

10 Groundfish: Overview

There are 89 species of marine fish (Table 10-1) included under the Pacific Coast Groundfish Fishery Management Plan (Groundfish FMP) that was adopted by the Pacific Fishery Management Council (PFMC) in 1982. In general, the Groundfish FMP provides for management of bottom dwelling finfish species (including all rockfish and Pacific whiting) that are found within 200 miles (322 kilometers) (exclusive economic zone or EEZ) of the U.S. Pacific coast off Washington, Oregon and California. Of these, only 31 of the species have been assessed. Since 2005, stock assessments have occurred biennially, alternating with regulation development, with an average of 17 species assessed each cycle. Overfished species (currently 7) are assessed or updated with each cycle along with species which have never been assessed or have not been assessed for several years. Only Pacific whiting is assessed each year.

Based on the results of stock assessments, the Groundfish FMP designates a stock to be “healthy,” “precautionary” or “overfished.” According to the Groundfish FMP, healthy stocks maintain more than 40 percent of their estimated unfished spawning stock biomass. Precautionary stocks maintain between 40 and 25 percent of their estimated unfished spawning stock biomass. Federally designated overfished stocks have less than 25 percent of their estimated unfished spawning stock biomass. The Groundfish FMP requires rebuilding plans for all overfished species that place an emphasis on a reasonable likelihood of rebuilding the stock within a specified time period and subsequent management actions designed to avoid fishing pressure upon the overfished species.

The amount of fishing that is allowed is determined using information from the stock assessments, when available, or historic catches. The Acceptable Biological Catch (ABC) is based on the current stock biomass and the fishery exploitation rate, when available. If there is no stock assessment, ABC can be set based on average historic landings. The ABC is the absolute maximum amount of fish that could be taken each year. The Optimum Yield (OY) can be equal to the ABC but is usually less than the ABC due to uncertainty about the stock assessment or historic catch, and can be for a single species or multispecies group. For species listed as precautionary or overfished, the OY is further reduced to allow for rebuilding of the species. When an OY is reached, all fishing for that species or species group must cease. Species which are included in a multispecies OY may also have individual OYs, individual harvest guidelines (HGs), or be included in a HG for a subgroup of the multispecies OY. Unlike OYs, attainment of a HG does not require closing the fishery, but does require review. Groundfish management measures are adopted biennially to keep within the various OYs and HGs. The OY or HG is allocated between the commercial and recreational fisheries, and can be further subdivided by fishing area and/or fishing sector (e.g., limited entry trawl, boat-based anglers).

Table 10-1. Pacific coast groundfish species.

Shallow nearshore species - Black-and-yellow rockfish • Cabezon - California scorpionfish - China rockfish • Gopher rockfish - Grass rockfish • Kelp greenling - Kelp rockfish Deep nearshore rockfish - Black rockfish • Blue rockfish - Brown rockfish - Calico rockfish - Copper rockfish - Olive rockfish - Quillback rockfish - Treefish Round fish - Finescale codling • Lingcod - Pacific cod - Pacific rattail • Pacific whiting - Ratfish • Sablefish <i>Additionally all species of the family Scorpaenidae that occur off Washington, Oregon and California, including those not listed above, are considered groundfish. The Scorpaenidae genera include Sebastes, Scorpaena, Scorpaenodes and Sebastolobus.</i>	Shelf rockfish • BOCACCIO - Bronzespotted rockfish • CANARY ROCKFISH - Chameleon rockfish • Chilipepper • COWCOD - Dusky rockfish - Dwarf-red rockfish - Flag rockfish - Freckled rockfish - Greenblotched rockfish - Greenspotted rockfish • Greenstriped rockfish - Halfbanded rockfish - Harlequin rockfish - Honeycomb rockfish - Mexican rockfish - Pink rockfish - Pinkrose rockfish - Pygmy rockfish - Redstripe rockfish - Rosethorn rockfish - Rosy rockfish • Shortbelly rockfish - Silvergrey rockfish - Speckled rockfish - Squarespot rockfish - Starry rockfish - Stripetail rockfish - Swordspine rockfish - Tiger rockfish • Vermilion rockfish • WIDOW ROCKFISH • YELLOW EYE ROCKFISH • Yellowtail rockfish • Longspine thornyhead • Shortspine thornyhead	Slope rockfish - Aurora rockfish - Bank rockfish • Blackgill rockfish • DARKBLOTCHED ROCKFISH • PACIFIC OCEAN PERCH - Redbanded rockfish - Rougheye rockfish - Sharpchin rockfish - Shortraker rockfish • Splitnose rockfish - Yellowmouth rockfish Flatfish • Arrowtooth flounder - Butter sole - Curlfin sole • Dover sole • English sole - Flathead sole - Pacific sanddab • Petrale sole - Rex sole - Rock sole - Sand sole • Starry flounder Sharks - Leopard shark - Southern shark - Spiny dogfish Skates - Big skate - California skate • Longnose skate
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Notes:

Species in caps have been declared overfished and are currently under rebuilding.

Species with a • have been assessed.

New state legislation in 1998 enacted the Marine Life Management Act (MLMA) which required the state to take a more precautionary approach to finfish management, delegated the management of finfish in state waters to the California Fish and Game Commission (Commission), and mandated the Commission adopt a Nearshore Fisheries Management Plan (Nearshore FMP) for 19 nearshore species, 16 of which

are included in the Groundfish FMP. For the commercial fishery, the Nearshore FMP implemented a regional restricted access fishery for the shallow nearshore species, California sheephead and rock greenling; and a statewide Deeper Nearshore Species Fishery Permit for the deep nearshore rockfish (Table 10-1). Monkeyface prickleback is included in the Nearshore FMP; however, no permit is required to take this species.

California's Nearshore FMP implemented a more precautionary approach to managing nearshore rockfish compared to the federal Groundfish FMP, based on how much is known about a species. In a data moderate situation, a healthy stock is one that maintains more than 60 percent of their estimated unfished spawning stock. Precautionary stocks maintain between 60 and 30 percent of their estimated unfished spawning stock biomass. Overfished stocks have less than 30 percent of their estimated unfished spawning stock biomass. The 19 species in the Nearshore FMP occur primarily in state waters (0-3 miles; 0-5 kilometers), so while the federal government maintains authority over the shallow and deep nearshore species, California is instrumental in developing regulations for these species using the guidelines of the Nearshore FMP.

Groundfish management is complicated because fisheries for many of the species are interrelated, but the various stocks have responded differently to fishing pressure. For example, flatfish populations such as Dover and English soles have been subjected to significant commercial fisheries for decades, yet have not shown the magnitude of decline that has occurred in some of the rockfish populations.

The current status of many rockfish off the west coast is poor, and significant changes in the groundfish fishery have been necessary to address this situation. There are over 60 different species of rockfish in California. Several factors affect the abundance of rockfish and the ability to manage them effectively. Recent analyses have shown that rockfish stocks are not as productive as previously thought. This is due in part to improved information about rockfish life history (such as age, growth and reproduction), better stock assessments and environmental conditions that generally have not been favorable to rockfish reproduction or survival for many years. As a result, rockfish cannot support harvest rates as high as previously thought.

Management is further complicated because the habitats and ranges of many rockfish species overlap, so it is difficult to catch one species without catching other species at the same time. Fishing must be reduced for an entire group of rockfish in order to realize lower catches that are necessary to rebuild overfished stocks. For example, although a few shelf rockfish species such as chilipepper and yellowtail rockfish appear to be comparatively healthy, their allowable harvest has been set at levels below the potential yield to protect the overfished shelf rockfish that tend to be caught with them, such as canary and yelloweye rockfish.

Prior to 2000, the allowable catch of all rockfish in the PFMC's southern management area (most of California) was combined into a single quota. To better align fishing opportunities with the resources that support them, fishery managers grouped rockfish into three new categories: nearshore, shelf, and slope (Table 10-1). In addition, management has been refined by setting individual quotas for a few

species, which reduces the aggregate quota for other remaining rockfish species. While this approach lowers the harvest of overfished rockfish species, such as canary and yelloweye rockfish, it also reduces the opportunities for nearshore species that are no longer grouped with certain deepwater species that are typically under harvested. In 2003, the nearshore species group was further subdivided into the shallow and deep nearshore to align quotas with California's new commercial fishery permits for nearshore species.

In 2002, the Rockfish Conservation Areas (RCAs) were created to reduce fishing pressure on the shelf where most of the overfished rockfish species occur. These are depth based closures ranging from 30-50 fathoms and 150-200 fathoms (55-91 meters and 274-366 meters) depending on regional management area, along the California coastline. Bottom fishing is prohibited within the RCA, but provisions allow for some surface fishing as well as transiting through the RCA. In addition to the RCAs, the Cowcod Conservation Area (CCA), a non-depth based closure covering much of the cowcod's habitat, was implemented to protect cowcod, one of the overfished rockfish. These closures have had significant impact on both recreational and commercial fishers.

Commercial fishery

The commercial groundfish fishery primarily targets round fish (Pacific whiting, sablefish), flatfish (Dover sole, Petrale sole) and shelf rockfishes (thornyheads, widow and chilipepper rockfish) (Figure 10-1). Landings of shelf rockfish have declined since 2000 due to catch restrictions aimed at limiting the take of overfished species (e.g., yelloweye and canary rockfish).

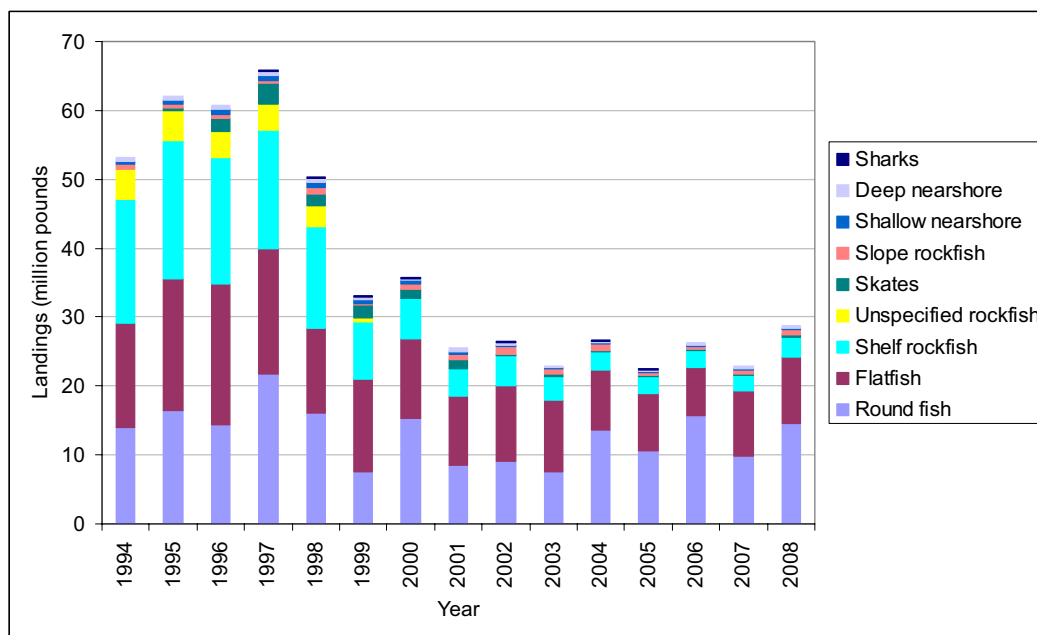


Figure 10-1. Groundfish commercial landings, 1994-2008. Data source: CFIS data, all gear types combined.

The commercial fishery is split into the limited entry (trawl and sablefish long line/trap) and the open access sectors. Trip limits for species or species groups differ between the sectors. Additionally, time and area closures (RCAs, CCA) are used to keep the commercial fishery within the various OYs and HGs.

In 2004, a Vessel Monitoring System (VMS) was implemented; its purpose is to monitor compliance with regards to areas closed to fishing such as the RCAs. Initially, VMS was only required on limited entry vessels fishing in federal waters (2004) but has since expanded to include the open access sector of the groundfish fishery for vessels fishing in federal waters (2008).

Overcapacity is another issue in the groundfish fishery. In 1994, the groundfish trawl and sablefish fixed gear fishery became limited entry fisheries to cap and reduce capacity. However, this did not reduce fleet size enough and further actions were taken. In 2001, a permit stacking program was implemented for the sablefish fixed gear fishery that allows fishers to take additional amounts of catch, depending on how many permits they have. For more information on this program, see the sablefish section of this report.

The PFMC developed and implemented a trawl vessel buyout program in 2003 to help compensate for continued fishery overcapacity. Coastwide, 92 trawl vessels, representing 1/3 of the fleet, took advantage of the vessel buyout program. The upcoming trawl individual quota (IQ) program will address overcapitalization in the remaining groundfish trawl vessels by granting quota shares for species or species groups based on historic landings. These quota shares can be used, leased or sold.

The Pacific whiting fishery is another sector of the groundfish fishery burdened with overcapacity. In 2008, a limited entry program was created for all sectors of the whiting fishery (catchers, catcher-processors and at sea processors). The program was implemented as an interim measure until the groundfish trawl IQ program could be implemented.

In 2000, the PFMC indicated that limiting the open access sector of the commercial groundfish fishery was a priority to limit overcapitalization. In subsequent years, the PFMC looked at a range of alternatives to restrict the fishery with a limited entry permit. After much deliberation, the PFMC adopted a registration only option that will require any vessel participating in groundfish fisheries to register with the National Marine Fisheries Service each year beginning in 2011. This option will provide annual fleet accountability for management tracking while maintaining flexibility for fishery participants.

A total of about 850 businesses in California are directly affected by commercial groundfish catch regulations. Most of the affected businesses are fishing vessels. There are approximately 625 commercial fishing vessels in California that catch and sell groundfish as part of their operations.

Vessels in the limited entry fleet have a federal permit that allows them to harvest larger amounts of groundfish. Consequently, vessels with limited entry permits generally

rely heavily on groundfish as a major source of income. There are 191 limited entry vessels in California.

Vessels that land groundfish under open access provisions may or may not depend on groundfish as a major source of income. Many vessels that predominately fish for other species also may inadvertently catch and land groundfish. Although 533 open access vessels landed groundfish in California during 2008, many landed less than 1000 pounds (454 kilograms). A total of 305 open access vessels each landed more than 1000 pounds (454 kilograms) of groundfish during the calendar year. In addition to the commercial fishing fleet, there are approximately 200 wholesale fish buying businesses in California that purchase groundfish from commercial fishing vessels.

The 2008 California commercial groundfish harvest was approximately 28.8 million pounds (13,000 metric tons), with an ex-vessel value of \$19.0 million (Figure 10-2). This represents a 43 percent decline in landings and an 11 percent decline in value compared to 1998, before more restrictive regulations became effective. Groundfish production has exhibited a long-term downward trend in landings since the 1990s, mostly due to increased regulations. Although landings have declined significantly over time, the advent of the live fish fishery has kept value fairly stable. The live fish fishery began in the late 1980s targeting nearshore rockfish and cabezon in central California. This fishery has expanded coastwide and now targets some other groundfish species (e.g., lingcod and thornyheads). In 2008, over 1 million pounds (470 metric tons) of live groundfish (3.4 percent of the total groundfish catch) worth \$4.2 million dollars were landed in California, primarily thornyheads, deeper nearshore rockfish, sablefish, shallow nearshore rockfish, cabezon and lingcod. For some species, such as cabezon, grass rockfish and treefish, over 90 percent were landed live in 2008 (Figure 10-3).

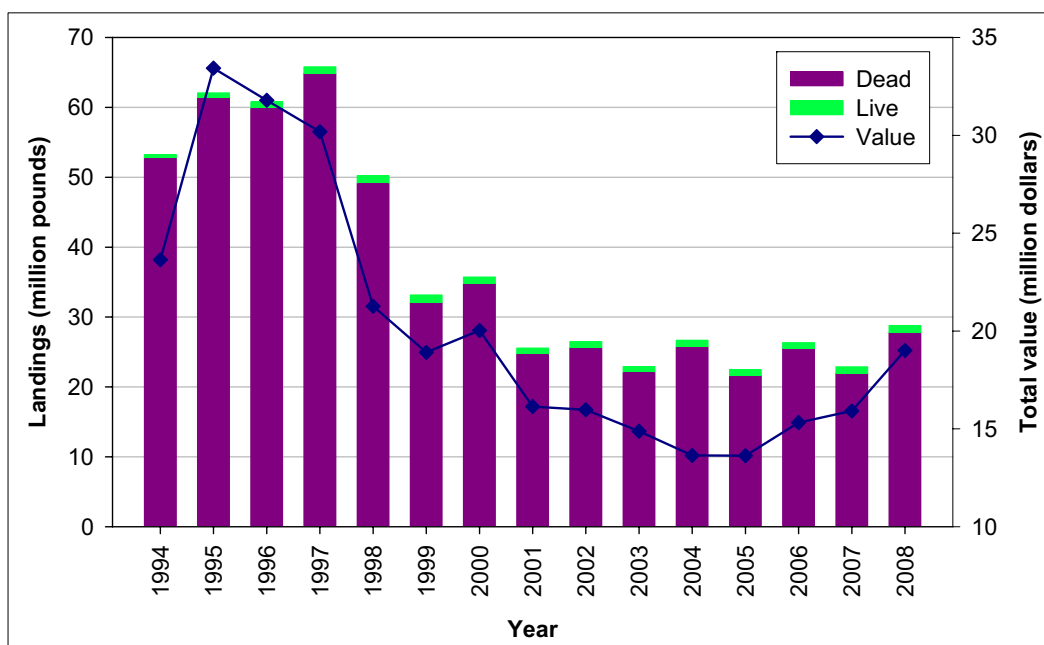


Figure 10-2. Commercial groundfish landings and value, 1994-2008. Data source: CFIS data, all gear types combined.

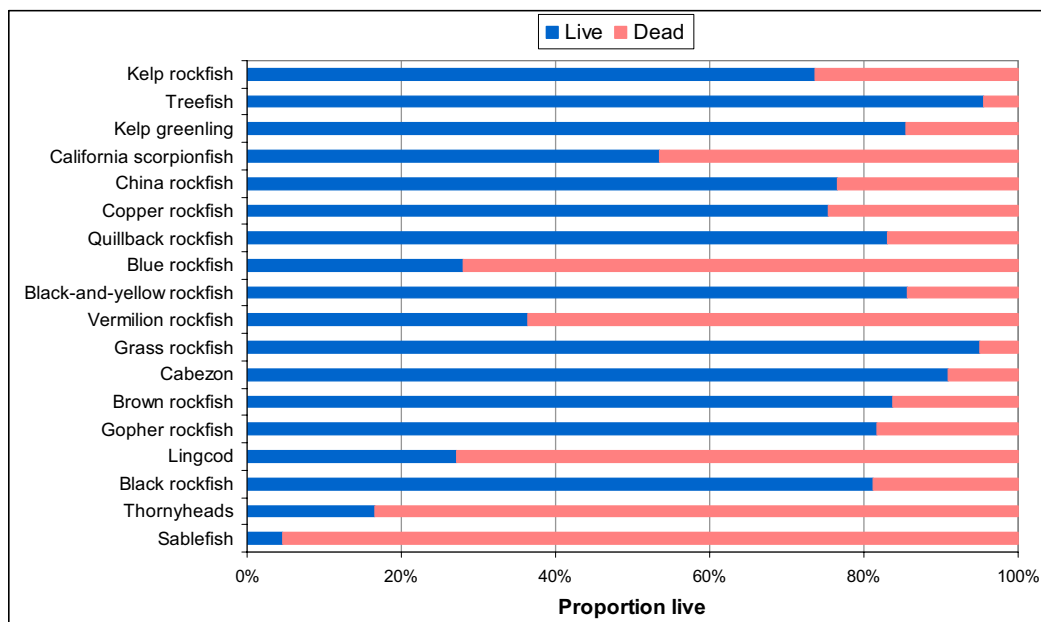


Figure 10-3. Live groundfish commercial landings in 2008. Species are ranked from lowest to highest total landings (live and dead combined). Data source: CFIS data, all gear types combined.

Recreational fishery

The primary groundfish species or species groups caught by recreational anglers are rockfishes, sanddabs, California scorpionfish, lingcod, cabezon and greenlings (Figures 10-4 and 10-5). Within the rockfish category deep nearshore, shelf, shallow nearshore and unspecified rockfish are the primary species groups caught. Groundfish are primarily caught by recreational anglers on boats, with shore-based anglers taking less than 5 percent of the catch. Bag and size limits and time and area closures are the primary means of keeping the recreational fishery within the various OYs and HGs.

There are two different recreational sampling programs: the Marine Recreational Fisheries Statistical Survey (MRFSS) which sampled from 1980 to 2003 and the California Recreational Fisheries Survey (CRFS) which was initiated by the California Department of Fish and Game (Department) in 2004. Due to changes in the sampling protocol and how the data are used to estimate catch these two surveys are not comparable. From 1994 to 2003, recreational groundfish catch was fairly stable based on MRFSS data, although the species composition changed as regulations changed (Figure 10-4). According to CRFS, catch peaked in 2005, declining each year thereafter (Figure 10-5). This is likely do to additional constraints on the recreational fishery.

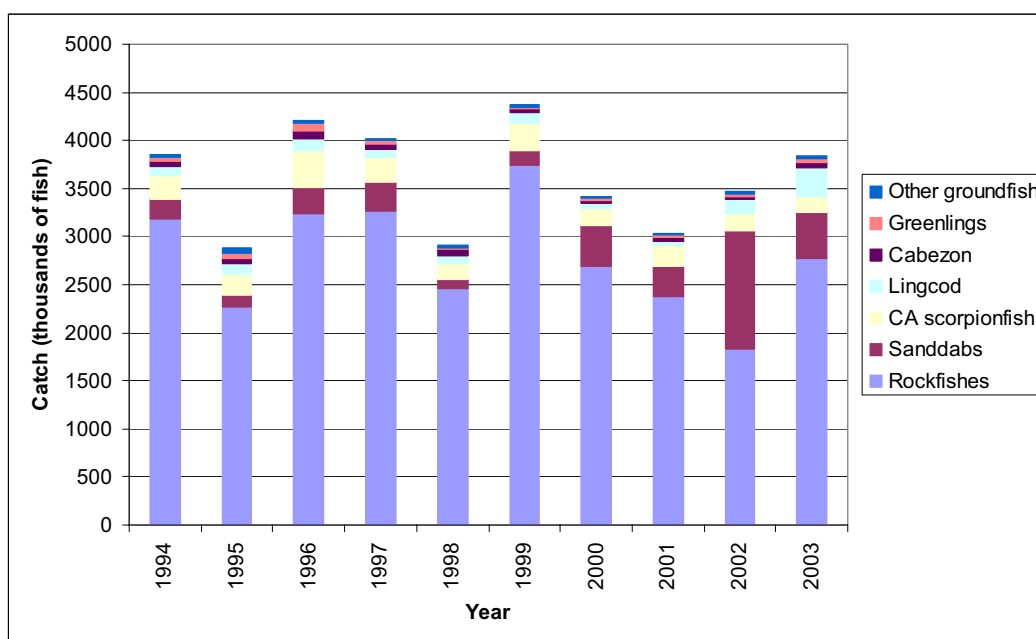


Figure 10-4. Groundfish recreational catch, 1994-2003. Data source: MRFSS data, all fishing modes and gear types combined. CPFV data not available for central and northern California for 1994-1995.

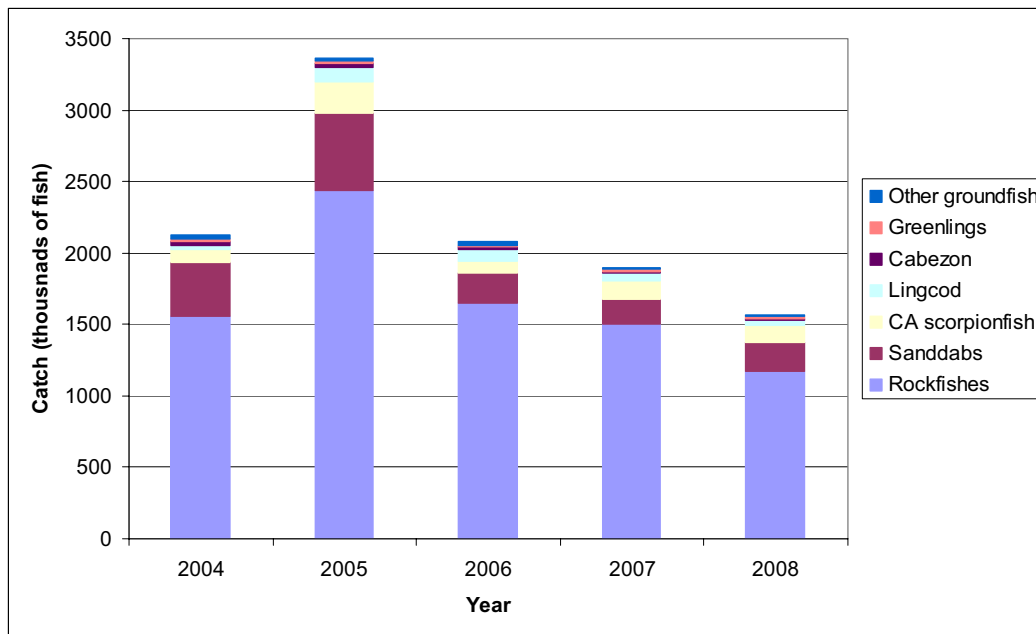


Figure 10-5. Groundfish recreational catch, 2004-2008. Data source: CRFS data, all fishing modes and gear types combined.

In 2000, the first of several major changes to the recreational take of groundfish occurred with the reduction of the rockfish bag limit from 15 fish to 10 fish, all species combined. In 2003, the RCG (rockfish, cabezon and greenlings) complex was established with a 10 fish bag limit, for all species combined. Since 2003, there have been a number of sub-bag limit changes such as allowing only 2 shallow nearshore rockfish within the 10-fish RCG bag limit (established 2003 and repealed in 2004). As of 2008, the 10-fish RCG bag limit includes a sub-bag limit for cabezon (1 fish) and greenlings (2 fish). Additionally, there have been changes to the lingcod bag limits over time (see the lingcod section of this report); the current lingcod bag limit is 2 fish (2008). There are also bag limits for the following groundfish species—leopard shark (3 fish) and soupfin shark (1 fish). The general bag limit of not more than 20 finfish in combination of all species with not more than 10 of any one species applies to the following groundfish—arrowtooth flounder, big skate, butter sole, California skate, curlfin sole, Dover sole, English sole, finescale codling, flathead sole, longnose skate, longspine thornyhead, Pacific cod, Pacific whiting, ratfish, rattail, rex sole, rock sole, sablefish, sand sole, shortspine thornyhead and spiny dogfish. There is no bag limit for Pacific sanddab, Petrale sole and starry flounder.

In 2000, the first size limits for recreationally-caught groundfish were established—cabezon (14 inches), California scorpionfish (10 inches) and greenlings (12 inches). In 2001, the size limit for cabezon was increased to 15 inches where it remains. As of 2008, the only rockfish with a recreational size limit is bocaccio (10 inches). Barotrauma, associated with bringing rockfish up from depth, has precluded the use of size limits on other rockfish species and any species with swim bladders caught in deeper waters. The size limit for lingcod is currently 24 inches (2008), but has

changed over time (see the lingcod section of this report). The only other groundfish species with a recreational size limit is leopard shark (36 inches).

In 2000, there were 3 recreational management areas in California. The northern recreational management area [Oregon/California border to Cape Mendocino (Humboldt County)] was open year round. The central recreational management area [Cape Mendocino to Lopez Point (Monterey County)] was closed in March and April for nearshore and shelf rockfish and lingcod and the southern recreational management area (Lopez Point to U.S./Mexico border) was closed in January and February for nearshore and shelf rockfish and lingcod. The first of many actions to limit recreational fishing for groundfish occurred mid-2000 when lingcod was closed for November and December. In 2003, recreational fishing in the central and southern recreational management areas was curtailed with a July–October season. Intense fishing pressure after being off the water for 6 months occurred in some areas. This resulted in early closures for some species due to attaining the HG for overfished species bocaccio and lingcod, as well as nearshore rockfish. In an effort to maximize fishing opportunities, a fourth management area was created in 2004 by splitting the central area into the north-central and south-central recreational management areas. Over the next 4 years, the number of recreational management areas grew from 4 to 6. Depth-based closures also increased culminating with the RCAs in 2003. Associated time and area closures have become more complex as the Department tries to maximize fishing opportunities while protecting overfished species such as yelloweye rockfish. Table 10-2 lists the 2008 time and depth closures for each regional management area.

Table 10-2. Recreational regulations for cabezon, California scorpionfish, greenlings, lingcod and rockfishes in 2008.		
Recreational management area	Season	Depth closure
Northern OR/CA border to Cape Mendocino	May-December Lingcod May-November <i>Closed September 2</i>	30 fms <i>Changed to 20 fms</i>
North-Central Cape Mendocino to Lopez Pt	June-November Lingcod June-November	30 fms <i>Changed to 20 fms</i>
<i>The North-Central region was split into two regions effective September 2, 2008:</i>		
North-Central North of Point Arena Cape Mendocino to Pt Arena	<i>Closed September 2</i>	20 fms
North-Central South of Point Arena Pt Arena to Pigeon Pt	June-November Lingcod June-November	20 fms
Monterey South-Central Pigeon Pt to Lopez Pt	May-November	40 fms
Morro Bay South-Central Lopez Pt to Pt Conception	May-November	40 fms
Southern Pt Conception to U.S./Mexico border	March-December Lingcod April-November California scorpionfish January-December	60 fms

Note: Inseason changes in *italics*.

Gear restrictions are another tool used to limit groundfish effort. Prior to 2000, there were no gear restrictions. In 2000, recreational anglers targeting rockfish were allowed only 1 line with 3 hooks. This was reduced to 1 line with 2 hooks in 2001 where it remains. In 2004, special gear was allowed for the take of Pacific sanddabs when rockfish fishing was closed and in depths where rockfish fishing was not allowed.

The recreational catch of groundfish totaled over 1.5 million fish in 2008, just 22 percent of the total recreational catch. Groundfish made up almost 70 percent of the commercial passenger fishing vessel (CPFV) catch and over 50 percent of the private/rental boat catch in 2008. Some areas, such as the Redwood and Wine CRFS districts, roughly analogous to the Northern and North-Central North of Point Arena recreational groundfish management areas, rely heavily on groundfish species, which represents 59 and 78 percent of the total recreational catch, respectively (Figure 10-6). The South and Channel CRFS districts, roughly analogous to the Southern groundfish recreational management area, do not rely on groundfish.

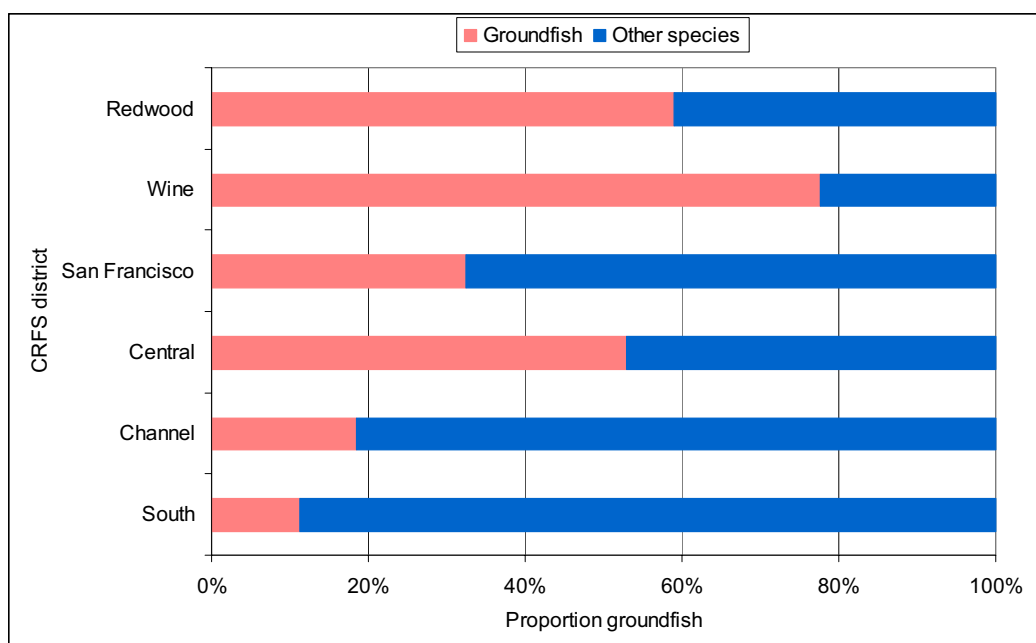


Figure 10-6. Proportion of groundfish taken by recreational anglers in 2008. Data source: CRFS data, all fishing modes and gear types combined.

For more information on groundfish and groundfish management in California go to the Department's Groundfish Central website at <http://www.dfg.ca.gov/marine/groundfishcentral/index.asp>.

For more information on federal groundfish management go to the PFMC's website at <http://www.pcouncil.org/>.

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Groundfish commercial landings, 1994-2000.								
Common Name	1994	1995	1996	1997	1998	1999	2000	
Shallow nearshore species								
Black-and-yellow rockfish	5 \$0	0 \$0	7 \$0	889 \$2,960	2,063 \$5,460	23,581 \$102,586	32,017 \$162,925	
Cabazon	82,924 \$273,589	193,814 \$665,683	245,230 \$837,835	264,868 \$847,178	372,760 \$1,224,134	321,207 \$1,220,517	255,811 \$1,126,064	
California scorpionfish	113,123 \$179,440	90,740 \$145,764	76,444 \$113,944	95,880 \$138,158	112,822 \$187,812	86,683 \$202,508	41,252 \$102,401	
China rockfish	67,963 \$124,071	58,156 \$107,533	38,388 \$68,191	47,657 \$102,768	21,837 \$61,587	14,305 \$55,403	12,256 \$59,439	
Gopher rockfish	31,337 \$34,998	17,327 \$35,105	12,095 \$18,936	19,368 \$46,601	23,477 \$66,132	93,420 \$328,716	77,842 \$360,635	
Grass rockfish	72,601 \$293,418	108,714 \$505,926	93,310 \$424,949	87,793 \$319,413	92,196 \$444,454	59,258 \$297,934	62,825 \$406,955	
Kelp greenling	7,599 \$12,611	2,577 \$4,980	5,800 \$14,653	23,118 \$55,180	14,716 \$51,197	32,439 \$123,637	51,019 \$223,099	
Kelp rockfish	6,673 \$10,245	5,307 \$6,061	4,297 \$7,359	2,009 \$1,788	1,653 \$2,392	2,976 \$9,788	2,218 \$9,440	
Group gopher rockfish	147,069 \$257,142	167,911 \$342,071	221,345 \$513,363	141,795 \$352,017	135,196 \$355,756	28,468 \$93,415	12,059 \$54,483	
Group nearshore rockfish	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	129 \$468	6,550 \$18,333	
Deeper nearshore rockfish								
Black rockfish	248,713 \$116,947	244,298 \$127,998	272,928 \$149,230	269,270 \$153,188	188,642 \$104,438	130,194 \$98,219	110,603 \$128,183	
Blue rockfish	73,600 \$38,611	40,356 \$22,872	25,311 \$14,403	86,180 \$46,691	92,215 \$56,986	30,393 \$24,601	17,862 \$19,769	
Brown rockfish	9,200 \$6,734	3,843 \$5,243	2,729 \$3,711	6,612 \$3,369	13,012 \$12,490	24,502 \$41,344	29,078 \$119,158	

Groundfish commercial landings, 1994-2000.							
Common Name	1994	1995	1996	1997	1998	1999	2000
Deeper nearshore rockfish (continued)							
Copper rockfish	76,857 \$110,714	97,591 \$136,901	141,988 \$201,484	101,053 \$116,907	66,362 \$84,656	35,456 \$65,756	21,821 \$63,492
Olive rockfish	135 \$83	564 \$248	720 \$2,023	645 \$1,363	1,259 \$4,693	1,218 \$1,993	2,186 \$3,185
Quillback rockfish	2,776 \$3,761	11,448 \$16,457	17,936 \$35,661	20,739 \$31,684	26,164 \$47,970	18,030 \$55,315	13,808 \$54,910
Treefish	114 \$353	199 \$705	1,536 \$1,861	1,744 \$2,693	231 \$1,087	1,960 \$9,912	3,720 \$18,702
Group black/blue rockfish	10,309 \$5,545	384 \$404	2,226 \$1,173	8,192 \$4,486	2,695 \$1,414	487 \$449	48 \$144
Group bolina (brown) rockfish	73,926 \$148,668	56,229 \$109,998	97,338 \$204,351	126,021 \$240,937	125,799 \$262,633	112,594 \$315,263	67,501 \$281,376
Group deeper nearshore rockfish	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
Shelf rockfish							
Bocaccio	1,883,077 \$730,583	1,678,458 \$687,328	1,022,557 \$405,653	600,460 \$237,223	297,478 \$142,490	150,895 \$79,635	54,455 \$38,135
Bronzespotted rockfish	54 \$0	627 \$627	0 \$0	16 \$7	137 \$150	0 \$0	61 \$91
Canary rockfish	205,338 \$145,303	341,969 \$210,324	404,248 \$254,793	477,605 \$308,771	399,487 \$233,669	233,081 \$154,894	34,937 \$34,508
Chameleon rockfish	0 \$0	0 \$0	0 \$0	0 \$0	18 \$0	0 \$0	0 \$0
Chilipepper rockfish	2,682,990 \$1,143,955	2,819,834 \$1,226,671	2,749,430 \$1,161,390	2,802,935 \$1,121,507	2,052,104 \$895,052	1,943,419 \$864,839	985,916 \$600,979
Cowcod	33,596 \$37,036	52,129 \$59,755	34,007 \$35,551	21,625 \$22,935	25,768 \$35,060	6,809 \$8,640	1,622 \$2,364

Groundfish commercial landings, 1994-2000.								
Common Name	1994	1995	1996	1997	1998	1999	2000	
Shelf rockfish (continued)								
Darkblotched rockfish	0 \$0	0 \$0	10,078 \$4,600	25,513 \$9,808	8,203 \$333	1,259 \$421	25,149 \$14,074	
Flag rockfish	180 \$240	1,005 \$890	18 \$20	130 \$52	170 \$11	1 \$5	279 \$369	
Greenblotched rockfish	0 \$0	0 \$0	0 \$0	0 \$0	19 \$4	0 \$0	477 \$949	
Greenspotted rockfish	33,381 \$31,940	15,356 \$12,399	41,785 \$38,603	44,779 \$25,579	27,160 \$18,973	13,523 \$13,984	6,478 \$9,850	
Greenstriped rockfish	3,140 \$1,115	4,219 \$1,105	1,529 \$351	1,909 \$424	7,317 \$5,322	1,781 \$1,123	986 \$475	
Honeycomb rockfish	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	
Pink rockfish	0 \$0	0 \$0	0 \$0	2 \$0	0 \$0	0 \$0	0 \$0	
Pinkrose rockfish	214 \$75	0 \$0	0 \$0	296 \$118	3,757 \$1,669	0 \$0	0 \$0	
Rosethorn rockfish	10,157 \$4,265	10,248 \$4,576	15,855 \$8,341	18,792 \$6,529	5,307 \$2,028	1,106 \$801	285 \$333	
Rosy rockfish	1,002 \$587	202 \$103	39 \$34	0 \$0	8,560 \$4,047	591 \$206	297 \$167	
Shortbelly rockfish	6,195 \$186	12,600 \$1,957	61,440 \$5,567	44,888 \$516	15,088 \$1,619	17,634 \$962	8,710 \$1,033	
Speckled rockfish	13 \$10	10 \$10	4,706 \$1,995	455 \$336	1,447 \$986	4,975 \$6,702	224 \$578	
Squarespot rockfish	1,413 \$1,197	94 \$41	0 \$0	0 \$0	0 \$0	23 \$23	0 \$0	

Groundfish commercial landings, 1994-2000.							
Common Name	1994	1995	1996	1997	1998	1999	2000
Shelf rockfish (continued)							
Starry rockfish	20,236 \$25,380	5,050 \$6,766	455 \$644	148 \$167	3,482 \$4,210	2,274 \$3,070	334 \$733
Stripetail rockfish	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	15 \$44
Swordspine rockfish	0 \$0	0 \$0	1,423 \$1,399	2 \$0	0 \$0	295 \$7	1,778 \$1,654
Vermilion rockfish	48,690 \$42,014	46,501 \$42,285	30,819 \$28,214	32,021 \$30,259	22,659 \$26,252	23,293 \$35,223	22,819 \$48,201
Widow rockfish	2,015,399 \$686,705	3,741,581 \$1,310,776	3,106,827 \$1,028,728	3,075,859 \$985,287	2,139,872 \$863,419	1,389,652 \$593,670	1,583,435 \$766,859
Yelloweye rockfish	56,754 \$58,283	66,949 \$85,871	99,667 \$132,317	92,249 \$98,222	38,202 \$50,752	21,106 \$36,785	7,278 \$16,259
Yellowtail rockfish	543,557 \$243,862	533,686 \$234,233	465,389 \$205,588	547,713 \$242,766	755,331 \$389,267	221,937 \$119,656	107,985 \$54,377
Group bocaccio/chilipecper rockfish	0 \$0	0 \$0	0 \$0	542 \$325	0 \$0	0 \$0	0 \$0
Group canary/vermilion rockfish	147 \$117	227 \$204	33 \$30	58 \$123	0 \$0	164 \$148	23 \$44
Group red rockfish	1,354,762 \$1,219,509	1,044,060 \$1,005,099	1,225,861 \$1,041,703	850,384 \$837,280	710,159 \$658,300	242,835 \$258,743	40,291 \$71,156
Group rosefish rockfish	549,425 \$143,828	650,929 \$218,694	594,180 \$141,456	773,483 \$176,786	2,762,585 \$618,913	409,944 \$102,876	192,309 \$58,123
Group shelf rockfish	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	42,871 \$30,309
Group small rockfish	1,099,744 \$354,120	924,333 \$288,455	1,210,981 \$310,086	1,487,399 \$344,935	1,236,840 \$338,740	288,096 \$87,278	12,359 \$6,696
Longspine thornyhead	944 \$872	5,856,667 \$5,830,692	5,420,006 \$4,344,592	4,606,366 \$3,318,016	2,911,494 \$1,914,459	2,380,198 \$1,970,876	1,940,774 \$1,921,151

Groundfish commercial landings, 1994-2000.							
Common Name	1994	1995	1996	1997	1998	1999	2000
Shelf rockfish (continued)							
Shortspine thornyhead	179 \$251	1,666,441 \$1,884,136	1,543,123 \$1,423,948	1,315,231 \$1,183,418	1,220,855 \$1,050,947	781,904 \$859,307	636,264 \$883,034
Unspecified thornyheads	7,293,383 \$5,386,609	502,216 \$528,906	345,041 \$356,120	271,063 \$323,301	107,771 \$138,282	131,487 \$180,004	165,575 \$235,428
Slope rockfish							
Aurora rockfish	0 \$0	0 \$0	0 \$0	97 \$114	4 \$0	0 \$0	1,524 \$2,252
Bank rockfish	55,867 \$24,624	106,376 \$40,808	66,639 \$27,937	81,466 \$33,962	451,477 \$206,602	27,166 \$12,826	179,935 \$120,440
Blackgill rockfish	579,005 \$403,339	411,473 \$272,355	479,860 \$303,386	414,246 \$252,377	348,434 \$232,558	77,288 \$54,771	98,928 \$102,412
Pacific ocean perch	323 \$113	20 \$0	45 \$135	0 \$0	0 \$0	3,426 \$975	7,143 \$3,024
Redbanded rockfish	6,138 \$4,776	2,173 \$1,361	1,104 \$837	1,480 \$1,330	447 \$359	251 \$218	10,143 \$10,973
Splitnose rockfish	4,029 \$1,075	18 \$32	370 \$0	936 \$234	89,585 \$15,723	74,081 \$20,860	49,948 \$23,737
Group deepwater red rockfish	2,368 \$928	36,572 \$17,129	6,138 \$3,793	4,332 \$3,375	379 \$178	0 \$0	271 \$509
Group slope rockfish	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	421,766 \$184,298
Unspecified rockfish	4,329,766 \$1,867,569	4,329,509 \$1,967,691	3,851,420 \$1,684,632	3,859,876 \$1,581,950	3,019,768 \$1,496,098	639,803 \$409,053	50,499 \$69,196
Flatfish							
Arrowtooth flounder	161,936 \$20,888	259,994 \$31,671	110,415 \$11,695	104,739 \$11,034	82,096 \$9,844	94,301 \$10,255	57,646 \$7,424

Groundfish commercial landings, 1994-2000.							
Common Name	1994	1995	1996	1997	1998	1999	2000
Flatfish (continued)							
Butter sole	262 \$105	0 \$0	1,897 \$1,648	57 \$21	6 \$2	55 \$13	0 \$0
Curlfin sole	211 \$53	275 \$158	0 \$0	5 \$0	30 \$30	90 \$68	0 \$0
Dover sole	9,888,498 \$2,824,487	13,417,995 \$4,251,099	14,107,539 \$4,012,496	11,693,676 \$3,188,756	7,874,411 \$2,592,020	8,421,513 \$2,718,708	7,247,486 \$2,461,483
English sole	1,019,534 \$351,058	1,101,103 \$422,201	1,281,212 \$472,740	1,430,131 \$469,744	940,449 \$333,267	849,836 \$290,415	668,158 \$244,341
Pacific sanddab	91,278 \$20,735	9,908 \$1,139	958 \$174	1,041 \$144	2,755 \$1,186	24,399 \$6,312	10,446 \$3,263
Petrale sole	1,211,845 \$983,260	1,305,154 \$1,176,597	1,803,549 \$1,589,178	1,830,750 \$1,589,478	1,042,039 \$972,545	1,250,534 \$1,161,064	1,400,696 \$1,434,170
Rex sole	1,256,861 \$467,318	1,517,177 \$597,717	1,097,983 \$401,275	1,000,369 \$345,483	637,802 \$231,525	629,453 \$238,893	495,761 \$214,883
Rock sole	8,400 \$3,604	15,691 \$7,293	7,822 \$3,350	20,762 \$8,197	21,506 \$9,303	14,515 \$6,386	16,542 \$7,958
Sand sole	121,880 \$89,499	81,496 \$64,950	137,148 \$111,253	109,918 \$87,241	77,254 \$56,748	60,137 \$47,089	83,862 \$69,805
Starry flounder	33,244 \$15,858	25,580 \$13,984	49,286 \$20,805	94,591 \$41,500	100,303 \$41,384	76,463 \$35,059	47,172 \$25,235
Unspecified sanddabs	1,408,535 \$401,529	1,483,628 \$533,211	1,737,152 \$583,861	2,044,958 \$653,951	1,435,056 \$453,041	2,044,787 \$662,068	1,629,012 \$585,765
Round fish							
Lingcod	1,251,353 \$585,956	1,185,394 \$614,933	1,066,023 \$574,245	1,132,240 \$607,682	331,705 \$273,627	313,284 \$293,026	119,817 \$151,714
Pacific cod	28 \$1	4 \$0	10 \$2	38 \$52	47 \$15	49 \$22	21 \$13

Groundfish commercial landings, 1994-2000.							
Common Name	1994	1995	1996	1997	1998	1999	2000
Round fish (continued)							
Pacific whiting	7,964,783 \$353,655	9,018,285 \$456,332	6,395,184 \$238,707	14,028,191 \$590,661	12,617,919 \$385,047	2,883,014 \$115,587	10,991,514 \$753,993
Sablefish	4,790,1273 \$3,375,080	6,186,789 \$7,254,744	6,997,446 \$7,254,744	6,477,982 \$8,961,132	3,166,222 \$6,715,824	4,336,184 \$8,501,141	4,136,065 \$5,260,841
Spotted ratfish	6 \$0	6 \$0	0 \$0	735 \$74	94 \$0	415 \$163	181 \$18
Sharks							
Leopard shark	27,615 \$19,233	18,660 \$15,363	13,848 \$11,032	20,508 \$18,009	26,219 \$23,762	25,484 \$22,834	23,100 \$21,107
Soupfin shark	79,486 \$57,125	63,911 \$51,841	83,868 \$68,727	84,933 \$77,545	78,530 \$64,451	98,326 \$84,493	58,328 \$48,860
Spiny dogfish	1,221 \$173	232 \$52	1,320 \$101	8,405 \$157	14,996 \$5,598	77,752 \$67,657	31,584 \$11,299
Skates							
Big skate	0 \$0	230 \$87	0 \$0	534 \$96	3,592 \$647	1,257 \$478	19 \$6
California skate	155 \$28	0 \$0	0 \$0	0 \$0	0 \$0	141 \$56	1,782 \$1,254
Unspecified skate	93,236 \$26,728	413,048 \$88,364	1,830,076 \$390,005	2,964,575 \$557,712	1,832,499 \$376,151	1,870,653 \$285,903	1,242,026 \$249,292
Annual pounds	53,251,723	62,066,127	60,778,141	65,810,335	50,239,973	33,153,501	35,726,569
Annual value	\$23,640,749	\$33,435,066	\$31,786,341	\$30,179,304	\$21,260,800	\$18,900,622	\$20,025,952

Data source: CFIS data, all gear types combined.

Groundfish commercial landings, 2001-2008.									
Common name	2001	2002	2003	2004	2005	2006	2007	2008	
Shallow nearshore species									
	Black-and-yellow rockfish	19,672 \$101,620	18,897 \$97,905	16,572 \$81,920	23,086 \$135,475	22,679 \$146,182	18,401 \$129,688	22,729 \$161,382	26,592 \$191,660
	Cabazon	159,438 \$716,663	110,912 \$483,897	87,464 \$415,605	108,532 \$501,803	68,204 \$341,814	62,329 \$343,181	56,063 \$326,329	50,812 \$309,730
California scorpionfish	44,038 \$122,741	29,761 \$76,754	11,582 \$32,122	11,034 \$31,923	11,405 \$32,670	5,936 \$17,410	7,847 \$24,666	7,957 \$24,826	
China rockfish	10,432 \$55,077	12,240 \$71,005	3,438 \$22,612	5,108 \$32,436	6,694 \$43,469	6,581 \$46,663	9,246 \$67,502	8,982 \$68,578	
Gopher rockfish	96,993 \$447,772	74,458 \$364,668	29,537 \$154,594	34,766 \$205,276	40,461 \$262,707	34,419 \$240,811	44,155 \$310,662	53,532 \$392,941	
Grass rockfish	51,221 \$363,743	37,396 \$277,883	29,784 \$253,157	30,090 \$264,263	27,930 \$255,986	39,015 \$379,201	41,986 \$426,698	35,070 \$364,281	
Kelp greenling	23,779 \$110,430	17,817 \$85,545	10,930 \$58,686	4,484 \$24,632	3,840 \$22,882	3,581 \$23,511	3,294 \$20,638	2,973 \$20,087	
Kelp rockfish	2,151 \$9,331	2,500 \$9,603	2,481 \$11,037	2,088 \$9,305	1,826 \$8,913	1,559 \$9,316	1,008 \$5,624	1,081 \$5,901	
Group gopher rockfish	4,540 \$18,305	2,809 \$12,875	3,641 \$18,050	3,037 \$15,007	2,924 \$17,241	4,274 \$29,929	1,711 \$9,391	584 \$4,611	
Group nearshore rockfish	6,250 \$8,774	2,545 \$2,362	420 \$614	381 \$622	56 \$107	1,692 \$3,318	925 \$1,948	1,347 \$3,621	
Deep nearshore rockfish									
Black rockfish	229,640 \$252,488	203,909 \$311,199	127,176 \$254,928	127,176 \$254,928	166,943 \$266,541	138,241 \$253,445	178,415 \$356,519	217,556 \$436,900	
Blue rockfish	26,603 \$30,045	38,106 \$45,674	17,003 \$25,347	20,993 \$31,125	35,291 \$47,494	39,674 \$59,245	38,252 \$54,680	24,516 \$36,201	
Brown rockfish	59,087 \$255,896	47,315 \$215,698	44,164 \$206,602	53,357 \$291,529	49,184 \$284,235	45,505 \$272,004	48,325 \$294,134	53,347 \$334,745	

Groundfish commercial landings, 2001-2008.								
Common name	2001	2002	2003	2004	2005	2006	2007	2008
Deep nearshore rockfish (continued)								
Copper rockfish	32,816	28,096	6,595	11,125	11,672	8,335	11,549	12,086
	\$114,816	\$87,914	\$23,563	\$45,523	\$45,436	\$32,414	\$45,758	\$49,512
Olive rockfish	2,349	1,882	1,583	2,209	2,586	2,585	2,414	1,692
	\$3,820	\$2,849	\$2,074	\$3,972	\$4,736	\$4,553	\$4,627	\$3,923
Quillback rockfish	26,075	9,919	4,251	3,952	10,627	9,173	14,469	13,594
	\$98,772	\$37,708	\$20,449	\$18,904	\$52,388	\$44,987	\$73,770	\$70,450
Treefish	3,398	2,690	1,704	1,536	1,763	1,712	2,452	2,129
	\$20,276	\$15,404	\$8,989	\$8,732	\$13,125	\$13,405	\$19,573	\$19,008
Group black/blue rockfish	1,021	0	131	0	463	0	3	0
	\$1,095	\$0	\$169	\$0	\$576	\$0	\$0	\$0
Group bolina (brown) rockfish	35,977	17,846	4,897	6,832	8,195	7,049	1,351	274
	\$149,217	\$78,688	\$21,313	\$35,149	\$47,357	\$44,248	\$8,882	\$1,384
Group deep nearshore rockfish	0	0	0	317	196	791	839	91
	\$0	\$0	\$0	\$517	\$414	\$1,442	\$1,517	\$231
Shelf rockfish								
Bocaccio	48,127	45,458	1,368	19,293	15,756	10,603	13,334	15,407
	\$37,389	\$30,924	\$1,395	\$20,984	\$16,825	\$15,145	\$18,251	\$19,183
Bronzespotted rockfish	55	109	0	88	236	206	106	40
	\$147	\$109	\$0	\$163	\$531	\$466	\$121	\$316
Canary rockfish	31,494	23,854	1,149	2,050	4,608	5,485	2,253	1,780
	\$29,193	\$11,817	\$767	\$1,273	\$2,911	\$3,199	\$1,537	\$1,381
Chameleon rockfish	29	0	0	18	0	0	0	148
	\$29	\$0	\$0	\$36	\$0	\$0	\$0	\$444
Chilipepper rockfish	761,726	345,191	38,824	139,623	145,235	95,405	126,546	227,743
	\$449,961	\$185,011	\$17,245	\$66,084	\$73,877	\$58,075	\$98,716	\$189,378
Cowcod	56	112	8	68	85	0	130	0
	\$25	\$36	\$0	\$18	\$90	\$0	\$130	\$0

Groundfish commercial landings, 2001-2008.								
Common name	2001	2002	2003	2004	2005	2006	2007	2008
Shelf rockfish (continued)								
Darkblotched rockfish	38,352 \$14,412	42,533 \$19,194	13,151 \$6,603	75,681 \$37,935	35,483 \$20,276	45,747 \$25,831	90,077 \$53,657	65,257 \$38,978
Flag rockfish	65 \$119	163 \$275	54 \$59	541 \$1,113	110 \$227	531 \$799	340 \$1,171	355 \$1,066
Greenblotched rockfish	1,094 \$2,273	128 \$283	27 \$21	744 \$1,166	283 \$436	986 \$1,042	1,901 \$2,054	363 \$602
Greepspotted rockfish	1,401 \$1,954	1,510 \$1,577	703 \$587	641 \$715	708 \$1,221	453 \$874	1,915 \$4,556	2,764 \$3,708
Greenstriped rockfish	626 \$842	274 \$104	826 \$1,138	219 \$31	209 \$101	180 \$100	40 \$41	179 \$209
Honeycomb rockfish	0 \$0	0 \$0	0 \$0	10 \$21	0 \$0	18 \$0	4 \$4	9 \$1
Pink rockfish	0 \$0	48 \$47	6 \$45	12 \$5	74 \$665	0 \$0	0 \$0	0 \$0
Pinkrose rockfish	3 \$3	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
Rosethorn rockfish	511 \$998	200 \$395	81 \$178	89 \$194	2 \$3	66 \$187	5 \$45	3 \$4
Rosy rockfish	2,568 \$838	6,493 \$2,743	536 \$322	419 \$466	48 \$62	796 \$265	1,156 \$2,852	887 \$2,752
Shortbelly rockfish	11,470 \$4,039	25 \$0	1,123 \$778	91 \$9	0 \$0	608 \$0	0 \$0	0 \$0
Speckled rockfish	46 \$68	35 \$61	64 \$179	53 \$100	80 \$80	646 \$815	93 \$191	268 \$317
Squarespot rockfish	0 \$0	0 \$0	424 \$907	272 \$580	87 \$232	0 \$0	438 \$1,504	93 \$360
Starry rockfish	234 \$371	196 \$383	47 \$66	274 \$670	155 \$353	280 \$678	1,193 \$4,625	1,438 \$6,468

Groundfish commercial landings, 2001-2008.								
Common name	2001	2002	2003	2004	2005	2006	2007	2008
Shelf rockfish (continued)								
Stripetail rockfish	0 \$0	0 \$0	0 \$0	248 \$0	0 \$0	0 \$0	5 \$5	0 \$0
Swordspine rockfish	46 \$51	0 \$0	10 \$20	0 \$0	0 \$0	25 \$25	8 \$8	7 \$7
Vermilion rockfish	25,314 \$42,043	18,008 \$37,678	13,541 \$31,636	30,730 \$67,364	36,415 \$79,989	34,008 \$83,866	39,677 \$95,076	30,981 \$80,383
Widow rockfish	731,293 \$346,412	107,987 \$51,858	10,186 \$5,923	19,085 \$9,231	12,840 \$6,382	18,068 \$15,042	18,230 \$19,341	67,556 \$15,198
Yelloweye rockfish	8,457 \$19,920	146 \$130	22 \$20	43 \$46	46 \$23	10 \$6	401 \$800	54 \$16
Yellowtail rockfish	91,627 \$47,032	30,760 \$16,128	4,985 \$4,596	20,845 \$14,565	12,857 \$10,648	11,587 \$17,995	11,353 \$15,595	8,080 \$8,331
Group bocaccio/ chilipepper rockfish	26 \$21	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	642 \$353
Group canary/vermillion rockfish	5 \$24	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
Group red rockfish	22,700 \$39,906	17,774 \$31,111	35,004 \$23,612	21,630 \$42,601	16,174 \$33,958	13,379 \$22,742	25,533 \$34,248	8,541 \$17,434
Group rosefish rockfish	205,179 \$61,034	165,621 \$50,063	373,345 \$106,611	389,224 \$123,276	266,770 \$81,992	309,649 \$91,958	44,944 \$23,711	3,285 \$1,495
Group shelf rockfish	26,961 \$19,907	26,495 \$15,899	1,629 \$1,933	5,491 \$9,058	6,865 \$12,041	18,640 \$35,517	14,105 \$32,103	7,378 \$22,067
Group small rockfish	7,327 \$5,301	12,635 \$6,039	4,124 \$2,819	5,558 \$2,274	2,452 \$1,142	3,109 \$1,455	143 \$74	96 \$31
Longspine thornyhead	1,313,534 \$1,342,917	2,482,144 \$2,268,766	1,863,418 \$1,387,221	1,197,918 \$705,810	1,135,563 \$565,008	1,226,826 \$739,686	1,110,725 \$640,178	1,531,888 \$767,828
Shortspine thornyhead	449,425 \$644,377	856,978 \$1,271,761	860,178 \$1,301,200	694,548 \$1,217,098	713,329 \$1,393,105	708,407 \$1,525,266	730,950 \$1,615,605	920,704 \$2,086,029

Groundfish commercial landings, 2001-2008.								
Common name	2001	2002	2003	2004	2005	2006	2007	2008
Shelf rockfish (continued)								
Unspecified thornyheads	104,974	148,798	130,480	91,313	42,834	28,822	19,111	4,655
Slope rockfish	\$213,221	\$197,052	\$143,140	\$177,692	\$79,258	\$91,116	\$63,188	\$16,492
Aurora rockfish	339	825	3,403	920	1,241	876	8,245	1,211
	\$634	\$1,713	\$3,364	\$1,202	\$885	\$797	\$3,560	\$2,703
Bank rockfish	124,050	439,106	159,600	199,370	36,227	77,489	56,812	183,590
	\$74,077	\$244,566	\$94,682	\$119,135	\$29,503	\$66,255	\$63,178	\$178,635
Blackgill rockfish	180,305	205,273	395,259	249,678	122,385	148,511	56,044	93,737
	\$155,216	\$220,371	\$408,950	\$259,643	\$121,624	\$165,473	\$84,687	\$141,409
Pacific ocean perch	2,195	108	0	128	56	721	58	538
	\$952	\$47	\$0	\$281	\$47	\$454	\$27	\$223
Redbanded rockfish	741	1,585	402	221	3,141	1,079	2,379	734
	\$871	\$1,721	\$520	\$211	\$2,853	\$1,335	\$2,384	\$1,979
Splitnose rockfish	30,474	40,066	49,847	22,668	1,667	17,605	177,128	188,865
	\$12,713	\$15,967	\$16,424	\$9,114	\$1,689	\$5,872	\$61,600	\$72,962
Group deepwater red rockfish	0	21	56	354	0	0	0	0
	\$0	\$47	\$126	\$347	\$0	\$0	\$0	\$0
Group slope rockfish	399,920	411,279	123,185	329,627	158,163	126,204	144,170	171,932
	\$200,688	\$212,776	\$72,395	\$174,898	\$94,072	\$80,475	\$88,051	\$109,697
Unspecified rockfish	33,704	41,843	21,682	6,135	7,160	7,585	29,891	1,498
	\$37,420	\$29,164	\$13,542	\$5,990	\$5,905	\$9,787	\$39,491	\$3,310
Flatfish								
Arrowtooth flounder	20,586	64,085	95,708	97,644	95,693	70,134	131,969	98,093
	\$2,736	\$9,559	\$14,513	\$10,034	\$10,219	\$7,429	\$13,556	\$9,896
Butter sole	1,177	69	0	0	140	157	0	86
	\$467	\$28	\$0	\$0	\$198	\$79	\$0	\$36
Curfin sole	0	61	4	0	0	163	11	0
	\$0	\$29	\$4	\$0	\$0	\$52	\$6	\$0

Groundfish commercial landings, 2001-2008.								
Common name	2001	2002	2003	2004	2005	2006	2007	2008
Flatfish (continued)								
Dover sole	5,307,234 \$1,875,731	6,881,731 \$2,503,923	7,185,492 \$2,599,173	5,337,785 \$1,969,689	4,894,492 \$1,798,577	3,884,339 \$1,430,755	6,101,575 \$2,380,396	6,667,414 \$2,579,456
English sole	927,131 \$350,407	821,953 \$301,721	289,854 \$111,378	677,381 \$250,613	536,400 \$182,694	660,249 \$228,485	398,527 \$143,123	306,598 \$110,067
Pacific sanddab	16,989 \$5,388	65 \$172	187 \$89	3,180 \$1,064	5,131 \$1,334	323 \$323	8,956 \$5,345	174 \$94
Petrale sole	1,234,980 \$1,262,768	1,055,574 \$924,670	838,405 \$797,990	1,080,285 \$1,109,232	1,694,083 \$1,613,531	1,661,938 \$1,728,327	2,020,351 \$2,122,149	2,048,686 \$2,203,405
Rex sole	518,975 \$231,463	633,841 \$281,813	570,787 \$254,616	463,782 \$191,779	469,277 \$186,684	329,588 \$119,537	379,204 \$132,931	314,350 \$112,509
Rock sole	15,945 \$9,101	28,494 \$15,690	32,409 \$16,350	28,977 \$14,496	27,834 \$14,007	12,585 \$6,789	11,781 \$7,149	4,707 \$2,802
Sand sole	183,661 \$145,417	119,576 \$100,826	80,657 \$68,502	50,388 \$45,851	57,052 \$44,850	16,465 \$15,482	13,989 \$11,503	5,749 \$5,749
Starry flounder	91,768 \$46,149	64,615 \$33,240	63,448 \$39,491	74,234 \$59,302	83,938 \$67,874	65,757 \$53,122	29,367 \$18,453	22,866 \$14,815
Unspecified sanddabs	1,713,965 \$670,896	1,242,137 \$478,084	1,350,096 \$508,937	785,590 \$308,724	503,737 \$238,323	253,348 \$129,305	347,247 \$164,506	277,711 \$129,756
Round fish								
Lingcod	137,002 \$175,456	178,984 \$246,966	115,388 \$184,466	137,703 \$215,224	139,981 \$205,402	141,749 \$204,873	176,177 \$260,724	155,402 \$237,181
Pacific cod	798 \$138	6 \$4	1,314 \$844	129 \$104	0 \$0	0 \$0	0 \$0	45 \$23
Pacific whiting	5,084,234 \$171,486	6,114,074 \$266,219	3,838,412 \$170,080	10,454,767 \$637,829	6,845,532 \$339,695	11,969,975 \$1,360,503	6,543,217 \$383,730	10,899,837 \$1,079,968
Sablefish	3,344,669 \$4,173,748	2,838,856 \$3,509,313	3,575,310 \$4,719,560	3,109,821 \$3,723,153	3,594,422 \$4,310,083	3,561,600 \$4,888,379	3,193,109 \$4,871,286	3,422,402 \$6,233,813

Groundfish commercial landings, 2001-2008.								
Common name	2001	2002	2003	2004	2005	2006	2007	2008
Round fish (continued)								
Spotted ratfish	0	3,458	0	0	2	3	160	5
	\$0	\$692	\$0	\$0	\$0	\$0	\$64	\$0
Sharks								
Leopard shark	23,210	24,831	17,137	21,864	25,180	20,301	19,958	6,393
	\$22,446	\$23,993	\$15,694	\$17,574	\$19,891	\$28,220	\$20,170	\$6,101
Soupin shark	60,298	42,323	43,505	42,138	33,285	40,532	30,228	14,638
	\$49,286	\$36,397	\$40,069	\$39,532	\$34,732	\$40,223	\$26,172	\$12,559
Spiny dogfish	6,574	36,259	23,749	58,122	16,871	31,737	27,905	98,261
	\$978	\$7,626	\$11,242	\$36,136	\$3,391	\$19,180	\$8,227	\$36,423
Skates								
Big skate	1,540	0	90	0	0	0	12	167
	\$329	\$0	\$32	\$0	\$0	\$0	\$9	\$49
California skate	0	0	0	47	0	0	0	26
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8
Unspecified skate	1,397,954	180,794	275,379	251,845	209,266	268,286	247,483	391,641
	\$289,048	\$35,444	\$62,057	\$44,318	\$39,337	\$47,559	\$54,006	\$99,545
Annual pounds	25,560,447	26,464,642	22,909,273	26,667,960	22,475,676	26,334,870	22,897,700	28,792,175
Annual value	\$16,139,755	\$15,972,722	\$14,873,309	\$13,641,404	\$13,628,257	\$15,316,421	\$15,911,762	\$19,004,591

Data source: CFIS data, all gear types combined.

Groundfish recreational catch (number of fish), 1994-2003.										
Common name	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Shallow nearshore species										
Black-and-yellow rockfish	33,852	26,406	9,564	8,968	13,969	15,810	20,656	17,046	16,377	21,158
Cabazon	47,117	60,075	77,059	54,674	66,551	40,706	31,867	41,456	31,391	59,511
California scorpionfish	252,899	213,018	384,501	256,586	163,517	296,977	175,072	211,181	186,909	173,475
China rockfish	45,537	34,195	30,294	14,155	11,160	23,900	26,627	30,835	22,232	30,416
Gopher rockfish	196,032	86,346	112,597	110,950	105,317	154,879	174,953	288,403	183,689	225,202
Grass rockfish	15,175	14,845	12,380	14,490	13,278	8,147	5,651	23,775	14,460	15,573
Kelp greenling	44,908	48,205	78,473	40,239	23,276	18,098	17,483	25,591	25,697	34,858
Kelp rockfish	61,308	51,927	31,329	30,583	13,433	20,008	18,084	22,253	44,141	45,541
Deep nearshore rockfish										
Black rockfish	300,040	222,109	196,661	152,778	161,786	282,997	230,214	346,179	187,545	735,698
Blue rockfish	428,512	266,618	463,803	764,979	619,300	498,466	311,406	256,500	295,750	444,844
Brown rockfish	63,119	77,297	105,665	116,911	79,660	120,091	101,707	192,572	100,074	206,415
Calico rockfish	6,276	8,055	6,665	5,102	3,816	8,038	1,538	545	453	2,186
Copper rockfish	151,575	64,243	118,736	47,955	60,873	89,955	56,217	42,272	30,097	45,952
Olive rockfish	113,238	58,690	73,482	99,214	82,999	65,458	75,933	119,027	199,638	73,494
Quillback rockfish	5,153	4,135	4,102	5,259	3,367	7,216	8,127	4,392	1,118	12,134
Treefish	34,950	52,915	54,407	17,691	27,057	41,268	14,481	27,738	13,580	13,265
Shelf rockfish										
Bocaccio	177,081	23,962	70,941	110,924	39,997	89,364	141,865	124,017	81,351	8,154
Bronzespotted rockfish	6,544	0	0	2,364	601	304	2,113	0	0	0
Canary rockfish	117,547	138,740	106,868	127,925	33,853	95,515	90,457	39,529	9,130	21,579

Groundfish recreational catch (number of fish), 1994-2003.										
Common name	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Shelf rockfish (continued)										
Chilipepper	51,182	28,759	64,381	90,957	8,515	45,372	67,180	57,525	23,161	465
Cowcod	8,153	583	4,547	1,429	1,487	2,692	1,615	0	294	242
Flag rockfish	35,397	18,610	33,283	25,709	23,397	40,455	31,764	19,276	15,818	5,638
Freckled rockfish	0	0	0	0	0	0	0	0	810	0
Greenblotched rockfish	362	3,717	16,215	4,394	3,453	52,295	26,227	18,060	8,923	0
Greenspotted rockfish	150,756	176,427	90,925	64,817	37,814	144,306	96,569	60,173	33,133	1,485
Greenstriped rockfish	35,908	32,004	18,590	15,998	13,585	39,263	32,612	20,579	4,688	245
Halfbanded rockfish	23,954	7,142	27,262	82,779	28,101	32,579	7,395	372	5,897	4,484
Honeycomb rockfish	23,815	27,343	107,193	30,988	35,879	159,623	38,253	13,947	19,017	35,445
Mexican rockfish	0	0	7,292	0	242	1,282	4,327	2,577	244	0
Pink rockfish	1,176	0	0	0	0	1,340	4,215	0	0	0
Pinkrose rockfish	0	0	0	0	0	317	0	0	204	0
Redstripe rockfish	632	0	188	990	159	425	313	0	9	0
Rosethorn rockfish	1,064	156	1,155	1,869	3,480	1,868	1,556	115	647	0
Rosy rockfish	40,833	31,979	107,620	104,178	66,635	113,552	77,583	50,200	7,522	13,601
Shortbelly rockfish	0	0	439	1,353	256	0	0	327	0	0
Slivergrey rockfish	0	0	0	0	0	192	138	0	0	19
Speckled rockfish	76,735	19,876	23,382	41,199	17,780	25,010	12,560	5,451	4,050	2,907
Squarespot rockfish	33,004	14,158	131,858	95,819	53,115	43,653	10,890	1,552	5,640	17,146
Starry rockfish	111,378	42,561	148,256	115,761	62,922	145,742	70,310	51,156	19,719	15,723
Stripetail rockfish	771	0	159	0	0	1,513	0	0	0	0

Groundfish recreational catch (number of fish), 1994-2003.										
Common name	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Shelf rockfish (continued)										
Swordspine rockfish	11,284	4,062	722	0	49	1,498	149	0	139	0
Tiger rockfish	592	0	0	0	344	291	0	0	148	252
Vermilion rockfish	271,783	195,499	252,511	90,894	120,205	262,932	199,477	138,760	198,047	382,247
Widow rockfish	9,529	9,566	41,023	57,920	49,108	37,038	15,763	13,647	3,776	1,394
Yelloweye rockfish	11,678	7,486	7,328	8,716	4,966	8,122	5,475	3,594	1,116	3,411
Yellowtail rockfish	86,234	66,094	196,910	598,807	171,157	326,041	198,487	86,674	46,231	35,748
Shortspine thornyhead	748	2,322	85	0	0	240	0	0	694	159
Slope rockfish										
Aurora rockfish	949	0	0	0	0	0	0	873	0	0
Bank rockfish	61,163	621	54,307	18,700	6,966	13,244	2,880	822	314	1,872
Blackgill rockfish	0	2,050	0	0	0	171	0	0	5,070	42
Darkblotched rockfish	0	0	136	0	0	0	0	0	0	0
Pacific ocean perch	1,265	0	427	1,614	0	0	0	2,092	566	862
Redbanded rockfish	316	0	0	0	0	360	0	0	0	0
Rougheye rockfish	3,583	156	414	2,676	244	0	0	225	139	180
Sharpchin rockfish	0	0	0	0	0	0	0	0	39	0
Splitnose rockfish	660	0	274	0	312	53	0	0	0	246
Unspecified rockfish	370,581	443,572	506,146	183,057	476,189	714,907	505,865	294,195	223,719	349,568
Round fish										
Lingcod	96,643	108,854	122,112	89,509	73,507	102,994	52,421	41,544	148,739	297,309

Groundfish recreational catch (number of fish), 1994-2003.										
Common name	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Round fish (continued)										
Pacific cod	632	0	0	0	0	0	0	0	0	0
Pacific whiting	1,265	583	2,857	935	0	2,845	247	0	710	0
Sablefish	0	0	341	0	0	271	442	179	6,210	631
Spotted ratfish	0	0	0	0	0	0	221	0	0	0
Walleye pollock	109	0	0	0	0	0	0	0	0	246
Flatfish										
Butter sole	0	0	661	0	0	86	0	0	0	0
Curfin sole	0	0	0	0	0	0	352	0	0	19
English sole	4	0	0	0	0	0	0	0	0	0
Pacific sanddab	194,622	101,435	273,692	285,950	89,771	141,231	422,624	302,792	1,088,153	350,311
Petrale sole	217	977	665	542	0	145	351	547	274	273
Rock sole	397	1,208	1,150	486	138	1,033	2,193	1,148	566	2,896
Sand sole	1,375	1,124	251	577	552	208	657	1,901	2,008	4,318
Starry flounder	2,875	5,769	2,822	5,499	14,353	8,998	6,599	4,295	4,549	4,716
Unspecified sanddab	20,460	32,416	13,644	6,307	15,506	10,010	12,365	23,975	141,139	137,448
Sharks										
Leopard shark	14,705	37,105	11,444	8,990	10,006	8,258	5,638	10,064	7,906	10,652
Soupin shark	0	1,199	143	0	0	1,150	508	0	27	387
Spiny dogfish	4,881	9,434	5,402	1,517	2,247	3,728	2,680	2,258	3,971	5,638
Skates										
Big skate	0	0	0	0	0	0	0	0	662	206

Groundfish recreational catch (number of fish), 1994-2003.										
Common name	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Skates (continued)										
California skate	0	0	297	0	0	536	0	0	24	0
Longnose skate	0	0	0	0	0	257	391	0	0	0
Unspecified groundfish	5,011	2,073	0	323	0	0	0	69	0	0
Annual catch	3,869,549	2,888,703	4,216,035	4,023,004	2,916,246	4,375,319	3,423,744	3,044,276	3,478,343	3,857,879

Data source: MRFSS data, all fishing modes and gear types combined.

Groundfish recreational catch (number of fish), 2004-2008.					
Common name	2004	2005	2006	2007	2008
Shallow nearshore species					
Black-and-yellow rockfish	10,656	9,484	7,395	7,429	12,390
Cabazon	23,492	29,987	14,487	12,068	12,090
California scorpionfish	90,162	219,096	85,089	136,150	121,522
China rockfish	14,405	22,668	20,311	20,551	23,667
Gopher rockfish	97,377	116,601	106,965	84,125	96,154
Grass rockfish	13,853	14,167	29,044	14,249	13,450
Kelp greenling	23,576	23,576	23,576	23,576	23,576
Kelp rockfish	9,253	13,927	11,961	14,419	10,907
Deep nearshore rockfish					
Black rockfish	166,016	218,689	214,653	155,950	175,585
Blue rockfish	342,442	568,033	531,533	256,887	175,761
Brown rockfish	50,887	134,469	105,785	92,215	76,305
Calico rockfish	1,891	5,099	433	1,001	1,035

Groundfish recreational catch (number of fish), 2004-2008.					
Common name	2004	2005	2006	2007	2008
Deep nearshore rockfish (continued)					
Copper rockfish	34,603	67,639	53,860	74,897	61,932
Olive rockfish	79,322	131,687	73,593	69,338	57,371
Quillback rockfish	4,111	5,495	10,579	12,709	5,009
Treefish	10,671	21,550	7,631	14,282	10,826
Shelf rockfish					
Bocaccio	54,588	82,224	36,779	49,307	33,250
Bronzespotted rockfish	3	0	0	0	0
Canary rockfish	15,882	4,670	10,324	8,370	2,520
Chilipepper	15,408	23,878	4,552	14,511	9,178
Cowcod	439	203	21	189	133
Flag rockfish	17,709	33,613	9,393	19,654	14,368
Freckled rockfish	17	131	54	238	239
Greenblotched rockfish	3,220	5,134	3,108	1,007	570
Greenspotted rockfish	38,787	62,395	18,475	33,874	27,072
Greenstriped rockfish	929	3,166	1,692	1,999	2,922
Halfbanded rockfish	5,848	11,192	2,206	2,772	7,405
Honeycomb rockfish	19,502	55,392	10,981	20,222	20,707
Mexican rockfish	21	213	9	29	33
Rosethorn rockfish	24	82	0	0	12
Rosy rockfish	28,890	31,631	14,332	35,245	28,308
Speckled rockfish	16,784	26,255	7,193	11,762	12,310

Groundfish recreational catch (number of fish), 2004-2008.					
Common name	2004	2005	2006	2007	2008
Shelf rockfish (continued)					
Squarespot rockfish	16,335	25,804	5,834	9,874	13,205
Starry rockfish	31,587	73,498	30,954	66,540	49,940
Stripetail rockfish	518	124	5	1,552	5
Swordspine rockfish	0	396	59	137	0
Tiger rockfish	0	33	176	348	40
Vermilion rockfish	250,584	343,077	174,507	180,783	99,065
Widow rockfish	26,838	6,939	5,011	11,756	7,076
Yelloweye rockfish	632	824	704	2,750	598
Yellowtail rockfish	26,850	36,856	38,865	112,035	42,507
Longspine thornyhead	0	0	0	6	0
Shortspine thornyhead	2	0	49	0	0
Slope rockfish					
Bank rockfish	1,246	3,123	77	181	161
Blackgill rockfish	4	0	0	0	0
Unspecified rockfish	150,752	275,084	101,674	103,328	85,379
Round fish					
Lingcod	30,909	72,085	82,881	49,912	30,477
Pacific whiting	201	71	39	32	35
Sablefish	2	259	12	6	14
Flatfish					
Butter sole	0	15	25	81	0

Groundfish recreational catch (number of fish), 2004-2008.					
Common name	2004	2005	2006	2007	2008
Flatfish (continued)					
Curlfin sole	4	0	0	0	8
Dover sole	0	0	0	36	6
English sole	206	13	21	6	0
Pacific sanddab	344,518	365,983	191,537	138,403	190,334
Petrale sole	538	558	867	1,315	612
Rex sole	0	0	6	0	0
Rock sole	781	1,319	742	802	678
Sand sole	2,275	134	96	229	178
Starry flounder	4,022	4,864	1,749	663	1,463
Unspecified sanddab	27,611	174,740	17,376	27,229	12,431
Sharks					
Leopard shark	13,837	7,561	20,735	4,682	5,877
Soupin shark	0	1,337	60	32	43
Spiny dogfish	1,329	1,051	1,998	1,241	825
Skates					
Big skate	43	9	33	0	53
California skate	0	140	13	13	25
Longnose skate	145	0	39	0	0
Unspecified groundfish	0	71	0	0	0
Annual catch	2,122,539	3,370,187	2,092,808	1,903,058	1,577,126

Data source: CRFS data, all fishing modes and gear types combined.