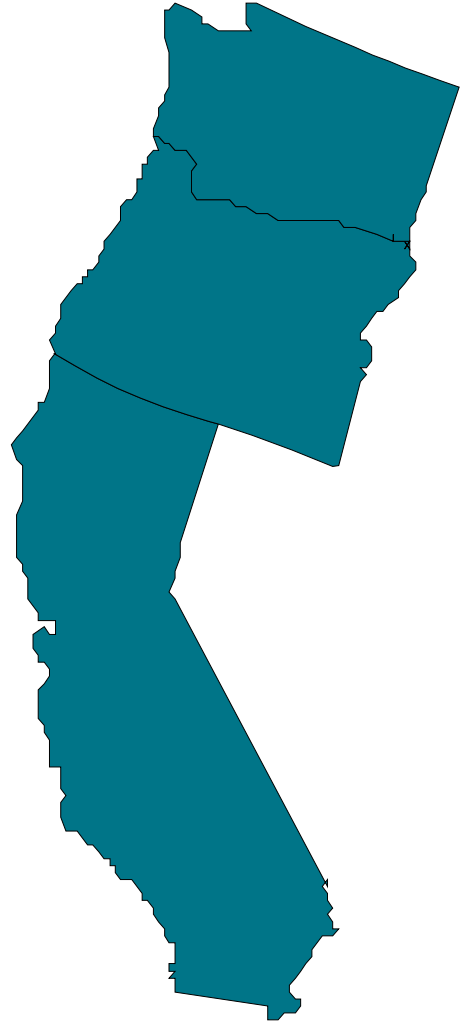


# Pacific

- California
- Oregon
- Washington



# Pacific Summary

## Management Context

The Pacific region includes the states of California, Oregon, and Washington. Federal fisheries in this region are managed by the Pacific Fishery Management Council (PFMC) and the National Marine Fisheries Service (NMFS) under four fishery management plans (FMPs).

### **Pacific Fishery Management Plans**

1. Coastal Pelagic Species
2. Pacific Coast Groundfish
3. Highly Migratory Species
4. Pacific Coast Salmon

Of the stocks covered in these fishery management plans, bocaccio, darkblotched rockfish, cowcod, and yelloweye rockfish are currently considered overfished. Eastern Pacific yellowfin tuna and Pacific bigeye tuna stocks are currently characterized as subject to overfishing.

Catch limits for Pacific halibut are set by the International Pacific Halibut Commission (IPHC). The PFMC develops a catch-sharing plan for tribal and non-tribal (commercial and recreational) fisheries based on this catch limit.

Several species of Pacific salmon are listed as threatened or endangered under the Endangered Species Act. The incidental harvest of these species is a concern. Incidental harvest of a non-target species such as endangered Pacific salmon is known as bycatch. Salmon bycatch is of particular concern for the sardine fisheries off of Oregon and Washington.

One type of market-based management tool available for fishery managers are limited access privilege programs (LAPPs). The Pacific sablefish permit stacking fishery is one such program that was put into place in 2001 and had an ex-vessel value of \$6.4 million in 2007.

Ecolabels are also considered a market-based management tool and are intended to encourage fishermen to adopt “green” harvest practices through higher market prices for sustainable seafood. The Oregon pink shrimp and Pacific halibut fisheries have received ecolabel certification from the Marine Stewardship Council.

## Commercial Fisheries

In 2006, landings by Pacific fishermen (1.2 billion pounds) had an ex-vessel value of \$472 million. Landings revenue was dominated by crab (\$144 million) and other shellfish (\$115 million). These species and groups accounted for \$259 million (55%) of landings revenue. Hake accounted for almost half of the landings in the region in 2006: 570 million pounds.



Northwest Seafoods Company Pier in Neah Bay, Washington

### **Key Pacific Commercial Species**

Commercially-important species and species groups in the Pacific include: crab, flatfish, hake (whiting), other shellfish, rockfish, sablefish, salmon, shrimp, squid, and albacore tuna.

## Economic Impacts

The Pacific region’s commercial fishing industry generated almost \$10 billion in sales impacts in California, followed by \$3.8 billion in Washington and over \$1 billion in Oregon. California also generated the highest income impacts (\$5.1 billion) and jobs (179,000). Washington had the highest landings revenue in the region with \$216 million in 2006, followed by California (\$130 million) and Oregon (\$108 million).

## Landings Revenue

Overall, ex-vessel revenue increased over 18% between 1997 and 2006, though no increase occurred when adjusted for inflation. Finfish and other fishery products revenue dropped 22% (34% in real terms), while shellfish increased 71% (45% in real terms). In 2006, Washington had the highest average landings revenue in the region (\$216 million), followed by California (\$130 million) and Oregon (\$108 million). Washington experienced the largest growth in ex-vessel landings revenue, increasing 63% nominally (38% in real terms) between 1997 and 2006. California had the largest decrease in landings revenue, dropping 26% (38% in real terms).

The Pacific’s regionally-important species comprised an average of 87% of ex-vessel revenue in the region (\$331 million). On average, crab and other shellfish contributed more to total landings revenue than any other key species or group, accounting for 24% and 23%, respectively. Squid

revenues experienced the largest decrease and increase between 1997-2006, dropping 93% (\$20 million) between 1997 and 1998 following a large El Nino event, then increasing 1949% (\$32 million) the following year.

### Commercial Fish Facts

#### Landings revenue

- On average, the regionally important species in the Pacific region accounted for 87% of the total revenue.
- Shellfish accounted for an average of 55% of total landings revenue. Crab contributed the most, approximately 44% of shellfish revenues.
- Over the 10-year period, landings revenue from finfish and other fishery products became less diversified. In 1997 salmon, hake and albacore accounted for 31% of landings revenue from this source but 53% by 2006.

#### Landings

- On average, the ten key species or groups accounted for 71% of total landings annually.
- Finfish and other fishery products accounted for almost 80% of average annual landings for the region. Hake and squid combined contributed over 50% of these landings.
- The largest annual decrease in annual landings during the time period was 96% (149 million pounds) for squid (1997-1998) following a large El Nino event, only to have the largest annual increase of 3062% (195 million pounds) the following year.

#### Prices

- Other shellfish (\$3.01 per pound), crab (\$1.81), and sablefish (\$1.44 per pound) had the highest average annual ex-vessel prices over the time period.
- Hake (\$0.05 per pound), squid (\$0.18 per pound), and flatfish (\$0.40 per pound) had the lowest average annual ex-vessel prices.
- The largest annual increase in annual ex-vessel price was for squid, a 136% increase from 2002-2003. The largest annual decrease in price was for salmon, dropping 46% from 2000-2001.

### Landings

From 1997-2006, total landings averaged 1.17 billion pounds with a range of 981 million pounds (2003) to a high of 1.34 billion pounds (1997). Total landings, landings of finfish and other fishery products, and shellfish landings all decreased between 1997 and 2006: -11%, -13%, and -4%, respectively.

Average landings for key species and species groups comprised 71% of total landings for the region. Landings of key species and groups increased 11% between 1997 and 2006 despite the decreasing landings trends for most key species and groups. Exceptions were for crab (145% increase), hake (12% increase), albacore tuna (14% increase), and other shellfish (landings were flat). Rockfish (-90%),

shrimp (-52%), flatfish (-31%), and squid (-30%) had the largest drop in landings between 1997 and 2006. Rockfish declines were largely due to management measures put in place to rebuild overfished stocks.

Squid landings experienced the largest decrease and increase of any key species or group between the 1997-2006 time period with a 96% drop in landings from 1997-1998 following a large El Nino event, only to reach a record high the following year.

### Prices

Ex-vessel prices between 1997 and 2006 increased for almost all key species or groups. Rockfish prices increased 128% (92% in real terms) from \$0.40 per pound to \$0.91 per pound, while squid prices increased 79% (51% in real terms) from \$0.14 per pound to \$0.25 per pound. Crab was the only species group where ex-vessel prices decreased, from \$1.91 per pound in 1997 to \$1.69 per pound in 2006, a 12% drop in price (-25% in real terms).

Ex-vessel price for squid experienced the largest annual increase over the time period, increasing 136% from 2002-2003. Salmon experienced the largest annual decrease in ex-vessel price, dropping 46% from 2000-2001.

### Recreational Fishing

In 2006, 1.97 million recreational anglers took fishing trips in the Pacific region. These anglers took approximately 5.9 million fishing trips, and spent \$442 million on fishing trips and \$4.2 billion on durable fishing-related equipment. These expenditures contributed between \$284 million (Oregon) and \$3.7 billion (California) in total sales of fishing trip and durable equipment impacts, between 2,500 (Oregon) and 23,000 (California) jobs, and between \$155 million (Oregon) and \$1.9 billion (California) in value-added impacts.

#### Key Pacific Recreational Fishing Species

The Pacific region's recreationally-important species and species groups are: salmon, rockfishes and scorpionfishes, greenlings, flatfishes, sculpins, surfperches, albacore and other tunas, bonito/barracuda/bass, mackerel, and croakers.

### Participation Rates

The total number of recreational fisherman across the Pacific region declined between 1997 and 1999 from 2 million anglers to 1.6 million, a 20% drop. From 1999 to 2003, there was a 57% increase in participation. Total participation peaked in 2001 and 2003 at 2.5 million anglers.

## Pacific Summary

In 2006, recreational anglers from coastal counties (1.3 million anglers) accounted for 65% of the total number of recreational anglers in the Pacific region. Non-coastal county residents accounted for 28% of total anglers (549,000 anglers) and out-of-state residents accounted for 7% (130,000 anglers).

Due to differences in the way California collected catch and effort information after 2003, total participation estimates in the Pacific region for 1997-2003 are not comparable to 2004-2006. Based on the new estimates for the 2004-2006 time period, participation was highest in 2006 with 1.97 million anglers. This was an increase of 23% from total participants in 2005.

### Recreational Fishing Facts

#### Participation

- The total number of recreational anglers in the Pacific region remained relatively stable over the time period, averaging 2.0 million anglers annually.
- In 2006, California had over 1.5 million anglers. Of these, 1.1 million were coastal county residents, 346,000 were non-coastal county residents, and 97,000 were out-of-state anglers.

#### Recreational trips

- Overall, the number of recreational fishing trips taken in the Pacific region declined 13%, from 6.7 million trips taken in 1997 to 5.9 million in 2006.
- The majority of fishing trips are taken from the shore, with these trips increasing 23% in 2006 relative to the number of trips reported in 1997. Over 80% of these trips were taken in California.
- In 2005, shore-based trips comprised the majority of fishing trips taken in California (3.1 million out of 4.5 million total trips) and Washington (512,000 out of 653,000 total trips).

#### Catch data for key species

- Over 809,000 salmon were caught by recreational anglers in 2006, a 30% decline relative to the 1.2 million caught in 1997.
- The recreational catch of mackerels was highest in the Pacific region with 5.1 million fish caught in 2006. Over 70% of these were released rather than harvested.
- Only surfperches reported an increase in catch with recreational anglers catching 65% more in 2006 relative to the numbers caught in 1997. Most of the other key species or groups reported double digit declines in catch.

### Recreational Fishing Trips

Between 1997 and 2006, the total number of fishing trips taken across the Pacific region decreased 13%, with the largest decreases in the number of party/charter boat trips (-42%) and private/rental boat trips (-43%). In contrast, fishing trips taken from shore increased 23%.

In California, 67% of fishing trips were taken from shore in 2006 with 3.1 million trips taken. Washington's anglers also preferred fishing from the shore with 512,000 shore trips in 2006, compared to 84,000 private/rental boat trips and 57,000 party/charter boat trips. In Oregon, most fishing trips were taken from a private/rental boat: 379,000 trips in 2006. Shore trips were also popular in Oregon with 232,000 trips taken, followed by 56,000 trips taken from a party/charter boat.

### Expenditures and Economic Impacts

In 2006, Pacific anglers spent a total of \$4.6 billion on both trip expenditures and purchases of durable equipment. In-state residents spent \$332 million on trip-related expenses compared to non-residents who spent \$111 million. Overall, Pacific anglers spent \$1.4 billion on boat expenses and \$1.1 million on fishing tackle.

Expenditures on shore-based fishing trips by residents were higher than private boat (\$107 million) and for-hire (\$93 million) expenditures. Oregon was the exception; trip expenditures on private boat fishing trips (\$26 million) was higher than other types of fishing trips. Across the region, non-resident expenditures were distributed fairly evenly between for-hire (\$41 million), private boat (\$37 million), and shore-based trip (\$33 million) expenditures.

In California, recreational fishing activities contributed \$3.7 billion in trip-related and durable equipment-related sales, generated over 23,000 jobs, and \$1.9 billion in value-added impacts. Durable expenditures accounted for the majority of these economic impacts. Washington's recreational fishing activities generated \$1.1 billion in trip-related and durable equipment-related sales, over 11,000 jobs, and \$606 million in value-added impacts. Oregon had \$284 million in trip-related and durable equipment-related sales, generating over 2,500 jobs, and \$155 million in value-added impacts.

### Recreational Catch and Release

Anglers in the Pacific region caught more mackerels than any other key species or species group: 5.1 million fish in 2006. All of these fish were caught in California and was the most caught species in this state. The majority of mackerels were released (3.7 million) rather than harvested (1.4 million). Mackerels were followed by rockfishes and scorpionfishes (3.7 million fish) and surfperches (3.5 million fish) as the most caught species or groups in the region. Albacore and other tunas were the least caught of the key species or groups with approximately 69,000 fish caught in 2006, a 51% decline from the numbers caught in 1997.

Overall, almost all species and groups were caught in lower numbers in 2006 compared to 1997, with declines ranging from 51% for albacore and other tunas to 6% declines in the number of greenlings caught. Only surfperches were caught in higher numbers in 2006 with 3.5 million fish caught, a 65% increase from 1997.

Rockfishes were the most caught species or group in Oregon, with 373,000 fish caught in 2006, a 45% decline from 1997. The majority of these fish were harvested (333,000) rather than released (40,000). In Washington, herring and smelt were the most caught species or group with over 2.5 million fish caught in 2006. The majority of these were harvested (2.5 million) rather than released (126,000). This species group had the largest increase in catch compared to the other species and groups, increasing 140% between 1997 and 2006. The largest decline in catch between these years was for flatfishes (75% decline).

### **Marine Coastal Economy**

When considering all industries in the Pacific region, California had the highest number of establishments and employees, followed by Washington and Oregon. In 2005, the gross domestic product by state for California was \$1.6 trillion (13% of the national total), followed by \$271 billion in Washington (2% of the national total), and \$142 billion in Oregon (1% of the national total).

When considering commercial fishing-related industries in 2006, the Commercial Fishing Location Quotient (CFLQ) for Washington was highest in the region at 13.9. That is, the proportion of Washington workers employed in commercial fishing industries was approximately 14 times larger than the proportion of U.S. workers engaged in this sector nationally. The 2006 CFLQ in Oregon was 2.96, a 12% decrease from 2001 while the 2006 California CFLQ was 0.73, a 27% decrease from 2001.

### ***Seafood Sales and Processing***

In 2005, there were 204 non-employer establishments in the seafood retail industry in the Pacific Region. Over 80% of these firms were located in California, 15% in Washington and 3% in Oregon. In Washington, the number of firms remained stable over the 1998-2005 time period but declined sharply in Oregon (-59%) and California (-26%). Annual receipts in the region decreased 20% between 1998 (\$25 million) and 2005 (\$20 million). Annual receipts increased 61% and 24% in Oregon and Washington, respectively, but declined 26% in California.

Employer firms engaged in seafood retail increased 19% between 1998 (211) and 2005 (251), ranging from a 6% increase in California to a 84% increase in Oregon. Annual

payroll increased 49% in California, 109% in Washington and 143% in Oregon during this time period. California accounted for 60% of the annual payroll of this industry in the Pacific Region in 2005.

Non-employer firms engaged in seafood processing activities increased from 111 firms (1998) to 151 firms (2005), a 36% increase over time. The number of firms in Oregon decreased 10% from 1998 and 2005. In contrast, the number of seafood processing firms in California and Washington increased 35 and 50%, respectively. Annual receipts increased in California and Oregon approximately 30% but were flat in Washington. The number of employer establishments engaged in seafood processing activities dropped 16% in Washington, 26% in Oregon, and 35% in California. Annual payroll in California increased 57% from \$59 million in 1997 to \$93 million in 2005.

From 1998-2005, the number of seafood wholesale establishments declined in California (-19%) and Washington (-33%) but held steady in Oregon, despite considerable fluctuation throughout the time period. Annual payroll increased 30% in California but declined 20% (the information on this industry was suppressed for Oregon).

### ***Transport, Support, and Marine Operations***

Marine cargo handling and ship and boat building were the two largest employers in this sector for both California and Washington. In 2005, the California ship and boat building industry had 10,100 employees and an annual payroll of \$410 million; the marine cargo industry employed 19,300 workers and had an annual payroll \$1.3 billion. Based upon employment, these sectors expanded 3% and 105%, respectively, from 1998-2005. In Washington, the ship and boat building industry had 7,200 employees and an annual payroll of \$308 million; the marine cargo industry employed 4,500 workers and had an annual payroll \$319 million. Employment in these sectors expanded 18% and 56%, respectively, from 1998-2005. Ship and boat building employed 1,300 workers in Oregon in 2005 and had an annual payroll of \$45 million, a 31% and 39% decrease, respectively, from 1998 levels.