

## Marine Life Protection Act Initiative



### Marine Birds and Marine Mammals Evaluations for Round 3 SCRS MPA Proposals in the MLPA South Coast Study Region

Presentation to the MLPA Blue Ribbon Task Force  
October 20, 2009 • Long Beach, CA

Dr. Susan Chivers and Dan Robinette, MLPA Master Plan Science Advisory Team

## MLPA Goals\* and SAT Guidelines

### 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**.

*\*Note that this language represents a summary of the MLPA goals.*

**SAT Guidelines** – None.

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## Benefits for Marine Birds and Mammals

### Direct Benefits

1. Decreased disturbance at breeding and resting sites
2. Decreased human interactions at foraging sites  
e.g., bycatch, gear entanglement, light attraction

### Indirect Benefits

1. Reduced competition with humans for food resources

Prey availability is an important factor regulating annual breeding population and reproductive success.



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## SCSR Marine Birds and Mammals

### Species likely to benefit

Incidental takes, vulnerable to disturbance, feature association, limited adult range and depressed populations

### Marine Birds

1. Depressed populations: Black Oystercatcher, Bald Eagle, Brown Pelican, Least Tern, Xantus's Murrelet
2. Limited adult range: Bald Eagle, Least Tern, Pigeon Guillemot, Brandt's and Pelagic Cormorants

### Marine Mammals

1. Pinnipeds: Guadalupe and Northern Fur Seals, Northern Elephant Seal, Pacific Harbor Seal, California Sea Lion
2. Cetaceans: Coastal Bottlenose Dolphin
3. Other: Sea Otter

### Federal and state protection:

Threatened or Endangered: Bald Eagle, Least Tern, Xantus's Murrelet, Brown Pelican, Guadalupe Fur Seal, Sea Otter

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## Methods Overview

Five Analyses Quantify Percentages of the South Coast Study Region Populations to Benefit from Protection of Areas used for

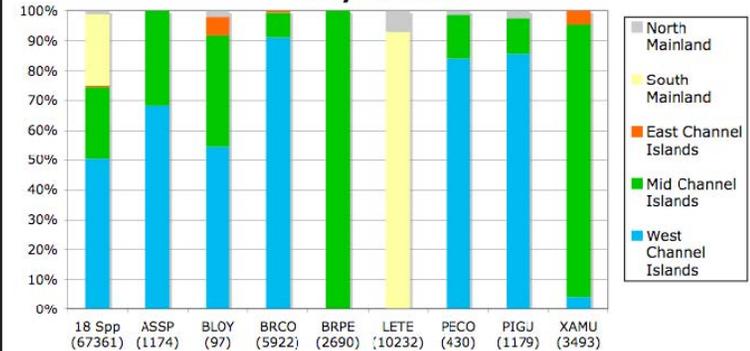
1. breeding
2. resting
3. foraging

### Notes about Round 3 Analyses

- Marine mammal analyses considered only proposed state marine reserves (SMRs)
- Proposed state marine conservation areas (SMCAs) were included in bird analyses depending on allowed uses
- Pending military closures were reviewed separately to determine the level of benefit they provide marine birds and mammals and were included where appropriate

## Seabird Breeding Colonies

Distribution of Total Seabird Population and Species Likely to Benefit

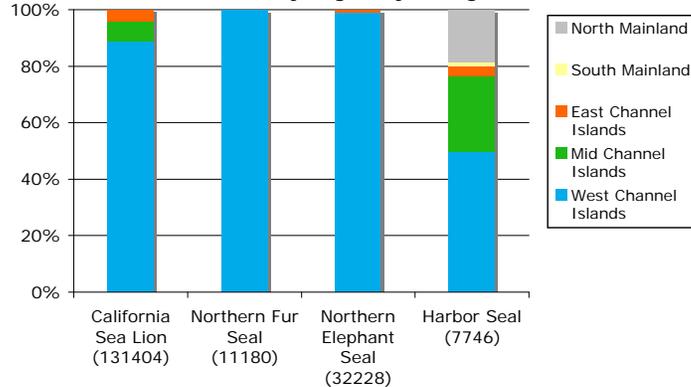


(values in parentheses indicate breeding population estimates)

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## Pinniped Bioregion Haulout Summary

Distribution of Total Pinniped Populations in the South Coast Study Region by Bioregion



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## Summary of Round 3 Analyses

### Potential Benefits Categories

Potential Benefits Categories	P 1	P 2	P 3
Seabird & Pinniped Breeding Colonies	=	=	=
Seabird Roost Sites (Brown Pelicans)	+		
East CI Harbor Seal Haulouts			+
Sea Otter Habitat Protection			+
Foraging			
Least Tern North Mainland		+	+
Least Tern South Mainland	+		+
Bald Eagle			+
Harbor Seal			+
Neritic "Hot Spots" (Birds & Mammals)			+
Bird Habitats: Beach/Marsh/Tidal Flats			+
Estuary Habitat	+		+

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## Summary of Round 3 Analyses

### 1. Potential benefits include...

Bioregion	Activity		
	Bird roosts	Pinniped haulouts & rookeries	Foraging
North Mainland	Brown Pelican (P2)	Harbor seal & Northern elephant seal (P1-3)	Least Tern (P2 & 3)
South Mainland	Brown Pelican (P3)		Least Tern (P1 & 3); Harbor seal (P3)
East		Harbor seal (P3)	Bald eagles & Harbor seal (P3)
West		Harbor seal & Northern elephant seal (P3)	Harbor seal (P3)

- Other: Bird & Mammal hotspots: 45-60 sq mi over existing; P3>P1>P2
- Overall, Proposal 3 provides the most benefits because they proposed more SMRs.

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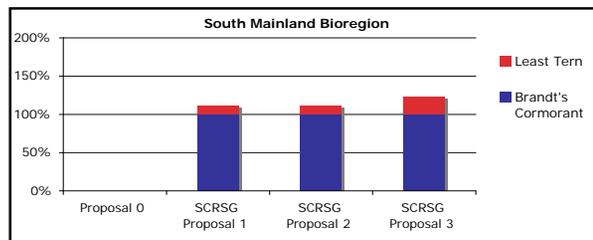
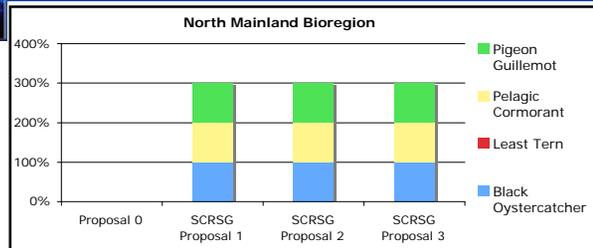
### Following Slides Are Excerpts from 'Draft Marine Birds and Marine Mammals Evaluations for Round 3 MPA Proposals in the MLPA South Coast Study Region'

Presentation to the MLPA Master Plan Science Advisory Team  
October 6, 2009 • Los Angeles, CA

Dan Robinette and Dr. Susan Chivers, MLPA Master Plan Science Advisory Team

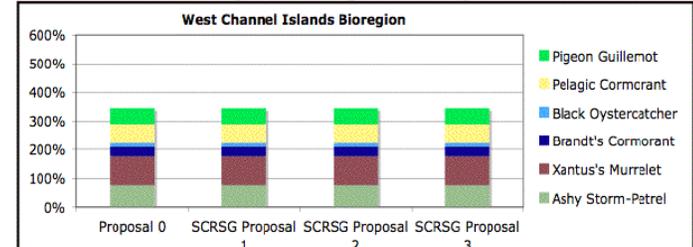
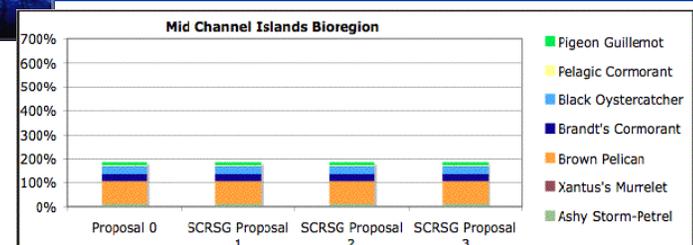
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## Percent of Bioregion Breeding Population



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## Percent of Bioregion Breeding Population



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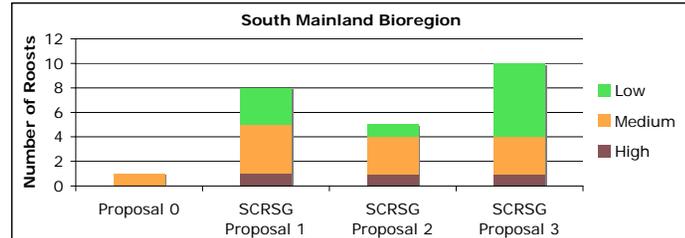
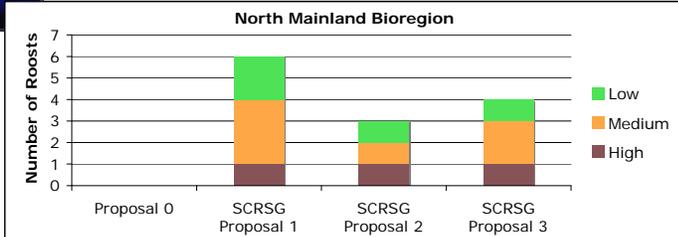
## Number of Pinniped Rookeries

Number of pinniped rookeries in state marine reserves

	California Sea Lion	Northern Fur Seal	Northern Elephant Seal	Harbor Seal
<b>North Mainland</b>				
Proposal 0	N/A	0	0	0
SCRSG 1	N/A	0	1	2
SCRSG 2	N/A	0	1	2
SCRSG 3	N/A	0	1	2
<b>Mid Channel Islands</b>				
Proposal 0	1	0	1	N/A
SCRSG 1	1	0	1	N/A
SCRSG 2	1	0	1	N/A
SCRSG 3	1	0	1	N/A
<b>West Channel Islands</b>				
Proposal 0	1	1	5	N/A
SCRSG 1	1	1	5	N/A
SCRSG 2	1	1	5	N/A
SCRSG 3	1	1	5	N/A
<b>West Channel Islands Military Closure</b>				
SCRSG 3	0	0	1	N/A

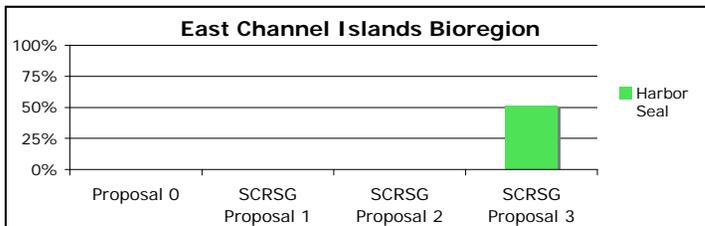
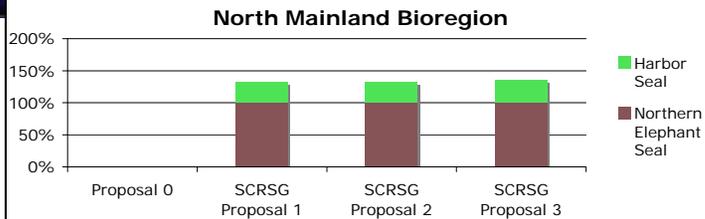
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## Mainland Brown Pelican Roosts



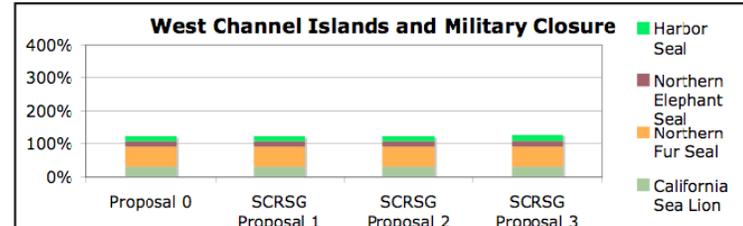
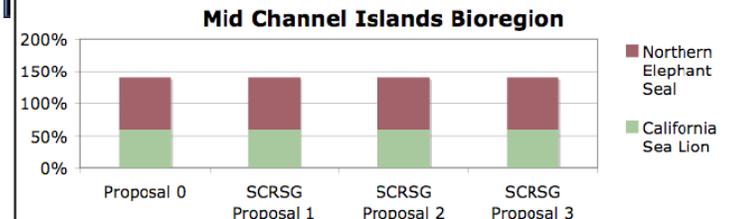
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## Percent of Bioregion Haulout Population



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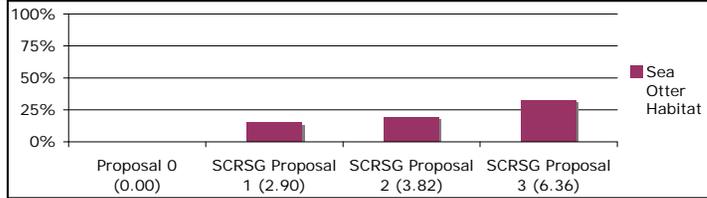
## Percent of Bioregion Haulout Population



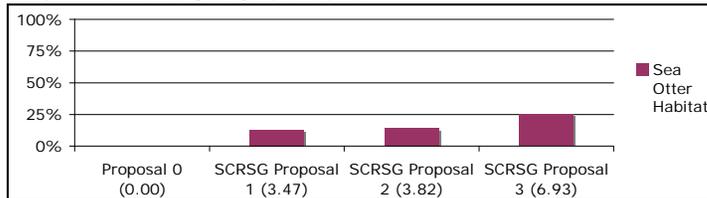
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## Sea Otter/Kelp Analysis

### Current Sea Otter Use Area



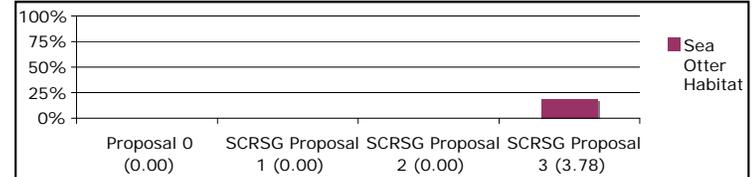
### North Mainland Sea Otter Habitat



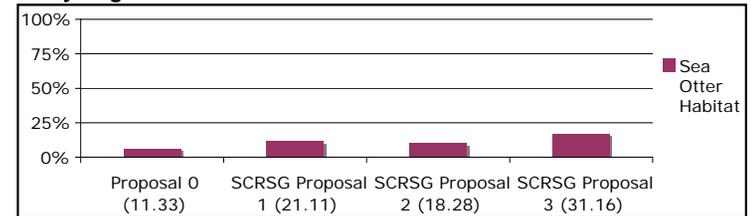
(Values in parentheses indicate amount of kelp persistence contained in SMRs in linear miles.) 17

## Sea Otter/Kelp Analysis

### San Nicolas Island Sea Otter Habitat



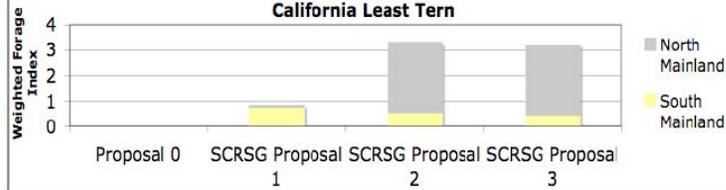
### Study Region Sea Otter Habitat



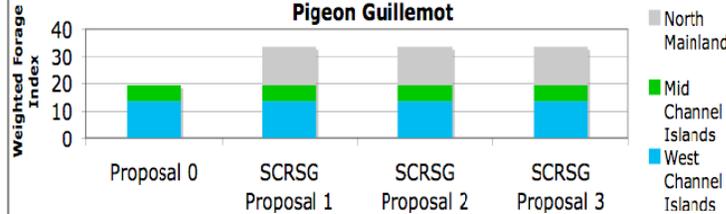
(Values in parentheses indicate amount of kelp persistence contained in SMRs in linear miles.) 18

## Nearshore Foraging Areas

### California Least Tern



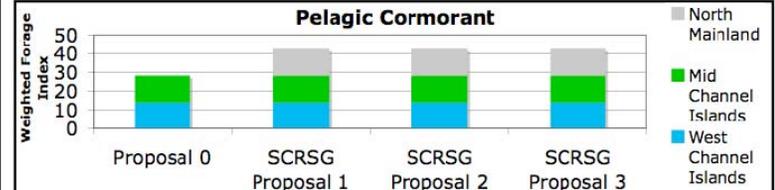
### Pigeon Guillemot



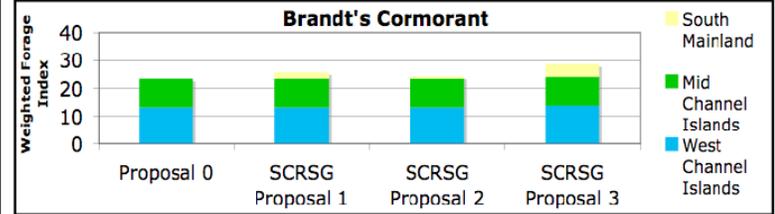
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## Nearshore Foraging Areas

### Pelagic Cormorant

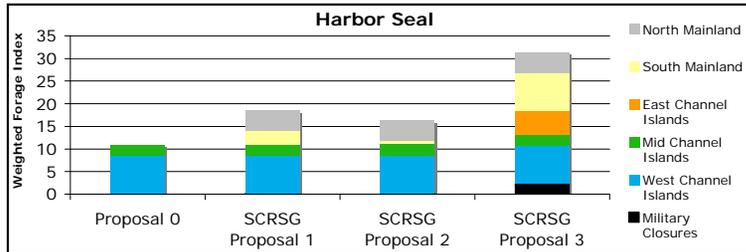
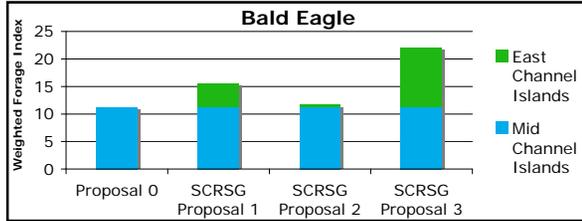


### Brandt's Cormorant



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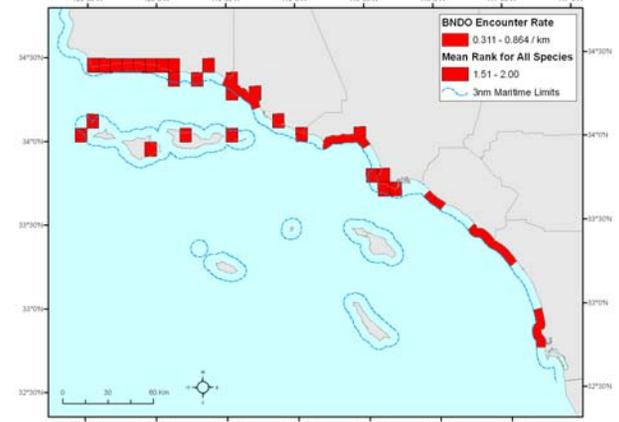
## Nearshore Foraging Areas



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## Neritic Foraging Area Analysis

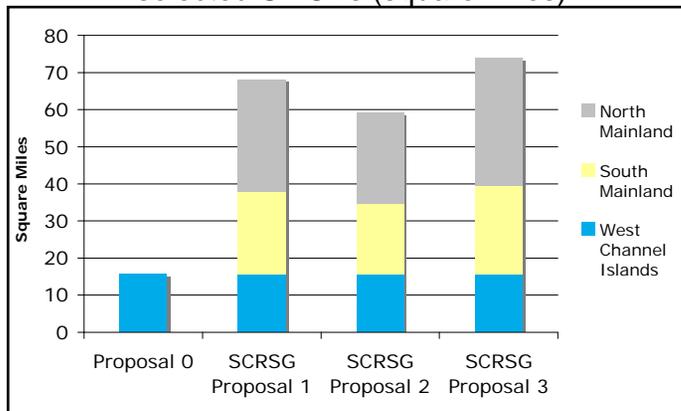
Composite Map of Neritic Foraging "Hot Spots" within the MLPA South Coast Study Region



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## Neritic Foraging Analysis

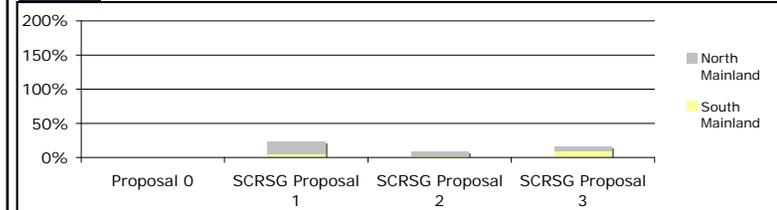
Overlap of "hot spots" and SMRs and selected SMCAs (square miles)



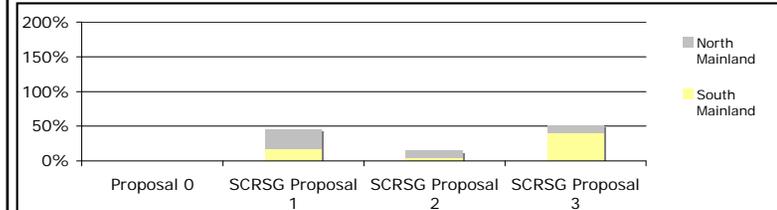
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## Estuarine and Coastal Habitat

### Estuaries



### Coastal Marshes

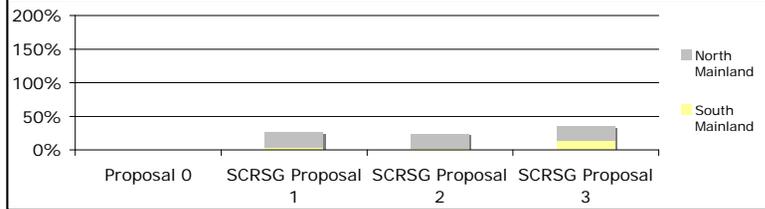


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# Estuarine and Coastal Habitat

## Tidal Flats



## Beaches

