

# Marine Life Protection Act Initiative



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

Presentation to the Master Plan Science Advisory Team  
April 6, 2009 • Via webinar



# Marine Mammal Evaluation

- **Data Sources**
  - NOAA Marine Sanctuaries
  - NOAA Fisheries: M. Lowry & S. Melin
- **Results**
  - Species diversity, numbers & distribution
  - Comparison of haulout size captured in state marine reserves (SMRs) by species
  - Potential harbor seal foraging benefits
  - Additional detail, including SMR-specific numbers are in the handouts
- *Note: Pending military closures were not included in this evaluation because they may not provide the same benefits as SMRs*



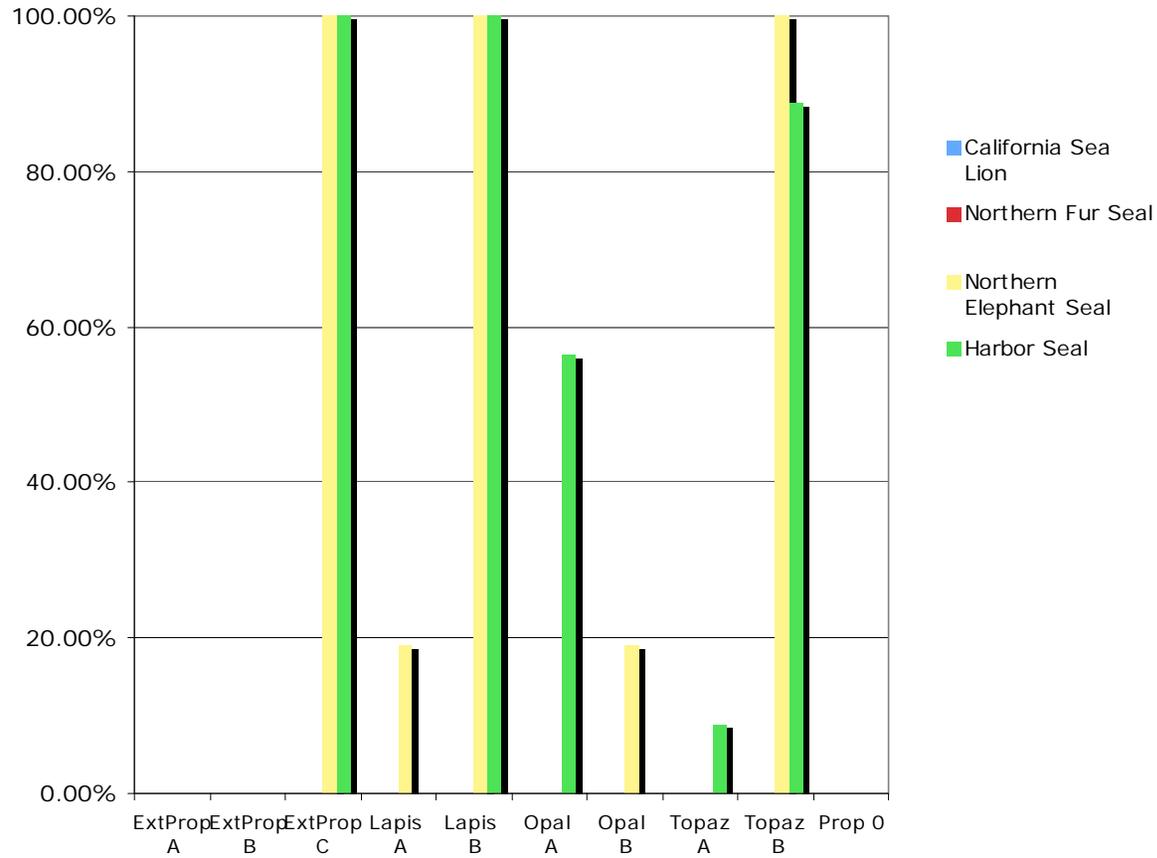
## Pinnipeds: Bioregional Summary

Bioregion	No. Species	Bioregion Total	California Sea Lion	Northern Fur Seal	Northern Elephant Seal	Harbor Seal
North Mainland	2	0.78%	0.00%	0.00%	0.02%	18.37%
South Mainland	1	0.07%	0.00%	0.00%	0.00%	1.56%
East Channel Islands	2	3.30%	4.13%	0.00%	0.91%	3.83%
Mid Channel Islands	3	6.20%	7.00%	0.00%	0.24%	26.44%
West Channel Islands	4	89.65%	88.87%	100.00%	98.83%	49.79%
Study Region Total	4	182426	71.98%	6.12%	17.66%	4.24%



# North Mainland Bioregion

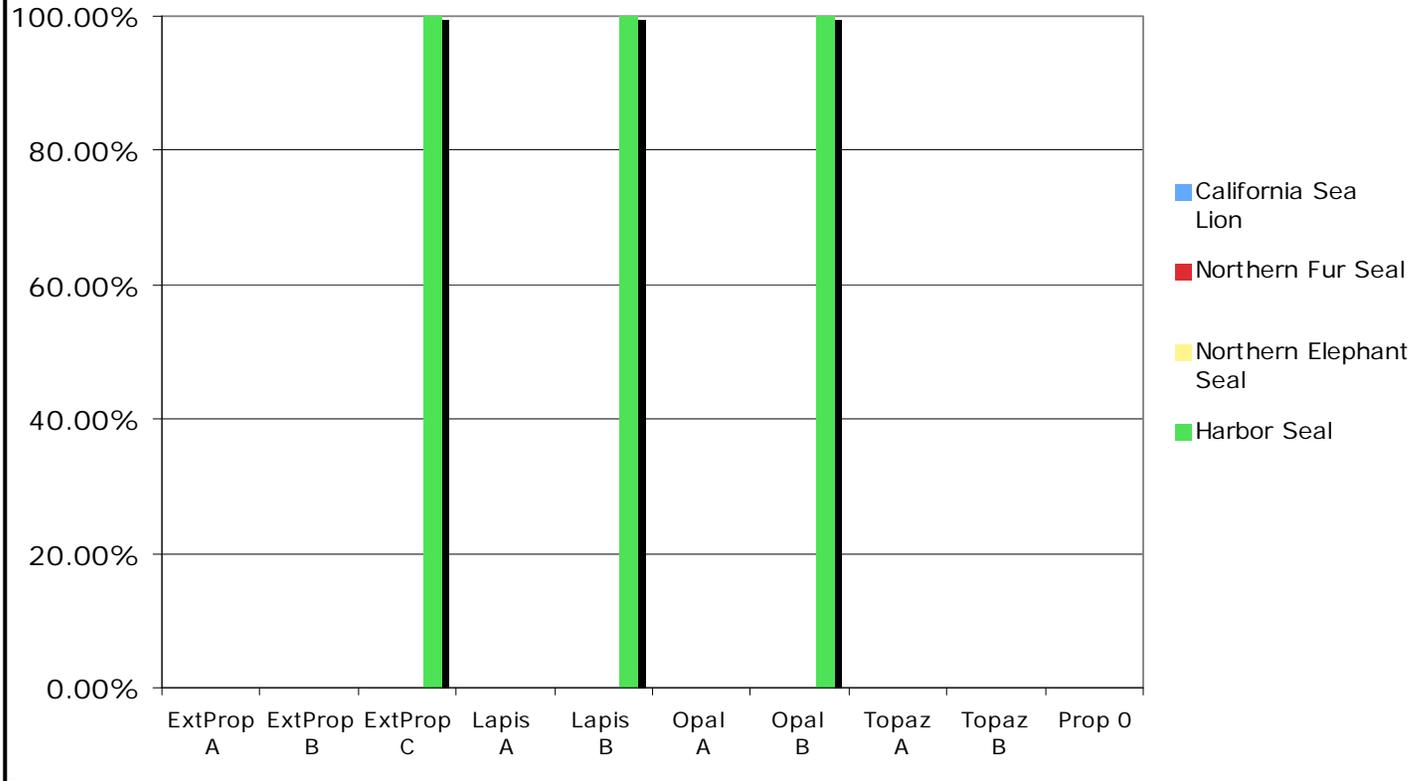
Percent Bioregion Population Captured in State Marine Reserves: North Mainland Bioregion





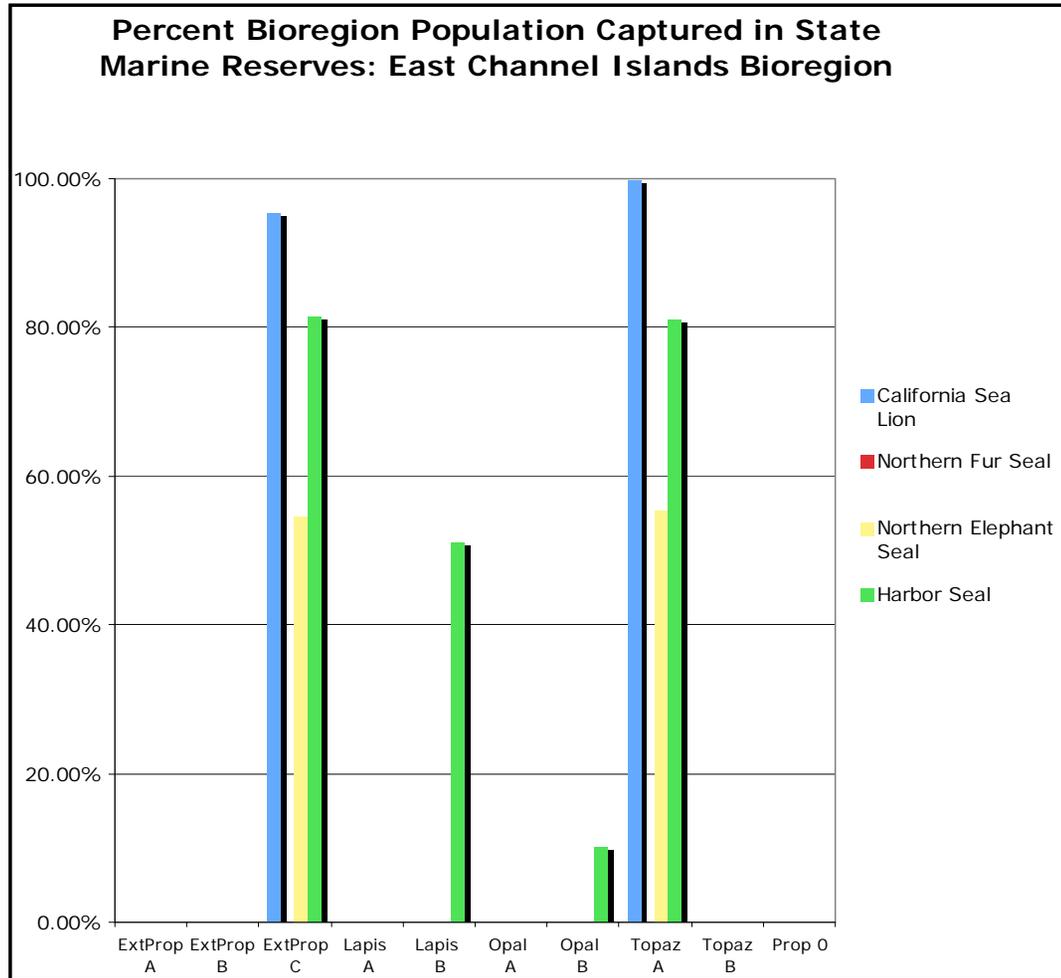
# South Mainland Bioregion

**Percent Bioregion Population Captured in State Marine Reserves: South Mainland Bioregion**





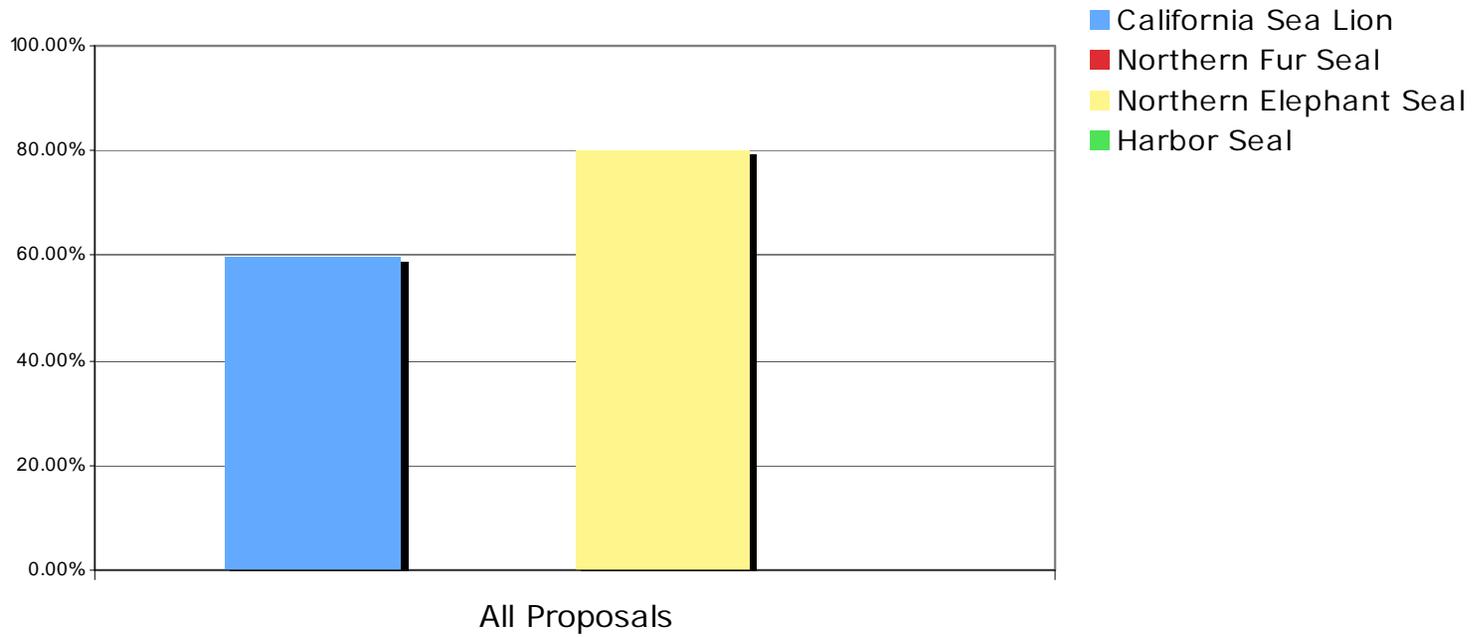
# East Channel Islands Bioregion





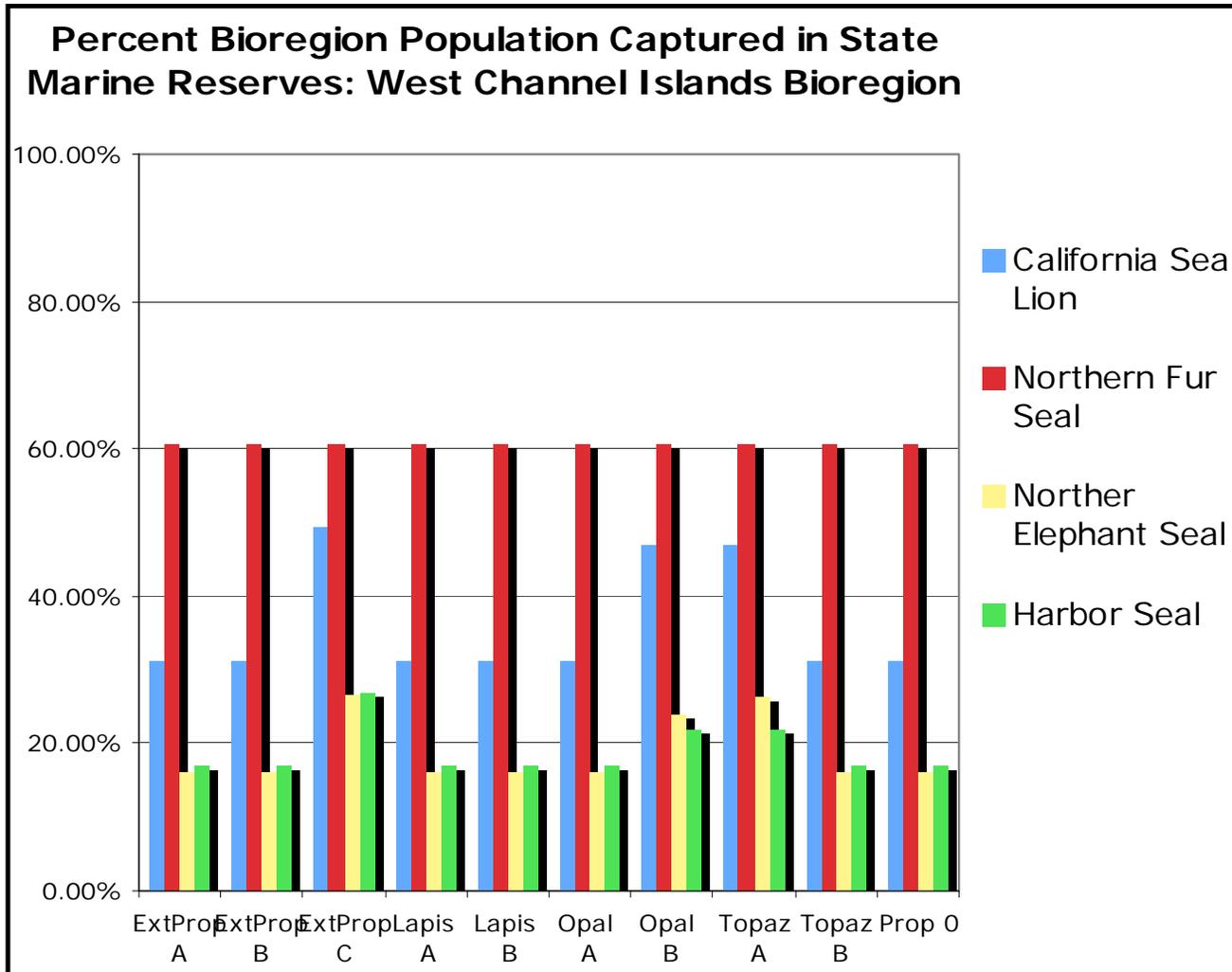
# Mid Channel Islands Bioregion

**Percent Bioregion Population Captured in State Marine Reserves: Mid Channel Islands Bioregion**





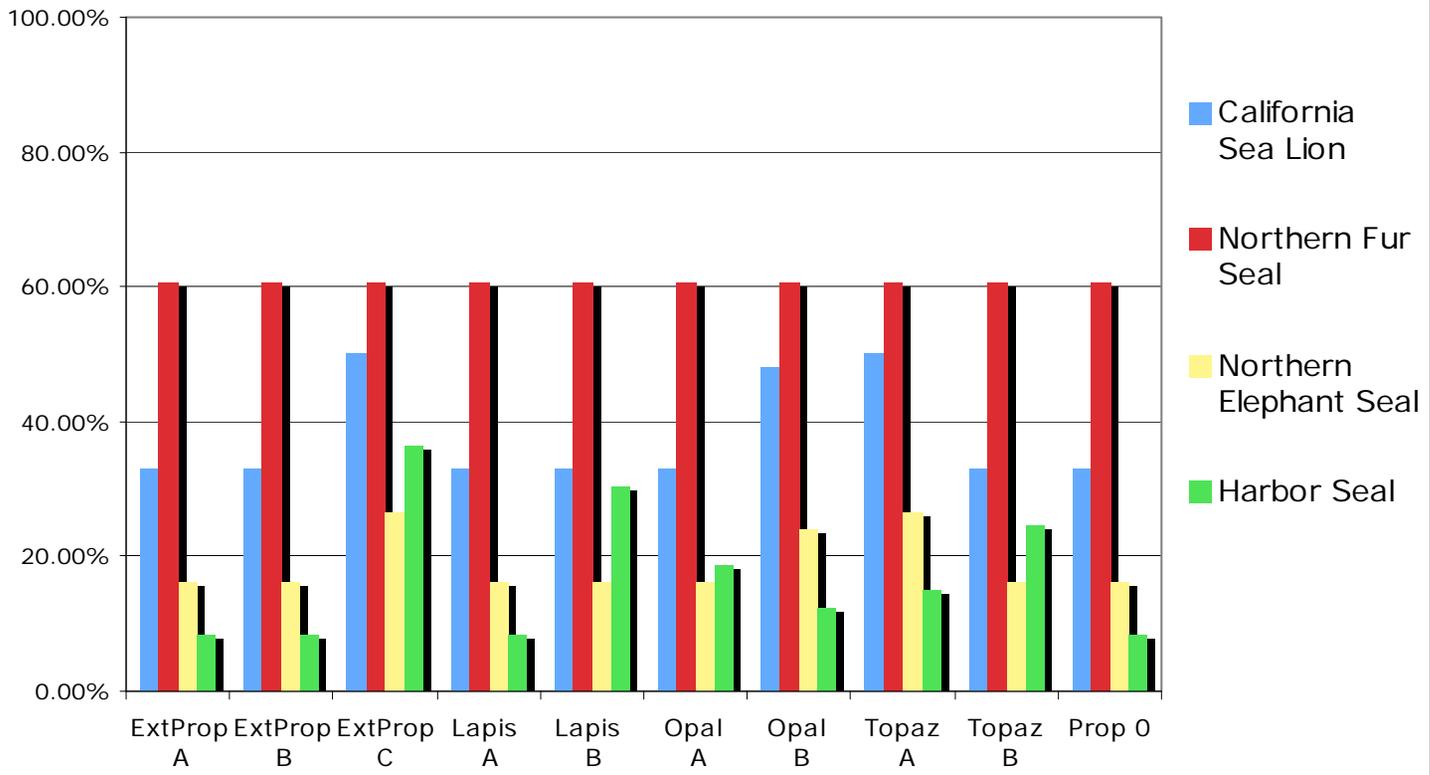
# West Channel Islands Bioregion





# South Coast Study Region

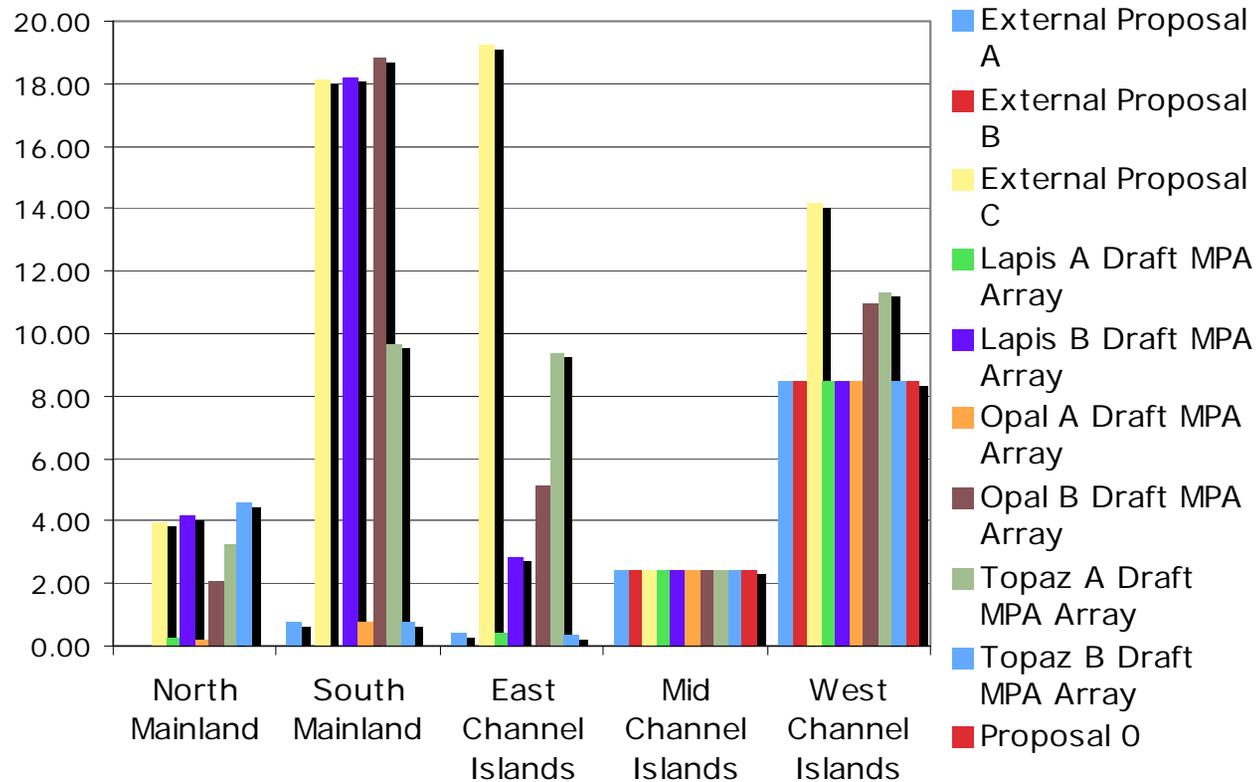
**Percent Bioregion Population Captured in State Marine Reserves: South Coast Study Region**





# Harbor Seal Forage Areas

## Harbor Seal Weighted Forage Area by Bioregion





# Marine Mammal Evaluation

## Summary of Round 1 Evaluation

- Overall: External C, Opal B and Topaz A provide additional benefits to pinnipeds because their arrays include SMRs at
  - San Nicolas Island, West Channel Islands Bioregion
  - San Clemente and Santa Catalina, East Channel Islands Bioregion
  - Along the South and North Mainland Coast
- South Mainland Bioregion
  - External C, Lapis B and Opal A propose a La Jolla SMR that includes the harbor seal haulout and rookery
- North Mainland Bioregion
  - All proposals except External A and External B include proposed SMRs at sites used by pinnipeds
  - External C, Lapis B and Topaz B arrays capture most of the sites used by northern elephant seals and harbor seals along the coast
- Additional benefits are provided in the arrays proposed by External C, Lapis B, Opal B and Topaz A that include where harbor seals likely forage



# 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