

Monitoring and evaluation summary for MPA systems

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Central Coast Science Sub-Team

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Monitoring MPAs and evaluating their performance

Three broad classes of comparisons:



Open access



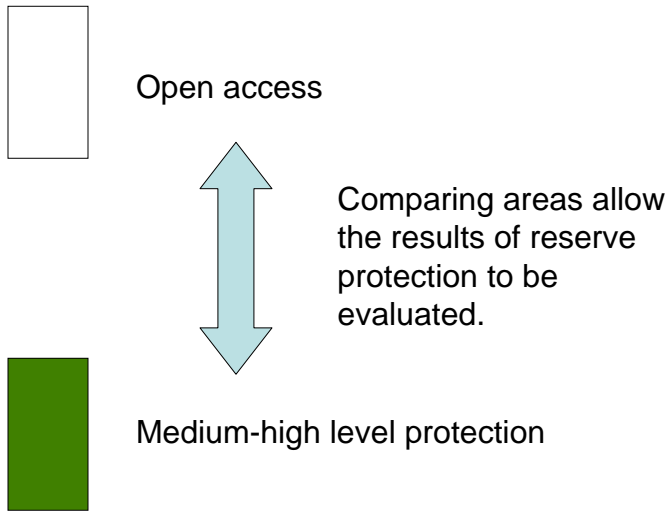
Low level protection



Medium-high level protection

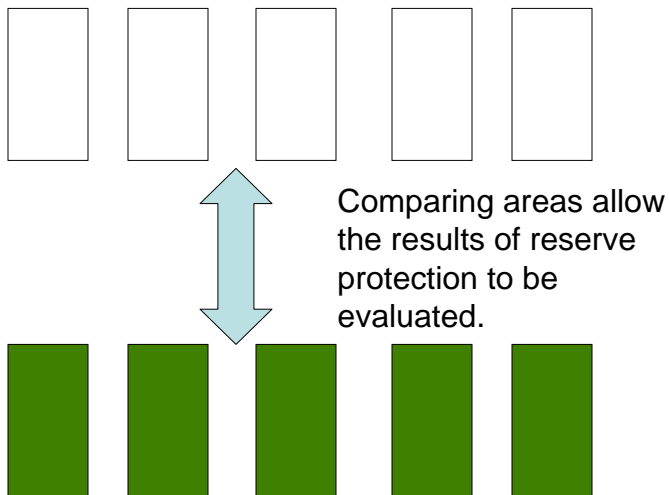
Monitoring MPAs and evaluating their performance

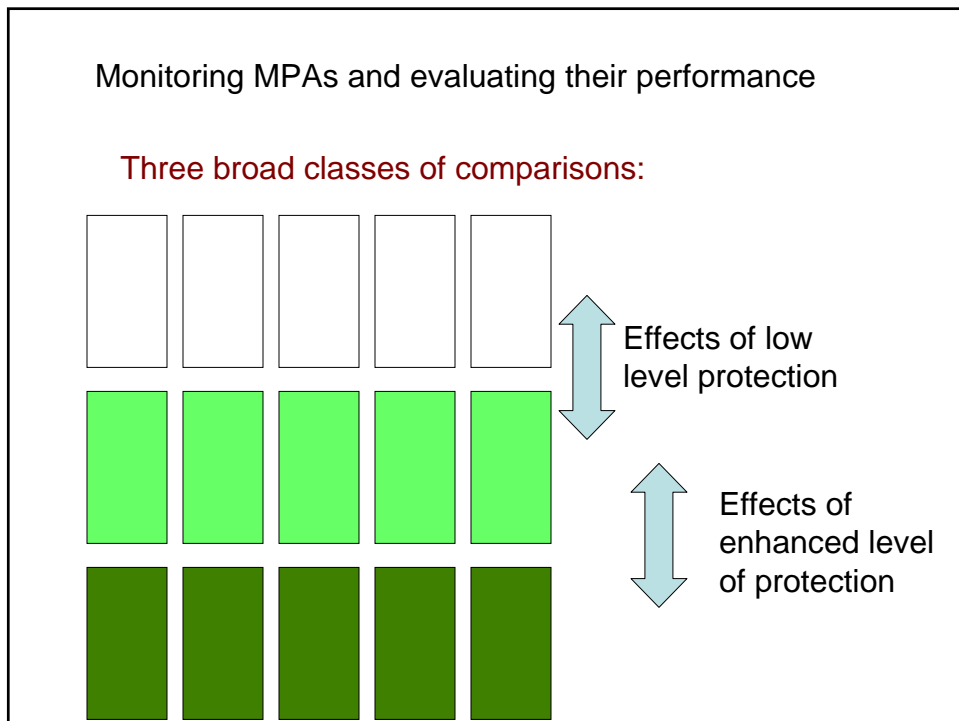
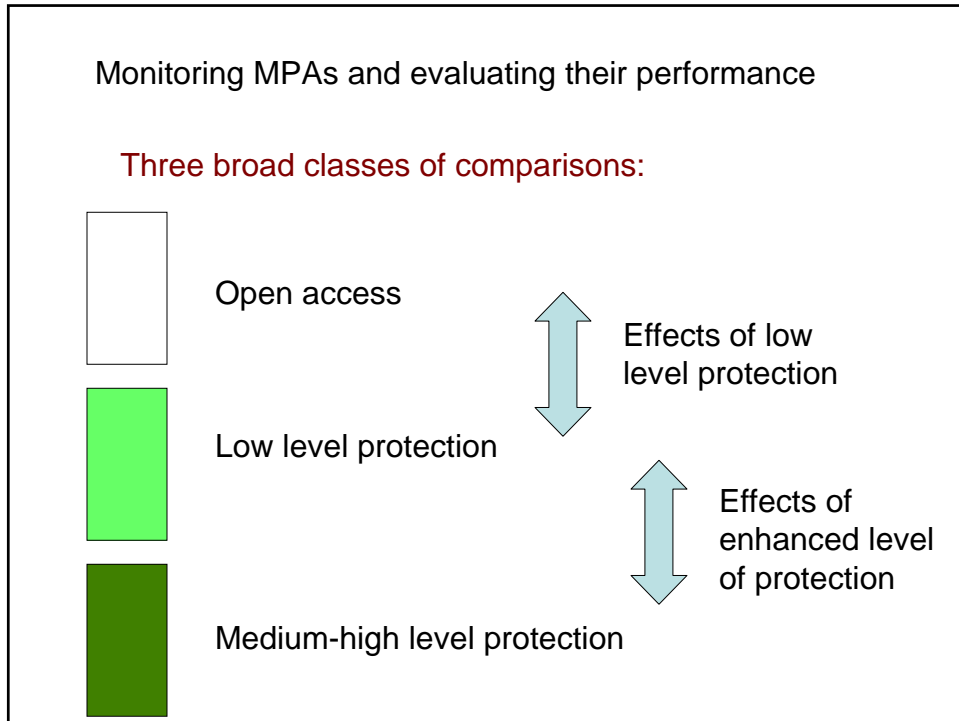
Three broad classes of comparisons:

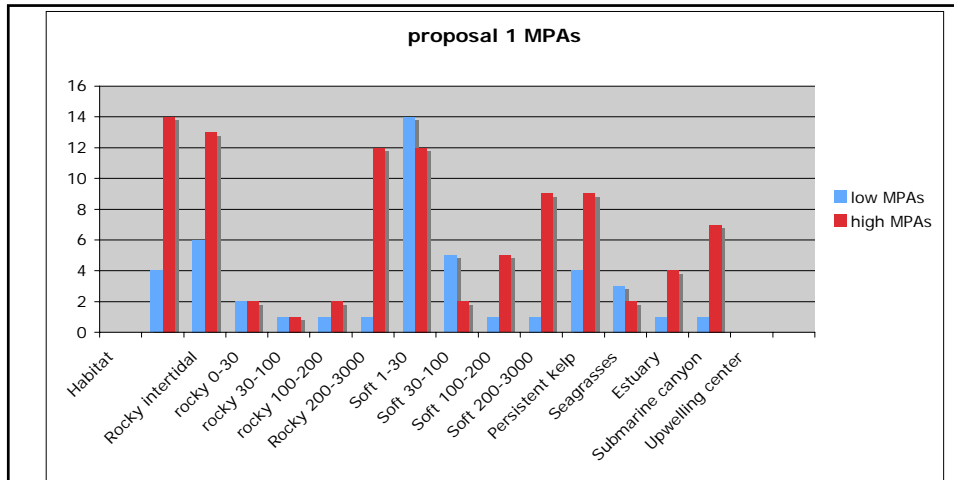


But two areas may differ in more than just levels of protection

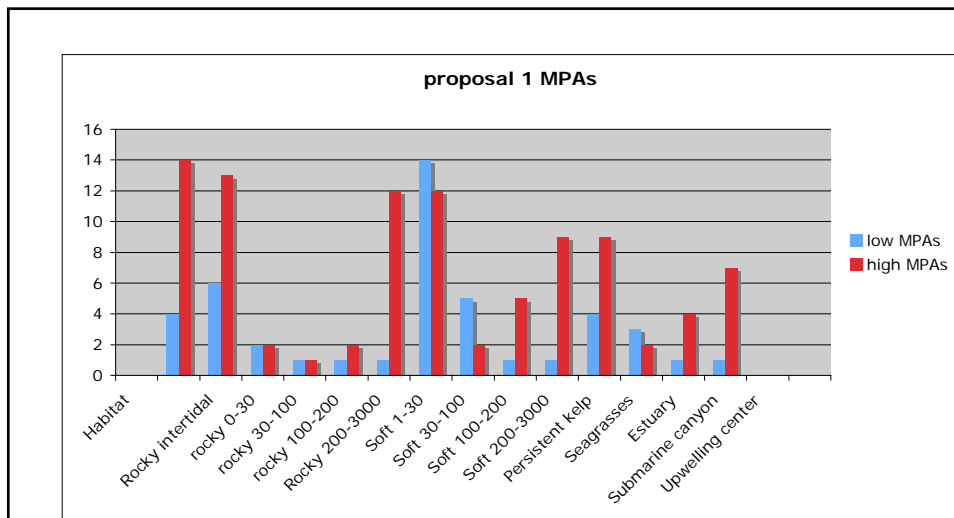
Typical experiments use replicates of every treatment



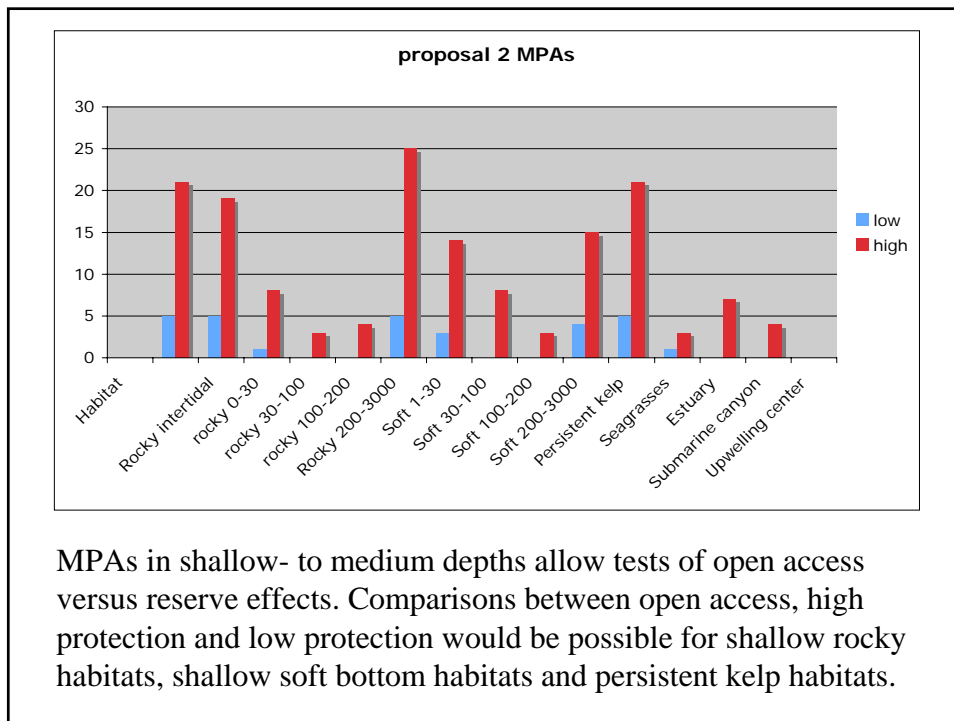
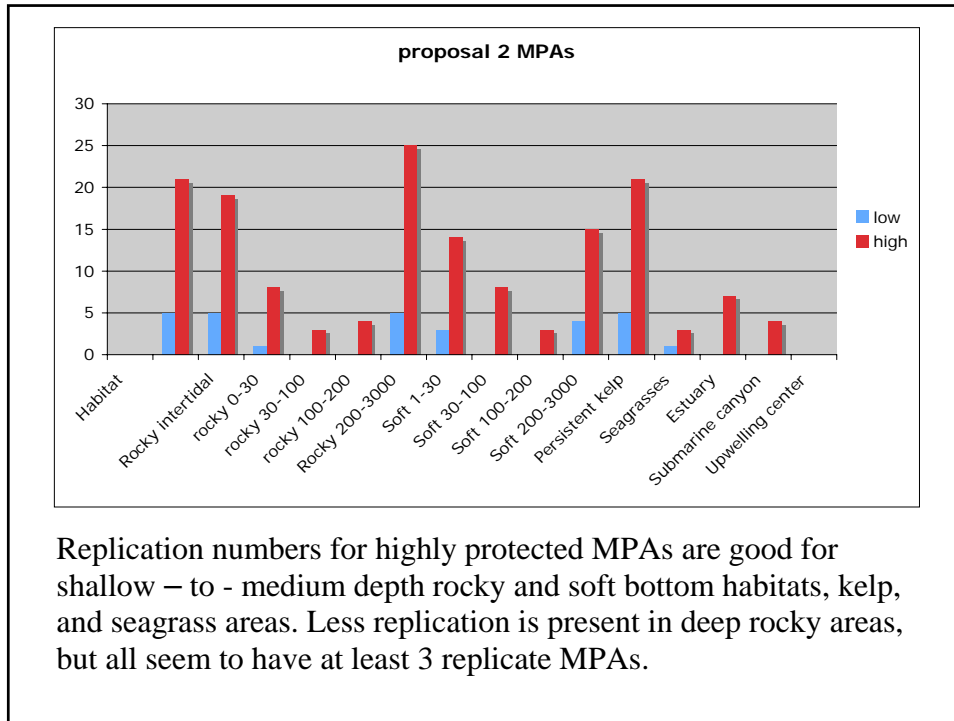


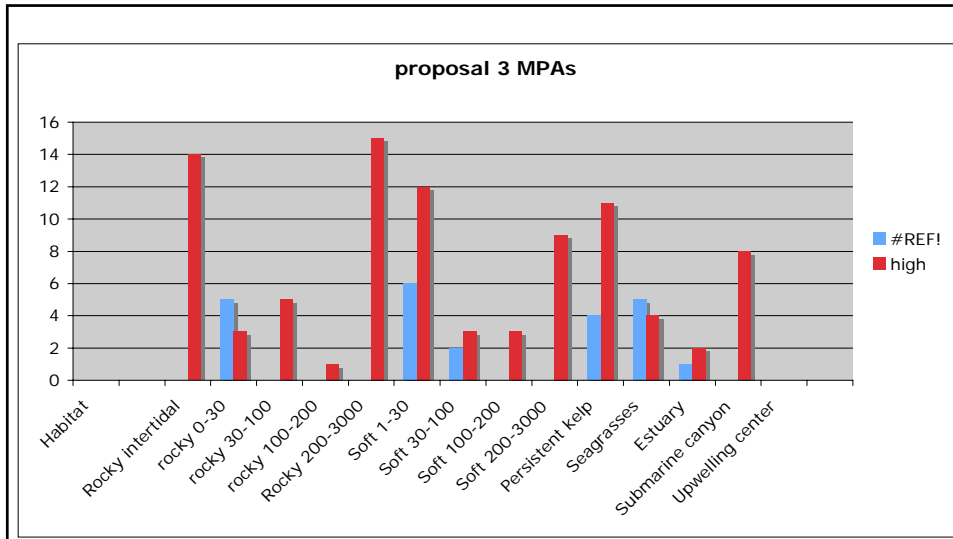


A large number of MPAs with high levels of protection occur in shallow waters, particularly in the rocky intertidal and soft-sediment areas less than 30 feet in depth. Replication in deeper water environments is much less common, with poor protection for rocky substrates deeper than 30 feet or for estuaries. Soft sediment areas 30-100 deep have better protection, but deeper than 100 ft, there is very little replication of MPAs of any kind.

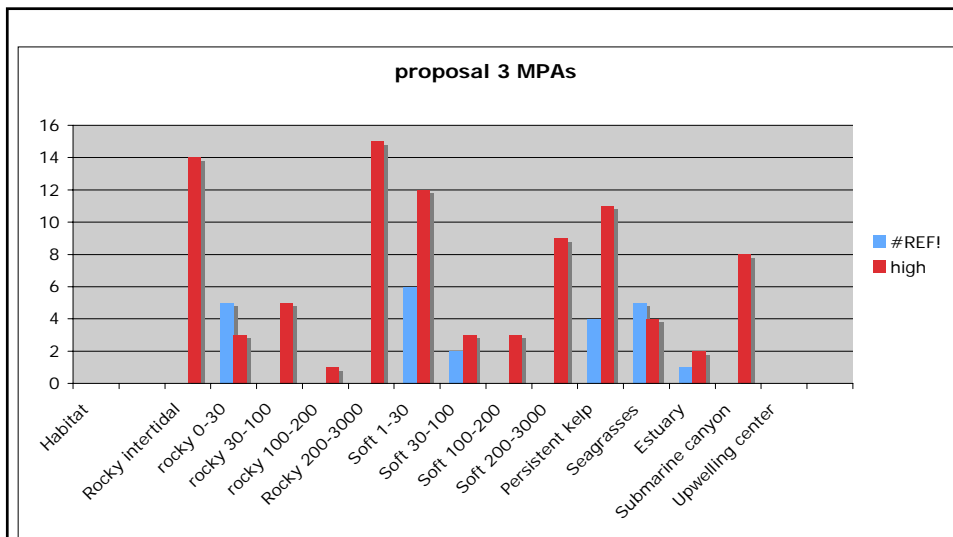


MPAs in shallow depths allow tests of open access versus reserve effects. Contrasts in results for no-MPA vs low vs high level MPA protection could be studied for shallow water areas, as well as for area with seagrasses. Few studies of protection of deep protection would be possible.

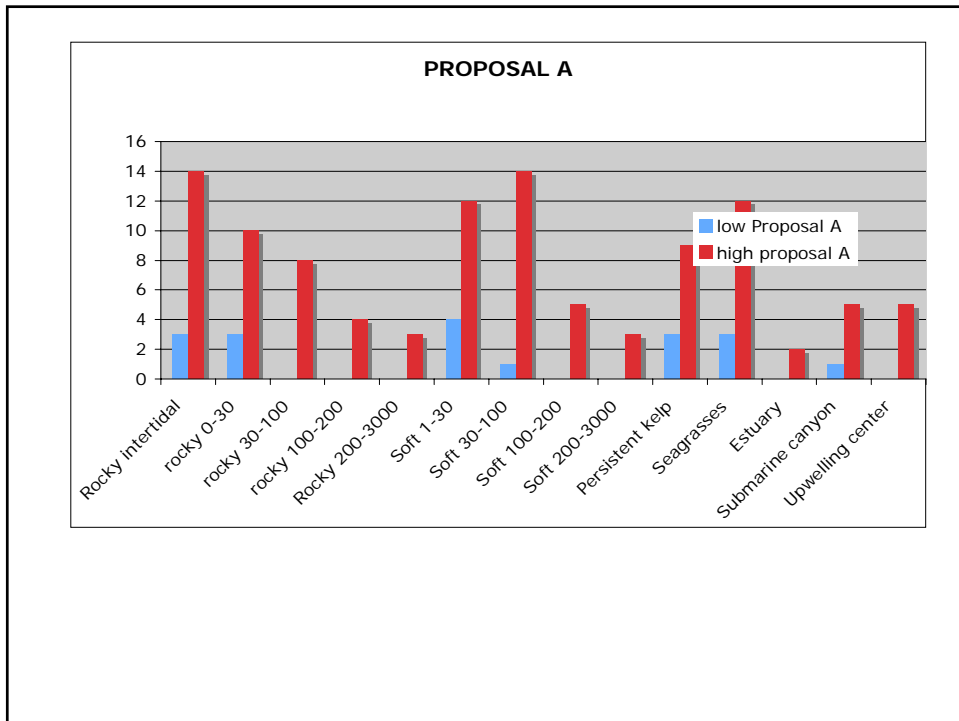
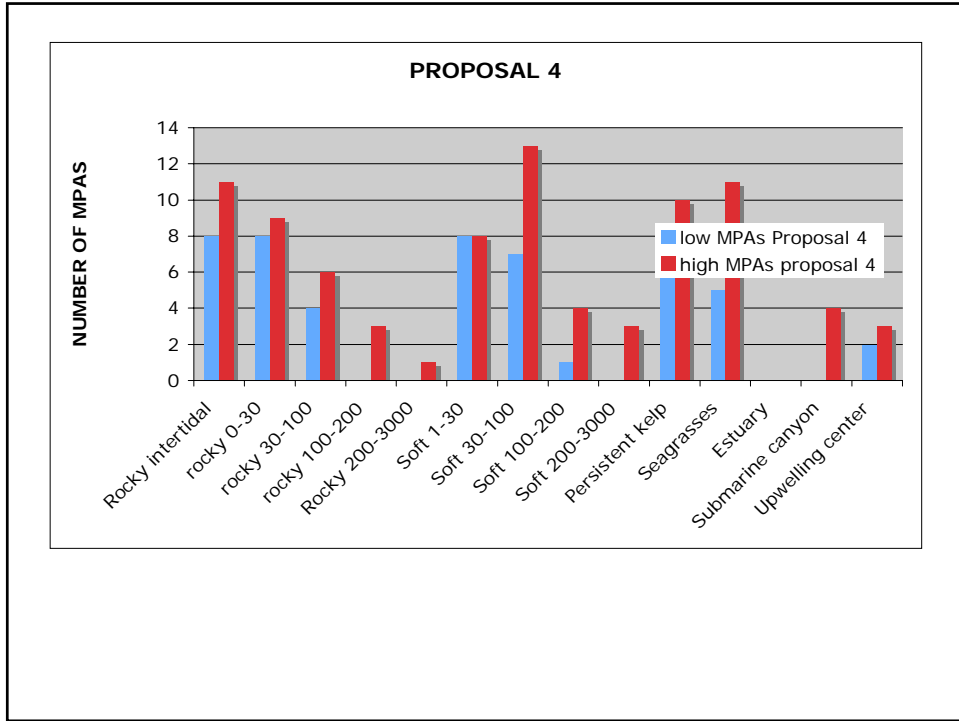


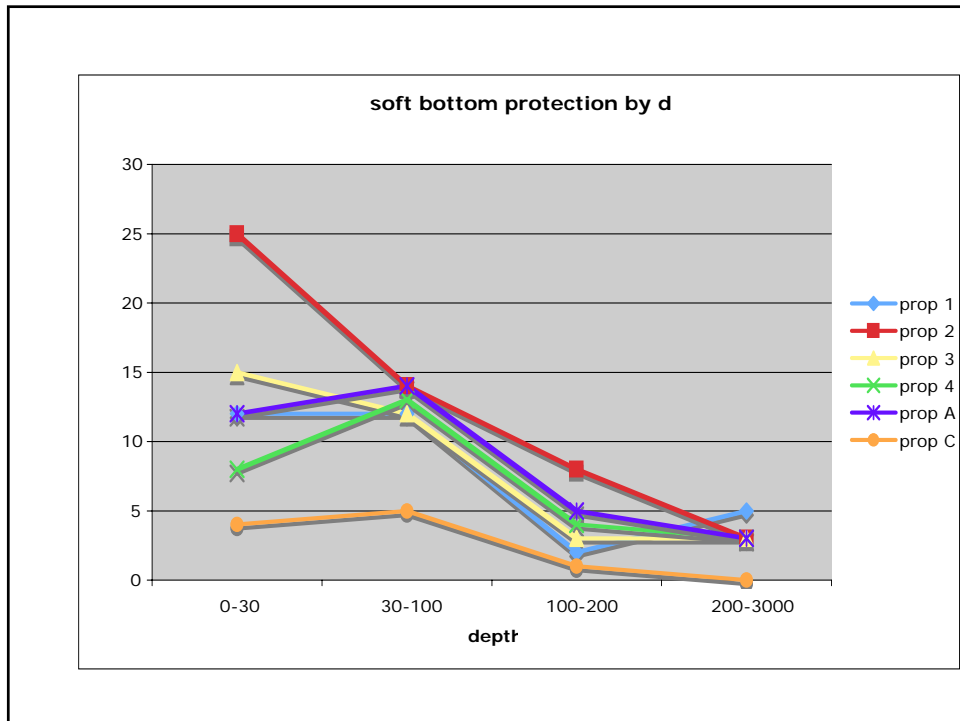
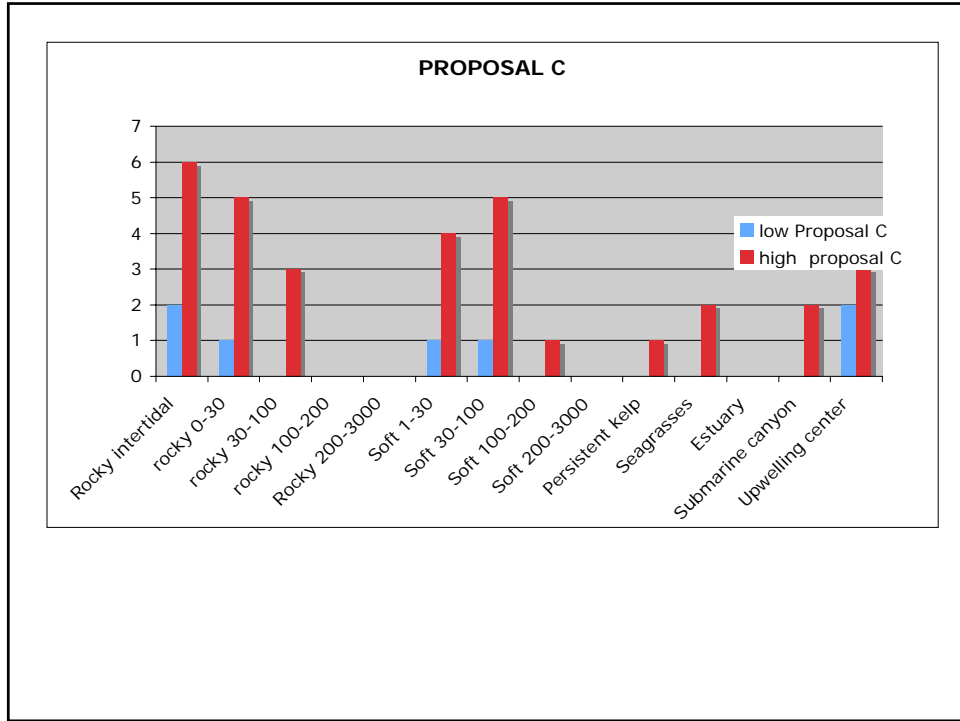


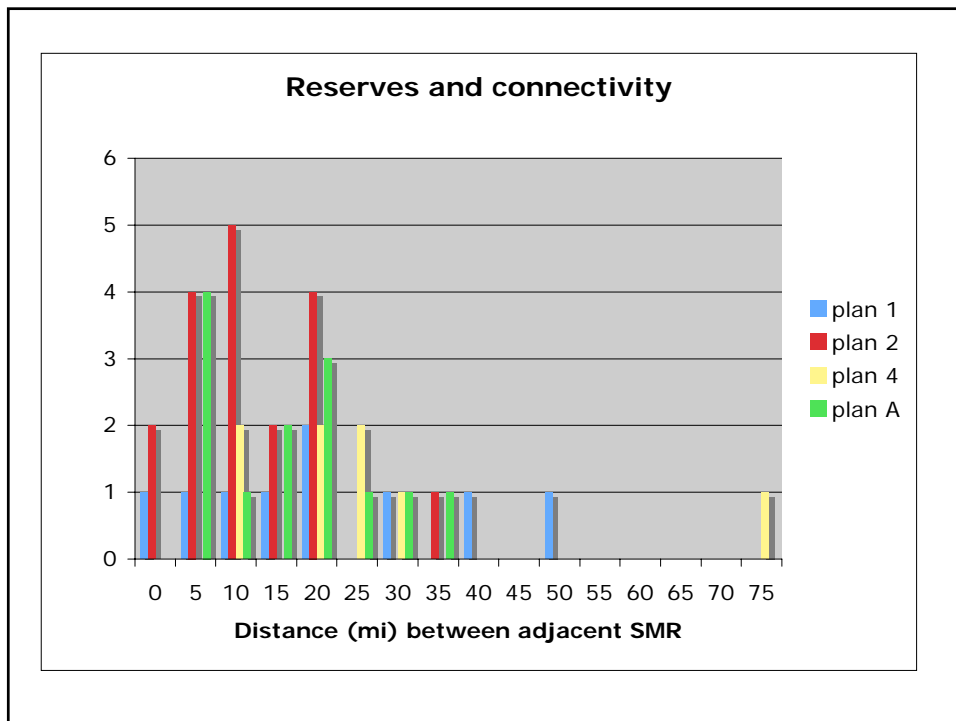
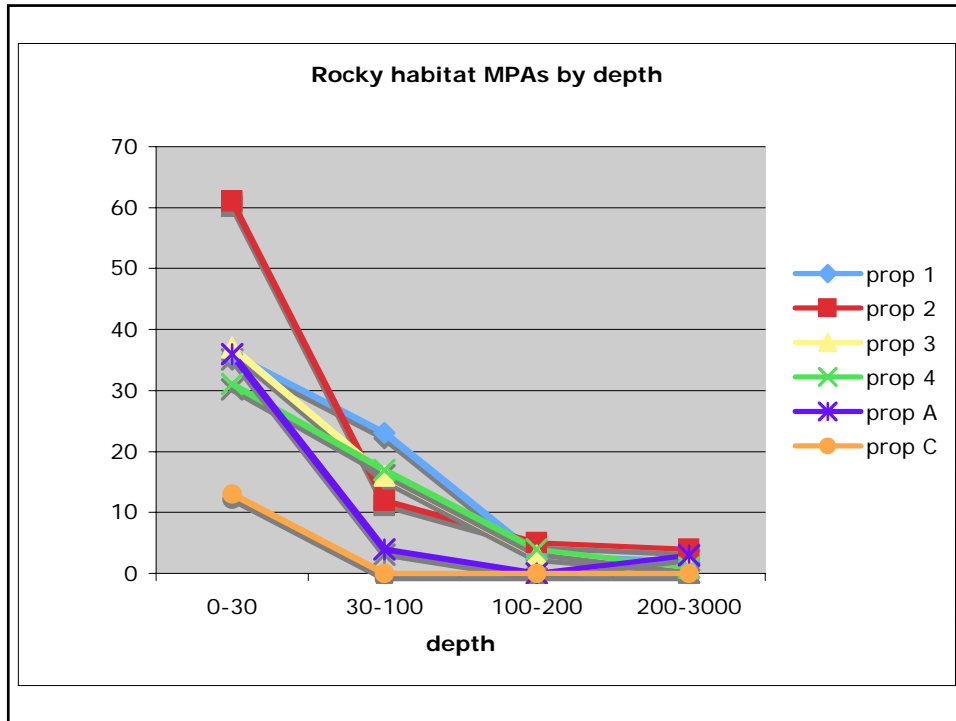
Replication is good for shallow rocky and soft bottom areas, kelp areas and seagrass beds. Upwelling centers receive more high level protection than in other proposals. Low replication for deep rocky reefs (>200 ft) is a concern in this proposal.



MPAs in shallow- to medium depths allow tests of open access versus reserve effects. Analysis of open access vs low level vs high level protection would be possible in shallow rocky, shallow soft bottom, seagrass and estuary habitats.







California Marine Life Protection Act Initiative

MLPA Master Plan Science Advisory Team - Central Coast Sub-Team

Analysis of Habitats by Depth for Candidate MPA Packages in the Central Coast Study Region

"November 29, 2005"

Habitat	low MPAs	low	low	low MPAs	low	low	high MPAs	high	high	high MPAs	high	high
	Proposal 1	Proposal 2	Proposal 3	Proposal 4	Proposal A	Proposal C	proposal 1	proposal 2	proposal 3	proposal 4	proposal A	proposal C
Rocky intertidal	4	5	6	8	3	2	14	21	12	11	14	6
rocky 0-30	6	5	5	8	3	1	13	19	14	9	10	5
rocky 30-100	2	1	0	4	0	0	2	8	3	6	8	3
rocky 100-200	1	0	0	0	0	0	1	3	5	3	4	0
Rocky 200-3000	1	0	0	0	0	0	2	4	1	1	3	0
Soft 1-30	1	5	6	8	4	1	12	25	15	8	12	4
Soft 30-100	14	3	2	7	1	1	12	14	12	13	14	5
Soft 100-200	5	0	0	1	0	0	2	8	3	4	5	1
Soft 200-3000	1	0	0	0	0	0	5	3	3	3	3	0
Persistent kelp	1	4	4	7	3	0	9	15	9	10	9	1
Seagrasses	4	5	5	5	3	0	9	21	11	11	12	2
Estuary	3	1	1	0	0	0	2	3	4	0	2	0
Submarine canyon	1	0	0	0	1	0	4	7	2	4	5	2
Upwelling center	1	0	0	2	0	2	7	4	8	3	5	3
Rocky habitats	prop 1	prop 2	prop 3	prop 4	prop A	prop C						
0-30	36	61	37	31	36	13						
30-100	23	12	16	17	4	0						
100-200	3	5	3	4	0	0						
200-3000	2	4	1	1	3	0						
Soft bottom habitats	prop 1	prop 2	prop 3	prop 4	prop A	prop C						
0-30	12	25	15	8	12	4						
30-100	12	14	12	13	14	5						
100-200	2	8	3	4	5	1						
200-3000	5	3	3	3	3	0						