

West Coast Groundfish IFQ Fishery Catch Summary for 2011: First Look

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Purpose

The purpose of this report is to summarize and illustrate preliminary catch data and trends for the 2011 West Coast Groundfish IFQ Fishery, and to compare them with historical catch for the analogous fisheries before IFQ, the Limited Entry Bottom Trawl (LET) fishery and the Shoreside Whiting Fishery (SSW). This is not meant to be an exhaustive report, but to present an early examination of the data, and divide catch estimates among strata which are of interest to many stakeholders.

Summary

Preliminary data show that in 2011 (the first year under IFQ management), overall non-whiting IFQ species landings were down compared with the historical average, revenues were up; and for the directed shoreside whiting fleet, both landings and revenues were up. Retention rates were generally much higher than in the past. Although the fishery got off to a slow start in 2011, it finished with the month of December having the highest monthly landings of 2011, and higher landings than any other December during the baseline period of 2006-2010. Monthly non-whiting fleet revenues for August, September, October and December of 2011 were higher than the highest observed value for the same month in the baseline period.

The 2011 IFQ fishery may have begun slowly, as many harvesters participated in the Dungeness crab fishery (in contrast to this winter's Dungeness crab fishery which was delayed, and offered less distraction from IFQ sector fishing during December). Harvesters apparently made a final push for landings in December, perhaps feeling relatively more secure that their quota pounds for bycatch species were sufficient to last the year. Except for landings in December, which were 71 percent higher than the historical average, and June's which equaled the historical average, landings in the remaining months of 2011 were below the average observed during the 2006-10 baseline period.

Although landings were lower, revenues in 2011 were up by 14 percent in the non-whiting portion of the shoreside IFQ fishery, compared to the historical average. Non-whiting fishery participation decreased slightly, with 10 fewer vessels fishing in 2011 compared to 2010. Astoria, Newport, and Westport were the dominant ports for IFQ landings in 2011, and Astoria was the only port to increase its share of trawl fishery landings compared to 2010. Fixed gear accounted for six percent of non-whiting IFQ landings by weight but 22.6 percent of revenues, mainly driven by the high price for fixed gear caught sablefish (39 percent of sablefish IFQ landings were made using fixed gear). Shoreside whiting landings and revenue both increased dramatically, with landings up by 40 percent and revenues up by 121 percent compared to the historical average.

Retention rates for the non-whiting IFQ fleet were higher for most species examined, in 2011 compared with previous years, and substantially higher for most rebuilding species. Discards accounted for 4.8 percent of nonwhiting IFQ fleet catch. When combined with whiting catch, the overall discard rate was 1.3 percent. Catch of rebuilding species was generally lower than in 2010, with the exception of canary rockfish, which increased by 0.4 mt (to 2.8 mt); however was still well below the fishery's allocation of

25.9 mt. Catch of most other rebuilding species declined by two-thirds or more with the exception of petrale sole, which is managed as a target species under its rebuilding plan. Similar declines in rebuilding species bycatch were recorded in the directed whiting IFQ fishery.

How the data are described in this report

In this report, the West Coast Groundfish Individual Fishing Quota (IFQ) Fishery during 2011 is compared to its analogous predecessors, the Limited Entry Bottom Trawl (LET) Fishery, and the directed shoreside whiting fishery (SSW), both combined and separately, over the baseline period of 2006 through 2010.

Catch data originated from five sources: electronic, IFQ landing receipts from 2011 were provided from the Pacific States Marine Fisheries Commission (PSMFC), along with data from “paper” landing receipts, from 2006 through 2010, which were accessed from tables in the Pacific Fisheries Information Network (PacFIN), one of PSMFC’s databases. Those data included landings, ex-vessel revenue, gear type, vessel, and port information. Landings and discard data for groundfish in IFQ species categories during 2011 was obtained from the National Marine Fisheries Service’s (NMFS) IFQ Vessel Accounts (VA) database. Summarized discarded and retained catch estimates for 2010 were obtained from the annual Groundfish Mortality Report, of the Fisheries Resource Analysis and Monitoring Division (FRAM) of NMFS, and the annual Pacific Whiting Fishery Summary, from the NMFS Northwest Region. Crab and shrimp landings and vessel information were obtained from PacFIN.

Landed and discarded catch is reported in round weight. Revenue is reported as ex-vessel revenue, and is not adjusted for inflation or other factors. Discarded catch was discarded at sea, and dockside discard is not included in this report. Total catch refers simply to the sum of landed and discarded catch. Bycatch refers to fish that were caught along with the intended target species, whether they were landed or discarded. The terms landing receipt, fish ticket, and ticket are synonymous in this report. Non-whiting and shoreside directed whiting fleets were separated by weight of landings by species in each trip. If a trip contained greater than 50 percent Pacific whiting, and was landed by trawl gear, it was considered a directed whiting trip, and those landings and revenue are presented under the shoreside whiting fleet in this report (as within PacFIN). All other landings of groundfish by trawl gear with a valid limited entry permit were considered part of the non-whiting fleet for that period. For 2011, IFQ trips were delineated directly on electronic tickets, and groundfish were landed in the IFQ fishery with fixed gear as well as trawl gear.

Consideration of data sources, timeliness, and accuracy

The results in this report should be considered preliminary due to how recent the data are, and that they originated from many different sources. Electronic landing receipts provide a welcome, nearly real-time look at the progress of the fishery, they provide fields not available in the NMFS IFQ vessel accounts database, such as revenue, gear type, etc., and they are available months before data from

paper landing receipts are complete in the PacFIN database. The sums of landings for most strata show extremely close agreement between the electronic tickets the NMFS vessel account system. Other fields, used to divide those landings at finer scale for comparison with previous years, such as port of landing and vessel ID, however, can produce somewhat different results between the two systems. The relative accuracy of estimates will tend to be higher at higher aggregate levels (fishery, fleet, year), and be reduced at finer levels of aggregation (port, vessel, species).

Since this report relies heavily on electronic landing receipt data for 2011, it should not be considered the final word on fishery estimates for that year. Rather, the paper fish ticket data, which has had more opportunity for correction of fields like vessel ID, gear, and port of landing fields, as well as landings themselves would logically be a more accurate, source of long-term information. In addition, some additional discarded catch data may be submitted to the NMFS vessel account system between now and April, which could change results slightly. This report is based on the best currently available scientific and management information.

Annual landings and revenue

Annual landings and revenue from 2006 through 2011 are summarized by fleet in Table 1 and Figures 1 through 3. Preliminary data show that in 2011 (the first year under IFQ management), overall non-whiting IFQ species landings were down compared with the historical average, revenues were up; and for the directed shoreside whiting fleet, both landings and revenues were up. Landings of groundfish in the non-whiting fleet rose from 2006 to 2009, but have been decreasing since then, including 2011 (Figure 1). Revenues from those landings have shown a similar trend until 2011, when they rose to 14 percent above the historical average (baseline period = 2006-2010, Table 1).

For the shoreside directed whiting fleet, both landings and revenue generally decreased from 2006 to 2009, but have both increased in 2010 and 2011. Landings from directed whiting trips were 40 percent higher in 2011 than the historical average, but the revenue from those landings was 121 percent higher (Table 1, Figure 2).

Monthly non-whiting fleet landings

Monthly landings and revenue for the non-whiting fleet are summarized in Table 2 and Figure 4. The pattern of monthly landings in the non-whiting fleet normally takes a dome shape through the year, and January and December are typically the lowest months (Figure 4, Table 2). Landings of groundfish by the non-whiting fleet began lower than usual in January of 2011, likely due to a combination of factors including late opening of the fishery, unfamiliarity with the new system, and accompanying apprehension of whether quotas of bycatch species would be enough to last the year, as well as participation by IFQ vessels in the Dungeness crab fishery (demonstrated in the mid-year IFQ catch report). Monthly landings continued to be lower than average throughout the year, except for June and

December. December landings, instead of being lowest of the year, as was the recent historical norm, (Figure 4), were the highest of any month in 2011, or for any December in the baseline period; they were 71 percent higher than the historical average. Harvesters apparently made a final push for landings in December, perhaps feeling relatively more secure that their quota pounds for bycatch species were sufficient, given the late date. Monthly total catch of each IFQ species category by the non-whiting fleet is shown in Table 3.

There was a strong, negative relationship between counts of IFQ vessels which landed crab (Figure 5, Table 4), which was overwhelmingly composed of Dungeness crab in the winter months (Table 5), and counts of those landing groundfish in 2011 (only vessels which landed more than 1,000 pounds in a management group were counted). This is a logical part of a likely explanation for a slow January start to IFQ fishing. The relationship was shown in the mid-year IFQ report specifically between Dungeness crab specifically, and groundfish IFQ participation; here it is shown between groundfish landings, and landings in the crab management group. The species composition of the crab landings is shown in Table 5, according to PacFIN SPID descriptions. Considering levels of participation in both fisheries, the late start to the Dungeness crab season this winter may have allowed time to catch considerable IFQ pounds and Dungeness crab as well, as 32 IFQ vessels landed crab in December, and 48 landed groundfish, according to fish ticket data from PacFIN, as of February 21, 2012. The vessel counts are larger for groundfish than crab in December, when IFQ catch spiked; in January, the ratio of vessel counts was the opposite, when IFQ catch was lower than average. Catch composition was greater than 99.5 percent Dungeness crab in both January and December. It should also be noted that December 2011 landings were still not considered greater than 90 percent complete when this report was prepared.

There was also a relatively weak negative relationship between monthly counts of IFQ vessels landing more than 1,000 pounds of shrimp species, and those landing more than 1,000 pounds of groundfish throughout 2011 (Figure 5), suggesting shrimp was less of a distraction from IFQ groundfish.

Monthly non-whiting fleet revenue

The typical monthly revenue pattern for the non-whiting fleet assumes a somewhat flatter trajectory than landings, and it normally dips in December (Figure 6, Table 6). Revenues increased in the second half of 2011, as fishermen became more comfortable with the new system and its advantages. October and December of 2011 were particularly good months for fishermen, with revenues about double the five-year average. December revenue was much higher than usual, which accompanied increased landings for many target species, including Dover sole, arrowtooth flounder, yellowtail rockfish (dramatic), lingcod and petrale sole (Table 3), but the September and October revenue spike was accompanied by large increases in sablefish landings especially, when monthly landings of other target species were down. September and October had the highest prices of the year for sablefish landed by the non-whiting fleet (within IFQ); the average price per pound in September was \$3.23, and in October it was \$3.37, while the annual average was \$2.73. The price per pound for sablefish has been steadily

rising in this sector since 2006, when it was \$1.45, to 2008, when it was \$1.89; to 2010 it was \$2.05, and in 2011 it was \$2.73.

Monthly shoreside directed whiting landings

The pattern of monthly landings in the shoreside, directed whiting fleet for 2011 reveals a protracted, uninterrupted season of fishing under IFQ, in contrast to many recent seasons, including that of 2009, when the fishery allocation was reached in July, and the season ended early (Figure 7, Table 7). Erratic patterns of monthly landings and short season lengths were common within the baseline period.

Average annual vessel landings and revenue

The pattern for annual, average vessel landings and revenue in the non-whiting fleet was similar to that of annual fleet landings (Figure 8, Table 8); average vessel landings were lower in 2011 (95 percent of the historical average), and average vessel revenues were higher (134 percent of historical average). Average vessel landings and revenues assumed similar trajectories across years as annual fleet levels. Fleet participation (vessel counts), estimated from electronic and paper landing receipts (as described earlier), was approximately 85 percent of the historical average for the non-whiting fleet.

The annual landing and revenue patterns for directed whiting fleet also were reflected in the average annual vessel estimates. Average annual vessel landings for 2011 were up dramatically, at 179 percent of their historical average levels, while revenue was estimated at 283 percent of baseline average levels (Figure 9, Table 9).

Landings by port

Distribution of landings among ports for non-whiting and shoreside whiting fleets combined is illustrated in Figure 10 and Table 10. Astoria remained the dominant port, with 45 percent of the landings overall, an increase of 20 percent since the previous year, 2010, when it was 20 percent. Astoria was followed by Newport with 24 percent, and Westport with 18 percent. Newport landings were similar to 2010, although Westport landings dropped by approximately 11 percent in 2011, from 29 percent in 2010. Four ports did not show landings recorded in 2011 which did the previous year, including Blaine and Neah Bay, Washington; Tillamook, Oregon; and Bodega Bay, California, according to electronic landing receipts, while Avila was newly reported as a port of landings in this sector for 2011. Smaller ports were combined with others in Table 10, for confidentiality.

Landings and revenue by gear type

Gear switching under IFQ made a larger impact on revenue distribution by gear than it did landings distribution, as seen in Figure 11 and Table 11, which show that although fixed gear catch made up only

about 1 percent of total IFQ landings by weight, the revenue from those landings were worth approximately 13 percent of the annual revenue.

Fixed gear accounted for six percent of non-whiting IFQ landings by weight but 22.6 percent of non-whiting fleet revenues (Figure 12, Table 12), likely driven by the high prices received for fixed gear caught sablefish. Thirty-nine percent of sablefish IFQ landings in 2011 were made using fixed gear. Fixed gear caught sablefish brought an average of \$2.95 per pound in 2011, in the non-whiting IFQ fleet, while trawl caught sablefish brought \$2.59 per pound. Revenue distribution by gear for sablefish is extremely similar to that of landings, unlike all non-whiting catch combined (Figure 13, Table 13).

Effort by fleet and gear type

The number of trips taken by the non-whiting fleet decreased substantially in 2011 (to 55 percent of the historical average), although the average pounds landed per trip increased substantially (to 146 percent of the historical average, Table 14). For directed shoreside whiting, both the number of trips and average weight per trip increased in 2011 (115 percent and 114 percent of historical average, respectively). Tables 14 and 15 show the annual number of trips, and average pounds landed per trip for each year since 2006, and the historical average. Figure 14 and Table 16 show the distribution of total trips by gear, for IFQ in 2011, where most trips taken were made using non-midwater trawl (47 percent), 39 percent were made using midwater trawl, nine percent were made with pot gear, and five percent with hook and line gear.

Non-whiting fishery participation decreased slightly, with 10 fewer vessels fishing in 2011 compared to 2010 (108 in 2011 versus 118 in 2010, Table 8). For the shoreside directed whiting IFQ fleet, the number of vessels has dropped as well; by seven from 2010, according to vessel ID numbers on electronic fish tickets (from 36 to 29), or by 10, (from 36 to 26) according to the NMFS VA system, using vessel ID numbers or vessel names. The difference in counts between databases could not be resolved at this time, although it could be the result of more than one type of vessel ID being listed for some directed whiting vessels on the original electronic fish tickets, which would later be corrected in the NMFS vessel accounts system. The likely effect of such an error, assuming it is only present in 2011 electronic fish tickets, would be to downwardly bias vessel-level estimates of landings and revenue for the shoreside directed whiting fleet in 2011, under IFQ. If the phenomenon were present in historical fish ticket data as well, it is assumed there would be little or no biasing effect on comparisons between relative pre- and post-IFQ participation. Non-whiting fleet vessel counts for 2011 match between electronic landing receipts and the NMFS vessel account system.

Total catch and attainment by IFQ species categories

Table 17 shows total catch and attainment of IFQ fishery allocations by IFQ species category, as of January 30, taken from the NMFS IFQ vessel accounts system. Amounts for discards and landings for

some species are expected to change slightly through April, as the last observer data continues to be reconciled.

In total, 64.6 percent of the IFQ groundfish allocation was reached. For Pacific whiting, 98.3 percent of that species allocation alone was reached, while 24 percent of the total allocation for all other species combined was harvested. Not considering any flatfish, most of which have been historically underutilized, 37% of the sum of the remaining target species allocations was harvested.

Looking at rebuilding species and Pacific halibut, 8.9 percent of the Bocaccio rockfish allocation was taken, 14.2 percent of canary rockfish, one percent of cowcod, 36.2 percent of darkblotched rockfish, 93.2 percent of petrale sole, 40.2 percent of widow rockfish, and 9.7 percent of yelloweye rockfish.

Table 18 shows total catch, separated into landings and discards in pounds, by fleet, within the 2011 IFQ groundfish fishery, while Table 19 displays landings and as percent of total catch, with the same structure.

Retention rates by species

Retention rates for many species, particularly rebuilding species, within the non-whiting IFQ fleet were much higher in 2011 compared with 2010 (Table 20 and Figure 15), according to data taken from the NMFS IFQ vessel accounts system on January 30, 2012. The highest increases in retention rates were seen in Bocaccio rockfish (83 percent; from 17 percent in 2010, to approximately 100 percent in 2011), cowcod (82 percent), widow rockfish (83 percent), and yelloweye rockfish (82 percent), and the target species, yellowtail rockfish (55 percent). Discards accounted for approximately 4.8 percent of nonwhiting IFQ fleet catch overall. When combined with whiting catch, the overall discard rate was approximately 1.3 percent.

Bycatch of rebuilding species

Catch of rebuilding species was generally lower in the non-whiting fleet in 2011 than in 2010, including reductions ranging between 10 and 97 percent of 2010 levels (Table 21). The exception to this for the non-whiting fleet was canary rockfish, which increased by 0.4 mt (20 percent, to 2.8 mt); however was still well below the fishery's allocation of 25.9 mt.

Similar declines in rebuilding species bycatch were recorded in the directed whiting fleet within the IFQ fishery, including a 79 percent reduction in canary rockfish, a 73 percent reduction in darkblotched rockfish, and a 96 percent reduction in Pacific ocean perch (Table 21). Catch of widow rockfish in the shoreside whiting fleet increased in 2011, by 124 percent of its 2010 level. However, total catch of widow rockfish in the IFQ sector remained well within the allocation (40 percent of the allocation). The limited entry, shoreside whiting fishery has been combined under IFQ with what was the non-whiting limited entry trawl fishery. The previous shoreside whiting fishery was conducted under an exempted fishing permit from 1995 to 2010, in which 100 percent retention of catch to port (100 percent landing) was mandatory; thus comparisons of voluntary fishery discard at sea are not possible. However, even

though retention is not mandatory after trawl rationalization, discards in the shoreside whiting sector in 2011 were only one percent; 99 percent of the catch was landed. Ninety-eight percent of that one percent which was discarded, was comprised of Pacific whiting, only two percent was other IFQ groundfish species. As mentioned earlier in this report, some data continue to come in through the observer program, and some catch estimates may increase slightly through the spring.

Acknowledgements

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Table 1. Annual landings and revenue for the West Coast Groundfish IFQ Fishery in 2011, and the LET and SSW fleets in 2006-2010. Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

| Year | Non-whiting trips | | Directed whiting trips | | Both fleets combined | |
|------------|-------------------|------------|------------------------|------------|----------------------|------------|
| | landings | revenue | landings | revenue | landings | revenue |
| 2006 | 39,404,780 | 23,128,507 | 214,681,696 | 12,609,826 | 254,086,476 | 35,738,333 |
| 2007 | 45,759,542 | 25,561,475 | 161,829,734 | 11,394,728 | 207,589,276 | 36,956,203 |
| 2008 | 53,795,497 | 31,767,767 | 112,048,616 | 11,610,034 | 165,844,113 | 43,377,801 |
| 2009 | 58,033,985 | 30,686,871 | 88,952,163 | 5,331,684 | 146,986,148 | 36,018,555 |
| 2010 | 50,289,281 | 25,668,012 | 138,407,048 | 9,820,517 | 188,696,329 | 35,488,530 |
| 2011 | 40,187,042 | 31,230,936 | 201,040,491 | 22,478,210 | 241,227,533 | 53,709,146 |
| Hist. ave. | 49,456,617 | 27,362,527 | 143,183,851 | 10,153,358 | 192,640,468 | 37,515,884 |
| 2011/hist. | 81% | 114% | 140% | 221% | 125% | 143% |

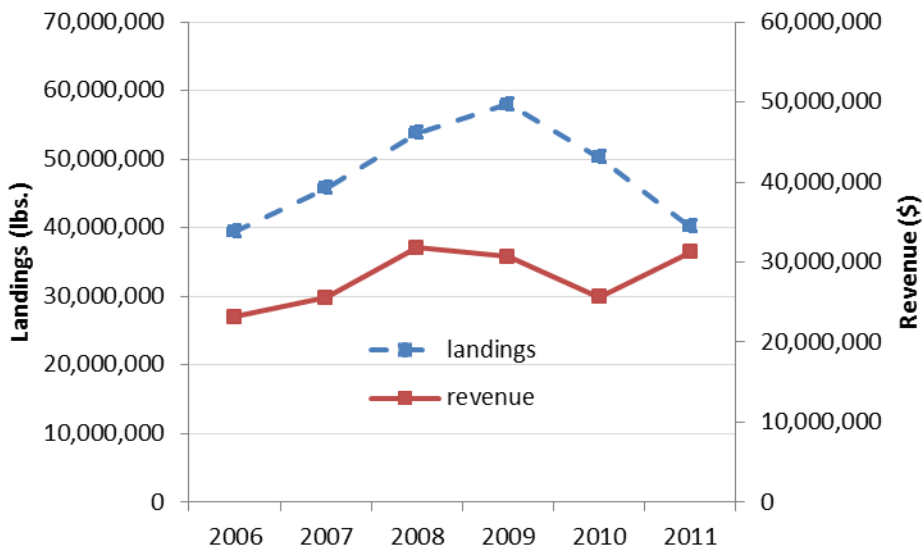


Figure 1. Annual landings and revenue from non-whiting trips, in the West Coast Groundfish IFQ Fishery in 2011, and the, LET fleet in 2006-2010. Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

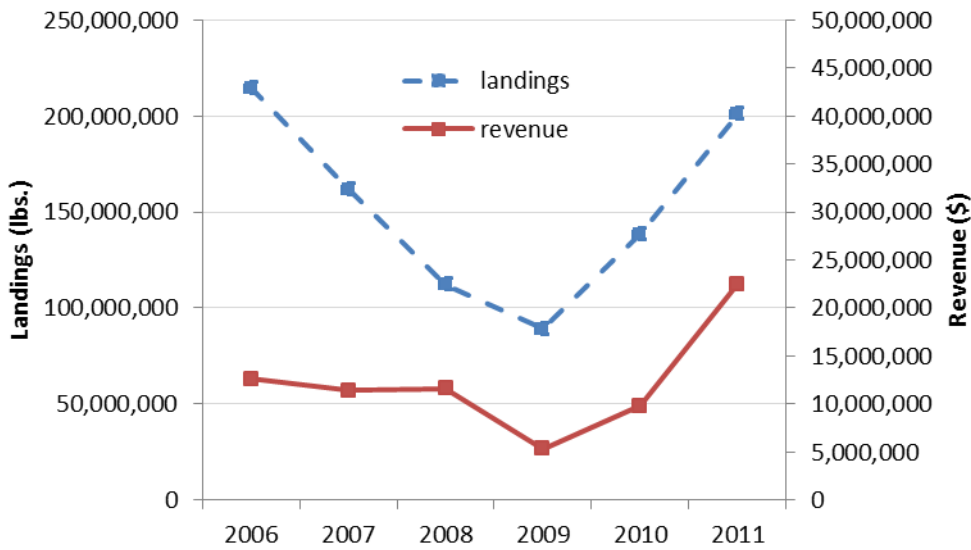


Figure 2. Annual landings and revenue from directed whiting trips, in the West Coast Groundfish IFQ Fishery in 2011, and the SSW fleet in 2006-2010. Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

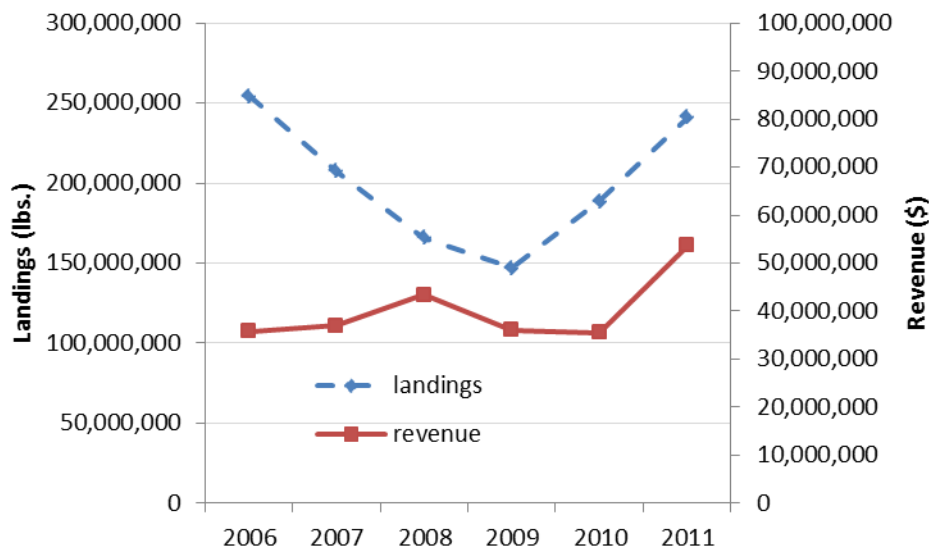


Figure 3. Annual landings and revenue from directed whiting and non-whiting trips combined, in the West Coast Groundfish IFQ Fishery in 2011, and the LET and SSW fleets in 2006-2010. Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

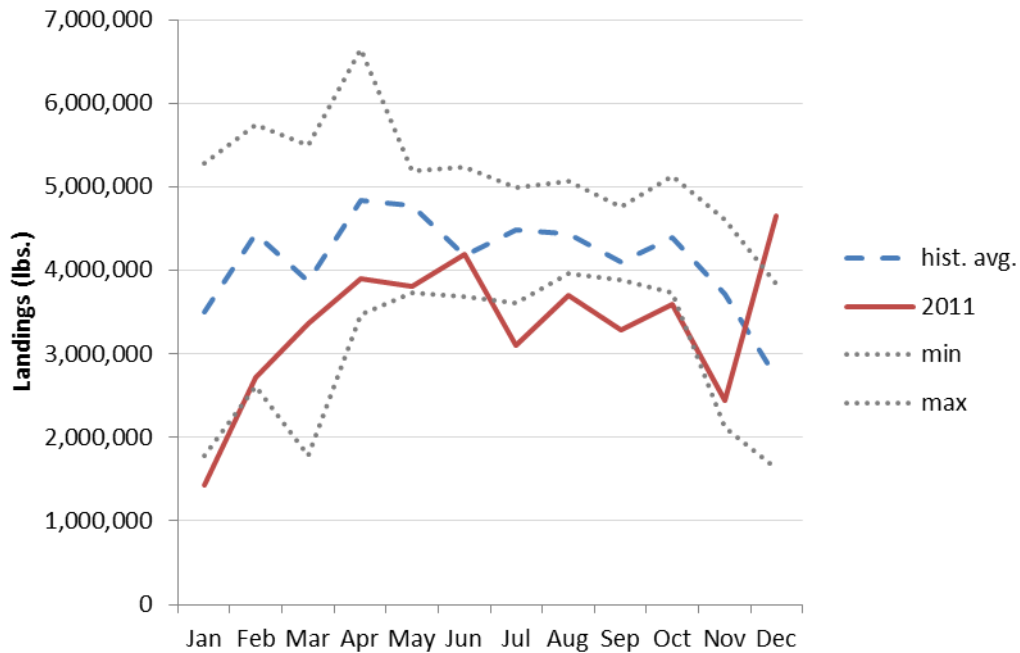


Figure 4. Monthly landings from non-whiting trips, in the West Coast Groundfish IFQ Fishery in 2011, and the LET fleet in 2006-2010 (historical average). Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

Table 2. Monthly landings from non-whiting trips, in the West Coast Groundfish IFQ fishery in 2011, and the LET fleet in 2006-2010 (historical average). Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

| Month | 2010 | Hist. avg. | 2011 | 2011/hist. |
|-------|------------|------------|------------|------------|
| Jan | 2,551,153 | 3,497,340 | 1,432,686 | 41% |
| Feb | 5,737,527 | 4,442,867 | 2,718,130 | 61% |
| Mar | 5,095,086 | 3,877,602 | 3,359,287 | 87% |
| Apr | 5,169,514 | 4,832,963 | 3,903,807 | 81% |
| May | 5,188,988 | 4,783,448 | 3,802,662 | 79% |
| Jun | 4,386,217 | 4,171,979 | 4,191,228 | 100% |
| Jul | 4,611,693 | 4,486,328 | 3,108,350 | 69% |
| Aug | 4,288,817 | 4,434,665 | 3,693,794 | 83% |
| Sep | 3,879,623 | 4,103,968 | 3,293,110 | 80% |
| Oct | 3,734,929 | 4,397,929 | 3,596,528 | 82% |
| Nov | 4,020,645 | 3,712,671 | 2,435,106 | 66% |
| Dec | 1,625,089 | 2,714,856 | 4,652,354 | 171% |
| Total | 50,289,281 | 49,456,617 | 40,187,042 | 81% |

Table 3. Monthly 2011 total catch of IFQ species categories by the non-whiting fleet. Source: NMFS West Coast Groundfish IFQ Vessel Accounts System.

| Row Labels | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Sum |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Arrowtooth flounder | 145,965 | 370,570 | 522,793 | 561,883 | 916,127 | 804,901 | 528,996 | 382,944 | 204,447 | 278,992 | 251,394 | 557,083 | 5,526,095 |
| Bocaccio rockfish South of 40°10' N. | | | | | | 1,716 | 946 | 515 | 1,741 | 1,414 | 899 | 4,484 | 11,715 |
| Canary rockfish | 4 | 56 | 33 | 38 | 113 | 449 | 2,448 | 1,113 | 619 | 799 | 44 | 523 | 6,239 |
| Chilipepper rockfish South of 40°10' N. | 6 | | 51 | 672 | 1,393 | 22,305 | 121,749 | 70,453 | 293,661 | 115,320 | 49,511 | 13,066 | 688,187 |
| Cowcod South of 40°10' N. | | | | 8 | | | | 9 | 6 | 14 | 2 | | 39 |
| Darkblotched rockfish | 2,862 | 13,662 | 11,024 | 8,228 | 22,018 | 12,028 | 5,597 | 7,230 | 4,766 | 10,151 | 20,036 | 79,818 | 197,420 |
| Dover sole | 794,070 | 1,161,616 | 1,919,382 | 2,282,658 | 1,610,362 | 1,443,232 | 1,050,453 | 1,506,781 | 1,334,505 | 1,356,609 | 1,056,199 | 1,765,288 | 17,281,155 |
| English sole | 2,901 | 8,263 | 5,259 | 12,651 | 21,760 | 29,683 | 58,345 | 62,342 | 34,656 | 29,770 | 11,252 | 25,947 | 302,829 |
| Lingcod | 322 | 79,929 | 101,044 | 731 | 10,789 | 35,276 | 87,424 | 103,059 | 29,502 | 35,604 | 12,394 | 132,835 | 628,909 |
| Longspine thornyheads North of 34°27' N. | 93,239 | 191,963 | 145,258 | 232,146 | 205,569 | 327,454 | 199,600 | 141,842 | 169,609 | 184,145 | 93,884 | 136,253 | 2,120,962 |
| Minor shelf rockfish North of 40°10' N. | 33 | 602 | 1,337 | 575 | 1,200 | 7,015 | 6,605 | 4,432 | 1,983 | 1,339 | 1,044 | 5,508 | 31,673 |
| Minor shelf rockfish South of 40°10' N. | | | 10 | 362 | 38 | 33 | 690 | 601 | 1,807 | 1,314 | 493 | 1,285 | 6,633 |
| Minor slope rockfish North of 40°10' N. | 2,852 | 11,168 | 12,640 | 14,318 | 66,956 | 33,225 | 8,079 | 10,189 | 15,796 | 50,423 | 28,382 | 42,088 | 296,116 |
| Minor slope rockfish South of 40°10' N. | 426 | 72 | 431 | 1,674 | 3,002 | 11,728 | 3,799 | 17,979 | 27,447 | 9,884 | 9,079 | 28,349 | 113,870 |
| Other flatfish | 21,203 | 55,312 | 29,210 | 82,378 | 128,161 | 241,731 | 265,370 | 267,249 | 135,031 | 139,927 | 66,434 | 91,863 | 1,523,869 |
| Pacific cod | 273 | 564 | 382 | 35,705 | 47,790 | 129,459 | 103,992 | 184,065 | 16,374 | 25,491 | 700 | 9,368 | 554,163 |
| Pacific halibut (IBQ) North of 40°10' N. | 1,794 | 4,148 | 7,257 | 5,772 | 7,572 | 4,434 | 22,437 | 11,913 | 2,836 | 5,411 | 2,724 | 4,689 | 80,987 |
| Pacific ocean perch North of 40°10' N. | 1,632 | 4,045 | 6,818 | 2,271 | 14,312 | 8,417 | 4,002 | 4,382 | 1,466 | 10,667 | 11,726 | 31,092 | 100,830 |
| Pacific whiting | 16,835 | 16,695 | 16,235 | 20,890 | 36,257 | 50,633 | 48,729 | 48,132 | 50,434 | 50,105 | 46,918 | 80,791 | 482,654 |
| Petrale sole | 91,647 | 253,484 | 147,094 | 23,213 | 38,902 | 80,108 | 136,626 | 188,315 | 104,206 | 149,129 | 115,946 | 460,396 | 1,789,066 |
| Sablefish North of 36° N. | 155,107 | 239,357 | 293,110 | 403,487 | 406,628 | 451,485 | 284,421 | 443,457 | 694,902 | 985,713 | 406,762 | 456,862 | 5,221,291 |
| Sablefish South of 36° N. | | | | 6,860 | 6,695 | 214,817 | 159,714 | 89,247 | 111,723 | 83,614 | 132,910 | 206,608 | 1,012,188 |
| Shortspine thornyheads North of 34°27' N. | 54,853 | 92,848 | 97,707 | 154,097 | 208,243 | 196,756 | 97,508 | 107,263 | 100,901 | 141,205 | 127,216 | 191,626 | 1,570,223 |
| Shortspine thornyheads South of 34°27' N. | | | | | | | | | 7,179 | 3,555 | 3,477 | 4,433 | 18,644 |
| Splitnose rockfish South of 40°10' N. | 1,433 | 4 | 1,128 | 1,255 | 2,182 | 5,086 | 2,661 | 13,993 | 9,092 | 10,009 | 15,427 | 25,780 | 88,050 |
| Starry flounder | | 933 | 859 | 1,176 | 2,486 | 7,548 | 4,353 | 4,577 | 1,917 | 1,773 | 7 | 305 | 25,934 |
| Widow rockfish | 65 | 143 | 335 | 305 | 899 | 7,656 | 4,818 | 1,311 | 5,489 | 232 | 1,512 | 9,160 | 31,925 |
| Yelloweye rockfish | | | 10 | 5 | | 27 | 1 | 7 | 18 | 3 | 32 | | 128 |
| Yellowtail rockfish North of 40°10' N. | 214 | 103 | 26,785 | 1,050 | 8,443 | 87,329 | 94,248 | 35,062 | 15,404 | 6,384 | 7,653 | 410,183 | 692,858 |
| Sum | 1,387,736 | 2,505,547 | 3,346,187 | 3,854,403 | 3,767,924 | 4,214,505 | 3,303,617 | 3,708,473 | 3,377,502 | 3,689,025 | 2,474,025 | 4,775,708 | 40,404,652 |

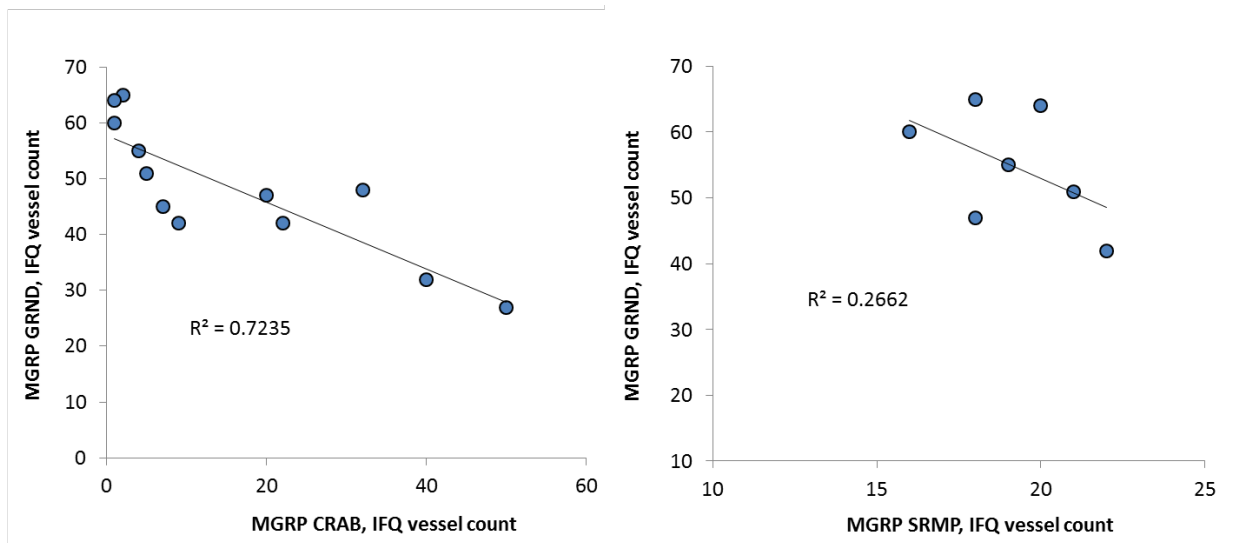


Figure 5. Scatterplots of monthly counts of IFQ vessels which landed either crab or shrimp, versus groundfish in PFMC areas during 2011. No shrimp landings were recorded for IFQ vessels in January, February, March, November, or December of 2011. Source: PacFIN, February 21, 2012. Vessels were only counted if they landed more than 1,000 pounds.

Table 4. Monthly counts of IFQ vessels which landed species within the crab, shrimp groundfish management groups in PFMC areas in 2011. Vessels were only counted if they landed more than 1,000 pounds. No shrimp landings were recorded for IFQ vessels in January, February, March, November, or December of 2011. Source: PacFIN, February 21, 2012. It is important to note that December landings in PacFIN were not considered more than 90 percent complete at the time of this report.

| Month | CRAB | GRND | SRMP |
|-------|------|------|------|
| Jan | 50 | 27 | 0 |
| Feb | 40 | 32 | 0 |
| Mar | 22 | 42 | 0 |
| Apr | 20 | 47 | 18 |
| May | 9 | 42 | 22 |
| Jun | 5 | 51 | 21 |
| Jul | 4 | 55 | 19 |
| Aug | 2 | 65 | 18 |
| Sep | 1 | 64 | 20 |
| Oct | 1 | 60 | 16 |
| Nov | 7 | 45 | 0 |
| Dec | 32 | 48 | 0 |

Table 5. Monthly species compositions and total pounds landed, in the crab management group, in PFMC areas, during 2011. It is important to note that December landings in PacFIN were not considered more than 90 percent complete at the time of this report.

| SPID description | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|--------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Bairdi tanner | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Dungeness | 99.5% | 98.6% | 96.2% | 94.0% | 87.1% | 78.9% | 60.6% | 57.1% | 40.1% | 12.0% | 86.0% | 99.8% |
| Opilio tanner | 0.0% | 0.1% | 0.2% | 0.2% | 0.2% | 0.6% | 1.2% | 1.4% | 1.3% | 4.0% | 0.7% | 0.0% |
| Rock | 0.4% | 1.3% | 3.6% | 5.7% | 12.6% | 20.4% | 38.2% | 41.5% | 58.6% | 83.6% | 13.3% | 0.2% |
| Unspecified | 0.0% | 0.0% | 0.0% | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.4% | 0.0% | 0.0% |
| Unsp. king | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Unsp. tanner | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Sum lbs. (x 1,000) | 19,377 | 6,815 | 3,153 | 2,292 | 1,240 | 745 | 406 | 358 | 231 | 106 | 591 | 15,721 |

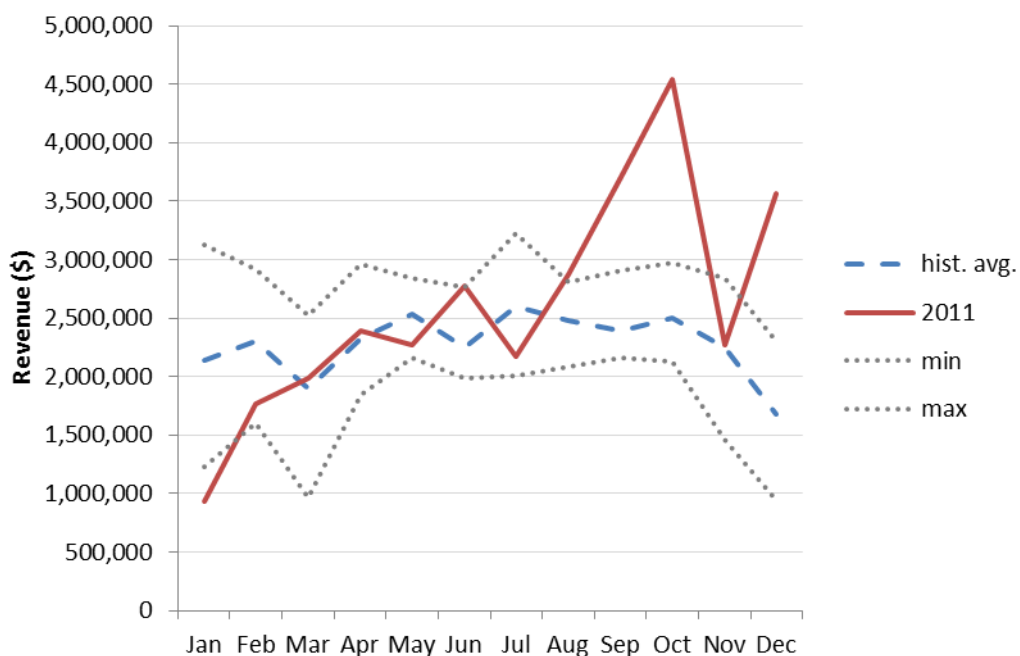


Figure 6. Monthly revenue from non-whiting trips, in the West Coast Groundfish IFQ Fishery in 2011, and the LET fleet in 2006-2010 (historical average). Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

Table 6. Monthly revenue from non-whiting trips, in the West Coast Groundfish IFQ Fishery in 2011, and the LET fleet in 2006-2010 (historical average). Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

| Month | 2010 | Hist. avg. | 2011 | 2011/hist. |
|-------|------------|------------|------------|------------|
| Jan | 1,465,940 | 2,139,589 | 935,310 | 44% |
| Feb | 2,548,515 | 2,301,100 | 1,766,921 | 77% |
| Mar | 2,327,689 | 1,892,842 | 1,981,980 | 105% |
| Apr | 2,348,443 | 2,330,254 | 2,390,985 | 103% |
| May | 2,581,292 | 2,534,425 | 2,272,672 | 90% |
| Jun | 2,153,959 | 2,253,992 | 2,771,733 | 123% |
| Jul | 2,554,229 | 2,600,465 | 2,168,590 | 83% |
| Aug | 2,085,806 | 2,484,382 | 2,869,549 | 116% |
| Sep | 2,187,365 | 2,396,678 | 3,703,198 | 155% |
| Oct | 2,125,783 | 2,500,639 | 4,536,757 | 181% |
| Nov | 2,340,188 | 2,253,103 | 2,270,570 | 101% |
| Dec | 948,802 | 1,675,057 | 3,562,670 | 213% |
| Total | 25,668,012 | 27,362,527 | 31,230,936 | 114% |

Figure 7. Monthly landings by the shoreside, directed whiting fleet, for 2009-2011. Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

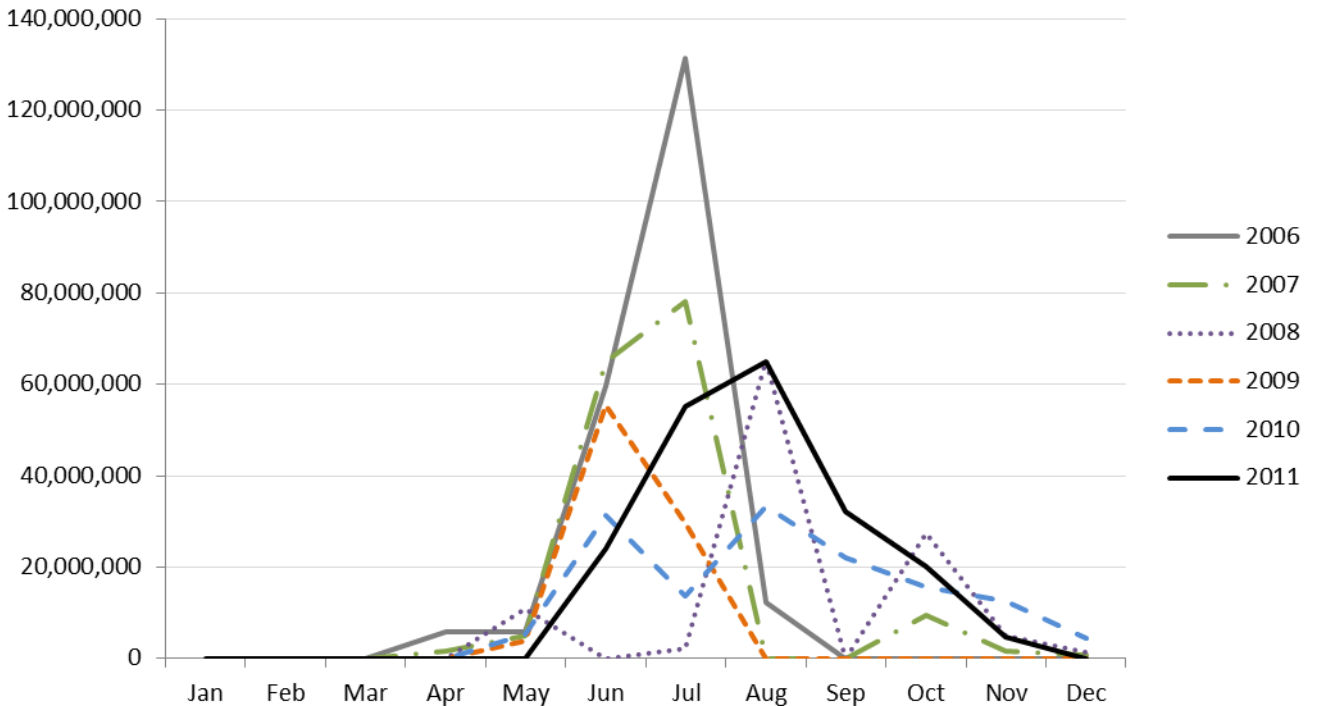


Table 7. Monthly landings by the shoreside, directed whiting fleet, for 2009-2011. Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

| Month | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|-------|-------------|-------------|-------------|------------|-------------|-------------|
| Jan | 0 | 0 | 0 | 0 | 0 | 0 |
| Feb | 0 | 0 | 0 | 0 | 0 | 0 |
| Mar | 0 | 0 | 0 | 0 | 0 | 0 |
| Apr | 5,748,067 | 1,555,539 | 0 | 0 | 0 | 0 |
| May | 5,750,974 | 5,034,462 | 10,799,754 | 3,963,481 | 5,400,561 | 0 |
| Jun | 59,588,381 | 65,034,296 | 81,160 | 55,349,911 | 31,288,665 | 24,051,963 |
| Jul | 131,320,837 | 78,245,030 | 2,085,860 | 29,638,771 | 13,694,947 | 55,183,299 |
| Aug | 12,273,437 | 0 | 65,356,458 | 0 | 33,306,949 | 65,047,304 |
| Sep | 0 | 0 | 0 | 0 | 22,071,296 | 32,059,087 |
| Oct | 0 | 9,543,111 | 27,443,038 | 0 | 15,748,347 | 20,065,504 |
| Nov | 0 | 1,550,796 | 5,052,808 | 0 | 12,508,431 | 4,633,334 |
| Dec | 0 | 866,500 | 1,229,538 | 0 | 4,382,434 | 0 |
| Sum | 214,681,696 | 161,829,734 | 112,048,616 | 88,952,163 | 138,407,048 | 201,040,491 |

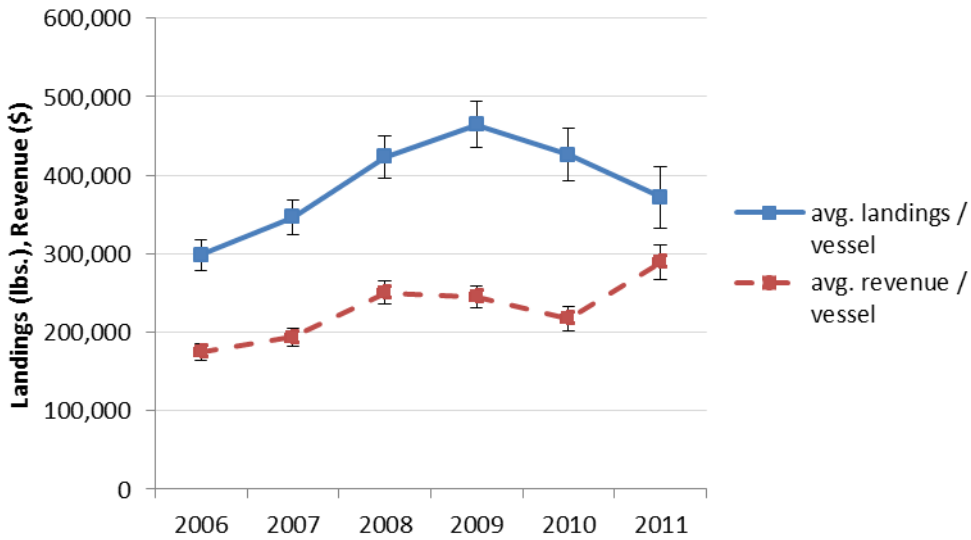


Figure 8. Average annual vessel landings and revenue, from non-whiting trips, in the West Coast Groundfish IFQ Fishery in 2011, and the LET fleet in 2006-2010 (historical average). Whiskers display ± 1 standard error. Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

Table 8. Average annual vessel landings and revenue, from non-whiting trips, in the West Coast Groundfish IFQ Fishery in 2011, and the LET fleet in 2006-2010 (historical average). Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Hist. avg. | 2011/hist. |
|---------------|---------|---------|---------|---------|---------|---------|------------|------------|
| Vessel count | 132 | 132 | 127 | 125 | 118 | 108 | 127 | 85% |
| Ave. landings | 298,521 | 346,663 | 423,587 | 464,272 | 426,180 | 371,707 | 391,845 | 95% |
| S.E. | 19,338 | 22,361 | 26,882 | 29,153 | 33,234 | 38,841 | 26,193 | - |
| Ave. revenue | 175,216 | 193,648 | 250,140 | 245,495 | 217,526 | 289,175 | 216,405 | 134% |
| S.E. | 10,914 | 11,665 | 14,521 | 13,757 | 15,780 | 22,656 | 13,327 | - |

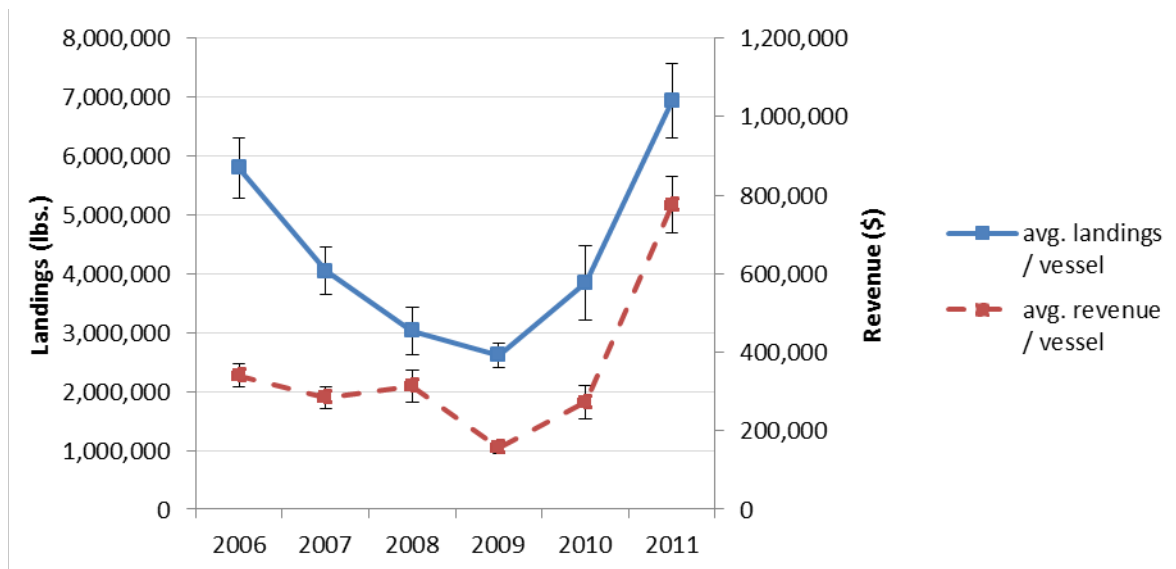


Figure 9. Average annual vessel landings and revenue, from directed shoreside whiting trips, in the West Coast Groundfish IFQ Fishery in 2011, and the LET fleet in 2006-2010 (historical average). Whiskers display ± 1 standard error. Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

Table 9. Average annual vessel landings and revenue, from directed shoreside whiting trips, in the West Coast Groundfish IFQ Fishery in 2011, and the LET fleet in 2006-2010 (historical average). Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Hist ave. | 2011/hist. |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Vessel count | 37 | 40 | 37 | 34 | 36 | 29 | 37 | 79% |
| Ave. landings | 5,802,208 | 4,045,743 | 3,028,341 | 2,616,240 | 3,844,640 | 6,932,431 | 3,867,435 | 179% |
| S.E. | 511,725 | 398,738 | 396,257 | 207,209 | 622,707 | 628,096 | 427,327 | - |
| Ave. revenue | 340,806 | 284,868 | 313,785 | 156,814 | 272,792 | 775,111 | 273,813 | 283% |
| S.E. | 29,073 | 28,464 | 39,876 | 13,209 | 43,605 | 72,688 | 30,845 | - |

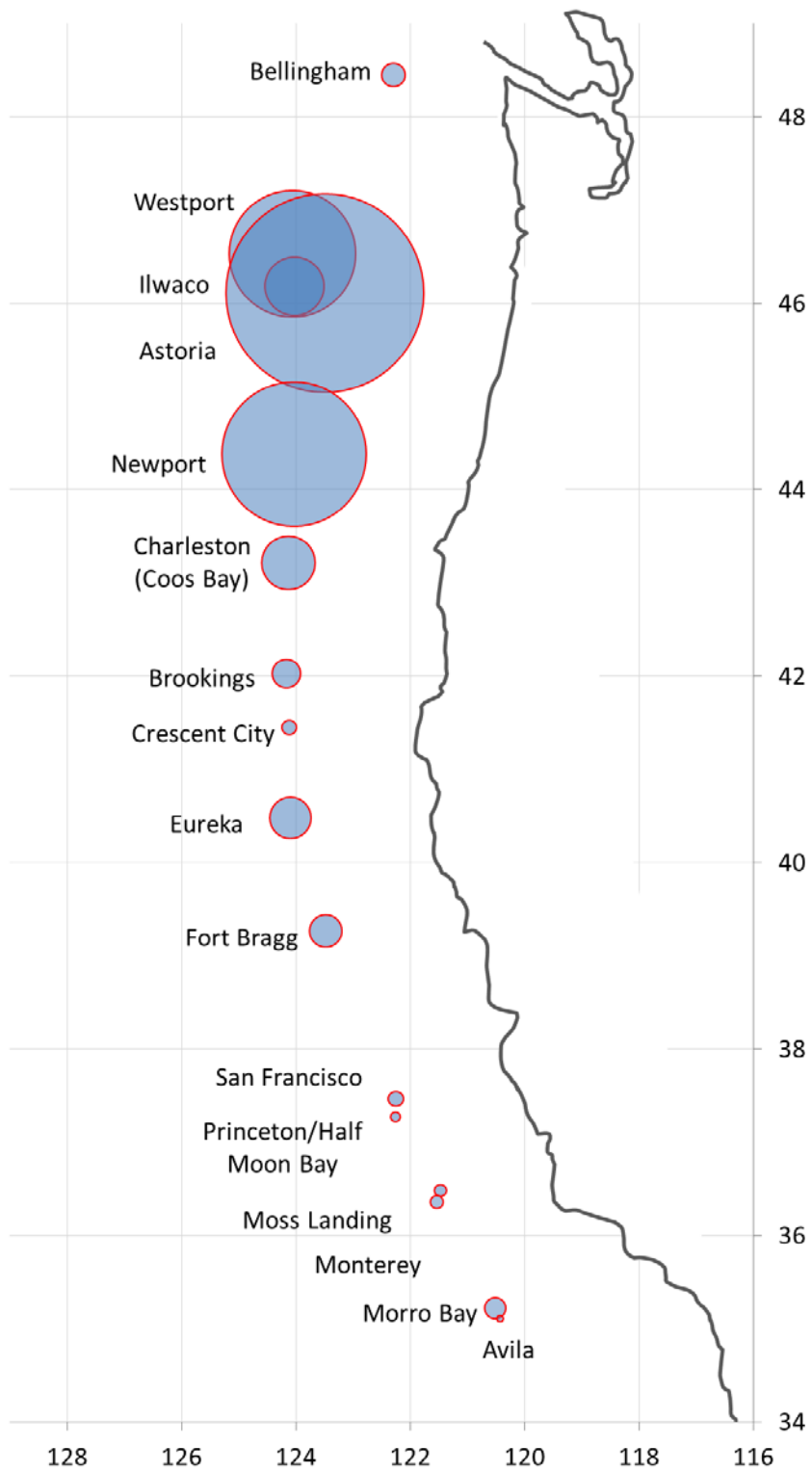


Figure 10. Total IFQ landings for 2011, distributed by port. Some ports shown here are combined in the corresponding table (Table 8) for confidentiality. Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

Table 10. Distribution of landings by port, for total IFQ landings in 2011 (right), and LET and shoreside whiting for 2010 (left). Some ports have been combined for confidentiality. Counts equal the number of ports for which landings were reported during 2011. Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2010, PacFIN).

| Port | 2010 | % of total | 2011 | % of total | Port |
|--|-------------|------------|-------------|------------|---|
| Bellingham, Blaine and Neah Bay | 2,839,909 | 1.5% | 1,485,940 | 0.6% | Bellingham |
| Westport | 55,115,717 | 29.2% | 43,988,336 | 18.2% | Westport |
| Ilwaco | 10,648,536 | 5.6% | 9,485,995 | 3.9% | Ilwaco |
| Astoria | 47,457,856 | 25.2% | 107,648,955 | 44.6% | Astoria |
| Newport and Tillamook | 44,496,181 | 23.6% | 57,299,092 | 23.8% | Newport |
| Charleston (Coos Bay) | 8,167,223 | 4.3% | 7,953,161 | 3.3% | Charleston (Coos Bay) |
| Brookings and Crescent City | 8,726,463 | 4.6% | 2,725,441 | 1.1% | Brookings and Crescent City |
| Eureka | 5,567,653 | 3.0% | 4,719,619 | 2.0% | Eureka |
| Fort Bragg | 3,454,936 | 1.8% | 2,870,946 | 1.2% | Fort Bragg |
| San Francisco, Princeton (Half Moon Bay), and Bodega Bay | 1,472,684 | 0.8% | 849,184 | 0.4% | San Francisco and Princeton (Half Moon Bay) |
| Moss Landing, Monterey, Morro Bay | 749,171 | 0.4% | 2,200,863 | 0.9% | Moss Landing, Monterey, Morro Bay, Avila |
| Sum | 188,696,329 | 100.0% | 241,227,533 | 100.0% | Sum |
| Port count | 19 | | 16 | | Port Count |

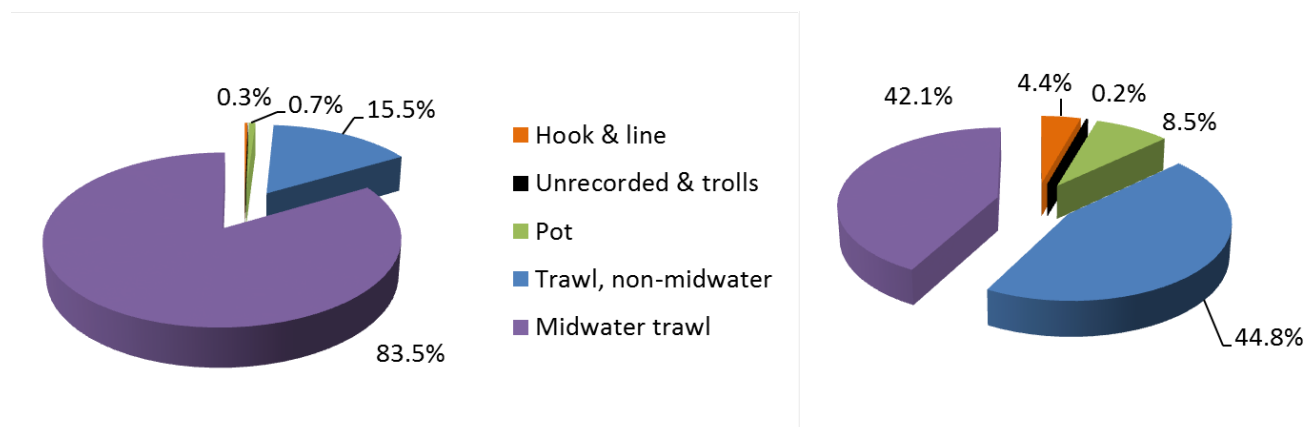


Figure 11. Total 2011 IFQ landings (left) and revenue (right), distributed by gear type.

Table 11. Total 2011 IFQ landings (left) and revenue (right), distributed by gear type.

| Gear type | Landings | Percent | Revenue | Percent |
|---------------------|-------------|---------|------------|---------|
| Hook & line | 678,045 | 0.3% | 2,374,602 | 4.4% |
| Unrecorded & trolls | 60,643 | 0.0% | 127,838 | 0.2% |
| Pot | 1,713,069 | 0.7% | 4,541,219 | 8.5% |
| Trawl, non-midwater | 37,435,009 | 15.5% | 24,041,169 | 44.8% |
| Midwater trawl | 201,340,767 | 83.5% | 22,624,318 | 42.1% |
| Sum | 241,227,533 | 100.0% | 53,709,146 | 100.0% |

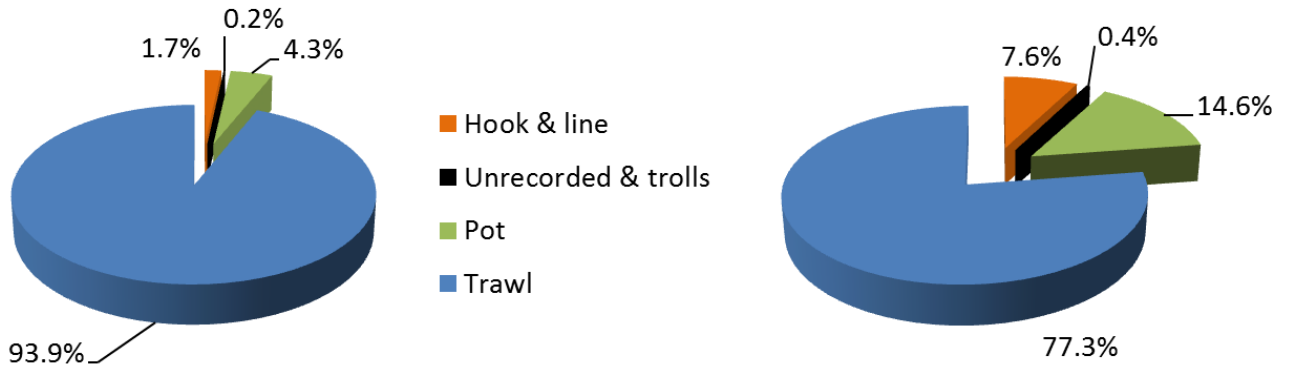


Figure 12. Non-whiting fleet, IFQ landings during 2011 (left) and revenue (right), distributed by gear type.

Table 12. Non-whiting fleet, IFQ landings for 2011 (left) and revenue (right), distributed by gear type.

| Gear type | Landings | Percent | Revenue | Percent |
|---------------------|------------|---------|------------|---------|
| Hook & line | 678,045 | 1.7% | 2,374,602 | 7.6% |
| Unrecorded & trolls | 60,643 | 0.2% | 127,838 | 0.4% |
| Pot | 1,713,069 | 4.3% | 4,541,219 | 14.6% |
| Trawl | 37,435,009 | 93.9% | 24,041,169 | 77.3% |
| Sum | 39,886,766 | 100.0% | 31,084,828 | 100.0% |

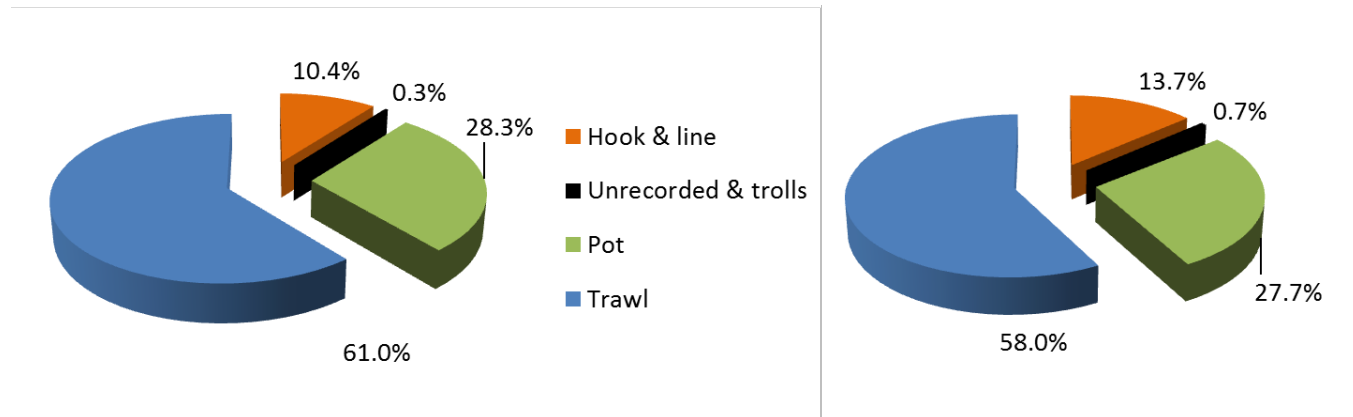


Figure 13. Sablefish IFQ landings during 2011 (left) and revenue (right), distributed by gear type.

Table 13. Sablefish IFQ landings during 2011 (left) and revenue (right), distributed by gear type.

| Gear type | Landings | Percent | Revenue | Percent |
|---------------------|-----------|---------|------------|---------|
| Hook & line | 618,182 | 10.4% | 2,230,293 | 13.7% |
| Unrecorded & trolls | 18,989 | 0.3% | 106,994 | 0.7% |
| Pot | 1,689,818 | 28.3% | 4,524,450 | 27.7% |
| Trawl | 3,641,720 | 61.0% | 9,458,546 | 58.0% |
| Grand Total | 5,968,709 | 100.0% | 16,320,283 | 100.0% |

Table 14. Counts, average landed weights, and total landed weight, of non-whiting IFQ trips in 2011. Only trips with a landed weight of more than 100 lbs. were counted for non-whiting.

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Hist ave. | 2011/hist. |
|----------------|--------|--------|--------|--------|--------|--------|-----------|------------|
| Trips | 3,022 | 2,821 | 2,811 | 3,169 | 2,651 | 1,604 | 2,895 | 55% |
| Ave. lbs. | 13,037 | 16,217 | 19,133 | 18,309 | 18,966 | 25,047 | 17,132 | 146% |
| Total (x1,000) | 39,405 | 45,760 | 53,795 | 58,034 | 50,289 | 40,187 | | |

Table 15. Counts, average landed weights, and total landed weight, of IFQ trips in 2011, for shoreside directed whiting. Only trips with a landed weight of more than 1,000 lbs. were counted for directed whiting.

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Hist. avg. | 2011/hist. |
|----------------|---------|---------|---------|---------|---------|---------|------------|------------|
| Trips | 1,172 | 875 | 586 | 471 | 714 | 909 | 788 | 115% |
| Ave. lbs. | 183,176 | 184,946 | 191,209 | 188,858 | 193,847 | 221,167 | 193,867 | 114% |
| Total (x1,000) | 214,682 | 161,830 | 112,049 | 88,952 | 138,407 | 201,040 | | |

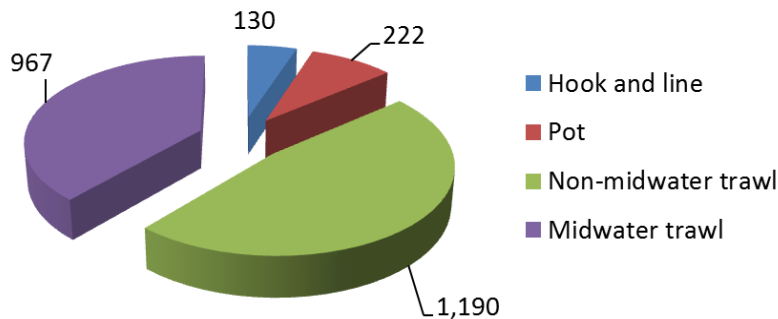


Figure 14. Counts of IFQ trips in 2011, distributed by gear type. Only trips with a landed weight of more than 100 lbs. were counted in this chart. Trips with troll gear were omitted for confidentiality.

Table 16. Counts of IFQ trips in 2011, and percent of total, distributed by gear type. Only trips with a landed weight of more than 100 lbs. were counted in this table. Trips with troll gear were omitted for confidentiality.

| Gear type | Trip count | Percent |
|--------------------|------------|---------|
| Hook and line | 130 | 5% |
| Pot | 222 | 9% |
| Non-midwater trawl | 1,190 | 47% |
| Midwater trawl | 967 | 39% |
| Sum | 2,509 | 100% |

Table 17. Total catch of IFQ species for 2011, allocation and attainment, as of January 30, 2012. Source: National Marine Fisheries Service, IFQ Vessel Accounts System, January 30, 2012.

| IFQ species category | Total catch | Allocation | Attainment |
|---|-------------|-------------|------------|
| Arrowtooth flounder | 5,554,275 | 27,406,105 | 20.3% |
| Bocaccio rockfish South of 40°10' N. | 11,715 | 132,277 | 8.9% |
| Canary rockfish | 8,125 | 57,100 | 14.2% |
| Chilipepper rockfish South of 40°10' N. | 688,187 | 3,252,370 | 21.2% |
| Cowcod South of 40°10' N. | 39 | 3,968 | 1.0% |
| Darkblotched rockfish | 200,112 | 552,997 | 36.2% |
| Dover sole | 17,281,316 | 49,018,682 | 35.3% |
| English sole | 302,830 | 41,166,808 | 0.7% |
| Lingcod | 638,978 | 4,107,873 | 15.6% |
| Longspine thornyheads North of 34°27' N. | 2,120,963 | 4,334,839 | 48.9% |
| Minor shelf rockfish North of 40°10' N. | 32,964 | 1,150,813 | 2.9% |
| Minor shelf rockfish South of 40°10' N. | 6,633 | 189,598 | 3.5% |
| Minor slope rockfish North of 40°10' N. | 320,493 | 1,828,779 | 17.5% |
| Minor slope rockfish South of 40°10' N. | 113,870 | 831,958 | 13.7% |
| Other flatfish | 1,525,761 | 9,253,683 | 16.5% |
| Pacific cod | 556,691 | 2,502,247 | 22.2% |
| Pacific halibut (IBQ) North of 40°10' N. | 81,772 | 257,524 | 31.8% |
| Pacific ocean perch North of 40°10' N. | 101,379 | 263,148 | 38.5% |
| Pacific whiting | 201,109,988 | 204,628,442 | 98.3% |
| Petrale sole | 1,789,067 | 1,920,226 | 93.2% |
| Sablefish North of 36° N. | 5,288,465 | 5,613,719 | 94.2% |
| Sablefish South of 36° N. | 1,012,188 | 1,170,390 | 86.5% |
| Shortspine thornyheads North of 34°27' N. | 1,575,026 | 3,156,138 | 49.9% |
| Shortspine thornyheads South of 34°27' N. | 18,644 | 110,231 | 16.9% |
| Splitnose rockfish South of 40°10' N. | 88,050 | 3,045,245 | 2.9% |
| Starry flounder | 25,934 | 1,471,586 | 1.8% |
| Widow rockfish | 303,699 | 755,348 | 40.2% |
| Yelloweye rockfish | 128 | 1,323 | 9.7% |
| Yellowtail rockfish North of 40°10' N. | 1,629,184 | 6,821,455 | 23.9% |
| Total | 242,386,476 | 375,004,872 | 64.6% |

Table 18. Total catch, separated into landings and discards, in pounds, by fleet, within the 2011 IFQ groundfish fishery.

| IFQ species category | Non-whiting | | | Directed whiting | | | Total | | |
|---|-------------|------------|-----------|------------------|-------------|-----------|-------------|-------------|-----------|
| | Total catch | Landings | Discards | Total catch | Landings | Discards | Total catch | Landings | Discards |
| Arrowtooth flounder | 5,526,095 | 5,000,314 | 525,781 | 28,180 | 27,672 | 508 | 5,554,275 | 5,027,986 | 526,289 |
| Bocaccio rockfish South of 40°10' N. | 11,715 | 11,695 | 20 | | | | 11,715 | 11,695 | 20 |
| Canary rockfish | 6,239 | 5,923 | 316 | 1,886 | 1,886 | 0 | 8,125 | 7,809 | 316 |
| Chilipepper rockfish South of 40°10' N. | 688,187 | 633,063 | 55,124 | | | | 688,187 | 633,063 | 55,124 |
| Cowcod South of 40°10' N. | 39 | 32 | 7 | | | | 39 | 32 | 7 |
| Darkblotched rockfish | 197,420 | 193,846 | 3,574 | 2,692 | 2,688 | 4 | 200,112 | 196,534 | 3,578 |
| Dover sole | 17,281,155 | 16,933,477 | 347,678 | 161 | 161 | 0 | 17,281,316 | 16,933,638 | 347,678 |
| English sole | 302,829 | 238,483 | 64,346 | 1 | 1 | 0 | 302,830 | 238,484 | 64,346 |
| Lingcod | 628,909 | 539,514 | 89,395 | 10,069 | 9,968 | 101 | 638,978 | 549,482 | 89,496 |
| Longspine thornyheads North of 34°27' N. | 2,120,962 | 2,007,848 | 113,114 | 1 | 1 | 0 | 2,120,963 | 2,007,849 | 113,114 |
| Minor shelf rockfish North of 40°10' N. | 31,673 | 26,461 | 5,212 | 1,291 | 1,276 | 15 | 32,964 | 27,737 | 5,227 |
| Minor shelf rockfish South of 40°10' N. | 6,633 | 361 | 6,272 | | | | 6,633 | 361 | 6,272 |
| Minor slope rockfish North of 40°10' N. | 296,116 | 263,892 | 32,224 | 24,377 | 24,377 | 0 | 320,493 | 288,269 | 32,224 |
| Minor slope rockfish South of 40°10' N. | 113,870 | 110,739 | 3,131 | | | | 113,870 | 110,739 | 3,131 |
| Other flatfish | 1,523,869 | 1,255,450 | 268,419 | 1,892 | 1,891 | 1 | 1,525,761 | 1,257,341 | 268,420 |
| Pacific cod | 554,163 | 554,135 | 28 | 2,512 | 2,512 | 0 | 556,675 | 556,647 | 28 |
| Pacific halibut (IBQ) North of 40°10' N. | 80,987 | 40 | 80,947 | 776 | 734 | 42 | 81,763 | 774 | 80,989 |
| Pacific ocean perch North of 40°10' N. | 100,830 | 99,983 | 847 | 549 | 549 | 0 | 101,379 | 100,532 | 847 |
| Pacific whiting | 482,654 | 57,857 | 424,797 | 200,627,334 | 199,508,992 | 1,118,342 | 201,109,988 | 199,566,849 | 1,543,139 |
| Petrale sole | 1,789,066 | 1,753,537 | 35,529 | 1 | 1 | 0 | 1,789,067 | 1,753,538 | 35,529 |
| Sablefish North of 36° N. | 5,221,291 | 5,172,174 | 49,117 | 67,174 | 66,996 | 178 | 5,288,465 | 5,239,170 | 49,295 |
| Sablefish South of 36° N. | 1,012,188 | 998,351 | 13,837 | | | | 1,012,188 | 998,351 | 13,837 |
| Shortspine thornyheads North of 34°27' N. | 1,570,223 | 1,556,172 | 14,051 | 4,803 | 4,803 | 0 | 1,575,026 | 1,560,975 | 14,051 |
| Shortspine thornyheads South of 34°27' N. | 18,644 | 18,166 | 478 | | | | 18,644 | 18,166 | 478 |
| Splitnose rockfish South of 40°10' N. | 88,050 | 21,123 | 66,927 | | | | 88,050 | 21,123 | 66,927 |
| Starry flounder | 25,934 | 24,391 | 1,543 | | | | 25,934 | 24,391 | 1,543 |
| Widow rockfish | 31,925 | 31,755 | 170 | 271,774 | 245,753 | 26,021 | 303,699 | 277,508 | 26,191 |
| Yelloweye rockfish | 128 | 117 | 11 | | | | 128 | 117 | 11 |
| Yellowtail rockfish North of 40°10' N. | 692,858 | 692,794 | 64 | 936,326 | 936,153 | 173 | 1,629,184 | 1,628,947 | 237 |
| Sum | 40,404,652 | 38,201,693 | 2,202,959 | 201,981,799 | 200,836,414 | 1,145,385 | 242,386,451 | 239,038,107 | 3,348,344 |

Table 19. Total catch in pounds, separated into landings and discards, in percent of total catch, by fleet, within the 2011 IFQ groundfish fishery.

| IFQ species category | Non-whiting | | | Directed whiting | | | Total | | |
|---|-------------|----------|----------|------------------|----------|----------|-------------|----------|----------|
| | Total catch | Landings | Discards | Total catch | Landings | Discards | Total catch | Landings | Discards |
| Arrowtooth flounder | 5,526,095 | 90% | 10% | 28,180 | 98% | 2% | 5,554,275 | 91% | 9% |
| Bocaccio rockfish South of 40°10' N. | 11,715 | 100% | 0% | | | | 11,715 | 100% | 0% |
| Canary rockfish | 6,239 | 95% | 5% | 1,886 | 100% | 0% | 8,125 | 96% | 4% |
| Chilipepper rockfish South of 40°10' N. | 688,187 | 92% | 8% | | | | 688,187 | 92% | 8% |
| Cowcod South of 40°10' N. | 39 | 82% | 18% | | | | 39 | 82% | 18% |
| Darkblotched rockfish | 197,420 | 98% | 2% | 2,692 | 100% | 0% | 200,112 | 98% | 2% |
| Dover sole | 17,281,155 | 98% | 2% | 161 | 100% | 0% | 17,281,316 | 98% | 2% |
| English sole | 302,829 | 79% | 21% | | | | 302,830 | 79% | 21% |
| Lingcod | 628,909 | 86% | 14% | 10,069 | 99% | 1% | 638,978 | 86% | 14% |
| Longspine thornyheads North of 34°27' N. | 2,120,962 | 95% | 5% | | | | 2,120,963 | 95% | 5% |
| Minor shelf rockfish North of 40°10' N. | 31,673 | 84% | 16% | 1,291 | 99% | 1% | 32,964 | 84% | 16% |
| Minor shelf rockfish South of 40°10' N. | 6,633 | 5% | 95% | | | | 6,633 | 5% | 95% |
| Minor slope rockfish North of 40°10' N. | 296,116 | 89% | 11% | 24,377 | 100% | 0% | 320,493 | 90% | 10% |
| Minor slope rockfish South of 40°10' N. | 113,870 | 97% | 3% | | | | 113,870 | 97% | 3% |
| Other flatfish | 1,523,869 | 82% | 18% | 1,892 | 100% | 0% | 1,525,761 | 82% | 18% |
| Pacific cod | 554,163 | 100% | 0% | 2,512 | 100% | 0% | 556,675 | 100% | 0% |
| Pacific halibut (IBQ) North of 40°10' N. | 80,987 | 0% | 100% | 776 | 95% | 5% | 81,763 | 1% | 99% |
| Pacific ocean perch North of 40°10' N. | 100,830 | 99% | 1% | 549 | 100% | 0% | 101,379 | 99% | 1% |
| Pacific whiting | 482,654 | 12% | 88% | 200,627,334 | 99% | 1% | 201,109,988 | 99% | 1% |
| Petrale sole | 1,789,066 | 98% | 2% | | | | 1,789,067 | 98% | 2% |
| Sablefish North of 36° N. | 5,221,291 | 99% | 1% | 67,174 | 100% | 0% | 5,288,465 | 99% | 1% |
| Sablefish South of 36° N. | 1,012,188 | 99% | 1% | | | | 1,012,188 | 99% | 1% |
| Shortspine thornyheads North of 34°27' N. | 1,570,223 | 99% | 1% | 4,803 | 100% | 0% | 1,575,026 | 99% | 1% |
| Shortspine thornyheads South of 34°27' N. | 18,644 | 97% | 3% | | | | 18,644 | 97% | 3% |
| Splitnose rockfish South of 40°10' N. | 88,050 | 24% | 76% | | | | 88,050 | 24% | 76% |
| Starry flounder | 25,934 | 94% | 6% | | | | 25,934 | 94% | 6% |
| Widow rockfish | 31,925 | 99% | 1% | 271,774 | 90% | 10% | 303,699 | 91% | 9% |
| Yelloweye rockfish | 128 | 91% | 9% | | | | 128 | 91% | 9% |
| Yellowtail rockfish North of 40°10' N. | 692,858 | 100% | 0% | 936,326 | 100% | 0% | 1,629,184 | 100% | 0% |
| Sum | 40,404,652 | 95% | 5% | 201,981,799 | 99% | 1% | 242,386,451 | 99% | 1% |

Table 20. Annual retention rates and differences for selected species caught by the non-whiting fleet, between 2011 and 2010; for species categories in which sufficient information was available for direct comparison. Source: Groundfish Mortality Report, WCGOP and NMFS IFQ Vessel Accounts System.

| IFQ Species Category | 2011 | 2010 | Difference |
|---|------|------|------------|
| Bocaccio rockfish South of 40°10' N. | 100% | 17% | 83% |
| Canary rockfish | 95% | 84% | 11% |
| Cowcod South of 40°10' N. | 82% | 0% | 82% |
| Darkblotched rockfish | 98% | 55% | 44% |
| Pacific ocean perch North of 40°10' N. | 99% | 54% | 45% |
| Petrale sole | 98% | 86% | 12% |
| Widow rockfish | 99% | 16% | 83% |
| Yelloweye rockfish | 91% | 9% | 82% |
| Arrowtooth flounder | 90% | 81% | 9% |
| Chilipepper rockfish South of 40°10' N. | 92% | 89% | 3% |
| Dover sole | 98% | 95% | 3% |
| English sole | 79% | 66% | 13% |
| Lingcod | 86% | 87% | -1% |
| Longspine thornyheads North of 34°27' N. | 95% | 78% | 17% |
| Other flatfish | 82% | 70% | 12% |
| Pacific cod | 100% | 100% | 0% |
| Pacific whiting | 12% | 48% | -36% |
| Sablefish North of 36° N. | 99% | 91% | 8% |
| Shortspine thornyheads North of 34°27' N. | 99% | 93% | 6% |
| Splitnose rockfish South of 40°10' N. | 24% | 26% | -2% |
| Starry flounder | 94% | 96% | -2% |
| Yellowtail rockfish North of 40°10' N. | 100% | 45% | 55% |
| Grand Total | 95% | - | - |

Table 21. Catch of rebuilding species in IFQ by fleet, compared with 2010 (mt). Source: NMFS IFQ vessel accounts system (2011), Groundfish Mortality Report, WCGOP (2010), NWR Whiting Catch Summary (2010).

| IFQ species category | Non-whiting | | | | Directed whiting | | | |
|----------------------------------|-------------|-------|--------|-------------|------------------|-------|-------|-------------|
| | 2010 | 2011 | dif. | dif. % 2010 | 2010 | 2011 | dif. | dif. % 2010 |
| Bocaccio rockfish S. of 40°10' | 13.1 | 5.3 | -7.8 | -60% | 0.0 | 0.0 | 0.0 | 0% |
| Canary rockfish | 2.4 | 2.8 | +0.5 | +20% | 4.0 | 0.9 | -3.2 | -79% |
| Cowcod S. of 40°10' | 0.6 | 0.0 | -0.6 | -97% | 0.0 | 0.0 | 0.0 | 0% |
| Darkblotched rockfish | 287.3 | 89.5 | -197.8 | -69% | 4.5 | 1.2 | -3.3 | -73% |
| Pacific ocean perch N. of 40°10' | 130.1 | 45.7 | -84.4 | -65% | 6.4 | 0.2 | -6.2 | -96% |
| Petrale sole | 900.3 | 811.5 | -88.8 | -10% | 0.1 | 0.0 | -0.1 | -99% |
| Widow rockfish | 25.5 | 14.5 | -11.0 | -43% | 55.0 | 123.3 | +68.3 | +124% |
| Yelloweye rockfish | 0.1 | 0.1 | 0.0 | -42% | 0.0 | 0.0 | 0.0 | 0% |

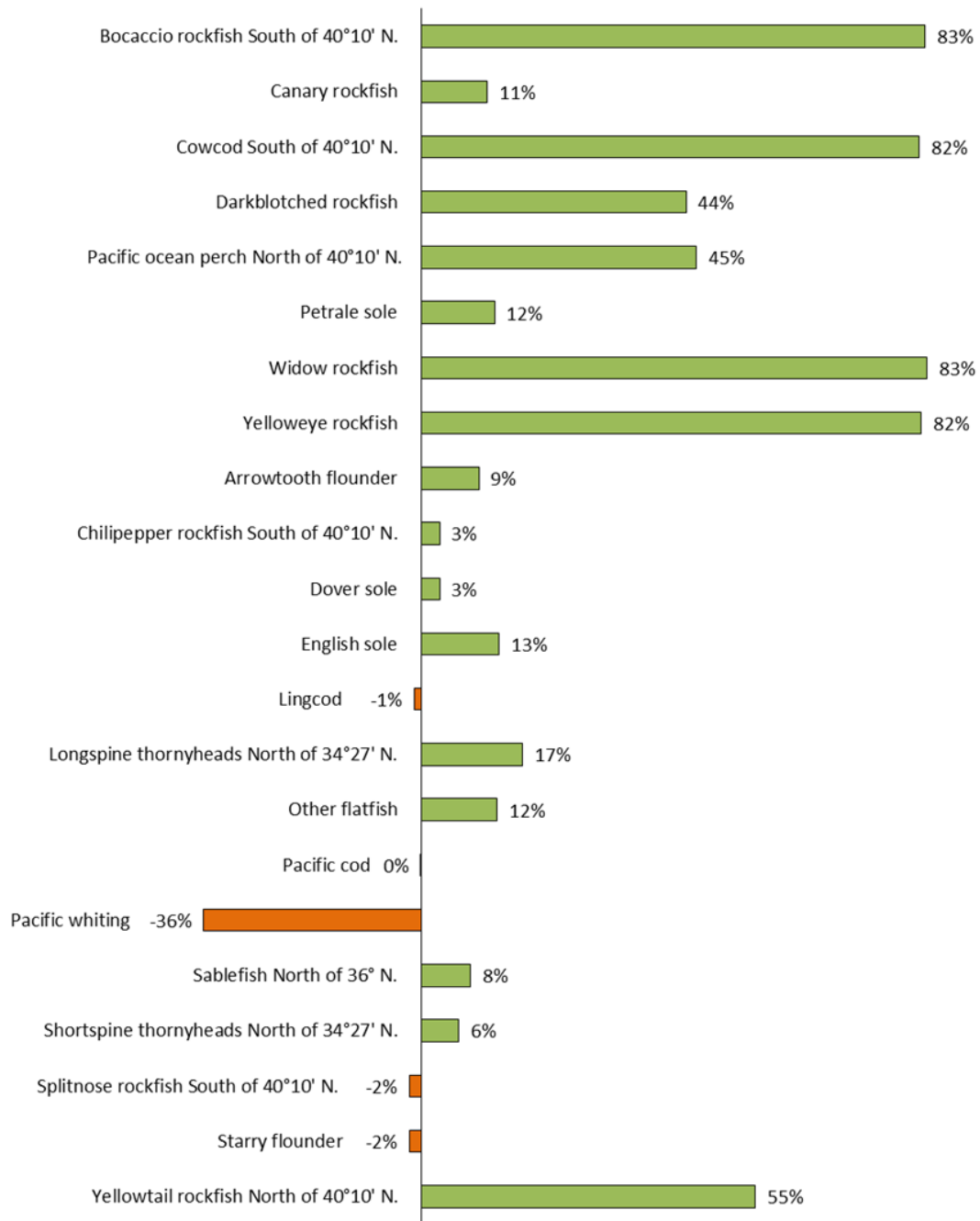


Figure 15. Retention rate comparisons, for the non-whiting fleet, between 2011 and 2010. Source: NMFS IFQ Vessel Accounts System (2011), Groundfish Mortality Report, WCGOP (2010).