

**SOUTH COAST MARINE PROTECTED AREAS PROJECT
DRAFT ENVIRONMENTAL IMPACT REPORT**

**APPENDIX B
PROFILE OF THE RECREATIONAL FISHERY**

Appendix B: Profile of the Recreational Fishery (FROM THE REGIONAL PROFILE)

This appendix contains the following sections:

- B1. Data used to characterize the recreational fishery
- B2. CRFS fishery statistics, 2005-2007
- B3. Historic MRFSS fishery statistics, 1998-2003
- B4. CPFV logbook data, 1998 to 2007: Invertebrate catch statistics
- B5. Synopsis of applicable regulations

This appendix provides more in-depth information regarding marine recreational fisheries occurring within the study region, and is supplementary to information provided in section 5.6 (Recreational Fisheries) of this profile.

B1. Data used to characterize the recreational fishery

CRFS is the primary source of data used in characterizing the recreational fishery for this profile. California implemented the survey in 2004 and it is a collaborative effort between DFG and the Pacific States Marine Fisheries Commission (PSMFC). The data are maintained by the PSMFC on the Recreational Fisheries Information Network (RecFIN). Catch and effort data are collected at more than 400 publicly-accessible sites during day-light hours and aboard CPFVs. The survey generally does not sample catch for night-time fishing, CPFV dive charters, and invertebrate fisheries, although a limited sampling effort for California spiny lobster was conducted in 2007. A telephone survey of licensed anglers is used to estimate effort information for night-time fishing and for boats that return to non-accessible marinas. A separate telephone survey of vessel operators is also used to estimate CPFV effort.

Estimates of catch and effort are reported monthly by six geographical districts along California's coastline and by mode of fishing. Two of these districts occur in the study region: the Channel District, consisting of Santa Barbara and Ventura counties, and the Southern District, consisting of Los Angeles, Orange, and San Diego counties. It should be noted that the CRFS catch estimates for southern California represent trips occurring from the northern Santa Barbara County line to the US/Mexico border, while the study region extends from Point Conception, just south of the northern Santa Barbara County line, to the US/Mexico border in San Diego County. Additional details about CRFS may be found at <http://www.dfg.ca.gov/marine/crfs.asp>, and CRFS data are available at <http://www.recfin.org>.

Prior to the CRFS, the California recreational fishery was sampled by the Marine Recreational Fisheries Statistics Survey (MRFSS) from 1981 through 2003. MRFSS estimates are not directly comparable to CRFS estimates. Further details regarding the MRFSS may be found at <http://www.st.nmfs.noaa.gov/st1/recreational/index.html>, and MRFSS data and estimates are available at <http://www.recfin.org>.

An additional source for CPFV catch and effort data are logbooks. The CPFV logbook is completed by the vessel operator and must be submitted monthly to DFG. Logbook data are maintained by DFG in the Commercial Fishery Information System database (CFIS).

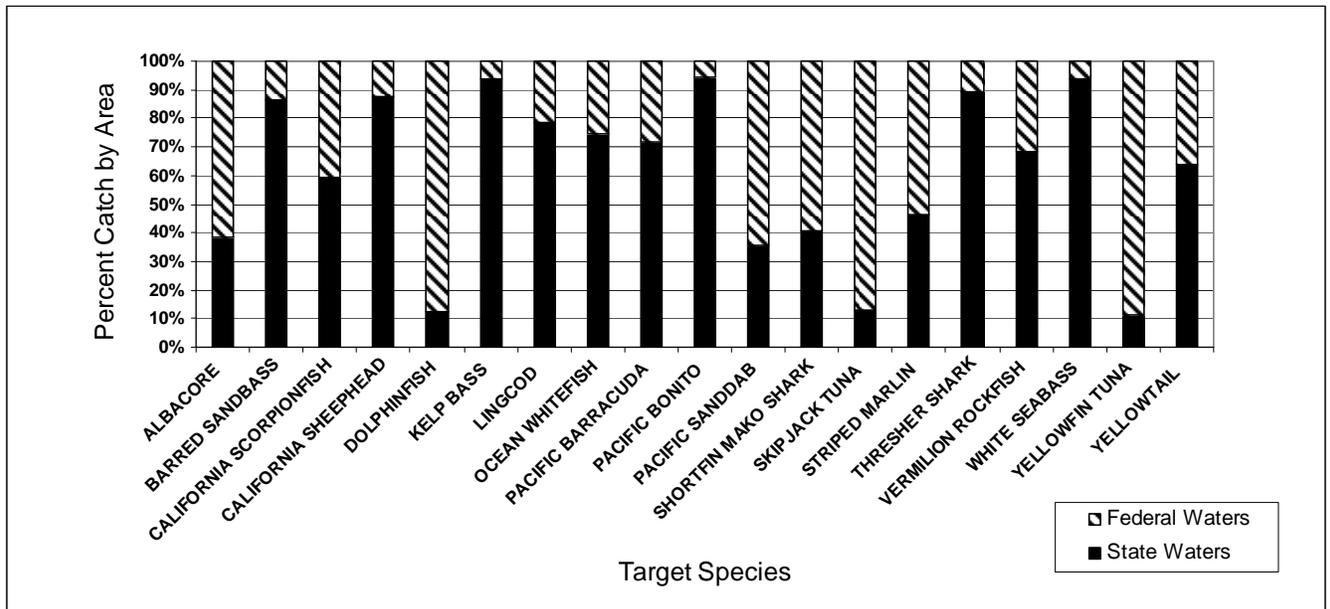
B.2. CRFS Fishery Statistics, 2005 to 2007

Catch Estimates by Fishing Area for Southern California

CRFS catch estimates for United States waters can be summarized for trips that occurred within state waters (within three miles of shore) versus trips that occurred in federal waters (outside of three miles). Some important species targeted by CPFV's and private boat anglers in southern California are primarily caught outside of the study

region, particularly highly migratory species. Catches of highly migratory species such as tunas, billfish, and dolphinfish primarily occur in federal waters (Figure B-1) and Mexico (not shown), although catches in state waters can be significant in some years.

Figure B-1. Estimated percentage of catch (number of fish) occurring within state vs federal waters for some southern California target species, 2005 to 2007.

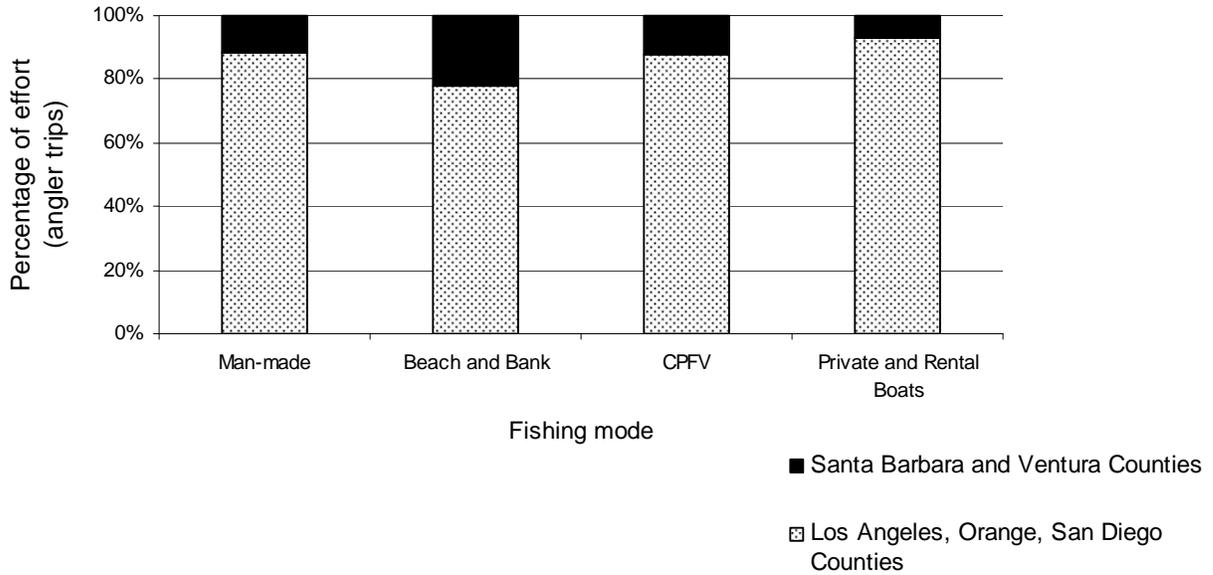


Source: CRFS data extracted from the RecFIN database at <http://www.recfin.org/forms/est2004.html>
 Query represents A+B1 catch by species for trips occurring in United States waters for southern California.
 Extraction date: December 17, 2008.

Catch and Effort by CRFS Sampling District for Southern California

CRFS provides separate catch and effort estimates for Santa Barbara and Ventura counties (Channel District) and for Los Angeles, Orange, and San Diego counties (Southern District). Effort and catch estimates in the study region for most species are much higher for all modes of fishing in the Southern District (Figure B-2). However, more than half of the rockfish and sculpins (cabezon and staghorn sculpin) are caught in the Channel District (Figure B-3).

Figure B-2. Estimated Proportion of Fishing Effort, 2005 to 2007

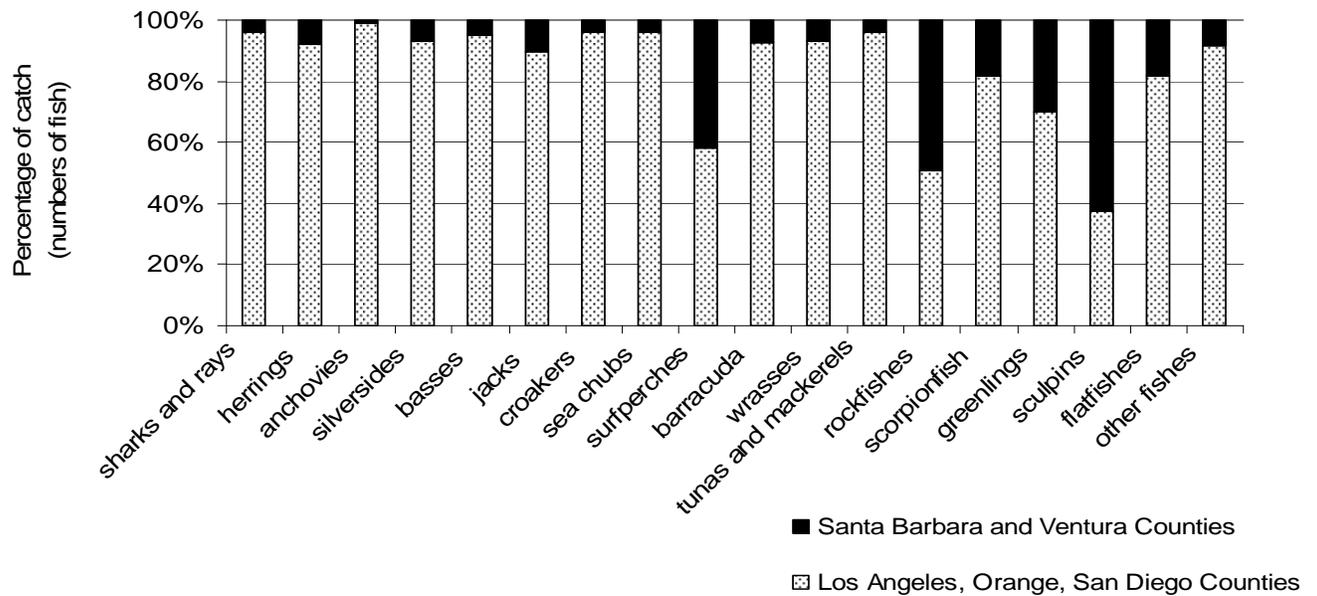


Source: CRFS data extracted from the RecFIN database at <http://www.recfm.org/forms/est2004.html>

Query represents all angler trips for all modes of fishing for inland and marine waters less than 3 miles from shore for southern California.

Extraction date: December 17, 2008

Figure B-3. Estimated proportion of catch by fish type, 2005 to 2007



Source: CRFS data extracted from the RecFIN database at <http://www.recfm.org/forms/est2004.html>. Query represents catch in numbers of fish by supergroup for all modes for inland and marine waters within three miles of shore for southern California. Extraction date: August 28, 2008

Note: A large proportion of surperch catch for Santa Barbara and Ventura Counties originates from sites north of Point Conception.

CRFS Catch Estimates by Species and Fishing Mode

Finfish catch by species and catch proportions vary by fishing mode. Table B-1 shows the average annual top ten species of fish caught for each fishing mode in the study region from 2005 to 2007.

Table B-1. Top ten species by fishing mode, 2005 to 2007

Estimated number of fish taken, in 1,000s.							
Man-made		Beach and bank ¹		CPFV		Private and rental boats	
Pacific mackerel	1,678	Barred surfperch	121	barred sandbass	114	Pacific mackerel	105
northern anchovy	580	Silversides	98	kelp bass	82	white croaker	89
Pacific sardine	446	yellowfin Croaker	34	Pacific bonito	40	barred sandbass	78
queenfish	216	white Croaker	23	Pacific barracuda	38	kelp bass	75
silversides	471	spotfin Croaker	19	vermillion rockfish	33	vermillion rockfish	24
yellowfin croaker	75	opaleye	15	Calif. scorpionfish	33	Sanddabs	22
Pacific bonito	74	California corbina	14	Pacific mackerel	28	Pacific bonito	21
walleye surfperch	59	walleye surfperch	12	blue rockfish	20	Pacific barracuda	15
white Croaker	55	black perch	11	halfmoon	17	California halibut	14
barred surfperch	44	Pacific mackerel	4	bocaccio	16	spotted sandbass	13

Source: CRFS data extracted from the RecFIN database at <http://www.recfin.org/forms/est2004.html> Query represents catch in numbers of fish by species for all modes in inland and marine waters within three miles of shore for southern California. Extraction date: July 7, 2008.

¹Note that a large proportion of surfperch catch for Santa Barbara and Ventura Counties originates from sites north of Point Conception.

CRFS Angler Reported Target Species

Tables B-2 through B-4 display the primary target species as reported by anglers during interviews with CRFS samplers. The target term “anything” is recorded when anglers are not targeting a particular species or type of fish, such as bottom or pelagic fish. The data shown in these tables are based on raw (un-extrapolated) interview data collected at fishing sites.

Table B-2. Top ten targeted finfish species by fishing mode, 2005 to 2007

	Man-made	Beach and bank	CPFVs	Private and rental boats
1	anything	anything	rockfish genus	anything
2	Pacific mackerel	surfperch family	sandbass genus	California halibut
3	California halibut	California halibut	kelp bass	yellowtail
4	surfperch family	California corbina	barred sandbass	sandbass genus
5	Pacific bonito	sandbass genus	yellowtail	kelp bass
6	bottomfish	barred surfperch	California scorpionfish	rockfish genus
7	sharks	croaker family	Pacific barracuda	barred sandbass
8	sandbass genus	bottomfish	anything	white seabass
9	croaker family	opaleye	bottom fish	Pacific barracuda
10	surface fish	Pacific bonito	surface fish	spotted sandbass

Data source: CRFS data extracted from the RecFIN database at <http://www.recfin.org/forms/dsamp.htm>.

Query represents type 1 records (angler information) for reported primary target in all modes in inland and marine waters within three miles of shore for southern California. Extraction date: July 7, 2008

Table B-3. Top ten finfish species targeted by kayakers, 2005 to 2007

	<u>Kayak</u>
1	yellowtail
2	anything
3	California halibut
4	white seabass
5	sandbass genus
6	spotted sandbass
7	kelp bass
8	barred sandbass
9	bottomfish
10	Pacific barracuda

Source: CRFS data extracted from the RecFIN database at <http://www.recfin.org/forms/dsamp.htm>.

Query represents type 1 records (angler information) for reported primary target species in private and rental boat mode where the boat type was a kayak for inland and marine waters within 3 miles from shore for southern California. Extraction date: July 7, 2008

Table B-4. Top ten finfish species targeted by spearfishermen, 2005 to 2007

	<u>Shore modes</u>	<u>Private and rental boats</u>
1	anything	kelp bass
2	California halibut	white seabass
3	white seabass	California halibut
4	black perch	yellowtail
5	California sheephead	sandbass genus
6	kelp bass	anything
7	opaleye	California sheephead
8	bottomfish	barred sandbass
9	California corbina	California scorpionfish
10	sandbass genus	black perch

Source: CRFS data extracted from the RecFIN database at <http://www.recfin.org/forms/dsamp.htm>.

Notes: Query represents type 1 records (angler information) for reported primary target species in all modes where the gear type was a spear for inland and marine waters within 3 miles of shore for southern California. Extraction date: July 7, 2008

No CRFS interview data are available for CPFV spearfishing trips.

B.3. Historic MRFSS Fishery Statistics, 1998 to 2003

Catch statistics from the MRFSS, although not directly comparable to the CRFS, are provided here to show historic catch proportions. Table B-5 shows the average annual estimated top ten species caught (number of fish) for each fishing mode in the study area from 1998 to 2003.

Table B-5. Top ten species by fishing mode, average annual catch, 1998 to 2003

<u>Estimated number of fish taken, in 1,000s.</u>							
Man-made		Beach and bank ^a		CPFV		Private and rental boats	
Pacific mackerel	455	Pacific mackerel	131	barred sandbass	189	barred sandbass	337
Pacific sardine	357	barred surfperch	103	kelp bass	152	Pacific mackerel	246
silversides	298	silversides	84	Pacific barracuda	117	kelp bass	224
queenfish	258	white croaker	28	Pacific mackerel	66	white croaker	103
white croaker	77	opaleye	15	ocean whitefish	62	California halibut	78
walleye surfperch	47	yellowfin croaker	12	Calif. scorpionfish	60	Calif. scorpionfish	67
yellowfin croaker	39	walleye surfperch	8	vermillion rockfish	34	Pacific barracuda	58
barred surfperch	21	black surfperch	8	yellowtail	33	ocean whitefish	53
black surfperch	15	Pacific sardine	7	halfmoon	27	spotted sandbass	46
northern anchovy	15	California corbina	7	rosy rockfish	19	vermillion rockfish	38

Source: MRFSS data extracted from the RecFIN database at <http://www.recfin.org/forms/dsamp.htm>. Query represents catch in numbers of fish by species for all modes in inland and marine waters within three miles of shore for southern California. Extraction date: July 7, 2008.

Notes: MRFSS catch estimates are not comparable to CRFS estimates.

^a Beach bank catch estimates are based on samples from the Santa Barbara/ San Luis Obispo County line to the Mexico/US border.

B.4. CPFV Logbook Data, 1998 to 2007: Invertebrate Catch Statistics

The CRFS and MRFSS programs have not historically collected catch and effort data on invertebrate species harvested in the recreational fisheries; thus CPFV logbook data are the best available source of information for some invertebrate species. Table V-6 displays the reported catch in thousands of fish for invertebrates taken by both divers and hook-and-line anglers on CPFVs. Humboldt squid is targeted by hook-and-line anglers, while rock scallop and California spiny lobster are primarily targeted by divers on CPFV trips. Unlike CRFS and MRFSS estimates, CPFV logbook data are not reported at the level of resolution needed to isolate trips that occurred within state waters.

Table B-6. CPFV catch of Humboldt squid, rock scallop, and California spiny lobster

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Humboldt squid		119	8		198	1		28		76
rock scallop	13	12	15	14	12	10	7	9	9	8
California spiny lobster	6	8	12	10	12	11	8	8	9	10

Source: CPFV logbook data extracted from CFIS for all ports within the south coast study region. Extraction date: August 4, 2008

Notes: Catch statistics for invertebrates represented in this table are for CPFV mode only, and are not representative of all recreational harvest.

Represents catch from all waters in southern California.

B.5. Synopsis of Applicable Regulations

California ocean sportfishing regulations applicable to the study region are described in the Ocean Sportfishing Regulation Booklet, which is available on DFG's website at: http://www.dfg.ca.gov/marine/sportfishing_regs2008.asp.

A summary of size and bag limits for common southern California species is provided in Tables B-7 and B-9, and a summary of groundfish regulations applicable to the southern California is provided in Table B-8.

Table B-7. 2007-2008 Size and Bag Limits for Some Common Fishes

Common name	Size limit (TL)	Daily bag limit
		General finfish bag limit: no more than 20 in combination of all species with no more than 10 of a single species except as provided.
albacore		10 fish in addition to overall daily limit of 20 fish in combination
bluefin tuna		10 fish in addition to overall daily limit of 20 fish in combination
kelp bass	12 inches	10 fish in combination
barred sandbass		
spotted sandbass		
California halibut	22 inches	5 fish
thresher shark		2 fish
blue shark		
shortfin mako		
shiner surfperch		20 fish in addition to overall daily limit of 20 fish in combination
Pacific barracuda	28 inches	10 fish
Pacific bonito	maximum of 5 fish can be under 24 inches(FL) or 5 lbs	10 fish
white seabass	28 inches	3 fish, except 1 fish between March 15th and June 15th
yellowtail	maximum of 5 fish can be under 24 inches (FL)	10 fish
anchovy		no limit
grunion		no limit
jacksmelt		no limit
topsmelt		no limit
Pacific butterfish		no limit
queenfish		no limit
sanddabs		no limit
skipjack		no limit
jack mackerel		no limit
Pacific mackerel		no limit
Pacific staghorn sculpin		no limit
round herring		no limit
Pacific sardine		no limit
petrale sole		no limit
starry flounder		no limit
garibaldi		no take allowed
white shark		no take allowed
giant seabass		no take allowed
broomtail grouper		no take allowed

Notes: Boat limits also apply for CPFV trips. See section §27.60, Title 14, CCR.
See regulations for gear restrictions and fillet lengths.

Table B-8. 2008 Groundfish regulations excluding cowcod conservation areas

Species	Time period ^{2,3,4,6,7}	Depth limit ^{2,3,4,6,7}	Daily bag limit ³	Min. size limit ^{1,3,5}
RCG Complex (including all species of rockfish, cabezon and greenlings)	<u>Boat-based Anglers⁴:</u> Open: Mar 1-Dec 31 Closed: Jan, Feb <u>Divers, Shore-based Anglers⁴:</u> Open year-round	May only be taken or possessed in waters <i>less than 360 ft (60 fm) deep</i> ² SEE EXCEPTION AT END OF TABLE	10 fish in combination per person; see sublimits for cabezon, greenlings and bocaccio	See individual species and groups below
canary and yelloweye rockfishes, cowcod	CLOSED all year; NO RETENTION		NO RETENTION (zero)	
bocaccio	Same as RCG Complex, above	Same as RCG Complex, above	1 fish per person; also included in the 10-fish aggregate RCG Complex bag limit	10" total length
cabezon	Same as RCG Complex, above	Same as RCG Complex, above	1 fish per person; also included in the 10-fish aggregate RCG Complex bag limit	15" total length
kelp or rock greenling	Same as RCG Complex, above	Same as RCG Complex, above	2 fish per person; also included in the 10-fish aggregate RCG Complex bag limit	12" total length
ocean whitefish	Same as RCG Complex, above	Same as RCG Complex, above	10 fish per person	none
California sheephead	Same as RCG Complex, above	Same as RCG Complex, above	5 fish per person	12" total length
California scorpionfish	OPEN all year	Jan, Feb: May only be taken or possessed in waters <i>less than 240 ft. (40 fm) deep</i> ² Mar 1-Dec 31: May only be taken or possessed in waters <i>less than 360 ft. (60 fm) deep</i> ²	5 fish per person	10" total length
lingcod	<u>All Anglers and Divers⁴:</u> Open: Apr 1-Nov 30 Closed: Jan 1-Mar 31, Dec	Same as RCG Complex, above	2 fish per person	24" total length
leopard shark	<u>Boat-based Anglers⁴ within Newport Bay, Alamitos Bay, San Diego Bay, and Mission Bay:</u> Open all year <u>Outside of the above-mentioned bays:</u> Same as RCG Complex, above <u>Divers, Shore-Based Anglers⁴:</u> Open all year	<u>Boat-based Anglers⁴ within Newport Bay, Alamitos Bay, San Diego Bay, and Mission Bay:</u> No depth restrictions <u>Outside of the above-mentioned bays:</u> Same as RCG Complex, above <u>Divers, Shore-Based Anglers⁴:</u> Open all year	3 fish per person	36" total length

Species	Time period ^{2,3,4,6,7}	Depth limit ^{2,3,4,6,7}	Daily bag limit ³	Min. size limit ^{1,3,5}
Pacific sanddabs and "Other Flatfish" ⁷ (see Section 28.48)	OPEN all year <i>with certain gear restrictions during Jan and Feb</i> (see Footnote 7, below)	None, <i>although certain gear restrictions apply in depths greater than 360 ft (60 fm)</i> (see Footnote 7, below)	See Section 28.48	See Section 28.48
other federal groundfish (see Sections 28.49, 28.51, 28.52, 28.53, 28.57)	Same as RCG Complex, above	Same as RCG Complex, above	See Sections 28.49, 28.51, 28.52, 28.53, 28.57	See Sections 28.49, 28.51, 28.52, 28.53, 28.57

Notes: 1 See regulations for information on gear restrictions and fillet lengths.

2-In the Cowcod Conservation Areas fishing is prohibited in waters greater than 120 feet (20 fathoms) in depth. Fishing is also subject to the Time Period closures for the Southern Management Area. See Section 27.50 for further information on species restrictions.

3-Subject to in-season change.

4-Divers and shore-based anglers are exempt from season and depth restrictions affecting the RCG complex, ocean whitefish, California sheephead, and other federally managed groundfish (except for lingcod). However, when spear fishing during a boat-based closure, only spear fishing gear is allowed aboard any vessel or watercraft. Also, when angling from shore during a boat-based closure, no vessel or watercraft may be used to assist in taking or possessing species included in this table. The following definitions describe boat-based and shore-based anglers, and divers:

Boat-based anglers are fishermen that fish from boats or vessels of any size or any other type of floating object, including kayaks and float tubes.

Shore-based anglers are fishermen that fish from beaches, banks, piers, jetties, breakwaters, docks and other manmade structures connected to the shore.

Divers are spear fishermen entering the water either from the shore or from a boat or other floating object.

5-Total length is the longest straight-line measurement from the tip of the head with the mouth closed to the end of the longest lobe of the tail. The 2007 Ocean Sport Fishing regulations booklet has a measurement illustration.

6-The sport fishery for leopard shark inside Newport Bay, Alamitos Bay, Mission Bay, and San Diego Bay is exempt from season and depth restrictions that affect other federally managed groundfish.

7-In closed areas or during closed periods, Pacific sanddab, butter sole, curfin sole, flathead sole, rex sole, rock sole, and sand sole (defined as "Other Flatfish" in Section 1.91(a)(10)) may ONLY be taken using the following gear: up to 12 No. 2 (or smaller) hooks and up to 2 lb. of weight.

EXCEPTION: During the open season, groundfish may be possessed in closed areas and in water depths closed to fishing only aboard vessels in transit with no fishing gear in the water. See sub-section 27.20(b).

Table B-9 2007-2008 size and bag limits for common invertebrates

Common name	Size limit	Daily bag limit
		General bag limit: 35 individuals
California spiny lobster ^a	3 1/4 inch carapace length	7 lobsters
ghost shrimp		50 shrimp in combination
blue mud shrimp		
sand crabs		50 crabs
mussels		10 lbs
Pismo clam	4 1/2 inch greatest diameter	10 clams
littleneck clams	1 1/2 inch greatest diameter	50 clams in combination
soft-shell clams	No limit	
chiones	1 1/2 inch greatest diameter	
northern quahogs	1 1/2 inch greatest diameter	
cockles	1 1/2 inch greatest diameter	

Notes: See regulations for additional restrictions. Recreational take of abalone is prohibited in southern California

^a California spiny lobster may be taken by hand or by baited hoop net. South of Point Arguello, not more than five baited hoop nets may be fished by any one person, not to exceed a total of 10 baited hoop nets fished from any vessel.