

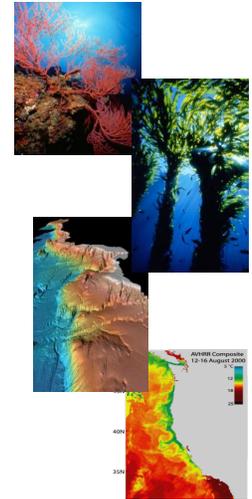
Marine Life Protection Act Initiative



**Preliminary Evaluations of NCCRS
MPA Proposals**
North Central Coast Study Region
 Presentation to the MLPA Science Advisory Team
 April 3, 2008 • Pacifica, CA
 Presented by Dr. Steve Gaines

MLPA Goals: Populations

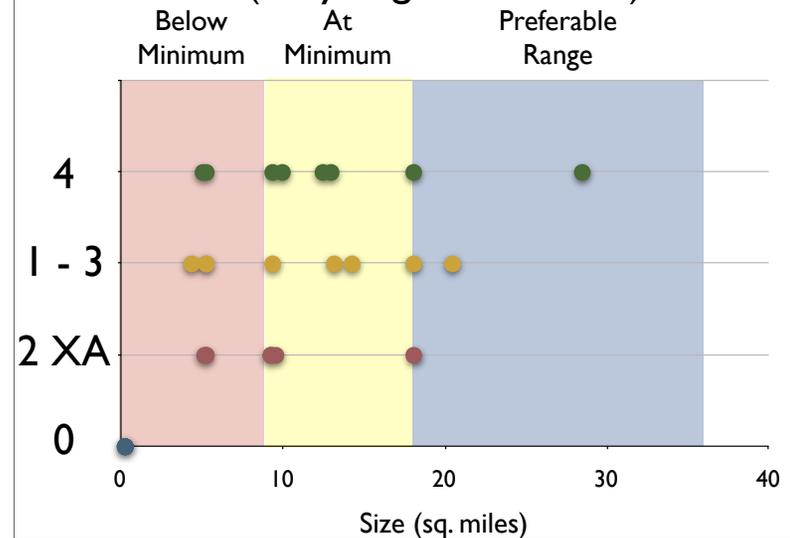
1. To protect the natural diversity and function of **marine ecosystems**.
2. To help sustain and restore **marine life populations**.
3. To improve **recreational, educational, and study opportunities** in areas with minimal human disturbance.
4. To protect representative and unique **marine life habitats**.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

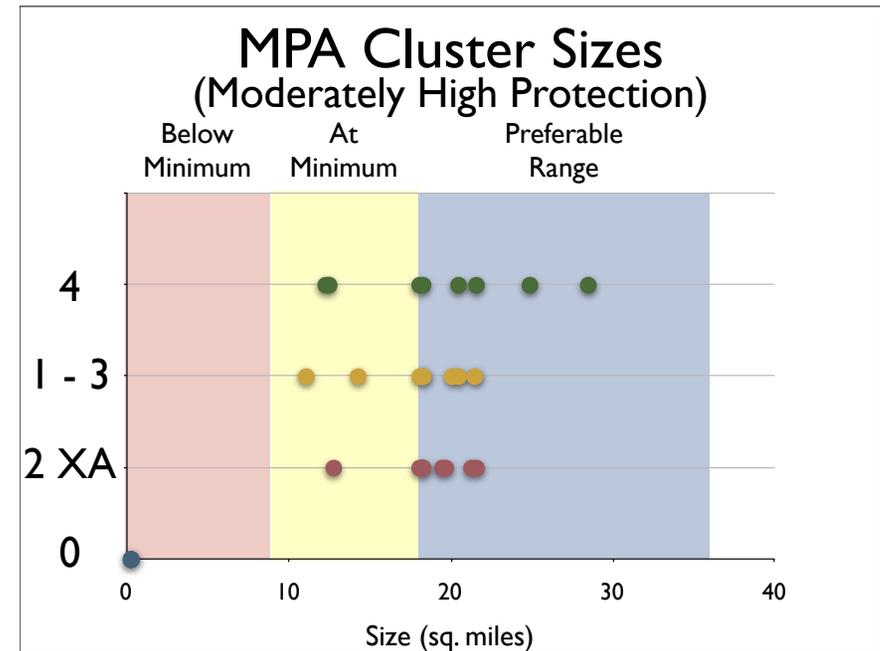
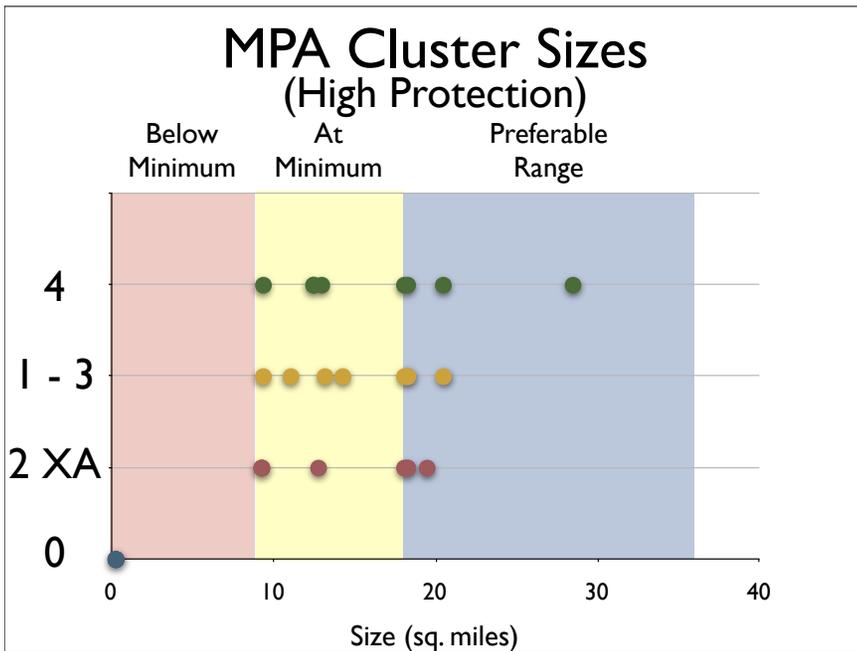


Size Analysis Methods

- 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

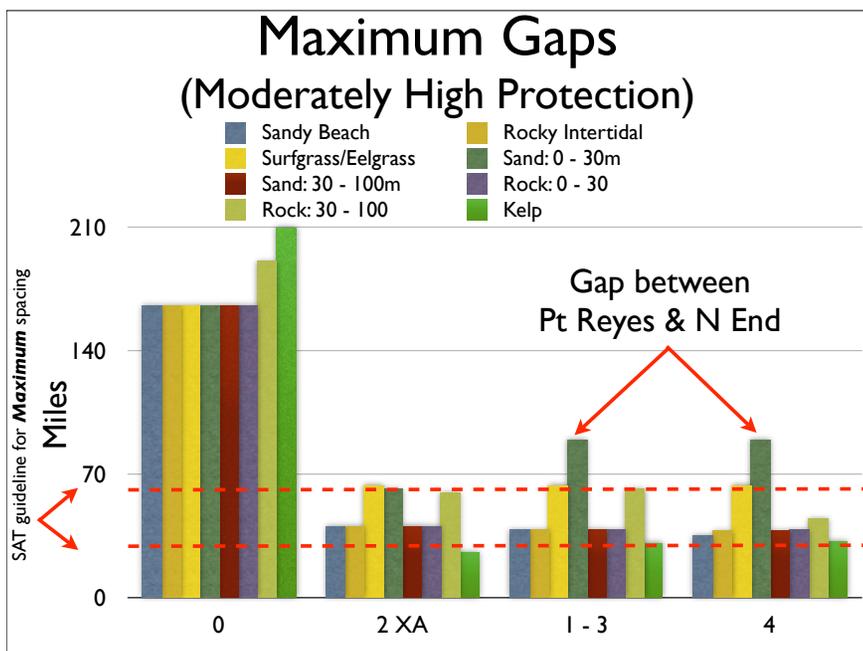
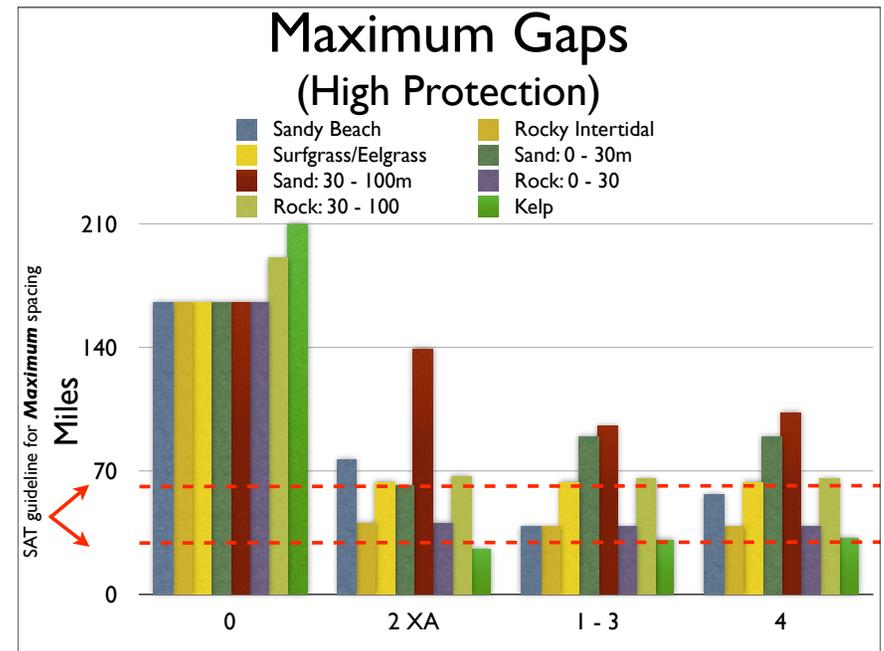
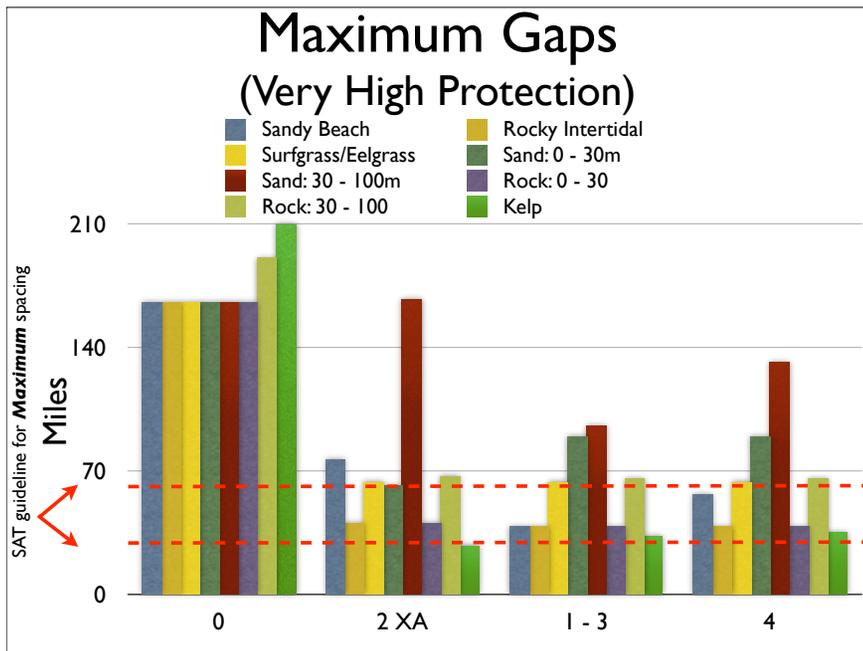
- Most MPAs meet minimum size guideline
- All MPAs meet min size for High/Mod High Prot
- Prop 4 generally has larger MPAs
- Prop 4 has the most MPAs in preferred size range

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

*Proposal 4 has two more MPAs than other Proposals

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

Replicates Per Habitat (Very High Protection)

Pkg	Sandy or gravel Beaches	Rocky intertidal and cliff	Surfgrass	Soft: 0 - 30m	Soft: 30 - 100m	Hard 0 - 30m	Hard 30 - 100m	Average Kelp	Average
0	0	0	0	0	0	0	0	0	0
2 XA	3	5	3	3	1	5	4	1	3.1
1 - 3	4	5	3	2	3	5	4	1	3.4
4	4	5	3	3	2	5	5	1	3.5

Replicates Per Habitat (High Protection)

Pkg	Sandy or gravel Beaches	Rocky intertidal and cliff	Surfgrass	Soft: 0 - 30m	Soft: 30 - 100m	Hard 0 - 30m	Hard 30 - 100m	Average Kelp	Average
0	0	0	0	0	0	0	0	0	0
2 XA	3	7	3	3	3	7	6	2	4.3
1 - 3	4	7	3	2	4	7	6	2	4.3
4	4	7	3	3	4	7	7	2	4.6

Replicates Per Habitat (Moderately High Protection)

Pkg	Sandy or gravel Beaches	Rocky intertidal and cliff	Surfgrass	Soft: 0 - 30m	Soft: 30 - 100m	Hard 0 - 30m	Hard 30 - 100m	Average Kelp	Average
0	0	0	0	0	0	0	0	0	0
2 XA	4	7	3	3	6	7	7	2	4.9
1 - 3	4	7	3	2	6	7	7	2	4.8
4	6	8	4	4	7	7	8	2	5.8

SAT Preliminary Evaluations

