

## Marine Life Protection Act Initiative

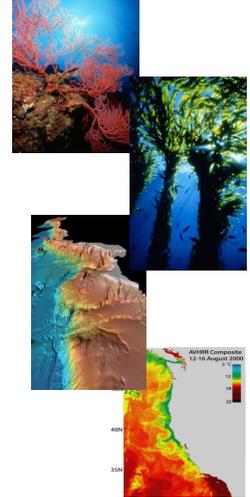


### SAT Evaluations of Draft Proposals North Central Coast Study Region

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

## MLPA Goals: Populations

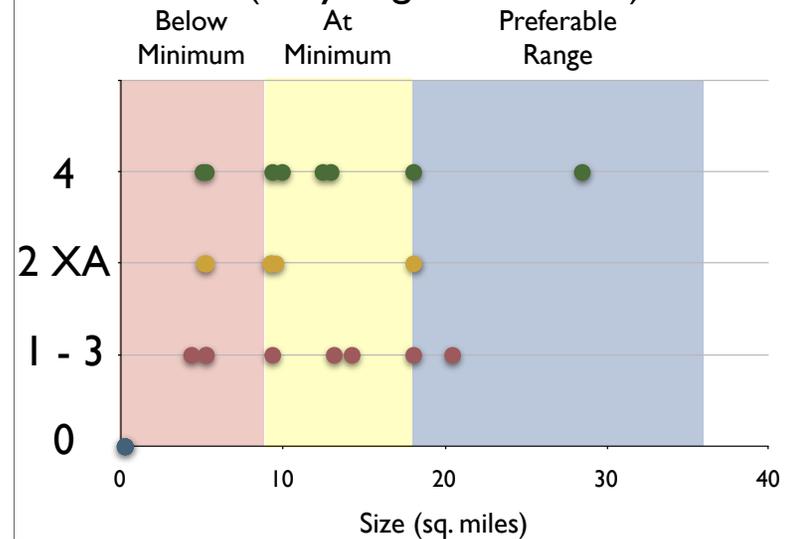
1. To protect the natural diversity and function of **marine ecosystems**.
2. To help sustain and restore **marine life populations**.
3. To improve **recreational, educational, and study opportunities** in areas with minimal human disturbance.
4. To protect representative and unique **marine life habitats**.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

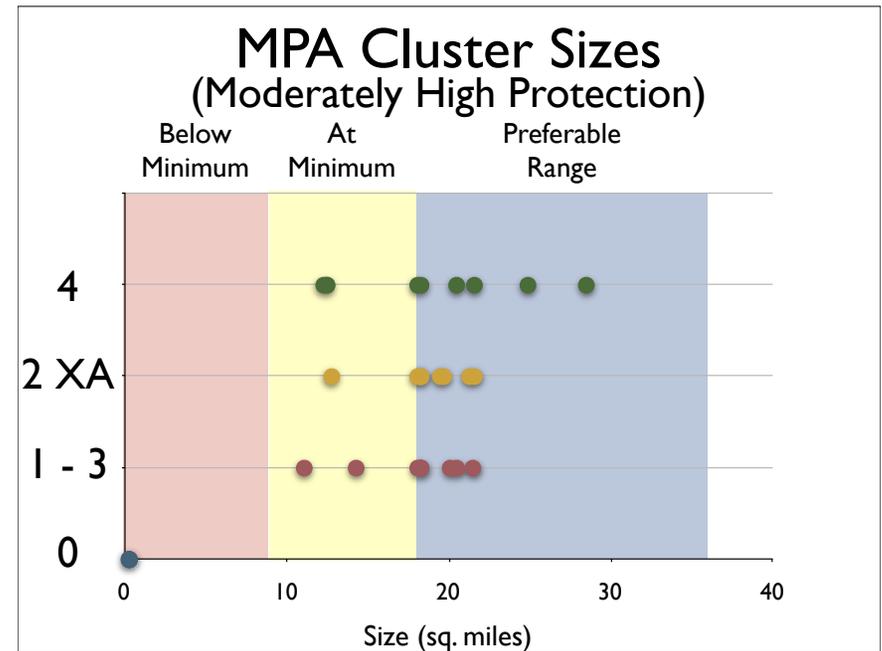
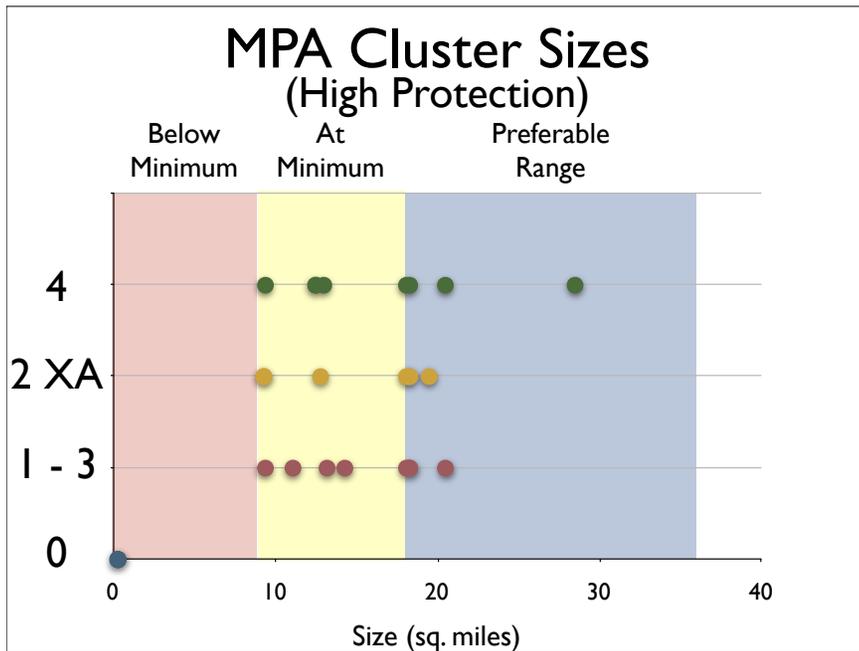


## Size Analysis Methods

- Measure individual MPA lengths and area
- Combine contiguous MPAs into single MPA complexes
- Consider level of protection
- Tabulate MPA lengths and areas relative to minimum & preferred guidelines

## MPA Cluster Sizes (Very High Protection)



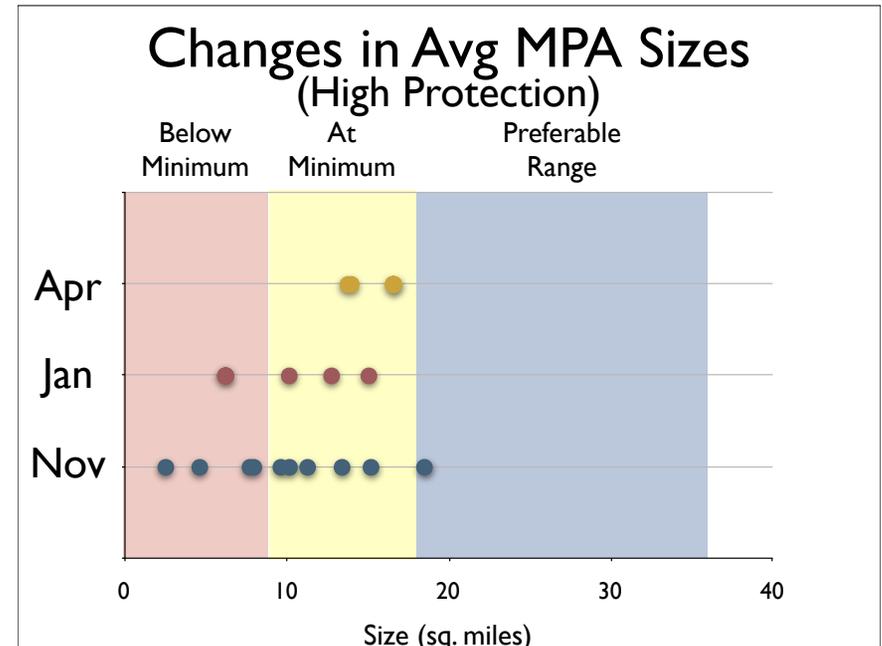


## MPA Size Conclusions

- Most MPAs meet minimum size guideline
- All MPAs meet min size for High/Mod High Prot
- Prop 4 generally has larger MPAs
- Prop 4 has the most MPAs in preferred size range

Avg <i>MPA Size</i>	Very High Protection	High Protection	Mod High Protection
1 - 3	12.2	14	17.7
2 XA	9.4	13.8	18.8
4	12.7	16.6	18.8*

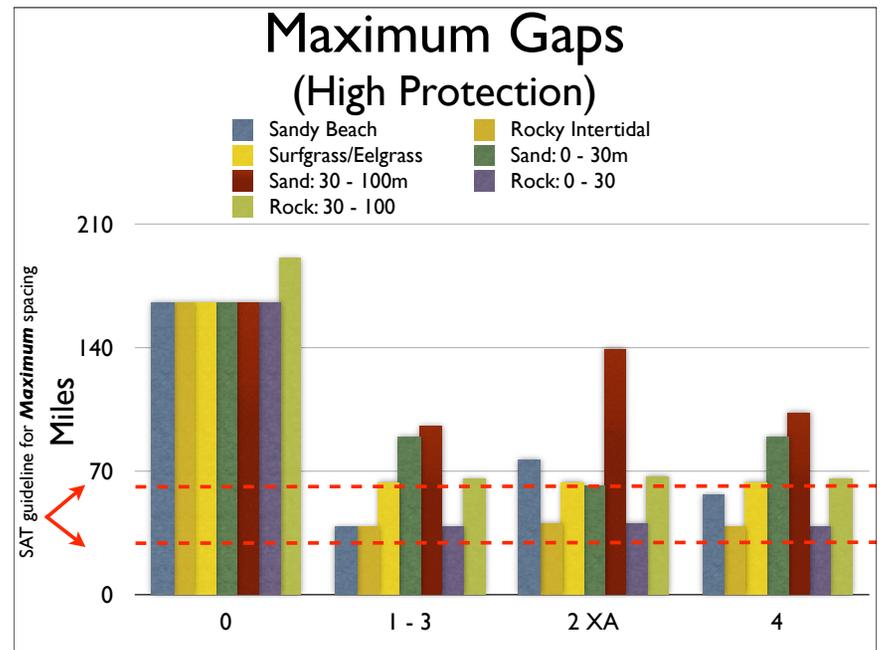
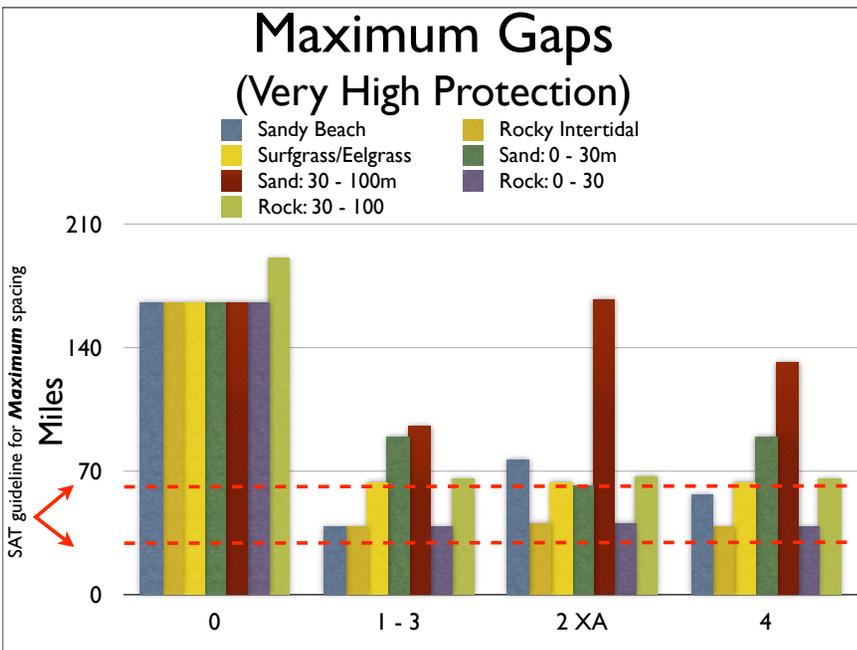
\*Proposal 4 has two more MPAs than other Proposals

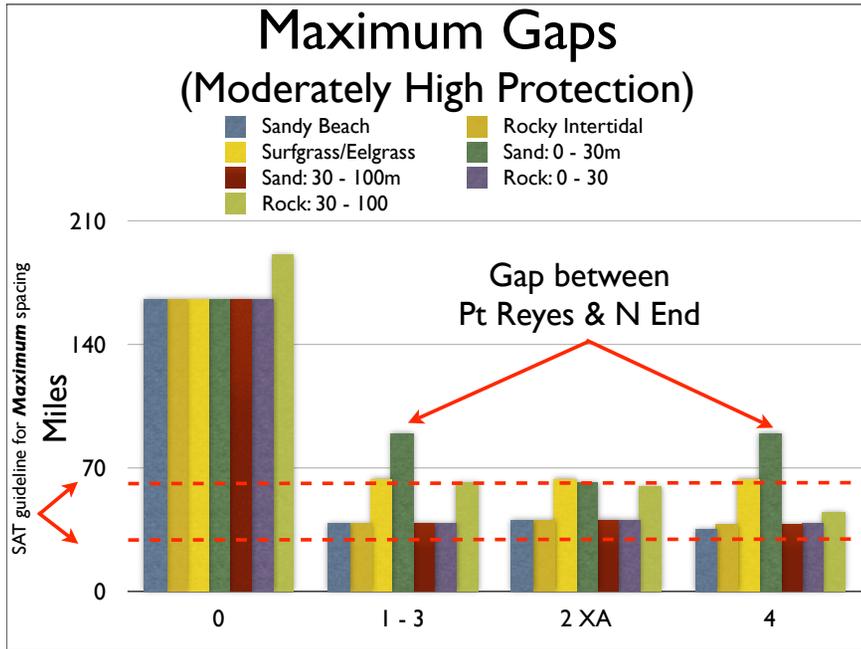


SAT Guidelines: Goals 2 and 6				
0 – 1 km	1 – 10 km	10 – 100 km	100 – 1000 km	> 1000 km
<b>Invertebrates</b> abalone, mussel, octopus, sea star, snail, urchin <b>Rockfishes</b> black & yellow brown, copper, gopher, grass,* kelp, quillback, starry, treefish, vermillion <b>Other Fishes</b> cabezon, eels, greenlings, giant seabass, black, striped, and pile perch, pricklebacks	<b>Rockfishes</b> black, China, greenspotted,* olive, yelloweye <b>Other Fishes</b> walleye perch*	<b>Invertebrates</b> Dung. crab** <b>Rockfishes</b> blue, bocaccio, yellowtail <b>Other Fishes</b> Ca. halibut, lingcod, starry flounder <b>Birds</b> gulls, cormorants <b>Mammals</b> harbor seals, otter	<b>Rockfishes</b> canary <b>Fishes</b> anchovy, big skate, herring, Pacific halibut, sablefish,** salmonids,** sole spp., sturgeon <b>Birds</b> gulls** <b>Mammals</b> porpoises, sea lions**	<b>Invertebrates</b> jumbo squid** <b>Fishes</b> sardine, sharks**, tunas**, whiting** <b>Turtles**</b> <b>Birds</b> albatross**, pelican**, shearwater**, shorebirds**, terns** <b>Mammals</b> dolphins, sea lions**, whales**
		* Studies of this species included fewer than 10 individuals ** Seasonal Migration		

## Spacing Analysis Methods

- MPAs must meet the minimum size guidelines (9 sq mi)
- Characterize each MPA by the habitats included
- For each habitat, measure the gaps between adjacent MPAs





### MPA Spacing Conclusions

- All Proposals have gaps that exceed guidelines for two habitats at Very High and High Levels of Protection
- Large gaps are all in sandy habitats
- Proposal 2 XA meets guidelines for Moderately High Protection
- Proposals 1 - 3 and 4 have a single gap (Shallow Sand) that exceeds guidelines for Moderately High Protection

