



Marine Life Protection Act Initiative



SAT Habitat Evaluations of NCCRSG Proposals North Central Coast Study Region

Presentation to the MLPA Blue Ribbon Task Force
April 22, 2008 • San Rafael, CA
Presented by Dr. Mark Carr



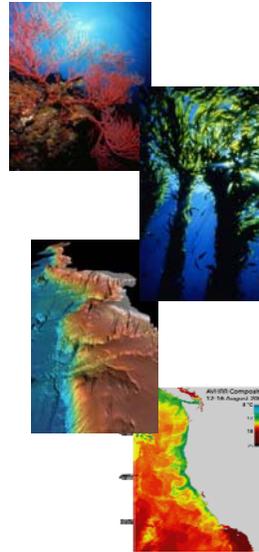
Master Plan Science Advisory Team

-  MLPA goals and applicable guidelines
-  Habitat representation
-  Habitat replication



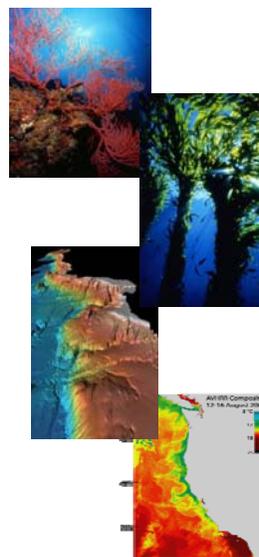
MLPA Goals

1. To protect the natural diversity and function of **marine ecosystems**.
2. To help sustain and restore **marine life populations**.
3. To improve **recreational, educational, and study opportunities** in areas with minimal human disturbance.
4. To protect representative and unique **marine life habitats**.
5. Clear objectives, effective management, adequate enforcement, sound science.
6. To ensure that MPAs are designed and managed as a **network**.



MLPA Goals: Habitat Representation

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Evaluation: Habitat Representation

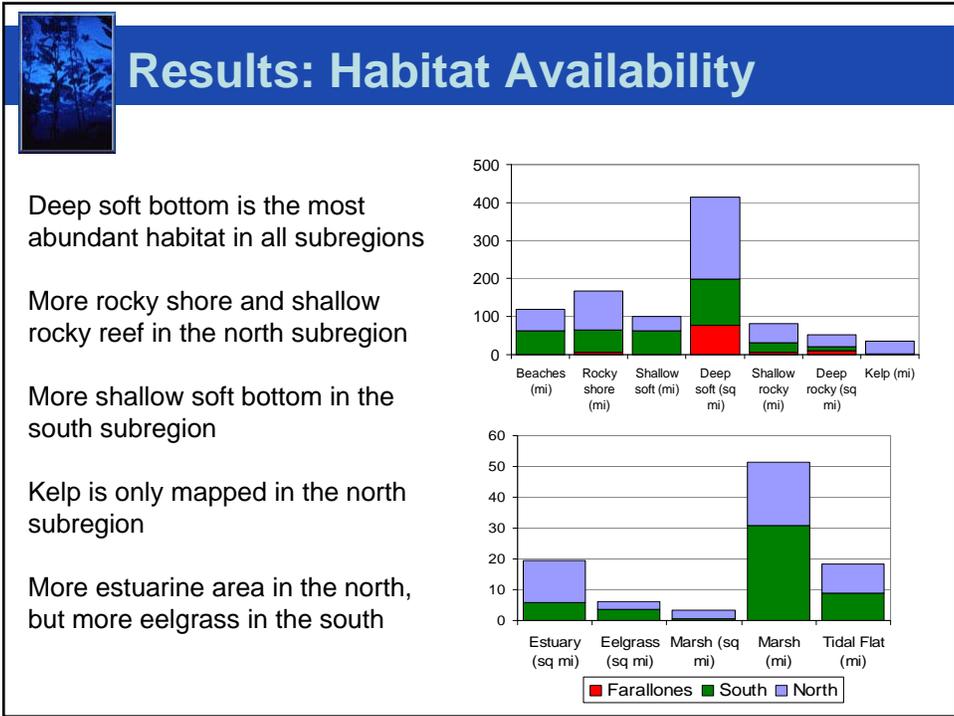
Key Questions for Each Proposed Package

1. How well are key habitat types represented in proposed MPA packages?
2. What are the proposed levels of protection for these habitat types?
3. How well are habitats and levels of protection distributed across the study region?



SAT Guidelines: Levels of Protection

	Level of Protection	MPA Types	Activities associated with this protection level
	Very high	SMR	No take
	High	SMCA	In water depth > 50m: pelagic finfish (H&L) salmon by troll only, coastal pelagic finfish (pelagic seine)
	Mod-high	SMCA	Dungeness crab (traps/pots); squid (pelagic seine); In water depth <50m: pelagic finfish (H&L) salmon by troll only, coastal pelagic finfish (pelagic seine);
	Moderate	SMCA SMP	salmon (non-troll H&L); abalone (diving); halibut, white seabass, striped bass, shore-based finfish, croaker, and flatfishes (H&L); smelt (H&L and hand/dip nets); clams (hand harvest); giant kelp (hand harvest)
	Mod-low	SMCA SMP	Urchin (diving); lingcod, cabezon, greenling, rockfish, and other reef fish (H&L); surfperches (H&L)
	Low	SMCA SMP	bull kelp and mussels (any method); all trawling ; giant kelp (mechanical harvest); mariculture (existing methods in NCCSR)



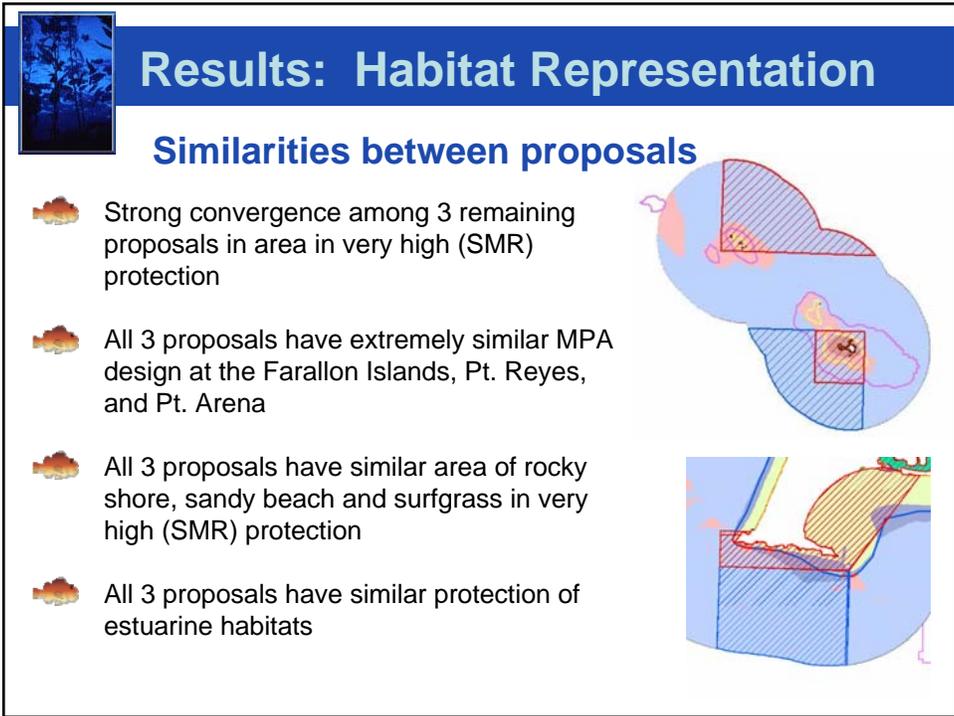
Deep soft bottom is the most abundant habitat in all subregions

More rocky shore and shallow rocky reef in the north subregion

More shallow soft bottom in the south subregion

Kelp is only mapped in the north subregion

More estuarine area in the north, but more eelgrass in the south



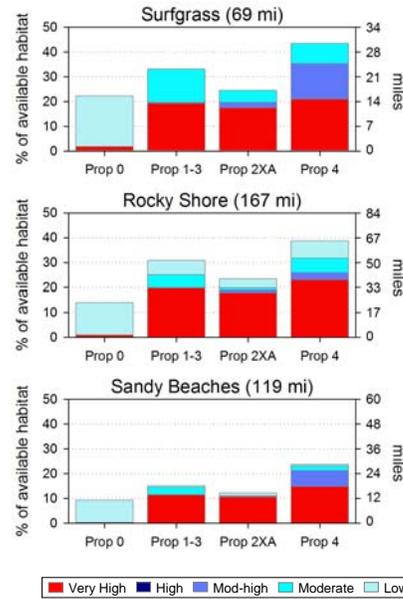


Results: Habitat Representation

Shoreline Habitats

All proposals have roughly 20% of surfgrass and rocky shore at very high protection. Additional areas allow some salmon and crab, shorefishing, abalone, halibut and urchin take.

Protection of sandy beach is still generally lower than protection of rocky shoreline



Results: Habitat Representation

Rock Habitats

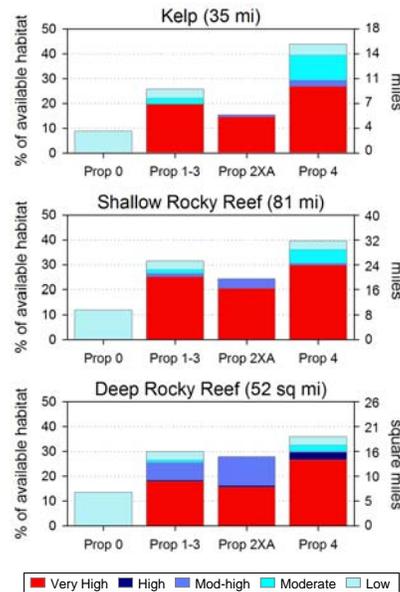
A high proportion of protected areas are in very high protection SMRs

Protection of kelp closely mirrors protection of shallow rock

Prop 4 protects the greatest proportion of all three rocky habitats at very high protection

Large areas of deep rock in mod-high protection due to salmon and crabbing

Some shallow rock and kelp areas in moderate due to shorefishing and abalone and low due to urchin harvest





Results: Habitat Representation

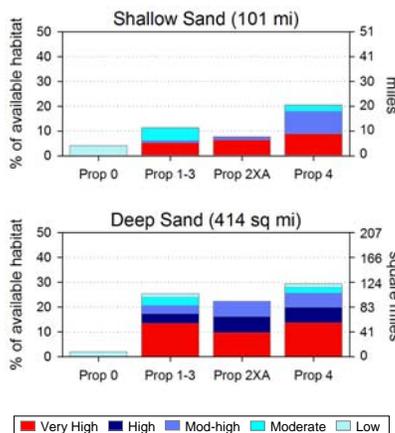
Soft Bottom Habitats

Lower representation of soft bottom habitats relative to rocky habitats

Area of shallow sand in very high protection ■ similar across proposals

Area of deep sand in very high, high and moderate-high protection similar across proposals

Large areas of deep sand in high ■ protection due to deep water salmon trolling and mod-high ■ protection due to crabbing

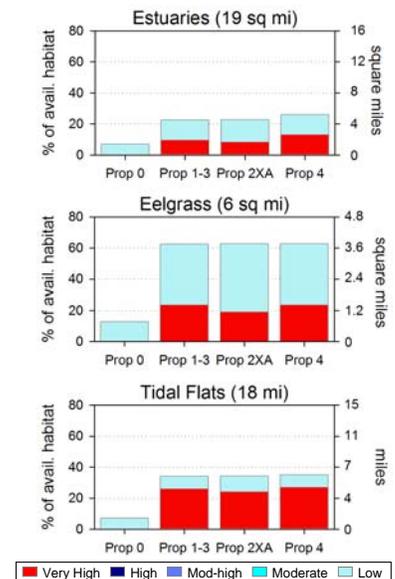
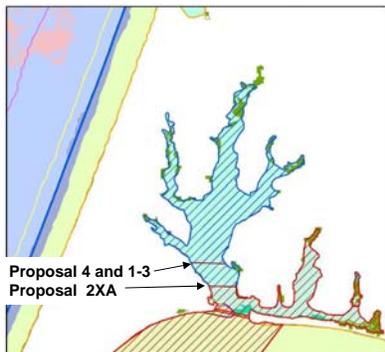


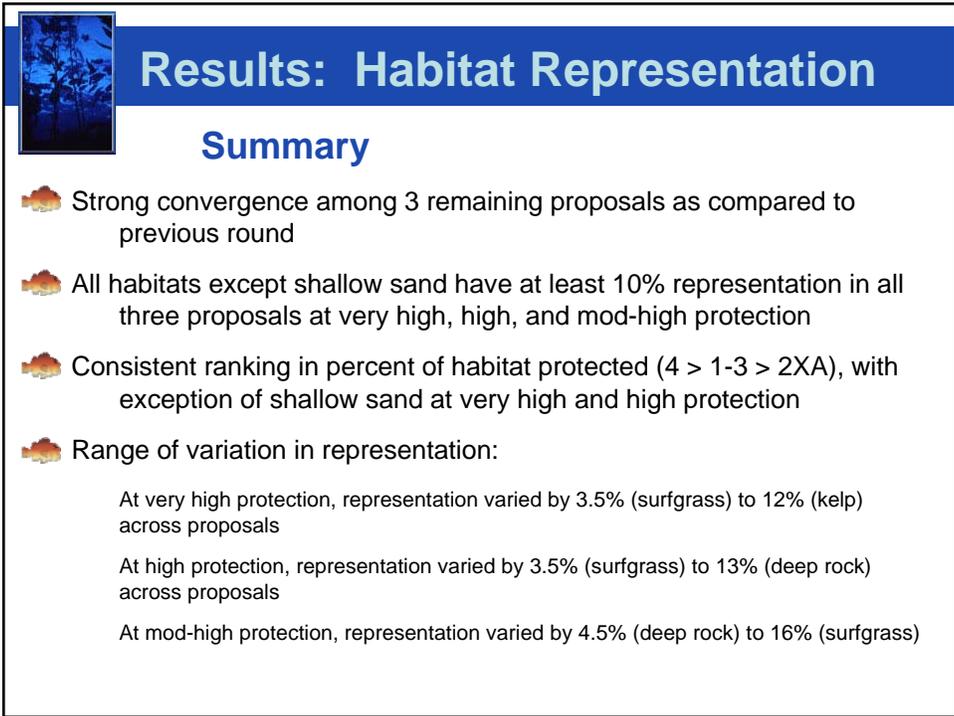
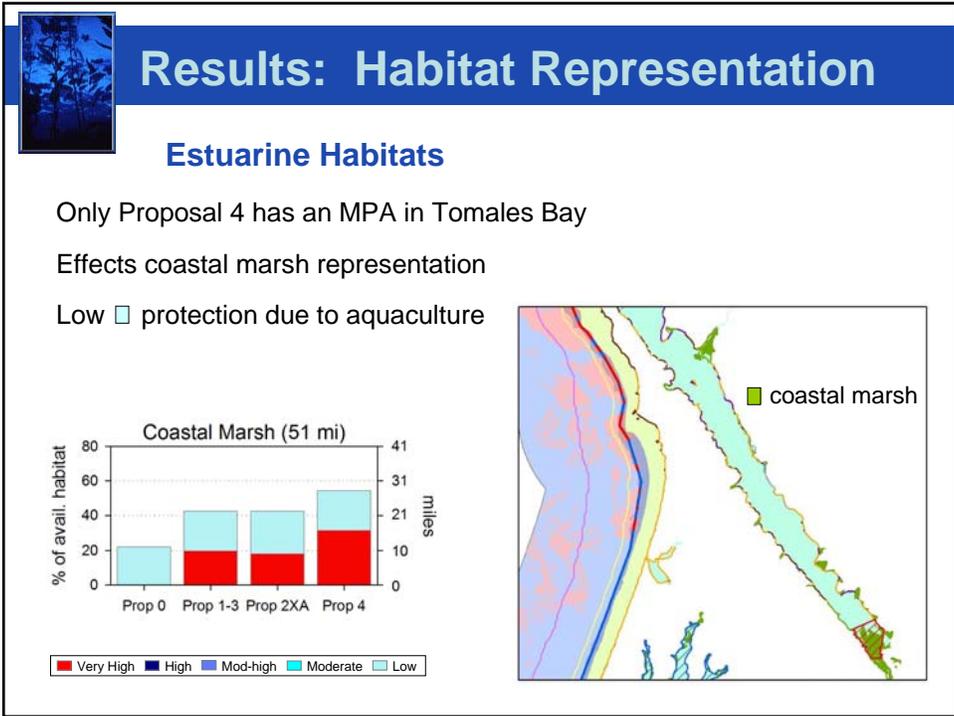
Results: Habitat Representation

Estuarine Habitats

Lower proportions of estuarine habitats in very high SMRs compared to previous version because forecasted mariculture not counted toward very high protection

Low □ protection due to aquaculture







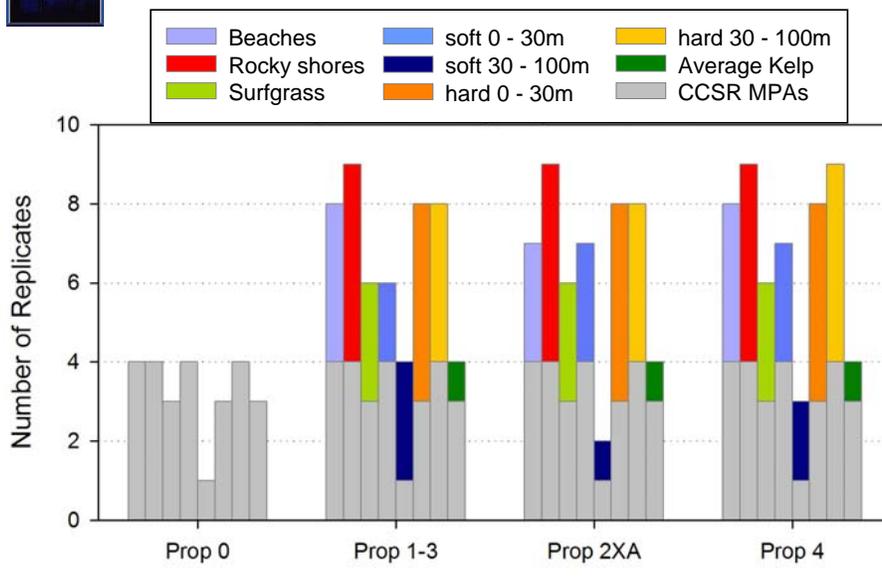
Methods: Habitat Replication

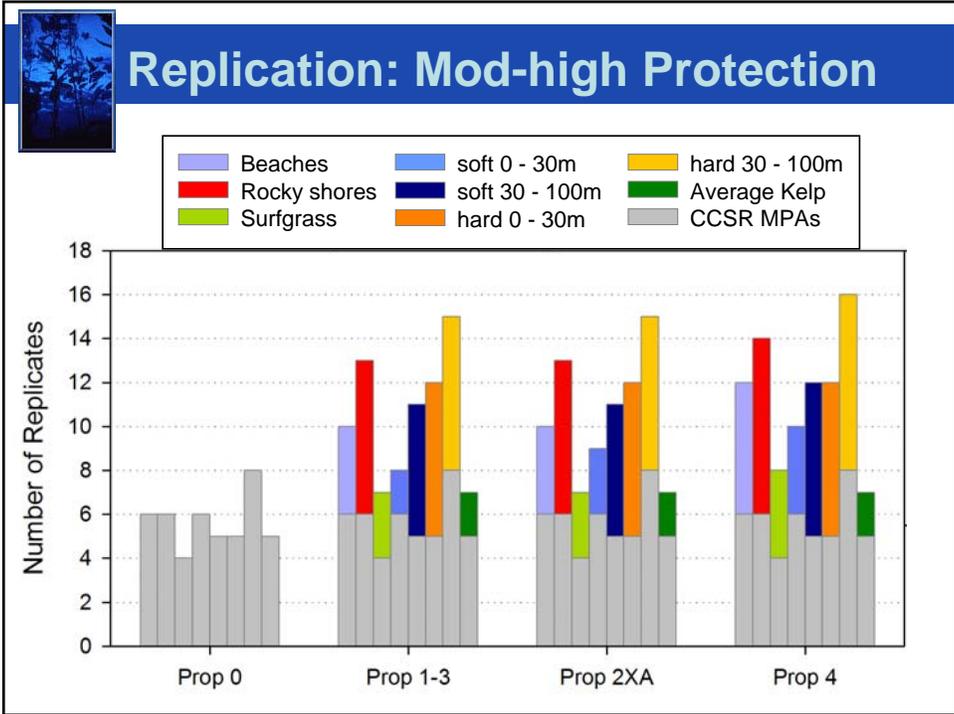
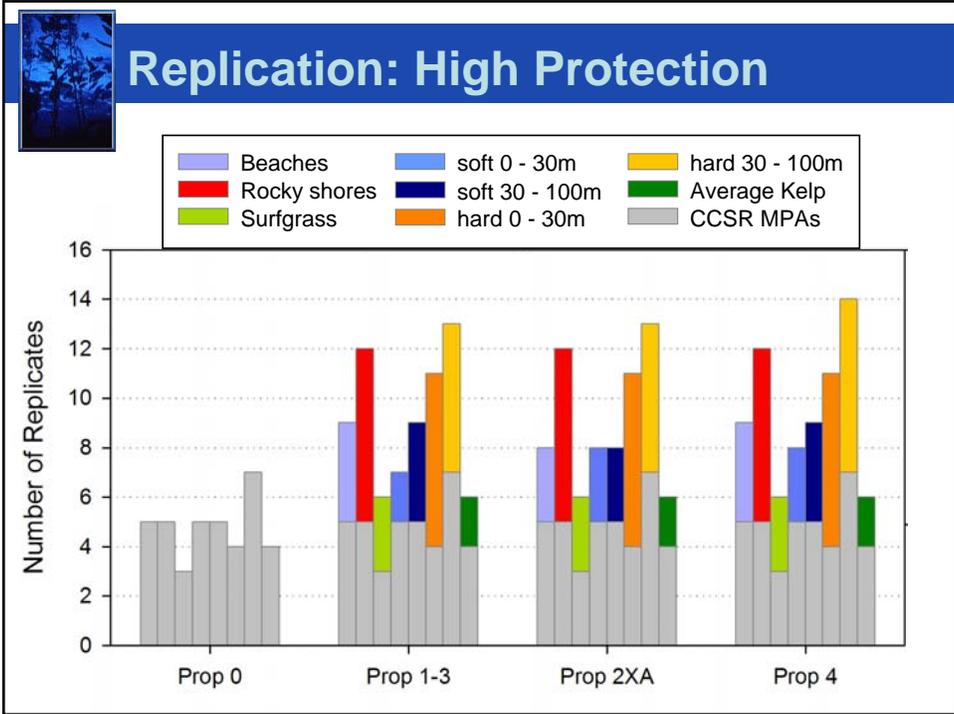
Guidelines for replication:

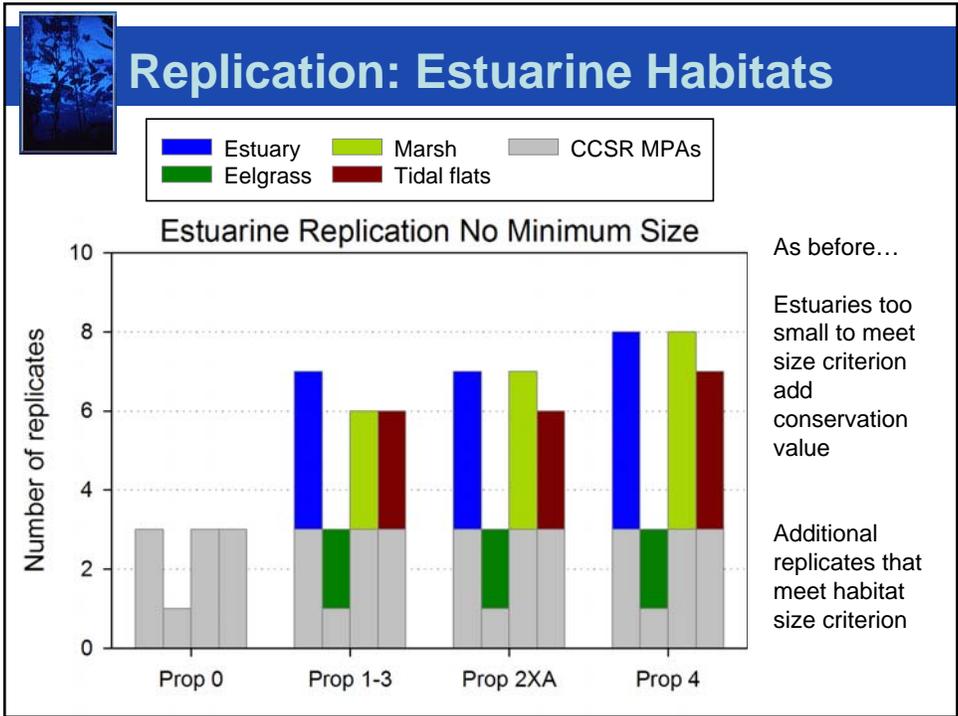
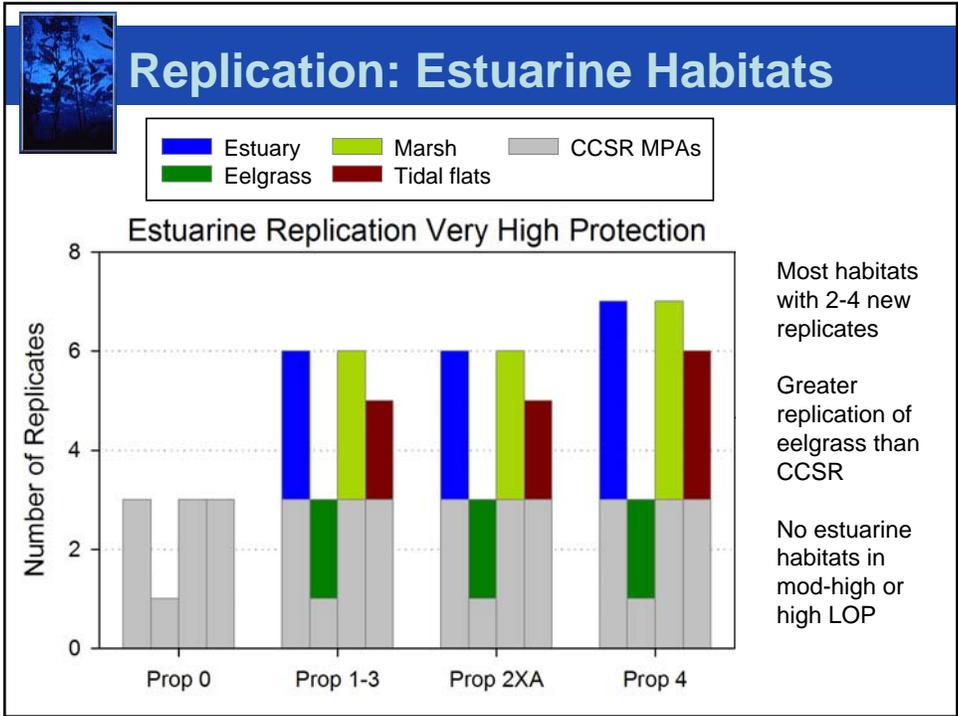
-  3-5 replicates of habitat per biogeographic region
-  MPA or cluster must meet the minimum size guidelines (9 square miles)
-  Habitat must meet the threshold identified to encompass 90% of biodiversity in that habitat type
-  Estuarine MPAs do not have to meet size guidelines but must contain at least 0.12 mi² of estuarine habitat
-  Some small estuaries (Gualala and Garcia rivers, Pescadero Creek) contain less than the minimum 0.12 mi², but protection of these habitats still has conservation value



Replication: Very High Protection









Results: Habitat Replication

Summary

-  No longer marked differences among proposals
-  Levels of replication similar to CCSR for most habitats at highest and moderate-high levels of protection



SAT Preliminary Evaluations



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