13 Surfperch, Embiotocidae

Barred surfperch, *Amphistichus argenteus*. Photo credit: K Oda. CDFW.

Overview of the Surfperch Family

The surfperch family, Embiotocidae, is composed of 23 species, 18 of which occur in California's coastal waters. Members of this family are commonly called surfperch, seaperch, and perch. While the former are generally considered to reside in or near the surf zone along sandy beaches, we also use the term "surfperch" throughout this chapter to describe all species collectively. Surfperch are found in temperate nearshore waters of the northeastern Pacific with the exception of three species in the Sea of Japan and the tule perch (*Hysterocarpus traski*) which occupy freshwater and estuarine habitats. The following 18 marine species in California waters are found in a variety of habitats, including adjacent to beaches, above rocky substrate, in the intertidal zone, and in subtidal kelp beds:

- barred surfperch, *Amphistichus argenteus*
- black perch, *Embiotoca jacksoni*
- calico surfperch, *Amphistichus koelzi*
- dwarf perch, *Micrometrus minimus*
- kelp perch, *Brachyistius frenatus*
- pile perch, *Rhacochilus vacca*
- pink seaperch, *Zalembius rosaceus*
- rainbow seaperch, *Hypsurus caryi*
- redtail surfperch, *Amphistichus rhodoterus*
- reef perch, *Micrometrus aurora*
- rubberlip seaperch, *Rhacochilus toxotes*
- sharpnose seaperch, *Phanerodon atripes*
- shiner perch, *Cymatogaster aggregata*
- silver surfperch, *Hyperprosopon ellipticum*
- spotfin surfperch, *Hyperprosopon anale*
- striped seaperch, *Embiotoca lateralis*
- walleye surfperch, *Hyperprosopon argenteum*
- white seaperch, *Phanerodon furcatus*

History of the Fishery

Surfperch support localized commercial fisheries from northern to south-central California. Landings in Del Norte and Humboldt counties are composed primarily of redtail surfperch. San Francisco Bay port landings are composed of black perch, shiner perch, striped seaperch, and white seaperch. Barred surfperch, calico surfperch, and walleye surfperch are landed in the Morro Bay area. Surfperch are sold live and dead for food, as well as for live bait to take game fish such as California halibut and striped bass. Shiner perch purchased as live bait bring $1.25 each to bait shops. Average price paid to commercial fishermen in 2011 was $2.35 per pound for surfperch.

The commercial fishery is dominated by fishermen using hook-and-line gear. This gear accounts for approximately 93 percent of surfperch landings, followed by A-frame dip nets, beach seine, round haul nets, and trawl gear; the latter two gear types take surfperch incidentally. Historically, gill and trammel nets also caught surfperch incidental to targeting other species (e.g., California halibut and white croaker) prior to the implementation of restrictions regarding the use of gill and trammel nets in nearshore waters in central and southern California.

Today, the surfperch fishery is conducted primarily by shore based hook-and-line fishermen targeting redtail surfperch in Humboldt and Del Norte counties, and barred surfperch in Monterey and San Luis Obispo counties. In central and south San Francisco Bay, a variety of species, including striped seaperch, rubberlip seaperch, black perch, and pile perch, are taken by fishermen operating skiffs fishing along rocky shoreline and manmade structures. Generally, shore based fishermen use traditional heavy surf rods. San Francisco Bay fishermen fish with light rods and baits such as cut market shrimp and grass shrimp.

Important commercial port areas for surfperch are Crescent City, Eureka, Fields Landing, Richmond, Morro Bay, and Avila/Port San Luis. These port areas account for 77 percent of all surfperch landings statewide since 1990. Barred surfperch and redtail surfperch dominated surfperch landings in the 1990s through the 2000s, comprising approximately 37 and 57 percent, respectively, of all specified surfperch landings.

Commercial fishery landings data are available from 1916 to 2011. Prior to 1927, “perch” landings included a combination of surfperch and perch-like species. Subsequently, landings for surfperch, blacksmith, halfmoon, opaleye, and sargo were reported separately; however, fish dealers on occasion have combined other species with surfperch on landing receipts. In addition, individual landing receipts frequently are not sorted to species. During the period 1990-1999, the percentage of landing receipts of unspecified surfperch appearing in the California Department of Fish and Wildlife’s (Department) Commercial Fisheries Information System (CFIS) database was approximately 58 percent. Following a concerted effort by Department staff to gain fish buyer cooperation in sorting species on receipts, the percentage of unspecified surfperch landings declined to about 19 percent statewide in 2010-2011.

Annual commercial landings have declined over time (Figure 13-1). Commercial landings have been heavily influenced by market demand, ocean conditions affecting abundance and distribution, and fisheries restrictions. Another change that impacted the fishery statewide was prohibiting the use of four-wheel drive vehicles on most beaches. Historically, fishermen were able to drive long sections of beaches to locate fish schools and transport their catches to market. Currently, vehicle access is limited to Oceano Dunes State Park in San Luis Obispo County, and several beaches in Humboldt and Del Norte counties. Some of the recently-implemented marine protected areas (MPAs), such as the Point Buchon State Marine Reserve (San Luis Obispo County), may have displaced some local commercial fishermen.

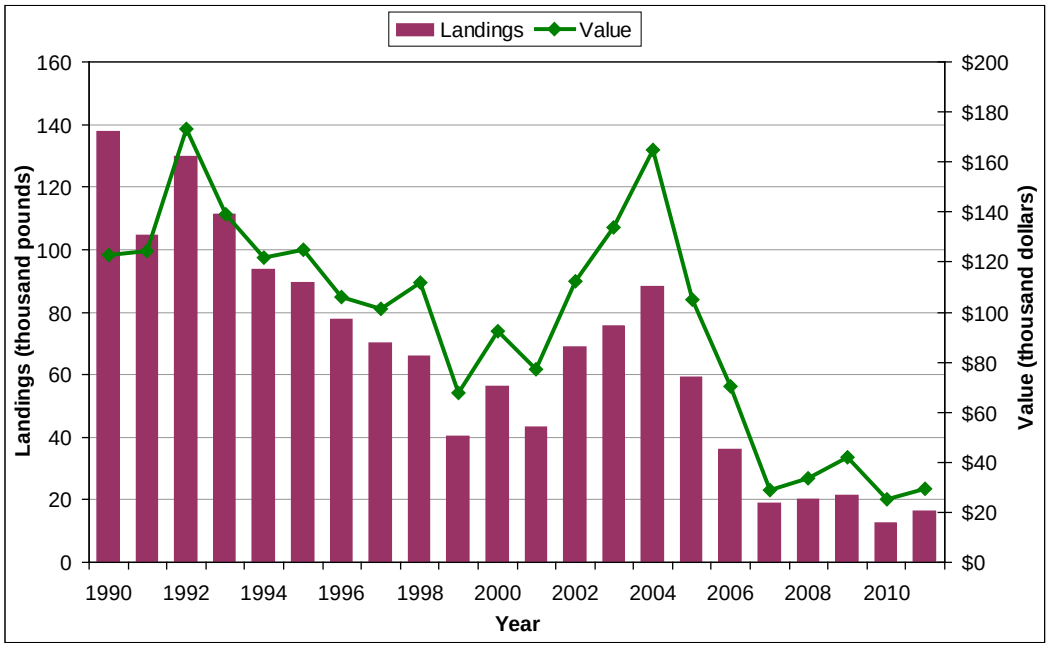

Figure 13-1. Surfperch commercial landings and value, 1990-2011. Data source: CFIS data, all species and gear types combined.

The general negative trend in landings since the 1980s reached a low in 1999, rebounded in the early 2000s, then declined to a historic low in 2010. Fishermen making 10 or more surfperch landings annually declined from 100 in 1992 to eight in 2008. Although commercial landings hit new lows recently, the average landing per receipt, which is a measure of catch-per-unit-effort (CPUE), has remained fairly steady since 2002 (Figure 13-2).

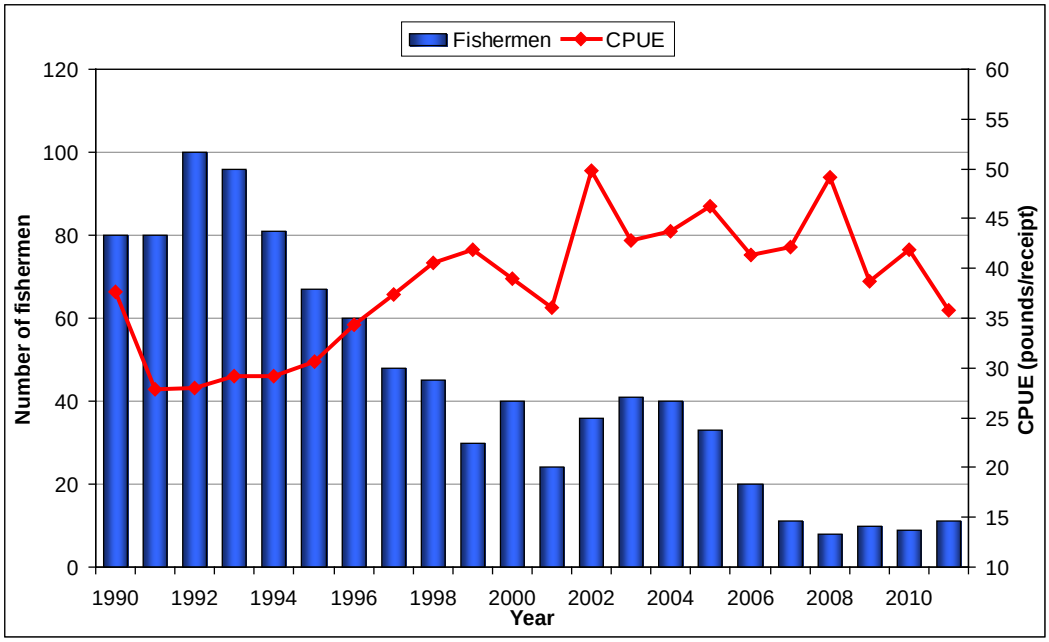

Figure 13-2 Surfperch commercial number of participants and CPUE (pounds/receipt), 1990-2011. Data source: CFIS data, all species and gear types combined.

Commercial fishery regulations include a seasonal closure for taking surfperch from May 1 through July 31 with the exception of shiner perch, which may be taken at any time. In 2002, the closure was extended from the original end date, July 14, to July 31 to further reduce the take of females and slow the fishery at a time when they are aggregated for parturition (i.e., giving birth). The take of barred surfperch, calico surfperch, and redtail surfperch for commercial purposes is prohibited south of Point Arguello (Santa Barbara County).

Surfperch are important to recreational anglers, with the vast majority of surfperch taken from sandy beaches and rocky banks (beach/bank mode [BB]) that are accessible from the shore. A smaller portion of the statewide catch is taken from manmade structures (manmade mode [MM]), an even smaller portion from private/rental boats (private/rental mode [PR]), and a negligible amount (i.e., less than 1 percent) from private/charter boats (private/charter mode [PC]).

Historically, surfperch were caught with a variety of natural baits including clams, mussels, polychaete worms, Dungeness crab backs, mackerel, Pacific mole crabs, and various species of shrimp by anglers using 10-14 foot (3-4 meter) heavy surf rods. Although many anglers enjoy bait fishing, there is a growing trend among anglers to fish with 7-10 foot (2-3 meter) lighter rods, used for steelhead and freshwater bass, and cast artificial baits, soft plastic “grubs”, and hard plastic minnows, as well as traditional baits.

Another growing trend in recreational saltwater fisheries is fly fishing for species traditionally targeted by other fishing methods. Fly fishing for surfperch was described by an outdoor writer in the early 1970s; however, anglers fly fishing on beaches was a

rarity until the early 2000s. It is now a common sight along sandy beaches in central and southern California.

The recreational fishery for surfperch is substantial and estimated catches far surpass those of the commercial fishery. By weight, the most abundant surfperch species comprising the recreational take statewide are barred surfperch, black perch, redtail surfperch, walleye surfperch, and striped seaperch (in descending order). Recreational catch weight estimates are converted from number estimates based on length-weight regressions of sampled fish. Recreational catch estimates from 1990 through 2009 and commercial landings from 1990 through 2011 indicate that the annual recreational catch averaged approximately 320,000 pounds (145,000 kilograms), while the annual commercial catch averaged about 65,000 pounds (29,000 kilograms), about 20 percent of the total surfperch harvest.

Estimates of recreational catch were generated by the Marine Recreational Fisheries Statistics Survey (MRFSS) from 1981 to 1989 and from 1993 to 2003. From 2004 to the present, catch estimates are produced by the California Recreational Fisheries Survey (CRFS), which benefits from an improved sampling design. Both surveys rely on an angler-intercept method to determine species composition and catch rates, coupled with a telephone survey to estimate fishing effort. Though similar methodology in general was used for each, the two sampling designs are sufficiently different that catch estimates generated from MRFSS and CRFS are not considered comparable and will be provided in separate graphs and tables below.

MRFSS catch estimates indicate a decline in overall recreational surfperch take between 1981 and 2003 (Figure 13-3). Beginning in 1986 and for three years thereafter, the BB and MM modes were collectively designated the shore mode. This change on methodology may have been partly responsible for the huge single-year spike in estimated catch in 1986.

However, more recent estimates from CRFS indicate a generally stable level of catch from 2004 to 2009 (Figure 13-4). CRFS reduced sampling levels for the BB mode in 2010 and BB and MM in 2011; therefore, the estimates for 2010 and 2011 are not comparable with the 2004-2009 estimates. Although many surfperch species are caught statewide, barred surfperch comprised approximately 52 percent of the catch composition since 2004 (Figures 13-5 and 13-6). Black perch comprised 12.5 percent of the catch, followed by redtail surfperch at 10 percent, walleye surfperch at 7 percent, and striped seaperch at 6 percent. All other surfperch species each comprised less than 3 percent of the catch. The BB mode continues to provide the majority of the catch compared to the boat and MM modes (Figure 13-7 and 13-8).

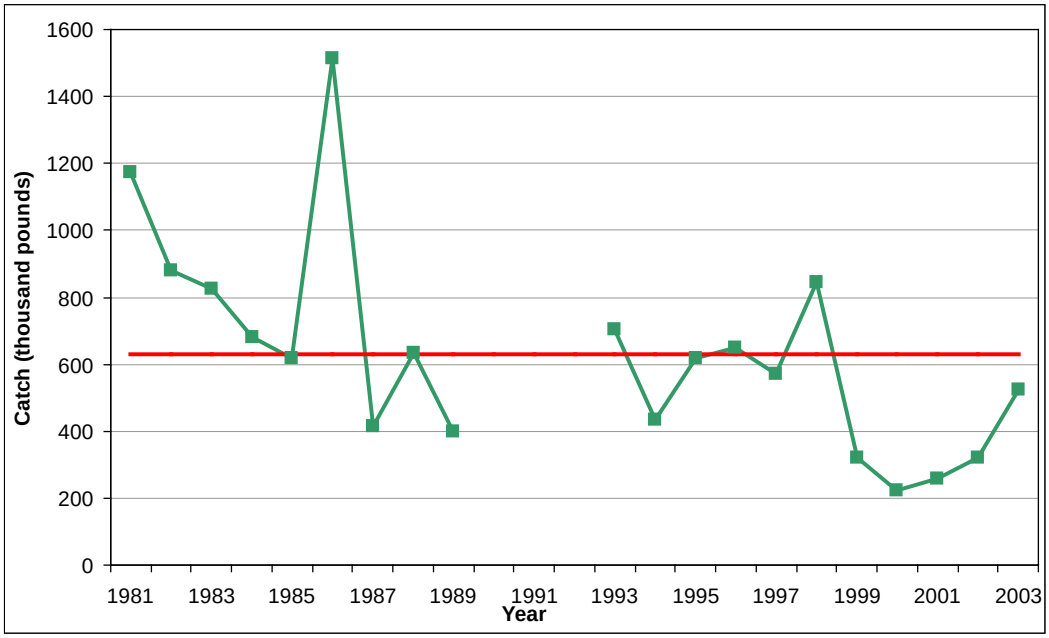

Figure 13-3. Surfperch recreational catch, all species combined, 1981-2003. Solid red line indicates the average catch across all years. Data source: MRFSS data, all fishing modes and gear types combined. Data for 1990-1992 are not available.

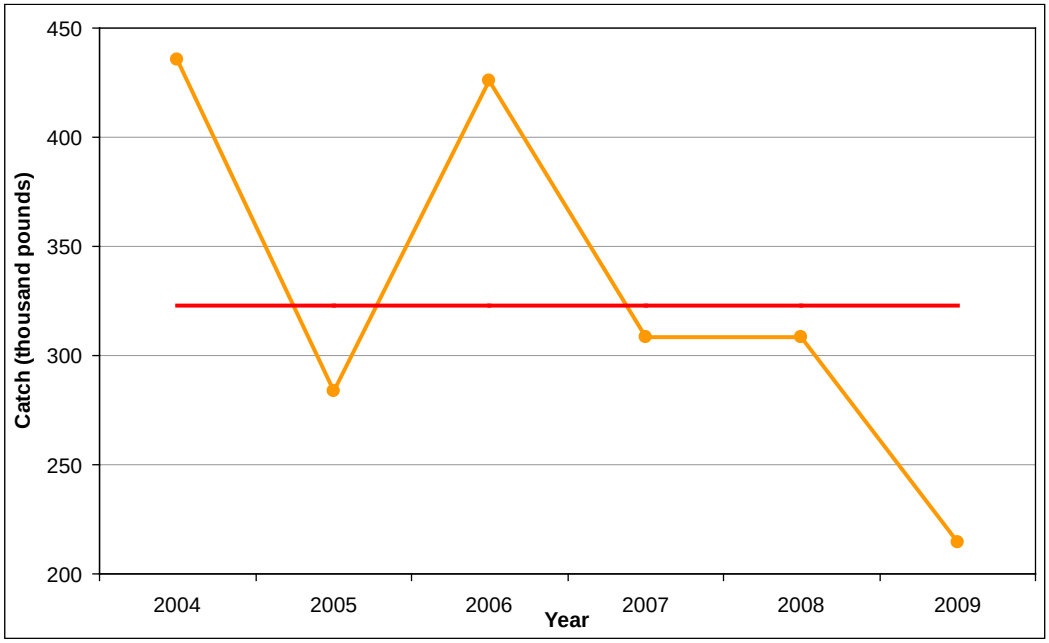

Figure 13-4. Surfperch recreational catch, all species combined, 2004-2009. Solid red line indicates the average catch across years. Data source: CRFS data, all fishing modes and gear types combined. Data for 2010-2011 are not available.

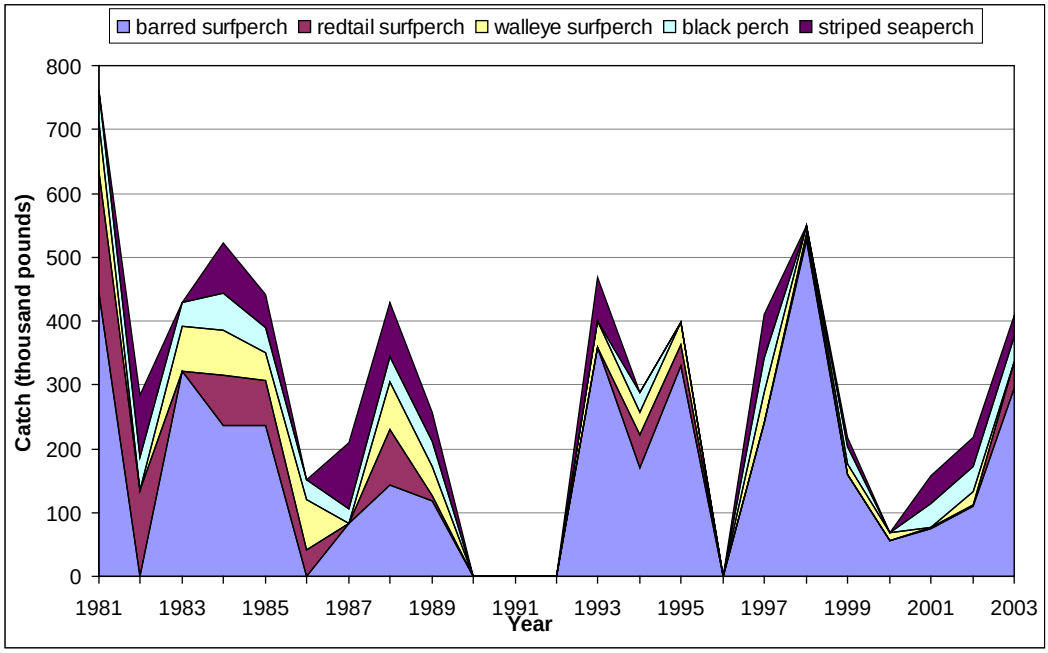

Figure 13-5. Surfperch recreational catch composition for the five most commonly caught species, 1981-2003. Data source: MRFSS data, all fishing modes and gear types combined. Data for 1990-1992 are not available.

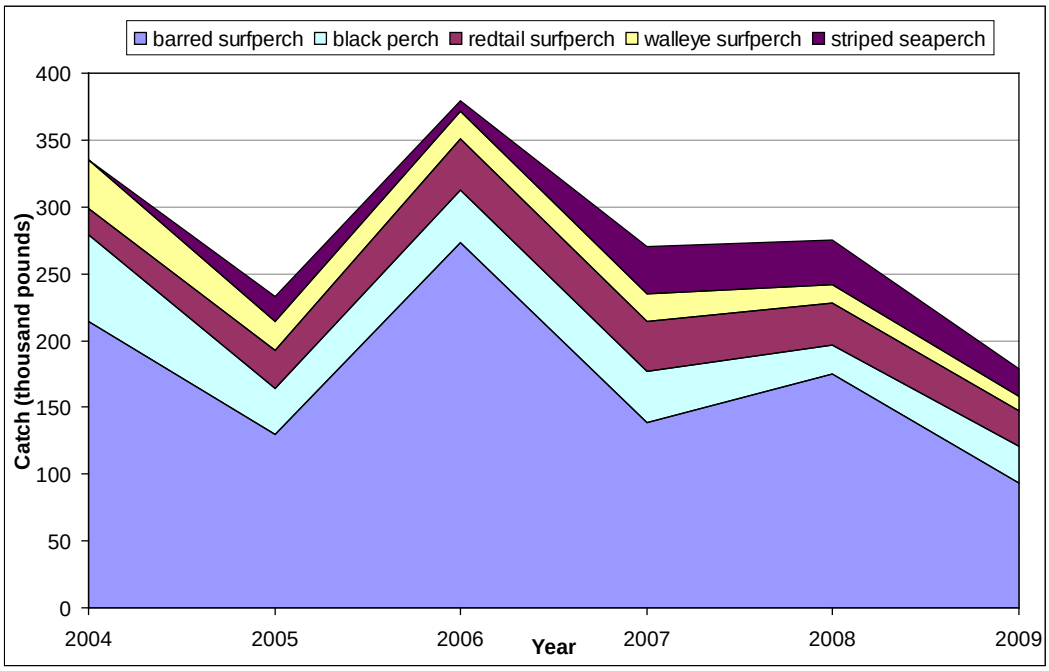

Figure 13-6. Surfperch recreational catch composition for the five most commonly caught species, 2004-2009. Data source: CRFS data, all fishing modes and gear types combined. Data for 2010-2011 are not available.

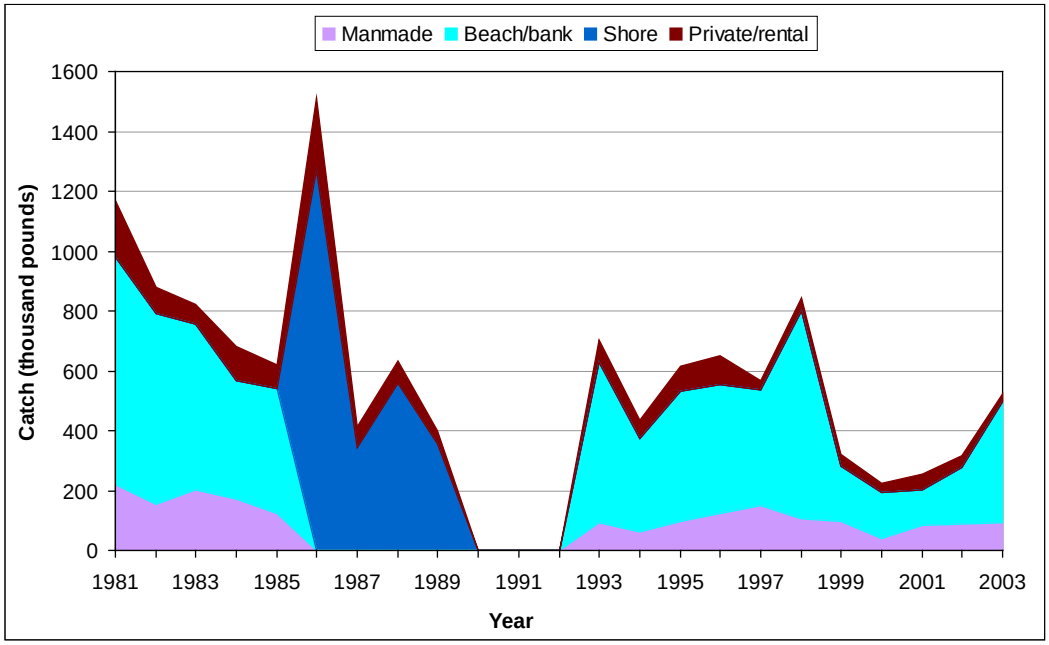

Figure 13-7. Surfperch recreational fishing mode composition, all species combined, 1981-2003. Data source: MRFSS data, all gear types combined. Between 1986-1989, the beach/bank and manmade modes were collectively designated 'shore mode'. Data for 1990-1992 are not available.

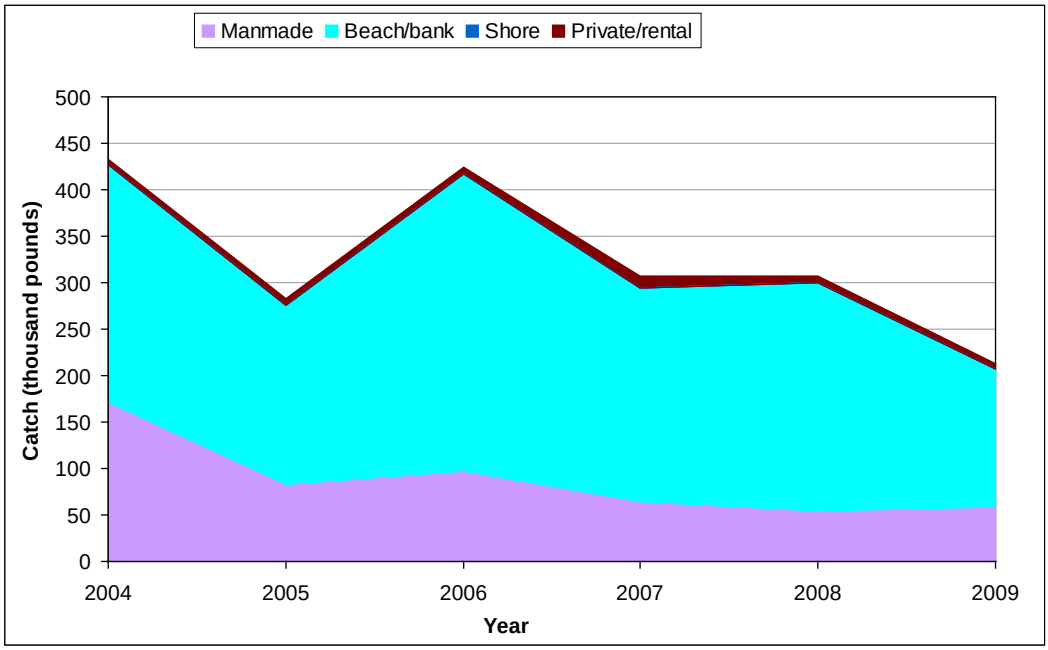

Figure 13-8. Surfperch recreational fishing mode composition, all species combined, 2004-2009. Data source: CRFS data. Data for 2010-2011 are not available.

Changes in CPUE and mean length at capture can be used to infer changes in population relative abundance and status. Since barred surfperch and redtail surfperch are common to both the recreational and commercial catch, the Department uses these

species as indicators of the surfperch resource in general. A time-series of CPUE for barred surfperch in central California suggests that there is some inter-annual variation, but no long-term trend (Figure 13-9). A plot of mean annual length at capture for barred surfperch over the same time period also shows some inter-annual variation without a trend (Figure 13-10).

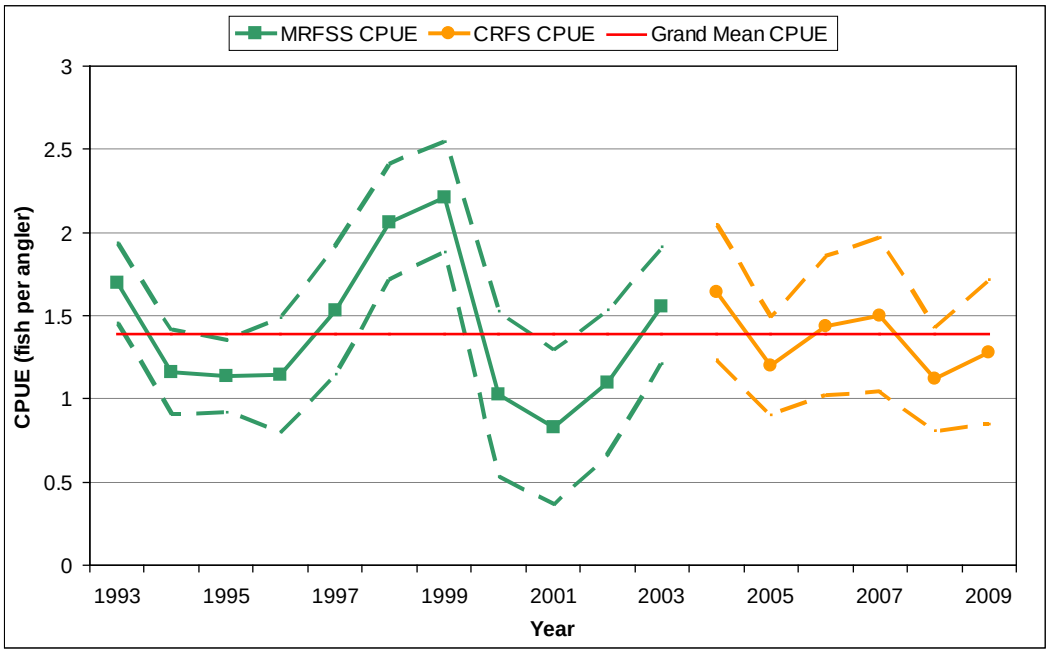

Figure 13-9. Barred surfperch recreational CPUE with dashed standard error bounds, 1993-2009. The solid red line represents the mean CPUE across all years. Data source: MRFSS data (1993-2003) and CRFS data (2004-2009), all fishing modes and gear types combined. Data for 2010-2011 are not available.

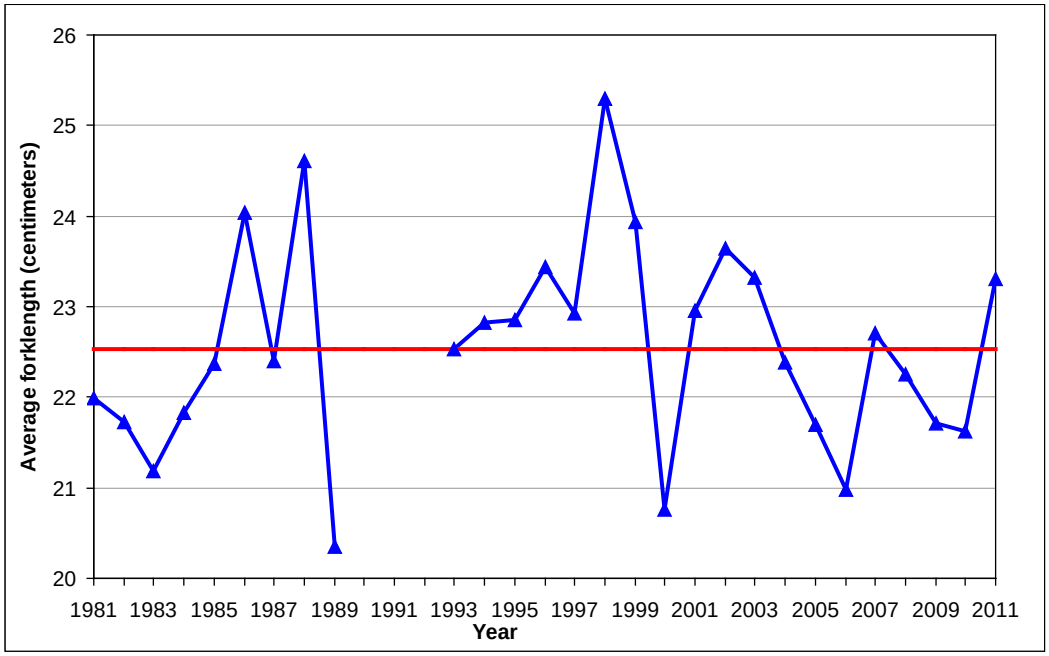

Figure 13-10. Barred surfperch recreational average fork length, 1981-2011. The solid line represents the mean length of sampled fish across all years. Data source: MRFSS (1981-2003) and CFRS (2004-2009), all fishing modes and gear types combined. Data 1990-1992 are not available.

Redtail surfperch CPUE from northern California exhibit inter-annual variation yet appears to have a slight positive trend (Figure 13-11). The time series of average length at capture also exhibits a slight increasing trend, based on observations from recreational surveys (Figure 13-12). However, the annual percentage of redtail surfperch released by recreational anglers appears to have increased after the imposition of a minimum size limit [10.5 inches total length (TL) (26.7 centimeters); 9.5 inches fork length (FL) (24.0 centimeters)] for this species in 2002 (Figure 13-13), likely contributing to the observed increase in average fish length in recent years.

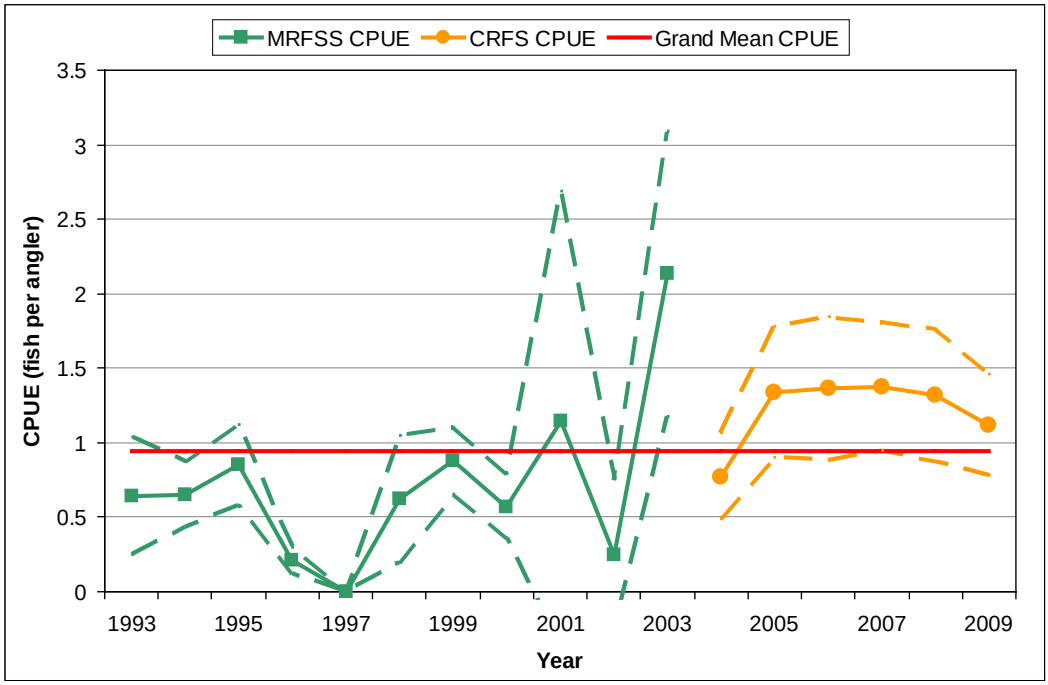

Figure 13-11. Redtail surfperch recreational CPUE (captured fish/number of anglers) with dashed standard error bounds, 1993 – 2009. The solid red line represents the mean CPUE across all years. Data source: MRFSS (1993-2003) and CRFS (2004-2009), all fishing modes and gear types combined. Data for 2010-2011 are not available.

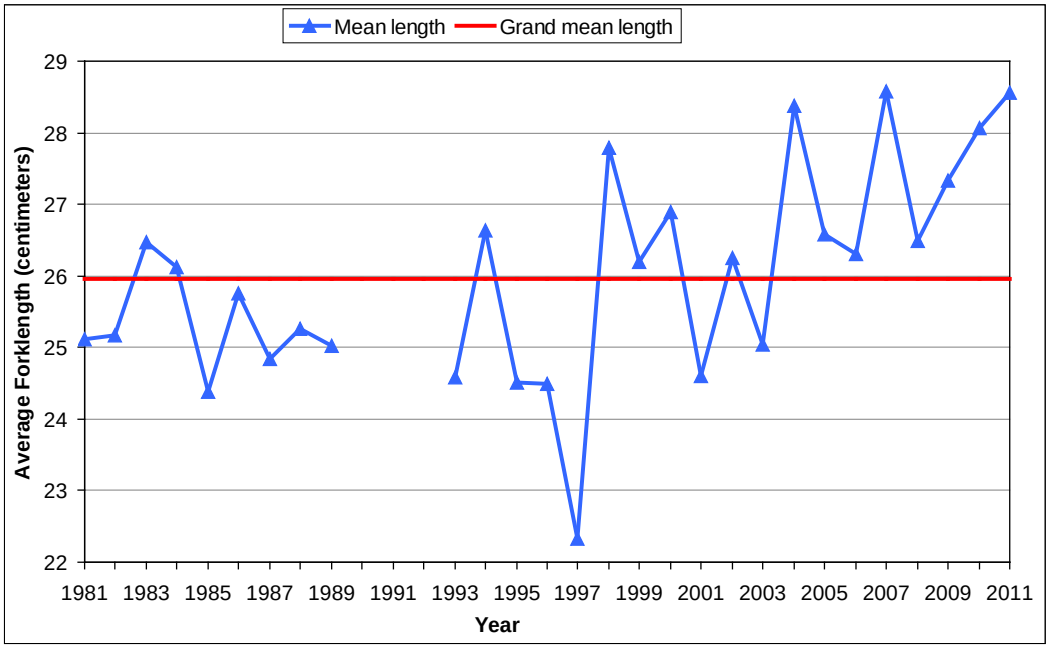

Figure 13-12. Redtail surfperch average fork length for the recreational fishery, 1981-2011. The solid red line represents the mean length of sampled barred surfperch across all years. Data source: MRFSS (1981-2003), and CRFS (2004-2011), all fishing modes and gear types combined. Insufficient data for 1996, 1997, 2001, and 2002 are available. Data for 2010-2011 are not available.

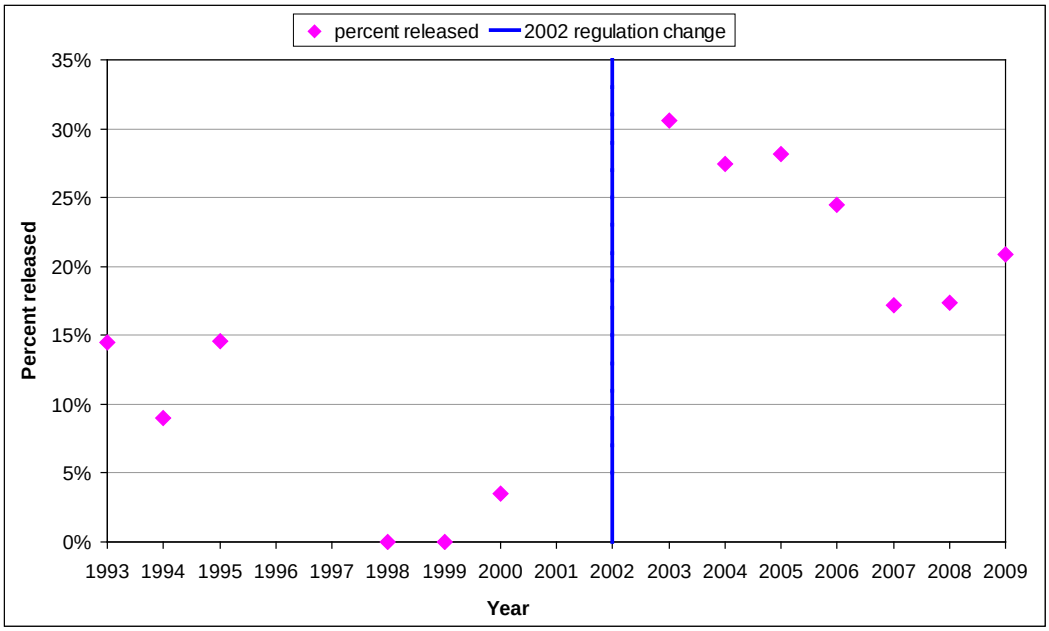

Figure 13-13. Percent redtail surfperch released by recreational anglers, 1993-2009. The blue line indicates the 2002 implementation of a minimum size limit (10.5 inches TL) for redtail surfperch. Data source: MRFS (1993-2003) and CRFS (2004-2009), all fishing modes and gear types combined. Insufficient data available for 1996, 1997, 2001, and 2002. Data for 2010-2011 are not available.

Status of Biological Knowledge

Surfperch can be identified by their compressed, elliptical outline with a furrow along either side of the dorsal fin, continuous spinous and soft dorsal fin, and forked tail. The dorsal fin has 9-11 spines and 19-28 soft rays, and the anal fin has three spines with 15-35 soft rays. The lateral line canal is continuous and located high on the side. Scales are cycloid, meaning thin, rounded, and smooth-edged.

Surfperch are viviparous, meaning they produce fully developed live young. Mating for most species initiates in the fall months, and females store the sperm for a few months until the eggs are ready for fertilization. The gestating females retain the young for 3-6 months before giving birth in the spring and summer. Barred surfperch have been found with full-term embryos earlier in the year south of Point Arguello. Many surfperch move in proximity to river mouths, bays, and estuaries for mating and parturition. The number of young produced by a single female varies by species from less than 10 to over 100, and is approximately proportional to the size of the female. Surfperch newborns are fully developed and free swimming, ranging in size from 1.5 to 3 inches (3.8-7.6 centimeters) depending upon the species, and have been observed in large schools.

The maximum age and size vary with species. Maximum age ranges from 2 to at least 14 years. The largest surfperch, as documented by angling and spear fishing records maintained by the Department, were both rubberlip seaperch: a 5 pound, 17.9 inch (2.3

kilogram, 45.5 centimeter) fish and a 4 pound 10 ounce, 19 inch (2.1 kilogram, 48.3 centimeter) fish, respectively.

The surfperch family ranges from subtropical Baja California, Mexico to southeastern Alaska. They are absent along the Aleutian Island chain but several species reappear off of Japan and Korea. The center of abundance for most species is central California, with 11 of the marine species found in California's waters also occurring north of the California-Oregon border, and 7 species found only in California to Baja California, Mexico. The occurrence of redtail surfperch south of Monterey Bay is considered rare, although recent reports indicate that surf anglers in northern Baja California, Mexico land redtail surfperch regularly.

Surfperch are found in a variety of habitats including adjacent to beaches (sand and/or cobble), over rocky substrate, and in kelp beds and estuaries. A number of species are found in multiple habitats including barred surfperch, redtail surfperch, walleye surfperch, pile perch, rubberlip seaperch, shiner perch, and white seaperch; and, a few species occupy a single habitat type. Silver surfperch and spotfin surfperch are most commonly found adjacent to sandy beaches. Black perch, dwarf perch, kelp perch, rainbow seaperch, reef perch, sharpnose seaperch, and striped seaperch tend to be associated with rocky substrate and kelp beds. The pink seaperch is found in relatively deeper waters than other surfperch.

The diets of surfperch species vary widely but most feed on small crustaceans such as the Pacific mole crab, gammarid and caprellid amphipods, and isopods, as well as polychaete worms, juvenile market squid, fish eggs, and small fish. Some species such as black perch, kelp perch, pile perch, rainbow seaperch, sharpnose seaperch, and white seaperch, can act as "cleaners", removing external parasites from other fish.

Surfperch are forage for a variety of species including game fish, marine mammals, and birds. Predatory fish include striped bass, California halibut, Pacific bonito, lingcod, salmon, rockfishes, kelp bass, barred sand bass, and leopard shark. Surfperch also fall prey to harbor seals, river otters, and birds such as great blue heron, least tern, Caspian tern, Forster's tern, cormorants, loons, osprey, and various gulls.

Surfperch population sensitivity to environmental conditions has been suggested by studies and inferred from recreational and commercial data analyses. Poor catches were linked to periods associated with the El Niño Southern Oscillation (ENSO) resulting in warming sea surface temperatures, poor upwelling, and low productivity. Warm seawater temperatures were indicated to shorten gestation and parturition periods of redtail surfperch in laboratory studies.

Status of the Populations

There are no formal population estimates for any species of surfperch in California, although CPUE, length at capture, and fishery independent surveys can be used to infer changes in population abundance. Commercial landing receipt analyses indicate

conflicting trends. Landings declined from an average of 92,000 pounds (41,700 kilograms) during the 1990s to 43,000 pounds (19,500 kilograms) in the 2000s, representing a 53 percent drop, including an all-time low in 2010 of 12,600 pounds (5,700 kilograms). The number of fishermen landing fish 10 or more times per year declined from a high of 100 in 1992 to 8 in 2008. The total CPUE (total pounds/number of receipts) for hook-and-line gear has been relatively stable over the past two decades with inter-annual variation ranging from 21-38 pounds (9.5-17.2 kilograms)/receipt, showing a modest positive trend in recent years.

Commercial fishery trends, historically, have also been impacted by factors beyond fish behavior and abundance. Market demand for surfperch declined from 1938 to 1942 and resulted in low prices offered by fish buyers. A landings peak in the early 1990s was associated with increased demand for surfperch to partially fill a market void left by reduced availability of rockfish due to regulatory actions. Regulations were implemented prohibiting nearshore gill nets, resulting in displaced fishermen exploring alternative fisheries such as the hook-and-line surfperch fishery.

Unlike commercial landings, the recreational catch has not shown a sharply declining trend during the last two decades. In spite of a general decline in overall recreational and commercial harvest, our analyses of indicators such as mean length and CPUE suggest that populations of barred surfperch have remained relatively stable during this period, and that redtail surfperch populations may have even slightly increased. However, population level inferences for redtail surfperch based on changes in average annual length are confounded by the imposition of a recreational minimum size limit of 10.5 inches TL (26.7 centimeters) in 2002. The proportion of the catch released increased dramatically in 2003 for redtail surfperch, likely motivated by the new regulatory change.

Since CPUE also appears to be increasing for redtail surfperch, this may indicate that stock size is increasing. It is plausible that the benefits to the resource from the establishment of a minimum legal size are being manifested in terms of CPUE, now that several generations of redtail surfperch have passed since the regulation was imposed.

Management Considerations

Surfperch are very important to recreational anglers, providing Californians with fishing opportunities coastwide, and have supported historically important localized commercial fisheries. Commercial and recreational catches peak during the mating and parturition seasons when surfperch are aggregated in the late fall through early summer. Barred surfperch and redtail surfperch are the two most important surfperch species to recreational and commercial fisheries.

The ecological value of surfperch is well documented. They are an important trophic component of many nearshore habitats statewide including sandy and rocky shallow subtidal areas, kelp forests, bays and estuaries, and areas adjacent to manmade structures. Surfperch consume small invertebrates, small fish, and fish eggs. Surfperch

have been identified as forage items as juveniles and adults for a wide variety of fish, marine mammals, river otters, and sea birds.

Surfperch have been managed by the Department through regulations adopted by the State Legislature and the California Fish and Game Commission (Commission). Recent regulation changes included the following: 1) a 10.5-inch TL (26.7 centimeter) minimum size limit for recreationally caught redtail surfperch in 2002; 2) an April through July 31 recreational closure within San Francisco and San Pablo Bays in 2002; 3) a reduction in bag limit from 10 to 5 surfperch in 2002; 4) a shiner perch bag limit of 20 fish and an exemption from the closure in 2002/2003; 5) an extension of the commercial fishery closure from July 15 to July 31 in 2004; and 6) an increase back to a 10 surfperch bag limit, with the exception of San Francisco Bay and San Pablo Bay which remained at 5 surfperch in the aggregate, in 2006. In addition the implementation of significant numbers of MPAs in California within the past 5 years should assist surfperch populations in maintaining sustainability, particularly in kelp beds and other shallow subtidal rocky habitats.

Formal stock assessments have not been conducted for any surfperch species, although life history features indicate that surfperch may be susceptible to overfishing. As a group, they have a relatively low reproductive potential and are vulnerable to fishing when aggregated during mating and parturition periods. There is a trend, however, indicating that direct fishing mortality may be decreasing due to changing angler behavior. More recreational anglers are practicing catch and release fishing. The average daily angler catch for barred surfperch and redtail surfperch is less than three each. The number of active fishermen in the commercial fishery has declined to approximately 10 percent of the 1990s level. The number of fish buyers has declined as well.

Surfperch habitats have been, and will continue to be, areas of conflict with losses due to shoreline development and pollution. In addition, rising sea level heights over the past several decades have reduced sandy beach habitat important to surfperch species and opportunity for both recreational and commercial fishermen. Recent research has indicated that ENSO can be a cause of potential declines in surfperch abundances.

Continuing to monitor the commercial and recreational catch, collection of life history data, and analyzing fishery trends will facilitate successful management of this diverse yet unique species assemblage.

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Further Reading

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Surfperch commercial landings, all species combined, 1980-2011.

Year	Pounds	Value	Year	Pounds	Value
1980	162,952	$103,540	**1996**	77,867	$105,992
1981	182,675	$130,475	**1997**	70,038	$101,186
1982	367,704	$209,833	**1998**	65,866	$111,905
1983	211,556	$169,986	**1999**	40,448	$67,853
1984	182,120	$140,674	**2000**	56,235	$92,543
1985	122,078	$99,414	**2001**	43,300	$77,376
1986	124983	$97,676	**2002**	68,707	$112,526
1987	145566	$118,556	**2003**	75,499	$133,691
1988	107,071	$101,910	**2004**	88,248	$164,618
1989	118,201	$106,735	**2005**	59,373	$105,086
1990	137,648	$122,734	**2006**	36,173	$70,221
1991	104,746	$124,581	**2007**	18,715	$29,019
1992	129,662	$173,257	**2008**	19,990	$33,412
1993	111,261	$139,088	**2009**	21,432	$41,944
1994	93,672	$121,571	**2010**	12,643	$25,045
1995	89,643	$124,998	**2011**	16,534	$29,537

Data source: CFIS data, all gear types combined.

Surfperch recreational catch (pounds), all species combined, 1981-2003.						
Year	**Manmade**	**Beach/Bank**	**Shore**	**Party/Charter**	**Private/Rental**	**Total**
1981	220,180	761,525	--	2,779	187,437	1,171,921
1982	152,819	636,456	--	585	91,689	881,549
1983	203,831	550,459	--	4,040	67,353	825,683
1984	172,874	393,644	--	1,281	114,262	682,061
1985	124,999	416,729	--	842	76,750	619,320
1986	--	--	1,268,466	0	244,679	1,513,145
1987	--	--	342,471	3,223	68,740	414,434
1988	--	--	558,427	625	73,220	632,272
1989	--	--	355,688	794	43,234	399,716
1990	--	--	--	--	--	--
1991	--	--	--	--	--	--
1992	--	--	--	--	--	--
1993	91,479	536,844	--	2,049	73,186	703,558
1994	63,704	308,933	--	812	61,796	435,245
1995	94,579	436,459	--	0	86,293	617,331
1996	124,478	428,963	--	0	96,429	649,870
1997	150,600	384,152	--	1,789	33,056	569,597
1998	104,961	695,003	--	776	44,260	845,000
1999	96,355	186,465	--	2,115	36,978	321,913
2000	40,196	151,881	--	585	30,863	223,525
2001	82,620	119,939	--	2,120	54,403	259,082
2002	89,056	185,873	--	1,053	42,909	318,891
2003	92,817	403,297	--	1,110	28,556	525,780

Data source: MRFSS data, all fishing modes and gear types combined. Between 1986 and 1989, the beach/bank and manmade modes were collectively designated 'shore' mode. Data for 1990-1992 are not available.

Surfperch recreational catch (pounds), all species combined, 2004-2009.						
Year	**Manmade**	**Beach/Bank**	**Shore**	**Party/Charter**	**Private/Rental**	**Total**
2004	171,290	256,406	--	2,361	5,512	435,569
2005	82,711	192,854	--	1,398	6,623	283,586
2006	96,507	320,711	--	1,116	7,703	426,037
2007	63,934	230,308	--	877	13,514	308,633

Surfperch recreational catch (pounds), all species combined, 2004-2009.						
Year	**Manmade**	**Beach/Bank**	**Shore**	**Party/Charter**	**Private/Rental**	**Total**
2008	54,427	245,101	--	1,235	7,928	308,691
2009	58,738	147,994	--	1,058	6,715	214,505

Data source: CRFS data, all fishing modes and gear types combined. Data for 2010-2011 are not available.

Surfperch recreational catch (pounds) for the five most commonly caught species, 1981-2003.					
Year	**Barred**	**Redtail**	**Walleye**	**Black**	**Striped**
1981	443,941	18,972	77,204	49,628	0
1982	0	133,843	0	53,050	97,676
1983	320,239	0	72,123	35,677	0
1984	236,655	77,651	71,971	58,009	77,674
1985	237,205	69,450	43,983	39,502	50,486
1986	0	41,235	78,034	32,578	0
1987	83,272	0	0	22,636	102,683
1988	142,033	87,852	74,149	40,721	83,361
1989	117,295	9,546	45,810	38,243	45,229
1990	--	--	--	--	--
1991	--	--	--	--	--
1992	--	--	--	--	--
1993	358,991	0	41,974	0	66,581
1994	169,497	51,616	35,597	32,127	0
1995	330,370	32,715	35,734	0	0
1996	0	0	0	0	0
1997	240,503	0	47,138	53,939	68,006
1998	526,620	9,190	12,812	0	0
1999	158,920	0	17,150	26,568	15,270
2000	56,148	0	12,740	0	0
2001	73,586	2,841	0	38,311	42,036
2002	109,754	2,356	19,612	39,823	46,487
2003	293,413	41,868	0	39,499	34,463

Data source: MRFSS data, all fishing modes and gear types combined. Data for 1990-1992 are not available.

Surfperch recreational catch composition (pounds) for the five most commonly caught species, 2004-2009.					
Year	**Striped**	**Black**	**Walleye**	**Redtail**	**Barred**
2004	0	64,221	35,726	20,245	214,715
2005	19,026	34,231	21,447	28,352	130,165
2006	7,571	39,486	21,389	37,645	273,310
2007	35,281	37914	20,565	37,635	138,566
2008	33,526	21,234	13,568	32,228	174,955
2009	20,187	27,836	11,636	26,067	93,079

Data source: CRFS data, all fishing modes and gear types combined. Data for 2010-2011 are not available.