

Management Context

The North Pacific Region includes the fisheries in the EEZ off of the state of Alaska. Federal fisheries in this region are managed by the North Pacific Fishery Management Council (NPFMC) and the National Marine Fisheries Service under six fishery management plans (FMPs). Catch limits for Pacific halibut are established by the International Pacific Halibut Commission and are implemented by the NPFMC. Salmon fishing in federal waters is limited to a few vessels using troll gear and management of salmon fisheries is deferred to the Alaska Department of Fish and Game.

North Pacific Fishery Management Plans

1. Bering Sea/Aleutian Islands (BSAI) Groundfish
2. Gulf of Alaska (GOA) Groundfish
3. BSAI King and Tanner Crabs
4. Alaska Scallop Fishery
5. Salmon in the EEZ
6. Arctic

Of the species or species groups managed under these FMPs, blue king crab from the Pribilof Islands is currently characterized as overfished. No stocks in this region are currently subject to overfishing.

The North Pacific Region has seven catch share programs (a type of market-based management), more than any other region.¹ These are the: 1) Western Alaska community development quota (CDQ) program; 2) Pacific halibut and sablefish individual fishing quota (IFQ) program; 3) Bering Sea pollock cooperative; 4) Alaska weathervane scallop cooperative; 5) Bering Sea king and tanner crab (crab rationalization) program that includes both an IFQ and a fishing cooperative; 6) Central Gulf of Alaska rockfish pilot sector program; and 7) Bering Sea groundfish (non-pollock) cooperative. The ex-vessel values for these programs totaled over \$766.1 million in 2007.

A particularly interesting management measure is the Western Alaska Community Development Quota (CDQ) program which is unique to Alaska. This program was originally implemented in 1992 as part of a restructuring of the Bering Sea/Aleutian Islands (BSAI) groundfish fishery. Under this program, a percentage of the total allowable catch for groundfish, prohibited species, halibut, and crab is apportioned to the coastal, western Alaskan native communities. The purpose of the program is to provide western Alaska communities the opportunity to participate and invest in BSAI fisheries, to support economic development in western Alaska, to alleviate poverty and provide economic and social benefits for residents of western Alaska, and to achieve sustainable and diversified local economies in western Alaska. Annual CDQ allocations provide a revenue stream for CDQ groups through various channels, including the direct catch and sale of some species and the leasing of quota to various harvesting partners. These communities participate in the CDQ Program through six nonprofit corporations (CDQ groups) which manage and administer the CDQ allocations, investments, and economic development projects. CDQ

¹Information about the ex-vessel values of these fisheries as well as the first year of implementation is available in the "U.S. Summary" found in this report.

groups use the revenue derived from the harvest of their fisheries allocations to fund economic development activities and provide employment opportunities. In 2008, 220 million pounds of pollock were caught under the BSAI CDQ program with a value of approximately \$40 million.

Commercial Fisheries

Alaska fishermen earned over \$1.7 billion from their commercial harvest (4.5 billion pounds) in 2008. Landings revenue was dominated by walleye pollock (\$384 million), salmon (\$368 million), Pacific halibut (\$209 million), and Pacific cod (\$267 million). Walleye pollock contributed the most to landings in 2008, accounting for roughly 50% of total landings (2.3 billion pounds) and 23% of landings revenue, with an average annual price of \$0.14 per pound. In contrast, salmon accounted for 14% of total landings (640 thousand pounds) and generated 22% of landings revenue, with an average annual price of \$0.58 per pound in 2008.

Economic Impacts

Alaska's seafood industry generated \$3.7 billion in sales impacts, \$1.3 billion in income impacts, and over 48,000 jobs in 2008. Seafood processing and dealer operations contributed over 58% to in-state sales for Alaskan businesses with over \$2.1 billion generated in 2008. This sector also accounted for most of the income impacts in the North Pacific with over \$668 million generated, or 52% of the region's total income impacts. In terms of employment, the commercial harvest sector supported the most full- and part-time jobs: 22,800 jobs or 48% of the region's total job impacts.

Key North Pacific Commercial Species

- Atka mackerel
- Pacific cod
- Crab
- Flatfish
- Pacific halibut
- Pacific herring
- Walleye pollock
- Rockfish
- Sablefish
- Salmon

Landings Revenue

In 2008, landings revenue for finfish and shellfish totaled over \$1.57 billion, a 40% increase from total revenue generated in 1999. When adjusting for inflation, real landings revenues increased 12%. Landings revenue in 2008 was a 14% increase relative to 2007 (\$1.50 billion). Finfish and other catch contributed more than shellfish to this 2008 total, accounting for 87% or \$1.48 billion. This was an 57% (26% in real terms) increase from 1999 finfish revenue totals. In contrast, shellfish revenues decreased 7% (26% in real terms) from \$271 million in 1999 to \$252 million in 2008. Shellfish landings decreased 79% from 278 million in 1998 to 57 million pounds in 2000 and the landings have never returned to the levels seen in the late 1990s.

The largest increases in landings revenue between 1999 and 2008 were for flatfish (220%), Atka mackerel (120%), Pacific halibut and Pacific herring both increased 79%, Pacific cod (87%), and rockfish (72%). Of the key species and species groups in this region, only crab landings revenue declined, decreasing 8%, a 26% decrease in real

terms. Landings revenue from salmon increased 6.5% over the time period with a 15% decrease in real terms.

Commercial Fish Facts

Landings revenue

- On average, key species or species groups accounted for 99% of total revenue generated in the North Pacific over the 1999 to 2008 time period.
- Five of the key species (walleye pollock, salmon, crab, Pacific cod, and Pacific halibut,) had average annual ex-vessel revenue in excess of \$200 million each.
- Walleye pollock and salmon accounted for 44% of average annual total landings revenue.
- The largest annual increase in landings revenue during the 10 year period was 122% for Atka mackerel (2000-2001). The largest annual decrease was 50% for crab (1999-2000).

Landings

- On average, key species or species groups accounted for nearly 100% of total landings in this region over the 1999 to 2008 time period.
- Four of the key species (walleye pollock, salmon, Pacific cod, and flatfish) had average annual landings of greater than 390 million pounds each.
- Annual landings of walleye pollock averaged over 3.0 billion pounds during the 10 year period, contributing over 60% to total average annual landings.
- Flatfish landings increased 42% from 2007 to 2008, the largest annual increase in the 10 year period. Crab landings decreased 75% from 1999-2000, the largest annual decrease.

Prices

- Sablefish (\$2.64), crab (\$2.34), and Pacific halibut (\$2.25) had the highest average annual prices per pound.
- Walleye pollock (\$0.08), Atka mackerel (\$0.08), flatfish (\$0.11), and Pacific herring (\$0.16) had the lowest average annual prices per pound.
- The largest annual price increase was 370% for flatfish between 2003 and 2004. The largest annual decrease was 89% for Atka mackerel between 2000 and 2001.

Landings

In 2008, North Pacific commercial fishermen landed over 4.5 billion pounds of finfish and shellfish, a less than 1% increase from 1999 totals. This was a 15% decrease from the 5.3 billion pounds landed in 2007. Finfish and other catch accounted for 98% of this total (4.5 billion pounds), a 3% increase from 1999 and a 15% decrease from 2007. Shellfish landings in 2008 decreased 50% from 213 million pounds in 1999 to 107 million pounds in 2008. Between 2007 and 2008, shellfish landings increased 36%. Overall, an average of 5.10 billion pounds were landed annually in the North Pacific from 1999-2008, ranging from a low of 4.3 billion pounds (2000) to a high of 5.65 billion pounds (2005).

In terms of key species or species groups, walleye pollock landings contributed the most to landings during the 10 year period, accounting for 50% of total landings in 2008 (2.28 billion pounds). Landings of salmon (640 million pounds), Pacific cod (490 million pounds), and flatfish (600 million pounds) were also a significant share of total landings.

Relative to 1999, landings of flatfish and rockfish in 2008 increased more than any other key species or group, increasing 148%, and 20% respectively. In contrast, crab

landings declined dramatically between 1999 and 2008, decreasing 52% from 206 million pounds to 99 million pounds. Salmon (20%), Pacific Halibut (15%), Pacific herring (1.7%), Pacific cod (5.6%), and sablefish (9.0%) landings also declined over this period.

Prices

In all, 2008 landings prices per pound for each of the key species and species groups were above their average annual price for the 10 year time period. When comparing 2008 landings prices to those in 1999, flatfish (533%), Pacific cod (243%), Atka mackerel (200%), and Pacific halibut (110%) had the largest increases at \$0.19, \$0.55, \$0.15, \$3.23 per pound, respectively.

Relative to landings prices in 2007, Pacific herring (23%), Atka mackerel (36%), walleye pollock (40%), Pacific cod (20%), and salmon (45%) all had double-digit increases in 2008. Rockfish prices decreased 8% from 2007 prices. Prices held steady for flatfish and halibut from 2007-2008.

Recreational Fishing

Recreational fishermen spent approximately 935,000 days fishing in Alaska in 2008. These anglers numbered over 309,000 with 62% of them non-residents. Halibut was the most caught finfish species or species group with approximately 875,000 harvested or released in 2008. Coho salmon and razor clam were also caught in large numbers with 492,000 and 592,000 caught, respectively. Together, these key species accounted for 67% of total catch by anglers in the North Pacific Region.

Economic Impacts and Expenditures

In 2008, approximately 4.8 million jobs in the North Pacific were related to recreational fishing activities and over \$389 million was spent by anglers who fished in the region. Most of these jobs were related to industries that provided services to anglers who fished from a for-hire boat (1.9 million jobs) or a private boat (1.2 million jobs). These fishing trip modes also generated the most in trip-related expenditures: \$98 million for for-hire fishing trips (51% of total trip expenditures) and \$81.6 million for private boat trips (41% of total trip expenditures). Over 64% of total trip-related expenditures in Alaska came from non-resident anglers.

In addition to jobs related to recreational fishing activities, other economic impacts include sales impacts and the contribution of recreational fishing activities to gross domestic product (value-added impacts). For-hire fishing trips generated \$149 million in sales (53% of total trip-related sales) and \$83 million in value-added impacts (54% of total trip-related value-added impacts) in 2008. Private boat trips contributed \$115 million in sales (41%) and \$62 million (41%) in value-added impacts. Shore based fishing trips contributed \$15.4 million in trip-related sales (5.5%) and \$8.4 million in trip-related value-added impacts (5.5%).

Anglers spent over \$197 million on durable equipment in 2008, contributing 51% to total expenditures in the region (trip and durable equipment combined). Most of this was spent on boat expenses (\$65 million). Expenditures related

to vehicles were \$31 million; second home expenses, \$33 million; other equipment, \$34 million; and fishing tackle, \$34 million.

Economic impacts from durable equipment expenditures in 2008 include approximately 1.6 million jobs, \$150 million in sales impacts, and \$102 million in value-added impacts.

Key North Pacific Recreational Species

- Razor clam
- Greenlings (lingcod)
- Halibut
- Rockfish
- Chinook salmon
- Chum salmon
- Coho salmon
- Pink salmon
- Sockeye salmon

Participation

In 2008, there were 309,000 recreational anglers who fished in Alaska. This was an 14% increase from 1999 (270,000 anglers) and a 7% decrease from 2007 (332,000 anglers). Recreational fishermen in Alaska are categorized as either a resident of Alaska or a non-resident. In 2008, non-resident anglers made up 62% of total anglers (190,000 anglers). This was a 24% increase from 1999 (153,000 anglers) and a 7.3% decrease from 2007 (205,000 anglers). In terms of resident anglers, there were 119,000 resident anglers who fished in the North Pacific in 2008. This was a small increase from 1999 (0.8%) and a decrease from 2007 (6.3%).

Days Fished²

Anglers who fished in Alaska spent approximately 935,000 days fishing in 2008. This was a 1% increase from the 924,000 days spent fishing in 1999. From 2007-2008, there was a 11% decrease in the number of days fished (1.1 million in 2007).

Harvest and Release

Of Alaska’s key species and species groups, Pacific halibut, coho salmon, and razor clams were most frequently caught by recreational fishermen. In 2008, 875,000 halibut, 492,000 coho salmon, and 592,000 razor clams were caught by anglers in Alaska. Razor clams (100% harvested), coho salmon (82%), and sockeye salmon (74%) were most often harvested than released, while pink salmon was more often released (63% released).

Three of the North Pacific’s key species or groups had large increases in catch totals between 1999 and 2008: greenlings and lingcod (62% increase), rockfish (36%), and Pacific halibut (56%). Large decreases in catch from 1999 to 2008 were experienced by the following key species; razor clams (23%), chum salmon (29%), Chinook salmon (26%), and pink salmon (48%). Razor clam and sockeye salmon experienced large changes in their harvest or release totals from 2007-2008. Pink salmon released decreased 46% and razor clam harvest increased 52% during this time. The dramatic changes in

²In Alaska, information related to how often a recreational fishermen fishes is collected in terms of the number of days spent fishing rather than the number of fishing trips taken.

pink salmon catch between 2007 and 2008 can at least be partially attributed to the biannual biological cycle.

Recreational Fishing Facts

Participation

- Approximately 302,000 anglers fished in Alaska annually over the 1999-2008 time period.
- In Alaska, out-of-state residents made up 62% of total anglers in 2008 and averaged 59% of total anglers annually from 1999-2008.
- The largest annual increase in anglers was a 14% increase in Alaska resident anglers from 2002-2003. Resident anglers also experienced the largest annual decrease in participation, decreasing 7.3% from 2007-2008.

Days fished

- On average, recreational fishermen spent 950,000 days fishing annually in Alaska from 1999-2008.
- The largest annual increase in total days fished was 16% from 868,000 days fishing (2003) to 1 million days fishing (2004). The largest annual decrease in total days fished was an 11% decrease from 1 million days fishing (2007) to 935,000 days fishing (2008).

Harvest and release

- Pacific halibut was the most caught key species or group, averaging 761,000 fish annually over the 10 year period. Of these, 59% were harvested rather than released in 2008.
- Key species or groups that were more often harvested than released in 2008 were coho salmon (82% harvested), sockeye salmon (74% harvested), and halibut (59% harvested), rockfish (57%).
- Sockeye salmon had the largest annual increase in catch, increasing 89% from 2006-2007. Pink salmon had the largest annual decrease in catch, decreasing 53% from 2005-2006 and the largest decrease when compared to other key species in catch from 2007-2008.

Marine Economy³

In Alaska, approximately 245,000 full- and part-time employees were employed by 20,000 establishments in 2007. Annual payroll totaled \$11.4 billion, employee compensation totaled \$20 billion, and gross state product totaled \$45 billion. Between 1998 and 2007, the largest changes were observed for gross state product (94% increase) and annual payroll (66%). Employee compensation (43% increase), employee numbers (25%), and establishment numbers (11%) also experienced modest increases. Relative to 2006 levels, each of these economic measures increased slightly in 2007, ranging from a 1.2% increase in number of employees to a 6% increase in employee compensation. The commercial fishing location quotient was not available for Alaska.

Seafood Sales and Processing

The number of nonemployer firms engaged in seafood product preparation and packaging increased 65% from 20 firms in 1999 to 33 firms in 2007. Despite this, annual receipts decreased 12% to \$1.8 million in 2007 (a 22% decrease in real terms). When considering employer establishments engaged in seafood product preparation and packaging, the number of establishments decreased 6% from 1999-2007 to 114 establishments and employee

³Information for 2007 is reported in this section; 2008 data were not available for this report.

numbers decreased 24% from 1999-2007 to approximately 6,500 full- and part-time employees. Annual payroll, on the other hand, increased 32% (16% in real terms) from 1999-2007 to \$250 million.

There were 68 seafood wholesale establishments in 2007. This was a 20% decrease relative to 1999 levels. Employee numbers also declined, decreasing 7% to 167 workers, while annual payroll increased 3% (9% decrease in real terms) to \$8.5 million in 2007.

There were 12 nonemployer seafood retail firms with an annual receipt total of \$1.36 million in 2007. From 2000-2007, the number of nonemployer firms increased 71% and annual receipts increased 315%.⁴ In contrast, the number of employer establishments engaged in seafood retail activities decreased 22% from 9 establishments in 1999 to 7 establishments in 2007. Employee and annual payroll information for this industry was not available for 2007.

Transport, Support, and Marine Operations

Data was largely unavailable for industries in this sector. When looking at available data, coastal and Great Lakes freight transportation industries had the highest number of establishments with 46 establishments in 2007. This was a 77% increase relative to 1999 totals. Large changes in establishment numbers were also observed in industries engaged in port and harbor operations (100% increase) and ship and boat building (78% increase). There were 2 establishments engaged in port and harbor operations and 16 engaged in ship and boat building in 2007.

The marine cargo handling operations produced annual payroll total of \$35 million, there were 17 establishments that employed 677 people in 2007. Between 1999 and 2007, the numbers of establishments increased 13%, employee numbers increased 4%, and annual payroll totals decreased 59% (41% in real terms).

⁴Information was not available for 1999 or 2008 thus the 2000-2007 time period is discussed here.