

# Marine Life Protection Act Initiative



## Marine Birds and Mammals Evaluation for the MLPA South Coast Study Region

Presentation to the South Coast Regional Stakeholder Group  
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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





# Methods Overview

## 5 Analyses to Evaluate Direct and Indirect Benefits

1. Protection of seabird breeding sites (*marine mammal breeding sites will be in Round 2*)
2. Protection of seabird roost and marine mammal haulouts.
3. Protection of nearshore foraging areas.
4. Protection of neritic foraging 'hot spots' (*in Round 2*)
5. Protection of estuarine and coastal habitat

## Notes about Round 1 Analyses

- Round 1 analyses only considered state marine reserves (SMRs)
- Pending military closures will be reviewed to determine whether they provide marine birds and mammals the same benefits as SMRs
- Proposed state marine conservation areas (SMCAs) will be reviewed to determine the level of protection they provide to marine birds and mammals



# Marine Bird and Mammal Analyses

## Analysis 1: Protection at Breeding Sites

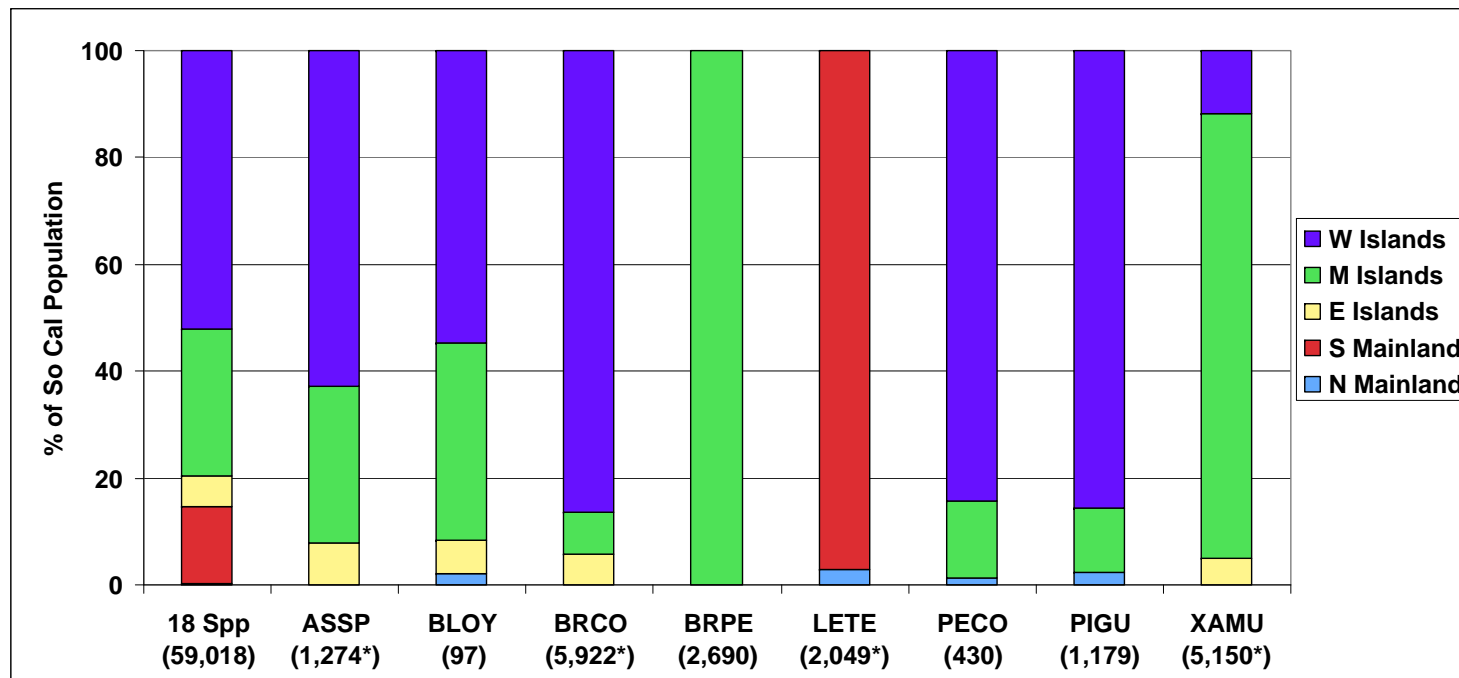
Investigated % of bioregion breeding populations protected by SMRs





# Seabird Breeding Colonies

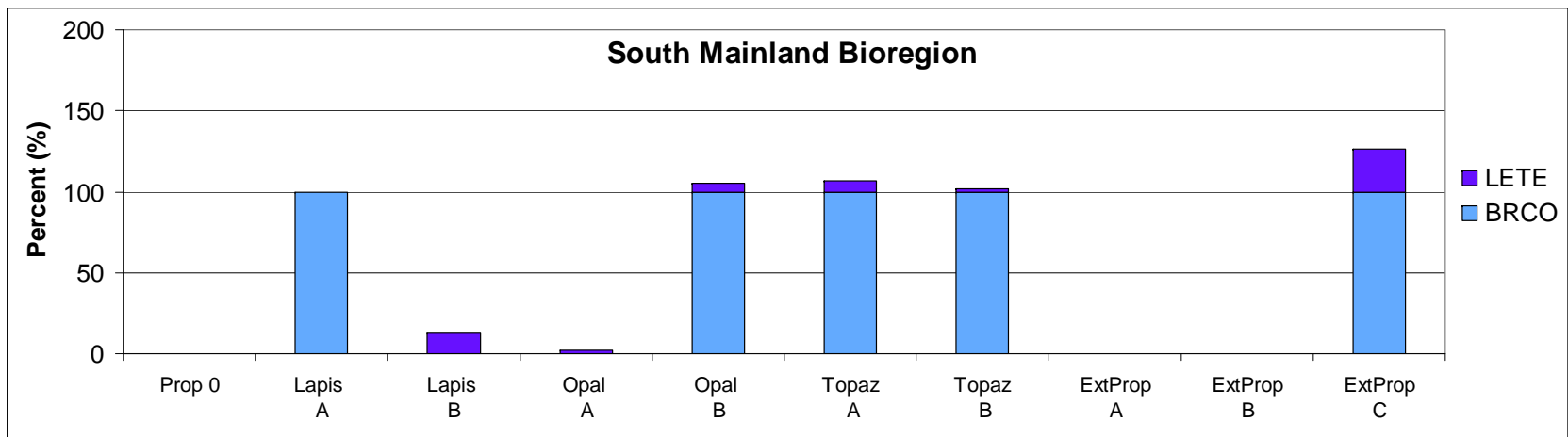
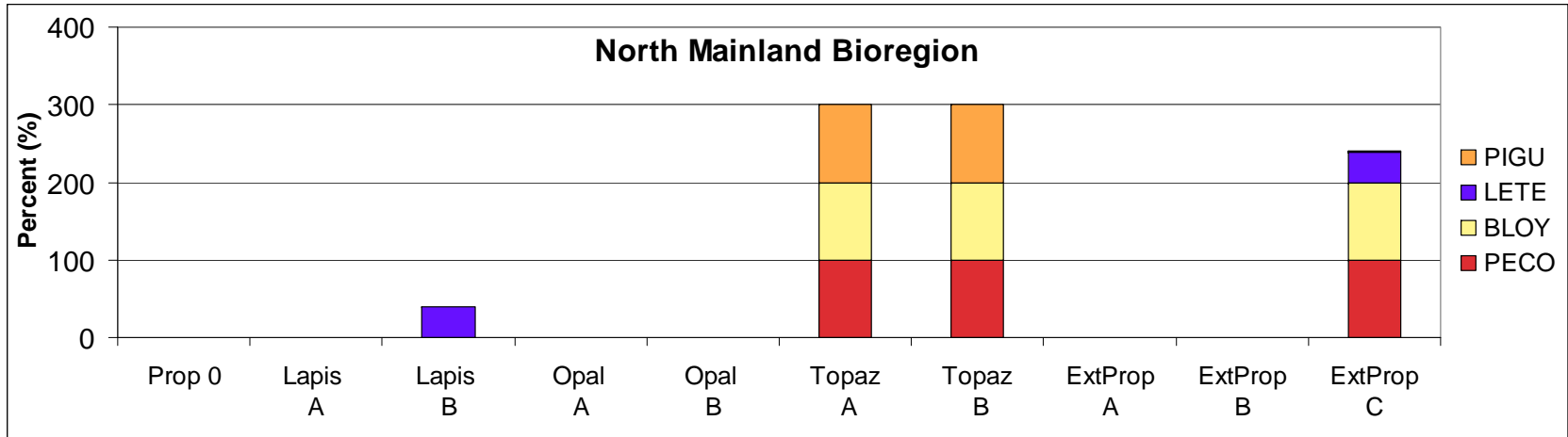
## Distribution of Total Seabird Population and SLTB (values in parentheses indicate population estimates)



\* These population estimates will be updated prior to the Round 2 analysis.

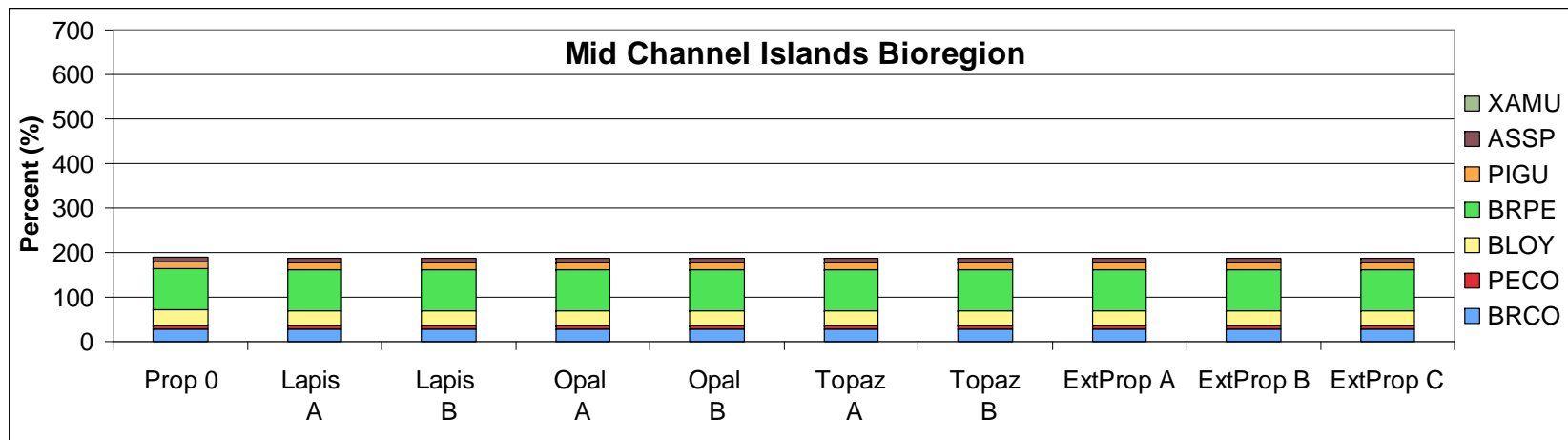
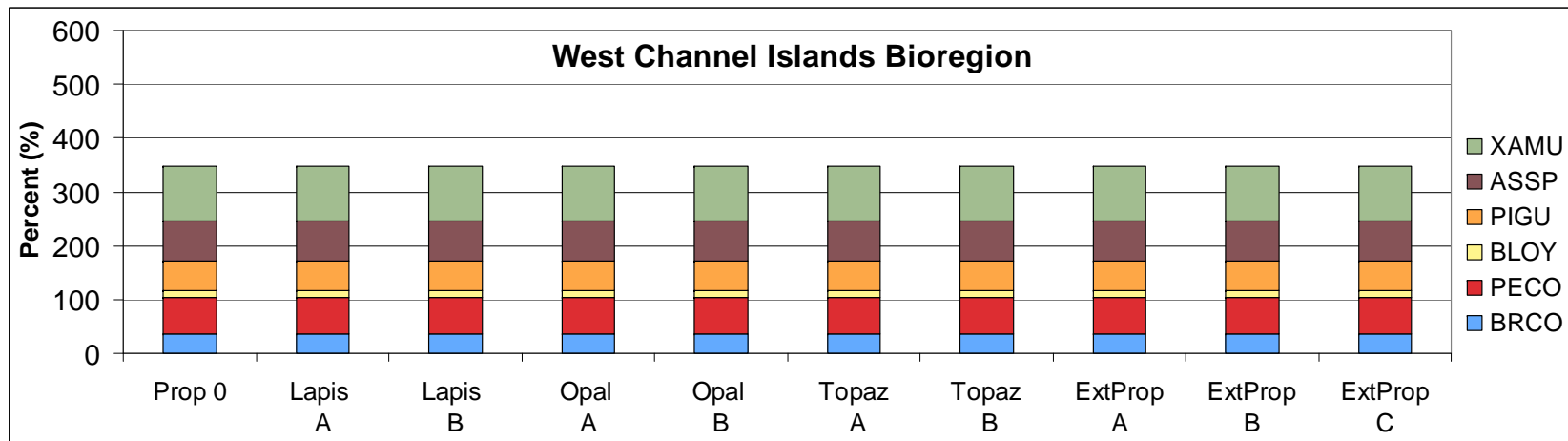


# Percent of Bioregion Breeding Population



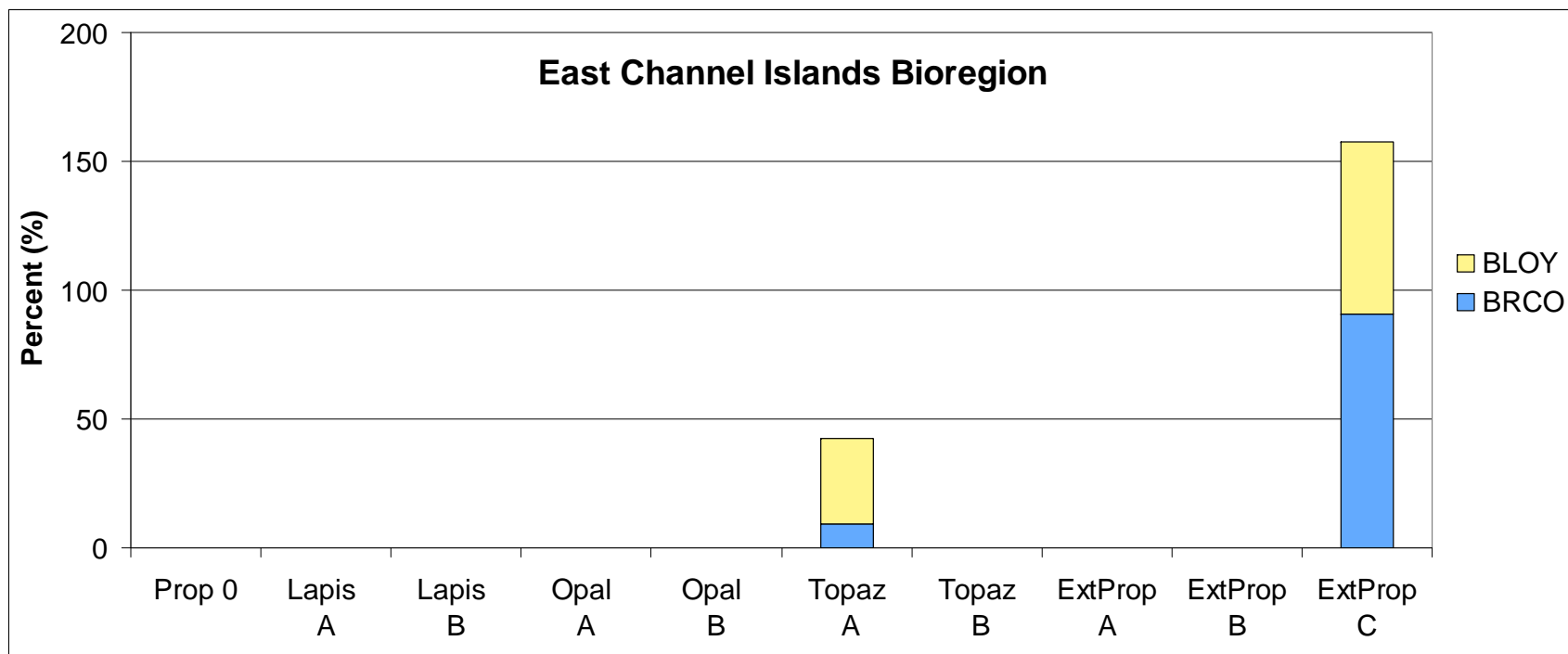


# Percent of Bioregion Breeding Population





# Percent of Bioregion Breeding Population







# Marine Bird and Mammal Analyses

## Analysis 2: Protection at Roosting and Haulout Sites

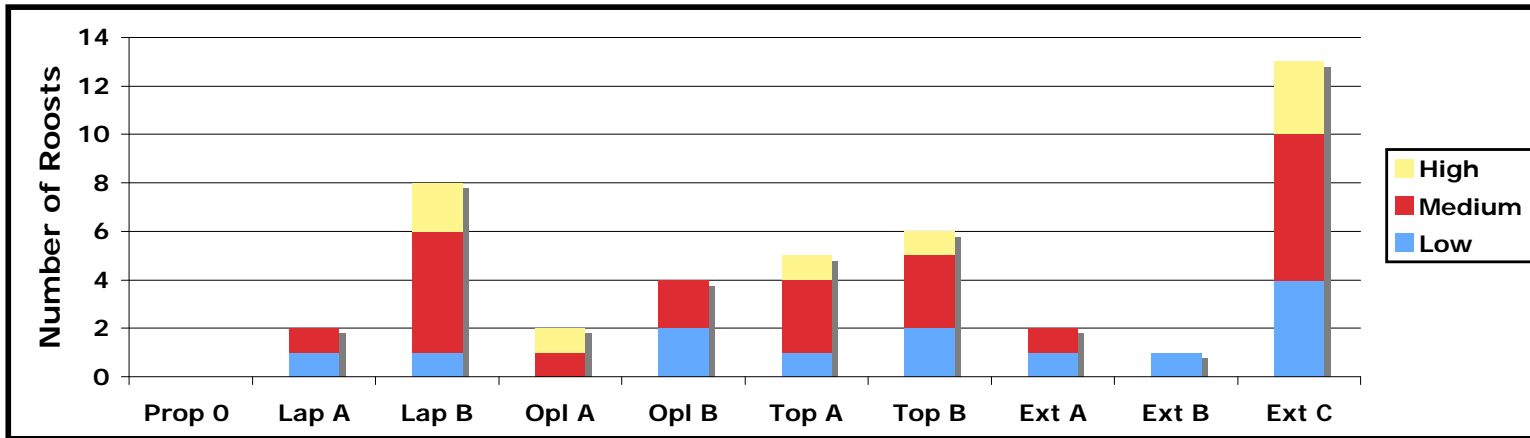
Investigated % of bioregion populations protected by SMRs



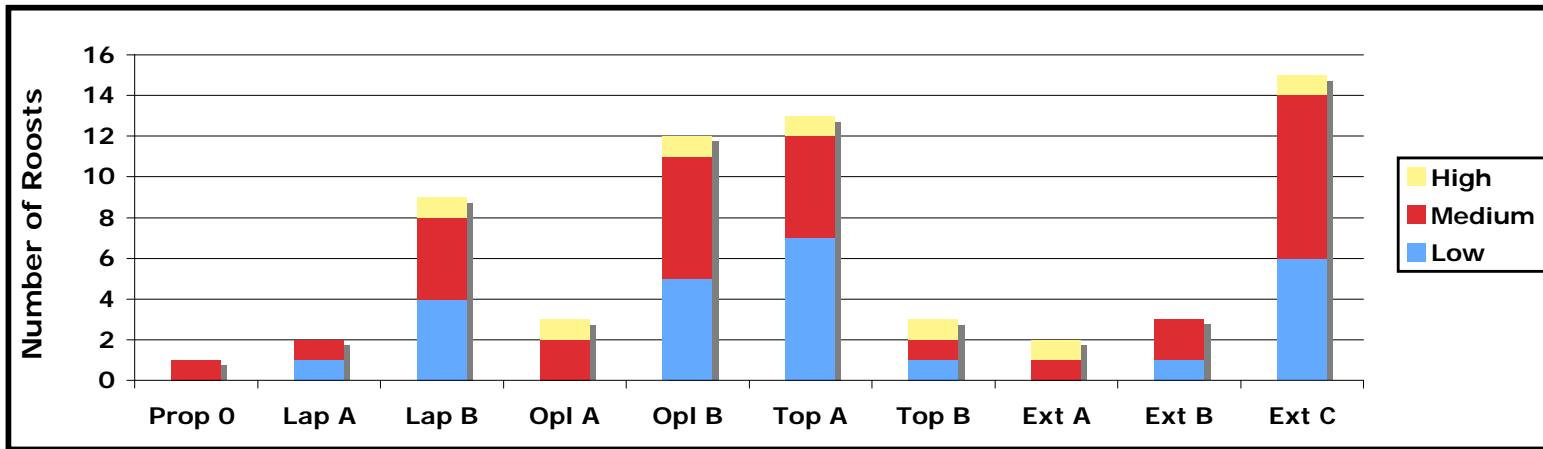


# Mainland Brown Pelican Roosts

## North Mainland



## South Mainland

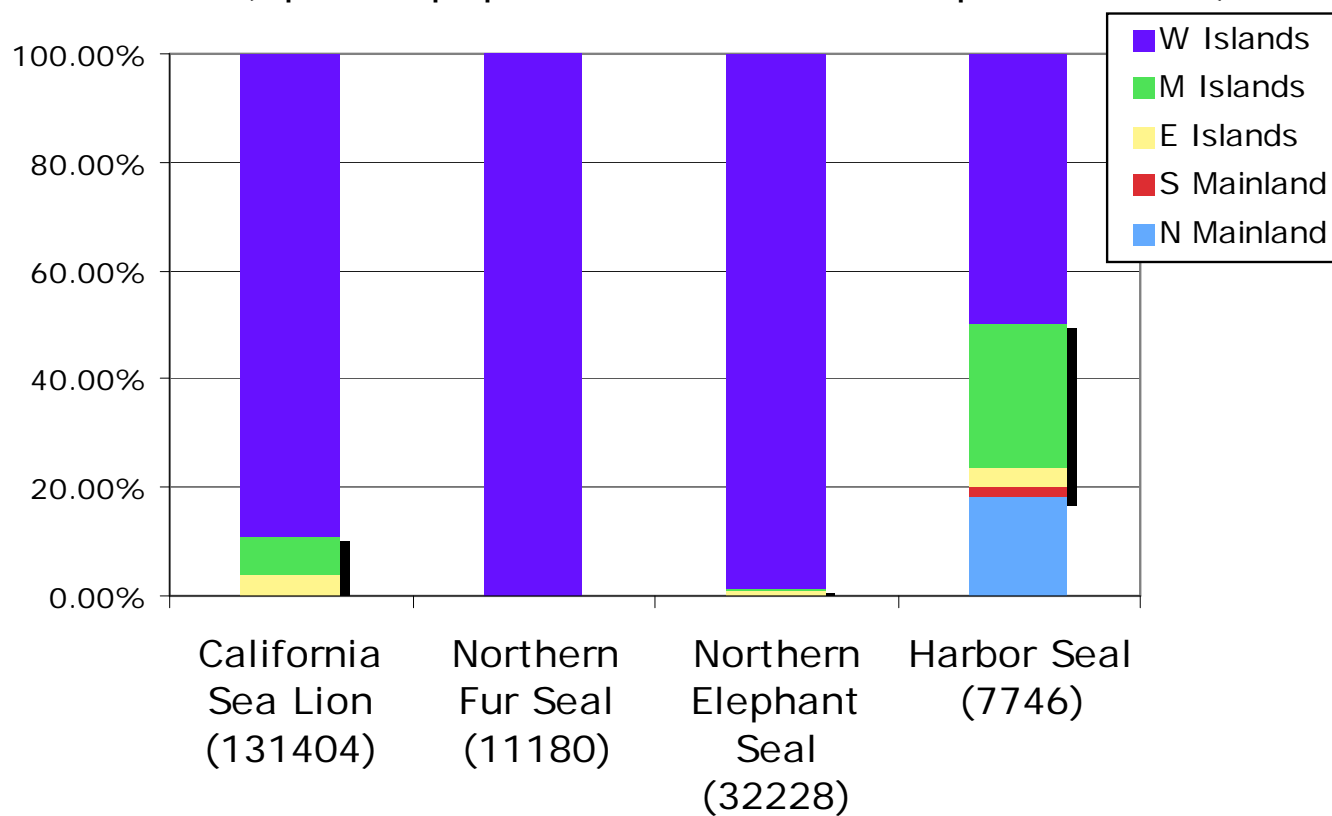




# Pinniped Bioregion Haulout Summary

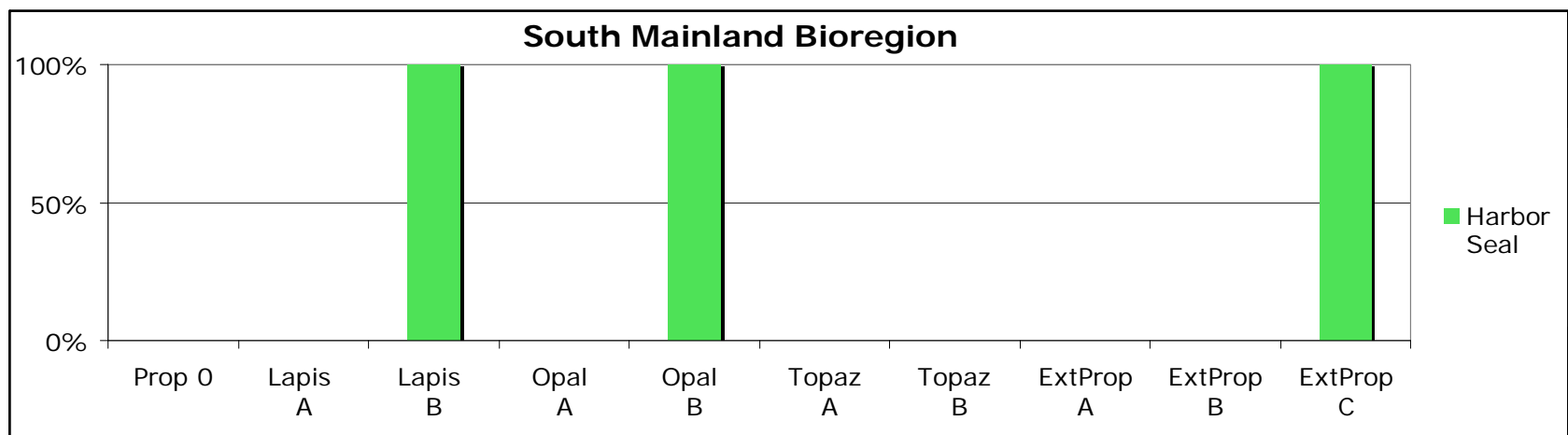
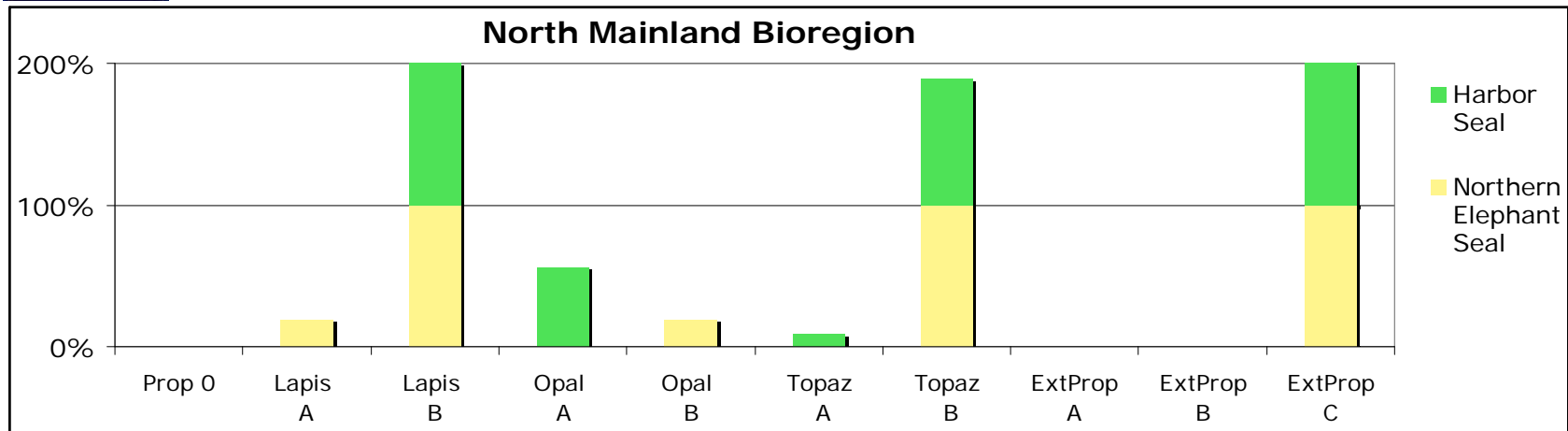
## Distribution of Total Pinniped Population in SCSR by Bioregion

(Species population counts are in parentheses)



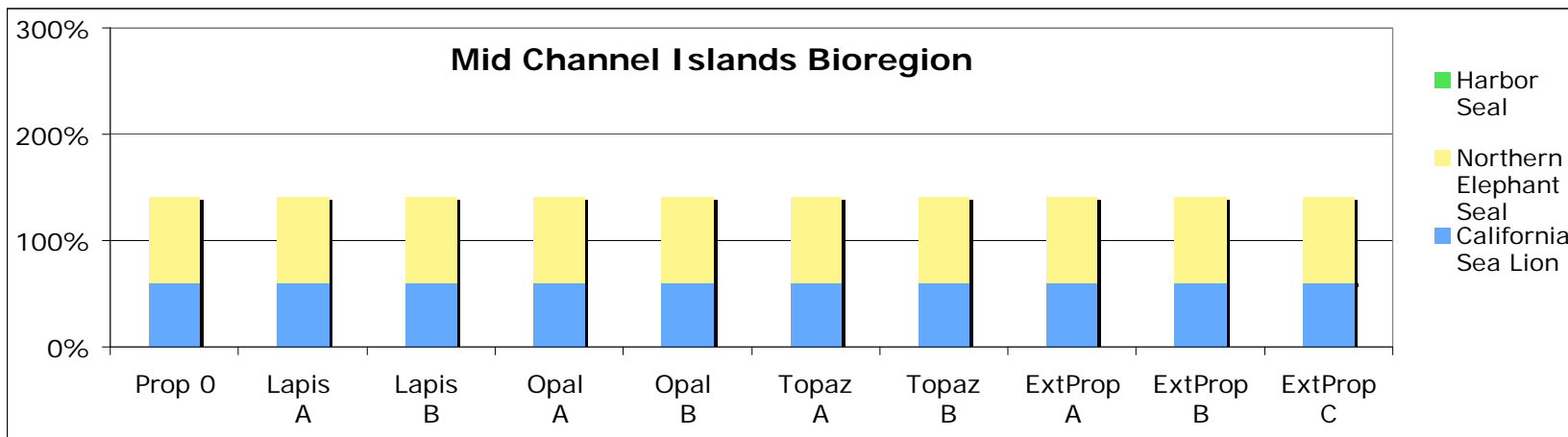
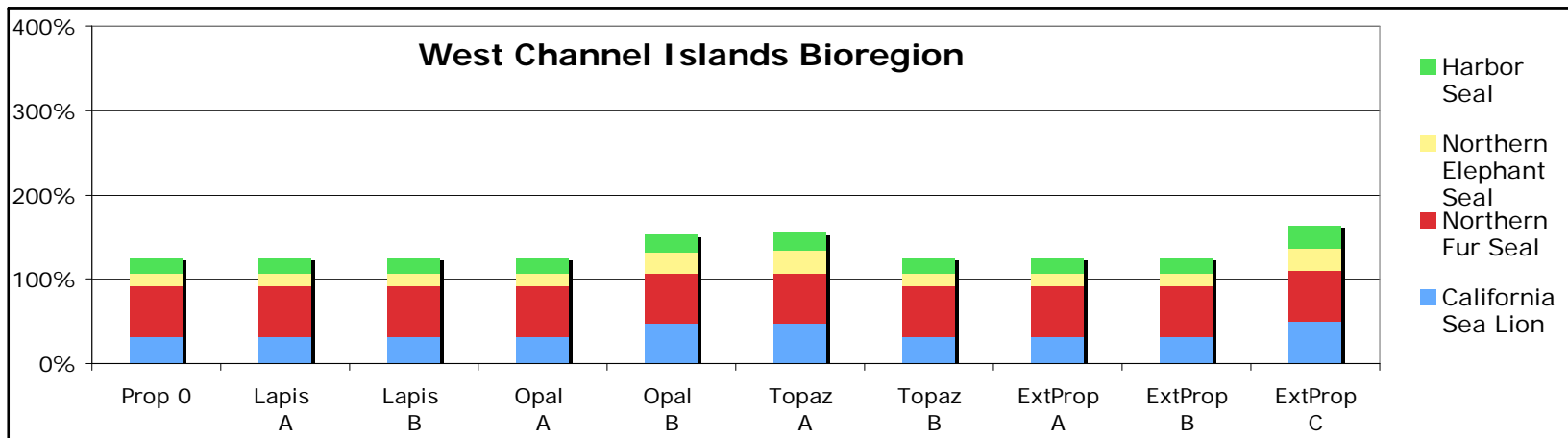


# Percent of Bioregion Haulout Population



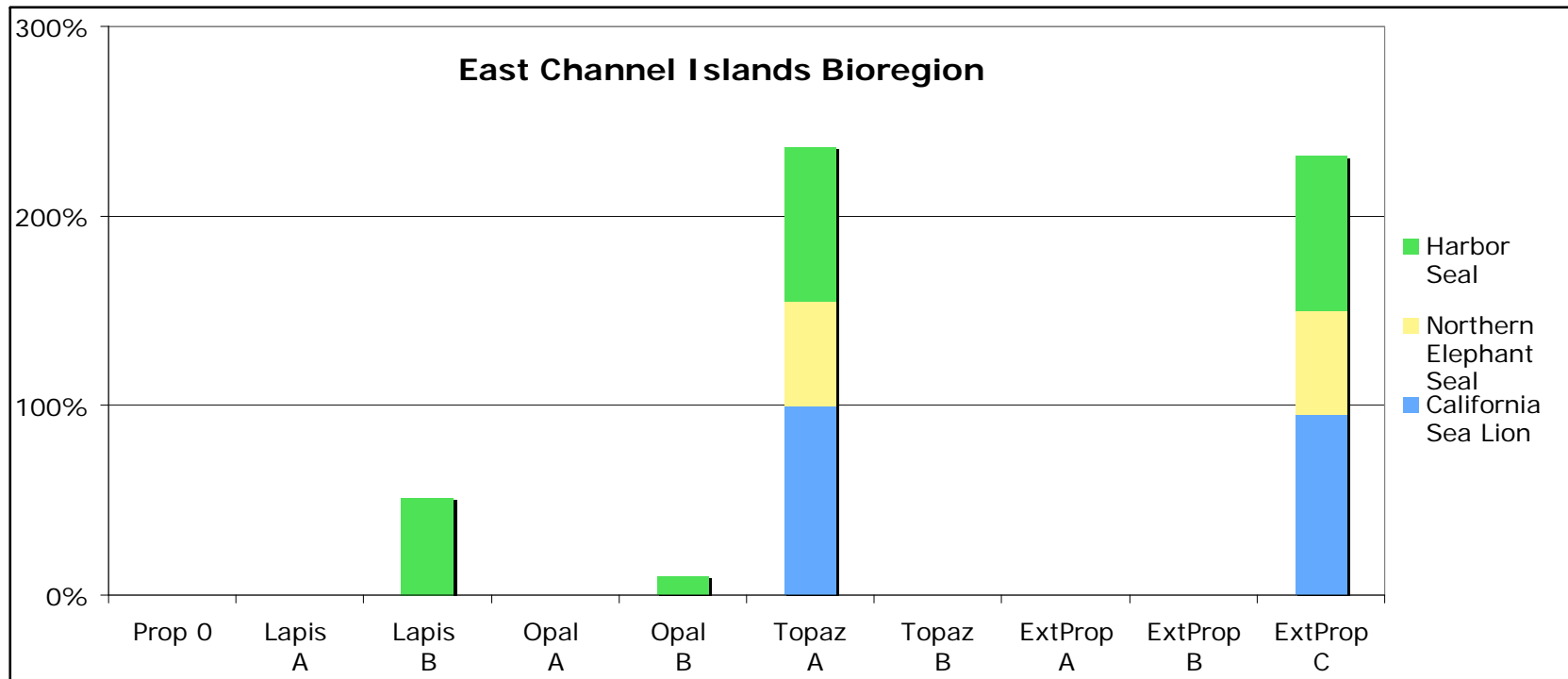


# Percent of Bioregion Haulout Population





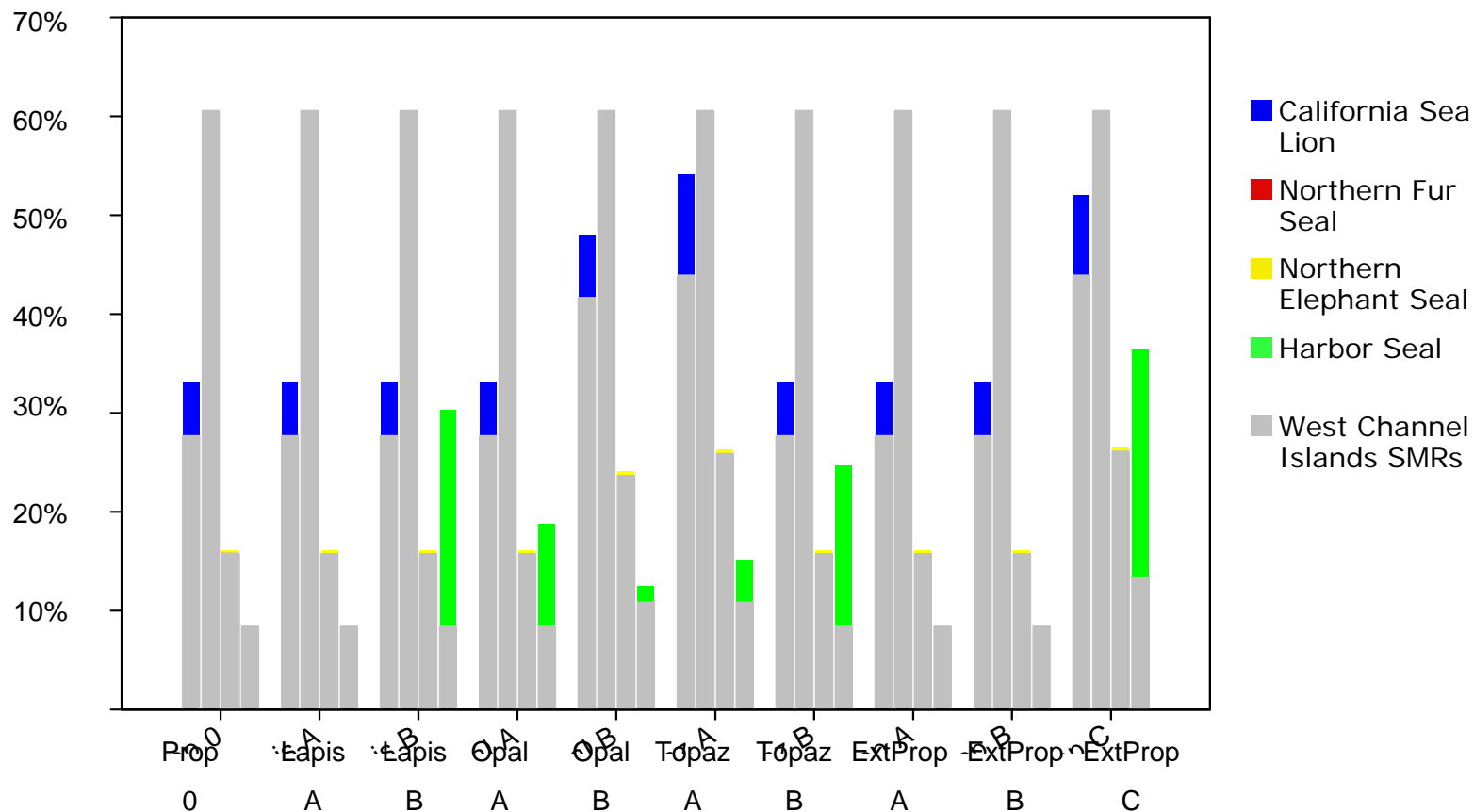
# Percent of Bioregion Haulout Population





# South Coast Study Region

Percent Bioregion Population Captured in State Marine Reserves: South Coast Study Region

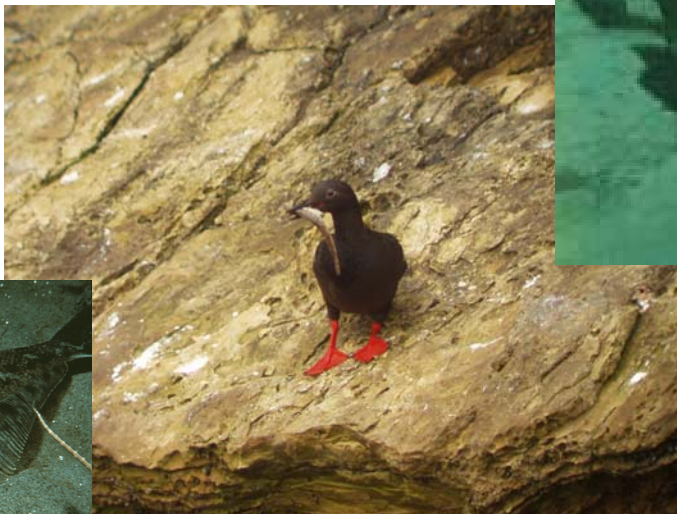
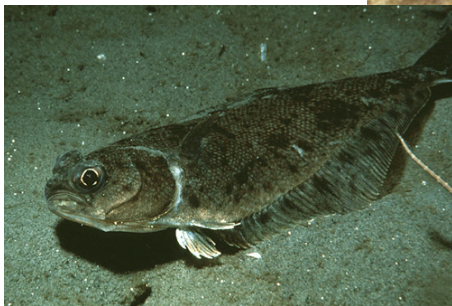




# Marine Bird and Mammal Analyses

## Analysis 3: Protection at Nearshore Foraging Sites

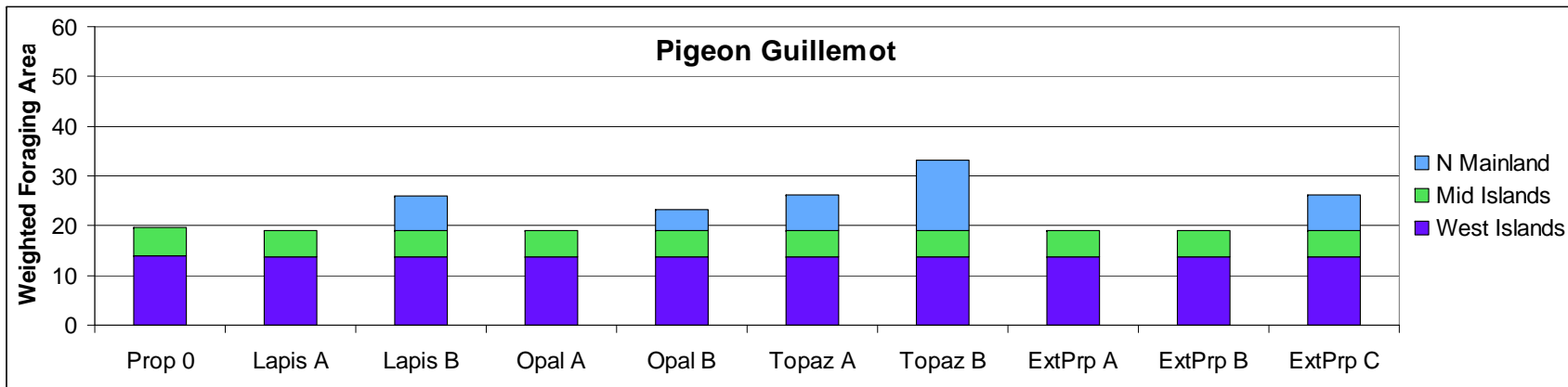
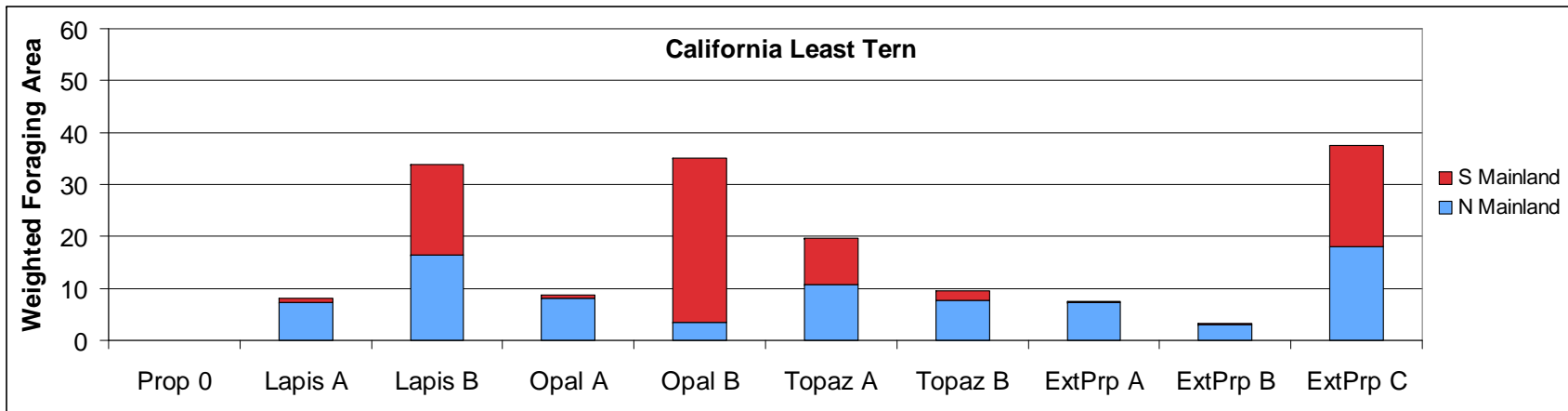
Investigated amount of foraging area protected by SMRs





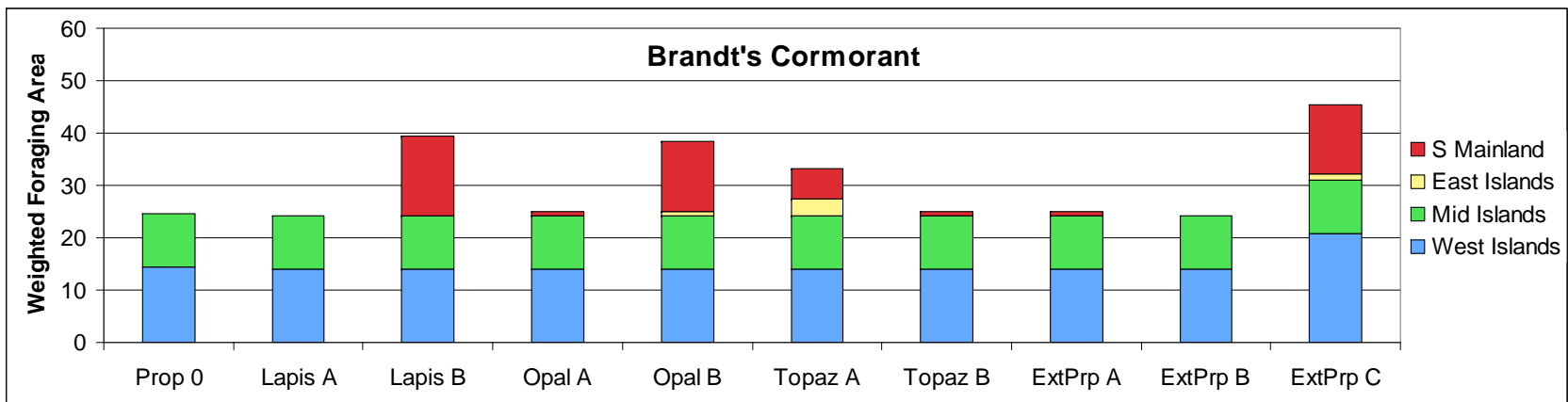
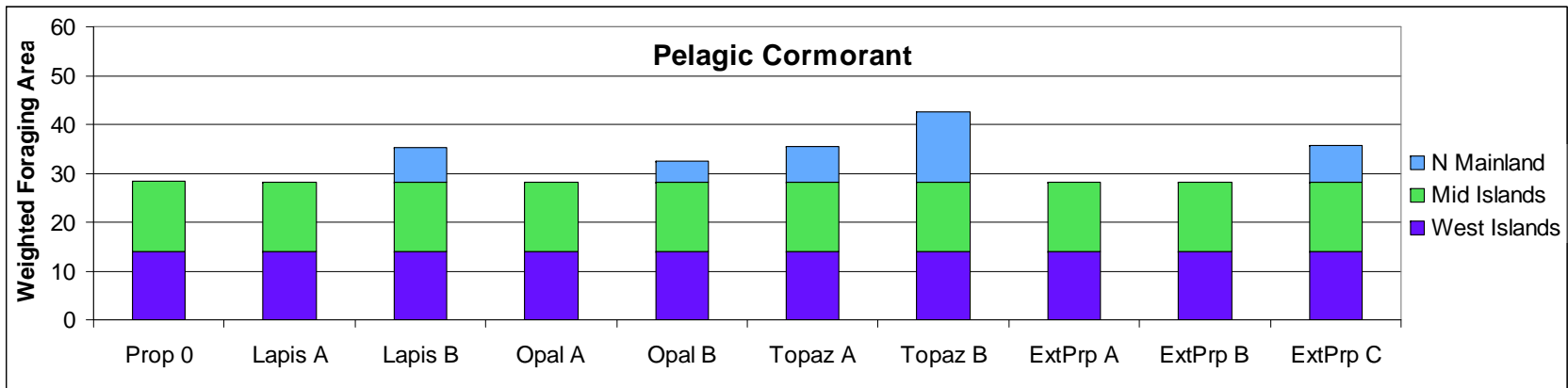


# Nearshore Foraging Areas



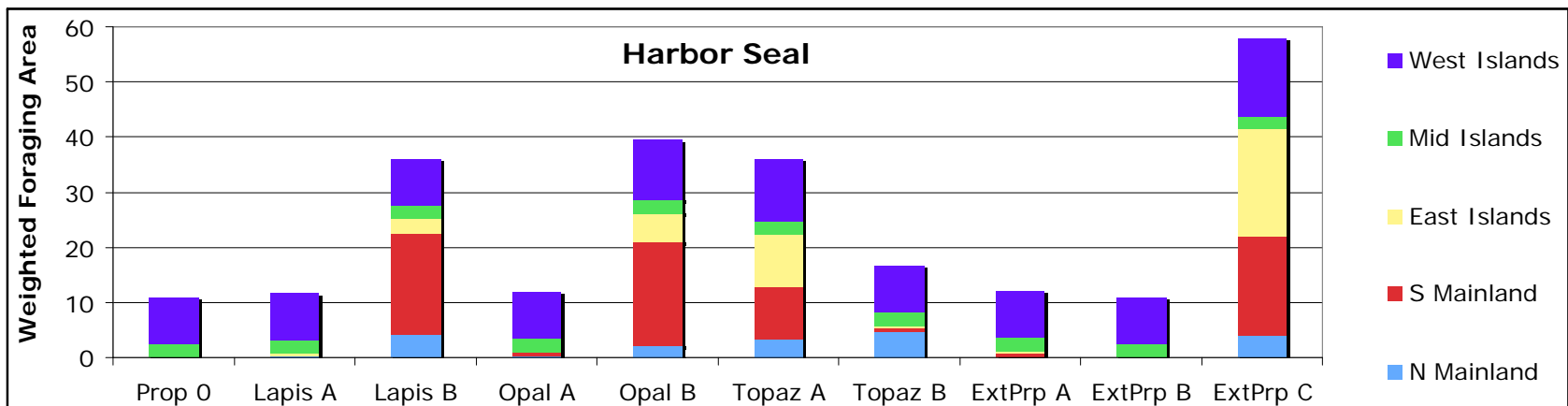
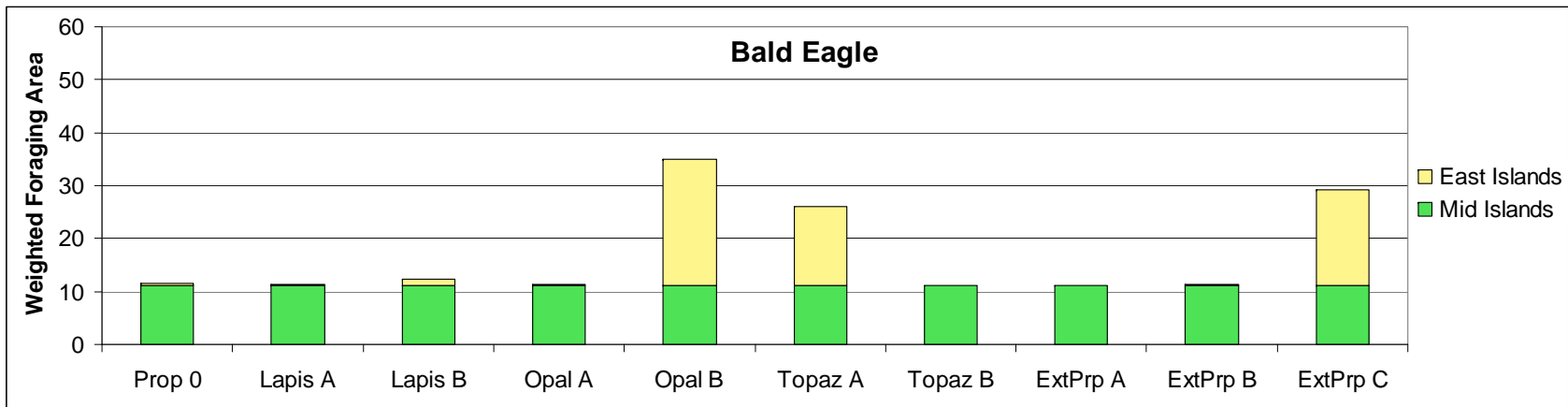


# Nearshore Foraging Areas





# Nearshore Foraging Areas





# Marine Bird and Mammal Analyses

## Analysis 4: Protection in Estuarine and Coastal Habitats

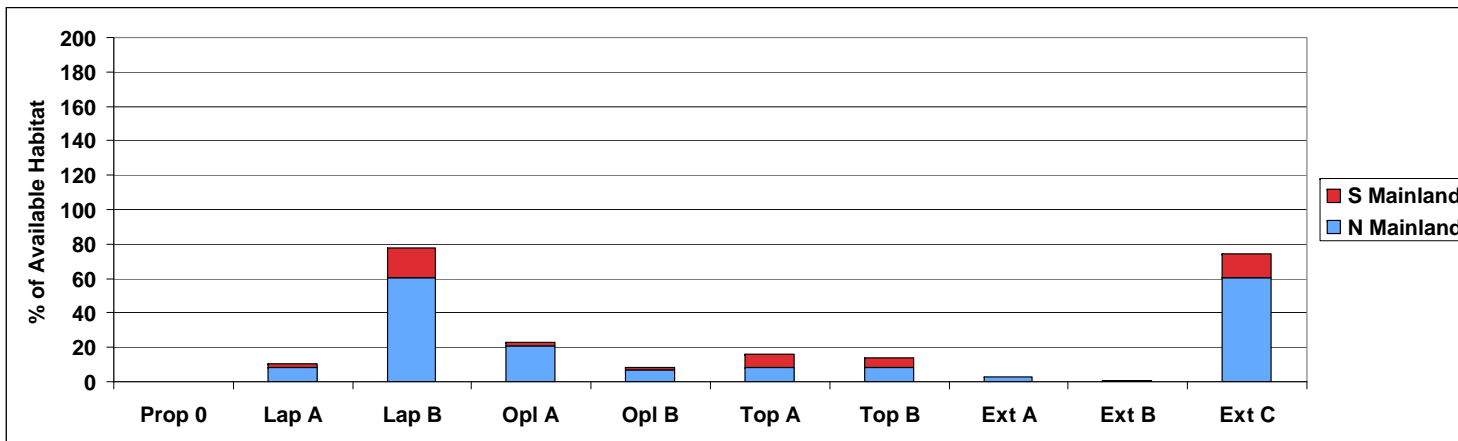
Investigated percent of available estuary, tidal flat, coastal marsh, and beach habitat protected by SMRs



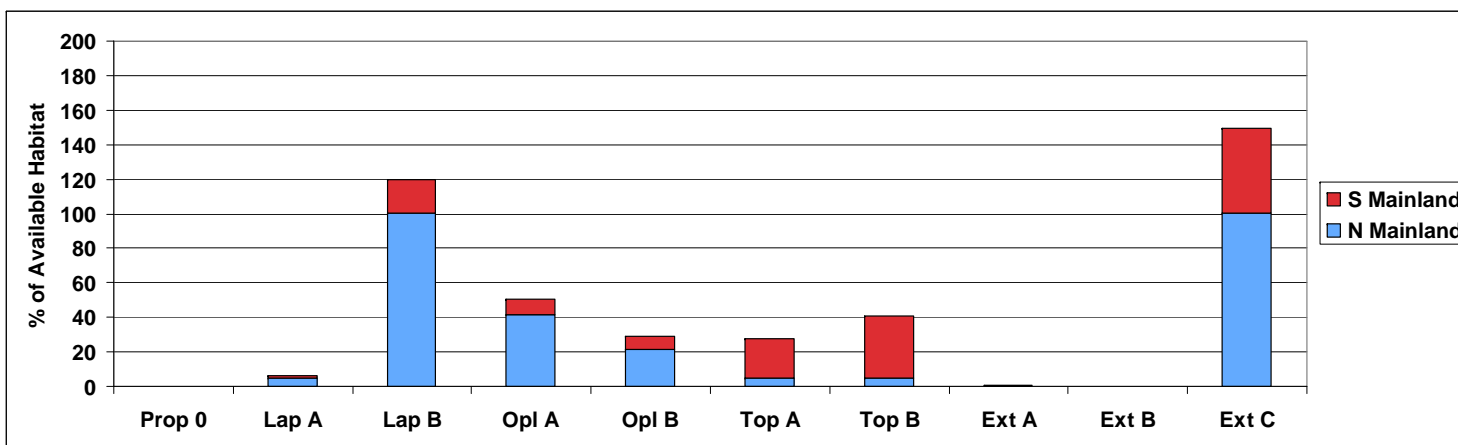


# Estuarine and Coastal Habitat

## Estuaries



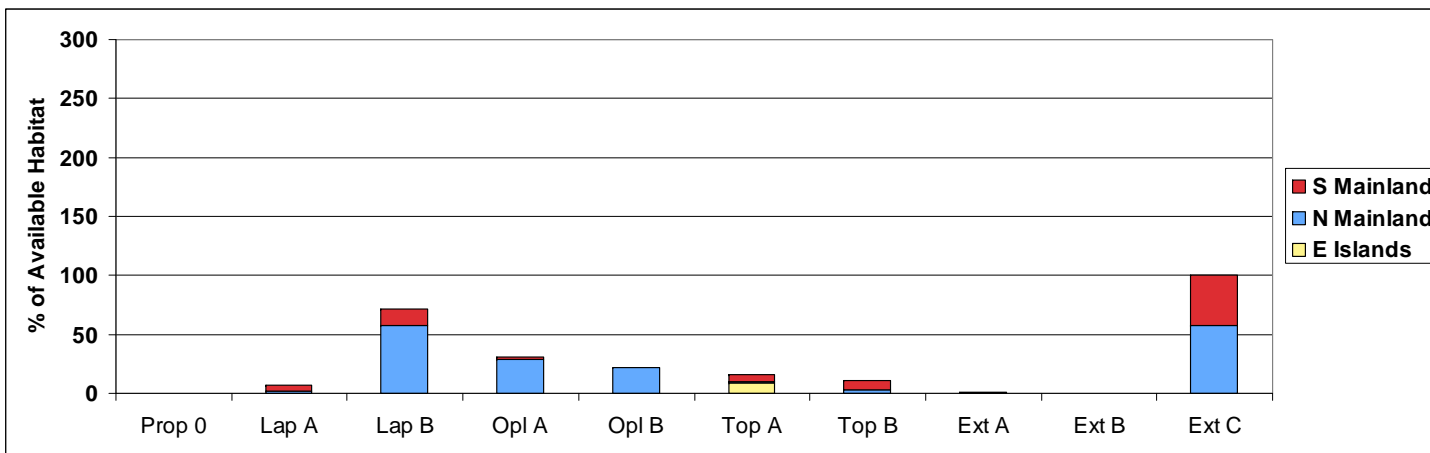
## Coastal Marshes



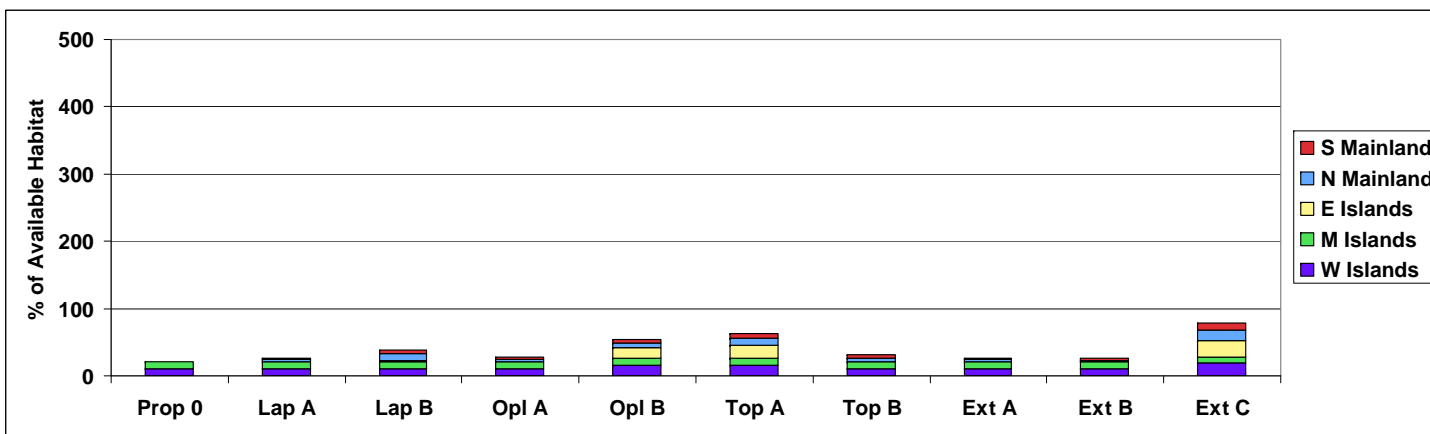


# Estuarine and Coastal Habitat

## Tidal Flats



## Beaches





# Summary of Round 1 Analyses

## **Seabird Breeding Colonies**

- External C provides the most protection in all bioregions.
- Lapis B and Topaz A provide more protection within mainland bioregions.
- All other arrays similar to Proposal 0

## **Seabird Roost and Pinniped Haulout Sites**

- External Proposal C, Lapis A, and Topaz B provide greatest protection for north mainland pelican roosts.
- External Proposal C, Opal B, and Topaz A provide greatest protection for south mainland pelican roosts.
- Overall: External C, Opal B and Topaz A provide greatest protection of pinniped haulouts.
- External C, Lapis B and Opal B propose a La Jolla SMR that includes the harbor seal haulout and rookery.
- External C, Lapis B, and Topaz B arrays capture most of the sites used by northern elephant seals and harbor seals along the north mainland coast.
- External C and Topaz A arrays capture most of the sites used by California sea lions, northern elephant seals and harbor seals in the east channel islands bioregion.



# Summary of Round 1 Analyses

## **Near-Colony Foraging Areas**

- Brandt's Cormorant and Pelagic Cormorant receive most protection from proposed arrays.
- Most protection occurs within mainland bioregions.
- Lapis B, Opal B, and External C provide greatest protection for Brandt's Cormorant.
- Topaz B provides greatest protection for Pelagic Cormorant.
- External C, Lapis B, Opal B and Topaz A provide greatest protection of harbor seals.

## **Estuarine and Coastal Habitats**

- Estuaries and coastal marshes receive the most protection.
- Lapis B and External C provide the most protection of these habitats.





# North Mainland Bioregion

## Number and Percent of Haul Out Population Captured within Individual MPAs: North Mainland

Proposal/Draft MPA Array	MPA Name	Northern Elephant Seal	Northern Elephant Seal %	Harbor Seal	Harbor Seal %
External Proposal A	MuguLagoon SMCA	0	0%	803	56%
External Proposal C	Pt Conception SMR	8	100%	459	32%
	Goleta SMR	0	0%	36	3%
	Carpinteria SMR	0	0%	125	9%
	Mugu Lagoon SMR	0	0%	803	56%
Lapis B	Point Conception SMR	8	100%	459	32%
	Naples Coal Oil Point SMR	0	0%	36	3%
	Carpinteria SMR	0	0%	125	9%
	Mugu Lagoon SMR	0	0%	803	56%
Opal A	Point Mugu Esturay SMR	0	0%	803	56%
Opal B	Devereux- Naples SMCA	0	0%	36	3%
Topaz A	Naples SMP	0	0%	36	3%
	Carp Reef SMR	0	0%	125	9%
	Muwu SMP	0	0%	803	56%
Topaz B	Point Conception SMR	8	100%	459	32%
	Muwu SMP	0	0%	803	56%



## South Mainland Bioregion

Number and Percent of Haul Out Population Captured  
within Individual MPAs: South Mainland

<b>Proposal/Draft MPA Array</b>	<b>MPA Name</b>	<b>Harbor Seal</b>	<b>Harbor Seal %</b>
External Proposal C	La Jolla SMR	121	100%
Lapis B	La Jolla SMR	121	100%
Opal B	La Jolla Coast SMR	121	100%



# East Channel Islands Bioregion

## Number and Percent of Haul Out Population Captured within Individual MPAs: East Channel Islands

Proposal/Draft MPA Array	MPA Name	California Sea Lion	California Sea Lion %	Northern Elephant Seal	Northern Elephant Seal %	Harbor Seal	Harbor Seal %
External Proposal B	Charles F Holder Catalina SMRMA	357	100.00%	0	0.00%	193	64.98%
External Proposal C	Land's End SMR	4	1%	0	0%	11	4%
	North End SMR	527	0%	0	0%	5	2%
	Farnsworth Bank SMR	0	0%	0	0%	152	51%
	Pyramid Head SMR	0	0%	0	0%	18	6%
	China Point SMR	4658	0%	160	98%	56	19%
Lapis B	Farnsworth Bank SMR	0	0%	0	0%	152	51%
Opal B	Santa Catalina Island SMP	0	0%	0	0%	0	0%
	Eagle Rock SMR	4	1%	0	0%	0	0%
	Back Catalina SMCA	0	0%	0	0%	163	55%
	Church Rock SMR	353	99%	0	0%	0	0%
	China Point SMR	0	0%	0	0%	4	1%
Topaz A	West End SMR	4	1%	0	0%	0	0%
	Southwest Catalina SMR	0	0%	0	0%	152	51%
	Castle Rock SMR	527	0%	0	0%	5	2%
	West San Clemente Island SMR	4658	0%	162	100%	24	8%
	Pyramid Head SMR	0	0%	0	0%	19	6%



# Mid Channel Islands Bioregion

## Number and Percent of Haul Out Population Captured within Individual MPAs: Mid Channel Islands

Proposal/Draft MPA Array	MPA Name	California Sea Lion	California Sea Lion %	Northern Elephant	Northern Elephant Seal	Harbor Seals	Harbor Seals %
All	Anacapa Island SMR	102	1.11%	0	0.00%	0	0.00%
	Anacapa Island SMCA	0	0.00%	0	0.00%	1	0.05%
	Gull Island SMR	709	7.71%	0	0.00%	0	0.00%
	Santa Barbara Island SMR	4691	51.03%	61	80.26%	0	0.00%



# West Channel Islands Bioregion

## Number and Percent of Haul Out Population Captured within Individual MPAs: West Channel Islands

Proposal/Draft MPA Array	MPA Name	California Sea Lion	California Sea Lion %	Northern Fur Seal	Northern Fur Seal %
All	Richardson Rock SMR	387	0%	0	0%
	Harris Point SMR	300	0.26%	0	0%
	Carrington Point SMR	0	0%	0	0%
	Judith Rock SMR	35624	31%	6768	61%
	South Point SMR	28	0%	0	0%
External Proposal B	San Nicolas Pending Military Closure	0	0%	0	0%
External Proposal C	West San Nicolas SMR	21324	18%	0	0%
Lapis A	San Nicolas Pending Military Closure	0	0%	0	0%
Lapis B	San Nicolas Pending Military Closure	0	0%	0	0%
Opal A	San Nicolas Island Pending Military Closure	0	0%	0	0%
Opal B	San Nicolas SMR	18356	16%	0	0%
Topaz A	San Nicolas Island SMR	21324	18%	0	0%
Topaz B	San Nicolas Island Pending Military Closure	0	0%	0	0%



## West Channel Islands Bioregion: Con't

Number and Percent of Haul Out Population Captured within Individual MPAs: West Channel Islands

Proposal/Draft MPA Array	MPA Name	Northern			
		Northern Elephant Seal	Elephant Seal %	Harbor Seal	Harbor Seal %
All	Richardson Rock	0	0%	0	0%
	Harris Point	657	2.06%	445	12%
	Carrington Point	0	0%	45	1%
	Judith Rock	2856	9%	30	1%
	South Point	1559	5%	128	3%
External Proposal B	San Nicolas Pending Military Closure	79	0.25%	196	5%
External Proposal C	West San Nicolas	3338	10.48%	386	10%
Lapis A	San Nicolas Pending Military Closure	79	0.25%	196	5%
Lapis B	San Nicolas Pending Military Closure	79	0.25%	196	5%
Opal A	San Nicolas Island Pending Military Closure	79	0.25%	196	5%
Opal B	San Nicholas SMR	2553	8%	190	5%
Topaz A	San Nicolas Island SMR	3259	10.23%	190	5%
Topaz B	San Nicolas Island Pending Military Closure	79	0%	196	5%



# Harbor Seal Forage Area

## Harbor Seal Weighted Forage Area by Bioregion

	North Mainland	South Mainland	East Channel Islands	Mid Channel Islands	West Channel Islands
<b>External Proposal A</b>	0.00	0.77	0.00	2.45	8.46
<b>External Proposal B</b>	0.00	0.00	0.00	2.45	8.46
<b>External Proposal C</b>	3.98	18.12	19.21	2.45	14.17
<b>Lapis A Draft MPA Array</b>	0.28	0.00	0.40	2.45	8.46
<b>Lapis B Draft MPA Array</b>	4.15	18.22	2.82	2.45	8.46
<b>Opal A Draft MPA Array</b>	0.23	0.77	0.00	2.45	8.46
<b>Opal B Draft MPA Array</b>	2.09	18.84	5.14	2.45	10.96
<b>Topaz A Draft MPA Array</b>	3.24	9.63	9.35	2.45	11.31
<b>Topaz B Draft MPA Array</b>	4.60	0.77	0.38	2.45	8.46
<b>Proposal 0</b>	0.00	0.00	0.00	2.45	8.46