

5. Port Profiles

In this section we present trends in landings, revenues, fishery participation, and other characteristics of local fisheries for the main ports and port groups in the study area:

1. Bodega Bay
2. Bodega Bay Area ports
3. San Francisco
4. San Francisco Area ports
5. Half Moon Bay

We summarize information derived from a variety of sources, including the CDFG commercial and recreational fishing databases, archival sources, and observations and information collected during visits to these ports and in meetings with members of the Fishing Activities Working Group.³¹

We first consider the ports as a group and then the combination of gear types and species for which landings are reported in each port over time. These landings are affected by the management changes summarized in the Regulatory Timeline, as well as by a confluence of environmental and market forces.

Between 1981 and 2004, overall landings and revenues have declined in all ports of the study area. Some have seen steeper declines, most likely as a result of changing market opportunities as processors have closed or relocated, while others have maintained their relative position in the area's overall landings and revenues. For example, as a percentage of study area totals, San Francisco's landings and revenues have fluctuated around 45% and 38%, respectively. Similarly, Bodega Bay landings and revenues have also stayed around their long-term averages, with landings accounting for 20% of study-area total landings, and 25% of revenues. In general, the role of other San Francisco Bay Area ports has diminished over time (with the exception of an upswing in landings during the first half of 2004), from 30% of landings and revenues to less than 10%. Landings and revenues in Half Moon Bay, on the other hand, have increased over the same time period, as proportions of the study area totals.

³¹ Several of these communities are also being profiled in a comprehensive effort by NOAA Fisheries, the "Joint Project for Fishing Community Profiles in the Western States," a draft of which is planned for May 2005 (Karma Norman, pers. comm., 6 January 2005).

Figure 35. Contribution to study-area landings, 1981–2003

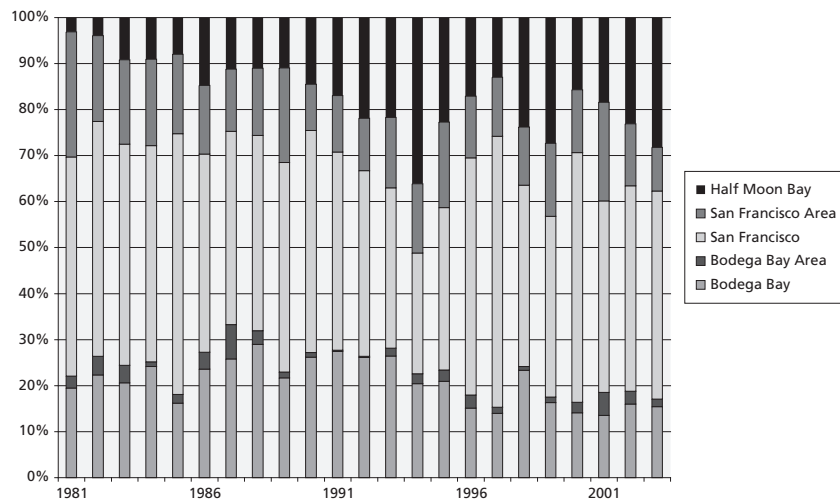
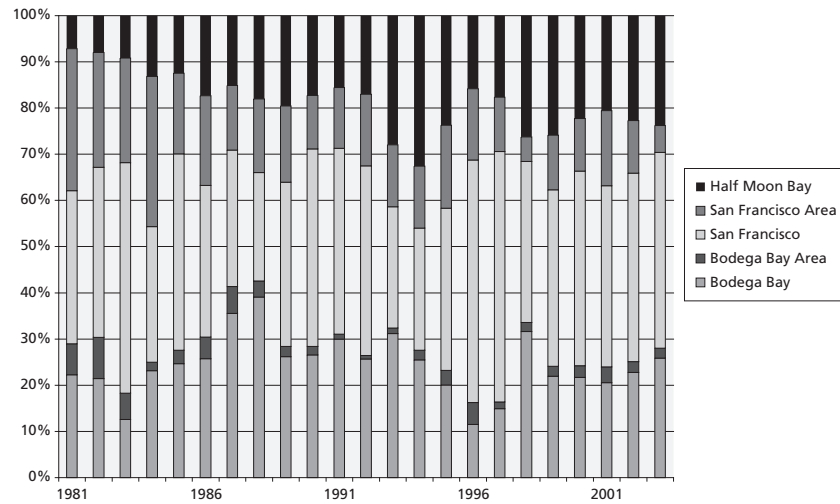


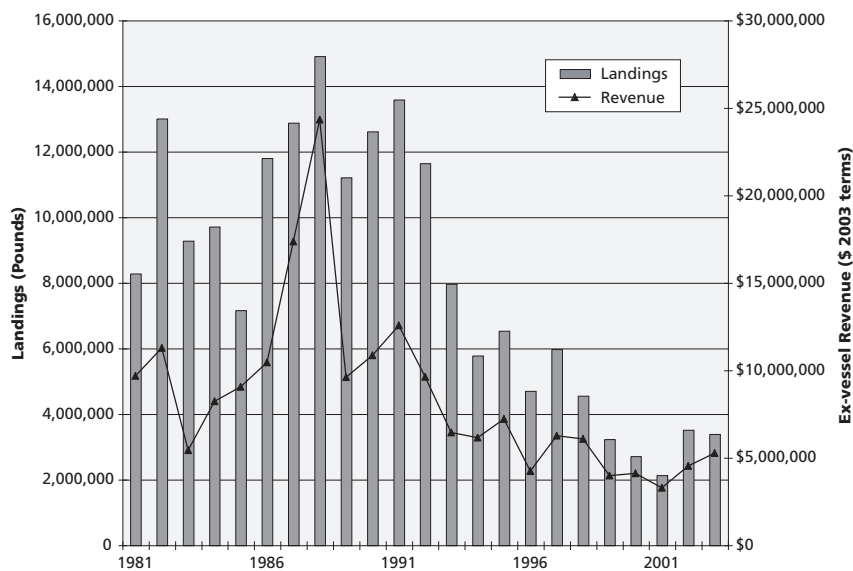
Figure 36. Contribution to study area revenues, 1981–2003



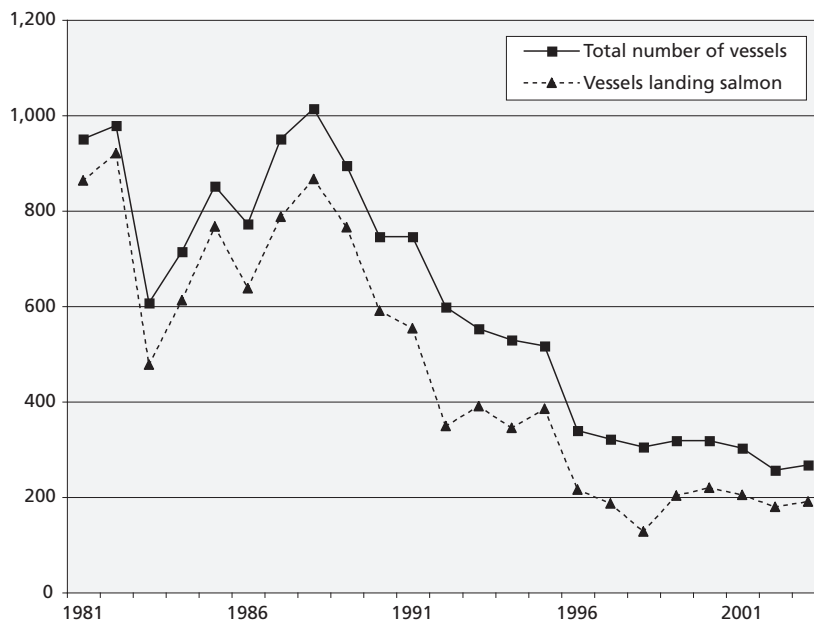
Bodega Bay and surrounding area ports

For a complete list of Bodega Bay Area ports, see Appendix B.

Bodega Bay is one of the major ports adjacent to the sanctuaries. Landings and revenues have declined from around 10 million pounds and dollars in the 1980s to half that in the 1990s. Several years in the late 1980s stand out, representing a historic peak of salmon catches in 1988 and several years of strong groundfish landings—more than 5 million pounds annually between 1988 and 1993.

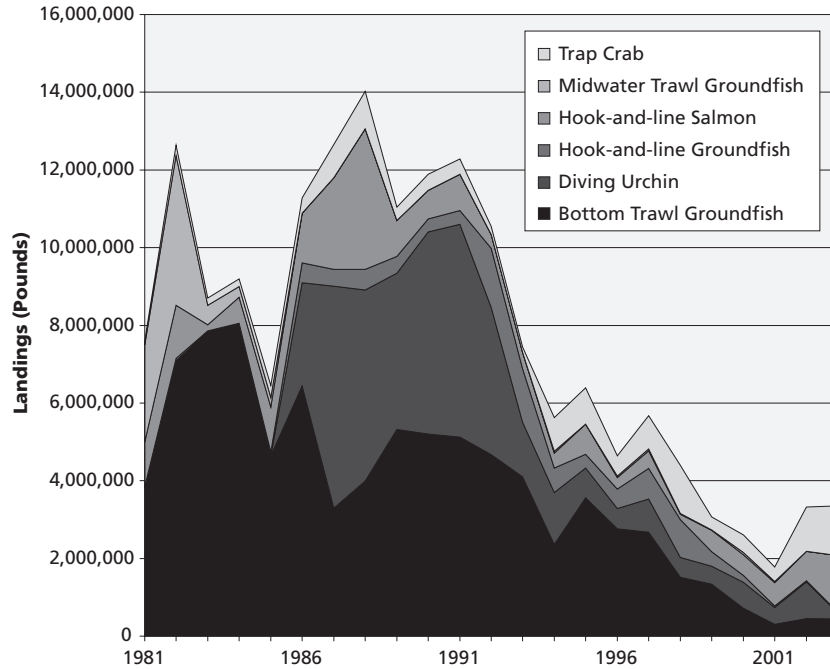
Figure 37. Bodega Bay landings and revenues, 1981–2003

Over this time period, the number of vessels making landings in Bodega Bay has declined, mirroring the overall trend in commercial fishing fleets in the rest of the study region and the rest of California.

Figure 38. Vessels making landings in Bodega Bay, 1981–2003

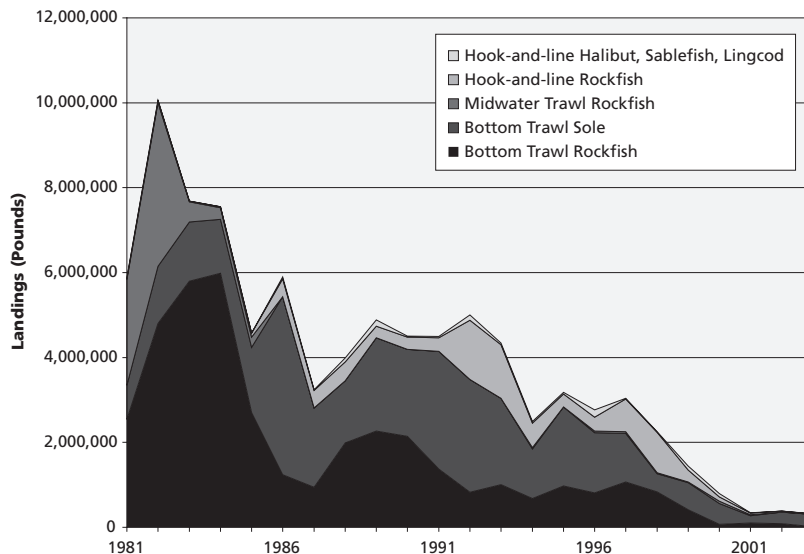
Aggregate landings and revenues mask the progression of gear types and fisheries in the area. In the next two graphs we consider trends in some of the most significant fisheries in Bodega Bay. In the early 1980s, there were significant midwater and bottom trawl fisheries for groundfish, especially rockfish. The 1988 peak is due to increased salmon landings and the expansion of the urchin diver fishery, which also emerges in the late 1980s as one of the fisheries that temporarily slowed the overall decline in landings. In more recent years, the trap fishery for crab has increased in significance, as a proportion of landings.

Figure 39. Landings by gear type of select fisheries in Bodega Bay, 1981–2003



Since the groundfish fishery spans so many different species groups, it is illustrative to consider the changes in this fishery in a little more detail. The next graph shows that landings of bottom trawl catches shifted from rockfish to soles, reflecting new target strategies in response to management measures and market conditions. By the late 1980s, a hook-and-line fishery for rockfish and several other species was developing, and accounted for significant landings of rockfish in the 1990s. By 2000 the groundfish fishery had virtually disappeared from Bodega Bay, and—as the previous graph illustrates—other fisheries now account for the majority of landings.

Figure 40. Landings by gear type of select groundfish species in Bodega Bay, 1981–2003



From the landing receipts alone, it is not possible to infer either the number of vessels home-ported in Bodega Bay or their participation levels over the years. It appears, however, that most of the vessels making landings in Bodega Bay land salmon there, and a recent survey of the California salmon fleet found that between Bodega Bay and Monterey, i.e. in our study area, fishermen are likely to land their catches in their home ports.³² On average, two thirds (68%) of vessels making landings in Bodega Bay land only one species or species group, suggesting that this is a highly specialized fleet.

³² Hansen, D. (2003). Estimating Costs in the California Commercial Salmon Fishery. *Agricultural and Resource Economics*. Davis, University of California: p. 90.

During visits to the port in the spring and summer of 2004, we counted 119 commercial and recreational fishing boats out of 244 available berths (see Appendix A). The remaining berths were occupied with sailing boats and private motor boats, some of which are likely used for recreational fishing. All but 5 of the vessels inspected were identified as commercial fishing vessels, with 3 charter boats and 2 unknowns. To our question of whether they were actively fished, our local guide responded with an unequivocal “yes” to only 27 of the 114 identified commercial fishing vessels. Another 34 were not fishing or only fished part-time, while 59 vessels remain unclassified. The port has some infrastructure that supports the fishing industry, notably an ice plant, a 70-ton travel lift for hauling out vessels, and six hoists. There are four cold storage/ice making facilities. The ice plant post-dates the boom days of the groundfish fishery, when, according to local fishermen, refrigerated trucks would line the narrow road leading to the harbor basin to haul away the abundant catches.

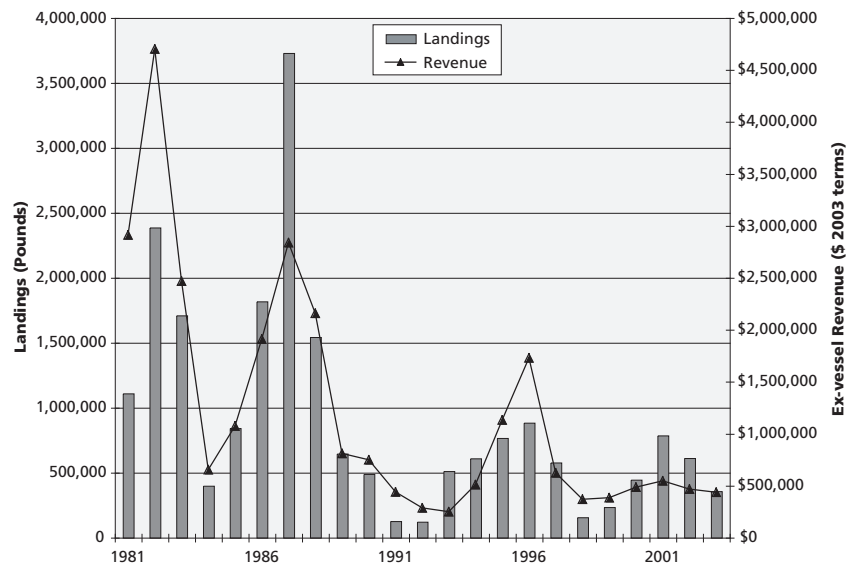
There are five main fish buyers in Bodega Bay, two of whom are associated with local restaurants and also do some processing locally. According to a longtime groundfish fisherman, only one of the buyers will occasionally buy groundfish, but no market exists on the scale of the millions of pounds that were once landed here. There are several marine-related businesses in Bodega Bay, notably five bait shops, four gear stores, and eight charter boats. In addition there are also two public ramps where private anglers pay a fee to launch their watercraft.

In assessing the causes for the failures of local businesses, including, for example, a struggling bait shop in Bodega Bay, members of the fishing industry cited the 2001 groundfish management measures, especially the rockfish conservation areas and declining bag limits in the recreational fishery.³³

³³ This information is derived from interview conducted for a project conducted in 2001–03, the Groundfish Fleet Restructuring Project; see www.ecotrust.org/gfr for more detail.

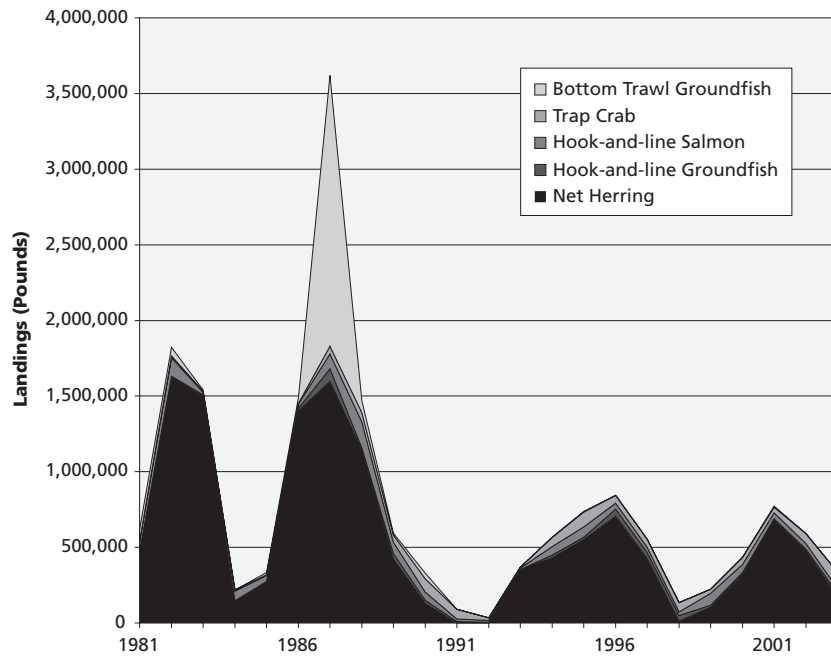
Ports in the Bodega Bay surrounding area account for only marginal landings and revenues, averaging 2% and 3% of the study area totals, respectively.

Figure 41. Landings and revenues in Bodega Bay Area ports, 1981–2003



The landing spikes seen in Bodega Bay in the early and late 1980s are repeated in Bodega Bay Area ports, but it appears that the value of landings made in Bodega Bay Area ports was somewhat higher in the early 1980s than in Bodega Bay itself, largely due to 1.7 million pounds of groundfish landings recorded for area ports. Otherwise, the cyclical spikes are due to landings dominated by lucrative herring catches, most likely associated with catches made in Tomales Bay.

Figure 42. Landings by gear type of select fisheries in Bodega Bay Area ports, 1981–2003

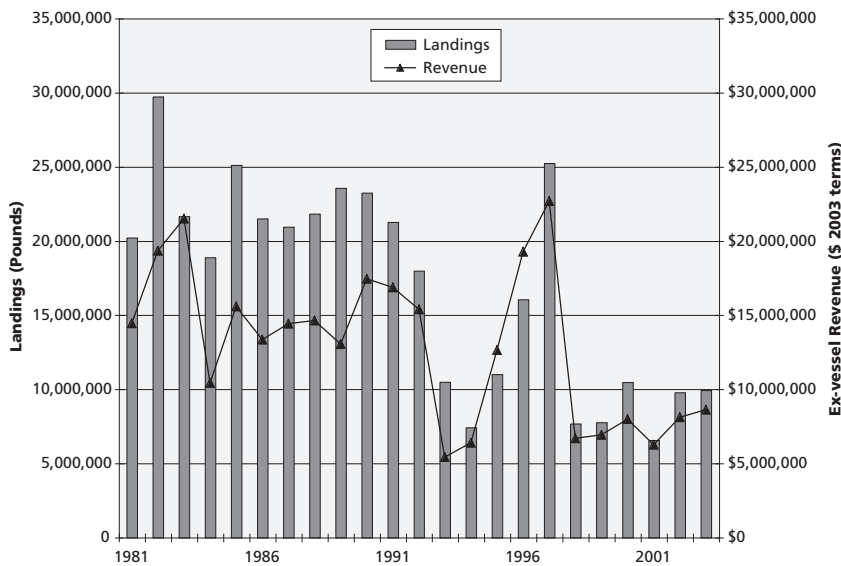


San Francisco and surrounding area ports

For a complete list of San Francisco Area ports, see Appendix B.

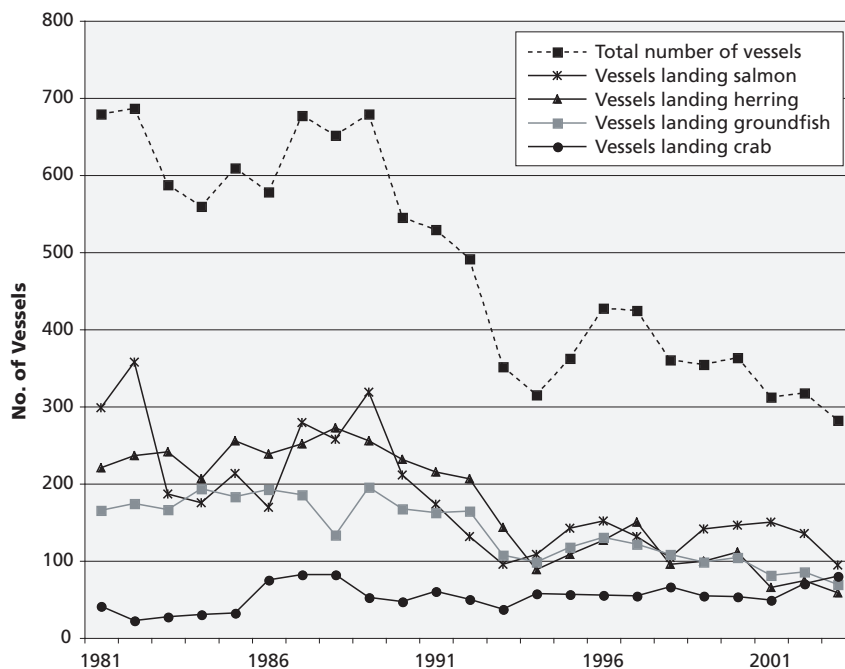
San Francisco is the major fishing port in the study area, accounting for over 40% of local landings and revenues. As elsewhere on the coast, commercial landings and revenues have fallen precipitously, with landings from 2000–03 averaging 9.2 million pounds annually, down from an annual average of 22.6 million in the 1980s and average revenues declining from \$15.2 million to \$7.7 million. Over the last 23 years the fishery has shrunk by 50%.

Figure 43. Landings and revenues in San Francisco, 1981–2003



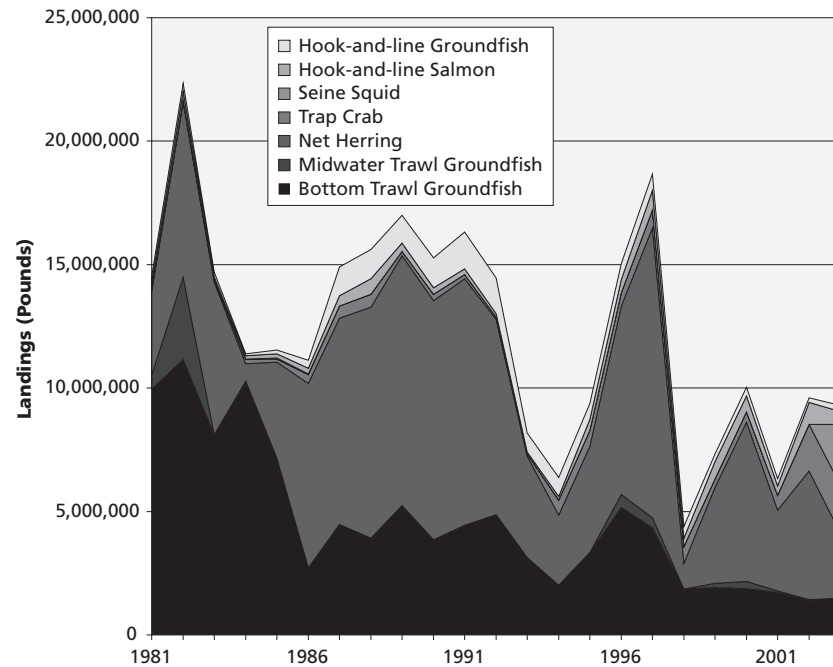
Analogously, the number of fishing vessels making landings in San Francisco has also declined, from close to 700 during the 1980s to fewer than 300 in the first half of 2004.

Figure 44. Vessels making landings in San Francisco, 1981–2003



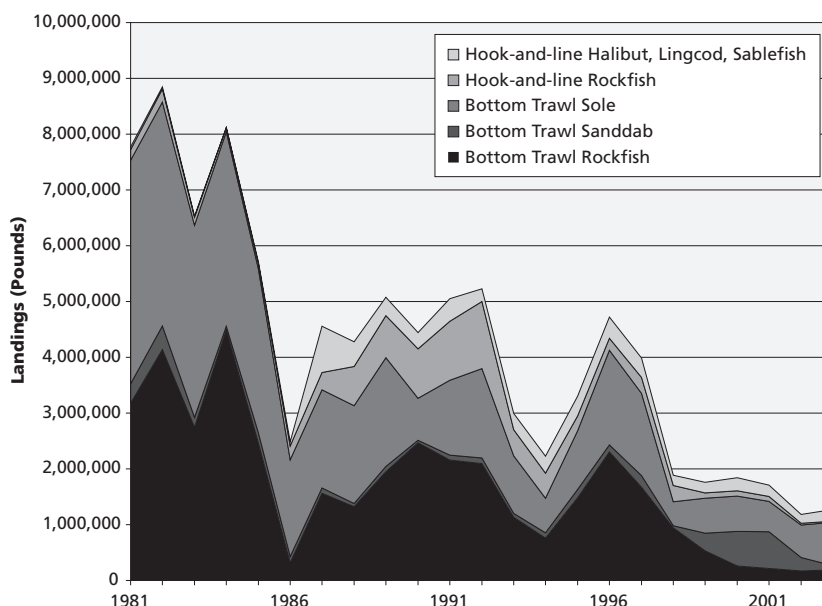
Looking at some of the most significant fisheries in San Francisco, the aggregate landings and revenues mask the progression of various gear types and fisheries in the area. After the boom in the groundfish trawl fishery in the 1980s, it was replaced by the herring fishery as the largest fishery, by landed volume, in San Francisco. With the exception of 2003, when over \$2 million pounds were landed in San Francisco, other fisheries with relatively steady landings over the majority of years have recently increased in relative significance. These include crab, salmon and tuna (not shown).

Figure 45. Landings by gear type of select fisheries in San Francisco, 1981–2003



The evolution of fisheries in San Francisco is less pronounced than in Bodega Bay, probably reflecting the greater diversity of fisheries making landings there. Nonetheless, there are some noticeable developments in the groundfish fishery. After an initial drop in trawl landings in the mid-1980s, the graph illustrates the emergence of hook-and-line fisheries for rockfish and several other species. Several years of higher than historical landings of sanddabs may have ceased in the wake of coastwide groundfish rebuilding regulations that limited the catch of all groundfish species in 2001/02.

Figure 46. Landings of select groundfish species in San Francisco, by gear type, 1981–2003



From the landing receipts alone it is not possible to infer the number of vessels homeported in San Francisco or their participation levels over the years. It appears, however, that the vessels making landings in San Francisco participate in most of the regionally significant fisheries (with the exception of squid). During port visits in spring of 2004, we counted 72 commercial fishing vessels in the 177 available berths, and both local fishermen and port staff reported that there were about 10 CPFVs operating out of Fishermen's Wharf. Out of those 72 vessels, only 28 elicited an unequivocal response that they are indeed participating in the fishery, with another 3 vessels identified as part-time and 20 as no longer being fished. The fishing status of 21 vessels was unknown.

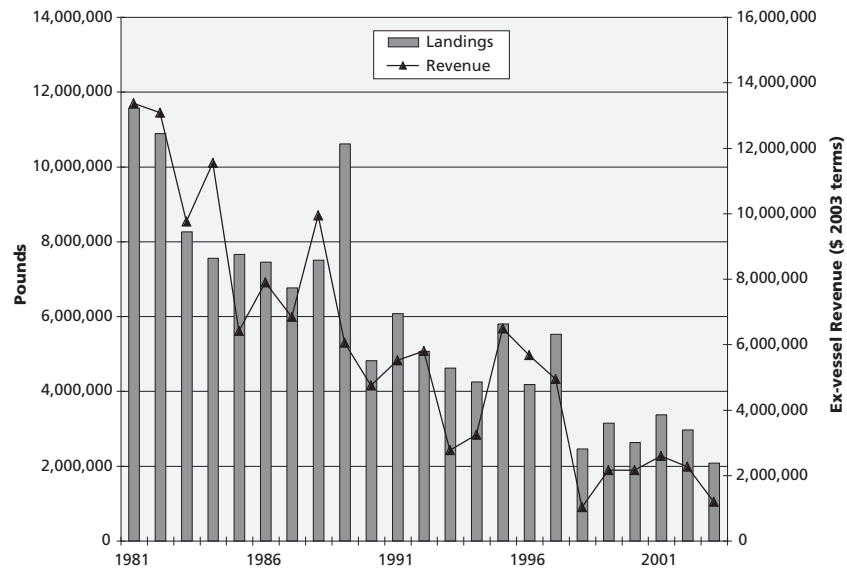
San Francisco has considerable infrastructure to support the fishing industry. There are private dry docks and hoists for hauling out vessels, as well as a ramp and travel lift. In addition to public cold storage, there are five private facilities, as well as a fuel dock. As of spring 2005, there were 15 fish buyers in San Francisco, most of them at Fishermen's Wharf (12), and one each at Piers 33, 28, and 7. A former buyer, H&N Fisheries at Pier 45, closed in 2002. In addition to two bait shops, there are also three gear stores.

Although San Francisco is the main commercial fishing port in the area, there are several ports in the San Francisco Bay Area that have historically played a significant role in commercial fisheries, and—in the case of marinas in Berkeley, Emeryville, and Oyster Point³⁴—continue to play a large role in local recreational fisheries.

³⁴ One respondent estimated revenues from berth rentals and fishing related ventures of Oyster Point Marina at around \$2 million in 2002.

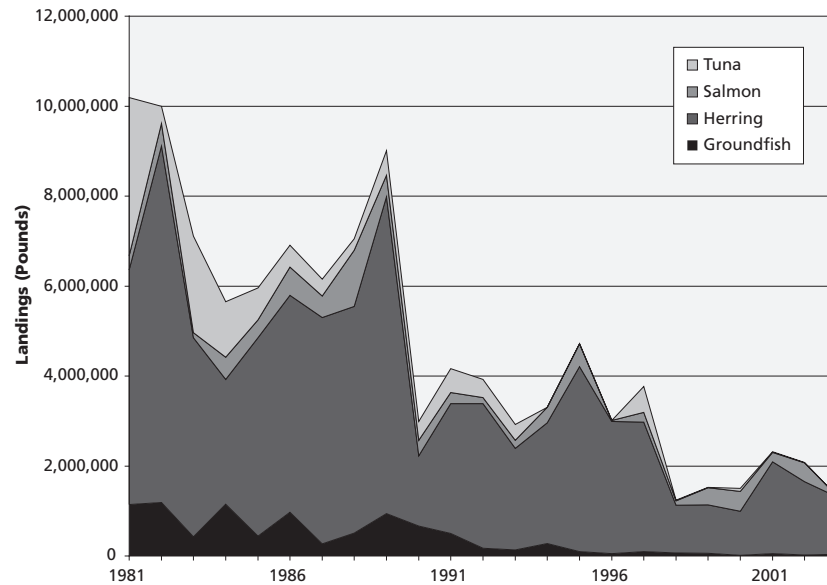
In terms of commercial fisheries, closings of processors and buyers in the East Bay have led to a sharper decline in landings and revenues over the past 23 years than in other ports of the study area.

Figure 47. Landings and revenues in San Francisco Bay Area ports, 1981–2003



Most of these landings are brine shrimp, with the harvest from the salt ponds in the South Bay accounting for over 1 million pounds annually in several years of the study period. In other words, statistics for San Francisco Bay Area ports are somewhat skewed by landings from this unusual fishery that obviously does not take place in sanctuary waters.

Figure 48. Landings of select species in San Francisco Bay Area ports, 1981–2003



Half Moon Bay

Pillar Point Harbor in Half Moon Bay is the southern-most port in our study area and accounts for about 20% of regional landings. Landings and revenues exhibit an interesting pattern. Landings peaked in the early 1990s, averaging 8.4 million pounds annually. Revenues, however, peaked in the late 1980s, averaging close to \$8 million a year from 1986–90, most likely associated with the strong salmon and crab years and higher prices during that time. During the study period, the number of commercial fishing vessels making landings increased to 739 in 1989 and has since declined steadily to around 200.

Figure 49. Landings and revenues in Half Moon Bay, 1981–2003

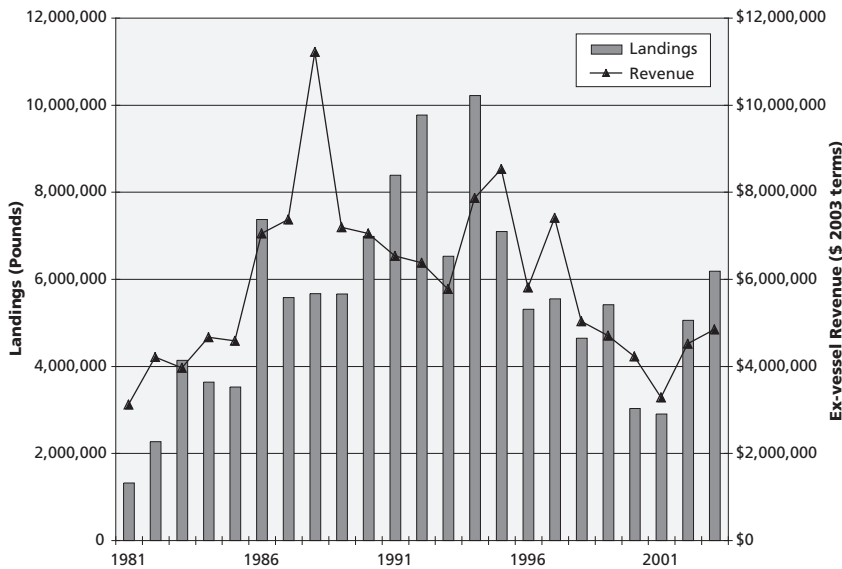
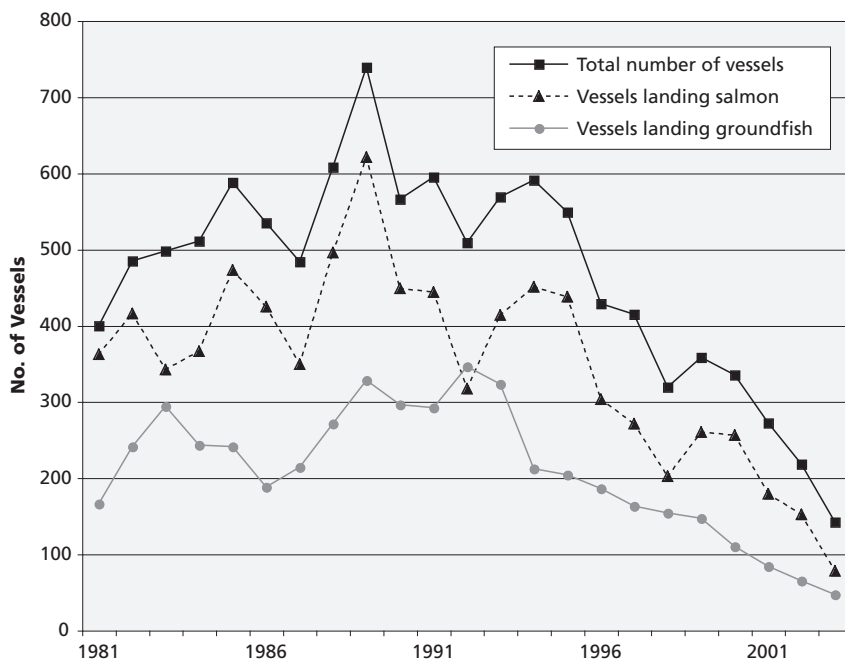
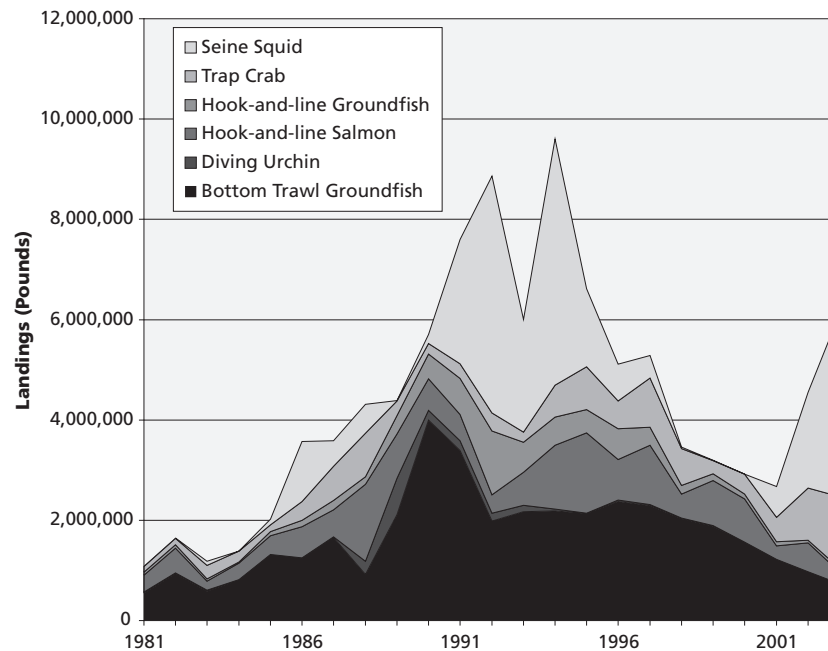


Figure 50. Vessels making landings in Half Moon Bay, 1981–2003



The progression of fisheries in Half Moon Bay, as seen through landings made there in the study period, exhibits a pattern somewhat different from other study-area ports. Trawl landings of groundfish peaked in 1990 at over 4 million pounds, and their decline was accompanied by the emergence of a hook-and-line fishery in the early 1990s. This fishery, in turn, has also fluctuated with more recent depth and gear restrictions. Crab landings peaked in the mid-1990s, and have recently taken on more significance as a proportion of landings, together with the cyclical squid fishery. Salmon also remains an important fishery.

Figure 51. Landings by gear type in Half Moon Bay, 1981–2003



Pillar Point Harbor at Half Moon Bay is home to significant salmon, crab, and groundfish fleets. During port visits in spring and summer of 2004, we counted 85 commercial and 13 charter fishing vessels, as well as 9 vessels of unknown status, for a total of 107 vessels occupying a total of 369 available berths. This may be a seasonal effect, since the harbor is considerably busier during salmon and crab season in summer and fall respectively. This is considerably less than the estimate by port staff that 55% of berths are occupied by fishing vessels. In 2002, local fishermen reported that only 24 vessels in the harbor fish to make a living and do so exclusively. During port visits in spring and summer of 2004, local respondents identified a total of 78 vessels as fishing part- or full-time, 9 as no longer fishing and the remaining 20 with unknown participation in the fishery. One way in which fishermen characterized the changes in the fisheries is in terms of the annual ritual of cleaning and overhauling boats. While they used to be “prettied up” with fresh coats of paint and such, they now exhibit signs of minimal upkeep and maintenance. Also, even though occupancy rates in the port have been increasing, fishermen see fewer young people coming into the fishery.

Much of the fishing activity takes place in close proximity to the port, making Half Moon Bay popular with small and recreational boaters. The port has a 6-lane public ramp, which is heavily used by trailerable boats that typically have a range of 55

nautical miles, traveling the 28 miles to Duxbury Reef off Bolinas for salmon or to an area called “the Guide” 60 miles southwest of Pillar Point Harbor for tuna. In recent years, the fleet has changed considerably to more extensive and powerful boats, reflecting a shift from charter boat fishing to private angling. One CPFV captain reports of his former regular clients buying their own boats. Participants in the charter boat fleet lamented the increasingly stringent regulations that have reduced bag limits and fishing seasons. Between port visits in 2002 and 2004, the number of CPFVs increased from 7 to 12, but had fallen from 9 by the time of this printing. Fishermen reported a decline from 16 vessels, prior to federal rockfish rebuilding measures. By the time of this printing (Dec 2005), there were six CPFVs with capacity for more than six anglers and three so-called “six pack” boats, which are charter boats that carry no more than six passengers. The latter may represent a trend towards smaller CPFVs. The charter fleet targets some 28 species of rockfish locally, out of more than 50.

There are three fish buyers with leases from the harbor; a fourth buyer left in early 2002. In addition, there are two fish markets, and fishermen also sell directly off their boats to the public. Pillar Point Harbor has become a weekend destination for shoppers and tourists, with many making the trip specifically to buy fresh seafood. The port has a fuel dock, and an ice plant that produces 50,000 pounds of ice a day and stores 80,000 pounds to be sold to commercial vessels. This quantity is barely enough to cope with peak demand during the height of salmon and squid season. Other marine-related businesses include two bait shops (in addition to the fish buyers, who also sell bait), a gear store, and 12 CPFVs. With the closure of the boat yard there is no longer a haul-out, and fishermen go to San Francisco for repairs instead. As recently as 2002, the yard employed two full-time and four part-time employees, but this became economically unfeasible, not least because of increasing land values.

There are 369 berths, and rental fees account for more than 50% of the port’s revenues. Port revenues totaled close to \$2 million in 2002, including rents, concessions and an RV park. The latter is used quite heavily by seasonal fishermen, and port staff have observed as many as 400 launches a day at the public ramp, and estimate that about 95% of the annual total of 10,000 launches are for fishing.

RELATION TO OTHER USER GROUPS AND OTHER USES

The ability to address socioeconomic concerns and incorporate economic data in spatially explicit frameworks becomes increasingly important as marine resource and fisheries managers assess the use of MPAs and other area-based regulations for achieving management goals such as ecosystem-based management. The ability to consider ecological and socioeconomic issues side by side stands to improve the policy processes currently underway in California and those planned in other parts of the coast.

The information contained in this report and the associated deliverables to the sanctuaries focus on the commercial and recreational fishing sectors. These consumptive uses are, however, not the only types of activities that take place in sanctuary waters. California is a prime destination for recreation and tourism, and consequently there are several important categories of non-consumptive uses that also take place in sanctuary waters.

According to the National Survey on Recreation and the Environment, over 100 million people—both visitors and residents of California—engage in “Viewing or photographing scenery in saltwater surroundings.” Other marine-based recreation activities are similarly popular, as shown in Table 13.

Table 13. Participation in select marine activities in California

Activity	No. of participants (millions)	No. of days (millions)
Photography	4.1	107.9
Swimming	8.4	94.6
Bird-watching	2.6	65.7
Wildlife viewing	2.5	38.6
Surfing	1.1	22.6
Fishing	2.7	20.3
Motorboating	1.5	11.6
Scuba/snorkeling	1.1	5.1

Source: Adapted from NSRE figures reported in Leeworthy and Wiley, 2001.

Some share of these activities in California takes place in sanctuary waters, and there are several efforts underway to characterize the patterns and values of non-consumptive uses. The results of our analysis, of efforts to assess habitat suitability and hotspots, and of related efforts to characterize the ocean environment are compatible, or can be made compatible, with considerations of non-consumptive uses.

Two efforts that might be particularly pertinent to the JMPR process are a local knowledge project and data-collection tool (OceanMap) developed by the non-profit group Environmental Defense and a study of non-consumptive use patterns and values in the waters of the Monterey Bay and Channel Islands National Marine Sanctuaries underway (Principal Investigator: Chris LaFranchi).

Chapter 5: Findings

- ▶ Overall, between 1981 and 2004, landings and revenues have declined in all ports of the study area.
- ▶ As a percentage of study area totals, San Francisco's landings and revenues have fluctuated around 45% and 38%, respectively. Similarly, Bodega Bay landings and revenues have also stayed around their long-term averages, with landings accounting for 20% of study-area total landings, and 25% of revenues.
- ▶ Landings and revenues in Half Moon Bay, on the other hand, have increased over the same time period, as proportions of the study area totals.
- ▶ In terms of the commercial fisheries, closings of processors and buyers in the East Bay have led to a sharper decline in landings and revenues over the past 23 years than in other ports of the study area.