

# The West Coast Groundfish IFQ Fishery

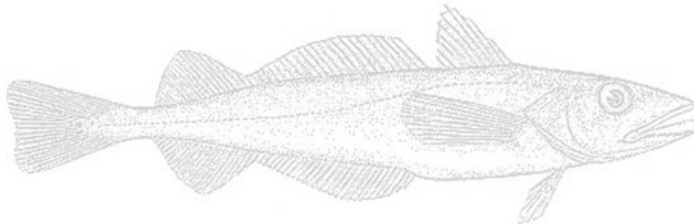
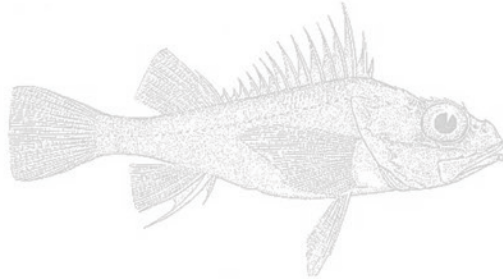


**Results  
from  
the first  
year of  
catch  
shares**

**2011**

**June 2012**





Cover: Sablefish. NOAA photo.

Right: Catch share observer from the West Coast Groundfish Observer Program calibrating a scale on deck before sampling and weighing fish. NOAA photo.



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**June 2012**



## Catch Shares as a Fisheries Management Tool

**A** catch share program is a management tool that advances the Magnuson-Stevens Act by helping to achieve annual catch limits and end overfishing. Catch share programs provide conservation benefits to ensure our fisheries are sustainable. A market-based mechanism, they place business decisions in the hands of fishermen and maximize economic benefits to support more stable jobs and coastal communities.

Under a catch share program, the total allowable catch or quota in a fishery is divided into shares controlled by fishermen. The fish can be caught at the fishermen's discretion, more efficiently and at more profitable marketing times, instead of trip limits or derbies. The amount of fish an individual fisherman can catch is set by the amount of annual quota (s)he holds, thereby allowing flexibility as to where and how to fish, and ensuring opportunities to fish during safer weather or better market conditions.

## Introduction to the West Coast Catch Share Program

**W**est Coast Groundfish Catch Shares began in 2011 for the Shorebased Individual Fishing Quota (IFQ) Fishery. Over ten years in the making, it is one of the most transformative strategies in this fishery's management history. NOAA Fisheries, the west coast groundfish fleet, the Pacific Fishery Management Council, Pacific States Marine Fisheries Commission, and the west coast states have worked together toward a common goal of healthy, sustainable fisheries and fishing communities. In addition to catch share quotas, the West Coast Groundfish IFQ Fishery includes a vastly improved monitoring system—using 100% observer coverage at sea and 100% monitoring of landings on shore. This refined monitoring system allows the fishery to be managed on an individual vessel basis, rather than via fleet-wide measures.

While the results presented in this report reflect only one year of data, a picture is emerging that is indeed positive for the groundfish resource, the fishermen, and their communities.



Bottom fish on ice. NOAA photo.



## The West Coast Groundfish IFQ Fishery

**T**he West Coast Groundfish Fishery includes over 90 different species, such as Pacific cod, sablefish, Pacific whiting, and many flatfish and rockfish species. Most groundfish species live on or near the bottom of the ocean. Different gears may be used to harvest groundfish, including trawl, longline, and pot gear. There are multiple components to the West Coast Groundfish catch share program including the at-sea whiting Catcher-Processors and Motherships (both trawl fisheries) and the Shorebased IFQ Fishery (both trawl and fixed gear). Some trawl vessels fish for both whiting and non-whiting species and therefore may participate in multiple components of the West Coast Groundfish catch share program.



Processing whiting in Newport, Oregon. NOAA photo.



Full trawl codend being pulled onboard a vessel. NOAA photo.

***"The first year of the catch share program exceeded most people's expectations. One of the biggest changes was in the reduction of discards, as personal accountability, coupled with the ability to trade quota pounds, really made a difference."***

- Brad Pettinger, Director  
Oregon Trawl Commission

## Overview of 2011

**2** 011 was an important transition year for fishermen, processors, scientists, and managers to adapt to the new catch share program. The program started slowly, due in part to crab fishing opportunities and a late start date. In addition, the industry was cautious as to how the program would unfold. Although fishing activity in the early months was noticeably lower than in prior years, groundfish fishing under the catch share system reflected a year-round fishery based on business decisions of fishermen rather than by government regulations.

This report summarizes results from the first year of the Shorebased Individual Fishing Quota Program, which was valued at about \$54 million last year to communities from Bellingham, Washington, to Morro Bay, California.



Catch monitor Ian Cole (left) inspecting catch as it is off loaded. Photo courtesy Pacific States Marine Fisheries Commission.

Right: Sorting trawl caught fish on deck. NOAA photo.





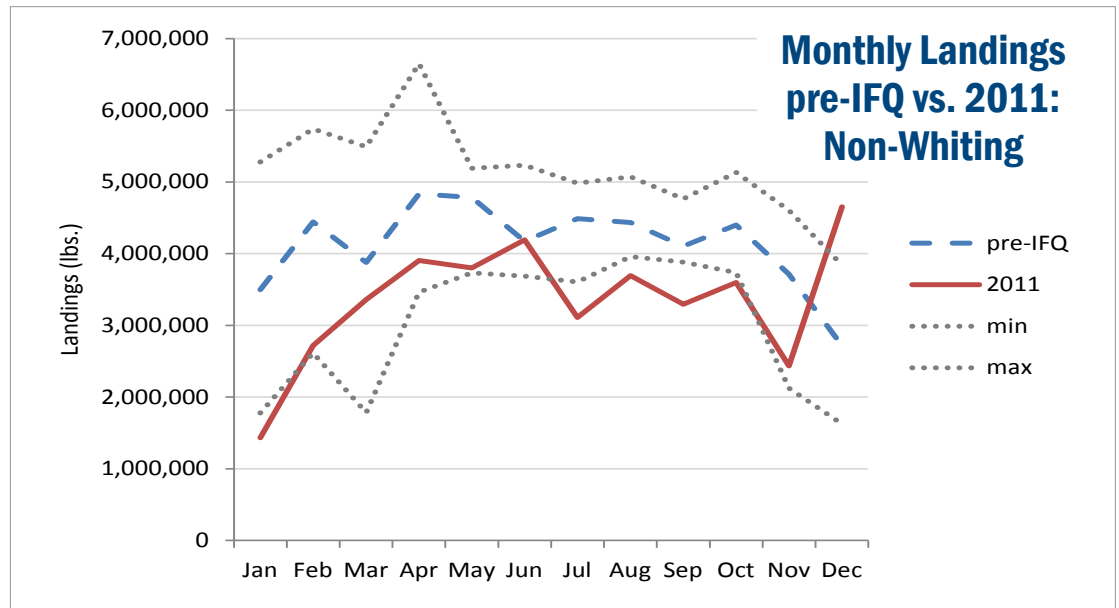


## Landings & Revenues

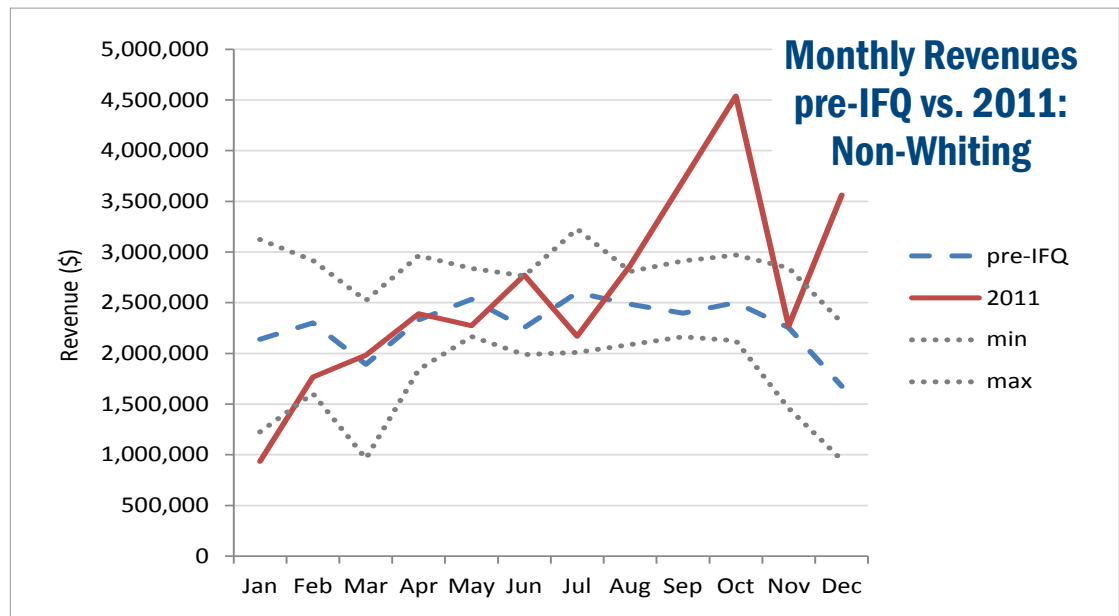
For this fishery, there were notable differences between landings and revenues in 2011 and 2010. Overall, landings in most months were lower than the pre-IFQ average, but in June, monthly landings in the non-whiting sector rose to the previous five-year average. Harvesters made a final push for landings in December, feeling more secure that their quota pounds for bycatch species were sufficient to last the year.

**Revenues for the West Coast IFQ Fishery reached a total of \$54 million in 2011, compared to the 2006-2010 historical average of \$38 million.**

Landings in December were 71 percent higher than the historical average (2006-2010). June's landings equaled the historical average, but landings for the rest of 2011 were below average. However, by August, revenue in the non-whiting component of the fishery had far surpassed the historical average, and this continued for the rest of the year. Annual revenues in 2011 were



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



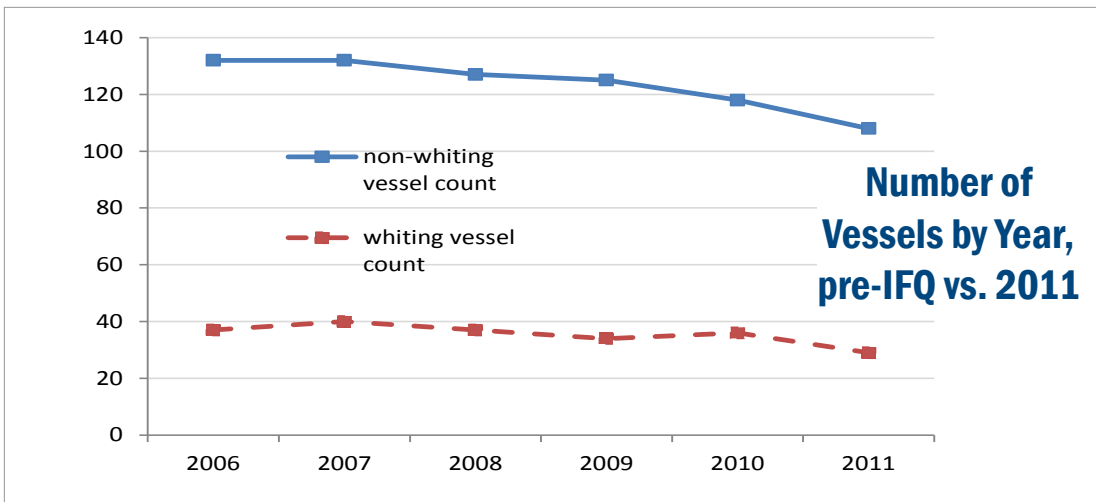
Monthly revenue from non-whiting trips in the West Coast Groundfish IFQ Fishery in 2011 and the limited entry fleet in 2006-2010 (historical average). Source: electronic landing receipts (2011, PSMFC) and paper landing receipts (2006-2010, PacFIN).

up by 14 percent in the non-whiting portion of the shoreside fishery, compared to the historical average. Shoreside whiting landings and revenue both increased dramatically, with landings up by 40 percent and

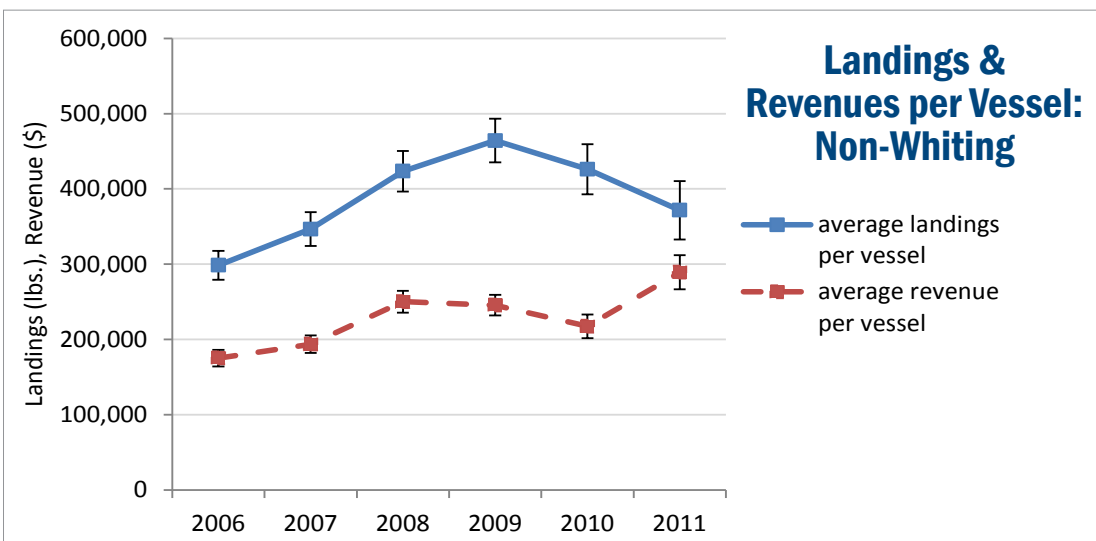
revenues up by 121 percent compared to the historical average. This, in large part, was due to a higher whiting total catch allowance and higher prices in 2011. Buttressed by high sablefish prices and a large whiting quota,

revenues in the combined fishery (non-whiting and whiting) reached higher than average levels. Combined, these sectors reached a total of \$54 million in 2011 compared to the 2006-2010 average of \$38 million.



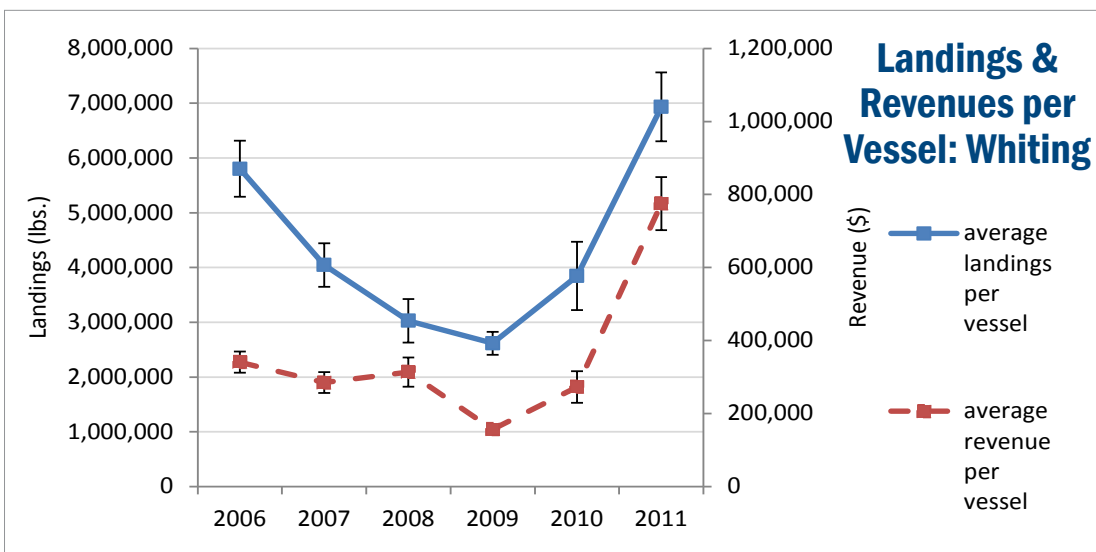


There was no radical change in the number of vessels participating or the ports of landing from the previous year. For 2011, there were 138 IFQ quota holders who had their shares fished by 108 vessels. These vessels landed their fish at 49 processing or landings sites.



The pattern for annual, average vessel landings and revenue in the non-whiting fleet was similar to that of annual fleet landings, due to a similar number of vessels participating as in previous years. Although average vessel landings were lower in 2011 (95 percent of the historical average), average vessel revenues were higher (134 percent of historical average), reflecting higher fish prices, most notably for sablefish.

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

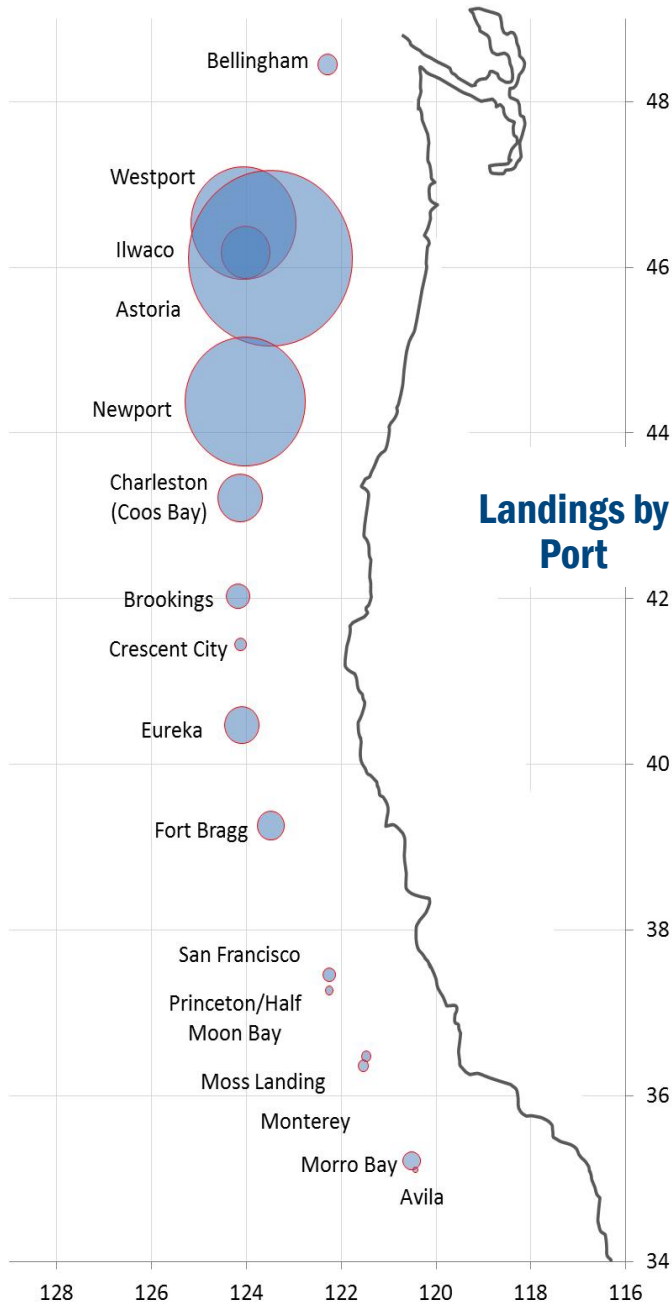


The annual landing and revenue patterns for directed whiting fleet were also reflected in the average annual vessel estimates, due to similar participation as in the previous five years. Average annual vessel landings for 2011 were up dramatically, at 179 percent of their historical average levels (largely due to a higher allowable catch of whiting), while revenue was estimated at 283 percent of baseline average levels, partially attributable to higher prices.

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

**A**storia remained the dominant port for the West Coast groundfish fishery, with 45 percent of the overall landings, an increase of 20 percent since 2010. This reflects the increased catch, and total allowable catch, of Pacific whiting in 2011. Astoria is the dominant port for whiting, which is also the dominant species by weight in this IFQ fishery, although it has the lowest price. Astoria was followed by Newport with 24 percent of overall landings and Westport with 18 percent.

Having individual annual quotas allowed catch share vessels to fish crab and shrimp without losing their access to groundfish. In past years, under the “trip limit” system, if fishermen chose to participate in these fisheries they would forego their groundfish opportunity. In addition, the new IFQ management system allows catch with non-trawl gear, which often is more valuable. Approximately 6% of the non-whiting landings in the 2011 fishery were made with non-trawl gear, which accounted for more than 20% of the non-whiting revenue. This was largely due to the value of sablefish. Catch in the 2011 shorebased whiting fleet was also more evenly distributed throughout the season than in recent years, when erratic patterns of monthly landings and short season lengths were common.



### Landings by Port Group

Port	Landings in 2011	% of total
Bellingham	1,485,940	0.6%
Westport	43,988,336	18.2%
Ilwaco	9,485,995	3.9%
Astoria	107,648,955	44.6%
Newport	57,299,092	23.8%
Charleston (Coos Bay)	7,953,161	3.3%
Brookings & Crescent City	2,725,441	1.1%
Eureka	4,719,619	2.0%
Fort Bragg	2,870,946	1.2%
San Francisco & Princeton (Half Moon Bay)	849,184	0.4%
Moss Landing, Monterey, Morro Bay, Avila	2,200,863	0.9%
<b>Total</b>	<b>241,227,533</b>	<b>100%</b>

Above: Distribution of landings by port for total IFQ landings in 2011. 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).

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



## Discard, Retention, & Bycatch

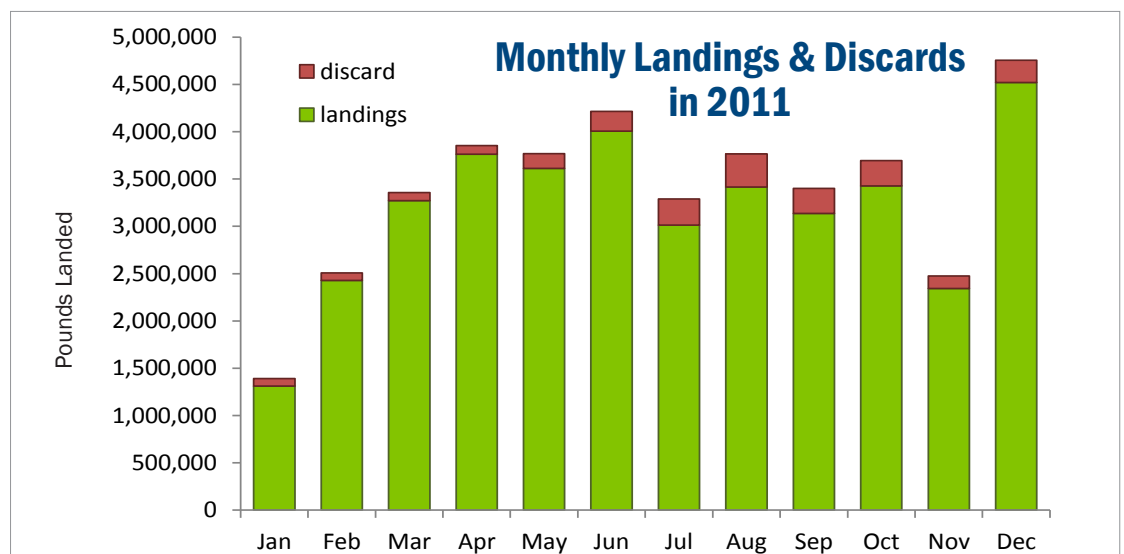
Some positive conservation-oriented changes in the fishery accompanied the first year of catch shares. Retention rates for many species within the non-whiting IFQ fleet, particularly rebuilding species, were much higher in 2011 than 2010. Retention rates reflect that fishermen are keeping more fish and can benefit from marketing them. The highest increases in retention rates, or the fraction of total catch landed and not discarded, were seen in:

- **Widow rockfish** up 84%, reaching nearly 100% in 2011
- **Bocaccio rockfish** up 83%
- **Cowcod** up 82%
- **Yellowtail rockfish** up 55%

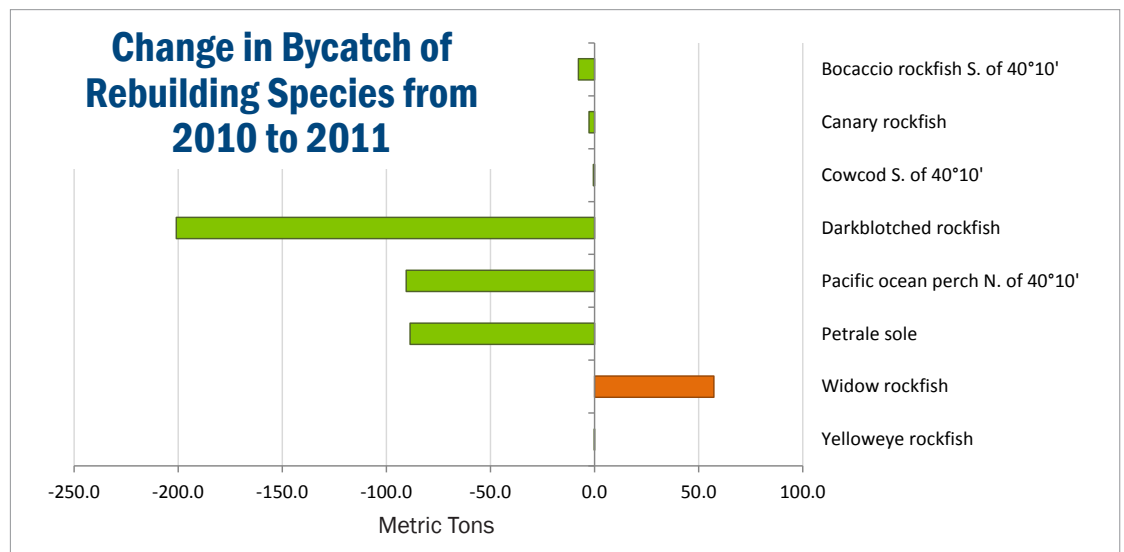
### Discards in 2011

accounted for only 4.8% of non-whiting fleet catch overall. When combined with whiting catch, the overall discard rate was approximately 1.3%.

Reduced discard rates are beneficial from a scientific and economic perspective. Access to biological information on an increased portion of the catch contributes to improved stock



Monthly landings and discards from non-whiting trips, in the West Coast Groundfish IFQ fishery in 2011. Source: NMFS IFQ vessel accounts system.



Change in bycatch of rebuilding species, from 2010 to 2011. Source: NMFS IFQ vessel accounts system and West Coast Groundfish Observer Program.

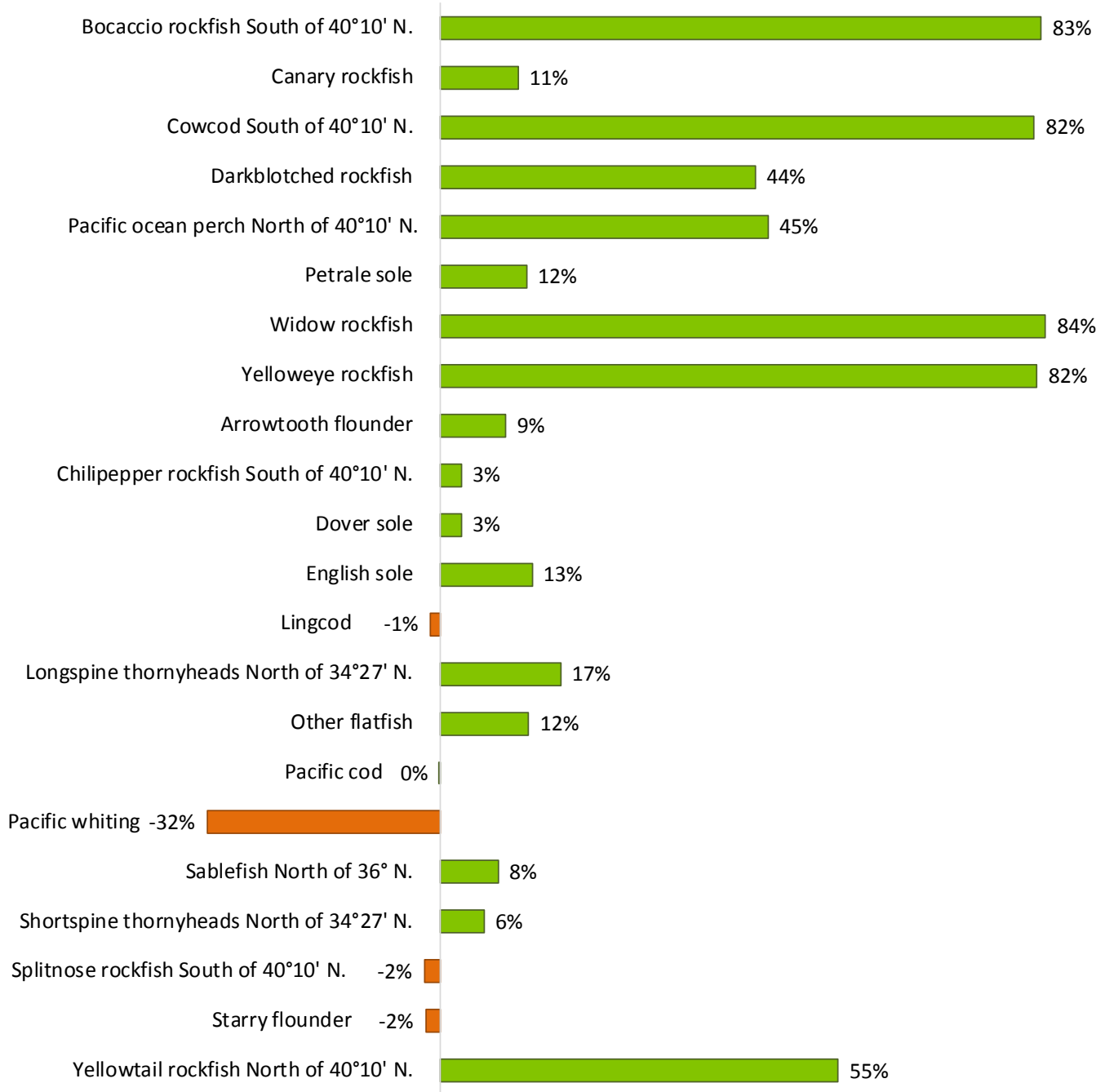
assessments. Fishermen can also sell their retained catch which can improve their economic efficiency.

The shoreside IFQ fishery substantially reduced its bycatch rates for rebuilding species. Catch of rebuilding species was lower in the non-whiting fleet in 2011 than in 2010—reductions ranged

between 10% and 97% of 2010 levels, depending on the species. Declines in bycatch were also recorded in the directed whiting fleet—79% reduction in canary rockfish, 73% reduction in darkblotched rockfish, and 96% reduction in Pacific ocean perch. One exception is for widow rockfish catch in the shoreside whiting fleet,

which increased in 2011 by 71% from its 2010 level. This is partially due to the fact that its abundance is increasing because the stock is fully rebuilt and thus widow rockfish are becoming harder to avoid. However, total catch of widow rockfish in the shoreside IFQ remained well within the trawl fleet's allocation (catch was only 40% of the allocation).

## Change in Retention Rates of Groundfish from 2010 to 2011



Change in retention rates of groundfish species in the W. Coast Groundfish IFQ Fishery from 2010 to 2011 (for species with comparable estimates available for 2010)



## New & Expanded Monitoring Programs

**W**ith the new catch share program, the frequency and amount of catch data available to managers and fishers increased dramatically. Now daily catch updates are tracked under the new Vessel Accounts System, an online system that operates in near real-time. These data enable fishers to manage their catch and quota pounds efficiently. They also enable managers to monitor landings and discard of both target and bycatch species. The system combines landings data with observer estimates of discards.

The West Coast Groundfish Observer Program observed a total of 9,305 sea days in eight fisheries in 2011. This was an increase of over 4,000 sea days from the previous year and is attributed to the program's 100 percent observer coverage requirement. Observers recorded haul information, determined the official total catch, sampled hauls for species composition, collected length and age structure data, completed projects related to salmon, and recorded marine mammal and seabird sighting

and interaction data. In addition to supporting fisheries management, these data are used for fish stock and protected species population assessments.

The new Compliance Monitor Program, managed by the Pacific States Marine Fisheries Commission, places observers, or catch monitors in the processing plants. Catch monitors verify that the fish tickets for catch share offloads are done accurately. In 2011, there were approximately 2,500 catch monitor days. Almost all of the catch monitors are observers who follow the fish off the boat and into the plant.



*Right: Observer Angie Scarlett from the West Coast Groundfish Observer Program collecting data on an LE Trawl vessel. Photo courtesy Angie Scarlett.*



*Observer Brian Perry preparing to weigh a Pacific electric ray as bycatch on a LE trawl vessel. Photo courtesy Brian Perry.*

## Collecting Economic & Social Data for Evaluation

The economic dynamics of the West Coast Groundfish IFQ Fishery will evolve under catch share management. To monitor these changes, the West Coast Groundfish Catch Share Program includes a mandatory Economic Data Collection Program. Using data collected from industry members, the Pacific Fishery Management Council and NOAA Fisheries will evaluate whether the goals of the catch share program have been met.

Changes from the catch share program will also impact the people working in the fishery, including fishermen, crew members, processors, and equipment suppliers. It is also important to understand individuals and fishing communities, as well as their degree of involvement in the West Coast Groundfish IFQ Fishery and other fisheries. Scientists from the Northwest Fisheries Science Center will collect information through voluntary social surveys and interviews with fishing industry members. This information will provide a deeper understanding of the human dimension of the fishery.



Fishing and crabbing vessels in port. Photo courtesy Microsoft.

## Future Improvements

There will be ongoing improvements to the West Coast Groundfish Catch Share Program, including cost reductions and management efficiencies. NOAA Fisheries will continue to improve the online catch, quota share-holder, and vessel accounting systems used to manage the program. NOAA also supports innovative partnerships with industry to keep bycatch low while increasing target catch.

One key area for testing and development in 2012 is the use of electronic monitoring. Electronic monitoring has the potential to reduce observer costs while simultaneously maintaining compliance and delivering necessary data for the West Coast Groundfish Catch Share Program. NOAA Fisheries Office of Law Enforcement, Northwest Fisheries Science Center, and Northwest Region, in partnership with the Pacific States Marine Fisheries Commission and the fishing industry, are collaborating on electronic monitoring projects.



Trawl vessel FV Raven. NOAA photo.

***"I had some pretty big reservations about the catch share program prior to implementation. However, after the first year, I'm happy to say I was wrong. Now my discards are almost non-existent and I can plan my groundfish landings when it's convenient to my operation."***

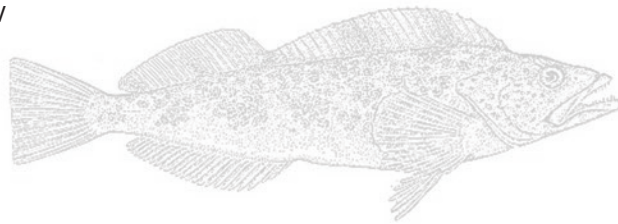
- Rex Leach, Coos Bay, Oregon Trawler

Right: Midwater trawl gear, NOAA photo.









## For Further Information

Background information and documents can be found at:

[www.nwr.noaa.gov/Groundfish-Halibut/Groundfish-Fishery-Management/Trawl-Program/index.cfm](http://www.nwr.noaa.gov/Groundfish-Halibut/Groundfish-Fishery-Management/Trawl-Program/index.cfm)

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