm, 5 are between 5-10 sq nm and 5 are larger than 10 sq nm. The CFC intends to actively participate in research and efforts to acquire funding for studies to determine the effects of size and protection level on the performance of MPAs in California.

**FORM FOR DRAFT MPA ARRAYS**

**MPA ARRAY NAME:**

Fishermen's Network  
 For details, see attached Excel matrix.

**Provide ALL the information listed below for EVERY MPA concept included in the array:**

MPA Concept Name (use name from Master List or MPA_DST)	MPA Concept ID (see ID number in master list)	Is this an Unmodified Existing State MPA? A MPA concept in the Master List? Or a NEW/Modified concept that still needs to be included in the Master List?	Type (SMR, SMP, SMC A, SC)	Disallowed Uses (be specific)	Goals/Objectives/ Design Criteria this MPA contributes toward
Vandenberg Ecological Reserve (VandenbergEcologicalReserve_SMR_Group1103_CFC)	39	Existing State MPA	SMR	No take. No disturbance of bottom; no boats, diving or other use (boat transit only); public entry restricted. Existing MOU with Vandenberg AFB allows all uses necessary for VAFB's national defense mission.	DC1, DC3, DC4, DC5, DC7, DC8, IC4, G101, G102, G103, G104, G201, G202, G302, G401, G501, G502, G6
Vandenberg Zone 4 Conservation Area (VandenbergZone4_SMCA_Group1103_CFC)	999	New/modified concept	SMC A	SMCA prohibits the take of finfish and invertebrates EXCEPT for recreational and commercial fishing for salmon and commercial fishing for Dungeness and rock crab. Recreational fishing from shore for finfish is allowed.	DC1, DC3, DC4, DC5, DC6, DC7, DC8, DC9, DC10, IC4, G101, G102, G103, G104, G201, G202, G203, G302, G304, G401, G402, G501, G502, G6

Vandenberg Zone 4 Reserve (VandenbergZone 4_SMR_Group1103_CFC)	999	New/modified concept	SMR	No take. No disturbance of bottom; no boats, diving or other use (boat transit only); public entry restricted. Existing MOU with Vandenberg AFB allows all uses necessary for VAFB's national defense mission.	DC1, DC3, DC4, DC5, DC6, DC7, DC8, DC9, DC10, IC4, G101, G102, G103, G104, G201, G202, G302, G501, G502, G6
Pismo-Oceano Pismo Clam Conservation Area (Pismo-Oceano_SMCA_Group1103_CFC)	999	New/modified concept	SMCA	SMCA prohibits take of pismo clams, worms, and other intertidal invertebrates. Other existing uses are allowed.	DC1, DC10, G105, G2, G203, G301, G402, G501, (pismo invert closure) DC1, DC3, DC7, G2, G203, G301, G402
Avila Harbor Conservation Area (AvilaHarbor_SMCA_Group1103_CFC)	999	New/modified concept	SMCA	SMCA prohibits commercial take of fish and invertebrates EXCEPT for live bait (coastal pelagic species) and kelp harvest. Commercially caught fish onboard a vessel while traveling through the SMCA to offload is allowed. Recreational fishing is allowed.	DC1, DC3, DC4, DC7, DC8, DC10, IC4, G101, G102, G201, G301, G302, G304, G401, G502
Diablo Canyon Conservation Area (Reserve) (DiabloCanyon_SMCA_Group1103_CFC)	999	New/modified concept	SMCA	All take prohibited except for larval/fish entrainment by Diablo Canyon Nuclear Power Plant	DC1, DC3, DC4, DC7, DC9, DC10, IC4, G101, G102, G103, G104, G105, G201, G202, G301, G302, G303, G304, G401, G402, G501, G502
Morro Beach SMCA (MorroBeach_SMCA_Group1103_CFC)	999	New/modified concept	SMCA	SMCA prohibits the take of clams, Diopatra worms, sand dollars, giant kelp and bull kelp. Other existing uses are allowed.	DC10, G203, G301
Morro Bay Harbor Conservation	999	New/modified concept	SMCA	SMCA prohibits commercial take of fish	DC1, DC3, DC4, DC7, DC10, IC4,

Area (MorroBayHarbor _SMCA_Group11 03_CFC)				and invertebrates EXCEPT for live bait (coastal pelagic species). Commercially caught fish onboard a vessel while traveling through the SMCA is allowed. Recreational fishing is allowed EXCEPT take of intertidal invertebrates is prohibited.	G101, G102, G103, G104, G301, G302, G304, G401, G502
Atascadero Beach SMCA (AtascaderoBeac h_SMCA_Group1 103_CFC)	999	New/modifie d concept	SMC A	SMCA prohibits the take of clams and Diopatra worms. Take of other marine resources is allowed.	DC10, G203, G301
Cambria SMCA (SMR) (Cambria_SMCA _Group1103_CF C)	999	New/modifie d concept	SMR	SMCA prohibits the take of finfish and invertebrates EXCEPT for recreational and commercial fishing for salmon.	DC10, G101, G102, G103, G104, G105, G201, G203, G301, G302, G302, G303, G304, G401, G402, G501, G502, G503
San Simeon (Leffingwell) Conservation Area (SanSimeon- Leffingwell_SMC A_Group1103_C FC)	999	New/modifie d concept	SMR	Recreational fishing only. Commercial nearshore fishing is prohibited (except cmmercial skiffs can launch from Leffingwell Landng and traverse through the SMCA.)	DC1, DC4, DC10, G101, G102, G103, G201, G301, G302, G304, G401, G502
Big Creek Ecological Reserve	?	Existing State MPA	SMR	No take, no disturbance of bottom, no swimming, no diving, no boating except to pass through the area. Scientific access by permit only.	DC1, DC3, DC4, DC6, DC7, DC8, DC9, IC1, G101, G102, G103, G104, G105, G201, G202, G301, G304, G401, G402, G501, G502
Julia Pfeiffer Burns Conservation	999	New/modifie d concept	SMC A	SMCA prohibits the take of finfish and invertebrates EXCEPT for recreational	DC1, DC2, DC4, DC6, DC7, DC8, DC9, IC1, G101,

Area (JuliaPfeifferBurns_SMCA_Group1103_CFC)				and commercial fishing for salmon, and commercial fishing for spot prawns and coastal pelagic species (including squid).	G102, G103, G104, G105, G201, G202, G301, G304, G401, G402, G501, G502
Julia Pfeiffer Burns Reserve (JuliaPfeifferBurns_SMR_Group1103_CFC)	999	New/modified concept	SMR	No take allowed	DC4 DC7, DC 9, G101, G102, G2, G3, G4, G502
Point Lobos Reserve (PointLobos_SMR_Group1103_CFC)	999	New/modified concept	SMR	No take allowed	DC10, G101, G102, G103, G104, G105, G201, G301, G302, G303, G304, G401, G502, G503
Pt. Lobos Conservation Area (PointLobos_SMCA_Group1103_CFC)	999	New/modified concept	SMCA	SMCA prohibits the take of finfish and invertebrates EXCEPT for recreational and commercial fishing for salmon, and commercial fishing for spot prawns.	DC10, G101, G102, G103, G201, G203, G301, G302, G304, G401, G402, G502
Hopkins Reserve (Hopkins_SMR_Group1103_CFC)	999	Existing State MPA	SMR	No take allowed	DC4, DC7, DC8, DC9, G101, G102, G103, G104, G105, G201, G202, G301, G302, G303, G502
Pacific Grove Intertidal Reserve (PacificGroveIntertidal_SMR_Group1103_CFC)	999	New/modified concept	SMR	No take allowed	DC5, DC7, DC8, DC9, DC10, G101, G103, G104, G105, G202, G301, G302, G303, G304, G402, G502, G503

Ed Ricketts Conservation Area (EdRicketts_SMC A_Group1103_CFC)	999	New/modified concept	SMC A	SMCA prohibits take of all marine life EXCEPT for kelp harvesting, recreational hook & line fishing for finfish and recreational spearfishing for halibut and highly migratory species. No take for scientific or educational purposes is allowed.	DC5, DC7, DC8, DC10, G103, G203, G301, G302, G402, G503
Monterey Canyon No-Trawl Conservation Area (MontereyCanyonNoTrawl_SMCA_Group1103_CFC)	161	New/modified concept	SMC A	SMCA prohibits take of marine species by trawl gear. Other recreational and commercial uses are allowed.	DC2, DC6, DC7, DC9, DC10, G101, G102, G201, G203, G301, G302, G303, G401, G402, G501, G502, G503
Monterey Submarine Canyon No Bottom Contact SMCA (MontereySubCanyonNoBC_SMC A_Group1103_CFC)	162	New/modified concept	SMC A	SMCA prohibits take of finfish and invertebrates EXCEPT for recreational and commercial fishing for salmon, coastal pelagic species and highly migratory species.	DC2, DC6, DC7, DC9 DC10, G101, G102, G103, G104, G105, G201, G203, G301, G302, G303, G401, G402, G501, G502, G503
Elkhorn Slough Reserve (ElkHornSlough_SMR_Group1103_CFC)	28	New/modified concept	SMR	No take is allowed both through State regs. and designation as Fed. National Estuarine Research Reserve	DC7, DC8, DC9, DC10, G101, G102, G103, G104, G105, G201, G202, G301, G302, G303, G401, G402, G502
Sand Hill Bluff Intertidal Reserve (SandHillBluffIntertidal_SMR_Group1103_CFC)	999	New/modified concept	SMR	No take allowed	DC5, DC7, DC8, DC9, DC10, G101, G103, G304, G305, G202, G301, G302, G303, G304, G402, G502, G503

Greyhound Rock Reserve (GreyHoundRock_SMR_Group1103_CFC)	156	New/modified concept	SMR	No take allowed	DC1, DC2, DC3, DC4, G101, G102, G103, G104, G105, G201, G202, G203, G301, G304, G401, G402, G502
Greyhound Rock Conservation Area (GreyHoundRock_SMCA_Group1103_CFC)	99	New/modified concept	SMCA	SMCA prohibits the take of finfish and invertebrates EXCEPT for recreational and commercial fishing for salmon, coastal pelagic species (including squid) and Dungeness crab. Recreational fishing from shore for finfish is allowed.	DC1, DC2, DC3, DC4, G101, G102, G103, G104, G105, G201, G202, G203, G301, G304, G401, G402, G502
Ano Nuevo Reserve (AnoNuevo_SMR_Group1103_CFC)	999	New/modified concept	SMR	No take allowed out to 100 ft. beyond low-tide mark.	DC1, DC2, DC3, DC4, G1, G202, G301, G303, G304



**DRAFT ANALYSIS OF INITIAL CANDIDATE MPA ARRAY FOR THE CENTRAL COAST STUDY REGION (Fishermen's Array)**

ARRAY NAME: Fishermen's Array

Date Received: 11/4/05

	How measured?	Total amount in Region	Total percent of Region	Amount in State Marine Reserves	Percent of Total in SMRs	Amount in State Marine Parks	Percent of Total in SMPs	Amount in State Marine Conservation Area	Percent of Total in SMCA's	Amount in all existing MPAs in region	Percent of Total in existing MPAs	Spatial Data Source
<b>Area</b>	Area (mi <sup>2</sup> )	1150.01	100%	21.08	1.83%	0.00	0.00%	179.15	15.58%	200.23	17.41%	GIS analysis
<b>Number of MPAs</b>	Count		NA	12		0		16		28		GIS analysis
<b>HABITATS</b>												
<b>Intertidal</b>												
Sandy or gravel beaches	Linear (mi)	223.66	52.3%	23.42	10.47%	0.00	0.00%	25.14	11.24%	48.56	21.71%	NOAA-ESI 2002
Rocky intertidal and cliff	Linear (mi)	209.21	48.9%	37.26	17.81%	0.00	0.00%	17.24	8.24%	54.50	26.05%	NOAA-ESI 2002
Coastal marsh	Linear (mi)	36.53	8.5%	16.54	45.28%	0.00	0.00%	0.29	0.78%	16.83	46.06%	NOAA-ESI 2002
Tidal flats	Linear (mi)	23.48	5.5%	13.62	58.03%	0.00	0.00%	0.20	0.84%	13.82	58.86%	NOAA-ESI 2002
<b>Seagrass beds (0-30m): Surfgrass</b>	Linear (mi)	161.09	37.7%	20.88	12.96%	0.00	0.00%	8.86	5.50%	29.74	18.46%	Minerals Management Service / TENERA Inc.
<b>Seagrass beds (0-30m): Eelgrass</b>	Area (mi <sup>2</sup> )	1.07	0.1%	1.04	97.10%	0.00	0.00%	0.00	0.00%	1.04	97.10%	Elkhorn Slough Foundation; Morro Bay National Estuary Program
<b>Estuary</b>	Area (mi <sup>2</sup> )	7.90	0.7%	2.97	37.58%	0.00	0.00%	0.00	0.01%	2.97	37.59%	
<b>Fine-scale Soft bottom</b>												
Fine-scale based on Kvitek et al multibeam and sidescan sonar; available for only about 25% of the region												
0-30 meters	Area (mi <sup>2</sup> )	24.21	5.7%	1.59	6.55%	0.00	0.00%	2.61	10.77%	4.19	17.32%	Total amount is only that which has been mapped to date.
30-100 meters	Area (mi <sup>2</sup> )	93.72	21.9%	2.85	3.04%	0.00	0.00%	4.00	4.26%	6.85	7.31%	Total amount is only that which has been mapped to date.
100-200 meters	Area (mi <sup>2</sup> )	1.93	0.5%	0.00	0.00%	0.00	0.00%	0.23	11.95%	0.23	11.95%	Total amount is only that which has been mapped to date.
>200 meters	Area (mi <sup>2</sup> )	0.29	0.1%	0.00	0.00%	0.00	0.00%	0.00	0.69%	0.00	0.69%	Total amount is only that which has been mapped to date.
<b>Coarse-scale Soft bottom</b>												
Greene et al 2004; coarse scale data overestimates soft substrata												
0-30 meters	Area (mi <sup>2</sup> )	294.14	25.8%	34.20	11.63%	0.00	0.00%	34.20	11.63%	68.40	23.25%	Greene et al 2004
30-100 meters	Area (mi <sup>2</sup> )	575.78	50.6%	55.55	9.65%	0.00	0.00%	55.55	9.65%	111.09	19.29%	Greene et al 2004
100-200 meters	Area (mi <sup>2</sup> )	58.46	5.1%	15.03	25.71%	0.00	0.00%	15.03	25.71%	30.06	51.42%	Greene et al 2004
>200 meters	Area (mi <sup>2</sup> )	105.52	9.3%	42.06	39.86%	0.00	0.00%	42.06	39.86%	84.11	79.71%	Greene et al 2004
<b>Fine-scale Rocky reef; hard bottom</b>												
Fine-scale based on Kvitek et al multibeam and sidescan sonar; available for only about 25% of the region												
0-30 meters	Area (mi <sup>2</sup> )	20.16	4.7%	1.10	5.45%	0.00	0.00%	2.00	9.94%	3.10	15.40%	Total amount is only that which has been mapped to date.
30-100 meters	Area (mi <sup>2</sup> )	20.59	4.8%	1.45	7.06%	0.00	0.00%	1.22	5.91%	2.67	12.97%	Total amount is only that which has been mapped to date.
100-200m	Area (mi <sup>2</sup> )	0.40	0.1%	0.00	0.00%	0.00	0.00%	0.07	16.61%	0.07	16.61%	Total amount is only that which has been mapped to date.
>200 meters	Area (mi <sup>2</sup> )	0.01	< .01%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	Total amount is only that which has been mapped to date.

ARRAY NAME: Fishermen's Array

Date Received: 11/4/05

	How measured?	Total amount in Region	Total percent of Region	Amount in State Marine Reserves	Percent of Total in SMRs	Amount in State Marine Parks	Percent of Total in SMPs	Amount in State Marine Conservation Area	Percent of Total in SMCAs	Amount in all existing MPAs in region	Percent of Total in existing MPAs	Spatial Data Source
<b>Coarse-scale Rocky reef; hard bottom</b>												Greene et al 2004; coarse scale data underestimates hard substrata
0-30 meters	Area (mi <sup>2</sup> )	46.66	4.1%	6.05	12.97%	0.00	0.00%	6.05	12.97%	12.11	25.95%	Greene et al 2004
30-100 meters	Area (mi <sup>2</sup> )	26.78	2.4%	2.72	10.17%	0.00	0.00%	2.72	10.17%	5.45	20.34%	Greene et al 2004
100-200 meters	Area (mi <sup>2</sup> )	13.91	1.2%	10.13	72.78%	0.00	0.00%	10.13	72.78%	20.25	145.57%	Greene et al 2004
>200 meters	Area (mi <sup>2</sup> )	16.16	1.4%	11.88	73.51%	0.00	0.00%	11.88	73.51%	23.75	147.03%	Greene et al 2004
<b>Kelp forest</b>												
<b>1989 Kelp</b>	Area (mi <sup>2</sup> )	17.94	1.6%	0.42	2.35%	0.00	0.00%	2.22	12.35%	2.64	14.70%	1989 CDFG aerial survey
<b>1999 Kelp</b>	Area (mi <sup>2</sup> )	2.56	0.2%	0.12	4.79%	0.00	0.00%	0.35	13.81%	0.48	18.60%	1999 CDFG aerial survey
<b>2002 Kelp</b>	Area (mi <sup>2</sup> )	12.55	1.1%	0.62	4.91%	0.00	0.00%	2.22	17.65%	2.83	22.56%	2002 CDFG aerial survey
<b>2003 Kelp</b>	Area (mi <sup>2</sup> )	9.53	0.8%	0.58	6.04%	0.00	0.00%	1.36	14.24%	1.93	20.28%	2003 CDFG aerial survey
<b>Persistent Kelp</b>	Area (mi <sup>2</sup> ); present in 3 of 4 years	3.18	0.3%	0.17	5.38%	0.00	0.00%	0.79	24.73%	0.96	30.11%	Present in 3 of 4 CDFG aerial survey datasets
<b>Pinnacles *</b>												
0-30 meters	Count	76.00		34				9		43.00		Bathymetry data
30-100 meters	Count	218.00		42				29		71.00		Bathymetry data
100-200 meters	Count	27.00		*				2		2.00		Bathymetry data
>200 meters	Count	4.00		*				*		*		Bathymetry data
<b>Submarine canyon</b>												
0-30 meters	Area (mi <sup>2</sup> )	0.56	0.1%	0.01	2.12%	0.00	0.00%	0.18	30.98%	0.19	33.10%	Coarse-scale substrata (Greene et al 2004)
30-100 meters	Area (mi <sup>2</sup> )	4.42	0.4%	0.06	1.42%	0.00	0.00%	0.36	8.12%	0.42	9.54%	Coarse-scale substrata (Greene et al 2004)
100-200 meters	Area (mi <sup>2</sup> )	6.06	0.5%	0.01	0.17%	0.00	0.00%	1.93	31.80%	1.94	31.97%	Coarse-scale substrata (Greene et al 2004)
>200 meters	Area (mi <sup>2</sup> )	42.77	3.8%	0.00	0.00%	0.00	0.00%	28.53	66.69%	28.53	66.69%	Coarse-scale substrata (Greene et al 2004)

\* Pinnacle data extent is limited, asterick indicates either zero count or no data available

## FORM FOR DRAFT MPA ARRAYS

Please provide the following information for your draft "MPA Arrays". Note that your draft arrays should meet ALL of the requirements of the MLPA for the Central Coast study region.

### **MPA ARRAY NAME:**

SS\_ConProposalv1 (Conservation Array)

### **PROPOSERS (Note: these should be GROUP, not individual concepts; list all names of proposers):**

**Alternates listed with (A) following their names.**

D'Anne Albers  
Don Canestro  
Kaitilin Gaffney  
Gordon Hensley  
Kris Lindstrom  
Marla Morrissey  
Ron Massingill  
Mike Osmond (A)  
John Pearse  
Jesus Ruiz  
Robin Robinson  
Milos Radakovich  
Erin Simmons (A)  
Jim Webb (A)  
Steve Webster (A)  
Dan Davis (A)  
Marc Shargel (A)  
Steve Shimek (A)

### **NUMBER AND TYPE OF MPA CONCEPTS IN ARRAY (EG. 5 SMRS, 0 SMPS, 8 SMCAS):**

17    **SMRS**  
3     **SMPS**  
8     **SMCAS**

**COMMENTS/RATIONALE:**

THIS PROPOSED NETWORK OF MPAS WAS CAREFULLY DESIGNED WITH INPUT FROM RSG MEMBERS, SCIENTISTS, FISHERMEN, DIVERS, EDUCATORS AND COMMUNITY MEMBERS TO:

- MEET THE REQUIREMENTS OF THE MLPA,
- COMPLY WITH THE SCIENTIFIC GUIDELINES CONTAINED IN THE MPF,
- FILL GAPS IDENTIFIED IN THE EVALUATION OF EXISTING CENTRAL COAST MARINE PROTECTED AREAS, AND
- MINIMIZE SOCIO-ECONOMIC CONCERNS.

THIS PROPOSED NETWORK IS ANCHORED BY FIVE SPECIAL AREAS, OR SUBREGIONS, THAT MEET VIRTUALLY ALL OF THE MLPA'S ECOLOGICAL GOALS AND OBJECTIVES: ANO NUEVO, POINT LOBOS, POINT SUR, PIEDRAS BLANCAS AND POINT CONCEPTION. THESE AREAS HAVE BEEN IDENTIFIED BY SCIENTISTS AND STAKEHOLDERS AS HAVING EXTREMELY HIGH CONSERVATION VALUES, UNIQUE OCEANOGRAPHIC CONDITIONS, EXTENSIVE SPECIES AND HABITAT DIVERSITY, AND STRONG NATURAL HERITAGE VALUES. BECAUSE OF THEIR OBVIOUS IMPORTANCE, THESE AREAS HAVE BEEN IDENTIFIED AS WARRANTING MPA PROTECTION BY BOTH THE ORIGINAL MLPA MASTER PLAN SCIENCE TEAM AND THE NATURAL RESOURCES DEFENSE COUNCIL. THEY ARE ALSO INCLUDED IN OCEANA'S LIST OF VERY IMPORTANT ECOLOGICAL AREAS.

THIS PROPOSED NETWORK ALSO INCLUDES SMRS THAT REPLICATE REPRESENTATIVE HABITATS ACROSS A RANGE OF DEPTHS AS REQUIRED BY THE MLPA. SMRS ARE PROPOSED TO PROTECT MAJOR ESTUARIES (ELKHORN AND MORRO BAY), UPWELLING CENTERS AT ANO NUEVO, POINTS AND SUBMARINE CANYONS (PORTUGUESE LEDGE, POINT LOBOS, POINT SUR, PARTINGTON AND BIG CREEK), PINNACLES (POINT LOBOS, POINT SUR, PARTINGTON, BIG CREEK, PIEDRAS BLANCAS, POINT BOUCHON) AND OTHER IMPORTANT HABITAT TYPES.

THE NETWORK INCLUDES AREAS THAT ARE IMPORTANT FOR EDUCATION, PUBLIC ACCESS AND RECREATION, AND RESEARCH AND MONITORING. THIS PROPOSAL INCLUDES STATE MARINE PARKS DESIGNED TO ENHANCE RECREATIONAL USES AND REPLICATION OF HABITATS WITH DIFFERENT MPA STATUS TO FACILITATE COMPARISON OF FISHED AND UNFISHED SITES FOR MONITORING PURPOSES.

MPA BOUNDARIES WERE DRAWN TO FACILITATE EASE OF RECOGNITION AND ENFORCEMENT, TO INCLUDE A WIDE RANGE OF HABITAT TYPES AND DEPTHS, AND TO ACCOMMODATE CONSUMPTIVE INTERESTS WHERE POSSIBLE, CONSISTENT WITH THE GOALS AND OBJECTIVES OF THE MLPA. .

## FORM FOR DRAFT MPA ARRAYS

### MPA ARRAY NAME:

SS\_ConProposalv1

Provide ALL the information listed below for EVERY MPA concept included in the array:

MPA Concept Name (use name from Master List or MPA_DST)	MPA Concept ID (see ID number in master list)	Is this an Unmodified Existing State MPA? A MPA concept in the Master List? Or a NEW/Modified concept that still needs to be included in the Master List?	Type (SMR, SMP, SMC A, SC)	Disallowed Uses (be specific)	Goals/Objectives/Design Criteria this MPA contributes toward
SS_Pigeon2Franklinv3_SMR		NEW/Modified concept	SMR		Goal 1 – Obj. 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 1, 2 Goal 4 – 2 Goal 5 – 1, 3
SS_Franklin2AnoQuartermilev2_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2 Goal 2 – 1, 3 Goal 3 – 3 Goal 4 – 1, 2
SS_Ano_SMCA		NEW/Modified concept	SMCA	No squid or other small coastal pelagics (wetfish).	Goal 1 – 1,2,3,4,5 Goal 2 – 1,2,3 Goal 3 – 1 Goal 4 – 2 Goal 5 – 1, 2
SS_Davenport_SMCA		NEW/Modified concept	SMCA	No groundfish	Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2, 3 Goal 3 – 1 Goal 4 – 2 Goal 5 – 1,2
SS_BaldwinCr2NatBrid_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 2, 3 Goal 3 – 1, 2, 3, 4

					Goal 4 – 2 Goal 5 – 1
SS_OpalCliffs_SMCA		NEW/Modified concept	SMC A	No invertebrate collecting	Goal 1 – 1, 4 Goal 2 – 4 Goal 3 – 1, 3 Goal 4 – 2 Goal 5 – 1
SS_ElkhornSlough_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 1, 2 Goal 4 – 1, 2 Goal 5 – 1, 2
SS_SoquelHoleOceana_SMCA		NEW/Modified concept	SMC A	Salmon and albacore allowed	Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2, 3 Goal 3 – 1, 2, 3 Goal 4 – 1, 2 Goal 5 – 1, 2
SS_PortLedgeOceana_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 1, 2, 3 Goal 4 – 2 Goal 5 – 2
SS_ExpandedLobosv2_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 2 Goal 3 – 1, 2, 3, 4 Goal 4 – 1, 2 Goal 5 – 1
SS_ExpandedLobos_SMCA		NEW/Modified concept	SMC A	Salmon and spot prawn allowed	Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2, 3 Goal 3 – 1, 3 Goal 4 – 1, 2 Goal 5 – 1, 2
SS_PtSurv2_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 3 Goal 4 – 1, 2 Goal 5 – 2
SS_PartingtonCanyon1milev2_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 1, 2, 3, 4 Goal 4 – 2 Goal 5 – 1, 3
SS_PartingtonCanyon_SMCA		NEW/Modified concept	SMC A	Salmon and spot prawn allowed	Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 1, 3, 4 Goal 4 – 1, 2

					Goal 5 – 1, 3
SS_BigCreekv3_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 1, 2, 3 Goal 4 – 1, 2 Goal 5 – 1, 2, 3
SS_SalmonCreek_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2, 3 Goal 3 – 2, 4 Goal 4 – 1, 2 Goal 5 – 1, 3
SS_PiedrasBlancas_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 1, 2, 3 Goal 4 – 1, 2, 3
SS_Cambriav4_SMP		NEW/Modified concept	SMP	Commercial fishing	Goal 1 – 1, 2, 3, 4 Goal 2 – 1, 2, 3 Goal 3 – 1, 2, 3, 4 Goal 4 – 2 Goal 5 – 1, 3
SS_KenNorris_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2, 3 Goal 3 – 1, 2, 3 Goal 4 – 1, 2 Goal 5 – 1, 2
SS_Cambriav2_SMCA		NEW/Modified concept	SMC A	only salmon allowed	Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 1, 3, 4 Goal 4 – 1, 2 Goal 5 – 1, 3
SS_EsteroBluff_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2 Goal 2 – 3 Goal 3 – 1 Goal 4 – 2 Goal 5 – 2
<b>Morro Bay Estuary:</b> SS_MorroBayMain_SMCA SS_MorroEast_SMR SS_MorroSouth_SMR		NEW/Modified concept	SMC A SMR SMR		<b><u>SMP:</u></b> Goal 1 – 1, 2, 3, 4 Goal 2 – 1, 2, 3 Goal 3 – 1, 2, 3, 4 Goal 4 – 2 Goal 5 – 1, 3 <b><u>SMR(s):</u></b> Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 1, 2, 3 Goal 4 – 1, 2

					Goal 5 – 1
SS_Buchonv2_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2, 3 Goal 3 – 1, 2, 3 Goal 4 – 1, 2 Goal 5 – 1, 3
SS_PurisimaPRBO_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2 Goal 3 – 1, 2 Goal 4 – 2 Goal 5 – 1, 3
SS_PurisimaPRBO_SMP		NEW/Modified concept	SMP		Goal 1 – 1, 2, 3, 4 Goal 2 – 1, 2, 3 Goal 3 – 1, 2, 3, 4 Goal 4 – 2 Goal 5 – 1, 3
SS_Conception_SMR		NEW/Modified concept	SMR		Goal 1 – 1, 2, 3, 4, 5 Goal 2 – 1, 2, 3 Goal 3 – 1, 4 Goal 4 – 2 Goal 5 – 1, 3



**DRAFT ANALYSIS OF INITIAL CANDIDATE MPA ARRAY FOR THE CENTRAL COAST STUDY REGION (Conservation)**

ARRAY NAME: Conservation Array

Date Received: 11/4/05

	How measured?	Total amount in Region	Total percent of Region	Amount in State Marine Reserves	Percent of Total in SMRs	Amount in State Marine Parks	Percent of Total in SMPs	Amount in State Marine Conservation Area	Percent of Total in SMCAs	Amount in all existing MPAs in region	Percent of Total in existing MPAs	Spatial Data Source
<b>Area</b>	Area (mi <sup>2</sup> )	1150.01	100%	181.13	15.75%	30.22	2.63%	63.23	5.50%	274.58	23.88%	GIS analysis
<b>Number of MPAs</b>	Count		NA	19.00		3.00		6.00		28		GIS analysis
<b>HABITATS</b>												
<b>Intertidal</b>												
Sandy or gravel beaches	Linear (mi)	223.66	52.3%	36.03	16.11%	7.73	3.46%	7.50	3.35%	51.26	22.92%	NOAA-ESI 2002
Rocky intertidal and cliff	Linear (mi)	209.21	48.9%	48.34	23.11%	6.33	3.03%	5.01	2.39%	59.68	28.53%	NOAA-ESI 2002
Coastal marsh	Linear (mi)	36.53	8.5%	11.52	31.53%	2.52	6.88%	0.00	0.00%	14.03	38.41%	NOAA-ESI 2002
Tidal flats	Linear (mi)	23.48	5.5%	8.70	37.04%	4.04	17.22%	0.00	0.00%	12.74	54.26%	NOAA-ESI 2002
<b>Seagrass beds (0-30m): Surfgrass</b>	Linear (mi)	161.09	37.7%	30.79	19.12%	5.60	3.48%	4.36	2.71%	40.76	25.30%	Minerals Management Service / Tenera Inc.
<b>Seagrass beds (0-30m): Eelgrass</b>	Area (mi <sup>2</sup> )	1.07	0.1%	0.36	33.08%	0.71	66.16%	0.00	0.00%	1.07	99.25%	Elkhorn Slough Foundation; Morro Bay National Estuary Program
<b>Estuary</b>	Area (mi <sup>2</sup> )	7.90	0.7%	0.94	11.91%	1.95	24.73%	0.00	0.00%	2.90	36.65%	
<b>Fine-scale Soft bottom</b>												Fine-scale based on Kvitek et al multibeam and sidescan sonar; available for only about 25% of the region
0-30 meters	Area (mi <sup>2</sup> )	24.21	5.7%	3.77	15.59%	0.16	0.64%	0.00	0.00%	3.93	16.24%	Total amount is only that which has been mapped to date.
30-100 meters	Area (mi <sup>2</sup> )	93.72	21.9%	13.81	14.73%	0.40	0.43%	0.63	0.67%	14.84	15.83%	Total amount is only that which has been mapped to date.
100-200 meters	Area (mi <sup>2</sup> )	1.93	0.5%	0.27	14.10%	0.00	0.00%	0.23	11.69%	0.50	25.79%	Total amount is only that which has been mapped to date.
>200 meters	Area (mi <sup>2</sup> )	0.29	0.1%	0.01	1.93%	0.00	0.00%	0.00	0.69%	0.01	2.62%	Total amount is only that which has been mapped to date.
<b>Coarse-scale Soft bottom</b>												Greene et al 2004; coarse scale data overestimates soft substrata
0-30 meters	Area (mi <sup>2</sup> )	294.14	25.8%	37.07	12.60%	9.65	3.28%	3.53	1.20%	50.25	17.08%	Greene et al 2004
30-100 meters	Area (mi <sup>2</sup> )	575.78	50.6%	82.54	14.33%	14.73	2.56%	33.14	5.75%	130.40	22.65%	Greene et al 2004
100-200 meters	Area (mi <sup>2</sup> )	58.46	5.1%	10.77	18.42%	0.00	0.00%	3.59	6.14%	14.35	24.55%	Greene et al 2004
>200 meters	Area (mi <sup>2</sup> )	105.52	9.3%	21.97	20.83%	0.00	0.00%	14.79	14.01%	36.76	34.84%	Greene et al 2004
<b>Fine-scale Rocky reef; hard bottom</b>												Fine-scale based on Kvitek et al multibeam and sidescan sonar; available for only about 25% of the region
0-30 meters	Area (mi <sup>2</sup> )	20.16	4.7%	8.43	41.83%	0.95	4.72%	0.00	0.00%	9.38	46.55%	Total amount is only that which has been mapped to date.

ARRAY NAME: Conservation Array Date Received: 11/4/05

	How measured?	Total amount in Region	Total percent of Region	Amount in State Marine Reserves	Percent of Total in SMRs	Amount in State Marine Parks	Percent of Total in SMPs	Amount in State Marine Conservation Area	Percent of Total in SMCAs	Amount in all existing MPAs in region	Percent of Total in existing MPAs	Spatial Data Source
30-100 meters	Area (mi <sup>2</sup> )	20.59	4.8%	5.63	27.33%	0.27	1.31%	0.17	0.84%	6.07	29.48%	Total amount is only that which has been mapped to date.
100-200m	Area (mi <sup>2</sup> )	0.40	0.1%	0.03	7.05%	0.00	0.00%	0.07	17.37%	0.10	24.42%	Total amount is only that which has been mapped to date.
>200 meters	Area (mi <sup>2</sup> )	0.01	< .01%	0.00	7.55%	0.00	0.00%	0.00	0.00%	0.00	7.55%	Total amount is only that which has been mapped to date.
<b>Coarse-scale Rocky reef; hard bottom</b>												Greene et al 2004; coarse scale data underestimates hard substrata
0-30 meters	Area (mi <sup>2</sup> )	46.66	4.1%	10.37	22.22%	2.05	4.40%	4.90	10.49%	17.32	37.12%	Greene et al 2004
30-100 meters	Area (mi <sup>2</sup> )	26.78	2.4%	5.26	19.63%	0.27	1.00%	0.33	1.21%	5.85	21.85%	Greene et al 2004
100-200 meters	Area (mi <sup>2</sup> )	13.91	1.2%	4.75	34.13%	0.00	0.00%	1.72	12.33%	6.46	46.46%	Greene et al 2004
>200 meters	Area (mi <sup>2</sup> )	16.16	1.4%	4.95	30.65%	0.00	0.00%	1.21	7.47%	6.16	38.12%	Greene et al 2004
<b>Kelp forest</b>												
1989 Kelp	Area (mi <sup>2</sup> )	17.94	1.6%	4.94	27.51%	1.09	6.09%	0.06	0.31%	6.08	33.90%	1989 CDFG aerial survey
1999 Kelp	Area (mi <sup>2</sup> )	2.56	0.2%	0.60	23.63%	0.07	2.58%	0.00	0.12%	0.67	26.33%	1999 CDFG aerial survey
2002 Kelp	Area (mi <sup>2</sup> )	12.55	1.1%	4.18	33.33%	0.77	6.13%	0.04	0.29%	4.99	39.76%	2002 CDFG aerial survey
2003 Kelp	Area (mi <sup>2</sup> )	9.53	0.8%	2.98	31.24%	0.64	6.75%	0.00	0.02%	3.63	38.02%	2003 CDFG aerial survey
<b>Persistent Kelp</b>	Area (mi <sup>2</sup> ); present in 3 of 4 years	3.18	0.3%	0.77	24.16%	0.37	11.70%	0.00	0.00%	1.14	35.87%	Present in 3 of 4 CDFG aerial survey datasets
<b>Pinnacles*</b>												
0-30 meters	Count	76.00		42.00			*	*		42.00		Bathymetry data
30-100 meters	Count	218.00		65.00			*	10.00		75.00		Bathymetry data
100-200 meters	Count	27.00		*			*	3.00		3.00		Bathymetry data
>200 meters	Count	4.00		*			*	*		*		Bathymetry data
<b>Submarine canyon</b>												
0-30 meters	Area (mi <sup>2</sup> )	0.56	0.1%	0.07	13.10%	0.00	0.00%	0.00	0.00%	0.07	13.10%	Coarse-scale substrata (Greene et al 2004)
30-100 meters	Area (mi <sup>2</sup> )	4.42	0.4%	1.26	28.52%	0.00	0.00%	0.06	1.45%	1.33	29.97%	Coarse-scale substrata (Greene et al 2004)
100-200 meters	Area (mi <sup>2</sup> )	6.06	0.5%	1.78	29.33%	0.00	0.00%	0.34	5.53%	2.11	34.86%	Coarse-scale substrata (Greene et al 2004)
>200 meters	Area (mi <sup>2</sup> )	42.77	3.8%	12.67	29.63%	0.00	0.00%	3.68	8.61%	16.36	38.24%	Coarse-scale substrata (Greene et al 2004)

\* Pinnacle data extent is limited, asterick indicates either zero count or no data available

## FORM FOR DRAFT MPA ARRAYS

Please provide the following information for your draft "MPA Arrays". Note that your draft arrays should meet ALL of the requirements of the MLPA for the Central Coast study region.

### **MPA ARRAY NAME:**

Monterey/Carmel/Lobos Group Suite (Diver 1 Array)

### **PROPOSERS(Note: these should be GROUP, not individual concepts;list all names of proposers):**

John Pearse, D'Anne Albers, Kris Lindstrom, Eric Russell, Marc Shargel, John Wolfe, Jesus Ruiz

**NOTE: This list will be SIGNIFICANTLY LONGER by Wednesday. These are the names I can confirm at this hour, more are coming.**

### **NUMBER AND TYPE OF MPA CONCEPTS IN ARRAY (EG. 5 SMRS, 0 SMPS, 8 SMCAS):**

4 SMRs

0 SMPs

6 SMCAs

### **COMMENTS/RATIONALE:**

Changes since November 2:

In response to spearfishing concerns, the North Carmel Bay Reerve no longer includes the portion of Stillwater Cove where the ocean access points lie. The Greater Point Lobos Reserve now includes the head of the Carmel Canyon and the southern half of Carmel Point. This change has no effect on spot prawn trapping. These reserves now share both Stillwater Cove and Carmel Point between Take and No-Take areas.

The line defining the Cannery Row SMCA has been moved closer to Lovers' Point in response to concerns expressed by party boat interests. Between Lovers' Point and Asilomer Ave, we've utilized the 60 foot contour bound, as the pre-existing SMCA did. This evenly splits the near shore shallow water, placing 0 to 60 feet in no-fishing status, and leaving 60-120 feet in open status. Both of these mapping details compromise enforcement interests. These seem necessary in order to meet stakeholder concerns.

The lines for the Greater Point Lobos SMR are very nearly those proposed by Dave Edlund on October 20. We felt that was a reasonable compromise and essentially accepted it. We moved the northern bound north by 0.1 minute, and, as noted earlier, added the canyonhead to the north and half of Carmel Point. The lines for the Outer Point Lobos SMCA are just as proposed by Dave Edlund October 20.

Specifics:

**Shale Beds SMCA** ; • Unique instance of shale bed habitat in Monterey County; • Replicates similar habitat found to the north in Santa Cruz County; • Juvenile rockfish of most of the species in the Nearshore Finfish Fishery Management Plan are here. Some juvenile Bocaccio and notable numbers of juvenile Canary Rockfish, both declared overfished by the Pacific Fishery Management Council, reside in this area; • Better water clarity than any of the shale bed areas further north, allowing for more effective research and monitoring; • Divers access this area primarily by private boats launched from Breakwater. About 5% of REEF Monterey/Carmel Bay dive surveys are reported from this area, which includes the Shale Beds, Anchor Farm and Steam Engine dive sites; • Originally proposed by Marine Biologist Dan Gotshall of DFG (retired) as a valuable rockfish nursery area, and for protection of unique species which bore into soft shale reef; • A useful site for research and education; • Enforcement facilitated by easy visual monitoring from nearby wharf, beaches, and residences.

**Edward F. Ricketts Marine Reserve** ; • The Breakwater/San Carlos Beach Park is the most popular diving beach on the west coast, and probably the entire United States. Ricketts reserve includes this plus four additional popular scuba entry points. 64,000 diver days per year; • Monterey and its environs has been described in the October '05 issue of Rodale's Scuba Diver magazine as the "hot spot" of west coast diving; • The area features the greatest fish diversity documented in the REEF database for the west coast of mainland US, due to confluence of northern and southern California species. Strong diversity here is corroborated in other biological databases; • About 40% of REEF fish surveys occur within Ricketts Reserve, probably closely matching the percentage of recreational dives done in the south Monterey Bay / Carmel Bay area; • Calmest seas on the south Monterey Bay / Carmel Bay area. Kelp persists for the longest through the winter storms in this area, especially the area between MacAbee Beach and the Breakwater. • Safe beach access for divers, with bathrooms and showers provided by city.; • Important sea otter, harbor seal and sea lion habitat; • Mixed sand and rocky bottom habitat with rocky wall (breakwater) enhances ecological value.; • Kelp is currently unprotected west of the Chart House Restaurant, in kelp bed 220, where any licensed kelp harvester may cut kelp. DFG's 2002 "Kelp Management Plan" regulations do little to prevent a recurrence of the 2000 clear cut performed by a now-defunct cutting operation. The existing hand-harvesting of kelp by two small abalone operations would be phased out as they develop cultured kelp and/or other alternative feeds.; • Reserve status would alleviate a safety risk: Divers are currently hooked by fisherman on the Breakwater at the documented rate of once every 19 days on average (the actual incident rate probably higher due to unreported events); • Ricketts Reserve is bracketed by two very productive fish nurseries, Breakwater to the east and Lovers Cove to the West. Well over 90 species of finfish have been identified at the Breakwater. Based on the presence of juvenile fish and the Davidson current, this is probably a larval retention area.; • Adults of seventeen of the 19 species in the Nearshore Finfish Fishery Management Plan (NFFMP) have been observed. Juveniles of almost all of the NFFMP rockfish species have also been observed at the Breakwater, demonstrating its nursery function. Juvenile and subadult Bocaccio and Canary Rockfish, declared overfished stock by the Pacific Fishery Management Council, have also been observed (both historically and very recently), as well as juveniles of the deepwater rockfish species Half-banded and Stripetail.; • Includes and

buffers the existing Hopkins Marine Reserve. ; • A wonderfully close and accessible area for research and education. Both the Monterey Bay Aquarium and Hopkins Marine Research Station overlook this reserve.; • Economic benefits of enhanced recreational scuba and kayaking attraction, wildlife viewing from beaches and restaurants, enhanced reputation for Cannery Row. Benefits barely reduced by loss of minimal fishing activity. Sportfishing in nearby weather-protected spots will be enhanced by spillover effect. ; • Preliminary survey data suggest 20 to 50 people dive at the Breakwater on the weekend for every person fishing there.; • Virtually self-enforcing due to tremendous recreational use, BayNET presence, and wildlife watching.

**Pacific Grove Marine Gardens SMCA** ; • Upgrades one of the oldest MPAs in California. ; • Strong grassroots support and community value. ; • A popular area for intermediate and experienced divers, due to better water clarity. Safe beach access points and popular boat dive sites including pinnacles. • Important Sea Otter and harbor seal habitat; • About 20% of REEF Monterey/Carmel Bay dives occur in this area, probably reflecting the relative popularity of this area. ; • Mixed sand and rocky bottom habitat enhances ecological value.; • Based on the presence of juvenile fish and the Davidson current, this is probably a larval retention area. ; • A wonderfully close and accessible area for research and education.; • Enforcement cost reduced or eliminated due to community interest, recreational use, BayNET presence, and wildlife watching.

**North Carmel Bay Marine Reserve**; • Includes areas of both Bull (*Nereocystis*) and Giant Kelp (*Macrocystis*); • Includes areas lush with slow-growing California Hydrocoral (*Stylaster californicus*); • There are significant differences between Carmel Bay and south Monterey Bay, including closer proximity to deep canyons and significantly more upwelling and significantly cooler surface waters in Carmel Bay.; • Thick beds of bull kelp (*Nereocystis*) occur in north Carmel Bay – much more than found in south Monterey Bay. Extensive hydrocoral coverage on rocky reefs at much shallower depths than in south Monterey Bay, where it is rare. Different species assemblages found here than elsewhere along the Monterey Peninsula. ; • Popular non-consumptive dive area, especially for the six commercial dive boats operating out of Monterey harbor.; • Some portions (e.g. Inner and Outer Pinnacles, East Pinnacles) have greatly reduced fish populations at top quality habitat.; • Includes leopard shark breeding area in Stillwater Cove; • Protects an identified upwelling area; • Enforcement cost reduced through recreational use, and visibility from beach and shore residences.

**Greater Point Lobos Marine Reserve** ; • Augments and buffers the existing Pt Lobos Marine Reserve; • Includes *five* different habitat types: rocky reef, sandy bottom, pinnacles, submarine canyon and the Carmel River estuary. ; • Includes areas of both Bull (*Nereocystis*) and Giant Kelp (*Macrocystis*); • Includes extensive areas lush with slow-growing California Hydrocoral (*Stylaster californicus*); • Includes haul-out areas for California Sea Lions, at Lobos Rocks, and for Harbor Seals in and around Whalers' Cove, which is also a pupping area. Important habitat for Sea Otters.; • Most or all enforcement requirements are already in place: The area lies off the shores of three State Park units (Carmel River State Beach, Point Lobos State Park and Garrapata State Park) with existing ranger staff. Point Lobos is equipped with a patrol/rescue boat. Extensive recreational use and strategically placed scenic view points place citizen eyes on water. There is a long history of volunteer enforcement at the existing Point Lobos Reserve, which continues today.; • Includes six shore access points for non-consumptive divers and dozens of different shore and boat dive sites; • Protects an identified upwelling area; • Includes traditional non-consumptive diving and kayaking use area proximate to Whalers' Cove.

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## FORM FOR DRAFT MPA ARRAYS

### MPA ARRAY NAME:

Provide ALL the information listed below for EVERY MPA concept included in the array:

MPA Concept Name (use name from Master List or MPA_DST)	MPA Concept ID (see ID number in master list)	Is this an Unmodified Existing State MPA? A MPA concept in the Master List? Or a NEW/Modified concept that still needs to be included in the Master List?	Type (SMR, SMP, SMCA, SC)	Disallowed Uses (be specific)	Goals/Objectives/Design Criteria this MPA contributes toward
Shale Beds SMCA		Modified concept, to be included in master list as redrawn (shape files already submitted to Chris Ball).	SMCA	All extractive activities except hand cutting of kelp, squid fishing.	Meets DC 1,3,7,10, Goal 2 Objective 2, 3, Goal 3, Objective 1, 2, Goal 4, Objective 2. Contributes to DC 4, 5, 9, Goal 1, all Objectives, Goal 2 Objective 1, Goal 3 Objective 4.
Edward F. Ricketts SMR		Modified concept, to be included in master list as redrawn (shape files already submitted to Chris Ball). May already have been entered in this form.	SMR	All extractive activities.	Meets DC 1,3,4,5,7,8, 9, 10, Goal 1, Objective2, Goal 3, Objective 1, Goal 4, Objective 2. Contributes to Goal 1, Objective 1,3,4,5, Goal 2 Objectives 1,2, Goal 3 Objectives 2,3,4, Goal 4 Objective 2, Goal 5 Objective 2.
Hopkins Marine Life Refuge		Unmodified Existing State MPA (Reserve)	SMR	All extractive activities.	In combination with the east and west portions of the new Ricketts Reserve, meets and contributes to the same Goals and Objectives listed for

					Ricketts.
Cannery Row SMCA			SMCA	All extraction except squid, herring, anchovies, sardines, mackerel.	Meets DC 1,3,5,7,8,9 Goal 1 Objective 2, Goal 3, Objective 1, Goal 4, Objective 2. Contributes to DC 4, 10, Goal 1, Objective 1,3,4,5, Goal 2 Objectives 1, 2, Goal 3 Objective 2,3,4, Goal 4 Objective 2, Goal 5 Objective 2.
PG Marine Gardens SMCA, East (of Asilomar Ave.)			SMCA	Allow kelp cutting and angling from shore only. No intertidal collecting or poke-pole fishing prohibited.	Meets DC 3,5,6,7 Goal 1 Objective 2, Goal 3, Objectives 1, 2, Goal 4, Objective 2. Contributes to DC 1, Goal 1, Objective 1,3,4,5, Goal 2 Objectives 1, 2, Goal 3 Objective 3,4, Goal 4 Objective 2, Goal 5 Objective 2.
PG Marine Gardens SMCA, West (of Asilomar Ave.)			SMCA	Allow kelp cutting and angling from boats only (intertidal Reserve).	Meets DC 3,5,6,7 Goal 1 Objective 2, Goal 3, Objectives 1, 2, Goal 4, Objective 2. Contributes to DC 1, Goal 1, Objective 1,3,4,5, Goal 3 Objective 3, Goal 4 Objective 2, Goal 5 Objective 2.
N Carmel Bay SMR		New Modified concept	SMR	All extractive activities.	Meets DC 1,3,4,5,7,8, 10, Goal 1, Objective 1, 2, 3 Goal 2, Objective 1, Goal 3, Objectives 1, 4, Goal 4, Objectives 1, 2. Contributes to Goal 1, Objective 4, 5, Goal 2 Objective 2, Goal 3 Objectives 2,3, Goal 5 Objective 2.
Greater Point Lobos SMR		New Modified concept	SMR	All extractive activities. New SMR area not managed by	Meets DC 1,2 ,5,6, 10, , Goal 1, ALL Objectives, Goal 2, Objectives 1,2, Goal 3 ALL Objectives,

				DPR.	Goal 4, ALL Objectives, Goal 5 Objective 2.
Outer Point Lobos SMCA		New concept	SMCA	All extractive activities except salmon and albacore fishing, trapping of spot prawns.	Meets DC 1 ,4,5,7,8, 9, 10, Goal 1 ALL Objectives, Goal 2 ALL Objectives, Goal 3 Objectives 2,4, Goal 4 ALL Objectives. Contributes to DC 4, Goal 5 Objective 2.
Carmel Bay Invertebrate Reserve	-	Unmodified Existing SMCA	SMCA	Extraction of invertebrates, commercial fishing.	Meets DC 1,2,3,5,6,7,8,10, Goal 1 Objective 2, Goal 2 Objective 3, Goal 3 Objective 2. Contributes to Goal 1 Objectives 1,3,5, Goal 3 Objectives 1, 3, Goal 4 Objectives 1, 2, Goal 5 Objective 2.



**DRAFT ANALYSIS OF INITIAL CANDIDATE MPA ARRAY FOR THE CENTRAL COAST STUDY REGION (Diver 1)**

ARRAY NAME: Diver 1

DIVE1

Date Received:

11/4/05

	How measured?	Total amount in Region	Total percent of Region	Amount in State Marine Reserves	Percent of Total in SMRs	Amount in State Marine Parks	Percent of Total in SMPs	Amount in State Marine Conservation Area	Percent of Total in SMCA's	Amount in all existing MPAs in region	Percent of Total in existing MPAs	Spatial Data Source
<b>Area</b>	Area (mi <sup>2</sup> )	1150.01	100%	9.51	0.83%	0.00	0.00%	9.87	0.86%	19.37	1.68%	GIS analysis
<b>Number of MPAs</b>	Count		NA	6		0	0.00%	3		0		GIS analysis
<b>HABITATS</b>												
<b>Intertidal</b>												
Sandy or gravel beaches	Linear (mi)	223.66	52.3%	6.67	2.98%	0.00	0.00%	0.00	0.00%	6.67	2.98%	NOAA-ESI 2002
Rocky intertidal and cliff	Linear (mi)	209.21	48.9%	24.90	11.90%	0.00	0.00%	0.00	0.00%	24.90	11.90%	NOAA-ESI 2002
Coastal marsh	Linear (mi)	36.53	8.5%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	NOAA-ESI 2002
Tidal flats	Linear (mi)	23.48	5.5%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	NOAA-ESI 2002
<b>Seagrass beds (0-30m): Surfgrass</b>	Linear (mi)	161.09	37.7%	16.30	10.12%	0.00	0.00%	0.00	0.00%	16.30	10.12%	Minerals Management Service / Tenera Inc.
<b>Seagrass beds (0-30m): Eelgrass</b>	Area (mi <sup>2</sup> )	1.07	0.1%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	Elkhorn Slough Foundation; Morro Bay National Estuary Program
<b>Estuary</b>	Area (mi <sup>2</sup> )	7.90	0.7%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	
<b>Fine-scale Soft bottom</b>												
Fine-scale based on Kvitek et al multibeam and sidescan sonar; available for only about 25% of the region												
0-30 meters	Area (mi <sup>2</sup> )	24.21	5.7%	1.28	5.28%	0.00	0.00%	0.31	1.27%	1.59	6.55%	Total amount is only that which has been mapped to date.
30-100 meters	Area (mi <sup>2</sup> )	93.72	21.9%	2.11	2.25%	0.00	0.00%	0.50	0.54%	2.61	2.79%	Total amount is only that which has been mapped to date.
100-200 meters	Area (mi <sup>2</sup> )	1.93	0.5%	0.00	0.00%	0.00	0.00%	0.22	11.22%	0.22	11.22%	Total amount is only that which has been mapped to date.
>200 meters	Area (mi <sup>2</sup> )	0.29	0.1%	0.00	0.00%	0.00	0.00%	0.00	0.69%	0.00	0.69%	Total amount is only that which has been mapped to date.
<b>Coarse-scale Soft bottom</b>												
Greene et al 2004; coarse scale data overestimates soft substrata												
0-30 meters	Area (mi <sup>2</sup> )	294.14	25.8%	1.57	0.54%	0.00	0.00%	0.30	0.10%	1.88	0.64%	Greene et al 2004
30-100 meters	Area (mi <sup>2</sup> )	575.78	50.6%	2.49	0.43%	0.00	0.00%	0.61	0.11%	3.11	0.54%	Greene et al 2004
100-200 meters	Area (mi <sup>2</sup> )	58.46	5.1%	0.00	0.00%	0.00	0.00%	2.71	4.63%	2.71	4.63%	Greene et al 2004
>200 meters	Area (mi <sup>2</sup> )	105.52	9.3%	0.00	0.00%	0.00	0.00%	2.79	2.64%	2.79	2.64%	Greene et al 2004
<b>Fine-scale Rocky reef; hard bottom</b>												
Fine-scale based on Kvitek et al multibeam and sidescan sonar; available for only about 25% of the region												
0-30 meters	Area (mi <sup>2</sup> )	20.16	4.7%	2.10	10.44%	0.00	0.00%	0.34	1.68%	2.44	12.12%	Total amount is only that which has been mapped to date.
30-100 meters	Area (mi <sup>2</sup> )	20.59	4.8%	1.88	9.12%	0.00	0.00%	0.20	0.97%	2.08	10.09%	Total amount is only that which has been mapped to date.
100-200m	Area (mi <sup>2</sup> )	0.40	0.1%	0.00	0.00%	0.00	0.00%	0.07	17.62%	0.07	17.62%	Total amount is only that which has been mapped to date.
>200 meters	Area (mi <sup>2</sup> )	0.01	< .01%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	Total amount is only that which has been mapped to date.

ARRAY NAME: Diver 1      DIVE1      Date Received: 11/4/05

	How measured?	Total amount in Region	Total percent of Region	Amount in State Marine Reserves	Percent of Total in SMRs	Amount in State Marine Parks	Percent of Total in SMPs	Amount in State Marine Conservation Area	Percent of Total in SMCAs	Amount in all existing MPAs in region	Percent of Total in existing MPAs	Spatial Data Source
<b>Coarse-scale Rocky reef; hard bottom</b>												Greene et al 2004; coarse scale data underestimates hard substrata
0-30 meters	Area (mi <sup>2</sup> )	46.66	4.1%	1.93	4.14%	0.00	0.00%	0.34	0.72%	2.27	4.86%	Greene et al 2004
30-100 meters	Area (mi <sup>2</sup> )	26.78	2.4%	1.59	5.93%	0.00	0.00%	0.48	1.81%	2.07	7.73%	Greene et al 2004
100-200 meters	Area (mi <sup>2</sup> )	13.91	1.2%	0.00	0.00%	0.00	0.00%	1.69	12.16%	1.69	12.16%	Greene et al 2004
>200 meters	Area (mi <sup>2</sup> )	16.16	1.4%	0.00	0.00%	0.00	0.00%	0.94	5.80%	0.94	5.80%	Greene et al 2004
<b>Kelp forest</b>								0.00				
<b>1989 Kelp</b>	Area (mi <sup>2</sup> )	17.94	1.6%	1.43	7.98%	0.00	0.00%	0.00	0.00%	1.43	7.98%	1989 CDFG aerial survey
<b>1999 Kelp</b>	Area (mi <sup>2</sup> )	2.56	0.2%	0.15	5.67%	0.00	0.00%	0.00	0.00%	0.15	5.67%	1999 CDFG aerial survey
<b>2002 Kelp</b>	Area (mi <sup>2</sup> )	12.55	1.1%	1.05	8.36%	0.00	0.00%	0.00	0.00%	1.05	8.36%	2002 CDFG aerial survey
<b>2003 Kelp</b>	Area (mi <sup>2</sup> )	9.53	0.8%	0.76	8.01%	0.00	0.00%	0.00	0.00%	0.76	8.01%	2003 CDFG aerial survey
<b>Persistent Kelp</b>	Area (mi <sup>2</sup> ); present in 3 of 4 years	3.18	0.3%	0.29	9.22%	0.00	0.00%	0.00	0.00%	0.29	9.22%	Present in 3 of 4 CDFG aerial survey datasets
<b>Pinnacles*</b>												
0-30 meters	Count	76.00		55				11		66.00		Bathymetry data
30-100 meters	Count	218.00		86				4		90.00		Bathymetry data
100-200 meters	Count	27.00		*				*		*		Bathymetry data
>200 meters	Count	4.00		*				*		*		Bathymetry data
<b>Submarine canyon</b>												
0-30 meters	Area (mi <sup>2</sup> )	0.56	0.1%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	Coarse-scale substrata (Greene et al 2004)
30-100 meters	Area (mi <sup>2</sup> )	4.42	0.4%	0.00	0.00%	0.00	0.00%	0.16	3.62%	0.16	3.62%	Coarse-scale substrata (Greene et al 2004)
100-200 meters	Area (mi <sup>2</sup> )	6.06	0.5%	0.00	0.00%	0.00	0.00%	0.15	2.49%	0.15	2.49%	Coarse-scale substrata (Greene et al 2004)
>200 meters	Area (mi <sup>2</sup> )	42.77	3.8%	0.00	0.00%	0.00	0.00%	0.14	0.33%	0.14	0.33%	Coarse-scale substrata (Greene et al 2004)

\* Pinnacle data extent is limited, asterick indicates either zero count or no data available

## FORM FOR DRAFT MPA ARRAYS

Please provide the following information for your draft "MPA Arrays". Note that your draft arrays should meet ALL of the requirements of the MLPA for the Central Coast study region.

**MPA ARRAY NAME:** Monterey Bay - Carmel Bay Array (Diver 2 Array)

**PROPOSERS(Note: these should be GROUP, not individual concepts; list all names of proposers):**

The following have endorsed individual concepts of the Array as identified below.

Long Marine Lab SMR

John Pearse, Jesús Ruiz, Marc Shargel, Steve Webster, John Wolfe

Ed Cooper SMR

D'Anne Albers, John Alioti, Dan Davis, Carol Jones, Kris Lindstrom, John Pearse, Jesús Ruiz, Marc Shargel, Steve Webster, John Wolfe

Hopkins SMR

D'Anne Albers, John Alioti, Dan Davis, Carol Jones, Kris Lindstrom, John Pearse, Jesús Ruiz, Marc Shargel, Steve Webster, John Wolfe

Ed Ricketts SMR

D'Anne Albers, John Alioti, Dan Davis, Carol Jones, Kris Lindstrom, John Pearse, Jesús Ruiz, Marc Shargel, Steve Webster, John Wolfe

Hopkins SMCA

D'Anne Albers, John Alioti, Dan Davis, Kris Lindstrom, John Pearse, Jesús Ruiz, Marc Shargel, Steve Webster, John Wolfe

PG Marine Gardens SMCA

D'Anne Albers, John Alioti, John Pearse, Jesús Ruiz, Marc Shargel, Steve Webster, John Wolfe

PG Intertidal SMR

D'Anne Albers, John Alioti, Dan Davis, Kris Lindstrom, John Pearse, Jesús Ruiz, Marc Shargel, Steve Webster, John Wolfe

PG Moss Beach SMCA

D'Anne Albers, John Alioti, John Pearse, Jesús Ruiz, Marc Shargel, Steve Webster, John Wolfe

Lone Cypress SMR

D'Anne Albers, John Alioti, Dan Davis, Carol Jones, Kris Lindstrom, John Pearse, Jesús Ruiz, Steve Webster,

Cypress Point SMCA

Carol Jones, Jesús Ruiz

Carmel SMCA

D'Anne Albers, John Alioti, John Pearse, Jesús Ruiz

Greater Point Lobos SMR

D'Anne Albers, John Alioti, Kris Lindstrom, John Pearse, Jesús Ruiz

D'Anne Albers; John Alioti; Dan Davis Carol Jones; Michele Knight; Kris Lindstrom; John Pearse; Jesús Ruiz; Art Seavey

**NUMBER AND TYPE OF MPA CONCEPTS IN ARRAY (EG. 5 SMRS, 0 SMPS, 8 SMCAS):**

7SMR  
5 SMCA

This does not include the Array of MPAs south of Big Sur proposed as part of another Array.

**COMMENTS/RATIONALE:**

This Array includes one MPA in Santa Cruz, MPAs in the Monterey Bay and Carmel Bay going down as far as Yankee Point, and other MPAs including Point Sur to Point Conception. However, since the MPAs from Point Sur to Point Conception are being presented by other stakeholders they are not included in this form.

The individuals listed as part of this Array are supporting one or several of these MPAs within this Array. However, because some individuals have slight differences in position to some of the MPAs, we are not able to claim total support of all MPAs by all the stakeholders listed. Therefore, we will indicate individual support for individual MPAs creating a substantial support for most MPAs thus creating an array of MPAs.

## FORM FOR DRAFT MPA ARRAYS

**MPA ARRAY NAME:**

**Provide ALL the information listed below for EVERY MPA concept included in the array:**

MPA Concept Name (use name from Master List or MPA_DST)	MPA Concept ID (see ID number in master list)	Is this an Unmodified Existing State MPA? A MPA concept in the Master List? Or a NEW/Modified concept that still needs to be included in the Master List?	Type (SMR, SMP, SMCA, SC)	Disallowed Uses (be specific)	Goals/Objectives/Design Criteria this MPA contributes toward
JCR_LongMarineLab_SMR_RockyReef	65	A MPA concept in the Master List.	SMR	No recreational or commercial extraction	Design Considerations: #1 #3 #4 #6 #7 #8 #9 Goal 1 Obj 1-5; Goal 2 Obj 1&2; Goal 3 Obj 1-4; Goal 4 Obj 1&2; Goal 5 Obj 2&3
JCR_Ed Cooper_SMR_Group Concept		A New/ Modified concept that still needs to be included in the Master List.	SMR	No recreational or commercial extraction	Design Considerations: #1 #3 #4 #6 #7 #8 #9 Goal 1 Obj 1-5; Goal 2 Obj 1&2; Goal 3 Obj 1-4; Goal 4 Obj 1&2; Goal 5 Obj 2&3
JCR_Hopkins_SMR_Group Concept		Existing SMR	SMR	No recreational or commercial extraction	Design Considerations: #1 #3 #4 #6 #7 #8 #9 Goal 1 Obj 1-5; Goal 2 Obj. 1&2; Goal 3 Obj 1-4; Goal 4 Obj 1&2; Goal 5 Obj 2&3

JCR_Ed Ricketts_SMR_Group Concept		A New/ Modified concept that still needs to be included in the Master List.	SMR	No recreational or commercial extraction	Design Considerations: #1 #3 #4 #6 #7 #8 #9 Goal 1 Obj 1-5; Goal 2 Obj 1&2; Goal 3 Obj 1-4; Goal 4 Obj 1&2; Goal 5 Obj 2&3
JCR_Hopkins_SMCA_Group Concept		A New/ Modified concept that still needs to be included in the Master List.	SMCA	No recreational or commercial extraction except for commercial wet fish	Design Considerations #1 #2 #3 #6. Goal 1 Obj 1-5; Goal 2 Obj 1&2; Goal 3 Obj 1-4; Goal 4 Obj 2; Goal 5 Obj 2&3
JCR_PG_MarineGardens_SMCA_Group Concept		A New/ Modified concept that still needs to be included in the Master List.	SMCA	No recreational or commercial extraction except for kelp extraction & recreational rod & reel shoreline fishing	Design Considerations #1 #2 #3 #6. Goal 1 Obj 1-5; Goal 2 Obj 1&2; Goal 3 Obj 1&3; Goal 4 Obj 1&2; Goal 5 Obj 2-3
JCR_PG_Intertidal_SMR_Group Concept	0	A MPA concept in the Master List.	SMR	No recreational or commercial extraction	Design Considerations: #1 #3 #4 #6 #7 #8 #9 Goal 1 Obj 1-5; Goal 2 Obj 1&2; Goal 3 Obj 1-4; Goal 4 Obj 1&2; Goal 5 Obj 2&3
JCR_PG_MossBeach_SMACA_Group Concept		A New/ Modified concept that still needs to be included in the Master List.	SMCA	Allow commercial wet fish, kelp extraction, recreational fishing	Design Considerations #1 #2 #3 #6. Goal 1 Obj 1&2; Goal 2 Obj 1&3; Goal 3 Obj 3&4
JCR_Lone Cypress		A New/ Modified	SMR	No	Design

SMR_Group Concept		concept that still needs to be included in the Master List.		recreational or commercial extraction	Considerations: #1 #3 #4 #6 #7 #8 #9 Goal 1 Obj 1-5; Goal 2 Obj 1&2; Goal 3 Obj 1-4; Goal 4 Obj 1&2; Goal 5 Obj 2&3
JCR_CypressPoint_SMCA_Group Concept		A New/ Modified concept that still needs to be included in the Master List.	SMCA	Present regulations except allow recreational ground fish to 60 fathoms	Design Considerations #1 #2 #3 #6. Goal 1; Goal 2 Obj 3; Goal 3 Obj 4; Goal 5 Obj 1
JCR_Carmel_SMCA_Group Concept		A New/ Modified concept that still needs to be included in the Master List.	SMCA	Recreational fishing allowed; No commercial extraction except kelp, no invertebrate extraction	Design Considerations #1 #3 #6 #7 #9. Goal 3 Obj 1, 4; Goal 4 Obj 2; Goal 5 Obj 1
JCR_GreaterPointLobos_SMR_Group Concept		A New/ Modified concept that still needs to be included in the Master List.	SMR	No recreational or commercial extraction	Design Considerations: #1 #3 #4 #6 #7 #8 #9 Goal 1 Obj 1-5; Goal 2 Obj 1&2; Goal 3, Obj 1-4; Goal 4, Obj 1&2; Goal 5 Obj 2&3

**DRAFT ANALYSIS OF INITIAL CANDIDATE MPA ARRAY FOR THE CENTRAL COAST STUDY REGION (Diver 2)**

ARRAY NAME: Diver 2

Date Received: 11/4/05

	How measured?	Total amount in Region	Total percent of Region	Amount in State Marine Reserves	Percent of Total in SMRs	Amount in State Marine Parks	Percent of Total in SMPs	Amount in State Marine Conservation Area	Percent of Total in SMCAs	Amount in all existing MPAs in region	Percent of Total in existing MPAs	Spatial Data Source
<b>Area</b>	Area (mi <sup>2</sup> )	1150.01	100%	128.66	11.19%	26.86	2.34%	36.00	3.13%	191.51	16.65%	GIS analysis
<b>Number of MPAs</b>	Count		NA	18		3		8		0		GIS analysis
<b>HABITATS</b>												
<b>Intertidal</b>												
Sandy or gravel beaches	Linear (mi)	223.66	52.3%	34.05	15.22%	4.91	2.20%	3.97	1.77%	42.93	19.19%	NOAA-ESI 2002
Rocky intertidal and cliff	Linear (mi)	209.21	48.9%	52.39	25.04%	4.37	2.09%	7.99	3.82%	64.75	30.95%	NOAA-ESI 2002
Coastal marsh	Linear (mi)	36.53	8.5%	3.07	8.40%	2.30	6.30%	0.00	0.00%	5.37	14.71%	NOAA-ESI 2002
Tidal flats	Linear (mi)	23.48	5.5%	0.97	4.12%	4.00	17.05%	0.00	0.00%	4.97	21.17%	NOAA-ESI 2002
<b>Seagrass beds (0-30m): Surfgrass</b>	Linear (mi)	161.09	37.7%	31.00	19.25%	0.00	0.00%	5.78	3.59%	36.78	22.83%	Minerals Management Service / Tenera Inc.
<b>Seagrass beds (0-30m): Eelgrass</b>	Area (mi <sup>2</sup> )	1.07	0.1%	0.32	30.10%	0.71	66.16%	0.00	0.00%	1.03	96.27%	Elkhorn Slough Foundation; Morro Bay National Estuary Program
<b>Estuary</b>	Area (mi <sup>2</sup> )	7.90	0.7%	0.94	11.91%	1.95	24.73%	0.00	0.00%	2.90	36.65%	
<b>Fine-scale Soft bottom</b>												
0-30 meters	Area (mi <sup>2</sup> )	24.21	5.7%	4.12	17.03%	0.16	0.64%	1.34	5.54%	5.62	23.21%	Total amount is only that which has been mapped to date.
30-100 meters	Area (mi <sup>2</sup> )	93.72	21.9%	13.18	14.07%	0.40	0.43%	1.07	1.14%	14.65	15.64%	Total amount is only that which has been mapped to date.
100-200 meters	Area (mi <sup>2</sup> )	1.93	0.5%	0.27	14.12%	0.00	0.00%	0.02	1.09%	0.29	15.21%	Total amount is only that which has been mapped to date.
>200 meters	Area (mi <sup>2</sup> )	0.29	0.1%	0.01	2.06%	0.00	0.00%	0.00	0.00%	0.01	2.06%	Total amount is only that which has been mapped to date.
<b>Coarse-scale Soft bottom</b>												
0-30 meters	Area (mi <sup>2</sup> )	294.14	25.8%	32.73	11.13%	9.66	3.28%	1.41	0.48%	43.80	14.89%	Greene et al 2004
30-100 meters	Area (mi <sup>2</sup> )	575.78	50.6%	62.77	10.90%	14.69	2.55%	14.60	2.54%	92.06	15.99%	Greene et al 2004
100-200 meters	Area (mi <sup>2</sup> )	58.46	5.1%	3.88	6.64%	0.00	0.00%	1.27	2.18%	5.16	8.82%	Greene et al 2004
>200 meters	Area (mi <sup>2</sup> )	105.52	9.3%	10.24	9.70%	0.00	0.00%	12.36	11.72%	22.60	21.42%	Greene et al 2004
<b>Fine-scale Rocky reef; hard bottom</b>												
0-30 meters	Area (mi <sup>2</sup> )	20.16	4.7%	8.58	42.59%	0.95	4.72%	1.54	7.63%	11.07	54.93%	Total amount is only that which has been mapped to date.



ARRAY NAME: Diver 2

Date Received: 11/4/05

	How measured?	Total amount in Region	Total percent of Region	Amount in State Marine Reserves	Percent of Total in SMRs	Amount in State Marine Parks	Percent of Total in SMPs	Amount in State Marine Conservation Area	Percent of Total in SMCAs	Amount in all existing MPAs in region	Percent of Total in existing MPAs	Spatial Data Source
30-100 meters	Area (mi <sup>2</sup> )	20.59	4.8%	5.50	26.69%	0.27	1.31%	1.79	8.71%	7.56	36.71%	Total amount is only that which has been mapped to date.
100-200m	Area (mi <sup>2</sup> )	0.40	0.1%	0.03	7.05%	0.00	0.00%	0.18	44.30%	0.20	51.35%	Total amount is only that which has been mapped to date.
>200 meters	Area (mi <sup>2</sup> )	0.01	< .01%	0.00	7.55%	0.00	0.00%	0.01	75.51%	0.01	83.06%	Total amount is only that which has been mapped to date.
<b>Coarse-scale Rocky reef; hard bottom</b>												Greene et al 2004; coarse scale data underestimates hard substrata
0-30 meters	Area (mi <sup>2</sup> )	46.66	4.1%	13.32	28.54%	2.05	4.40%	1.33	2.84%	16.70	35.79%	Greene et al 2004
30-100 meters	Area (mi <sup>2</sup> )	26.78	2.4%	3.71	13.87%	0.27	1.00%	2.46	9.19%	6.44	24.06%	Greene et al 2004
100-200 meters	Area (mi <sup>2</sup> )	13.91	1.2%	0.32	2.31%	0.00	0.00%	0.79	5.67%	1.11	7.98%	Greene et al 2004
>200 meters	Area (mi <sup>2</sup> )	16.16	1.4%	0.31	1.89%	0.00	0.00%	0.83	5.16%	1.14	7.06%	Greene et al 2004
<b>Kelp forest</b>												
1989 Kelp	Area (mi <sup>2</sup> )	17.94	1.6%	5.30	29.55%	1.09	6.06%	1.21	6.72%	7.60	42.33%	1989 CDFG aerial survey
1999 Kelp	Area (mi <sup>2</sup> )	2.56	0.2%	0.63	24.49%	0.07	2.58%	0.10	3.72%	0.79	30.79%	1999 CDFG aerial survey
2002 Kelp	Area (mi <sup>2</sup> )	12.55	1.1%	4.60	36.67%	0.77	6.11%	0.75	6.00%	6.12	48.78%	2002 CDFG aerial survey
2003 Kelp	Area (mi <sup>2</sup> )	9.53	0.8%	3.20	33.53%	0.64	6.74%	0.52	5.44%	4.36	45.72%	2003 CDFG aerial survey
<b>Persistent Kelp</b>	Area (mi <sup>2</sup> ); present in 3 of 4 years	3.18	0.3%	0.88	27.56%	0.37	11.70%	0.18	5.60%	1.43	44.87%	Present in 3 of 4 CDFG aerial survey datasets
<b>Pinnacles*</b>												
0-30 meters	Count	76.00		44.00			*	15		59.00		Bathymetry data
30-100 meters	Count	218.00		57.00			*	33		90.00		Bathymetry data
100-200 meters	Count	27.00		*			*	15		15.00		Bathymetry data
>200 meters	Count	4.00		*			*	*		*		Bathymetry data
<b>Submarine canyon</b>												
0-30 meters	Area (mi <sup>2</sup> )	0.56	0.1%	0.16	28.68%	0.00	0.00%	0.06	10.80%	0.22	39.47%	Coarse-scale substrata (Greene et al 2004)
30-100 meters	Area (mi <sup>2</sup> )	4.42	0.4%	0.80	18.14%	0.00	0.00%	0.15	3.39%	0.95	21.53%	Coarse-scale substrata (Greene et al 2004)
100-200 meters	Area (mi <sup>2</sup> )	6.06	0.5%	0.84	13.91%	0.00	0.00%	0.24	3.88%	1.08	17.79%	Coarse-scale substrata (Greene et al 2004)
>200 meters	Area (mi <sup>2</sup> )	42.77	3.8%	3.58	8.37%	0.00	0.00%	3.84	8.98%	7.42	17.35%	Coarse-scale substrata (Greene et al 2004)

\* Pinnacle data extent is limited, asterick indicates either zero count or no data available