

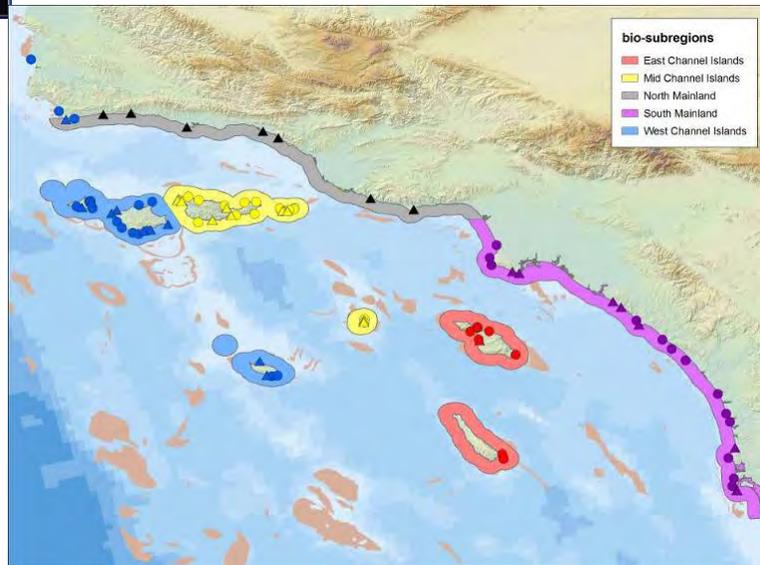
# Marine Life Protection Act Initiative



## Habitat Evaluations of the Round 3 SCRS MPA Proposals for the MLPA South Coast Study Region

Presentation to the MLPA Blue Ribbon Task Force  
October 20, 2009 • Long Beach, CA  
Dr. Mark Carr, MLPA Master Plan Science Advisory Team

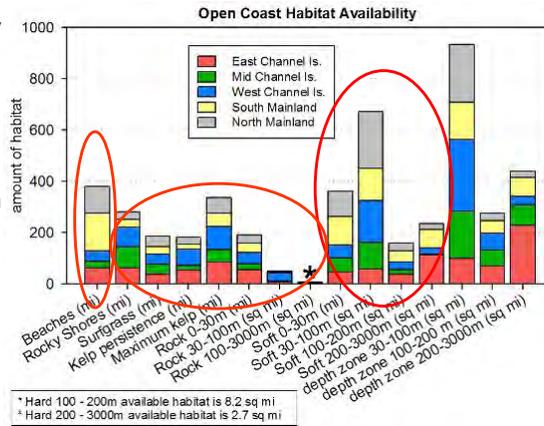
## South Coast Evaluation Bioregions





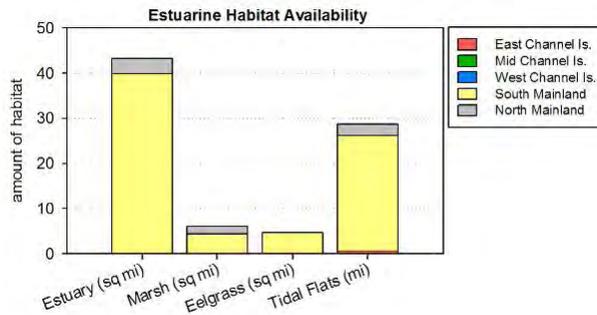
## Habitat Availability

- Soft-bottom habitats are very abundant across the study region, especially on the mainland.
- Rocky habitats are more abundant on the islands than the mainland.
- Deep rock (>100 meters) is rare.



## Habitat Availability

- Estuarine habitats occur almost exclusively on the mainland.
- The south mainland bioregion contains the majority of estuarine habitats.
- The “estuaries” layer includes harbors.
- Eelgrass represented here does not include open-coast eelgrass.





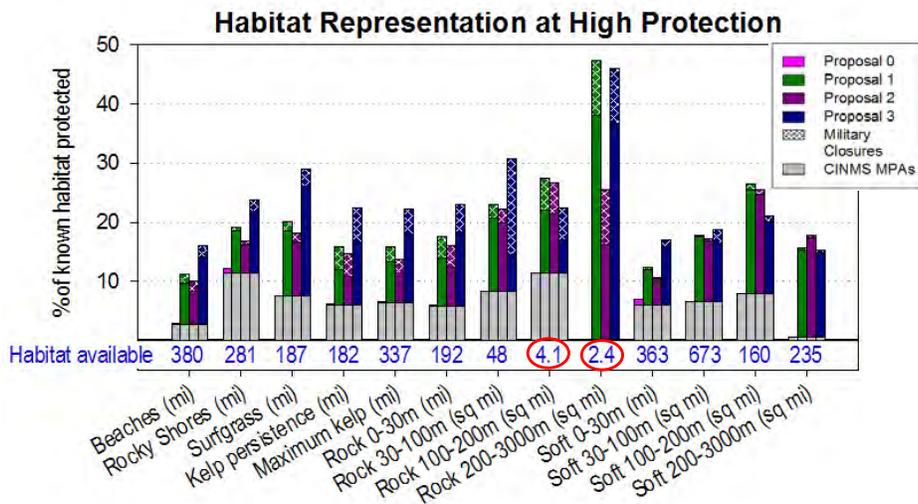
## Guidelines for Habitat Representation

-  Every "key" marine habitat should be represented in the MPA network.
-  MPAs should extend from the intertidal zone to deep waters offshore.
-  At least 1 replicate of each key habitat should be protected within reserves in each bioregion.
-  \*To represent habitat, an MPA or cluster must meet the minimum size guidelines (9 square miles).
-  Habitat patch size must encompass 90% of biodiversity in that habitat type.

\*Estuarine MPAs must contain at least 0.12 square miles of estuarine habitat but may be smaller than 9 square miles.



## Results: Habitat Representation



Proposals include areas where rare habitats are known to exist



## Results: Rare and Unique Habitats

Table summarizes the number of MPAs at or above mod-high protection that are known to contain rare and unique habitats.

Proposal	Open coast eelgrass	Elk kelp	Oil seeps	*Sulfide vents	Canyons
CINMS	4	0	1	0	1
Proposal 0	2	1	0	0	1
Proposal 1	9(1)	2(1)	3	0	5
Proposal 2	9(1)	1(1)	3	0	5
Proposal 3	10(1)	3(1)	5	0	6

Totals for each proposal include habitats in the existing Channel Islands MPAs

\*Only one sulfide vent location is currently mapped in the study region (at Palos Verdes).

( ) indicates military closures



## Geographies and Representation

### North Mainland

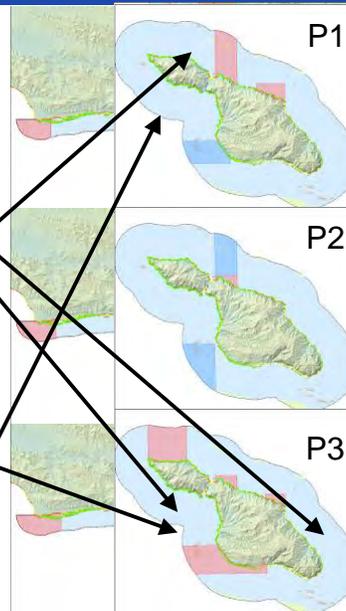
- P3 includes additional high protection MPAs in this area.

### South La Jolla/ Sunset Cliffs

- P1 includes an additional smaller SMR for higher representation of nearshore reef and kelp.

### Catalina

- P1 and P3 include additional smaller SMRs that increase habitat representation.





## Results: Habitat Representation

-  All proposals have at least 10% of all open-coast habitats in MPAs at or above high protection.
-  In general, Round 3 proposals include a greater proportion of open-coast habitats in MPAs as compared to Round 2.
-  Ranking of proposals for habitat representation across all habitats:  
 $P3 > P1 > P2$
-  In general, proposals include greater proportions of rocky habitats as compared to soft-bottom habitats.

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## Guidelines for Habitat Replication

-  3-5 replicates of habitat per biogeographic region (i.e., the study region)
-  MPA or cluster must meet the minimum size guidelines (9 square miles).
-  Habitat must meet the threshold identified to encompass 90% of biodiversity in that habitat type.
-  Estuarine MPAs do not have to meet size guidelines but must contain at least 0.12 square miles of estuarine habitat.

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## Habitat Replication by Bioregion

### Rocky Habitats

Number of bioregions with at least 1 habitat replicate

	Rocky Shores (5)			Surfgrass (5)			Kelp persist. (5)			Maximum kelp (5)			Rock 0-30m (5)			Rock 30-100m (5)			Rock 100-3000m (4)		
	VH	H	MH	VH	H	MH	VH	H	MH	VH	H	MH	VH	H	MH	VH	H	MH	VH	H	MH
Proposal 0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1
Proposal 1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	4	4
Proposal 2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	4	4
Proposal 3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	3

- Military closures contribute one replicate of 100-3000m rock.
- All but the deepest rocky habitat are replicated across all bioregions at very high protection for all proposals.
- For deepest rock, Proposal 3 missed a possible replicate in the South Mainland bioregion.

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## Habitat Replication by Bioregion

### Soft Bottom Habitats

Number of bioregions with at least 1 habitat replicate

	Beaches (5)			Soft 0-30m (5)			Soft 30-100m (5)			Soft 100-200m (5)			Soft 200-3000m (4)			Soft all depths (5)		
	VH	H	MH	VH	H	MH	VH	H	MH	VH	H	MH	VH	H	MH	VH	H	MH
Proposal 0	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	2	2	2
Proposal 1	5	5	5	5	5	5	4	5	5	5	5	5	3	4	4	5	5	5
Proposal 2	5	5	5	5	5	5	4	5	5	5	5	5	3	4	4	4	5	5
Proposal 3	5	5	5	5	5	5	5	5	5	5	5	5	4	4	4	5	5	5

- Military closures contribute replicates of the deepest soft-bottom habitats.
- Several soft-bottom habitats are not replicated across all available bioregions at very high protection.

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## Habitat Replication by Bioregion

### Estuarine Habitats

Number of bioregions with at least 1 habitat replicate

	Estuary (2)			Marsh (2)			Eelgrass (1)			Tidal Flats (0)		
	VH	H	MH	VH	H	MH	VH	H	MH	VH	H	MH
Proposal 0	0	0	0	0	0	0	0	0	0	0	0	0
Proposal 1	2	2	2	2	2	2	1	1	1	0	0	0
Proposal 2	2	2	2	2	2	2	0	0	0	0	0	0
Proposal 3	2	2	2	2	2	2	1	1	1	0	0	0

- Estuary and marsh are replicated across all available bioregions for all proposals.
- Proposal 2 does not protect any replicates of eelgrass at or above mod-high protection.



## Results: Habitat Replication

-  All proposals meet replication guidelines for all habitats except for eelgrass.
-  Round 3 proposals generally contain higher levels of replication for most habitats as compared to Round 2.
-  Ranking of proposals for replication across all habitats:  
P3 > P1 > P2
-  Military closures at San Clemente contribute to replication of nearshore rocky habitats as well as deep rock and soft-bottom habitats.