

Summary of potential impacts of the March 2009 MPA proposals on commercial and recreational fisheries in the South Coast Study Region

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1. Introduction

The purpose of this project is to analyze the relative effects of nine MPA proposals on commercial and recreational fisheries in the South Coast Study Region (SCSR). For detailed information on how data were collected and/or analyzed, please see our *Draft Survey Methods and Summary Statistics for Ecotrust's South Coast Study Region Fishery Uses and Values Project* (presented to the RSG on 3/3/2009). For information on the methods used to evaluate these data, please see Section 12 of the *SAT Draft Methods Used to Evaluate Marine Protected Area Proposals for the MLPA South Coast Region*. Additional proposal-specific information on potential fishery-specific impacts (to study region and to total area and value) for any given MPA are available in the series of Excel files provided to the RSG.

To analyze the commercial fisheries, we used data layers characterizing the spatial extent and relative importance of fishing grounds for 15 commercial fisheries. We collected this information during the summer and fall of 2008 using a stratified, representative sample of 254 commercial fishermen. Individual responses regarding the relative importance of ocean areas for each fishery were standardized using a 100-point scale and normalized to the reported fishing grounds.

To analyze the recreational fisheries, we used data layers characterizing the spatial extent and relative importance of fishing grounds for 10 commercial passenger fishing vessel (CPFV) fisheries and 17 recreational fisheries. We collected this information during the summer and fall of 2008 using a stratified, solicited¹ sample of 119 CPFV fishermen and 504 recreational fishermen. Individual responses regarding the relative importance of ocean areas for each fishery were standardized using a 100-point scale and normalized to the reported fishing grounds.

Based on the data described above, we evaluate the potential economic impacts on the commercial, CPFV, and recreational fishing grounds under each of the nine MPA proposals (i.e., Ext. A, Ext. B, Ext. C, Lapis A, Lapis B, Opal A, Opal B, Topaz A, and Topaz B). We also conduct a socioeconomic impact analysis on the commercial and CPFV fisheries. We report commercial and CPFV results by study region and by port. We report recreational results by user group (i.e., dive, kayak, and private vessel) and by county.

The remaining sections of this document summarize the potential impacts. For more detailed statistics, please see the tables in the Appendix.

In all tables presented, a 'dashed line' represents a fishery that does not occur or a fishery for which insufficient data was collected to merit presentation.

¹ The use of a solicited sample may cause traditional statistical measures (e.g., confidence intervals) to be less precise. Nevertheless, it does allow us to make generalizations about preferences of the overall recreational fishing population and about the three user groups within the study area. We feel that this adds thematic resolution to the MLPA marine planning process.

2. Results for Commercial Fisheries

We summarize here our analyses of the potential impacts on the 15 commercial fisheries (i.e., Ca. Halibut (Hook & Line), Ca. Halibut (Trawl), Coastal Pelagics, Lobster, N. Fishery (Hook & Line), N. Fishery (Trap), Rock Crab, Sablefish, Sea Cucumber (Diving), Sea Cucumber (Trawl), Spot Prawn, Squid, Swordfish, Thornyhead, and Urchin). The commercial fisheries are broken out by study region and by port (i.e., Santa Barbara, Ventura, Port Hueneme, San Pedro, Dana Point, Oceanside, and San Diego).

2.1 Potential Impacts on Commercial Fishing Grounds (Area and Value)

MPA proposals vary considerably in their effects, both between and across fisheries. As mentioned previously, this report only presents results. Evaluation methods are presented in a separate document.

Each proposal affects the commercial fisheries differently. Ext. A generally has the lowest potential impacts in terms of both total value and total area, while Ext. C generally has the highest potential impacts. For information on the potential impacts on commercial fishing grounds for the 65 port-fishery combinations considered (both in terms of total area and total value), please see Tables A.1 and A.2 in the Appendix.

2.2 Potential Economic Impacts on Commercial Fisheries

A key assumption of this analysis is that each of the MPA proposals completely eliminates fishing opportunities in areas closed to specific fisheries and that fishermen are unable to adjust or mitigate in any way. In other words, the analysis assumes that all fishing in an area affected by an MPA is lost completely, when in reality it is more likely that fishermen will shift their efforts areas outside the MPA. The effect of such an assumption is most likely an overestimation of the impacts, or a “worst case scenario.”

Table 1 summarizes the MPA proposals with the estimated highest and lowest potential economic impact by port (for associated values, see Table 3). On average, Ext. A is estimated to have the lowest potential net economic impact across the study region, while Ext. C is estimated to have the highest potential impact.

Figure 1 summarizes the potential annual net economic impact on all SCSR commercial fisheries considered, calculated as a percentage reduction in net economic revenue (i.e., profit). The potential impacts from each proposal are further broken down by port, as summarized in Figure 2 and Tables 2–3. Tables 4–11 show potential impacts by fishery for each port and for the SCSR.²

In terms of potential economic impact across the SCSR for the top six commercial species (based on % contribution to overall SCSR ex-vessel values), several patterns emerge from the analysis of the nine proposals:

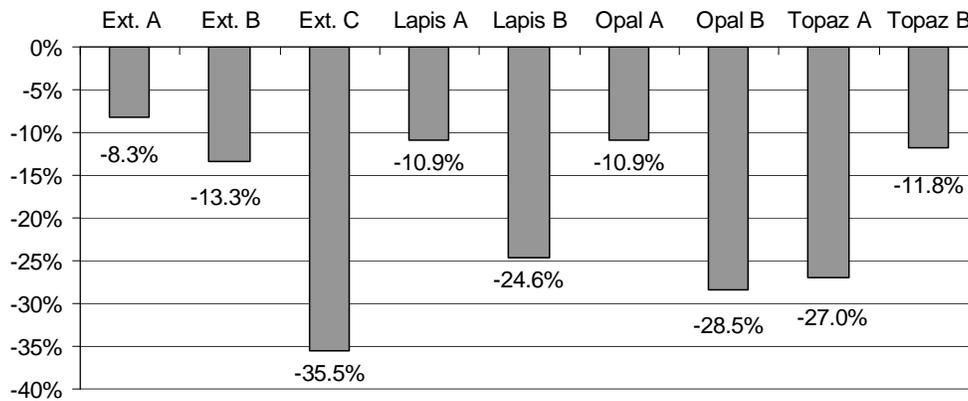
- The rock crab fishery sees the lowest range of potential impacts (in dollars). Ext. C has the highest potential impact on the rock crab fishery (\$221,687), while Ext. B has the lowest potential impact (\$60,800).
- The squid fishery sees the highest range of potential impacts (in dollars). Ext. C has the highest potential impact on the squid fishery (\$3,593,414), while Ext. A has the lowest potential impact (\$726,240).
- The coastal pelagic fishery sees the lowest range of potential impacts (by %). Ext. C has the highest potential impact on the coastal pelagic fishery (22.5%), while Ext. A has the lowest potential impact (3.9%).
- The spot prawn fishery sees the highest range of potential impacts (by %). Opal B has the highest potential impact on the spot prawn fishery (47.3%), while Ext. B has the lowest potential impact (3.9%).

² For an explanation of why net economic impact can exceed 100%, please see the Appendix.

Table 1: Highest/Lowest Annual Estimated Net Economic Impact on Commercial Fisheries by Port³

Port	MPA Proposal(s) with highest potential impact	MPA Proposal(s) with lowest potential impact
Santa Barbara	Ext. C	Ext. A
Ventura	Ext. C	Ext. A
Port Hueneme	Ext. C	Ext. A
San Pedro	Ext. C	Ext. A
Dana Point	Ext. C	Ext. A
Oceanside	Lapis B	Ext. A
San Diego	Ext. C	Ext. A
Study Region	Ext. C	Ext. A

Figure 1: Estimated Annual Net Economic Impact on Commercial Fisheries (% Reduction in Profit)



³ For all economic impacts, the results are the estimated maximum potential economic impact on average annual net revenue from 2000-07 (in \$2007).

Figure 2: Estimated Annual Net Economic Impact on Commercial Fisheries by Port (% Reduction in Profit)

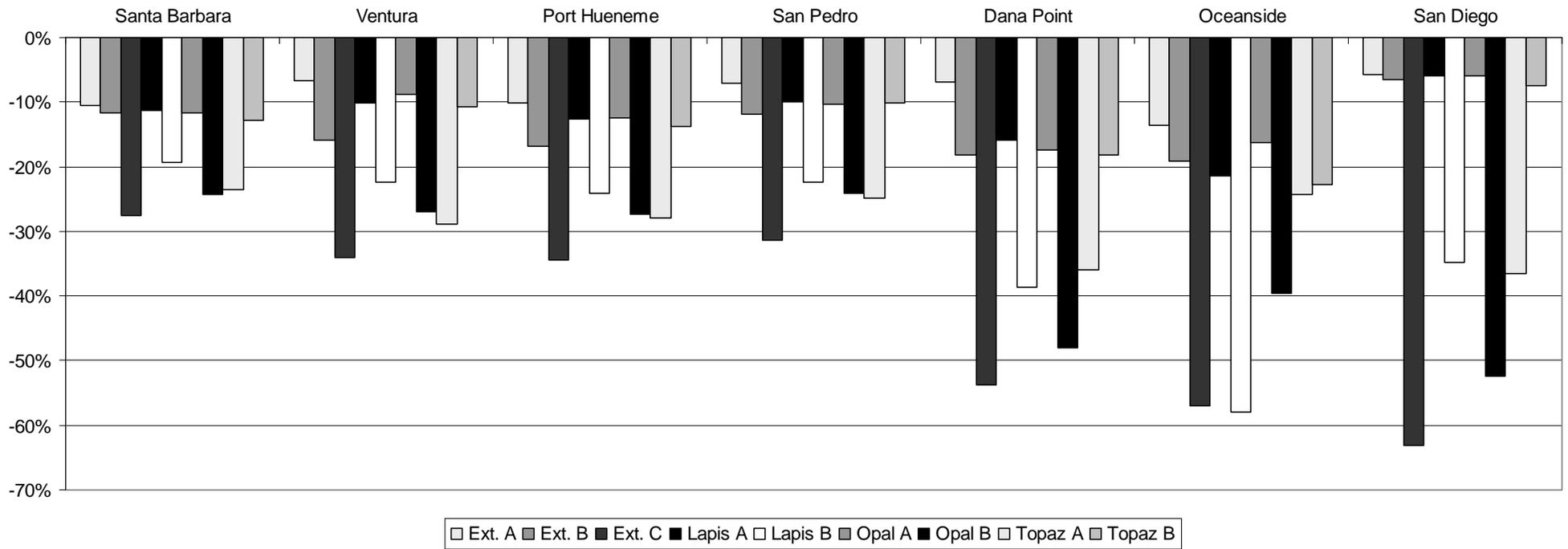


Table 2: Estimated Annual Net Economic Impact on Commercial Fisheries by Port (\$ Reduction in Profit)

Port	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Santa Barbara	\$5,796,804	\$2,761,020	\$3,399,438	\$356,202	\$396,749	\$937,629	\$382,130	\$655,037	\$396,292	\$822,907	\$799,678	\$437,639
Ventura	\$5,061,321	\$2,828,803	\$2,232,518	\$147,393	\$356,080	\$761,440	\$224,731	\$498,379	\$197,262	\$603,485	\$642,729	\$239,263
Port Hueneme	\$11,061,000	\$6,008,602	\$5,052,398	\$507,924	\$847,036	\$1,742,066	\$633,479	\$1,216,846	\$627,245	\$1,379,887	\$1,409,056	\$693,033
San Pedro	\$20,141,349	\$10,989,464	\$9,151,885	\$654,853	\$1,083,532	\$2,867,574	\$904,612	\$2,049,709	\$941,959	\$2,212,398	\$2,281,475	\$924,546
Dana Point	\$1,860,091	\$926,136	\$933,955	\$65,067	\$170,066	\$502,815	\$148,397	\$360,711	\$162,590	\$448,679	\$335,083	\$169,373
Oceanside	\$987,326	\$481,905	\$505,421	\$68,847	\$96,888	\$287,830	\$108,512	\$292,460	\$82,633	\$200,170	\$122,966	\$115,227
San Diego	\$3,093,219	\$1,462,682	\$1,630,538	\$94,322	\$107,358	\$1,030,147	\$95,644	\$568,469	\$95,553	\$854,089	\$595,413	\$120,798
Study Region	\$48,001,110	\$25,458,611	\$22,906,154	\$1,894,608	\$3,057,709	\$8,129,500	\$2,497,504	\$5,641,611	\$2,503,534	\$6,521,614	\$6,186,400	\$2,699,878

Table 3: Estimated Annual Net Economic Impact on Commercial Fisheries by Port (% Reduction in Profit)

Port	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Santa Barbara	100%	47.6%	52.4%	10.5%	11.7%	27.6%	11.2%	19.3%	11.7%	24.2%	23.5%	12.9%
Ventura	100%	55.9%	44.1%	6.6%	15.9%	34.1%	10.1%	22.3%	8.8%	27.0%	28.8%	10.7%
Port Hueneme	100%	54.3%	45.7%	10.1%	16.8%	34.5%	12.5%	24.1%	12.4%	27.3%	27.9%	13.7%
San Pedro	100%	54.6%	45.4%	7.2%	11.8%	31.3%	9.9%	22.4%	10.3%	24.2%	24.9%	10.1%
Dana Point	100%	49.8%	50.2%	7.0%	18.2%	53.8%	15.9%	38.6%	17.4%	48.0%	35.9%	18.1%
Oceanside	100%	48.8%	51.2%	13.6%	19.2%	56.9%	21.5%	57.9%	16.3%	39.6%	24.3%	22.8%
San Diego	100%	47.3%	52.7%	5.8%	6.6%	63.2%	5.9%	34.9%	5.9%	52.4%	36.5%	7.4%
Study Region	—	—	—	8.3%	13.3%	35.5%	10.9%	24.6%	10.9%	28.5%	27.0%	11.8%

Table 4: Estimated Annual Net Economic Impact for Santa Barbara

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
				\$ Reduction in Profit Under MPA Proposals								
Ca. Halibut (Hook & Line)	\$70,658	\$37,025	\$33,633	\$4,463	\$5,760	\$17,735	\$6,236	\$15,495	\$7,978	\$17,184	\$15,410	\$9,534
Ca. Halibut (Trawl)	\$200,567	\$65,184	\$135,383	\$7,088	\$11,070	\$37,438	\$7,368	\$32,421	\$9,684	\$30,017	\$25,772	\$16,666
Coastal Pelagics	—	—	—	—	—	—	—	—	—	—	—	—
Lobster	\$1,558,845	\$716,026	\$842,819	\$84,709	\$108,275	\$311,321	\$99,613	\$194,002	\$103,816	\$271,451	\$263,935	\$112,351
N. Fishery (Hook & Line)	\$150,237	\$77,523	\$72,715	\$11,656	\$11,737	\$21,178	\$11,772	\$18,325	\$11,911	\$22,720	\$20,644	\$15,205
N. Fishery (Trap)	\$39,144	\$19,986	\$19,157	\$1,966	\$3,757	\$12,724	\$3,598	\$5,180	\$3,722	\$11,275	\$11,461	\$3,710
Rock Crab	\$845,105	\$396,193	\$448,912	\$56,052	\$54,736	\$173,907	\$54,528	\$109,541	\$56,606	\$144,253	\$139,957	\$63,951
Sablefish	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Diving)	\$19,874	\$9,858	\$10,017	\$1,660	\$2,691	\$4,454	\$2,614	\$3,309	\$2,641	\$3,797	\$3,764	\$2,880
Sea Cucumber (Trawl)	\$163,088	\$40,772	\$122,316	\$3,653	\$3,596	\$19,622	\$3,439	\$15,226	\$3,596	\$13,856	\$14,256	\$3,953
Spot Prawn	\$48,537	\$23,651	\$24,886	\$1,464	\$1,158	\$3,957	\$1,292	\$3,934	\$1,602	\$5,517	\$3,942	\$4,175
Squid	—	—	—	—	—	—	—	—	—	—	—	—
Swordfish	—	—	—	—	—	—	—	—	—	—	—	—
Thornyhead	—	—	—	—	—	—	—	—	—	—	—	—
Urchin	\$3,064,404	\$1,374,803	\$1,689,601	\$183,491	\$193,969	\$335,293	\$191,669	\$257,603	\$194,736	\$302,837	\$300,537	\$205,214
All Fisheries	\$6,160,459	\$2,761,020	\$3,399,438	\$356,202	\$396,749	\$937,629	\$382,130	\$655,037	\$396,292	\$822,907	\$799,678	\$437,639

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	% Reduction in Profit Under MPA Proposals								
				Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Ca. Halibut (Hook & Line)	100%	52%	48%	13.3%	17.1%	52.7%	18.5%	46.1%	23.7%	51.1%	45.8%	28.3%
Ca. Halibut (Trawl)	100%	33%	68%	5.2%	8.2%	27.7%	5.4%	23.9%	7.2%	22.2%	19.0%	12.3%
Coastal Pelagics	—	—	—	—	—	—	—	—	—	—	—	—
Lobster	100%	46%	54%	10.1%	12.8%	36.9%	11.8%	23.0%	12.3%	32.2%	31.3%	13.3%
N. Fishery (Hook & Line)	100%	52%	48%	16.0%	16.1%	29.1%	16.2%	25.2%	16.4%	31.2%	28.4%	20.9%
N. Fishery (Trap)	100%	51%	49%	10.3%	19.6%	66.4%	18.8%	27.0%	19.4%	58.9%	59.8%	19.4%
Rock Crab	100%	47%	53%	12.5%	12.2%	38.7%	12.1%	24.4%	12.6%	32.1%	31.2%	14.2%
Sablefish	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Diving)	100%	50%	50%	16.6%	26.9%	44.5%	26.1%	33.0%	26.4%	37.9%	37.6%	28.8%
Sea Cucumber (Trawl)	100%	25%	75%	3.0%	2.9%	16.0%	2.8%	12.4%	2.9%	11.3%	11.7%	3.2%
Spot Prawn	100%	49%	51%	5.9%	4.7%	15.9%	5.2%	15.8%	6.4%	22.2%	15.8%	16.8%
Squid	—	—	—	—	—	—	—	—	—	—	—	—
Swordfish	—	—	—	—	—	—	—	—	—	—	—	—
Thornyhead	—	—	—	—	—	—	—	—	—	—	—	—
Urchin	100%	45%	55%	10.9%	11.5%	19.8%	11.3%	15.2%	11.5%	17.9%	17.8%	12.1%
All Fisheries	—	—	—	10.5%	11.7%	27.6%	11.2%	19.3%	11.7%	24.2%	23.5%	12.9%

Table 5: Estimated Annual Net Economic Impact for Ventura

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
				\$ Reduction in Profit Under MPA Proposals								
Ca. Halibut (Hook & Line)	\$18,178	\$9,525	\$8,653	\$1,781	\$2,131	\$1,777	\$1,885	\$1,761	\$2,390	\$1,677	\$1,592	\$2,349
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	—	—	—	—	—	—	—	—	—	—	—	—
Lobster	\$371,161	\$170,486	\$200,675	\$1,638	\$58,597	\$122,592	\$56,929	\$65,785	\$57,202	\$92,596	\$96,539	\$56,898
N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
N. Fishery (Trap)	\$35,207	\$17,976	\$17,231	\$0	\$4,452	\$21,649	\$4,420	\$4,420	\$4,420	\$19,441	\$20,054	\$4,420
Rock Crab	\$126,384	\$59,250	\$67,134	\$3,658	\$3,668	\$4,341	\$3,658	\$4,974	\$3,658	\$4,051	\$4,145	\$3,658
Sablefish	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Diving)	\$49,076	\$24,342	\$24,734	\$3,637	\$7,636	\$17,169	\$4,346	\$16,012	\$6,201	\$7,786	\$7,381	\$6,784
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	\$108,471	\$52,855	\$55,616	\$0	\$0	\$38,244	\$0	\$0	\$0	\$7,963	\$9,963	\$0
Squid	\$4,352,843	\$2,494,369	\$1,858,475	\$136,679	\$279,596	\$555,666	\$153,493	\$405,427	\$123,391	\$469,970	\$503,055	\$165,154
Swordfish	—	—	—	—	—	—	—	—	—	—	—	—
Thornyhead	—	—	—	—	—	—	—	—	—	—	—	—
Urchin	—	—	—	—	—	—	—	—	—	—	—	—
All Fisheries	\$5,061,321	\$2,828,803	\$2,232,518	\$147,393	\$356,080	\$761,440	\$224,731	\$498,379	\$197,262	\$603,485	\$642,729	\$239,263

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	% Reduction in Profit Under MPA Proposals								
				Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Ca. Halibut (Hook & Line)	100%	52%	48%	20.6%	24.6%	20.5%	21.8%	20.4%	27.6%	19.4%	18.4%	27.2%
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	—	—	—	—	—	—	—	—	—	—	—	—
Lobster	100%	46%	54%	0.8%	29.2%	61.1%	28.4%	32.8%	28.5%	46.1%	48.1%	28.4%
N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
N. Fishery (Trap)	100%	51%	49%	0.0%	25.8%	125.6%	25.7%	25.7%	25.7%	112.8%	116.4%	25.7%
Rock Crab	100%	47%	53%	5.4%	5.5%	6.5%	5.4%	7.4%	5.4%	6.0%	6.2%	5.4%
Sablefish	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Diving)	100%	50%	50%	14.7%	30.9%	69.4%	17.6%	64.7%	25.1%	31.5%	29.8%	27.4%
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	100%	49%	51%	0.0%	0.0%	68.8%	0.0%	0.0%	0.0%	14.3%	17.9%	0.0%
Squid	100%	57%	43%	7.4%	15.0%	29.9%	8.3%	21.8%	6.6%	25.3%	27.1%	8.9%
Swordfish	—	—	—	—	—	—	—	—	—	—	—	—
Thornyhead	—	—	—	—	—	—	—	—	—	—	—	—
Urchin	—	—	—	—	—	—	—	—	—	—	—	—
All Fisheries	—	—	—	6.6%	15.9%	34.1%	10.1%	22.3%	8.8%	27.0%	28.8%	10.7%

Table 6: Estimated Annual Net Economic Impact for Port Hueneme

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
				\$ Reduction in Profit Under MPA Proposals								
Ca. Halibut (Hook & Line)	\$19,373	\$10,152	\$9,222	\$1,720	\$2,129	\$1,721	\$1,829	\$1,785	\$2,267	\$1,761	\$1,616	\$2,350
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	\$767,935	—	\$340,771	\$16,572	\$15,350	\$68,097	\$20,678	\$63,551	\$20,874	\$48,983	\$44,583	\$22,096
Lobster	\$420,552	\$193,172	\$227,379	\$14,983	\$24,331	\$63,439	\$20,585	\$52,682	\$22,750	\$50,242	\$41,720	\$22,441
N. Fishery (Hook & Line)	\$49,637	\$25,613	\$24,024	\$80	\$172	\$13,166	\$172	\$9,208	\$176	\$13,680	\$11,051	\$7,744
N. Fishery (Trap)	\$61,447	\$31,374	\$30,073	\$681	\$871	\$1,557	\$621	\$380	\$681	\$1,316	\$0	\$621
Rock Crab	\$131,803	\$61,790	\$70,012	\$11	\$292	\$7,942	\$11	\$12,200	\$11	\$4,441	\$5,500	\$11
Sablefish	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Diving)	\$258,699	\$128,315	\$130,384	\$32,547	\$43,607	\$66,396	\$45,131	\$51,738	\$48,445	\$51,515	\$50,519	\$47,307
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	\$427,903	\$208,506	\$219,398	\$90,770	\$112,308	\$88,006	\$92,691	\$102,904	\$105,668	\$88,006	\$88,006	\$103,881
Squid	\$7,387,374	\$4,233,286	\$3,154,088	\$287,653	\$538,946	\$1,109,650	\$341,962	\$782,876	\$291,335	\$909,443	\$959,150	\$365,894
Swordfish	—	—	—	—	—	—	—	—	—	—	—	—
Thornyhead	—	—	—	—	—	—	—	—	—	—	—	—
Urchin	\$1,536,277	\$689,230	\$847,047	\$62,907	\$109,029	\$322,092	\$109,798	\$139,522	\$135,038	\$210,500	\$206,913	\$120,688
All Fisheries	\$11,061,000	\$5,581,438	\$5,052,398	\$507,924	\$847,036	\$1,742,066	\$633,479	\$1,216,846	\$627,245	\$1,379,887	\$1,409,056	\$693,033

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	% Reduction in Profit Under MPA Proposals								
				Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Ca. Halibut (Hook & Line)	100%	52%	48%	18.7%	23.1%	18.7%	19.8%	19.4%	24.6%	19.1%	17.5%	25.5%
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	100%	56%	44%	4.9%	4.5%	20.0%	6.1%	18.6%	6.1%	14.4%	13.1%	6.5%
Lobster	100%	46%	54%	6.6%	10.7%	27.9%	9.1%	23.2%	10.0%	22.1%	18.3%	9.9%
N. Fishery (Hook & Line)	100%	52%	48%	0.3%	0.7%	54.8%	0.7%	38.3%	0.7%	56.9%	46.0%	32.2%
N. Fishery (Trap)	100%	51%	49%	2.3%	2.9%	5.2%	2.1%	1.3%	2.3%	4.4%	0.0%	2.1%
Rock Crab	100%	47%	53%	0.0%	0.4%	11.3%	0.0%	17.4%	0.0%	6.3%	7.9%	0.0%
Sablefish	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Diving)	100%	50%	50%	25.0%	33.4%	50.9%	34.6%	39.7%	37.2%	39.5%	38.7%	36.3%
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	100%	49%	51%	41.4%	51.2%	40.1%	42.2%	46.9%	48.2%	40.1%	40.1%	47.3%
Squid	100%	57%	43%	9.1%	17.1%	35.2%	10.8%	24.8%	9.2%	28.8%	30.4%	11.6%
Swordfish	—	—	—	—	—	—	—	—	—	—	—	—
Thornyhead	—	—	—	—	—	—	—	—	—	—	—	—
Urchin	100%	45%	55%	7.4%	12.9%	38.0%	13.0%	16.5%	15.9%	24.9%	24.4%	14.2%
All Fisheries	—	—	—	10.1%	16.8%	34.5%	12.5%	24.1%	12.4%	27.3%	27.9%	13.7%

Table 7: Estimated Annual Net Economic Impact for San Pedro

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
				\$ Reduction in Profit Under MPA Proposals								
Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	\$5,121,261	\$2,848,701	\$2,272,559	\$84,762	\$115,081	\$523,569	\$118,341	\$414,030	\$141,488	\$444,023	\$421,203	\$128,773
Lobster	\$980,389	\$450,323	\$530,066	\$42,220	\$57,842	\$144,123	\$43,581	\$88,765	\$68,657	\$105,829	\$100,061	\$47,026
N. Fishery (Hook & Line)	\$14,034	\$7,242	\$6,793	\$960	\$1,463	\$3,869	\$1,466	\$2,324	\$1,494	\$3,440	\$3,316	\$1,761
N. Fishery (Trap)	\$76,447	\$39,033	\$37,414	\$1,222	\$8,082	\$26,268	\$5,903	\$8,030	\$6,214	\$19,789	\$24,620	\$5,413
Rock Crab	\$136,953	\$64,205	\$72,748	\$56	\$67	\$157	\$56	\$112	\$6,366	\$124	\$124	\$34
Sablefish	\$68,707	\$38,647	\$30,059	\$6,524	\$12,419	\$39,344	\$17,725	\$40,240	\$10,206	\$9,216	\$5,973	\$15,834
Sea Cucumber (Diving)	\$164,935	\$81,808	\$83,127	\$12,948	\$16,551	\$66,218	\$15,761	\$26,985	\$29,733	\$47,438	\$51,572	\$16,279
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	\$389,257	\$189,674	\$199,583	\$0	\$8,003	\$49,028	\$0	\$6,654	\$0	\$84,442	\$19,347	\$3,679
Squid	\$10,719,087	\$6,142,503	\$4,576,584	\$307,195	\$591,684	\$1,238,130	\$418,052	\$1,031,107	\$347,932	\$1,061,826	\$1,071,176	\$431,409
Swordfish	—	—	—	—	—	—	—	—	—	—	—	—
Thornyhead	\$280,325	\$144,835	\$135,490	\$19,255	\$40,761	\$137,102	\$55,982	\$158,608	\$34,186	\$58,768	\$42,209	\$59,013
Urchin	\$2,189,956	\$982,494	\$1,207,462	\$179,711	\$231,579	\$639,765	\$227,744	\$272,854	\$295,684	\$377,503	\$541,873	\$215,325
All Fisheries	\$20,141,349	\$10,989,464	\$9,151,885	\$654,853	\$1,083,532	\$2,867,574	\$904,612	\$2,049,709	\$941,959	\$2,212,398	\$2,281,475	\$924,546

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	% Reduction in Profit Under MPA Proposals								
				Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	100%	56%	44%	3.7%	5.1%	23.0%	5.2%	18.2%	6.2%	19.5%	18.5%	5.7%
Lobster	100%	46%	54%	8.0%	10.9%	27.2%	8.2%	16.7%	13.0%	20.0%	18.9%	8.9%
N. Fishery (Hook & Line)	100%	52%	48%	14.1%	21.5%	57.0%	21.6%	34.2%	22.0%	50.6%	48.8%	25.9%
N. Fishery (Trap)	100%	51%	49%	3.3%	21.6%	70.2%	15.8%	21.5%	16.6%	52.9%	65.8%	14.5%
Rock Crab	100%	47%	53%	0.1%	0.1%	0.2%	0.1%	0.2%	8.8%	0.2%	0.2%	0.0%
Sablefish	100%	56%	44%	21.7%	41.3%	130.9%	59.0%	133.9%	34.0%	30.7%	19.9%	52.7%
Sea Cucumber (Diving)	100%	50%	50%	15.6%	19.9%	79.7%	19.0%	32.5%	35.8%	57.1%	62.0%	19.6%
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	100%	49%	51%	0.0%	4.0%	24.6%	0.0%	3.3%	0.0%	42.3%	9.7%	1.8%
Squid	100%	57%	43%	6.7%	12.9%	27.1%	9.1%	22.5%	7.6%	23.2%	23.4%	9.4%
Swordfish	—	—	—	—	—	—	—	—	—	—	—	—
Thornyhead	100%	52%	48%	14.2%	30.1%	101.2%	41.3%	117.1%	25.2%	43.4%	31.2%	43.6%
Urchin	100%	45%	55%	14.9%	19.2%	53.0%	18.9%	22.6%	24.5%	31.3%	44.9%	17.8%
All Fisheries	—	—	—	7.2%	11.8%	31.3%	9.9%	22.4%	10.3%	24.2%	24.9%	10.1%

Table 8: Estimated Annual Net Economic Impact for Dana Point

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
				\$ Reduction in Profit Under MPA Proposals								
Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	—	—	—	—	—	—	—	—	—	—	—	—
Lobster	\$914,095	\$419,872	\$494,223	\$28,683	\$91,876	\$214,526	\$56,321	\$128,701	\$39,365	\$116,749	\$203,322	\$43,622
N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
N. Fishery (Trap)	\$31,345	\$16,004	\$15,341	\$558	\$3,370	\$7,514	\$2,304	\$8,752	\$619	\$7,684	\$7,499	\$3,619
Rock Crab	\$38,375	\$17,991	\$20,384	\$547	\$837	\$4,081	\$1,947	\$4,093	\$642	\$4,276	\$3,747	\$563
Sablefish	\$127,274	\$71,591	\$55,682	\$12,085	\$23,006	\$72,882	\$32,835	\$74,541	\$18,906	\$17,072	\$11,065	\$29,332
Sea Cucumber (Diving)	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	\$300,792	\$146,568	\$154,224	\$1,256	\$1,682	\$45,799	\$2,677	\$10,117	\$1,445	\$144,126	\$21,111	\$27,887
Squid	—	—	—	—	—	—	—	—	—	—	—	—
Swordfish	\$196,774	\$130,362	\$66,411	\$10,925	\$10,925	\$52,723	\$10,536	\$18,059	\$81,423	\$89,381	\$27,681	\$30,378
Thornyhead	\$160,858	\$83,110	\$77,748	\$9,834	\$21,804	\$75,067	\$29,464	\$90,553	\$18,415	\$37,559	\$27,443	\$33,057
Urchin	\$90,579	\$40,637	\$49,942	\$1,178	\$16,566	\$30,223	\$12,313	\$25,895	\$1,775	\$31,832	\$33,215	\$914
All Fisheries	\$1,860,091	\$926,136	\$933,955	\$65,067	\$170,066	\$502,815	\$148,397	\$360,711	\$162,590	\$448,679	\$335,083	\$169,373

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	% Reduction in Profit Under MPA Proposals								
				Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	—	—	—	—	—	—	—	—	—	—	—	—
Lobster	100%	46%	54%	5.8%	18.6%	43.4%	11.4%	26.0%	8.0%	23.6%	41.1%	8.8%
N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
N. Fishery (Trap)	100%	51%	49%	3.6%	22.0%	49.0%	15.0%	57.1%	4.0%	50.1%	48.9%	23.6%
Rock Crab	100%	47%	53%	2.7%	4.1%	20.0%	9.6%	20.1%	3.1%	21.0%	18.4%	2.8%
Sablefish	100%	56%	44%	21.7%	41.3%	130.9%	59.0%	133.9%	34.0%	30.7%	19.9%	52.7%
Sea Cucumber (Diving)	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	100%	49%	51%	0.8%	1.1%	29.7%	1.7%	6.6%	0.9%	93.5%	13.7%	18.1%
Squid	—	—	—	—	—	—	—	—	—	—	—	—
Swordfish	100%	66%	34%	16.5%	16.5%	79.4%	15.9%	27.2%	122.6%	134.6%	41.7%	45.7%
Thornyhead	100%	52%	48%	12.6%	28.0%	96.6%	37.9%	116.5%	23.7%	48.3%	35.3%	42.5%
Urchin	100%	45%	55%	2.4%	33.2%	60.5%	24.7%	51.8%	3.6%	63.7%	66.5%	1.8%
All Fisheries	—	—	—	7.0%	18.2%	53.8%	15.9%	38.6%	17.4%	48.0%	35.9%	18.1%

Table 9: Estimated Annual Net Economic Impact for Oceanside

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
				\$ Reduction in Profit Under MPA Proposals								
Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	—	—	—	—	—	—	—	—	—	—	—	—
Lobster	\$400,696	\$184,052	\$216,644	\$18,500	\$22,986	\$72,133	\$18,795	\$94,922	\$18,303	\$98,884	\$48,951	\$23,510
N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
N. Fishery (Trap)	\$21,205	\$10,827	\$10,378	\$77	\$96	\$612	\$75	\$1,244	\$75	\$1,238	\$505	\$106
Rock Crab	\$35,177	\$16,491	\$18,686	\$0	\$0	\$127	\$0	\$130	\$0	\$147	\$101	\$0
Sablefish	\$90,829	\$51,091	\$39,738	\$8,625	\$16,418	\$52,012	\$23,433	\$53,196	\$13,492	\$12,183	\$7,897	\$20,933
Sea Cucumber (Diving)	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	\$211,491	\$103,054	\$108,437	\$22,057	\$22,057	\$62,171	\$20,807	\$22,223	\$20,807	\$34,634	\$28,470	\$21,190
Squid	—	—	—	—	—	—	—	—	—	—	—	—
Swordfish	—	—	—	—	—	—	—	—	—	—	—	—
Thornyhead	\$207,737	\$107,331	\$100,406	\$13,096	\$28,670	\$98,116	\$38,910	\$117,092	\$24,178	\$47,283	\$34,384	\$42,972
Urchin	\$20,191	\$9,058	\$11,132	\$6,493	\$6,661	\$2,657	\$6,493	\$3,652	\$5,777	\$5,801	\$2,657	\$6,516
All Fisheries	\$987,326	\$481,905	\$505,421	\$68,847	\$96,888	\$287,830	\$108,512	\$292,460	\$82,633	\$200,170	\$122,966	\$115,227

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	% Reduction in Profit Under MPA Proposals								
				Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	—	—	—	—	—	—	—	—	—	—	—	—
Lobster	100%	46%	54%	8.5%	10.6%	33.3%	8.7%	43.8%	8.4%	45.6%	22.6%	10.9%
N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
N. Fishery (Trap)	100%	51%	49%	0.7%	0.9%	5.9%	0.7%	12.0%	0.7%	11.9%	4.9%	1.0%
Rock Crab	100%	47%	53%	0.0%	0.0%	0.7%	0.0%	0.7%	0.0%	0.8%	0.5%	0.0%
Sablefish	100%	56%	44%	21.7%	41.3%	130.9%	59.0%	133.9%	34.0%	30.7%	19.9%	52.7%
Sea Cucumber (Diving)	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	100%	49%	51%	20.3%	20.3%	57.3%	19.2%	20.5%	19.2%	31.9%	26.3%	19.5%
Squid	—	—	—	—	—	—	—	—	—	—	—	—
Swordfish	—	—	—	—	—	—	—	—	—	—	—	—
Thornyhead	100%	52%	48%	13.0%	28.6%	97.7%	38.8%	116.6%	24.1%	47.1%	34.2%	42.8%
Urchin	100%	45%	55%	58.3%	59.8%	23.9%	58.3%	32.8%	51.9%	52.1%	23.9%	58.5%
All Fisheries	—	—	—	13.6%	19.2%	56.9%	21.5%	57.9%	16.3%	39.6%	24.3%	22.8%

Table 10: Estimated Annual Net Economic Impact for San Diego

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
				\$ Reduction in Profit Under MPA Proposals								
Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	—	—	—	—	—	—	—	—	—	—	—	—
Lobster	\$1,715,118	\$787,807	\$927,311	\$58,864	\$70,496	\$556,823	\$60,265	\$360,470	\$59,144	\$553,459	\$342,951	\$72,318
N. Fishery (Hook & Line)	\$3,291	\$1,698	\$1,593	\$81	\$81	\$864	\$81	\$496	\$81	\$758	\$363	\$117
N. Fishery (Trap)	\$107,924	\$55,105	\$52,819	\$4,866	\$5,802	\$30,558	\$5,298	\$21,720	\$5,233	\$28,596	\$21,036	\$9,757
Rock Crab	\$155,496	\$72,898	\$82,598	\$1,479	\$1,492	\$31,131	\$1,453	\$17,057	\$1,428	\$27,944	\$20,168	\$2,384
Sablefish	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Diving)	\$7,712	\$3,825	\$3,887	\$106	\$106	\$4,574	\$106	\$1,440	\$106	\$2,565	\$1,903	\$106
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	\$254,984	\$124,247	\$130,737	\$23,359	\$23,620	\$78,733	\$22,636	\$46,698	\$22,636	\$57,483	\$42,741	\$30,449
Squid	—	—	—	—	—	—	—	—	—	—	—	—
Swordfish	\$169,952	\$112,593	\$130,737	\$699	\$893	\$2,951	\$880	\$1,605	\$2,058	\$2,602	\$1,023	\$1,307
Thornyhead	—	—	—	—	—	—	—	—	—	—	—	—
Urchin	\$678,742	\$304,508	\$374,234	\$4,868	\$4,868	\$324,513	\$4,925	\$118,982	\$4,868	\$180,681	\$165,228	\$4,359
All Fisheries	\$3,093,219	\$1,462,682	\$1,703,916	\$94,322	\$107,358	\$1,030,147	\$95,644	\$568,469	\$95,553	\$854,089	\$595,413	\$120,798

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	% Reduction in Profit Under MPA Proposals								
				Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—	—	—	—
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	—	—	—	—	—	—	—	—	—	—	—	—
Lobster	100%	46%	54%	6.3%	7.6%	60.0%	6.5%	38.9%	6.4%	59.7%	37.0%	7.8%
N. Fishery (Hook & Line)	100%	52%	48%	5.1%	5.1%	54.3%	5.1%	31.1%	5.1%	47.6%	22.8%	7.4%
N. Fishery (Trap)	100%	51%	49%	9.2%	11.0%	57.9%	10.0%	41.1%	9.9%	54.1%	39.8%	18.5%
Rock Crab	100%	47%	53%	1.8%	1.8%	37.7%	1.8%	20.7%	1.7%	33.8%	24.4%	2.9%
Sablefish	—	—	—	—	—	—	—	—	—	—	—	—
Sea Cucumber (Diving)	100%	50%	50%	2.7%	2.7%	117.7%	2.7%	37.1%	2.7%	66.0%	49.0%	2.7%
Sea Cucumber (Trawl)	100%	25%	75%	—	—	—	—	—	—	—	—	—
Spot Prawn	100%	49%	51%	17.9%	18.1%	60.2%	17.3%	35.7%	17.3%	44.0%	32.7%	23.3%
Squid	—	—	—	—	—	—	—	—	—	—	—	—
Swordfish	100%	66%	34%	1.2%	1.6%	5.1%	1.5%	2.8%	3.6%	4.5%	1.8%	2.3%
Thornyhead	—	—	—	—	—	—	—	—	—	—	—	—
Urchin	100%	45%	55%	1.3%	1.3%	86.7%	1.3%	31.8%	1.3%	48.3%	44.2%	1.2%
All Fisheries	—	—	—	5.8%	6.6%	63.2%	5.9%	34.9%	5.9%	52.4%	36.5%	7.4%

Table 11: Estimated Annual Net Economic Impact for the SCSR

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
				\$ Reduction in Profit Under MPA Proposals								
Ca. Halibut (Hook & Line)	\$108,209	\$56,702	\$2,613,331	\$3,710	\$4,668	\$9,892	\$4,635	\$8,871	\$5,886	\$9,607	\$8,673	\$6,631
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	\$5,889,196	\$3,275,865	\$2,613,331	\$100,728	\$129,651	\$588,127	\$138,188	\$474,725	\$161,390	\$490,057	\$463,000	\$149,967
Lobster	\$6,360,856	\$2,921,739	\$3,439,117	\$249,596	\$434,401	\$1,484,957	\$356,088	\$985,328	\$369,237	\$1,289,211	\$1,097,479	\$378,166
N. Fishery (Hook & Line)	\$217,200	\$112,075	\$105,125	\$12,353	\$13,006	\$37,780	\$13,043	\$29,345	\$13,209	\$39,250	\$34,200	\$24,003
N. Fishery (Trap)	\$372,719	\$190,306	\$182,413	\$9,370	\$26,431	\$100,882	\$22,219	\$49,726	\$20,964	\$89,339	\$85,176	\$27,645
Rock Crab	\$1,469,292	\$688,818	\$780,474	\$61,803	\$61,091	\$221,687	\$61,653	\$148,106	\$68,711	\$185,236	\$173,741	\$70,600
Sablefish	\$286,809	\$161,330	\$125,479	\$21,053	\$40,079	\$126,966	\$57,201	\$129,856	\$32,935	\$29,740	\$19,276	\$51,099
Sea Cucumber (Diving)	\$500,296	\$248,147	\$252,149	\$50,884	\$70,570	\$158,766	\$67,939	\$99,457	\$87,101	\$113,067	\$115,106	\$73,334
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	\$1,741,435	\$848,554	\$892,881	\$138,905	\$168,827	\$365,938	\$140,103	\$192,529	\$152,158	\$422,171	\$213,579	\$191,262
Squid	\$22,459,304	\$12,870,158	\$9,589,146	\$726,240	\$1,400,033	\$2,882,459	\$906,904	\$2,203,368	\$757,145	\$2,423,595	\$2,515,069	\$955,500
Swordfish	\$366,725	\$242,956	\$892,881	\$5,882	\$5,980	\$28,171	\$5,776	\$9,950	\$42,241	\$46,542	\$14,523	\$16,033
Thornyhead	\$648,920	\$335,275	\$313,645	\$32,298	\$69,852	\$237,562	\$95,210	\$280,412	\$58,784	\$109,951	\$79,653	\$103,392
Urchin	\$7,580,148	\$3,400,730	\$4,179,418	\$435,971	\$559,238	\$1,644,443	\$549,566	\$813,513	\$633,984	\$1,102,384	\$1,242,790	\$549,640
All Fisheries⁴	\$48,001,110	\$25,352,655	\$25,979,390	\$1,848,793	\$2,983,828	\$7,887,630	\$2,418,526	\$5,425,185	\$2,403,744	\$6,350,150	\$6,062,268	\$2,597,271

Fishery	% Reduction in Profit Under MPA Proposals											
	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B	Ext. A	Ext. B	Ext. C
Ca. Halibut (Hook & Line)	7.2%	9.1%	19.2%	9.0%	17.2%	11.4%	18.7%	16.8%	12.9%	7.2%	9.1%	19.2%
Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Coastal Pelagics	3.9%	5.0%	22.5%	5.3%	18.2%	6.2%	18.8%	17.7%	5.7%	3.9%	5.0%	22.5%
Lobster	7.3%	12.6%	43.2%	10.4%	28.7%	10.7%	37.5%	31.9%	11.0%	7.3%	12.6%	43.2%
N. Fishery (Hook & Line)	11.8%	12.4%	35.9%	12.4%	27.9%	12.6%	37.3%	32.5%	22.8%	11.8%	12.4%	35.9%
N. Fishery (Trap)	5.1%	14.5%	55.3%	12.2%	27.3%	11.5%	49.0%	46.7%	15.2%	5.1%	14.5%	55.3%
Rock Crab	7.9%	7.8%	28.4%	7.9%	19.0%	8.8%	23.7%	22.3%	9.0%	7.9%	7.8%	28.4%
Sablefish	16.8%	31.9%	101.2%	45.6%	103.5%	26.2%	23.7%	15.4%	40.7%	16.8%	31.9%	101.2%
Sea Cucumber (Diving)	20.2%	28.0%	63.0%	26.9%	39.4%	34.5%	44.8%	45.6%	29.1%	20.2%	28.0%	63.0%
Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—	—	—	—
Spot Prawn	15.6%	18.9%	41.0%	15.7%	21.6%	17.0%	47.3%	23.9%	21.4%	15.6%	18.9%	41.0%
Squid	7.6%	14.6%	30.1%	9.5%	23.0%	7.9%	25.3%	26.2%	10.0%	7.6%	14.6%	30.1%
Swordfish	4.8%	4.8%	22.8%	4.7%	8.0%	34.1%	37.6%	11.7%	13.0%	4.8%	4.8%	22.8%
Thornyhead	10.3%	22.3%	75.7%	30.4%	89.4%	18.7%	35.1%	25.4%	33.0%	10.3%	22.3%	75.7%
Urchin	10.4%	13.4%	39.3%	13.1%	19.5%	15.2%	26.4%	29.7%	13.2%	10.4%	13.4%	39.3%
All Fisheries	8.2%	13.2%	34.8%	10.7%	24.0%	10.6%	28.0%	26.8%	11.5%	8.2%	13.2%	34.8%

⁴ Please note that Santa Barbara Ca. Halibut (Trawl) and Sea Cucumber (Trawl) are not included in this total. Please see Table 5 for estimated impacts on these two fisheries.

3. Results for Commercial Passenger Fishing Vessels (CPFV)

We summarize here our analyses of the potential impacts on the 10 CPFV fisheries (i.e., Barracuda, Ca. Halibut, Calico Bass, Lingcod, Rockfish, Ca. Scorpionfish, Ca. Sheephead, Sand Bass, Whitefish, and White Seabass). The results for CPFV fisheries are broken out by study region and by port (i.e., Santa Barbara, Port Hueneme/Channel Islands Harbor, Santa Monica, San Pedro/Long Beach, Newport Beach, Dana Point, Oceanside, and San Diego).

3.1 Potential Impacts on CPFV Fishing Grounds (Area and Value)

MPA proposals vary considerably in their effects, both between and across fisheries. As mentioned previously, this report only presents results. Evaluation methods are presented in a separate document. Each proposal affects the CPFV fisheries differently. For information on the potential impacts on CPFV fishing grounds for the 80 port-fishery combinations considered in this analysis (both in terms of total area and total value), please see Tables A.3 and A.4 in the Appendix.

3.2 Potential Economic Impacts on CPFV Fisheries

Table 12 summarizes the MPA proposals with the estimated highest and lowest potential economic impact by port (for associated values, see Table 13). On average, Ext. A is estimated to have the lowest potential net economic impact across the study region, while Ext. C is estimated to have the highest potential impact (see Table 12).

Figure 3 summarizes the potential annual net economic impact on all SCSR CPFV fisheries considered. Similar to our analysis of the commercial fisheries, we calculate the potential net economic impact for the CPFV fisheries as the average (i.e., for all 10 species considered) percentage reduction on net economic revenue (i.e., profit). The potential impacts from each proposal are further broken down by port in Figure 4. San Pedro/Long Beach is the port estimated to see the lowest potential net impacts (as a %), while San Diego is estimated to see the highest potential net impacts (as a %).

Table 12: Highest/Lowest Annual Estimated Net Economic Impact on CPFV Fisheries by Port

Port	MPA Proposal(s) with highest potential impact	MPA Proposal(s) with lowest potential impact
Santa Barbara	Ext. C	Ext. B
Port Hueneme / Channel Islands Harbor	Opal B	Topaz A
Santa Monica	Ext. C	Ext. B
San Pedro / Long Beach	Ext. C	Topaz B
Newport Beach	Ext. C	Topaz B
Dana Point	Ext. C	Topaz B
Oceanside	Opal B	Ext. B
San Diego	Ext. C	Ext. B
Study Region	Ext. C	Ext. B

Figure 3: Estimated Annual Net Economic Impact on CPFV Fisheries (% Reduction in Profit)

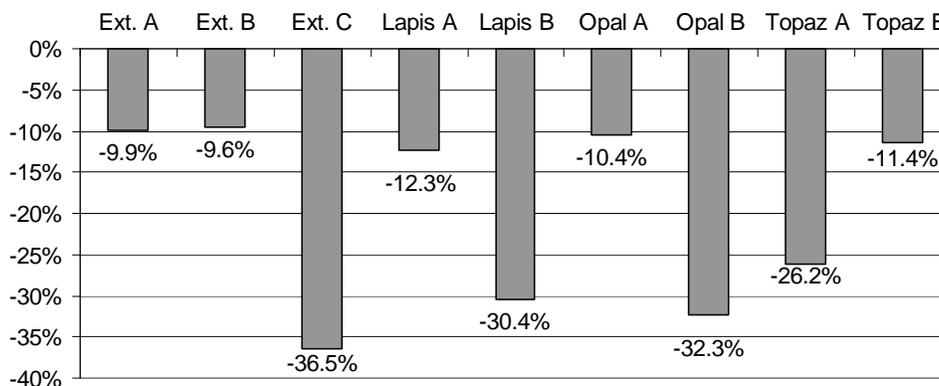
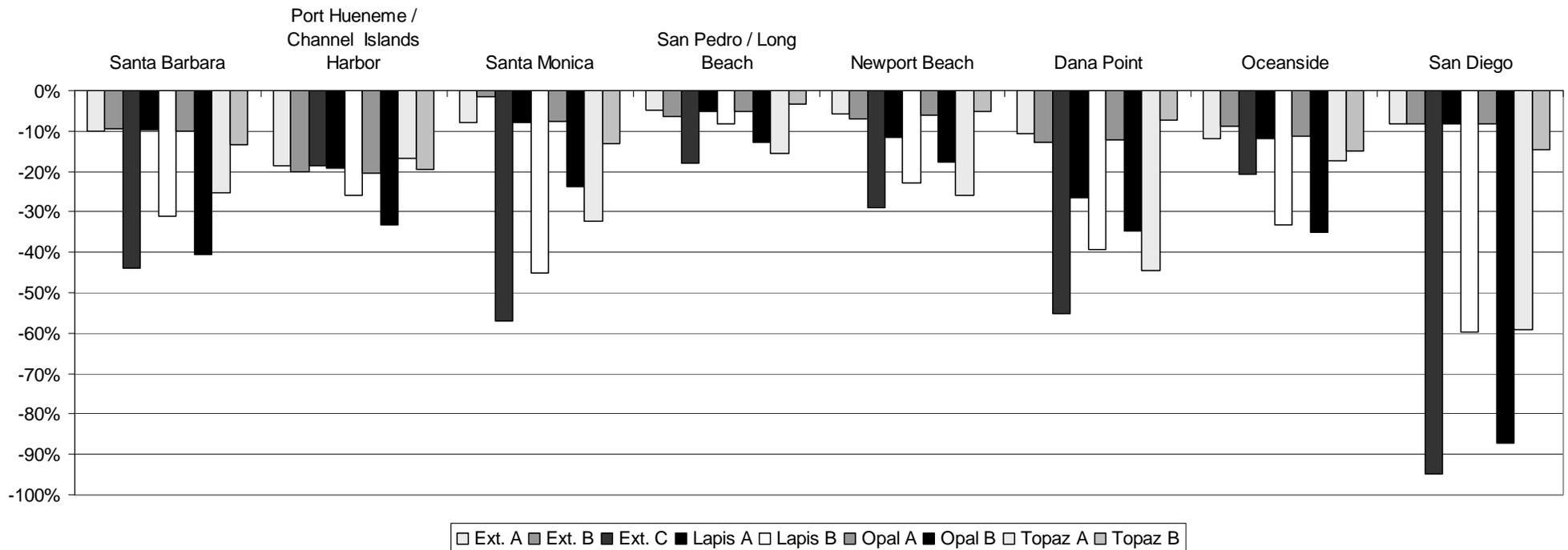


Table 13: Estimated Annual Net Economic Impact on CPFV Fisheries by Port (% Reduction in Profit)

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Santa Barbara	100%	67%	33%	10.0%	9.4%	44.0%	9.8%	31.2%	10.2%	40.4%	25.2%	13.4%
Port Hueneme / Channel Islands Harbor	100%	61%	39%	18.5%	20.0%	18.7%	19.3%	26.0%	20.5%	33.2%	16.9%	19.4%
Santa Monica	100%	74%	26%	7.8%	1.5%	56.9%	7.9%	45.0%	7.6%	23.7%	32.3%	13.1%
San Pedro / Long Beach	100%	65%	35%	4.7%	6.5%	17.9%	5.0%	8.3%	5.1%	12.9%	15.5%	3.4%
Newport Beach	100%	62%	38%	5.7%	7.1%	28.9%	11.7%	22.9%	6.0%	17.8%	25.8%	5.1%
Dana Point	100%	79%	21%	10.8%	12.8%	55.1%	26.6%	39.3%	12.2%	34.8%	44.6%	7.2%
Oceanside	100%	62%	38%	11.9%	8.9%	20.8%	11.8%	33.3%	11.4%	34.9%	17.2%	14.8%
San Diego	100%	82%	18%	8.4%	8.2%	94.8%	8.3%	59.9%	8.4%	87.1%	59.0%	14.6%
Study Region	—	—	—	9.9%	9.6%	36.5%	12.3%	30.4%	10.4%	32.3%	26.2%	11.4%

Figure 4: Estimated Annual Net Economic Impact on CPFV Fisheries by Port (% Reduction in Profit)



4. Results for Recreational Fisheries

We summarize here our analyses of the potential impacts on the 17 recreational fisheries (i.e., Barracuda, Bonito, Ca. Halibut, Calico Bass, Croaker, Lobster, Mackerels, Rockfish, Rock Crab, Scallops, Sheephead, Sand Bass, Squid, Surf Perch, Thresher Shark, White Seabass, and Yellowtail). The results for recreational fisheries are broken out by user group (i.e., dive, kayak, and private vessel) and by county (i.e., Santa Barbara, Ventura, Los Angeles, Orange, and San Diego).

The pier/shore user group results are not presented in this summary as the data are still being reviewed for representativeness and validity, but may be considered in future evaluations.

4.1 Potential Impacts on Recreational Fishing Grounds (Area and Value)

MPA proposals vary considerably in their effects, both between and across fisheries. Each proposal affects the recreational fisheries differently. Due to the large number of fisheries, user groups, and counties considered, we present potential impacts on total recreational fishing grounds (both in terms of total area and total value) in Tables A.5–A.22 in the Appendix.

Appendix A: Summary Tables of Potential Impacts**Table A.1 Percentage Area of Total Commercial Fishing Grounds Affected by Port**

Port	Fishery	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Santa Barbara	Ca. Halibut (Hook & Line)	5.7%	12.4%	34.4%	13.1%	25.2%	15.8%	30.1%	29.5%	17.8%
	Ca. Halibut (Trawl)	1.8%	3.0%	8.6%	1.9%	7.5%	2.6%	7.7%	6.1%	4.9%
	Coastal Pelagics	—	—	—	—	—	—	—	—	—
	Live Bait	—	—	—	—	—	—	—	—	—
	Lobster	7.1%	12.1%	30.0%	11.7%	20.7%	11.8%	26.5%	25.3%	14.1%
	N. Fishery (Hook & Line)	11.5%	13.0%	27.8%	13.1%	19.2%	13.3%	25.9%	24.7%	15.2%
	N. Fishery (Trap)	6.0%	15.4%	42.0%	14.0%	16.9%	14.5%	34.9%	30.8%	14.2%
	Rock Crab	5.8%	6.8%	23.2%	6.7%	15.7%	6.8%	21.1%	18.3%	10.4%
	Sablefish	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Diving)	11.8%	14.9%	33.4%	13.7%	21.8%	14.0%	32.6%	30.2%	16.8%
	Sea Cucumber (Trawl)	1.0%	1.1%	8.1%	0.9%	6.9%	1.0%	7.6%	6.4%	2.3%
	Spot Prawn	2.5%	2.3%	8.8%	2.3%	8.7%	2.4%	10.7%	8.7%	12.5%
	Squid	—	—	—	—	—	—	—	—	—
	Swordfish	—	—	—	—	—	—	—	—	—
	Thornyhead	—	—	—	—	—	—	—	—	—
Urchin	10.5%	11.6%	32.2%	11.9%	22.1%	13.2%	25.8%	25.7%	14.0%	
Ventura	Ca. Halibut (Hook & Line)	14.6%	15.5%	20.7%	15.0%	18.8%	19.8%	18.6%	17.6%	18.8%
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	—	—	—	—	—	—	—	—	—
	Live Bait	—	—	—	—	—	—	—	—	—
	Lobster	1.2%	9.6%	27.2%	9.0%	18.7%	9.2%	18.8%	19.6%	9.2%
	N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—
	N. Fishery (Trap)	11.7%	15.9%	27.0%	15.2%	15.9%	16.8%	23.9%	25.0%	15.3%
	Rock Crab	2.3%	2.6%	2.5%	2.2%	3.4%	2.3%	2.2%	2.3%	2.2%
	Sablefish	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Diving)	13.4%	18.9%	25.8%	17.1%	23.1%	18.0%	19.3%	19.6%	18.4%
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	0.0%	0.0%	44.8%	0.0%	0.0%	0.0%	9.3%	11.7%	0.0%
	Squid	6.2%	7.9%	20.5%	7.2%	17.3%	7.5%	18.2%	15.6%	9.1%
	Swordfish	—	—	—	—	—	—	—	—	—
	Thornyhead	—	—	—	—	—	—	—	—	—
Urchin	—	—	—	—	—	—	—	—	—	
Port Huene / Oxnard	Ca. Halibut (Hook & Line)	11.0%	11.6%	22.2%	11.3%	21.1%	14.7%	21.9%	20.0%	16.4%
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	6.3%	5.8%	16.9%	7.0%	15.8%	7.0%	15.4%	12.3%	7.6%
	Live Bait	—	—	—	—	—	—	—	—	—
	Lobster	2.8%	6.7%	21.4%	5.3%	15.7%	6.1%	15.1%	14.0%	6.0%
	N. Fishery (Hook & Line)	8.4%	10.3%	30.2%	10.4%	20.0%	10.6%	28.0%	26.7%	17.4%
	N. Fishery (Trap)	7.1%	9.2%	16.4%	6.5%	4.0%	7.1%	13.8%	0.0%	6.5%
	Rock Crab	0.9%	1.9%	6.9%	0.7%	7.4%	0.9%	4.6%	2.8%	0.7%
	Sablefish	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Diving)	12.4%	15.3%	34.5%	14.3%	23.6%	16.1%	31.1%	28.9%	18.2%
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	27.9%	45.9%	25.6%	29.5%	38.1%	40.4%	25.6%	25.6%	38.9%
	Squid	7.5%	8.8%	22.4%	8.5%	18.9%	8.7%	19.7%	17.1%	11.0%
	Swordfish	—	—	—	—	—	—	—	—	—
	Thornyhead	—	—	—	—	—	—	—	—	—
Urchin	7.9%	9.3%	19.4%	9.1%	11.6%	19.3%	14.5%	14.8%	10.0%	

Table A.1 (continued) Percentage Area of Total Commercial Fishing Grounds Affected by Port

Port	Fishery	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
San Pedro / Terminal Island / Redondo	Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	5.8%	5.0%	17.5%	6.3%	14.7%	6.7%	15.4%	13.0%	8.2%
	Live Bait	3.2%	3.1%	15.2%	5.2%	13.1%	22.2%	8.3%	8.5%	5.9%
	Lobster	5.2%	7.1%	20.1%	5.4%	12.8%	8.9%	12.6%	13.2%	5.9%
	N. Fishery (Hook & Line)	10.8%	12.9%	31.8%	12.9%	20.9%	13.2%	29.2%	27.7%	15.7%
	N. Fishery (Trap)	3.7%	13.9%	40.9%	11.2%	13.2%	19.4%	32.3%	31.1%	10.6%
	Rock Crab	1.3%	1.6%	4.3%	1.2%	3.3%	3.2%	3.7%	3.4%	0.8%
	Sablefish	6.9%	19.0%	52.3%	23.9%	60.5%	16.6%	24.1%	18.9%	34.4%
	Sea Cucumber (Diving)	10.6%	13.7%	39.8%	12.7%	24.0%	15.1%	37.9%	34.8%	16.2%
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	0.0%	1.2%	18.9%	0.0%	3.4%	0.0%	43.2%	8.0%	6.6%
	Squid	6.9%	8.2%	20.7%	7.8%	17.3%	8.2%	18.4%	15.6%	9.9%
	Swordfish	—	—	—	—	—	—	—	—	—
	Thornyhead	6.9%	19.0%	52.3%	23.9%	60.5%	16.6%	24.1%	18.9%	34.4%
Urchin	9.0%	10.5%	22.3%	10.2%	13.3%	21.1%	17.0%	17.8%	11.2%	
Dana Point / Newport	Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	—	—	—	—	—	—	—	—	—
	Live Bait	0.2%	2.3%	11.5%	6.4%	16.3%	1.3%	5.7%	9.5%	0.2%
	Lobster	2.6%	9.8%	22.7%	9.0%	12.4%	7.4%	13.3%	19.5%	7.5%
	N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—
	N. Fishery (Trap)	2.4%	7.1%	14.7%	8.5%	18.3%	2.7%	15.4%	14.7%	7.2%
	Rock Crab	2.6%	3.8%	17.5%	7.8%	16.3%	3.0%	18.1%	15.3%	2.6%
	Sablefish	6.9%	19.0%	52.3%	23.9%	60.5%	16.6%	24.1%	18.9%	34.4%
	Sea Cucumber (Diving)	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	4.5%	6.1%	35.2%	8.8%	20.7%	5.2%	68.5%	13.4%	14.9%
	Squid	—	—	—	—	—	—	—	—	—
	Swordfish	1.7%	1.8%	4.4%	1.9%	2.4%	4.0%	4.3%	2.0%	2.3%
	Thornyhead	6.9%	19.0%	52.3%	23.9%	60.5%	16.6%	24.1%	18.9%	34.4%
Urchin	2.8%	4.9%	16.8%	5.9%	9.8%	3.0%	13.5%	16.4%	2.9%	
Oceanside	Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	—	—	—	—	—	—	—	—	—
	Live Bait	11.9%	10.6%	12.5%	11.7%	25.8%	11.5%	14.0%	3.0%	14.2%
	Lobster	6.5%	6.9%	25.7%	6.5%	15.0%	6.4%	21.8%	15.3%	7.4%
	N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—
	N. Fishery (Trap)	4.7%	5.2%	18.0%	4.7%	15.9%	4.7%	18.2%	12.7%	6.6%
	Rock Crab	0.0%	0.0%	22.6%	0.0%	18.5%	0.0%	22.6%	19.8%	0.4%
	Sablefish	6.9%	19.0%	52.3%	23.9%	60.5%	16.6%	24.1%	18.9%	34.4%
	Sea Cucumber (Diving)	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	8.7%	8.7%	29.9%	8.2%	12.6%	8.2%	16.6%	12.5%	9.3%
	Squid	—	—	—	—	—	—	—	—	—
	Swordfish	—	—	—	—	—	—	—	—	—
	Thornyhead	6.9%	19.0%	52.3%	23.9%	60.5%	16.6%	24.1%	18.9%	34.4%
Urchin	25.3%	36.0%	26.0%	25.3%	42.7%	23.3%	48.7%	26.0%	26.0%	

Table A.1 (continued): Percentage Area of Total Commercial Fishing Grounds Affected by Port

Port	Fishery	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
San Diego	Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	—	—	—	—	—	—	—	—	—
	Live Bait	0.0%	0.0%	24.5%	0.0%	30.7%	0.0%	23.0%	2.4%	0.0%
	Lobster	4.2%	6.6%	27.8%	6.3%	15.1%	6.2%	24.0%	19.1%	6.9%
	N. Fishery (Hook & Line)	3.5%	3.5%	18.1%	3.5%	7.4%	3.5%	13.2%	9.5%	3.7%
	N. Fishery (Trap)	3.5%	6.2%	25.2%	5.8%	15.9%	5.8%	23.0%	18.9%	10.0%
	Rock Crab	4.0%	4.1%	28.1%	3.9%	25.1%	3.9%	29.4%	17.8%	6.5%
	Sablefish	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Diving)	5.3%	5.3%	60.7%	5.3%	23.7%	5.3%	47.7%	34.9%	5.3%
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	11.6%	12.1%	41.6%	11.1%	17.9%	11.1%	29.0%	21.5%	13.2%
	Squid	—	—	—	—	—	—	—	—	—
	Swordfish	0.5%	0.7%	2.3%	0.7%	1.2%	1.6%	2.0%	0.8%	1.0%
	Thornyhead	—	—	—	—	—	—	—	—	—
Urchin	3.5%	3.8%	51.0%	3.5%	27.3%	3.3%	43.8%	37.5%	3.5%	

Table A.2: Percentage Value of Total Commercial Fishing Grounds Affected by Port

Port	Fishery	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Santa Barbara	Ca. Halibut (Hook & Line)	8.4%	10.9%	33.5%	11.8%	29.3%	15.1%	32.5%	29.1%	18.0%
	Ca. Halibut (Trawl)	4.0%	6.3%	21.3%	4.2%	18.5%	5.5%	17.1%	14.7%	9.5%
	Coastal Pelagics	—	—	—	—	—	—	—	—	—
	Live Bait	—	—	—	—	—	—	—	—	—
	Lobster	6.7%	8.5%	24.4%	7.8%	15.2%	8.2%	21.3%	20.7%	8.8%
	N. Fishery (Hook & Line)	10.1%	10.1%	18.3%	10.2%	15.8%	10.3%	19.6%	17.8%	13.1%
	N. Fishery (Trap)	6.7%	12.7%	43.1%	12.2%	17.6%	12.6%	38.2%	38.8%	12.6%
	Rock Crab	8.1%	7.9%	25.1%	7.9%	15.8%	8.2%	20.8%	20.2%	9.2%
	Sablefish	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Diving)	10.6%	17.2%	28.5%	16.7%	21.2%	16.9%	24.3%	24.1%	18.4%
	Sea Cucumber (Trawl)	2.6%	2.5%	13.8%	2.4%	10.7%	2.5%	9.7%	10.0%	2.8%
	Spot Prawn	3.8%	3.0%	10.4%	3.4%	10.3%	4.2%	14.4%	10.3%	10.9%
	Squid	—	—	—	—	—	—	—	—	—
	Swordfish	—	—	—	—	—	—	—	—	—
	Thornyhead	—	—	—	—	—	—	—	—	—
Urchin	7.2%	7.6%	13.1%	7.5%	10.1%	7.6%	11.9%	11.8%	8.0%	
Ventura	Ca. Halibut (Hook & Line)	13.1%	15.7%	13.1%	13.8%	12.9%	17.6%	12.3%	11.7%	17.3%
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	—	—	—	—	—	—	—	—	—
	Live Bait	—	—	—	—	—	—	—	—	—
	Lobster	0.5%	19.3%	40.4%	18.8%	21.7%	18.9%	30.5%	31.8%	18.8%
	N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—
	N. Fishery (Trap)	0.0%	16.8%	81.6%	16.7%	16.7%	16.7%	73.2%	75.5%	16.7%
	Rock Crab	3.5%	3.5%	4.2%	3.5%	4.8%	3.5%	3.9%	4.0%	3.5%
	Sablefish	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Diving)	9.4%	19.8%	44.5%	11.3%	41.5%	16.1%	20.2%	19.1%	17.6%
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	0.0%	0.0%	44.8%	0.0%	0.0%	0.0%	9.3%	11.7%	0.0%
	Squid	5.0%	10.3%	20.5%	5.7%	15.0%	4.6%	17.3%	18.6%	6.1%
	Swordfish	—	—	—	—	—	—	—	—	—
	Thornyhead	—	—	—	—	—	—	—	—	—
Urchin	—	—	—	—	—	—	—	—	—	
Port Hueneume / Oxnard	Ca. Halibut (Hook & Line)	11.9%	14.7%	11.9%	12.6%	12.3%	15.6%	12.1%	11.1%	16.2%
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	3.4%	3.1%	13.9%	4.2%	13.0%	4.3%	10.0%	9.1%	4.5%
	Live Bait	—	—	—	—	—	—	—	—	—
	Lobster	4.4%	7.1%	18.5%	6.0%	15.3%	6.6%	14.6%	12.1%	6.5%
	N. Fishery (Hook & Line)	0.2%	0.5%	34.4%	0.5%	24.0%	0.5%	35.7%	28.8%	20.2%
	N. Fishery (Trap)	1.5%	1.9%	3.4%	1.3%	0.8%	1.5%	2.8%	0.0%	1.3%
	Rock Crab	0.0%	0.3%	7.4%	0.0%	11.3%	0.0%	4.1%	5.1%	0.0%
	Sablefish	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Diving)	16.0%	21.5%	32.7%	22.2%	25.5%	23.8%	25.3%	24.9%	23.3%
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	26.9%	33.3%	26.1%	27.5%	30.5%	31.4%	26.1%	26.1%	30.8%
	Squid	6.3%	11.7%	24.1%	7.4%	17.0%	6.3%	19.8%	20.8%	8.0%
	Swordfish	—	—	—	—	—	—	—	—	—
	Thornyhead	—	—	—	—	—	—	—	—	—
Urchin	4.9%	8.5%	25.1%	8.6%	10.9%	10.5%	16.4%	16.2%	9.4%	

Table A.2 (continued): Percentage Value of Total Commercial Fishing Grounds Affected by Port

Port	Fishery	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
San Pedro / Terminal Island / Redondo	Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	2.6%	3.5%	16.1%	3.6%	12.7%	4.3%	13.6%	12.9%	4.0%
	Live Bait	1.4%	2.7%	8.8%	3.4%	6.8%	21.1%	5.1%	4.8%	3.1%
	Lobster	5.3%	7.2%	18.0%	5.4%	11.1%	8.6%	13.2%	12.5%	5.9%
	N. Fishery (Hook & Line)	8.9%	13.5%	35.7%	13.5%	21.5%	13.8%	31.8%	30.6%	16.3%
	N. Fishery (Trap)	2.1%	14.0%	45.6%	10.2%	13.9%	10.8%	34.3%	42.7%	9.4%
	Rock Crab	0.1%	0.1%	0.1%	0.1%	0.1%	5.7%	0.1%	0.1%	0.0%
	Sablefish	11.7%	22.3%	70.7%	31.9%	72.4%	18.4%	16.6%	10.7%	28.5%
	Sea Cucumber (Diving)	10.0%	12.8%	51.1%	12.2%	20.8%	22.9%	36.6%	39.8%	12.6%
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	0.0%	2.6%	16.0%	0.0%	2.2%	0.0%	27.5%	6.3%	1.2%
	Squid	4.6%	8.9%	18.5%	6.3%	15.4%	5.2%	15.9%	16.0%	6.5%
	Swordfish	—	—	—	—	—	—	—	—	—
	Thornyhead	8.6%	18.3%	61.5%	25.1%	71.2%	15.3%	26.4%	18.9%	26.5%
Urchin	9.8%	12.7%	35.0%	12.5%	14.9%	16.2%	20.7%	29.7%	11.8%	
Dana Point / Newport	Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	—	—	—	—	—	—	—	—	—
	Live Bait	0.2%	2.5%	15.7%	8.5%	19.7%	1.4%	7.3%	12.5%	0.3%
	Lobster	3.8%	12.3%	28.7%	7.5%	17.2%	5.3%	15.6%	27.2%	5.8%
	N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—
	N. Fishery (Trap)	2.4%	14.3%	31.8%	9.8%	37.0%	2.6%	32.5%	31.7%	15.3%
	Rock Crab	1.7%	2.7%	13.0%	6.2%	13.0%	2.0%	13.6%	11.9%	1.8%
	Sablefish	11.7%	22.3%	70.7%	31.9%	72.4%	18.4%	16.6%	10.7%	28.5%
	Sea Cucumber (Diving)	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	0.5%	0.7%	19.3%	1.1%	4.3%	0.6%	60.8%	8.9%	11.8%
	Squid	—	—	—	—	—	—	—	—	—
	Swordfish	7.3%	7.3%	35.2%	7.0%	12.1%	54.3%	59.6%	18.5%	20.3%
	Thornyhead	7.7%	17.1%	58.7%	23.0%	70.8%	14.4%	29.4%	21.5%	25.9%
Urchin	1.6%	21.9%	40.0%	16.3%	34.3%	2.4%	42.1%	44.0%	1.2%	
Oceanside	Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	—	—	—	—	—	—	—	—	—
	Live Bait	1.2%	1.1%	1.3%	1.2%	8.4%	1.2%	4.3%	0.3%	1.5%
	Lobster	5.7%	7.0%	22.0%	5.7%	29.0%	5.6%	30.2%	15.0%	7.2%
	N. Fishery (Hook & Line)	—	—	—	—	—	—	—	—	—
	N. Fishery (Trap)	0.5%	0.6%	3.8%	0.5%	7.8%	0.5%	7.7%	3.2%	0.7%
	Rock Crab	0.0%	0.0%	0.4%	0.0%	0.5%	0.0%	0.5%	0.4%	0.0%
	Sablefish	11.7%	22.3%	70.7%	31.9%	72.4%	18.4%	16.6%	10.7%	28.5%
	Sea Cucumber (Diving)	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	13.2%	13.2%	37.3%	12.5%	13.3%	12.5%	20.8%	17.1%	12.7%
	Squid	—	—	—	—	—	—	—	—	—
	Swordfish	—	—	—	—	—	—	—	—	—
	Thornyhead	7.9%	17.4%	59.4%	23.6%	70.9%	14.6%	28.6%	20.8%	26.0%
Urchin	38.6%	39.6%	15.8%	38.6%	21.7%	34.3%	34.5%	15.8%	38.7%	

Table A.2 (continued): Percentage Value of Total Commercial Fishing Grounds Affected by Port

Port	Fishery	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
San Diego	Ca. Halibut (Hook & Line)	—	—	—	—	—	—	—	—	—
	Ca. Halibut (Trawl)	—	—	—	—	—	—	—	—	—
	Coastal Pelagics	—	—	—	—	—	—	—	—	—
	Live Bait	0.0%	0.0%	25.8%	0.0%	32.4%	0.0%	24.3%	2.6%	0.0%
	Lobster	4.2%	5.0%	39.7%	4.3%	25.7%	4.2%	39.5%	24.5%	5.2%
	N. Fishery (Hook & Line)	3.2%	3.2%	34.0%	3.2%	19.5%	3.2%	29.9%	14.3%	4.6%
	N. Fishery (Trap)	6.0%	7.1%	37.6%	6.5%	26.7%	6.4%	35.1%	25.9%	12.0%
	Rock Crab	1.2%	1.2%	24.4%	1.1%	13.4%	1.1%	21.9%	15.8%	1.9%
	Sablefish	—	—	—	—	—	—	—	—	—
	Sea Cucumber (Diving)	1.8%	1.8%	75.5%	1.8%	23.8%	1.8%	42.3%	31.4%	1.8%
	Sea Cucumber (Trawl)	—	—	—	—	—	—	—	—	—
	Spot Prawn	11.6%	11.8%	39.2%	11.3%	23.3%	11.3%	28.6%	21.3%	15.2%
	Squid	—	—	—	—	—	—	—	—	—
	Swordfish	0.5%	0.7%	2.3%	0.7%	1.2%	1.6%	2.0%	0.8%	1.0%
	Thornyhead	—	—	—	—	—	—	—	—	—
Urchin	0.9%	0.9%	57.3%	0.9%	21.0%	0.9%	31.9%	29.2%	0.8%	

Table A.3: Percentage Area of Total CPFV Fishing Grounds Affected by Port

Port	Fishery	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Santa Barbara	Barracuda	8.4%	8.3%	16.7%	8.2%	15.2%	8.1%	16.3%	12.3%	8.5%
	Ca. Halibut	10.2%	10.0%	25.2%	9.8%	23.4%	10.0%	23.3%	18.7%	11.4%
	Calico Bass	10.4%	10.0%	24.7%	10.1%	22.7%	10.3%	23.7%	18.7%	12.3%
	Lingcod	8.3%	8.3%	18.7%	8.1%	16.7%	8.2%	17.0%	14.1%	10.9%
	Rockfish	8.3%	8.4%	18.7%	8.2%	16.9%	8.2%	16.7%	14.1%	10.7%
	Ca. Scorpionfish	8.6%	8.6%	20.7%	8.6%	18.9%	8.5%	20.1%	14.9%	9.0%
	Ca. Sheephead	8.4%	7.2%	22.1%	8.2%	20.3%	8.3%	20.8%	16.6%	12.0%
	Sand Bass	2.4%	1.9%	31.4%	2.1%	31.6%	2.7%	22.6%	15.9%	2.6%
	Whitefish	10.5%	9.6%	20.7%	10.4%	18.4%	10.5%	20.0%	15.7%	10.6%
	White Seabass	9.6%	8.6%	22.6%	9.4%	18.6%	9.5%	21.5%	17.0%	11.7%
Port Hueneke / Channel Islands Harbor	Barracuda	7.3%	9.4%	15.9%	9.4%	14.0%	9.8%	15.8%	13.6%	9.6%
	Ca. Halibut	17.2%	20.9%	18.1%	19.8%	22.4%	20.3%	19.6%	16.6%	20.1%
	Calico Bass	6.3%	7.1%	16.7%	7.2%	14.5%	8.0%	16.1%	12.1%	7.8%
	Lingcod	11.1%	12.3%	18.0%	11.7%	14.3%	12.0%	15.9%	14.1%	12.0%
	Rockfish	12.2%	13.0%	17.8%	12.5%	14.3%	12.7%	16.0%	14.0%	12.7%
	Ca. Scorpionfish	8.4%	9.7%	14.1%	9.8%	10.7%	10.3%	14.6%	12.5%	9.8%
	Ca. Sheephead	6.9%	8.3%	12.7%	8.4%	12.4%	8.9%	12.6%	10.4%	8.4%
	Sand Bass	2.3%	2.2%	2.4%	2.6%	8.9%	3.8%	4.8%	2.5%	2.5%
	Whitefish	12.7%	15.0%	18.7%	15.3%	16.6%	15.7%	18.7%	16.0%	15.2%
	White Seabass	13.2%	13.2%	18.5%	13.6%	14.7%	14.1%	22.7%	18.3%	13.4%
Santa Monica	Barracuda	5.5%	2.1%	21.8%	5.5%	14.9%	5.6%	7.0%	13.4%	7.2%
	Ca. Halibut	4.2%	2.0%	18.8%	4.2%	13.8%	4.1%	8.3%	12.5%	7.4%
	Calico Bass	4.3%	2.9%	17.3%	4.3%	11.2%	4.4%	9.0%	12.7%	4.4%
	Lingcod	7.6%	5.4%	31.1%	7.6%	17.0%	7.0%	13.6%	19.0%	10.4%
	Rockfish	9.3%	7.3%	36.5%	9.2%	19.1%	8.2%	16.7%	22.2%	12.4%
	Ca. Scorpionfish	3.9%	1.6%	13.1%	3.9%	11.2%	3.4%	4.4%	8.3%	5.0%
	Ca. Sheephead	6.6%	4.7%	21.5%	6.8%	12.9%	7.2%	12.7%	14.4%	8.2%
	Sand Bass	3.4%	0.6%	11.2%	3.4%	9.6%	3.3%	3.7%	6.3%	5.2%
	Whitefish	3.1%	4.4%	22.7%	6.2%	12.5%	6.1%	11.3%	16.5%	7.9%
	White Seabass	6.0%	3.6%	17.7%	6.1%	12.6%	6.8%	10.0%	11.5%	8.0%
San Pedro / Long Beach	Barracuda	3.1%	3.6%	16.0%	3.1%	9.4%	3.3%	9.1%	11.4%	1.6%
	Ca. Halibut	2.7%	3.5%	10.6%	2.6%	5.6%	2.8%	7.2%	7.7%	2.2%
	Calico Bass	4.5%	4.5%	16.3%	4.4%	8.4%	4.7%	10.8%	13.1%	3.1%
	Lingcod	2.8%	7.2%	27.8%	6.2%	16.3%	6.1%	22.5%	19.4%	8.7%
	Rockfish	2.7%	7.2%	25.0%	6.2%	14.8%	6.0%	17.8%	15.2%	6.3%
	Ca. Scorpionfish	2.8%	4.1%	15.0%	4.1%	7.1%	3.9%	8.9%	11.8%	3.2%
	Ca. Sheephead	4.3%	4.6%	19.4%	6.0%	11.9%	5.3%	12.7%	15.0%	5.5%
	Sand Bass	1.6%	1.7%	4.1%	1.5%	4.3%	1.7%	3.1%	2.6%	0.2%
	Whitefish	5.0%	4.5%	14.1%	5.9%	11.9%	5.2%	9.8%	10.9%	5.5%
	White Seabass	4.3%	5.1%	19.0%	4.3%	9.2%	4.5%	12.2%	15.7%	2.5%

Table A.3 (continued): Percentage Area of Total CPFV Fishing Grounds Affected by Port

Port	Fishery	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Newport Beach	Barracuda	2.8%	2.2%	12.1%	4.7%	9.6%	2.7%	5.2%	11.2%	0.8%
	Ca. Halibut	1.0%	2.0%	7.6%	3.1%	7.6%	1.1%	8.8%	7.6%	1.4%
	Calico Bass	2.0%	1.9%	11.7%	4.0%	7.9%	2.2%	5.6%	10.4%	1.3%
	Lingcod	5.2%	7.7%	26.3%	7.7%	15.3%	4.8%	17.3%	21.6%	6.2%
	Rockfish	4.6%	7.6%	22.3%	6.9%	14.4%	4.0%	14.2%	18.9%	5.4%
	Ca. Scorpionfish	2.0%	1.3%	9.8%	5.6%	10.8%	2.2%	1.3%	8.9%	0.7%
	Ca. Sheephead	1.9%	2.0%	18.0%	4.4%	10.5%	1.5%	7.1%	16.1%	1.5%
	Sand Bass	1.0%	0.9%	5.7%	3.2%	6.6%	1.2%	2.0%	5.4%	0.1%
	Whitefish	2.0%	2.8%	13.5%	3.7%	7.4%	2.2%	7.5%	12.2%	1.9%
	White Seabass	2.7%	2.6%	17.3%	4.5%	13.0%	2.7%	11.9%	13.4%	2.6%
Dana Point	Barracuda	3.1%	2.1%	11.9%	6.8%	12.7%	3.3%	4.2%	10.7%	1.5%
	Ca. Halibut	1.9%	3.5%	13.1%	6.1%	13.5%	2.2%	13.3%	13.0%	2.6%
	Calico Bass	4.5%	4.8%	25.3%	8.3%	13.5%	4.8%	12.2%	22.1%	3.6%
	Lingcod	7.8%	9.2%	25.0%	12.8%	18.0%	8.2%	22.6%	18.1%	8.2%
	Rockfish	12.2%	14.1%	42.4%	18.4%	23.0%	12.6%	32.1%	28.3%	12.2%
	Ca. Scorpionfish	7.0%	6.4%	35.8%	9.5%	14.0%	6.5%	17.5%	26.1%	5.7%
	Ca. Sheephead	3.7%	2.0%	15.2%	9.7%	13.1%	4.2%	3.2%	14.2%	0.7%
	Sand Bass	1.9%	1.6%	10.1%	6.0%	11.3%	2.2%	2.2%	9.7%	0.3%
	Whitefish	13.4%	14.4%	53.9%	22.3%	24.1%	13.8%	28.5%	33.4%	10.7%
	White Seabass	1.0%	3.2%	18.8%	4.2%	8.6%	1.4%	10.9%	15.0%	0.9%
Oceanside	Barracuda	3.2%	1.8%	17.5%	3.2%	15.2%	3.1%	21.0%	11.3%	4.4%
	Ca. Halibut	5.8%	5.6%	9.8%	5.7%	18.2%	5.6%	15.1%	6.4%	7.7%
	Calico Bass	3.6%	2.6%	16.4%	3.6%	14.7%	3.5%	19.6%	11.9%	4.9%
	Lingcod	5.9%	5.7%	12.3%	5.8%	23.7%	5.7%	19.3%	7.0%	8.1%
	Rockfish	7.0%	6.7%	10.7%	6.8%	24.5%	6.7%	19.7%	8.4%	9.5%
	Ca. Scorpionfish	2.7%	1.5%	16.8%	2.7%	14.0%	2.6%	19.2%	10.5%	3.8%
	Ca. Sheephead	4.3%	2.4%	16.7%	4.2%	16.1%	4.2%	21.2%	12.3%	5.9%
	Sand Bass	5.9%	4.4%	8.1%	6.2%	12.4%	5.8%	13.3%	7.3%	7.6%
	Whitefish	7.6%	5.9%	16.2%	7.6%	14.1%	7.5%	18.5%	13.4%	9.7%
	White Seabass	2.9%	2.5%	22.0%	2.8%	15.7%	2.6%	21.7%	15.5%	3.9%
San Diego	Barracuda	5.4%	4.9%	17.1%	5.4%	11.8%	5.4%	15.7%	11.9%	6.0%
	Ca. Halibut	5.1%	5.0%	19.4%	5.1%	15.9%	5.0%	18.8%	14.5%	9.3%
	Calico Bass	4.1%	3.5%	21.8%	4.0%	14.3%	4.0%	20.9%	16.5%	4.9%
	Lingcod	11.1%	11.0%	20.4%	11.0%	15.1%	11.0%	18.0%	15.7%	12.7%
	Rockfish	11.6%	11.6%	18.8%	11.6%	14.0%	11.6%	16.5%	14.4%	11.9%
	Ca. Scorpionfish	4.5%	4.0%	18.7%	4.5%	11.6%	4.5%	16.7%	12.1%	5.0%
	Ca. Sheephead	4.4%	4.3%	18.5%	4.4%	11.1%	4.2%	15.3%	12.7%	4.9%
	Sand Bass	4.7%	3.9%	22.9%	4.6%	15.7%	4.6%	21.9%	16.6%	5.6%
	Whitefish	7.6%	7.6%	25.9%	7.6%	18.3%	7.6%	23.1%	20.0%	8.7%
	White Seabass	6.7%	6.6%	30.6%	6.6%	18.8%	6.5%	26.0%	22.4%	7.5%

Table A.4: Percentage Value of Total CPFV Fishing Grounds Affected by Port

Port	Fishery	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Santa Barbara	Barracuda	2.7%	2.7%	14.4%	2.7%	14.3%	2.7%	10.9%	9.1%	2.9%
	Ca. Halibut	6.9%	7.0%	29.2%	6.8%	20.2%	7.1%	28.5%	17.9%	10.1%
	Calico Bass	3.0%	2.5%	28.8%	2.7%	18.6%	3.3%	27.4%	12.7%	5.6%
	Lingcod	6.5%	6.6%	22.3%	6.4%	16.8%	6.5%	20.8%	14.9%	10.2%
	Rockfish	5.1%	5.1%	18.7%	5.0%	13.9%	5.0%	16.8%	12.3%	8.0%
	Ca. Scorpionfish	3.7%	3.8%	18.7%	3.7%	10.0%	3.7%	16.8%	10.5%	3.9%
	Ca. Sheephead	6.7%	5.8%	23.2%	6.6%	17.5%	6.6%	22.1%	15.7%	9.7%
	Sand Bass	2.4%	1.7%	26.4%	2.1%	16.7%	2.9%	20.8%	7.7%	2.4%
	Whitefish	9.2%	8.5%	22.0%	9.1%	17.0%	9.1%	22.0%	15.9%	9.3%
	White Seabass	5.3%	4.4%	22.4%	5.1%	15.3%	5.4%	21.7%	12.9%	7.1%
Port Hueneme / Channel Islands Harbor	Barracuda	7.7%	8.5%	11.2%	8.5%	14.4%	9.3%	17.6%	9.2%	8.7%
	Ca. Halibut	16.3%	18.3%	14.0%	16.5%	22.2%	17.3%	27.0%	14.4%	16.9%
	Calico Bass	8.7%	9.2%	9.1%	9.3%	16.8%	10.4%	22.3%	8.0%	9.3%
	Lingcod	12.7%	13.6%	15.5%	12.9%	13.9%	13.1%	15.9%	11.6%	13.0%
	Rockfish	13.8%	14.4%	15.9%	13.9%	14.1%	14.0%	16.0%	12.8%	13.9%
	Ca. Scorpionfish	9.1%	10.0%	8.4%	9.9%	12.8%	10.7%	18.4%	8.1%	9.7%
	Ca. Sheephead	10.6%	11.5%	10.0%	11.6%	15.0%	12.2%	19.3%	9.7%	11.4%
	Sand Bass	1.4%	1.6%	0.8%	1.4%	3.6%	1.7%	4.8%	0.9%	1.4%
	Whitefish	9.5%	10.3%	8.4%	10.2%	14.4%	10.9%	20.4%	8.2%	10.1%
	White Seabass	11.2%	11.6%	8.7%	11.5%	14.9%	12.2%	19.8%	9.1%	11.4%
Santa Monica	Barracuda	5.0%	0.6%	25.7%	5.0%	20.1%	4.9%	10.5%	14.4%	8.1%
	Ca. Halibut	5.3%	0.3%	22.7%	5.3%	18.8%	5.2%	5.4%	11.5%	9.4%
	Calico Bass	4.2%	0.7%	31.4%	4.1%	26.4%	4.1%	13.9%	19.0%	6.5%
	Lingcod	1.9%	0.4%	20.2%	1.9%	15.7%	1.8%	9.9%	11.2%	3.4%
	Rockfish	3.3%	0.5%	19.4%	3.3%	15.2%	3.1%	8.6%	11.2%	5.8%
	Ca. Scorpionfish	0.4%	0.2%	10.0%	0.4%	7.4%	0.3%	5.3%	5.6%	1.0%
	Ca. Sheephead	2.5%	1.0%	27.3%	2.5%	21.1%	2.4%	12.5%	16.1%	3.7%
	Sand Bass	1.5%	0.0%	14.9%	1.5%	11.4%	1.4%	5.8%	7.3%	2.6%
	Whitefish	2.2%	1.7%	26.2%	2.6%	19.1%	2.6%	11.6%	15.3%	3.5%
	White Seabass	5.1%	0.7%	30.5%	5.0%	25.3%	4.9%	11.8%	18.0%	8.6%
San Pedro / Long Beach	Barracuda	1.7%	1.9%	4.2%	1.6%	2.7%	1.8%	3.5%	3.5%	0.4%
	Ca. Halibut	1.1%	2.2%	4.4%	1.1%	2.7%	1.2%	5.1%	4.5%	0.9%
	Calico Bass	3.0%	3.1%	12.2%	3.0%	4.8%	3.2%	8.2%	10.7%	1.9%
	Lingcod	4.3%	7.0%	15.2%	5.4%	8.1%	5.2%	10.0%	12.5%	5.3%
	Rockfish	4.0%	5.1%	14.0%	4.4%	6.9%	4.3%	9.6%	10.1%	4.1%
	Ca. Scorpionfish	3.1%	3.1%	8.2%	3.3%	4.1%	3.3%	6.0%	6.6%	1.6%
	Ca. Sheephead	2.9%	3.7%	13.9%	3.1%	4.8%	3.0%	7.7%	11.7%	2.0%
	Sand Bass	0.6%	0.7%	0.7%	0.6%	1.0%	0.7%	1.8%	0.7%	0.1%
	Whitefish	2.0%	2.6%	7.9%	2.0%	2.7%	2.1%	5.6%	6.9%	1.1%
	White Seabass	3.9%	7.4%	20.1%	3.8%	8.9%	4.3%	15.2%	20.0%	1.7%

Table A.4 (continued): Percentage Value of Total CPFV Fishing Grounds Affected by Port

Port	Fishery	Ext. A	Ext. B	Ext. C	Lapis A	Lapis B	Opal A	Opal B	Topaz A	Topaz B
Newport Beach	Barracuda	1.5%	0.8%	8.9%	3.9%	9.8%	1.7%	2.6%	7.9%	0.4%
	Ca. Halibut	1.6%	2.3%	9.7%	5.1%	11.5%	1.8%	10.8%	9.0%	2.4%
	Calico Bass	4.0%	4.3%	23.3%	8.5%	16.7%	4.2%	9.6%	20.5%	2.4%
	Lingcod	13.0%	14.8%	39.5%	18.3%	26.4%	13.1%	34.3%	33.3%	13.7%
	Rockfish	4.1%	5.9%	15.7%	7.6%	13.8%	4.2%	18.6%	14.6%	4.4%
	Ca. Scorpionfish	0.6%	0.5%	3.0%	1.7%	3.7%	0.7%	0.4%	2.7%	0.2%
	Ca. Sheephead	3.3%	4.7%	23.3%	9.6%	20.1%	3.4%	6.5%	21.3%	2.3%
	Sand Bass	1.3%	1.4%	7.5%	4.1%	8.9%	1.5%	2.7%	7.0%	0.2%
	Whitefish	1.8%	3.0%	14.9%	2.6%	5.9%	1.9%	9.0%	14.2%	1.7%
White Seabass	3.2%	5.1%	27.1%	8.8%	20.5%	3.4%	12.2%	23.8%	2.7%	
Dana Point	Barracuda	2.2%	1.3%	10.0%	6.8%	8.4%	2.6%	3.9%	9.3%	0.7%
	Ca. Halibut	1.8%	2.9%	12.0%	6.8%	13.2%	2.2%	12.6%	12.0%	2.3%
	Calico Bass	2.0%	2.4%	12.1%	5.0%	8.7%	2.3%	6.0%	11.5%	1.3%
	Lingcod	6.1%	7.9%	24.9%	14.2%	21.0%	6.8%	23.8%	18.5%	6.0%
	Rockfish	5.9%	8.1%	22.8%	13.9%	18.6%	6.7%	20.8%	17.3%	5.7%
	Ca. Scorpionfish	4.1%	3.1%	18.9%	9.3%	11.9%	4.5%	7.6%	15.8%	2.2%
	Ca. Sheephead	2.8%	3.0%	17.0%	10.1%	14.9%	3.7%	6.4%	17.0%	0.7%
	Sand Bass	0.7%	0.8%	5.7%	3.0%	5.4%	0.9%	2.7%	5.7%	0.1%
	Whitefish	9.2%	10.3%	46.4%	15.1%	19.2%	9.7%	23.3%	28.4%	4.4%
White Seabass	1.0%	3.1%	14.2%	4.6%	9.9%	1.4%	9.3%	13.5%	0.8%	
Oceanside	Barracuda	5.5%	3.0%	10.7%	5.4%	14.6%	5.2%	18.5%	8.8%	6.8%
	Ca. Halibut	5.4%	5.2%	7.9%	5.4%	18.5%	5.2%	14.6%	6.7%	6.6%
	Calico Bass	4.7%	3.7%	8.5%	4.6%	11.7%	4.5%	14.6%	7.3%	5.7%
	Lingcod	7.8%	7.5%	14.1%	7.6%	30.2%	7.5%	24.2%	9.8%	10.1%
	Rockfish	5.4%	5.2%	9.8%	5.2%	23.2%	5.2%	19.3%	9.0%	6.3%
	Ca. Scorpionfish	5.1%	2.4%	8.1%	4.9%	12.6%	4.8%	16.0%	7.6%	6.0%
	Ca. Sheephead	6.8%	4.2%	15.0%	6.7%	18.6%	6.5%	23.0%	12.3%	9.0%
	Sand Bass	4.8%	3.6%	7.9%	4.9%	12.3%	4.6%	15.0%	7.5%	5.6%
	Whitefish	13.0%	8.9%	18.8%	12.8%	22.2%	12.5%	23.8%	13.9%	16.4%
White Seabass	4.9%	3.4%	9.8%	4.8%	12.6%	4.7%	16.2%	8.4%	6.1%	
San Diego	Barracuda	1.9%	1.7%	28.7%	1.9%	18.5%	1.9%	27.2%	17.2%	2.3%
	Ca. Halibut	2.4%	2.4%	29.5%	2.4%	20.9%	2.4%	28.4%	21.1%	15.0%
	Calico Bass	2.7%	2.6%	38.5%	2.6%	23.5%	2.7%	35.9%	23.8%	3.3%
	Lingcod	4.1%	4.1%	27.4%	4.1%	16.5%	4.1%	24.3%	16.0%	7.2%
	Rockfish	4.3%	4.3%	22.8%	4.3%	13.3%	4.3%	19.5%	11.4%	4.9%
	Ca. Scorpionfish	1.7%	1.6%	27.5%	1.7%	18.1%	1.7%	25.9%	17.2%	2.0%
	Ca. Sheephead	1.7%	1.6%	30.1%	1.7%	18.2%	1.7%	27.5%	17.2%	2.2%
	Sand Bass	1.2%	1.1%	26.9%	1.2%	18.1%	1.2%	25.9%	19.1%	1.6%
	Whitefish	4.0%	3.9%	36.2%	4.0%	22.8%	4.0%	31.8%	22.5%	4.7%
White Seabass	3.0%	3.1%	36.9%	3.0%	22.4%	3.0%	33.2%	24.1%	3.7%	

Table A.5: Percentage Area of Total Recreational Fishing Grounds Affected by County for External Proposal A

		External Proposal A																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			2.3%	3.2%	5.5%	5.0%		4.7%		6.6%						7.7%	3.7%
	Kayak			8.5%	4.6%		0.0%						0.0%			3.9%		
	Private Vessel	0.0%		3.4%	3.0%		0.6%		11.4%				0.0%			0.3%	2.2%	7.7%
Ventura	Dive	0.0%		19.6%	17.3%		13.7%		17.1%		16.0%	9.1%	16.5%				12.7%	14.0%
	Kayak	14.8%		13.3%	14.9%		15.0%	19.4%	21.8%	0.0%		17.3%	14.7%	19.6%		13.6%	18.4%	0.0%
	Private Vessel	13.5%	12.6%	9.7%	3.4%	0.0%	9.0%	1.0%	1.6%							0.0%	7.8%	5.3%
Los Angeles	Dive	21.0%	29.8%	8.9%	8.5%	15.4%	7.6%		0.0%		15.1%	11.0%	19.6%				15.2%	12.2%
	Kayak	8.0%	2.4%	4.7%	5.4%		4.3%	4.4%	14.4%	0.0%		12.4%	5.7%	0.0%		4.4%	9.2%	8.2%
	Private Vessel	6.7%	6.2%	6.0%	6.4%	0.0%	5.8%	4.6%	9.7%			7.0%	4.8%		7.5%	13.5%	7.2%	9.5%
Orange	Dive		0.3%	2.1%	5.9%	8.3%	4.0%		3.6%		4.7%	5.4%	4.6%				6.3%	4.5%
	Kayak	1.8%	2.4%	2.6%	1.7%		3.4%	0.0%	8.1%			2.7%	1.6%	9.7%		2.3%	4.6%	8.8%
	Private Vessel	7.2%	5.9%	3.4%	2.9%	1.6%	2.5%	1.0%	8.6%			15.6%	2.2%		0.0%	7.4%	5.6%	9.1%
San Diego	Dive	1.5%	1.7%	6.4%	1.3%	0.8%	3.3%		0.0%		1.8%	3.0%	0.1%				4.7%	6.5%
	Kayak	2.2%	9.1%	5.6%	5.2%		6.8%	3.6%	6.0%	0.6%		8.8%	5.0%	14.4%		14.5%	5.5%	5.6%
	Private Vessel	9.5%	4.0%	3.6%	4.3%	4.8%	2.5%	4.5%	6.0%			3.5%	3.0%		9.6%	5.4%	5.5%	7.0%

Table A.6: Percentage Area of Total Recreational Fishing Grounds Affected by County for External Proposal B

		External Proposal B																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			2.3%	3.3%	6.2%	5.1%		4.6%		7.0%						7.9%	3.7%
	Kayak			5.2%	4.2%		0.0%						0.0%			0.0%		
	Private Vessel	0.0%		3.6%	3.1%		4.0%		11.3%				0.0%			0.2%	2.1%	8.7%
Ventura	Dive	0.0%		16.9%	14.7%		13.8%		17.5%		17.5%	4.6%	7.1%				13.7%	14.4%
	Kayak	5.8%		7.4%	9.3%		8.9%	7.6%	12.7%	0.0%		8.1%	13.9%	10.7%		0.0%	9.5%	4.9%
	Private Vessel	13.5%	12.6%	8.6%	4.4%	0.0%	11.3%	0.0%	1.6%							0.0%	8.8%	5.4%
Los Angeles	Dive	21.1%	30.8%	13.0%	6.5%	18.3%	6.0%		0.0%		16.3%	17.1%	23.4%				12.5%	14.7%
	Kayak	0.0%	2.4%	3.7%	4.3%		5.1%	3.5%	14.1%	0.0%		13.5%	2.4%	0.0%		0.4%	11.3%	6.9%
	Private Vessel	1.8%	1.5%	4.8%	4.3%	0.0%	4.6%	1.9%	9.3%			10.4%	2.4%		5.3%	1.9%	6.0%	6.8%
Orange	Dive		0.3%	6.2%	6.6%	11.6%	5.3%		4.9%		5.1%	17.3%	6.3%				7.6%	5.5%
	Kayak	1.7%	1.4%	3.3%	1.8%		4.0%	0.0%	12.0%			3.8%	1.6%	10.4%		4.1%	3.7%	6.0%
	Private Vessel	1.8%	3.9%	4.6%	3.0%	8.0%	4.0%	1.1%	12.1%			13.9%	2.9%		0.0%	0.5%	5.6%	6.2%
San Diego	Dive	1.2%	1.3%	5.9%	1.0%	0.4%	3.4%		0.0%		2.4%	2.2%	0.0%				5.6%	6.2%
	Kayak	1.8%	5.8%	5.3%	4.7%		7.2%	3.4%	6.0%	0.8%		7.9%	4.7%	15.4%		11.2%	3.9%	4.0%
	Private Vessel	6.9%	1.5%	3.5%	3.7%	5.6%	3.7%	3.6%	8.3%			2.7%	2.4%		9.2%	0.7%	5.1%	9.5%

Table A.7: Percentage Area of Total Recreational Fishing Grounds Affected by County for External Proposal C

		External Proposal C																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			27.1%	35.0%	37.5%	24.2%		31.6%		27.0%						20.6%	3.7%
	Kayak			23.7%	45.4%		0.0%						100.0%			23.4%		
	Private Vessel	15.7%		24.8%	25.8%		18.1%		19.8%				100.0%			13.7%	21.6%	46.7%
Ventura	Dive			25.9%	21.7%	22.7%	28.8%		23.3%		22.6%	27.3%	25.4%				27.2%	20.2%
	Kayak			33.6%	19.7%	32.3%	44.9%	26.6%	28.4%	75.0%		29.0%	38.1%	43.4%		45.9%	23.0%	48.7%
	Private Vessel	23.7%	12.6%	14.5%	37.1%	0.0%	39.3%	0.0%	9.2%							30.4%	22.9%	37.7%
Los Angeles	Dive			46.8%	60.0%	43.1%	28.9%	75.2%	27.8%		87.3%	54.5%	54.9%	62.1%			34.1%	46.9%
	Kayak			30.7%	51.6%	14.3%	17.3%		20.3%	47.0%	39.6%	70.0%	48.5%	18.8%	78.1%	28.1%	27.5%	40.3%
	Private Vessel	28.1%	30.1%	17.2%	16.8%	22.9%	25.7%	13.9%	35.8%			37.1%	16.9%		12.8%	43.5%	27.9%	41.9%
Orange	Dive			43.0%	21.3%	32.7%	57.0%	17.8%		18.6%		15.6%	51.3%	32.3%			29.9%	20.4%
	Kayak			11.9%	26.2%	13.1%	15.7%		12.3%	27.8%	37.1%		16.5%	11.9%	39.3%	19.2%	27.8%	36.9%
	Private Vessel	28.8%	25.4%	14.4%	13.8%	45.9%	14.1%	7.0%	41.4%			34.1%	9.4%		0.0%	37.1%	23.2%	40.0%
San Diego	Dive			39.8%	43.3%	25.8%	47.6%	33.5%	17.7%		51.0%	42.1%	53.3%	34.6%			41.0%	36.2%
	Kayak			70.7%	51.8%	21.1%	38.3%		26.2%	46.3%	68.6%	43.3%	49.2%	24.2%	79.8%	43.4%	34.2%	24.6%
	Private Vessel	33.0%	25.0%	21.0%	23.8%	24.3%	27.0%	23.3%	40.1%			34.1%	17.7%		18.7%	28.9%	31.4%	43.2%

Table A.8: Percentage Area of Total Recreational Fishing Grounds Affected by County for Lapis Proposal A

		Lapis Proposal A																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			2.1%	2.9%	4.9%	4.9%		4.5%		6.2%						7.6%	3.7%
	Kayak			8.8%	4.5%		0.0%						0.0%			3.9%		
	Private Vessel	0.0%		3.3%	2.7%		0.6%		11.4%				0.0%			0.2%	2.1%	7.7%
Ventura	Dive	0.0%		19.4%	17.2%		13.9%		18.8%		15.9%	9.1%	18.0%				14.9%	13.8%
	Kayak	15.6%		14.3%	16.3%		14.6%	20.4%	22.9%	0.0%		18.2%	16.9%	20.6%		13.6%	19.8%	0.0%
	Private Vessel	13.5%	12.6%	9.6%	3.4%	0.0%	8.3%	3.3%	1.6%							0.0%	7.6%	5.3%
Los Angeles	Dive	20.5%	28.6%	13.3%	10.6%	36.1%	10.5%		0.0%		14.9%	18.5%	26.6%				15.6%	12.0%
	Kayak	8.4%	5.5%	6.6%	8.0%		6.9%	4.6%	14.9%	0.0%		12.4%	6.7%	0.0%		5.3%	12.8%	7.9%
	Private Vessel	6.6%	7.0%	6.2%	6.6%	0.0%	5.7%	4.6%	9.7%			12.6%	7.0%		8.4%	17.3%	7.1%	10.5%
Orange	Dive		0.0%	7.2%	9.9%	37.2%	6.2%		5.0%		5.2%	19.0%	13.7%				9.6%	5.9%
	Kayak	4.9%	6.7%	4.6%	5.7%		7.2%	10.1%	23.2%			9.8%	5.3%	9.7%		10.6%	14.2%	13.3%
	Private Vessel	11.7%	8.4%	5.2%	4.4%	2.0%	4.2%	3.3%	10.9%			15.8%	4.2%		0.0%	16.7%	7.3%	10.3%
San Diego	Dive	1.2%	1.3%	6.1%	1.0%	0.4%	3.5%		0.0%		2.3%	2.2%	0.0%				4.6%	6.3%
	Kayak	1.8%	8.6%	5.5%	4.9%		7.7%	3.3%	5.9%	0.8%		7.7%	5.4%	15.2%		13.9%	5.3%	5.4%
	Private Vessel	8.9%	3.9%	5.8%	6.3%	9.5%	5.2%	4.4%	6.0%			3.4%	4.8%		9.6%	7.1%	5.4%	10.1%

Table A.9: Percentage Area of Total Recreational Fishing Grounds Affected by County for Lapis Proposal B

		Lapis Proposal B																	
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail	
Santa Barbara	Dive			22.1%	26.4%	30.2%	17.2%		23.6%		15.8%						15.8%	3.7%	
	Kayak			27.0%	35.0%		0.0%						70.4%			25.7%			
	Private Vessel	17.9%		18.0%	17.4%		0.0%		17.0%				0.0%			15.5%	18.0%	28.6%	
Ventura	Dive	22.2%		25.5%	24.1%		18.7%		37.3%		22.3%	25.5%	31.6%					18.8%	14.8%
	Kayak	37.1%		28.3%	28.7%		22.8%	31.2%	34.7%	29.8%		35.3%	51.8%	36.3%		39.2%	29.2%	46.5%	
	Private Vessel	21.4%	12.6%	14.9%	26.8%	0.0%	26.4%	0.0%	7.5%							56.0%	17.8%	14.3%	
Los Angeles	Dive	47.1%	61.9%	28.4%	21.7%	65.1%	13.5%		69.4%		52.5%	41.6%	53.1%					25.2%	22.9%
	Kayak	28.6%	38.4%	15.6%	15.9%		14.8%	37.8%	41.3%	0.0%		40.9%	17.7%	62.7%		24.8%	21.7%	28.6%	
	Private Vessel	19.2%	19.3%	13.3%	12.4%	0.0%	6.5%	11.6%	18.4%			18.5%	14.7%		7.5%	41.4%	16.7%	20.2%	
Orange	Dive		7.2%	12.5%	17.8%	50.4%	11.1%		12.9%		13.3%	26.3%	26.3%					18.6%	12.9%
	Kayak	11.2%	30.2%	10.3%	13.6%		9.3%	18.7%	32.1%			23.1%	12.9%	44.5%		22.2%	28.9%	34.1%	
	Private Vessel	17.6%	13.0%	9.3%	9.2%	21.2%	9.3%	7.1%	20.2%			30.8%	8.4%		71.4%	27.4%	13.8%	19.3%	
San Diego	Dive	26.9%	29.1%	23.4%	31.7%	37.7%	13.3%		30.5%		26.3%	33.9%	21.9%					26.1%	22.8%
	Kayak	48.5%	47.2%	20.2%	27.9%		22.2%	37.8%	65.1%	22.1%		28.4%	18.8%	86.5%		42.9%	27.4%	19.2%	
	Private Vessel	22.7%	20.7%	17.0%	17.7%	21.4%	17.6%	19.9%	21.8%			19.1%	17.5%		24.2%	25.3%	18.4%	17.8%	

Table A.10: Percentage Area of Total Recreational Fishing Grounds Affected by County for Opal Proposal A

		Opal Proposal A																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			2.5%	3.6%	6.2%	5.2%		5.1%		6.4%						7.9%	3.7%
	Kayak			9.3%	6.6%		0.0%						1.0%			3.8%		
	Private Vessel	0.0%		3.6%	3.2%		0.0%		11.4%				0.0%			0.4%	2.4%	6.9%
Ventura	Dive	0.0%		20.9%	17.9%		15.7%		23.2%		17.0%	3.6%	23.0%				15.5%	13.8%
	Kayak	17.9%		16.5%	18.5%		16.4%	20.3%	23.3%	0.0%		20.2%	21.0%	23.5%		12.9%	21.3%	0.4%
	Private Vessel	13.5%	12.6%	10.5%	3.5%	0.0%	9.0%	10.9%	1.6%							0.0%	7.9%	4.8%
Los Angeles	Dive	22.5%	30.8%	9.6%	8.9%	17.2%	8.4%		0.0%		16.1%	12.2%	21.5%				16.8%	12.6%
	Kayak	7.3%	2.4%	5.5%	6.3%		4.7%	4.9%	19.8%	0.0%		13.5%	5.1%	0.0%		5.5%	11.8%	8.2%
	Private Vessel	6.9%	6.5%	6.6%	7.0%	0.0%	5.8%	4.6%	9.1%			12.3%	5.0%		11.2%	14.3%	6.9%	9.0%
Orange	Dive		1.1%	5.6%	6.2%	9.9%	4.2%		3.8%		4.8%	15.6%	5.3%				6.7%	4.8%
	Kayak	1.6%	2.2%	2.8%	2.0%		4.0%	0.0%	9.7%			3.1%	1.8%	9.3%		2.2%	5.3%	8.8%
	Private Vessel	8.1%	5.9%	3.6%	3.1%	1.7%	2.7%	1.2%	8.2%			14.1%	2.4%		0.0%	8.4%	5.6%	8.8%
San Diego	Dive	1.3%	1.4%	6.0%	1.0%	0.4%	3.4%		0.0%		2.3%	2.4%	0.1%				4.6%	6.3%
	Kayak	1.8%	8.7%	5.3%	5.0%		7.3%	3.4%	6.0%	0.8%		7.9%	4.8%	15.2%		13.6%	5.3%	5.3%
	Private Vessel	8.9%	3.8%	3.4%	4.1%	4.7%	2.6%	4.3%	5.5%			2.8%	2.9%		9.4%	5.3%	5.2%	9.8%

Table A.11: Percentage Area of Total Recreational Fishing Grounds Affected by County for Opal Proposal B

		Opal Proposal B																	
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail	
Santa Barbara	Dive			26.2%	36.9%	24.6%	21.7%		35.4%		19.1%							22.5%	3.7%
	Kayak			17.6%	27.9%		0.0%						94.9%			14.9%			
	Private Vessel	10.4%		25.8%	29.3%		0.0%		22.7%				20.0%			8.5%	22.4%	24.0%	
Ventura	Dive	0.0%		18.5%	20.2%		20.1%		13.0%		17.1%	0.0%	14.4%					21.9%	18.1%
	Kayak	20.1%		11.6%	20.7%		25.6%	15.6%	16.5%	55.3%		19.3%	24.0%	15.8%		10.5%	13.6%	28.4%	
	Private Vessel	19.2%	12.6%	16.6%	32.6%	0.0%	33.9%	0.0%	11.4%							38.3%	20.7%	20.2%	
Los Angeles	Dive	37.6%	60.0%	29.6%	14.6%	38.5%	10.4%		91.0%		30.4%	25.3%	24.7%					21.9%	29.8%
	Kayak	21.8%	34.8%	10.8%	8.0%		10.3%	29.4%	24.0%	0.0%		28.8%	10.2%	48.8%		16.4%	17.4%	32.6%	
	Private Vessel	9.7%	10.5%	10.7%	10.7%	57.1%	11.1%	5.1%	20.3%			19.7%	4.7%		5.7%	17.1%	15.1%	17.9%	
Orange	Dive		18.3%	19.9%	16.0%	18.2%	9.3%		14.7%		15.0%	37.4%	8.4%					14.5%	11.1%
	Kayak	5.5%	20.0%	10.2%	6.0%		3.7%	19.1%	38.9%			4.9%	7.6%	43.0%		4.9%	5.1%	28.8%	
	Private Vessel	7.5%	8.8%	11.5%	8.8%	17.8%	8.8%	3.0%	27.7%			28.0%	5.1%		0.0%	11.5%	11.6%	21.2%	
San Diego	Dive	39.3%	41.9%	30.6%	45.6%	49.4%	19.6%		47.2%		41.4%	51.6%	33.2%					36.4%	32.9%
	Kayak	66.0%	45.9%	26.1%	42.4%		29.7%	50.1%	64.9%	30.3%		42.1%	23.9%	79.3%		41.9%	37.6%	26.8%	
	Private Vessel	32.8%	29.3%	20.3%	22.0%	21.4%	21.5%	23.3%	30.4%			28.9%	19.9%		27.3%	33.5%	26.6%	26.2%	

Table A.12: Percentage Area of Total Recreational Fishing Grounds Affected by County for Topaz Proposal A

		Topaz Proposal A																	
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail	
Santa Barbara	Dive			16.4%	21.6%	24.9%	14.3%		19.8%		15.8%							13.3%	3.7%
	Kayak			11.4%	18.2%		0.0%						15.3%			13.8%			
	Private Vessel	10.3%		14.9%	12.1%		5.1%		15.9%				0.0%			6.6%	12.0%	25.5%	
Ventura	Dive	22.2%		18.6%	17.7%		17.4%		12.9%		17.0%	18.2%	14.2%					22.1%	18.0%
	Kayak	18.1%		10.9%	24.3%		22.6%	13.5%	13.7%	29.8%		16.5%	22.5%	13.6%		23.6%	12.7%	43.1%	
	Private Vessel	19.9%	12.6%	10.5%	19.3%	0.0%	7.5%	0.0%	8.6%							29.1%	14.8%	18.5%	
Los Angeles	Dive	42.3%	76.5%	38.6%	22.0%	71.0%	21.9%		86.3%		67.0%	48.1%	48.1%					25.3%	39.0%
	Kayak	13.6%	36.8%	9.8%	13.2%		16.7%	28.1%	22.2%	0.0%		36.5%	11.8%	46.7%		16.3%	22.4%	29.0%	
	Private Vessel	15.5%	17.3%	11.6%	11.7%	39.3%	18.9%	8.4%	22.5%			25.3%	11.6%		8.0%	24.1%	21.5%	18.5%	
Orange	Dive		31.8%	19.8%	29.2%	55.4%	16.3%		15.2%		15.2%	47.8%	30.1%					25.2%	17.1%
	Kayak	10.8%	20.4%	10.0%	14.8%		10.7%	28.7%	35.4%			16.8%	10.9%	21.7%		18.0%	23.6%	26.7%	
	Private Vessel	12.1%	9.0%	12.6%	11.5%	28.5%	12.3%	6.3%	30.3%			34.8%	9.4%		0.0%	13.9%	18.6%	17.8%	
San Diego	Dive	20.8%	22.8%	16.7%	33.6%	26.0%	12.2%		26.4%		24.8%	30.7%	24.4%					31.3%	26.9%
	Kayak	40.9%	28.2%	14.0%	24.5%		17.0%	26.1%	35.2%	24.0%		25.8%	13.4%	42.7%		24.6%	24.0%	14.1%	
	Private Vessel	18.1%	15.6%	16.1%	19.1%	20.4%	17.6%	16.0%	24.3%			17.5%	13.5%		16.2%	13.9%	22.3%	21.3%	

Table A.13: Percentage Area of Total Recreational Fishing Grounds Affected by County for Topaz Proposal B

		Topaz Proposal B																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			6.5%	10.8%	16.3%	7.4%		7.2%		7.2%						8.1%	3.7%
	Kayak			12.0%	8.4%		0.0%						0.0%			6.9%		
	Private Vessel	0.0%		7.9%	5.5%		3.4%		12.5%				0.0%			0.2%	3.9%	7.7%
Ventura	Dive	0.0%		22.6%	18.7%		16.1%		29.5%		17.2%	19.1%	24.4%				16.1%	13.9%
	Kayak	22.2%		22.0%	20.7%		21.5%	29.1%	33.7%	0.0%		26.1%	20.7%	33.1%		24.1%	25.8%	0.1%
	Private Vessel	13.5%	12.6%	12.7%	6.6%	0.0%	8.3%	2.6%	3.7%							0.0%	8.5%	5.4%
Los Angeles	Dive	1.3%	2.9%	10.7%	8.7%	18.3%	10.1%		33.8%		8.2%	5.9%	3.1%				16.7%	8.5%
	Kayak	14.8%	0.8%	6.7%	4.4%		3.7%	0.0%	19.0%	0.0%		2.9%	7.1%	1.3%		7.3%	9.9%	7.3%
	Private Vessel	5.6%	4.6%	8.0%	7.3%	0.0%	7.7%	5.5%	12.1%			13.5%	4.8%		9.1%	7.1%	6.8%	7.9%
Orange	Dive		0.0%	5.9%	4.8%	22.3%	3.9%		3.4%		3.5%	12.9%	1.3%				3.3%	2.9%
	Kayak	0.9%	2.5%	2.6%	0.5%		3.1%	0.5%	7.8%			4.5%	0.3%	16.1%		1.6%	2.3%	8.9%
	Private Vessel	0.0%	2.4%	3.5%	1.5%	3.3%	2.4%	0.6%	8.7%			15.8%	0.4%		0.0%	0.0%	3.5%	6.7%
San Diego	Dive	1.5%	1.6%	8.8%	1.3%	0.4%	5.1%		0.0%		2.3%	2.9%	0.3%				5.0%	7.7%
	Kayak	2.0%	15.4%	7.4%	8.2%		11.1%	8.7%	10.2%	1.7%		14.1%	7.1%	15.5%		19.2%	7.2%	7.1%
	Private Vessel	10.5%	6.0%	11.7%	5.1%	10.1%	7.0%	5.9%	9.4%			5.0%	3.9%		9.6%	7.9%	6.3%	10.7%

Table A.14: Percentage Value of Total Recreational Fishing Grounds Affected by County for External Proposal A

		External Proposal A																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			3.5%	3.4%	0.9%	2.9%		4.1%		9.2%						4.4%	0.6%
	Kayak			11.3%	1.6%		0.0%						0.0%			7.2%		
	Private Vessel	0.0%		3.8%	4.6%		0.7%		7.1%				0.0%			0.1%	2.2%	0.0%
Ventura	Dive	0.0%		9.0%	10.6%		8.5%		7.5%		10.5%	6.8%	16.5%				13.0%	12.2%
	Kayak	13.9%		12.1%	13.9%		14.9%	12.3%	8.8%	0.0%		5.0%	13.3%	19.1%		17.1%	13.5%	0.0%
	Private Vessel	6.2%	1.2%	2.0%	2.6%	0.0%	6.5%	1.0%	4.4%							0.0%	2.6%	11.4%
Los Angeles	Dive	25.0%	17.8%	12.3%	11.3%	16.1%	8.9%		0.0%		24.4%	20.4%	8.4%				12.5%	10.2%
	Kayak	6.0%	2.6%	2.9%	9.1%		2.3%	3.3%	5.2%	0.0%		2.4%	2.8%	0.0%		3.0%	5.8%	9.5%
	Private Vessel	3.7%	3.7%	4.7%	5.1%	0.0%	6.1%	3.0%	7.3%			8.0%	1.6%		6.7%	7.8%	4.4%	3.8%
Orange	Dive		0.4%	7.2%	15.2%	11.1%	9.2%		6.1%		6.6%	11.0%	15.5%				7.4%	7.9%
	Kayak	0.4%	5.6%	2.1%	3.2%		4.0%	0.0%	3.8%			4.9%	3.1%	6.4%		4.3%	3.4%	7.4%
	Private Vessel	4.0%	2.6%	1.3%	3.7%	0.7%	2.6%	1.5%	6.3%			11.1%	1.1%		0.0%	5.2%	4.0%	2.2%
San Diego	Dive	0.6%	0.8%	3.1%	0.5%	1.0%	3.4%		0.0%		0.9%	0.6%	0.1%				0.9%	1.3%
	Kayak	3.5%	3.4%	5.7%	1.4%		2.3%	5.4%	2.9%	1.3%		6.2%	5.2%	4.6%		12.6%	1.7%	2.9%
	Private Vessel	0.7%	0.3%	2.4%	1.8%	3.3%	1.3%	1.0%	1.0%			0.8%	0.8%		16.4%	1.7%	2.1%	1.0%

Table A.15: Percentage Value of Total Recreational Fishing Grounds Affected by County for External Proposal B

		External Proposal B																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			4.2%	3.4%	1.1%	3.0%		3.9%		9.6%						4.6%	0.6%
	Kayak			4.8%	2.0%		0.0%						0.0%			0.0%		
	Private Vessel	0.0%		4.1%	4.9%		4.9%		7.0%				0.0%			0.1%	2.0%	0.0%
Ventura	Dive	0.0%		10.3%	12.3%		11.1%		7.7%		17.9%	5.1%	7.1%				6.6%	13.2%
	Kayak	5.5%		9.7%	12.7%		9.1%	10.1%	12.9%	0.0%		2.4%	12.6%	10.5%		0.0%	6.5%	6.1%
	Private Vessel	6.2%	1.2%	1.0%	3.2%	0.0%	9.3%	0.0%	4.4%							0.0%	3.3%	11.4%
Los Angeles	Dive	25.7%	18.3%	14.2%	10.1%	22.0%	9.0%		0.0%		26.3%	23.3%	9.7%				14.0%	13.1%
	Kayak	0.1%	2.6%	1.9%	7.8%		2.6%	2.6%	5.8%	0.0%		2.6%	0.9%	0.0%		0.3%	9.5%	6.7%
	Private Vessel	0.9%	1.5%	1.5%	3.8%	0.0%	3.1%	1.1%	6.7%			9.3%	0.4%		4.2%	0.3%	6.4%	3.8%
Orange	Dive		0.4%	14.3%	20.9%	15.5%	12.6%		7.9%		6.3%	18.6%	21.5%				11.4%	10.7%
	Kayak	0.4%	3.8%	3.2%	3.6%		5.3%	0.0%	7.6%			6.7%	3.2%	8.0%		7.9%	3.2%	5.4%
	Private Vessel	0.6%	0.5%	2.2%	3.9%	4.6%	4.5%	1.6%	8.9%			9.4%	1.2%		0.0%	0.2%	6.8%	1.7%
San Diego	Dive	0.5%	0.7%	2.7%	0.4%	0.2%	3.5%		0.0%		1.2%	0.4%	0.0%				1.0%	1.5%
	Kayak	3.0%	2.7%	5.0%	1.2%		2.6%	4.6%	2.9%	1.3%		5.3%	4.8%	4.9%		9.8%	1.4%	2.3%
	Private Vessel	0.3%	0.1%	2.3%	1.5%	3.6%	1.6%	0.8%	1.1%			0.6%	0.6%		15.6%	0.1%	2.4%	0.8%

Table A.16: Percentage Value of Total Recreational Fishing Grounds Affected by County for External Proposal C

		External Proposal C																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			36.3%	39.6%	38.8%	30.9%		34.7%		23.0%						27.2%	0.6%
	Kayak			43.6%	51.0%		0.0%						100.0%			25.0%		
	Private Vessel	4.4%		37.7%	33.2%		22.3%		18.3%				100.0%			35.2%	24.6%	0.2%
Ventura	Dive	13.8%		39.5%	38.8%		48.7%		21.8%		37.1%	30.6%	25.4%				23.4%	23.7%
	Kayak	36.4%		32.4%	32.4%		41.6%	39.7%	26.3%	58.9%		31.5%	43.7%	42.3%		52.2%	44.1%	42.4%
	Private Vessel	14.1%	1.2%	7.8%	32.2%	0.0%	43.7%	0.0%	18.9%							20.4%	19.4%	34.6%
Los Angeles	Dive	56.6%	56.6%	52.4%	41.5%	86.4%	43.8%		72.1%		33.7%	54.6%	81.0%				39.4%	49.5%
	Kayak	43.5%	59.4%	26.0%	36.9%		67.9%	58.0%	55.4%	36.8%		76.5%	25.4%	78.1%		55.7%	49.1%	51.4%
	Private Vessel	9.8%	8.5%	13.5%	16.9%	14.4%	31.3%	8.2%	18.0%			29.4%	4.0%		15.5%	26.8%	34.9%	26.3%
Orange	Dive		55.9%	48.2%	81.0%	75.6%	39.6%		29.5%		16.7%	70.7%	83.9%				47.5%	42.8%
	Kayak	10.8%	41.8%	20.6%	29.6%		28.6%	37.4%	48.9%			36.5%	31.6%	37.5%		48.0%	46.9%	52.0%
	Private Vessel	16.1%	17.0%	7.3%	20.3%	46.9%	23.2%	11.7%	28.0%			54.2%	6.3%		0.0%	22.3%	35.7%	11.7%
San Diego	Dive	62.4%	86.0%	55.1%	71.5%	65.2%	47.4%		61.3%		52.8%	81.7%	54.3%				55.3%	41.3%
	Kayak	91.0%	87.8%	44.2%	72.1%		55.4%	76.9%	90.4%	77.9%		76.0%	62.8%	93.0%		62.3%	79.8%	75.9%
	Private Vessel	25.8%	18.8%	18.3%	40.4%	10.5%	30.0%	30.9%	28.8%			37.6%	23.9%		13.4%	6.7%	44.8%	15.4%

Table A.17: Percentage Value of Total Recreational Fishing Grounds Affected by County for Lapis Proposal A

		Lapis Proposal A																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			3.3%	3.1%	0.8%	2.6%		3.7%		8.9%						4.1%	0.6%
	Kayak			11.7%	1.5%		0.0%						0.0%			7.2%		
	Private Vessel	0.0%		3.5%	4.2%		0.7%		7.0%				0.0%			0.1%	2.0%	0.0%
Ventura	Dive	0.0%		8.6%	9.9%		8.7%		8.2%		11.6%	6.8%	18.0%				13.6%	12.1%
	Kayak	14.6%		13.3%	16.0%		14.5%	13.5%	9.9%	0.0%		5.3%	15.3%	20.1%		17.1%	14.4%	0.0%
	Private Vessel	6.2%	1.2%	2.1%	2.6%	0.0%	5.6%	3.3%	4.4%							0.0%	2.4%	11.4%
Los Angeles	Dive	24.0%	17.0%	15.3%	14.6%	58.0%	11.2%		0.0%		24.0%	26.2%	10.4%				12.2%	9.9%
	Kayak	6.2%	3.5%	4.8%	11.5%		3.3%	3.4%	5.4%	0.0%		2.4%	3.4%	0.0%		3.4%	8.9%	9.2%
	Private Vessel	3.6%	3.8%	4.8%	5.0%	0.0%	6.0%	3.0%	7.3%			9.3%	1.8%		7.5%	10.0%	4.3%	3.7%
Orange	Dive		0.0%	24.8%	46.3%	49.8%	20.1%		10.3%		8.2%	40.1%	47.9%				13.5%	9.4%
	Kayak	3.8%	12.2%	8.8%	14.0%		13.2%	13.6%	27.2%			19.9%	14.9%	6.3%		22.8%	23.1%	10.4%
	Private Vessel	7.9%	5.9%	3.6%	8.0%	1.5%	6.9%	5.1%	7.5%			11.2%	3.4%		0.0%	11.8%	5.9%	2.7%
San Diego	Dive	0.5%	0.7%	2.7%	0.4%	0.2%	3.7%		0.0%		1.2%	0.4%	0.0%				0.8%	1.3%
	Kayak	3.0%	3.0%	5.0%	1.2%		2.9%	4.6%	2.9%	1.3%		5.2%	5.6%	4.9%		11.5%	1.6%	2.7%
	Private Vessel	0.7%	0.3%	2.8%	2.0%	17.4%	2.9%	0.9%	1.0%			0.7%	1.1%		16.4%	1.8%	2.1%	0.9%

Table A.18: Percentage Value of Total Recreational Fishing Grounds Affected by County for Lapis Proposal B

		Lapis Proposal B																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			25.8%	32.6%	25.9%	17.7%		24.6%		15.3%						15.9%	0.6%
	Kayak			40.9%	45.9%		0.0%						74.0%			24.1%		
	Private Vessel	5.0%		26.9%	24.1%		0.0%		14.3%				0.0%			58.1%	20.1%	0.1%
Ventura	Dive	11.9%		50.3%	52.4%		23.0%		33.1%		36.3%	29.9%	31.6%				25.8%	14.0%
	Kayak	40.0%		43.8%	44.7%		18.6%	47.3%	36.6%	25.1%		33.3%	56.4%	35.4%		45.5%	46.7%	35.5%
	Private Vessel	12.6%	1.2%	7.5%	23.6%	0.0%	27.8%	0.0%	15.5%							37.6%	14.0%	20.6%
Los Angeles	Dive	58.2%	63.4%	44.3%	38.4%	69.7%	26.7%		58.0%		25.1%	54.4%	67.8%				28.7%	21.9%
	Kayak	36.6%	44.8%	22.3%	32.7%		45.6%	46.6%	51.7%	0.0%		67.5%	17.7%	62.7%		47.4%	37.7%	44.7%
	Private Vessel	7.9%	5.8%	11.4%	12.6%	0.0%	12.0%	6.8%	13.8%			9.8%	4.0%		7.2%	24.1%	18.3%	8.0%
Orange	Dive		9.5%	37.1%	74.9%	62.5%	26.0%		24.9%		16.2%	62.0%	78.6%				29.4%	15.7%
	Kayak	8.4%	40.0%	17.4%	27.1%		27.3%	25.2%	42.6%			40.1%	28.3%	41.1%		49.9%	40.6%	53.2%
	Private Vessel	11.6%	9.7%	7.5%	14.5%	22.8%	14.5%	13.6%	12.6%			53.5%	6.9%		71.4%	15.7%	15.9%	4.6%
San Diego	Dive	49.1%	82.4%	48.5%	55.9%	70.1%	37.5%		32.7%		40.8%	57.6%	39.6%				44.3%	31.3%
	Kayak	89.7%	88.6%	50.7%	64.4%		38.6%	80.4%	92.6%	68.9%		69.0%	60.1%	98.0%		75.1%	78.3%	75.3%
	Private Vessel	17.9%	12.8%	15.8%	26.8%	24.3%	17.5%	20.6%	20.4%			24.2%	17.7%		26.8%	8.5%	32.6%	10.7%

Table A.19: Percentage Value of Total Recreational Fishing Grounds Affected by County for Opal Proposal A

		Opal Proposal A																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			3.8%	3.9%	1.1%	3.2%		4.6%		9.0%						4.8%	0.6%
	Kayak			14.5%	3.7%		0.0%						1.4%			7.4%		
	Private Vessel	0.0%		4.0%	4.9%		0.0%		7.1%				0.0%			0.1%	2.3%	0.0%
Ventura	Dive	0.0%		13.5%	11.1%		11.4%		10.2%		16.1%	2.0%	23.0%				15.6%	12.1%
	Kayak	16.8%		15.9%	19.9%		16.3%	17.1%	12.7%	0.0%		5.9%	19.1%	23.0%		16.6%	19.0%	0.7%
	Private Vessel	6.2%	1.2%	2.4%	2.6%	0.0%	6.5%	10.9%	4.4%							0.0%	2.6%	11.1%
Los Angeles	Dive	26.4%	18.3%	13.1%	12.1%	19.1%	9.7%		0.0%		26.0%	22.0%	9.2%				13.2%	10.6%
	Kayak	5.5%	2.6%	3.2%	10.5%		2.5%	3.6%	6.8%	0.0%		2.6%	2.5%	0.0%		6.0%	8.7%	9.2%
	Private Vessel	3.8%	3.9%	4.6%	5.3%	0.0%	6.0%	3.0%	6.8%			9.3%	1.6%		10.0%	7.8%	4.3%	3.3%
Orange	Dive		1.4%	12.3%	17.1%	13.3%	10.0%		6.7%		6.9%	14.7%	17.5%				8.0%	8.0%
	Kayak	0.4%	5.0%	2.4%	3.7%		4.5%	0.0%	4.5%			5.4%	3.5%	4.9%		4.0%	4.2%	7.3%
	Private Vessel	4.6%	2.9%	1.5%	4.1%	0.8%	3.0%	1.7%	5.7%			9.6%	1.2%		0.0%	5.9%	3.7%	2.0%
San Diego	Dive	0.5%	0.7%	2.8%	0.4%	0.2%	3.6%		0.0%		1.2%	0.5%	0.1%				0.9%	1.3%
	Kayak	3.0%	3.0%	4.9%	1.2%		2.6%	4.6%	2.9%	1.3%		5.2%	4.9%	4.9%		11.5%	1.6%	2.7%
	Private Vessel	0.7%	0.3%	2.3%	1.7%	3.3%	1.3%	1.0%	1.0%			0.6%	0.7%		16.2%	1.7%	2.0%	0.9%

Table A.20: Percentage Value of Total Recreational Fishing Grounds Affected by County for Opal Proposal B

		Opal Proposal B																	
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail	
Santa Barbara	Dive			34.7%	40.0%	37.9%	25.5%		38.8%		16.5%							25.4%	0.6%
	Kayak			18.6%	21.4%		0.0%						98.3%			6.8%			
	Private Vessel	3.2%		35.3%	35.1%		0.0%		22.8%				20.0%			22.7%	25.2%	0.1%	
Ventura	Dive	0.0%		25.3%	28.7%		23.7%		12.0%		16.4%	0.0%	14.4%					15.6%	18.9%
	Kayak	18.1%		23.7%	25.0%		21.0%	22.2%	27.4%	46.0%		31.2%	24.3%	15.4%		4.2%	16.7%	20.6%	
	Private Vessel	10.9%	1.2%	14.2%	26.6%	0.0%	37.1%	0.0%	23.5%							25.7%	18.2%	23.7%	
Los Angeles	Dive	52.3%	56.6%	33.6%	20.8%	28.2%	21.8%		76.0%		27.3%	31.8%	41.3%					29.9%	31.5%
	Kayak	26.2%	36.6%	15.1%	19.8%		41.9%	36.2%	34.0%	0.0%		49.9%	12.7%	48.8%		17.5%	28.7%	40.7%	
	Private Vessel	3.7%	3.8%	5.3%	10.4%	74.8%	14.5%	2.4%	9.1%			16.9%	1.7%		6.8%	5.8%	24.2%	12.7%	
Orange	Dive		4.7%	46.0%	18.0%	24.3%	13.8%		24.2%		17.4%	29.4%	19.9%					22.2%	22.7%
	Kayak	7.6%	18.3%	20.8%	9.7%		16.2%	25.8%	51.3%			13.9%	12.4%	40.4%		15.0%	17.7%	47.9%	
	Private Vessel	2.0%	2.6%	8.4%	8.4%	20.2%	9.9%	2.6%	18.7%			49.2%	2.7%		0.0%	2.7%	21.1%	5.5%	
San Diego	Dive	61.6%	88.7%	57.8%	67.6%	70.9%	50.4%		45.8%		50.8%	71.3%	50.8%					55.0%	40.3%
	Kayak	92.5%	89.4%	50.2%	73.3%		50.3%	79.3%	90.0%	72.6%		71.7%	63.0%	92.8%		62.1%	82.9%	77.7%	
	Private Vessel	24.7%	17.5%	21.1%	38.7%	11.8%	25.5%	30.9%	27.1%			33.9%	23.6%		19.9%	7.9%	41.6%	13.2%	

Table A.21: Percentage Value of Total Recreational Fishing Grounds Affected by County for Topaz Proposal A

		Topaz Proposal A																	
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail	
Santa Barbara	Dive			19.0%	20.0%	28.2%	13.4%		19.6%		15.3%							10.6%	0.6%
	Kayak			21.7%	20.6%		0.0%						18.6%			13.6%			
	Private Vessel	2.5%		17.9%	14.8%		6.3%		10.9%				0.0%			31.1%	13.0%	0.1%	
Ventura	Dive	11.9%		23.7%	21.6%		20.5%		13.9%		15.7%	27.2%	14.2%					12.5%	20.0%
	Kayak	22.6%		20.3%	20.9%		18.4%	23.0%	18.9%	25.1%		27.1%	29.6%	13.3%		27.8%	26.6%	32.9%	
	Private Vessel	11.3%	1.2%	2.9%	17.5%	0.0%	4.6%	0.0%	18.8%							19.5%	13.3%	21.0%	
Los Angeles	Dive	63.1%	80.3%	37.8%	32.0%	84.7%	32.3%		72.1%		60.4%	54.5%	47.4%					34.5%	41.0%
	Kayak	21.8%	36.9%	15.4%	25.8%		43.0%	34.7%	36.7%	0.0%		48.4%	11.4%	46.7%		29.1%	37.2%	29.4%	
	Private Vessel	5.5%	5.6%	7.2%	13.5%	23.7%	20.3%	4.5%	13.3%			19.3%	2.1%		9.7%	13.3%	32.2%	13.8%	
Orange	Dive		31.7%	45.5%	78.7%	73.7%	38.1%		24.7%		17.2%	71.4%	84.2%					43.1%	35.3%
	Kayak	10.4%	34.0%	19.4%	28.5%		35.3%	39.7%	48.5%			39.2%	30.8%	17.9%		43.5%	46.0%	30.0%	
	Private Vessel	6.0%	5.9%	7.1%	18.2%	26.1%	20.4%	10.1%	20.6%			56.8%	6.0%		0.0%	7.3%	32.9%	5.2%	
San Diego	Dive	31.6%	46.5%	35.3%	43.1%	49.9%	30.7%		30.9%		32.1%	47.1%	32.8%					33.6%	25.0%
	Kayak	38.0%	37.0%	25.7%	38.4%		24.7%	31.7%	34.1%	32.3%		31.9%	29.2%	35.3%		26.1%	37.3%	36.3%	
	Private Vessel	12.8%	8.8%	13.7%	24.8%	14.7%	17.4%	18.6%	13.9%			19.0%	19.2%		11.2%	2.9%	26.8%	7.1%	

Table A.22: Percentage Value of Total Recreational Fishing Grounds Affected by County for Topaz Proposal B

		Topaz Proposal B																
County	Sector	Barracuda	Bonito	Ca. Halibut	Calico Bass	Croaker	Lobster	Mackerels	Rockfish	Rock Crab	Scallops	Sheephead	Sand Bass	Squid	Surf Perch	Thresher Shark	White Seabass	Yellowtail
Santa Barbara	Dive			9.4%	13.1%	18.3%	5.9%		6.1%		9.8%						4.9%	0.6%
	Kayak			19.6%	5.7%		0.0%						0.0%			12.6%		
	Private Vessel	0.0%		9.2%	7.3%		4.2%		8.3%				0.0%			0.1%	4.0%	0.0%
Ventura	Dive	13.8%		15.0%	12.0%		12.8%		12.9%		16.8%	12.6%	24.4%				18.5%	12.4%
	Kayak	20.9%		19.2%	18.6%		21.2%	18.9%	13.0%	0.0%		7.6%	18.7%	32.3%		30.3%	21.8%	0.2%
	Private Vessel	6.5%	1.2%	4.3%	5.3%	0.0%	5.6%	2.6%	8.7%							0.0%	4.1%	11.4%
Los Angeles	Dive	2.7%	1.7%	10.9%	6.9%	34.2%	9.1%		28.2%		15.5%	6.6%	1.3%				5.7%	8.0%
	Kayak	11.0%	0.8%	4.5%	6.9%		2.4%	0.0%	6.9%	0.0%		0.6%	3.6%	1.3%		8.6%	6.2%	11.8%
	Private Vessel	2.9%	0.6%	7.4%	3.7%	0.0%	12.7%	3.6%	9.4%			7.5%	2.2%		8.5%	6.2%	2.9%	3.3%
Orange	Dive		0.0%	18.0%	3.5%	29.9%	10.7%		6.2%		4.7%	17.5%	3.8%				5.1%	7.7%
	Kayak	0.6%	3.3%	3.5%	0.7%		4.6%	0.4%	4.0%			9.2%	0.7%	8.5%		3.6%	2.5%	8.0%
	Private Vessel	0.3%	0.2%	1.6%	1.4%	2.0%	6.5%	1.3%	7.0%			11.2%	0.2%		0.0%	0.0%	3.2%	1.7%
San Diego	Dive	0.7%	0.7%	4.1%	0.7%	0.2%	4.9%		0.0%		1.3%	1.1%	0.4%				1.1%	1.5%
	Kayak	3.0%	3.8%	10.3%	1.7%		2.6%	7.7%	5.2%	2.0%		8.8%	6.7%	4.8%		17.7%	2.1%	3.9%
	Private Vessel	1.1%	0.7%	9.6%	2.4%	18.2%	4.7%	1.4%	2.4%			1.3%	1.0%		16.4%	2.8%	2.7%	1.1%

Example of Why Potential Impact on Profit (as a %) Can Exceed 100%

Cases where the potential net economic impact of a given MPA proposal on a commercial fishery exceeds 100% are not mistakes. Rather, they are directly related to how we account for operating costs.

In an effort to alleviate concerns over why potential impact can exceed 100%, we provide the following example.

The potential impact of a given MPA proposal is the impact to the baseline gross economic revenue (BGER), also known as ex-vessel landing value for the fishery. Assume a hypothetical fishery for which BGER is \$196,774 and a given MPA proposal that has a 58% impact on that fishery. To estimate gross economic impact (GEI), we multiply BGER * 58%, which equals \$114,207. Then we calculate the potential gross economic revenue (GER) if the MPA proposal went into effect by subtracting the GEI from BGER. In this case, $GER = BGER - GEI = \$82,566$.

To determine net economic revenue (NER) (i.e., profit) prior to the MPA, we consider fishermen's costs. The total estimated cost for this hypothetical fishery is 66% of BGER, or $66\% * \$196,774 = \$130,362$. NER is calculated as BGER minus estimated costs, or $\$196,774 - \$130,362 = \$66,412$.

To determine NER (i.e., profit) post impact, we consider how the MPA proposal will affect fishermen's costs. Total costs are equal to fixed costs + variable costs. Fixed costs⁵, which are calculated as a percentage of BGER, will not change. In this case, fixed costs are 42% of BGER, or $42\% * \$196,774 = \$83,457$.

However, the MPA proposal will affect fishermen's variable costs because fishermen will no longer be able to fish in certain areas. Variable costs are broken out by crew (11%) and fuel (13%) and are based on GER after considering the impact of the MPA. In this case, variable costs = fuel (11% * \$82,566) + crew (13% * \$82,566) = \$19,682.

Therefore, NER (i.e., profit) after the MPA proposal = $GER - \text{fixed costs} - \text{variable costs} = \$82,566 - \$83,457 - \$19,683 = -\$20,572$.

Net economic impact (NEI) after the MPA proposal (i.e., change in profit) is calculated as $BNER - NER$. In this case, $\$66,412 - (-\$20,572) = \$86,983$. Finally, to estimate the % NEI we divide NEI by BNER, or $\$86,983 / \$66,412 = 130.9\%$. Because fishermen are likely to incur fixed costs regardless of the MPA proposal, the impact of the MPA on fishermen's profit exceeds 100%.

For additional details, please see Section 12 of the *SAT Draft Methods Used to Evaluate Marine Protected Area Proposals for the MLPA South Coast Region*.

⁵ We assume fixed costs to be anything other than crew and fuel (a bit of a simplifying assumption, but generally appropriate). Examples of fixed costs could be payment on a boat, docking/mooring fees, permit fees, gear costs, etc.