

Pacific Region

- California
- Oregon
- Washington



Filleting yellowfin tuna off of San Diego, CA
(photo credit: Stephen Stohs)

MANAGEMENT CONTEXT

The Pacific Region includes California, Oregon, and Washington. Federal fisheries in this region are managed by the Pacific Fishery Management Council (PFMC) and NOAA Fisheries under four fishery management plans (FMPs).

Pacific Region FMPs

- Coastal pelagic species
- Pacific coast groundfish
- Pacific coast salmon
- West Coast highly migratory species

Three of the stocks or stock complexes covered in these FMPs were listed as overfished in 2015: Pacific ocean perch, yelloweye rockfish, and Pacific bluefin tuna. Seven stock complexes were subject to overfishing in 2015: Chinook salmon (three stocks), coho salmon, Pacific bluefin tuna, bigeye tuna, and swordfish.

Conservative management techniques are employed in the Pacific Region’s fisheries. For example, the Pacific groundfish and salmon fisheries are subject to "weak stock management" where access to the surplus of healthier stocks that can be harvested is often restricted to protect weaker stocks with which they comele in the ocean. These weaker stocks include seven rebuilding groundfish stocks, salmon (listed under the Endangered Species Act), and other non-listed stocks that constrain the fishery.

Salmon management is further complicated by the need to ensure equal allocation of harvest among diverse user groups and coordination with other entities that have jurisdiction over various aspects of salmon management. Decades of habitat modification, hatchery practices, harvest, and growing competition for water have affected the viability of salmon stocks and made them more vulnerable to adverse environmental conditions. These conditions include the prolonged drought and adverse ocean conditions experienced in recent years. Low returns of salmon to the Klamath River in 2006, and to the Sacramento River in 2008 and 2009, resulted in unprecedented closures of ocean and in-river fisheries, leading to federal disaster relief for affected entities.

Coastal pelagic species (CPS) are highly variable,

environmentally sensitive stocks that provide food for marine mammals, birds, and fish. These species include Pacific sardine, northern anchovy, Pacific and jack mackerel, and market squid. Of these species, Pacific sardine is the most commonly targeted CPS finfish and is managed according to an innovative harvest control rule: Allowable harvest varies with sea surface temperature. Because the geographic range of sardine tends to expand with abundance, harvest allocation between the California and Pacific Northwest fisheries is an ongoing and dynamic issue. The annual guideline for sardine harvest is allocated coast-wide on a seasonal basis. Recent decreases in harvest guideline limits have contributed to the development of an intense derby fishery.

Catch limits for Pacific halibut, a transboundary fish stock, are set in January by the International Pacific Halibut Commission (IPHC). This bilateral commission between the United States and Canada determines total allowable catch levels (TACs) for Pacific halibut that will be caught in the United States and Canadian exclusive economic zones (EEZs). After catch levels are determined, the PFMC develops a catch-sharing plan for tribal and non-tribal (i.e., commercial and recreational) fisheries in the federal waters of California, Oregon, and Washington. Pacific Halibut is targeted only with hook gear, but there are allocations to the trawl sector for bycatch, including individual bycatch quotas, in the Pacific groundfish trawl IFQ.

The Highly Migratory Species (HMS) FMP includes tunas, billfish, and pelagic sharks as managed species. The albacore surface hook-and-line fishery is by far the most economically important commercial HMS fishery, followed by the drift gillnet fishery for swordfish and thresher shark. HMS is also a very important component of the catch for the Pacific Region’s commercial passenger fishing vessel fleet and the private recreational boat fleet.

Catch Share Programs

The Pacific Region has two catch share programs: 1) the Pacific Sablefish Permit Stacking Program; and 2) the Pacific Groundfish Trawl Rationalization Program. The landings revenues for these programs totaled more than \$58.3 million in 2014. Following are descriptions of these catch share programs and their performance.

Pacific Sablefish Permit Stacking Program: This program was implemented in 2001 and allows vessels to stack multiple vessel permits on a single vessel. The goal of this approach is to improve economic efficiency through rationalization of the fixed gear fleet, increase benefits for fishing communities, promote equity, lessen reallocation effects of previous harvest regulations, promote safety, and improve product quality and value. Results for this program show that in 2014, the number of active vessels and landings decreased compared with the baseline period (average of the 3-year period prior to the start of the program). However, inflation-adjusted revenue and inflation-adjusted revenue per vessel increased during 2014.

Pacific Trawl Rationalization Program: This program was implemented by the PFMC in January 2011. This program involves individual fishing quotas (IFQs) for non-whiting groundfish and whiting trawlers delivering to shoreside plants, and cooperatives for whiting mothership and catcher processor sectors. The objectives of this program are to provide a mechanism for total catch accounting; provide a viable, profitable, and efficient groundfish fishery; promote practices that reduce bycatch and discard mortality, and minimize ecological impacts; increase operational flexibility; minimize adverse effects from the IFQ program on fishing communities and other fisheries; promote measurable economic and employment benefits through the seafood catching, processing, distribution, and support sectors of the industry; provide quality product for the consumer; and increase safety in the fishery.

The economic performance of the program has been strong. Net revenue per active catcher vessel increased 65% relative to the pre-catch share period (2009–2010) for the non-whiting groundfish fishery, and 400% for the whiting fishery. Meanwhile, motherships experienced a 62% increase and catcher-processors experienced a 7% decrease in net revenue. Results for this program show that in 2014, inflation-adjusted revenue and landings increased compared to the baseline period. However, the number of active vessels decreased during this period. Expanded observer coverage and dockside monitoring, which were implemented with the catch share program, coupled with long-term adherence to catch targets and

improved stock assessment models have also contributed, to varying degrees, to improved fishery performance. For example, in the first 3 years of catch shares, the total catch of rebuilding stocks (of which two—canary rockfish and petrale sole—are now declared rebuilt) was 50% lower than the previous 3 years.

Policy Updates

In April 2015, after reviewing the best available science and hearing from fishery participants and environmental groups, the PFMC closed the Pacific sardine fishery for the 2015–2016 season. The fishery was scheduled to open on July 1, 2015, but the biomass was estimated to fall well below the 150,000 metric ton threshold for a directed fishery. Although commercial fishing is closed, the PFMC allowed up to 7,000 tons of sardine to be harvested to account for small amounts taken as incidental catch in other fisheries, live bait harvest, tribal harvest, and research. Only days after closing the 2015–16 season, the NMFS and the PFMC closed the 2014–15 fishery early because the harvest forecast indicated the fishery would reach its harvest allocation prior to the end of the fishing season (June 30). Since 2006 Pacific sardine biomass, which is prone to significant natural fluctuation due to large-scale changes in oceanic temperature, has declined 90% from approximately 1 million metric tons in 2006 to 97,000 metric tons in 2015.

The U.S. pelagic longline fishery for bigeye tuna was temporarily shut down in August 2015 for vessels 24 meters in overall length in the eastern Pacific Ocean (EPO) through December 31, 2015, because the 2015 catch limit of 500 metric tons was expected to be reached.

Closures and delays in the Pacific crab and razor clam fisheries in 2015 were due to elevated levels of domoic acid, a naturally occurring bio-toxin produced by marine algae of the genus *Pseudo-nitzschia*. A massive pool of warm water, termed “the blob” by scientists, in the Pacific Ocean coupled with El Niño contributed to higher than average water temperatures that brought on the harmful algal bloom. Unsafe levels of domoic acid shut down razor clam fisheries in both Oregon and Washington in May 2015 followed by the June closure of Washington’s recreational and commercial dungeness crab fisheries. In November, California delayed the start of its recreational and

commercial dungeness crab and rock crab fisheries when testing revealed unsafe levels of domoic acid. Oregon and Washington also delayed the start of its 2015-16 dungeness crab season in November due to unsafe domoic acid levels.

In June 2015, the PFMC announced that two important West Coast groundfish stocks—canary rockfish and petrale sole—were rebuilt. These stocks had been subject to strict rebuilding plans that severely constrained West Coast fisheries for more than a decade. The canary rockfish was declared overfished in 2000, and a rebuilding plan was put in place in 2001. Under the rebuilding plan, catch quotas were dramatically reduced and large area closures put in place, and the stock was expected to rebuild by 2057. However, the new 2015 canary rockfish assessment showed that the coast-wide canary stock is already rebuilt. Petrale sole was declared overfished in 2010, and a rebuilding plan was put in place in 2011 to rebuild the stock by 2016. The petrale sole harvest limit was cut by half; fisheries in which petrale sole could be caught were reduced. Area closures were also implemented. The 2015 stock assessment showed that the rebuilding plan was successful and the stock had increased over the target level.

In November 2015, the council discussed management of the swordfish drift gillnet fishery. The Council reiterated its recommendation to NOAA Fisheries to issue an exempted fishing permit (EFP) to test the use of modified large-mesh drift gillnet gear for fishing by two boats inside the Pacific Leatherback Conservation Area. Fishing would occur when and where bycatch was likely to be low and swordfish abundance high. The EFP tested generally whether “eco-set triggered fishing” could result in substantially higher swordfish catch with far less bycatch. Four exempted fishing permit EFP applications were submitted for council consideration in November.

COMMERCIAL FISHERIES

In this report, commercial fisheries refer to fishing operations that sell their catch for profit. It does not include saltwater anglers that fish for sport or subsistence fishermen. It also excludes the for hire sector, which earns its revenue from selling recreational fishing trips

to saltwater anglers. The commercial fisheries section reports on economic impacts, landings revenue, landings, and ex-vessel prices of key species/species groups.

Key Pacific Region Commercial Species

- Albacore tuna
- Crab
- Flatfish
- Hake
- Other shellfish
- Rockfish
- Sablefish
- Salmon
- Shrimp
- Squid

Economic Impacts

The premise behind economic impact modeling is that every dollar spent in a regional economy (direct impact) is either saved or respent on additional goods or services. If those dollars are respent on other goods and services in the regional economy, this spending generates additional economic activity in the region. This report provides estimates of total economic impacts for the Nation and for each of the 23 coastal states. Total economic impacts for each state and the Nation represent the sum of direct impacts; indirect impacts (in this case, the impact from suppliers to the seafood industry); and induced impacts (spending by employees on personal and household expenditures, where employees of both seafood businesses and its full supply chain are included). That is, impacts from the seafood industry as well as the economic activity generated throughout each region’s broader economy from this industry.

Four different measures are commonly used to show commercial fisheries landings affect the economy in a region (state or nationwide): sales, income, value-added, and employment. Sales refer to the gross value of all sales by regional businesses affected by an activity, such as commercial fishing. It includes both the direct sales of fish landed and sales made between businesses and households resulting from the original sale. Income includes personal income (wages and salaries) and proprietors’ income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full-time and part-time jobs supported directly or indirectly by the sales of seafood or purchases of inputs to commercial fishing. The first three types of

Landings Revenue: Largest Increases*From 2006:*

- Shrimp (604%, 508% in real terms)
- Rockfish (56%, 34% in real terms)
- Salmon (38%, 20% in real terms)

From 2014:

- Shrimp (43%)
- Sablefish (19%)
- Rockfish (7%)

Landings Revenue: Largest Decreases*From 2006:*

- Hake (-30%, -41% in real terms)
- Crab (-27%, -37% in real terms)
- Squid (-9%, -22% in real terms)

From 2014:

- Squid (-66%)
- Hake (-59%)
- Crab (-47%)

Landings: Largest Increases*From 2006:*

- Shrimp (419%)
- Rockfish (86%)

From 2014:

- Sablefish (18%)
- Shrimp (13%)
- Rockfish (11%)

Landings: Largest Decreases*From 2006:*

- Crab (-73%)
- Hake (-40%)
- Other shellfish (-38%)

From 2014:

- Squid (-65%)
- Crab (-56%)
- Hake (-42%)

measures are calculated in terms of dollars, whereas employment impacts are measured in terms of numbers of jobs. Note that these categories are not additive. The United States seafood industry is defined here as the commercial fishing sector, seafood processors and dealers, seafood wholesalers and distributors, importers, and seafood retailers.¹

In 2015, commercial fishing in California generated the largest employment impacts in the region with 113,900 jobs. California also had the largest income impacts (\$4.5 billion), sales impacts (\$21.3 billion), and value-added impacts (\$7.6 billion).

The importers sector in California generated the highest employment impacts of any state-level sector with 52,600 jobs. The importers sector in California generated the highest state-level income impacts (\$2.6 billion), the highest state-level sales impacts (\$16.3 billion), and the highest state-level value-added impacts in the region (\$5 billion).

Landings Trends

Landings revenue declined in all three states (California, -49%; Oregon, -28% and Washington, -9%) from 2014-2015. Crab landings revenue had significant

declines in all three states from 2014 – 2015 due to the marine toxin closures, which sharply reduced landings. Crab landings revenue fell \$50 million (-71%) in California; \$36 million (-75%) in Oregon; and \$8 million (-10%) in Washington. Pacific sardine landings revenue was down significantly in California (-83%, \$2 million) and Oregon (-77%, \$3 million) for this period due fishery closures based on low stock abundance; lower sardine prices in both states also negatively impacted landings revenues.

Squid, which had been California's largest fishery by value and volume in 2014, fell \$48 million (-66%) in 2015 due to the large decline in landings (148 million pounds, -65%). The \$50 million and \$48 million declines in California landings revenue of crab and squid accounted for almost 80% of the state's overall decline in landings revenue from 2014-15.

Sharply lower landings and landings revenue of hake and salmon, major fisheries in both Oregon and Washington, may have been attributed to the "warm blob" effects. Hake landings revenues in 2015 were down \$11 million (-61%) in Oregon, down \$3 million (-53%) in Washington from 2014 levels, and down \$21 million for at sea processors (-59%); salmon landings

¹ The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates (see NMFS Commercial Fishing & Seafood Industry Input/Output Model, available at: www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf).

revenue fell \$8 million (-41%) in Oregon and \$11 million (-28%) in Washington from 2014 levels.

Sablefish and shrimp landings revenue were the two bright spots for Oregon fishermen in 2015. Landings revenues were up \$5 million and \$11 million, respectively, from 2014 levels driven by both higher landings and higher prices. In Washington, 2015 shrimp landings revenue were also up from 2014 levels, increasing \$13 million (68%) from 2014 levels.

Landings Revenue

Landings revenue in the Pacific Region totaled \$558 million in 2015. This number represented a 18% increase from 2006 (a 2% increase in real terms after adjusting for inflation) and a 28% decrease from 2014. Landings revenue was highest in Washington (\$300 million), followed by California (\$129 million). Shellfish landings revenue made up 65% of total revenue. Other shellfish (\$137 million) and crab (\$105 million) had the highest landings revenue in the Pacific Region in 2015. Together they accounted for 45% of total landings revenue.

From 2006 to 2015, shrimp (604%, 508% in real terms); rockfish (56%, 34% in real terms); and salmon (38%, 20% in real terms) had the largest revenue increases, while hake (-30%, -41% in real terms); crab (-27%, -37% in real terms); and squid (-9%, -22% in real terms) had the largest decreases. From 2014 to 2015, shrimp (43%), sablefish (19%), and rockfish (7%) had the largest revenue increases, while squid (-66%), hake (-59%), and crab (-47%) had the largest decreases.

Landings

In 2015, commercial fishermen in the Pacific Region landed 747 million pounds of finfish and shellfish, a 36% decrease from 2006 and a 38% decrease from 2014. Landings volume was highest in California (186 million pounds), followed by Washington (154 million pounds). Hake had the highest landings volume in the Pacific Region, accounting for 45% of landed weight.

From 2006 to 2015, shrimp (419%) and rockfish (86%) had the largest landings increases, while crab (-73%), hake (-40%), and other shellfish (-38%) had the largest decreases. From 2014 to 2015, sablefish (18%), shrimp

(13%), and rockfish (11%) had the largest revenue increases, while squid (-65%), crab (-56%), and hake (-42%) had the largest decreases.

Price

In 2015, other shellfish (\$11.61 per pound) received the highest ex-vessel price in the Pacific Region. Landings of hake (\$0.08 per pound) had the lowest ex-vessel price. From 2006 to 2015, crab (174%, 137% in real terms); other shellfish (101%, 74% in real terms); and salmon (57%, 35% in real terms) had the largest price increases, while rockfish (-16%, -28% in real terms); squid (21%, 5% in real terms); and flatfish (23%, 6% in real terms) had the largest decreases. From 2014 to 2015, shrimp (27%), crab (21%), and other shellfish (12%) had the largest price increases, while hake (-29%), squid (-5%), and salmon (-4%) had the largest decreases.

RECREATIONAL FISHERIES

In this report, recreational fisheries refer to fishing for fun rather than to resell fish (commercial fishing) or for subsistence. The recreational fisheries section reports on economic impacts and expenditures, angler participation, trips, and catch of key species/species groups.

Key Pacific Region Recreational Species

- Albacore & other tunas
- Barracuda, bass & bonito
- Croakers
- Flatfishes
- Greenlings
- Rockfishes & scorpionfishes
- Salmon
- Sculpins
- Surfperches

Economic Impacts and Expenditures

The contribution of recreational fishing activities² in the United States is reported in terms of economic impacts from angler expenditures. Total annual trip expenditures are estimated by multiplying mean trip expenditures by the estimated number of adult trips in each trip mode (for-hire, private boat, and shore). Total annual durable expenditures are estimated by multiplying mean durable expenditures by the estimated annual number of adult participants in a given state.

² Trip expenditure estimates were generated from the 2011 National Marine Recreational Fishing Expenditure Survey. Durable good expenditure impacts were generated from the 2014 National Marine Recreational Fishing Expenditure Survey (see <http://www.st.nmfs.noaa.gov/economics/fisheries/recreational/Marine-Angler-Durable-Expenditures/2014-durable-expenditures-survey>). Economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see The Economic Contribution of Marine Angler Expenditures in the United States, 2011, available at <http://www.st.nmfs.noaa.gov/economics/publications/marine-angler-expenditures/marine-angler-2011>).

Recreational Catch: Largest Increases*From 2006:*

- Albacore and other tunas (179%)
- Greenlings (60%)
- Rockfishes and scorpionfishes (44%)

From 2014:

- Greenlings (8%)
- Albacore and other tunas (4%)

Recreational Catch: Largest Decreases*From 2006:*

- Croakers (-77%)
- Barracuda, bass, and bonito (-30%)
- Flatfishes (-24%)

From 2014:

- Flatfishes (-52%)
- Salmon (-49%)
- Croakers (-27%)

Four different measures are commonly used to show how angler expenditures affect the economy in a region (state or nationwide): sales, income, value-added, and employment. Sales refer to the gross value of all sales by regional businesses affected by an activity, such as recreational fishing. It includes both the direct sales made by the angler and sales made between businesses and households resulting from that original sale by the angler. Income includes personal income (wages and salaries) and proprietors' income (income from self-employment). Value-added is the contribution made to the gross domestic product in a region. Employment is specified on the basis of full- and part-time jobs supported directly or indirectly by the purchases made by anglers. The first three measures are calculated in terms of dollars, whereas employment impacts are measured in terms of number of jobs. Note that these categories are not additive. NOAA Fisheries uses a regional impact modeling software, called IMPLAN, to estimate these four types of impacts.

The greatest employment impacts from expenditures on saltwater recreational fishing in the Pacific Region were generated in California (16,500 jobs), followed by Washington (6,500 jobs). The largest sales impacts were observed in California (\$2.1 billion), followed by

Washington (\$775 million). The biggest income impacts were generated in California (\$797 million), followed by Washington (\$297 million). The greatest value-added impacts were in California (\$1.3 billion), followed by Washington (\$483 million).

Recreational fishing expenditures (on both fishing trips and durable equipment purchases) across the Pacific Region in 2015 totaled about \$2.5 billion. Trip expenditures totaled more than \$640 million, with a large portion coming from trips in the private boat (37%) and for-hire (33%) sectors. Durable goods expenditures totaled \$1.8 billion, with the largest portion coming from boat expenses (\$946 million).

Fishing Trips

In 2015, recreational anglers took 5.8 million fishing trips in the Pacific Region. This number was a 9% decrease from 2006 and a 10% decrease from 2014. The largest proportions of trips were taken in the shore mode (53%) and private boat mode (32%). States with the highest number of recorded trips were California (3.7 million trips) and Washington (1.3 million trips).

Participation

In 2015, 1.2 million recreational anglers who fished in the Pacific Region. This number was a 32% decrease from 2006 and a 15% decrease from 2014. These anglers were Pacific Region residents from either a coastal county (74%) or non-coastal county (26%).

Harvest and Release

Of the Pacific Region's key species and species groups, rockfishes and scorpionfishes (4.7 million fish), surfperches (2.4 million fish), and barracuda, bass, and bonito (1.6 million fish) were most frequently caught by recreational anglers. From 2006 to 2015, albacore and other tunas (179%), greenlings (60%), and rockfishes and scorpionfishes (44%) had the largest increases in catch, while croakers (-77%), barracuda, bass, and bonito (-30%), and flatfishes (-24%) had the largest decreases. From 2014 to 2015, greenlings (8%) and albacore and other tunas (4%) had the largest increases in catch, while flatfishes (-52%), salmon (-49%), and croakers (-27%) had the largest decreases.

MARINE ECONOMY

For this report, the marine economy refers to the economic activity generated by fishing and marine-related industries in a coastal state. The state marine economy consists of two industry sectors: 1) seafood sales and processing (employer establishments and non-employer firms); and 2) transport, support, and marine operations (employer establishments). These sectors include several different marine-related industries.^{3,4}

To measure the size of the commercial fishing sector in a state's economy relative to the size of the commercial fishing sector in the national economy, researchers use an index called the Commercial Fishing Location Quotient (CFLQ).⁵ The CFLQ is calculated as the ratio of the percentage of regional employment in the commercial fishing sector relative to the percentage of national employment in the commercial fishing sector. The U.S. CFLQ is 1. If a state's CFLQ is less than 1, then less commercial fishing occurs in this state than the national average. If a state's CFLQ is greater than 1, then more commercial fishing occurs in this state than the national average.

The Bureau of Labor Statistics did not disclose CFLQ data for Washington for 2014. In 2014, the CFLQ for Oregon was the highest for the remaining states in the region at 3.99. Oregon's CFLQ suggests that the level of employment in commercial fishing-related industries in this state is approximately 3.99 times higher than the level of employment in these industries nationwide.

In 2014, 1.2 million establishments operated throughout the Pacific Region (including marine and non-marine-related establishments). These establishments employed 18 million workers and had a total annual payroll of \$1 trillion. The region's gross domestic product was approximately \$2.9 trillion.

Seafood Sales and Processing

Seafood Product Preparation and Packaging: In 2014, there were 226 non-employer firms (a 50% increase from 2006) and annual receipts totaled \$17 million (an 18% increase from 2006 in real terms).

The greatest number of firms was located in California (164).

There were 163 employer establishments (a 1% decrease from 2006) in 2014. These establishments employed approximately 8,724 workers (a 5% decrease from 2006) and had a total annual payroll of \$430 million (a 4% increase from 2006 in real terms). The greatest number of establishments was located in Washington (90).

Seafood Sales, Retail: In 2014, there were 279 non-employer firms (a 37% increase from 2006) and annual receipts totaled \$21 million (a 20% decrease from 2006 in real terms). The greatest number of firms was located in California (227).

There were 223 employer establishments (a 13% decrease from 2006) in 2014. These establishments employed 1,570 workers (a 4% decrease from 2006) and had a total annual payroll of \$42 million (a 15% increase from 2006 in real terms). The greatest number of establishments was located in California (167).

Seafood Sales, Wholesale: There were 482 establishments (a 26% increase from 2006) in 2014. These establishments employed 5,202 workers (a 2% increase from 2006) and had a total annual payroll of \$237 million (a 10% increase from 2006 in real terms). The greatest number of establishments was located in California (341).

Transport, Support, and Marine Operations

The size of the Transport, Support, and Marine Operations sectors in the Pacific Region is difficult to assess because much of the state-level data is suppressed for confidentiality purposes. It is clear, however, that these sectors play an important role in the regional economy. For example, the Ship and Boatbuilding sector contributed more than 300 jobs and more than \$800 million in payroll to the region in 2014.

³ Unless otherwise stated, data is from the U.S. Census Bureau, <http://censtats.census.gov/> (accessed May 31, 2016).

⁴ U.S. Bureau of Economic Analysis, "Table 1.1.5 Gross Domestic Product" and "Table SA6N Compensation of Employees by NAICS Industry," http://www.bea.gov/iTable/index_nipa.cfm (accessed May 31, 2016).

⁵ U.S. Bureau of Labor Statistics, "Location Quotient Calculator," http://data.bls.gov/location_quotient/ (accessed May 31, 2016).

Tables | Pacific Region



2015 Economic Impacts of the Pacific Seafood Industry (thousands of dollars)

	Landings Revenue	With Imports				Without Imports			
		#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
California	129,143	113,896	21,314,558	4,530,035	7,552,746	9,105	747,849	281,375	386,989
Oregon	113,990	13,624	1,057,899	355,933	503,606	11,347	646,466	271,563	361,303
Washington	299,952	23,197	1,702,330	693,619	941,845	22,887	1,648,356	681,162	921,935

Total Landings Revenue & Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	471,764	459,763	500,435	501,935	566,576	729,775	674,457	814,817	776,081	557,650
Finfish & Other	159,425	158,772	175,040	162,664	188,560	238,497	225,466	248,722	230,250	188,988
Shellfish	312,388	301,009	325,419	339,276	378,021	491,297	449,007	566,129	545,866	368,700
Key Species										
Albacore tuna	23,767	21,612	28,845	27,541	28,780	43,347	45,827	41,930	32,792	29,387
Crab	143,758	121,136	107,107	123,865	132,843	182,085	176,880	249,579	199,222	105,053
Flatfish	15,602	16,266	18,015	16,716	12,824	13,369	13,490	17,408	15,655	16,736
Hake	34,425	32,603	58,492	14,104	27,316	52,869	47,054	61,321	58,630	24,109
Other shellfish	110,464	114,639	122,904	133,940	134,460	172,541	141,221	166,551	177,487	137,035
Rockfish	6,705	7,406	8,986	8,819	9,033	9,305	9,329	9,739	9,728	10,439
Sablefish	22,986	20,975	27,273	34,480	35,962	44,850	28,096	19,530	24,118	28,697
Salmon	34,786	34,508	27,548	25,549	49,534	54,267	48,197	77,754	71,416	48,157
Shrimp	12,433	17,298	25,132	16,594	21,941	40,638	40,326	42,614	61,100	87,556
Squid	26,974	29,160	26,573	56,926	71,171	66,547	63,886	73,703	72,915	24,472

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	1,169,814	1,109,184	1,091,565	899,035	1,065,423	1,176,695	1,069,945	1,255,299	1,208,639	746,986
Finfish & Other	633,029	627,532	509,534	423,694	418,068	476,563	514,800	563,071	452,625	313,816
Shellfish	536,968	481,728	582,247	475,358	647,506	700,302	555,386	692,818	756,357	433,425
Key Species										
Albacore tuna	28,117	25,483	24,507	27,055	25,477	24,284	30,638	28,471	27,247	24,821
Crab	85,301	51,888	45,075	59,158	61,668	66,518	52,860	87,157	52,133	22,745
Flatfish	28,291	33,825	37,844	41,190	33,762	25,911	24,768	29,062	24,147	24,718
Hake	558,078	454,533	531,277	253,053	355,216	496,363	347,171	505,614	574,921	333,290
Other shellfish	19,115	17,513	17,357	17,513	16,446	17,072	14,819	16,509	17,107	11,805
Rockfish	6,308	7,121	8,887	10,152	10,607	9,608	10,180	10,521	10,505	11,703
Sablefish	13,714	11,624	12,975	15,822	15,047	14,130	11,571	9,137	9,598	11,352
Salmon	29,564	25,050	19,503	34,132	31,107	42,224	24,619	56,892	37,187	26,134
Shrimp	20,290	26,497	35,799	33,456	46,191	66,686	66,319	71,505	93,150	105,324
Squid	108,470	109,426	85,092	205,635	288,603	267,898	214,867	230,070	229,493	81,000

Average Annual Price of Key Species/Species Groups (dollars per pound)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albacore tuna	0.85	0.85	1.18	1.02	1.13	1.78	1.5	1.47	1.20	1.18
Crab	1.69	2.33	2.38	2.09	2.15	2.74	3.35	2.86	3.82	4.62
Flatfish	0.55	0.48	0.48	0.41	0.38	0.52	0.54	0.60	0.65	0.68
Hake	0.06	0.07	0.11	0.06	0.08	0.11	0.14	0.12	0.10	0.07
Other shellfish	5.78	6.55	7.08	7.65	8.18	10.11	9.53	10.09	10.38	11.61
Rockfish	1.06	1.04	1.01	0.87	0.85	0.97	0.92	0.93	0.93	0.89
Sablefish	1.68	1.80	2.10	2.18	2.39	3.17	2.43	2.14	2.51	2.53
Salmon	1.18	1.38	1.41	0.75	1.59	1.29	1.96	1.37	1.92	1.84
Shrimp	0.61	0.65	0.70	0.50	0.48	0.61	0.61	0.60	0.66	0.83
Squid	0.25	0.27	0.31	0.28	0.25	0.25	0.30	0.32	0.32	0.30

2015 Economic Impacts of the Pacific Recreational Fishing Expenditures (thousands of dollars, trips)

	Trips	#Jobs	Sales	Income	Value Added
California	3,741	16,451	2,079,006	797,296	1,271,261
Oregon	711	3,185	313,559	138,900	202,277
Washington	1,342	6,499	774,736	297,032	482,748

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures	Equipment	Durable Goods Expenditures
For-Hire	213,038	Fishing Tackle	421,750
Private Boat	236,628	Other Equipment	212,966
Shore	191,161	Boat Expenses	946,265
Total	640,827	Vehicle Expenses	251,416
		Second Home Expenses	4,043
		Total Durable Expenditures	1,836,438
Total State Trip and Durable Goods Expenditures			2,477,265

Recreational Anglers by Residential Area (thousands of anglers)¹

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	1,392	1,272	1,011	1,266	1,166	1,056	1,174	1,121	1,050	885
Non-Coastal	381	372	302	357	356	310	335	349	358	313
Out-of-State	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Anglers	1,773	1,644	1,313	1,623	1,522	1,366	1,509	1,470	1,408	1,198

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	514	515	416	442	446	686	674	751	1,084	880
Private	1,993	1,872	1,524	2,087	1,686	1,794	1,929	2,037	1,958	1,828
Shore	3,891	3,297	3,357	3,757	3,467	2,935	3,896	3,727	3,413	3,085
Total Trips	6,398	5,684	5,297	6,286	5,600	5,415	6,499	6,516	6,455	5,794

Harvest (H) & Release (R) of Key Species/Species Groups (thousands of fish)²

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albacore & other tunas	H	45	105	48	78	79	49	133	85	126	126
	R	3	8	2	8	1	1	17	13	3	7
Barracuda, bass & bonito	H	668	537	436	412	373	435	371	215	453	376
	R	1,660	1,408	1,103	1,209	991	738	775	1,112	1,658	1,254
Croakers	H	455	427	322	427	173	128	256	173	136	91
	R	553	630	275	360	340	98	231	257	181	139
Flatfishes	H	326	261	346	328	362	537	499	601	676	304
	R	518	338	374	294	333	326	356	571	668	338
Greenlings	H	256	216	195	221	239	332	340	390	405	460
	R	222	165	154	207	226	332	343	309	305	304
Rockfishes & scorpionfishes	H	2,514	2,258	1,854	2,131	2,212	2,778	3,151	3,656	3,803	3,664
	R	734	516	492	513	573	832	1,118	1,274	1,204	1,000
Salmon ³	H	172	209	47	242	112	143	224	236	352	181
	R	0	0	0	0	0	0	0	0	0	0
Sculpins	H	57	50	60	60	54	91	68	70	60	61
	R	222	208	227	198	198	239	229	297	200	188
Surfperches	H	1,165	861	833	752	638	1,018	1,143	1,033	1,125	1,284
	R	1,676	863	818	704	452	931	1,280	1,006	1,282	1,122

¹ NA = data are not available because out-of-state resident information is collected for individual states, but whether an angler is a resident of a region is not specified.

² In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.

³ Salmon harvest estimates exclude release mortality.

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2015 Economic Impacts of the California Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	113,896	21,314,558	4,530,035	7,552,746	9,105	747,849	281,375	386,989
Commercial Harvesters	2,455	261,266	89,313	131,262	2,455	261,266	89,313	131,262
Seafood Processors & Dealers	3,800	437,036	162,056	215,033	1,055	121,325	44,988	59,695
Importers	52,554	16,255,810	2,605,304	4,955,483	0	0	0	0
Seafood Wholesalers & Distributors	10,322	1,636,243	530,716	741,447	340	53,882	17,477	24,416
Retail	44,766	2,724,202	1,142,646	1,509,521	5,255	311,376	129,597	171,616

Total Landings Revenue & Landings Revenue of Key Species/Species Groups (thousands of dollars)¹

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	129,907	127,580	120,861	159,253	187,263	222,160	243,963	266,488	253,768	129,143
Finfish & Other	43,765	51,037	48,671	47,738	45,558	59,289	57,103	66,416	61,163	54,526
Shellfish	86,142	76,543	72,190	111,515	141,704	162,871	186,860	200,071	192,605	74,617
Key Species										
Crab	46,483	28,626	24,227	32,508	43,016	53,762	88,207	91,851	70,563	20,467
Pacific sardine	5,100	8,218	7,575	5,544	4,366	4,398	4,249	1,510	2,003	343
Rockfish	4,630	4,924	5,781	5,330	5,453	5,644	5,170	5,748	5,604	5,797
Sablefish	4,892	4,873	6,224	9,765	11,491	15,121	8,988	7,047	8,945	8,870
Salmon	5,261	7,835	6	NA	1,215	5,096	12,850	22,957	12,127	8,058
Sea urchins	5,145	5,400	6,550	7,806	7,413	8,102	8,320	9,832	9,057	6,879
Shrimp	4,213	4,064	5,696	5,462	4,951	8,598	8,492	9,520	11,791	13,769
Spiny lobster	8,111	6,916	8,008	7,934	11,386	12,972	13,749	13,842	18,238	15,806
Squid	26,959	29,131	26,477	56,877	71,165	66,546	63,886	73,701	72,903	24,458
Swordfish	2,695	3,127	2,365	1,932	2,203	3,350	2,090	2,699	3,049	3,628

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)¹

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	341,661	384,826	323,884	376,053	439,440	409,837	353,875	364,790	361,290	186,418
Finfish & Other	203,581	259,139	224,763	148,478	120,700	108,999	102,261	90,128	98,771	89,788
Shellfish	138,079	125,687	99,121	227,575	318,740	300,838	251,614	274,661	262,518	96,630
Key Species										
Crab	27,391	12,393	9,845	16,660	23,352	22,206	27,589	33,094	20,888	5,412
Pacific sardine	102,683	178,480	126,945	82,842	73,814	60,993	50,660	15,636	17,112	3,724
Rockfish	3,252	3,136	3,933	3,984	3,949	3,450	3,457	3,862	3,555	3,239
Sablefish	3,617	3,240	3,507	5,089	5,501	5,646	3,916	3,291	3,960	4,033
Salmon	1,184	1,743	1	NA	255	1,133	2,862	4,337	2,558	1,339
Sea urchins	10,664	11,131	10,283	12,205	11,230	11,465	11,443	12,945	11,833	8,106
Shrimp	1,197	2,015	3,011	3,596	4,522	8,217	7,255	9,712	9,873	9,443
Spiny lobster	886	663	741	706	716	751	876	764	951	768
Squid	108,410	109,150	84,071	205,278	288,497	267,890	214,867	230,061	229,466	80,968
Swordfish	1,187	1,210	1,168	898	815	1,365	887	1,174	1,252	1,358

Average Annual Price of Key Species/Species Groups (dollars per pound)¹

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Crab	1.70	2.31	2.46	1.95	1.84	2.42	3.20	2.78	3.38	3.78
Pacific sardine	0.05	0.05	0.06	0.07	0.06	0.07	0.08	0.10	0.12	0.09
Rockfish	1.42	1.57	1.47	1.34	1.38	1.64	1.50	1.49	1.58	1.79
Sablefish	1.35	1.50	1.77	1.92	2.09	2.68	2.29	2.14	2.26	2.20
Salmon	4.44	4.50	4.16	NA	4.76	4.50	4.49	5.29	4.74	6.02
Sea urchins	0.48	0.49	0.64	0.64	0.66	0.71	0.73	0.76	0.77	0.85
Shrimp	3.52	2.02	1.89	1.52	1.09	1.05	1.17	0.98	1.19	1.46
Spiny lobster	9.15	10.44	10.8	11.24	15.91	17.27	15.69	18.11	19.17	20.59
Squid	0.25	0.27	0.31	0.28	0.25	0.25	0.30	0.32	0.32	0.30
Swordfish	2.27	2.58	2.03	2.15	2.70	2.46	2.36	2.30	2.44	2.67

¹ NA = these data are confidential and therefore not disclosable.

2015 Economic Impacts of California Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	2,091	308,634	116,635	176,829
	Private Boat	714	123,816	37,976	66,728
	Shore	1,584	229,657	75,491	131,276
Total Durable Expenditures		12,062	1,416,899	567,194	896,428
Total State Economic Impacts		16,451	2,079,006	797,296	1,271,261

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures	Equipment	Durable Goods Expenditures
For-Hire	163,126	Fishing Tackle	301,224
Private Boat	83,098	Other Equipment	149,836
Shore	151,589	Boat Expenses	481,902
Total	397,813	Vehicle Expenses	153,618
		Second Home Expenses	0
		Total Durable Expenditures	1,086,579
Total State Trip and Durable Goods Expenditures			1,484,392

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	1,087	967	740	879	870	733	849	772	718	551
Non-Coastal	230	216	160	199	208	161	181	190	195	152
Out-of-State	106	85	203	223	176	207	74	80	101	96
Total Anglers	1,423	1,268	1,103	1,301	1,254	1,101	1,104	1,042	1,014	799

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	371	371	305	308	324	561	544	613	929	727
Private	978	843	640	681	690	683	799	797	803	673
Shore	3,147	2,553	2,613	3,013	2,723	2,191	3,152	2,983	2,669	2,341
Total Trips	4,496	3,767	3,558	4,002	3,737	3,435	4,495	4,393	4,401	3,741

Harvest (H) & Release (R) of Key Species/Species Groups (thousands of fish)^{1,4}

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albacore & other tunas	H	8	21	2	10	10	4	19	9	3	12
	R	2	7	2	8	< 1	1	17	13	3	7
Barracuda, bass & bonito ²	H	668	537	436	412	373	435	371	215	453	376
	R	1,660	1,408	1,103	1,209	991	738	775	1,112	1,658	1,254
Croakers	H	455	427	322	427	173	128	256	173	136	91
	R	553	630	275	360	340	98	231	257	181	139
Flatfishes	H	242	188	275	259	297	471	430	530	606	233
	R	470	292	326	242	287	280	310	523	621	291
Greenlings	H	117	84	65	88	90	163	159	188	232	281
	R	121	76	63	107	113	206	226	192	207	198
Rockfishes & scorpionfishes	H	1,898	1,675	1,328	1,526	1,613	2,243	2,567	2,976	3,077	2,773
	R	669	457	427	440	495	765	1,052	1,198	1,126	894
Salmon ³	H	98	48	0	< 1	15	50	124	116	75	37
	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sculpins	H	25	19	29	27	21	58	37	40	32	32
	R	74	58	78	49	46	86	77	144	48	36
Surfperches	H	913	610	580	501	387	766	892	782	873	1,033
	R	1,515	703	658	544	292	771	1,119	846	1,121	962

¹ In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.² This species may not be equivalent to species with similar names listed in the commercial tables.³ Salmon harvest estimates exclude release mortality.⁴ NA = not available.

2014 California State Economy (% of national total)¹

	#Establishments	#Employees	Annual Payroll (\$ billions)	Employee Compensation (\$ billions)	Gross State Product (\$ billions)	Commercial Fishing Location Quotient ²
Totals	889,646 (11.8%)	13,838,702 (11.4%)	797.05 (13.4%)	1,232.91 (13.3%)	2,305.92 (13.4%)	0.71

Seafood Sales & Processing - Non-Employer Firms (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	91	121	139	159	184	187	151	157	164
	Receipts	8,298	10,842	11,460	10,852	9,695	9,788	9,283	9,866	11,112
Seafood sales, retail	Firms	163	222	210	202	203	209	236	218	227
	Receipts	19,875	19,703	19,892	17,095	19,021	18,006	18,238	18,581	17,055

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	47	49	45	47	48	48	41	44	53
	Employees	2,592	2,229	2,024	2,167	1,820	1,842	1,668	1,871	1,799
	Payroll	78,065	75,886	65,215	69,529	62,480	60,411	52,977	57,603	60,762
Seafood sales, wholesale	Establishments	252	300	278	289	314	404	275	320	341
	Employees	4,063	4,429	3,321	3,183	3,223	3,505	3,441	3,671	3,912
	Payroll	144,758	159,672	132,139	128,813	137,810	149,302	173,959	181,698	175,927
Seafood sales, retail	Establishments	184	182	161	153	158	157	149	155	167
	Employees	1,031	1,004	932	976	985	1,088	1,043	1,119	1,124
	Payroll	19,900	21,224	20,585	21,785	22,718	25,168	24,221	26,702	28,044

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)^{3,4}

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	22	29	28	30	25	21	22	24	30
	Employees	ds	ds	ds	ds	554	395	ds	ds	ds
	Payroll	ds	ds	ds	ds	30,431	24,708	ds	ds	ds
Deep sea freight transportation	Establishments	54	51	43	41	54	51	45	34	43
	Employees	957	1,643	ds	ds	2,562	2,464	2,431	2,073	2,467
	Payroll	84,199	116,628	ds	ds	236,235	256,962	236,423	218,054	187,383
Deep sea passenger transportation	Establishments	16	13	5	5	3	2	2	4	5
	Employees	1,552	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	72,119	ds	ds	ds	ds	ds	ds	ds	ds
Marinas	Establishments	268	276	277	276	270	269	251	250	249
	Employees	2,457	2,680	2,652	2,514	2,390	2,401	2,237	2,199	2,332
	Payroll	74,778	80,216	85,315	78,890	80,631	82,958	71,777	72,737	79,840
Marine cargo handling	Establishments	52	56	61	62	63	71	38	64	64
	Employees	20,975	22,395	22,086	17,428	18,449	18,812	18,759	ds	ds
	Payroll	1,448,623	1,484,308	1,453,281	1,211,572	1,273,268	1,333,805	1,351,874	ds	ds
Navigational services to shipping	Establishments	36	39	40	39	41	45	35	36	37
	Employees	817	858	815	804	765	760	800	805	634
	Payroll	63,893	63,610	65,225	61,720	58,899	62,065	61,166	67,665	59,927
Port & harbor operations	Establishments	20	18	17	19	21	19	59	31	33
	Employees	582	443	256	345	435	508	ds	651	535
	Payroll	32,523	30,001	23,316	26,889	37,560	41,688	ds	52,401	33,599
Ship & boat building	Establishments	132	136	136	123	117	108	120	113	108
	Employees	9,801	9,250	11,630	10,483	9,720	9,165	12,681	12,651	9,814
	Payroll	453,255	433,846	477,300	460,239	448,338	434,449	544,819	537,438	534,787

¹ Census Bureau data for the Marine Economy section of this report is available only through 2014.

² The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.

³ ds = these data are suppressed.

⁴ NA = not applicable.

Tables | Oregon



2015 Economic Impacts of the Oregon Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	13,624	1,057,899	355,933	503,606	11,347	646,466	271,563	361,303
Commercial Harvesters	3,654	212,855	91,644	126,545	3,654	212,855	91,644	126,545
Seafood Processors & Dealers	1,298	123,581	47,463	62,013	1,197	114,016	43,789	57,213
Importers	1,081	334,341	53,584	101,922	0	0	0	0
Seafood Wholesalers & Distributors	466	62,497	21,201	28,436	275	36,842	12,498	16,763
Retail	7,125	324,625	142,041	184,691	6,221	282,752	123,632	160,782

Total Landings Revenue & Landings Revenue of Key Species/Species Groups (thousands of dollars)¹

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	106,093	97,298	103,042	106,959	106,378	148,354	128,222	179,215	158,080	113,990
Finfish & Other	46,326	47,589	56,912	52,750	58,730	76,718	72,329	81,445	78,214	60,860
Shellfish	59,767	49,709	46,130	54,210	47,648	71,636	55,893	97,770	79,866	53,130
Key Species										
Albacore tuna	8,067	9,468	10,666	10,191	12,425	18,766	15,168	16,085	11,023	9,212
Crab	53,810	38,208	29,168	42,413	32,757	44,696	29,189	71,208	48,149	11,935
Flatfish	7,547	7,930	9,163	8,468	6,861	6,779	7,315	9,854	8,651	9,765
Hake (whiting)	7,974	6,501	6,830	3,783	5,414	16,518	14,611	20,405	18,274	7,146
Oysters	1,163	1,847	2,748	4,506	3,317	1,869	1,661	1,798	1,774	NA
Pacific sardine	3,743	4,551	5,665	5,291	5,252	3,192	8,979	6,299	3,522	813
Rockfish	1,564	2,002	2,610	2,500	2,520	2,473	2,661	3,023	3,246	3,744
Sablefish	9,787	9,494	13,737	15,919	15,069	17,351	11,530	7,595	8,076	12,807
Salmon	4,940	4,647	4,166	3,546	7,698	6,737	6,950	12,422	20,115	11,864
Shrimp	4,618	9,488	14,056	6,994	11,313	24,901	24,848	24,430	29,605	40,634

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)¹

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	282,846	253,543	195,688	199,458	201,974	274,533	296,091	339,589	291,655	194,575
Finfish & Other	236,998	216,134	155,837	154,147	153,588	208,445	237,822	265,454	227,318	138,601
Shellfish	45,848	37,410	39,851	45,310	48,386	66,088	58,269	74,136	64,337	55,974
Key Species										
Albacore tuna	8,534	10,468	8,876	10,082	10,703	9,682	9,938	10,209	8,767	7,574
Crab	33,291	17,007	13,875	21,848	15,817	17,240	8,681	26,016	11,910	2,284
Flatfish	16,385	19,697	23,842	26,047	22,226	15,957	15,322	18,965	15,955	16,722
Hake (whiting)	122,804	81,481	55,511	53,466	57,017	142,092	102,651	160,098	161,589	88,728
Oysters	255	197	162	1,127	829	467	415	449	443	NA
Pacific sardine	74,669	90,037	49,298	45,902	44,743	23,479	91,459	57,022	16,938	4,688
Rockfish	1,967	2,905	3,820	4,207	4,533	3,819	3,918	4,745	5,293	6,628
Sablefish	5,838	5,349	6,514	7,219	6,269	5,074	4,739	3,840	3,293	5,002
Salmon	1,810	1,370	1,860	2,311	2,765	2,386	1,918	3,505	6,373	3,142
Shrimp	12,167	20,027	25,433	22,085	31,516	48,276	49,054	47,535	51,835	53,457

Average Annual Price of Key Species/Species Groups (dollars per pound)¹

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albacore tuna	0.95	0.90	1.20	1.01	1.16	1.94	1.53	1.58	1.26	1.22
Crab	1.62	2.25	2.10	1.94	2.07	2.59	3.36	2.74	4.04	5.22
Flatfish	0.46	0.40	0.38	0.33	0.31	0.42	0.48	0.52	0.54	0.58
Hake (whiting)	0.06	0.08	0.12	0.07	0.09	0.12	0.14	0.13	0.11	0.08
Oysters	4.56	9.40	16.96	4.00	4.00	4.00	4.00	4.00	4.00	NA
Pacific sardine	0.05	0.05	0.11	0.12	0.12	0.14	0.10	0.11	0.21	0.17
Rockfish	0.80	0.69	0.68	0.59	0.56	0.65	0.68	0.64	0.61	0.56
Sablefish	1.68	1.78	2.11	2.21	2.40	3.42	2.43	1.98	2.45	2.56
Salmon	2.73	3.39	2.24	1.53	2.78	2.82	3.62	3.54	3.16	3.78
Shrimp	0.38	0.47	0.55	0.32	0.36	0.52	0.51	0.51	0.57	0.76

¹ NA = these data are confidential and therefore not disclosable.

2015 Economic Impacts of Oregon Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	298	36,509	13,975	19,859
	Private Boat	413	41,105	15,343	24,530
	Shore	153	15,098	5,538	8,970
Total Durable Expenditures		2,321	220,847	104,044	148,918
Total State Economic Impacts		3,185	313,559	138,900	202,277

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures	Equipment	Durable Goods Expenditures
For-Hire	22,289	Fishing Tackle	47,064
Private Boat	47,356	Other Equipment	26,239
Shore	15,960	Boat Expenses	79,617
Total	85,605	Vehicle Expenses	63,005
		Second Home Expenses	4,043
		Total Durable Expenditures	219,967
Total State Trip and Durable Goods Expenditures			305,572

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	82	86	78	85	82	81	84	88	91	89
Non-Coastal	125	130	120	128	124	123	128	132	136	134
Out-of-State	15	15	14	15	15	14	15	16	16	16
Total Anglers	222	231	212	228	221	218	227	236	243	239

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	56	61	48	55	51	51	57	63	67	71
Private	373	399	353	396	378	369	389	413	431	407
Shore	232	232	232	232	232	232	232	232	232	232
Total Trips	662	693	634	684	662	653	679	709	731	711

Harvest (H) & Release (R) of Key Species/Species Groups (thousands of fish)^{1,2}

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Baitfishes	H	220	221	221	221	223	221	220	220	221	221
	R	125	125	125	125	125	125	125	125	125	125
Flatfishes	H	20	22	20	16	14	15	17	18	15	17
	R	6	6	8	9	4	5	5	6	5	5
Greenlings	H	102	99	98	96	109	120	132	154	124	136
	R	76	69	72	75	86	92	90	95	77	87
Rockfishes	H	295	284	270	326	343	258	284	364	380	521
	R	28	26	35	38	42	33	32	41	39	69
Salmon ³	H	27	68	14	91	23	24	35	45	118	38
	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sculpins	H	15	15	16	16	16	16	15	14	12	13
	R	57	59	58	58	61	61	61	63	60	60
Sturgeon	H	12	12	12	12	12	12	12	12	12	12
	R	25	25	25	25	25	25	25	25	25	25
Surfperches	H	118	118	118	118	118	118	118	118	118	118
	R	39	39	39	39	39	39	39	39	39	39

¹ In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.² NA = not available.³ Salmon estimates exclude release mortality.

2014 Oregon State Economy (% of national total)¹

	Establishments	Employees	Annual Payroll (\$ billions)	Employee Compensation (\$ billions)	Gross State Product (\$ billions)	Commercial Fishing Location Quotient ²
Totals	109,875 (1.5%)	1,444,041 (1.2%)	65.71 (1.1%)	104.78 (1.1%)	212.81 (1.2%)	3.99

Seafood Sales & Processing - Non-Employer Firms (thousands of dollars)³

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	7	ds	19	15	15	16	14	11	11
	Receipts	54	ds	957	466	510	467	346	319	484
Seafood sales, retail	Firms	11	11	16	12	15	16	11	ds	16
	Receipts	914	1,210	2,101	1,140	1,907	1,896	1,600	ds	1,036

Seafood Sales & Processing - Employer Establishments (thousands of dollars)³

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	21	22	23	20	21	22	18	19	20
	Employees	896	819	850	812	806	805	934	907	980
	Payroll	25,881	27,394	27,616	26,202	27,007	32,438	31,970	37,265	39,290
Seafood sales, wholesale	Establishments	16	18	18	19	22	27	21	19	22
	Employees	ds	ds	ds	ds	ds	ds	180	189	192
	Payroll	ds	ds	ds	ds	ds	ds	7,602	8,065	8,601
Seafood sales, retail	Establishments	22	23	21	23	21	20	18	20	23
	Employees	306	171	178	151	162	163	126	147	170
	Payroll	3,294	3,185	3,370	3,515	3,651	3,613	2,851	4,238	4,440

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)^{3,4}

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	9	13	8	9	8	8	8	7	8
	Employees	ds	476	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	25,206	ds	ds	ds	ds	ds	ds	ds
Deep sea freight transportation	Establishments	6	5	4	3	3	3	3	3	2
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Deep sea passenger transportation	Establishments	0	2	0	0	0	0	0	0	0
	Employees	NA	ds	NA	NA	NA	NA	NA	NA	NA
	Payroll	NA	ds	NA	NA	NA	NA	NA	NA	NA
Marinas	Establishments	37	38	37	33	30	33	32	34	34
	Employees	ds	138	106	109	102	102	119	104	113
	Payroll	ds	3,754	2,178	2,602	2,290	2,382	3,034	3,148	3,584
Marine cargo handling	Establishments	9	9	13	13	12	13	5	8	7
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	ds
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	ds
Navigational services to shipping	Establishments	20	17	20	17	18	18	20	15	15
	Employees	ds	183	200	189	144	152	176	81	67
	Payroll	ds	11,331	11,808	10,154	9,577	9,592	12,219	6,534	3,958
Port & harbor operations	Establishments	0	2	1	1	3	3	10	5	5
	Employees	NA	ds	ds	ds	ds	ds	90	ds	ds
	Payroll	NA	ds	ds	ds	ds	ds	6,512	ds	ds
Ship & boat building	Establishments	41	40	41	35	34	34	33	32	30
	Employees	1,230	1,441	1,692	1,886	980	1,179	1,504	1,406	ds
	Payroll	43,416	47,950	74,583	90,446	42,004	55,068	77,718	79,913	ds

¹ Census Bureau data for the Marine Economy section of this report is available only through 2014.² The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.³ ds = these data are suppressed.⁴ NA = not applicable.

Tables | Washington



2015 Economic Impacts of the Washington Seafood Industry (thousands of dollars)

	With Imports				Without Imports			
	#Jobs	Sales	Income	Value Added	#Jobs	Sales	Income	Value Added
Total Impacts	50,859	6,855,269	1,818,420	2,778,187	22,887	1,648,356	681,162	921,935
Commercial Harvesters	6,469	597,359	254,216	358,232	6,469	597,359	254,216	358,232
Seafood Processors & Dealers	12,997	1,385,108	520,226	688,440	2,548	271,576	102,000	134,981
Importers	11,578	3,581,160	573,949	1,091,694	0	0	0	0
Seafood Wholesalers & Distributors	2,192	315,783	105,800	144,347	774	111,573	37,381	51,001
Retail	18,757	961,950	414,726	544,615	13,095	667,848	287,565	377,721

Total Landings Revenue & Landings Revenue of Key Species/Species Groups (thousands of dollars)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Revenue	217,030	216,119	232,841	227,773	255,332	329,785	275,585	335,450	329,109	299,952
Finfish & Other	69,309	60,137	69,445	62,173	84,269	102,481	96,026	100,844	90,855	73,583
Shellfish	147,721	155,981	163,396	165,600	171,063	227,305	179,560	234,606	238,254	226,368
Key Species										
Clams	55,786	56,428	64,142	72,647	73,625	88,774	69,445	83,788	83,643	75,342
Crab	43,464	54,302	53,712	48,944	57,070	83,627	59,485	86,520	80,509	72,651
Hake (Whiting)	7,296	7,121	7,249	2,334	4,105	7,183	5,882	7,452	5,431	2,563
Halibut	8,303	8,842	7,525	4,879	5,764	6,740	6,122	4,929	6,985	6,199
Mussels	6,564	3,820	5,293	4,851	4,318	4,740	6,065	9,253	6,830	7,704
Oysters	38,302	37,437	34,794	34,993	30,370	43,021	37,576	46,378	47,555	37,507
Sablefish	8,307	6,608	7,312	8,796	9,402	12,378	7,578	4,888	7,098	7,020
Salmon	24,586	22,026	23,376	22,003	40,622	42,434	28,398	42,376	39,174	28,235
Shrimp	3,602	3,746	5,380	4,139	5,677	7,140	6,986	8,664	19,704	33,152
Tuna, albacore	15,176	10,439	17,225	16,390	14,575	22,253	28,440	24,745	21,177	19,961

Total Landings & Landings of Key Species/Species Groups (thousands of pounds)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Landings	241,606	194,449	173,176	163,937	189,486	210,282	213,578	263,639	191,391	153,568
Finfish & Other	192,358	152,221	128,825	121,060	143,705	159,034	174,597	207,194	126,364	85,300
Shellfish	49,248	42,228	44,351	42,877	45,782	51,248	38,982	56,445	65,027	68,268
Key Species										
Clams	4,618	3,363	4,071	4,267	3,876	4,038	3,677	3,978	4,320	4,262
Crab	24,619	22,487	21,355	20,651	22,500	27,072	16,590	28,046	19,335	15,048
Hake (Whiting)	120,058	91,272	67,159	36,378	58,900	73,494	38,524	58,696	49,654	32,977
Halibut	2,451	2,428	2,055	1,731	1,371	1,301	1,295	1,065	1,284	1,157
Mussels	774	475	593	568	589	547	559	734	579	600
Oysters	12,306	11,189	10,258	9,386	8,650	9,389	8,143	9,420	9,329	5,911
Sablefish	4,259	3,035	2,954	3,514	3,277	3,410	2,916	2,006	2,345	2,317
Salmon	26,570	21,938	17,641	31,821	28,086	38,706	19,839	49,050	28,256	21,654
Shrimp	6,926	4,455	7,355	7,775	10,153	10,193	10,009	14,259	31,441	42,423
Tuna, albacore	19,133	13,129	14,801	16,112	13,148	13,209	19,275	17,552	18,039	17,133

Average Annual Price of Key Species/Species Groups (dollars per pound)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Clams	12.08	16.78	15.76	17.03	18.99	21.98	18.89	21.06	19.36	17.68
Crab	1.77	2.41	2.52	2.37	2.54	3.09	3.59	3.08	4.16	4.83
Hake (Whiting)	0.06	0.08	0.11	0.06	0.07	0.10	0.15	0.13	0.11	0.08
Halibut	3.39	3.64	3.66	2.82	4.20	5.18	4.73	4.63	5.44	5.36
Mussels	8.48	8.05	8.93	8.54	7.33	8.66	10.85	12.6	11.79	12.85
Oysters	3.11	3.35	3.39	3.73	3.51	4.58	4.61	4.92	5.10	6.34
Sablefish	1.95	2.18	2.48	2.50	2.87	3.63	2.60	2.44	3.03	3.03
Salmon	0.93	1.00	1.33	0.69	1.45	1.10	1.43	0.86	1.39	1.30
Shrimp	0.52	0.84	0.73	0.53	0.56	0.70	0.70	0.61	0.63	0.78
Tuna, albacore	0.79	0.80	1.16	1.02	1.11	1.68	1.48	1.41	1.17	1.17

2015 Economic Impacts of Washington Recreational Fishing Expenditures (thousands of dollars)

		#Jobs	Sales	Income	Value Added
Trip Impacts by Fishing Mode	For-Hire	306	46,490	17,734	26,573
	Private Boat	766	129,638	36,630	64,766
	Shore	206	30,034	9,516	16,245
Total Durable Expenditures		5,221	568,574	233,152	375,164
Total State Economic Impacts		6,499	774,736	297,032	482,748

2015 Angler Trip & Durable Goods Expenditures (thousands of dollars)

Fishing Mode	Trip Expenditures	Equipment	Durable Goods Expenditures
For-Hire	27,623	Fishing Tackle	73,462
Private Boat	106,174	Other Equipment	36,891
Shore	23,612	Boat Expenses	384,746
Total	157,409	Vehicle Expenses	34,793
		Second Home Expenses	0
		Total Durable Expenditures	529,892
Total State Trip and Durable Goods Expenditures			687,301

Recreational Anglers by Residential Area (thousands of anglers)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coastal	223	219	193	302	214	242	241	261	241	245
Non-Coastal	26	26	22	30	24	26	26	27	27	27
Out-of-State	20	20	17	23	19	20	20	21	21	21
Total Anglers	269	265	232	355	257	288	287	309	289	293

Recreational Fishing Effort by Mode (thousands of angler trips)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
For-Hire	86	83	62	79	71	74	73	75	87	81
Private	642	630	531	1,010	618	742	741	827	724	748
Shore	512	512	512	512	512	512	512	512	512	512
Total Trips	1,240	1,224	1,105	1,601	1,201	1,327	1,326	1,414	1,323	1,342

Harvest (H) & Release (R) of Key Species Species Groups (thousands of fish)^{1,4}

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Baitfishes	H	2,486	2,486	2,486	2,486	2,486	2,486	2,486	2,486	2,486	2,486
	R	126	126	126	126	126	126	126	126	126	126
Flatfishes	H	64	51	51	53	50	51	52	53	55	54
	R	42	40	40	43	41	41	41	42	42	42
Greenlings	H	38	32	32	37	39	49	50	48	49	44
	R	25	21	20	25	27	34	27	21	21	19
Rockfishes	H	277	254	210	235	211	231	255	271	301	324
	R	21	16	13	18	20	17	17	18	23	20
Salmon ³	H	47	93	33	150	73	69	65	75	159	106
	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sculpins	H	17	16	16	17	16	17	16	16	16	16
	R	91	91	91	91	91	91	91	91	91	91
Sharks & Skates	H	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	R	10	5	7	5	3	1	3	2	4	4
Sturgeon ³	H	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Surfperches	H	134	133	134	133	133	133	134	134	134	133
	R	122	121	121	121	121	121	121	121	121	121

¹ In this table, '<1' = 0-999 fish and '1' = 1,000-1,499 fish.

² This species may not be equivalent to species with similar names listed in the commercial tables

³ Data on sturgeon harvest not available for 2006-2015; Salmon harvest estimates exclude release mortality.

⁴ NA = not available.

2014 Washington State Economy (% of national total)^{1,3}

	#Establishments	#Employees	Annual Payroll (\$ billions)	Employee Compensation (\$ billions)	Gross State Product (\$ billions)	Commercial Fishing Location Quotient ²
Totals	179,012 (2.4%)	2,528,874 (2.1%)	141.28 (2.4%)	224.43 (2.4%)	422.88 (2.5%)	ds

Seafood Sales & Processing - Non-Employer Firms (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Firms	53	63	44	47	39	37	42	42	51
	Receipts	4,149	4,698	5,167	5,022	4,228	3,859	4,377	4,094	5,270
Seafood sales, retail	Firms	29	32	33	42	30	34	42	41	36
	Receipts	1,727	1,458	1,807	2,462	1,273	2,370	1,871	3,017	2,559

Seafood Sales & Processing - Employer Establishments (thousands of dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Seafood product prep. & packaging	Establishments	96	98	96	86	93	90	90	86	90
	Employees	5,705	5,249	5,893	4,860	5,296	5,387	6,118	6,224	5,945
	Payroll	255,129	275,662	306,213	232,543	254,592	293,112	326,827	315,379	329,739
Seafood sales, wholesale	Establishments	115	127	107	108	105	107	101	116	119
	Employees	1,015	1,086	996	1,103	970	911	1,085	999	1,098
	Payroll	42,934	46,085	48,251	48,044	45,871	45,543	51,508	49,683	52,761
Seafood sales, retail	Establishments	49	50	44	43	47	44	40	35	33
	Employees	292	244	247	239	282	253	256	266	276
	Payroll	8,998	8,001	7,947	8,324	9,098	7,786	8,210	9,069	9,938

Transport, Support, & Marine Operations - Employer Establishments (thousands of dollars)^{3,4}

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Coastal & Great Lakes freight transportation	Establishments	43	37	24	24	30	28	28	35	38
	Employees	2,353	1,903	2,222	2,245	1,731	1,684	1,557	2,186	2,020
	Payroll	145,144	136,543	168,832	168,783	130,398	132,068	126,401	170,003	163,075
Deep sea freight transportation	Establishments	23	30	21	25	20	14	12	8	8
	Employees	197	227	263	305	209	ds	ds	200	204
	Payroll	14,390	19,692	24,843	28,897	24,711	ds	14,014	14,892	14,991
Deep sea passenger transportation	Establishments	3	3	4	5	4	2	2	5	4
	Employees	ds	ds	ds	ds	ds	ds	ds	ds	1,412
	Payroll	ds	ds	ds	ds	ds	ds	ds	ds	54,346
Marinas	Establishments	103	114	116	110	117	114	100	110	106
	Employees	466	485	573	570	560	517	479	529	530
	Payroll	14,269	15,623	18,931	18,811	18,783	18,364	18,038	18,914	20,348
Marine cargo handling	Establishments	29	28	25	27	26	32	13	30	29
	Employees	3,764	4,913	4,821	2,953	ds	3,910	ds	ds	ds
	Payroll	303,375	334,601	334,193	239,490	ds	323,286	ds	ds	ds
Navigational services to shipping	Establishments	56	61	76	69	79	78	72	73	71
	Employees	942	950	1,213	1,168	1,225	1,207	ds	ds	1,297
	Payroll	72,120	72,912	100,542	102,934	102,766	94,781	ds	ds	101,251
Port & harbor operations	Establishments	5	6	11	11	9	9	48	28	27
	Employees	53	129	111	118	74	75	1,509	181	304
	Payroll	3,436	4,631	6,359	6,437	4,662	4,937	85,042	11,894	16,449
Ship & boat building	Establishments	164	167	169	162	152	135	141	138	131
	Employees	7,669	7,742	8,067	6,710	5,406	5,232	5,294	5,387	5,060
	Payroll	313,230	354,084	402,253	312,240	284,759	276,402	290,400	273,825	262,730

¹ Census Bureau data for the Marine Economy section of this report is available only through 2014.

² The U.S. Commercial Fishing Location Quotient (CFLQ) is 1. A CFLQ greater than 1 indicates that more commercial fishing occurs in this state than the national average. A CFLQ less than 1 indicates that less commercial fishing occurs in this state than the national average.

³ ds = these data are suppressed.

⁴ NA = not applicable.