

## A look at harvesting and processing jobs

**A**laska is once again the nation's No. 1 fishing state, a position it's held since 1975. The state's 2008 harvest, worth a record \$1.7 billion, topped the state's previous record – \$1.66 billion in 1992 – and was 4.3 times the value of the nation's No. 2 fishing state, Massachusetts. (See Exhibit 1.)

The latest National Marine Fisheries Service release reported that 55 percent of the total U.S. fisheries harvest by volume was taken in Alaska waters. That production translated into 39 percent of the total U.S. harvest by value. (See Exhibit 2.) Dutch Harbor/Unalaska ranked first among U.S. ports in terms of volume, and five other Alaska cities are in the top 20. The numbers are impressive for a state whose population amounts to only two-tenths of 1 percent of the nation's total.

The importance of the seafood industry to Alaska is undeniable. When Alaska's seafood har-

vesters<sup>1</sup> – crew members and permit holders – are combined with seafood processing workers, 52,000 people<sup>2</sup> were directly employed at some time in the seafood industry in Alaska in 2008.

This article will look at Alaska's seafood industry employment, the demographics of the industry's workers and where they live, how the industry's employment breaks down by fishery, and what the harvest workers do when the fishing season is over.

### Where the numbers come from

The Alaska Department of Labor and Workforce Development can accurately count seafood processing jobs, because, like all other wage and salary jobs, employers are required to report the number of employees and their earnings on their payrolls each month as part of their mandatory unemployment insurance coverage.

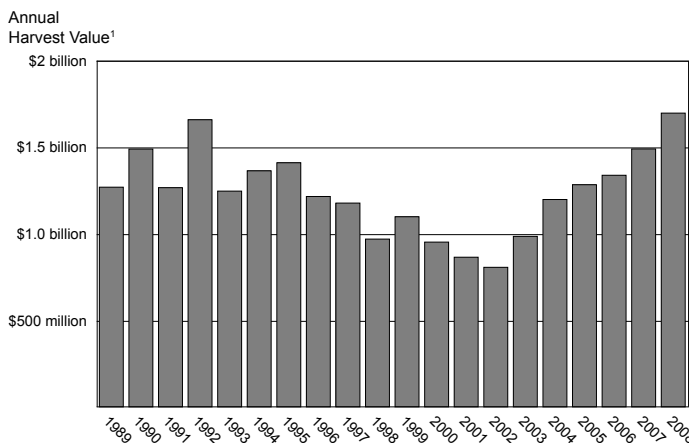
But fish harvesting jobs are generally exempted from state unemployment insurance laws and they don't generate the payroll records used to calculate employment in other industries. (The methodology section at the end of this article provides more detail.)

Most of what we know about the state's fish harvests comes from the Alaska Department of Fish and Game's Commercial Fisheries Entry Commission, which provides detailed fisheries data on, among other things, gross estimated earnings, pounds caught, permit holders and permit holders who fished.

<sup>1</sup> The term "fish harvesting" jobs is used in this article rather than more generic references to "fishing" jobs to clarify that only the jobs created for permit holders and their crew who are directly involved in harvesting the fish are being included and not the many jobs in processing, tendering and other related activities. Processing jobs, also covered in this article, are referred to separately.

<sup>2</sup> Fifty-eight percent of the 52,000 were nonresidents, largely in seafood processing.

## 1 Alaska's Fish Harvest Values All fisheries, 1989 to 2008



<sup>1</sup> This is the ex-vessel value, the price paid to fishermen at the dock. It's not adjusted for inflation.

Source: National Oceanic and Atmospheric Administration, National Marine Fisheries Service

The Department of Labor since 2000 has produced harvest employment estimates each year using Fish and Game's weekly landing or daily delivery records and data collected by the two other regulatory agencies that monitor the state's commercial fishing.<sup>3</sup>

Fish and Game is developing a plan to collect counts of each crew member working on a vessel when fish are landed, by assigning an identifying number to each crew member and recording how much time the crew member worked to harvest the fish. That would provide harvest employment numbers without having to estimate the crew members needed to make fish landings.

The plan needs to be approved by the Alaska Legislature and it will likely be several years before it's fully implemented. But when it is, it will provide a more accurate count of fish harvesting workers and their earnings, shedding more light on the relative economic importance to the worker of the fishing industry, each harvest and each species.

### Fish harvesting employment

Alaska's seafood industry had 7,270<sup>4</sup> harvesting jobs in 2008, and in July 2008 – July is the peak for both harvesting and processing – it had 20,447 harvesting jobs. (See Exhibits 3, 4 and 9.)

Harvesting employment barely inched up in 2008, adding 10 jobs, a 0.14 percent gain. The state's wage and salary employment grew 1.4 percent in 2008.

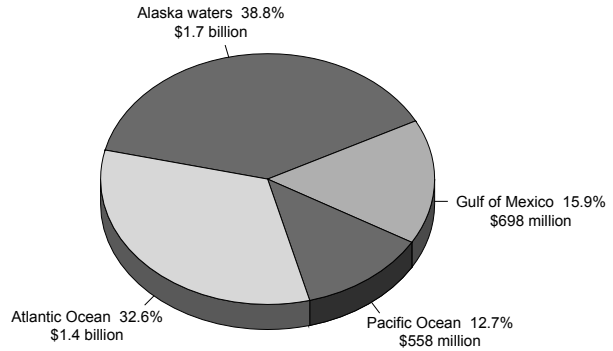
Over the nine years measured by this data set, total fish harvesting employment has shown two distinct trend lines: from 2000 to 2002, employment numbers fell at a dramatic rate;<sup>5</sup> then from

<sup>3</sup> Fish and Game primarily manages the inshore fishery within three miles from shore, the Western Alaska crab fisheries and some groundfish fisheries. The National Oceanic and Atmospheric Administration's National Marine Fisheries Service supervises the fisheries between three miles offshore and 200 miles offshore (the international border line). The International Pacific Halibut Commission oversees the halibut harvests.

<sup>4</sup> Job counts published in this article are annualized, unless otherwise noted. An annualized job count is simply the average number of monthly jobs over the full calendar year.

<sup>5</sup> The declines undoubtedly extended well back into the 1990s, judging from other fisheries-related data such as permits fished and catch values, but harvesting employment data aren't available for years before 2000.

## Shares of the U.S. Fish Harvest Percentages and values, 2008 **2**



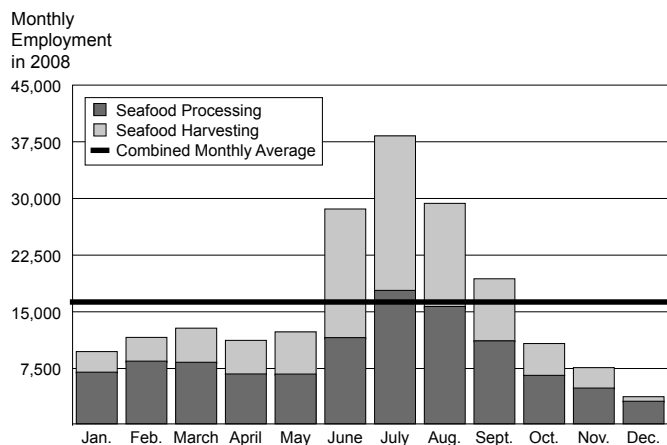
Source: National Oceanic and Atmospheric Administration, National Marine Fisheries Service

## Harvesting and Processing Jobs Alaska, 2000 to 2008 **3**

	Average Monthly Employment		
	Harvesting	Processing	Total
2000	8,706	8,433	17,139
2001	7,959	7,904	15,863
2002	7,168	7,406	14,574
2003	7,404	7,873	15,277
2004	7,330	8,535	15,865
2005	7,486	8,727	16,213
2006	7,314	9,374	16,688
2007	7,260	9,143	16,403
2008	7,270	9,027	16,297

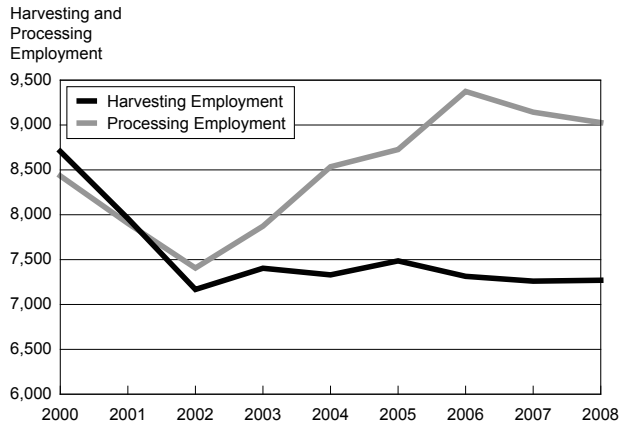
Sources: Alaska Department of Fish and Game, Commercial Fisheries Entry Commission; National Oceanic and Atmospheric Administration, National Marine Fisheries Service; Alaska Department of Labor and Workforce Development, Research and Analysis Section, Quarterly Census of Employment and Wages

## Activity Peaks in Summer Alaska, 2008 **4**



Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Quarterly Census of Employment and Wages; Alaska Department of Fish and Game, Commercial Fisheries Entry Commission

## 5 Seafood Industry Employment Alaska 2000 to 2008



Sources: Alaska Department of Fish and Game, Commercial Fisheries Entry Commission; National Oceanic and Atmospheric Administration, National Marine Fisheries Service; Alaska Department of Labor and Workforce Development, Research and Analysis Section, Quarterly Census of Employment and Wages

at 17,841. Seafood processing lost 116 jobs in 2008, a 1.3 percent decline.

Seafood processing employment, like harvesting employment, shows jobs falling dramatically from 2000 to 2002. (See Exhibit 5.) Yet, unlike harvesting, processing employment has rebounded since 2002 for reasons that aren't entirely clear.

As far as the number of people, 23,047 were employed in processing jobs at some time in 2008.

### Half of crew members are under 30, permit holders and processing workers are older

The Department of Labor had access to more information about Alaska's crew license holders in 2008 than in previous years, providing a more complete picture of those who work on commercial fishing boats.

A breakdown into age groups shows that 47 percent of crew license holders in 2008 were 29 or younger. (See Exhibits 6 and 8.) In comparison, only about 33 percent of all workers in wage and salary employment in 2008 were 29 or younger.

Permit holders, the other segment of harvesting workers, were much older than their crew, with an average age of 46 in 2008.

Seafood processing workers also tend to be older than crew. Processing workers<sup>6</sup> had an average age of 39 in 2008 compared with a total wage and salary worker average age of 38.

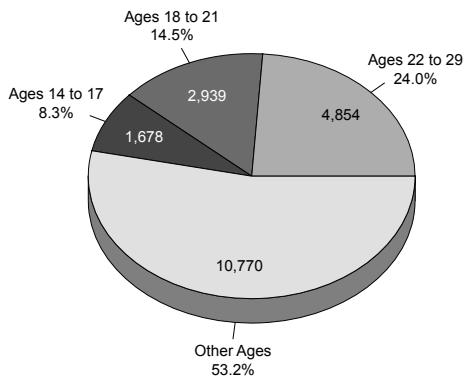
### Where Alaska's seafood industry workers live

Forty-six percent of Alaska's crew members in 2008 lived outside the state. (See Exhibit 7.) Of the 54 percent who lived in Alaska, 82 percent lived in a coastal region<sup>7</sup> and 18 percent lived in Anchorage and Fairbanks.

<sup>6</sup> Based on processing workers with age information in Alaska Permanent Fund dividend records for 1993 to 2009

<sup>7</sup> Coastal is defined as all of the state boroughs excluding the Municipality of Anchorage; the Matanuska-Susitna, Fairbanks North Star or Denali boroughs; or the Southeast Fairbanks Census Area.

## 6 The Youth Crew Share Alaska, 2008



Notes:  
This exhibit is the only place in the article that includes crew members under the age of 18.  
This exhibit shows residents and nonresidents for all age groups.  
Source: Alaska Department of Fish and Game, Commercial Fisheries Division

2002 to 2008, total employment stabilized and managed to recover a small amount of the lost ground. (See Exhibit 5.)

Altogether, over the entire 2000 to 2008 period, harvesting employment lost 1,436 jobs, a 16.5 percent decrease.

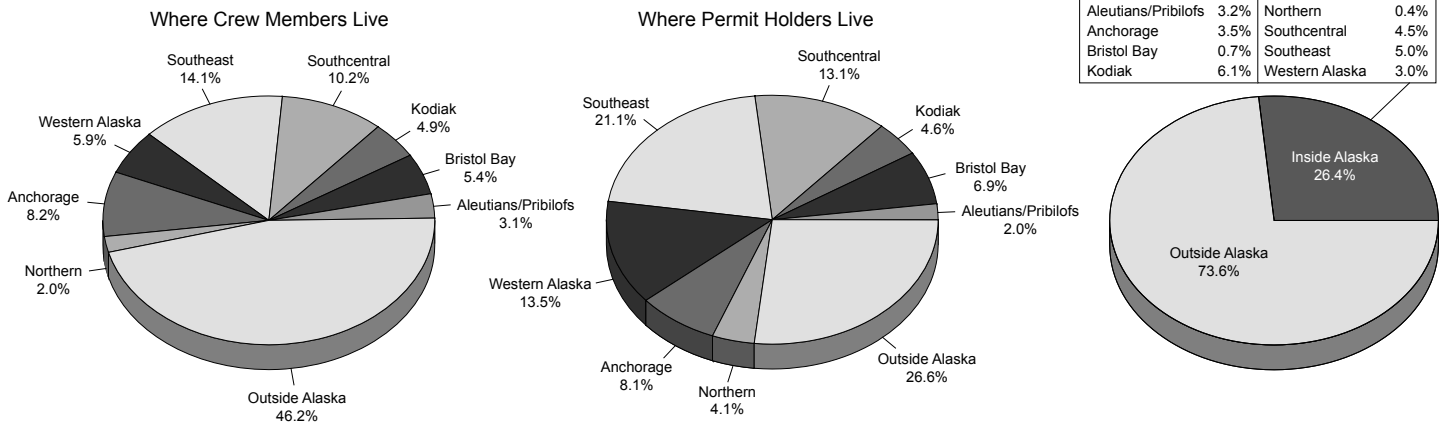
Looking at the number of people, 29,093 people had fishing permits or crew licenses at some time in 2008.

### Seafood processing employment

The seafood industry had 9,027 fish processing jobs in 2008 and in July processing jobs peaked

## Where They Live 7

Self-declared residence in 2008



Notes: Each pie represents people working in Alaska. For crew members, residency is based on what they put on their crew licenses; for permit holders, it's based on what they put on their permits; and for processing workers, it's based on the fact of whether they filed Alaska Permanent Fund dividend applications. Sources: Alaska Department of Fish and Game, Commercial Fisheries Division and Commercial Fisheries Entry Commission; Alaska Department of Labor and Workforce Development, Research and Analysis Section, Occupational Database; Alaska Department of Revenue, Permanent Fund Dividend Division

Twenty-seven percent of permit holders in 2008 were nonresidents, a rate closer to the statewide average of 19.6 percent for all workers. Of the 73 percent of permit holders who lived in Alaska, 52 percent lived in a coastal area.

Seafood processing since at least the mid-1980s<sup>8</sup> has been the sector<sup>9</sup> with the highest percentage of nonresidents, both within the fishing industry and in all wage and salary employment in the state.

Seventy-four percent of Alaska's seafood processing workers were nonresidents in 2008, and they earned \$187 million that year.

Many seafood processing plants are in remote locations and workers often move to another plant when their initial processing job is over. That, coupled with the short seasonal nature of the work, can make it difficult to recruit enough workers within Alaska to meet the peak seasonal demand.

### Harvesting employment by fishery

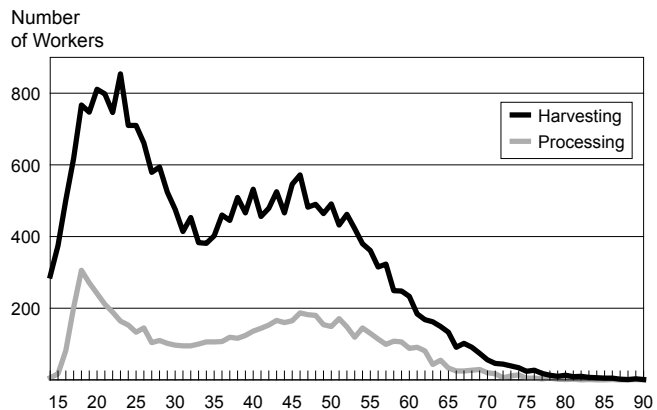
Salmon accounted for 51 percent of all fish harvesting jobs over the year in 2008 and about 80

<sup>8</sup> Research and Analysis has published the number of nonresidents working in Alaska since 1986.

<sup>9</sup> For sectors with more than 1,000 workers

## Workers' Ages 8

Harvesting and processing, Alaska 2008



Sources: Alaska Department of Fish and Game, Commercial Fisheries Division; Alaska Department of Labor and Workforce Development, Research and Analysis Section, Occupational Database

percent of the jobs during July, the fishery's peak month. (See Exhibit 9.)

Alaska's fishing fleet has always been dominated by salmon fishermen, and 2008 was no different. Salmon harvesting employment decreased slightly in 2008; it declined by 20 jobs to 3,739.

Price increases were the big news for salmon in 2008 – everything went up from 2007. (See Exhibit 10.) The price of kings increased 48 percent to \$4.54 a pound, cohos went up 33

## 9

# Fish Harvesting Employment for All Fisheries

## Alaska, 2006 to 2008

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Monthly Average
<b>All Fisheries</b>													
2006	2,700	3,038	4,573	4,293	5,709	17,748	20,066	13,700	7,719	5,003	2,507	720	7,314
2007	2,584	2,966	3,930	4,348	5,949	17,528	20,137	13,567	7,500	4,738	3,080	791	7,260
2008	2,738	3,138	4,511	4,445	5,572	17,022	20,447	13,634	8,226	4,202	2,708	602	7,270
<b>Total Crab</b>													
2006	523	660	537	210	60	432	429	401	88	788	755	83	413
2007	363	589	450	252	42	451	473	441	93	851	864	142	418
2008	483	777	534	210	108	530	559	499	105	842	823	209	473
<b>Total Groundfish/Other</b>													
2006	1,884	2,006	1,824	1,122	645	840	1,059	1,131	1,403	911	354	365	1,129
2007	1,977	2,064	1,843	1,188	803	912	1,055	1,058	1,395	813	677	401	1,182
2008	2,034	2,135	1,976	1,111	746	1,026	1,142	1,166	1,465	1,053	643	90	1,216
<b>Total Halibut</b>													
2006	0	0	1,179	1,456	2,080	2,438	1,908	2,416	1,181	1,540	713	3	1,293
2007	0	0	819	1,312	2,188	2,448	2,001	2,233	1,713	1,508	732	0	1,246
2008	3	0	1,066	1,260	1,859	2,284	1,866	2,345	1,865	1,004	590	0	1,179
<b>Total Sablefish</b>													
2006	0	0	358	621	787	751	513	691	767	580	208	0	440
2007	0	0	263	574	839	697	480	649	698	555	245	0	417
2008	0	0	372	603	768	710	505	651	717	441	162	0	411
<b>Total Herring</b>													
2006	6	11	275	430	469	190	15	0	5	0	0	10	117
2007	6	11	275	516	578	25	20	0	0	5	0	6	120
2008	6	11	259	748	422	35	13	0	5	5	0	17	126
<b>Total Miscellaneous Shellfish</b>													
2006	69	90	44	20	101	60	58	48	12	666	323	126	135
2007	78	68	19	15	40	36	36	43	15	559	370	146	119
2008	87	70	18	14	67	55	55	49	25	528	323	161	121
<b>Total Salmon</b>													
2006	218	271	357	435	1,568	13,037	16,084	9,013	3,664	518	154	134	3,788
2007	161	235	261	491	1,459	12,959	16,073	9,143	3,586	448	193	97	3,759
2008	126	145	286	500	1,603	12,383	16,308	8,924	4,014	306	148	126	3,739

Sources: Alaska Department of Fish and Game, Commercial Fisheries Entry Commission, National Oceanic and Atmospheric Administration, National Marine Fisheries Service; Alaska Department of Labor and Workforce Development, Research and Analysis Section

percent, chums by 74 percent and pinks by 84 percent.

Looking at the dominant species by region, sockeye made up the majority of the 2008 harvest in Bristol Bay, Cook Inlet, Chignik, the Copper River and Alaska Peninsula. Pinks were the largest share of the catch in Southeast Alaska, Prince William Sound and Kodiak, chum for the Kuskokwim and Yukon River regions, and king salmon in the Northern region on the Yukon.<sup>10</sup>

<sup>10</sup> For fish harvesting employment by region and other information about Alaska's seafood industry employment, go to Research and Analysis' Web site at laborstats.alaska.gov, click on "Industry Information" in the column on the left, then "Seafood Industry." (You can also get to the Web site by going to the Department of Labor's Web site at labor.alaska.gov and clicking on "Researchers" in the gold ribbon at the top.)

Employment for groundfish – mostly pollock, Pacific cod and lingcod – is slowly regaining the jobs the fishery had in the early 2000s. It had 1,361 jobs in 2001 and added 33 jobs in 2008, making its employment 1,216. Some of that increase is due to permit holders fishing for a longer duration than they did in 2007, an average of 48 days instead of 36.

The trend for sablefish and halibut employment continued its modest but steady decline. From 2007 to 2008, employment in the two fisheries lost a combined 73 jobs, a decline of 4.5 percent.

Herring jobs stabilized in 2008, but failed to recover from several years of job losses. From 2005 to 2006, the fishery lost 103 jobs, a 47

percent drop, and it gained only nine jobs from 2006 to 2008.

Jobs for miscellaneous shellfish – predominantly scallops, clams and sea cucumbers – stayed flat for 2008, only adding two jobs to the fishery’s employment of 121.

Alaska’s crab fisheries generated an additional 55 jobs in 2008, a 13 percent increase to 473 jobs. That topped 2007’s meager increase – five jobs.

## What does a fish harvesting worker do during the off-season?

After combining different data sources from the departments of Fish and Game, Revenue and Labor, it’s possible to look at some of the other jobs that harvesters hold within the state. Aside from their seafood harvesting work in 2008, nearly 37 percent of permit holders and crew had an Alaska wage and salary job at some point during the remainder of the year. (See Exhibit 11.)

The permit holders and crew earned roughly \$173 million in 2008 from their wage and salary employment in the state, an average of about \$21,000 for the 8,247 wage and salary workers employed as fish harvesters.

Looking at just permit holders, 2,744 of the 6,334 permit holders in 2008 worked in both wage and salary jobs and fish harvesting jobs. They earned \$473.6 million in their wage and salary jobs while they earned \$91.6 million in gross earnings from fish harvesting.

Permit holders with wage and salary jobs made up 43.3 percent of the harvesters in 2008 and earned 17.7 percent of fish harvesting’s gross earnings.

## Looking toward 2009

Since there’s a time lag after the end of the fishing season to collect and analyze data, hard numbers for 2009’s harvesting employment won’t be complete until early summer 2010.

# Salmon Prices Alaska, 2000 to 2008 **10**

	Statewide Salmon Prices <sup>1</sup>				
	King	Sockeye	Coho	Chum	Pink
2000	\$1.95	\$0.79	\$0.56	\$0.27	\$0.15
2001	\$1.68	\$0.57	\$0.49	\$0.34	\$0.13
2002	\$1.30	\$0.60	\$0.36	\$0.18	\$0.10
2003	\$1.43	\$0.63	\$0.48	\$0.18	\$0.09
2004	\$1.85	\$0.60	\$0.68	\$0.21	\$0.10
2005	\$2.23	\$0.74	\$0.75	\$0.26	\$0.12
2006	\$3.03	\$0.76	\$1.04	\$0.32	\$0.16
2007	\$3.07	\$0.80	\$0.96	\$0.34	\$0.19
2008	\$4.54	\$0.84	\$1.28	\$0.59	\$0.35
2000 to 2008:					
Species Price Change	132.8%	6.3%	128.6%	118.5%	133.3%
CPI-U Anchorage <sup>2</sup>	25.6%	25.6%	25.6%	25.6%	25.6%

<sup>1</sup> Not adjusted for inflation

<sup>2</sup> CPI-U is the Consumer Price Index for all Urban Consumers, which is Anchorage’s (and Alaska’s) most commonly used measure for inflation. It’s produced by the U.S. Department of Labor’s Bureau of Labor Statistics.

Source: Alaska Department of Fish and Game, Division of Commercial Fisheries

# Harvesters and their Nonfishing Jobs Alaska, 2008 **11**

	Permit Holders	Crew Members <sup>1</sup>	Total
Total	7,017 <sup>2</sup>	16,140	23,157
Total permit holders and crew members with Social Security numbers	6,334	16,140	22,474
Percentage of total with Social Security numbers	90.3%	100%	97.1%
Total also employed in wage and salary jobs <sup>3</sup>	2,744	5,503	8,247
Percentage also employed in wage and salary jobs <sup>4</sup>	43.3%	34.1%	36.7%
Total earnings from wage and salary jobs <sup>4</sup>	\$73.7 million	\$99.3 million	\$173.0 million
Average wage and salary earnings	\$26,845	\$18,053	\$20,978
Total gross earnings from fishing	\$517.0 million <sup>5</sup>	–	–
Total gross earnings from fishing for those with wage and salary jobs	\$91.6 million	–	–

<sup>1</sup> All references to crew members in this article are to adults, ages 18 and older, with the exception of Exhibit 6.

<sup>2</sup> This number includes residents and nonresidents.

<sup>3</sup> Data for wage and salary jobs in this article come from reports employers are required to file under state unemployment insurance laws. Because they don’t receive a wage or salary, fishermen and other self-employed workers aren’t included in wage and salary data. Federal workers are covered by federal unemployment insurance and aren’t included in Alaska’s wage records; therefore, they also aren’t included in wage and salary data.

<sup>4</sup> For permit holders and crew members who have Social Security number identifiers

<sup>5</sup> This number includes residents and nonresidents.

Sources: Alaska Department of Fish and Game, Commercial Fisheries Entry Commission; Alaska Department of Labor and Workforce Development, Research and Analysis Section, Occupational Database; Alaska Department of Revenue, Permanent Fund Dividend Division

It’s possible, though, to compare each week of 2009’s salmon season to the same week in previous years.

Overall, the weekly salmon harvests statewide are higher than they were in 2008, although they’re still below in the corresponding weeks in the previous five years. Sockeye has had the strongest harvest of any salmon species so far in

## Methodology Notes

In other industries, the Alaska Department of Labor and Workforce Development can count jobs because most employers are required to report the number of employees on their payrolls each month as part of their mandatory unemployment insurance coverage.

But fish harvesting jobs are generally exempted from state unemployment insurance laws, and even if they weren't, they don't generate the payroll records used to calculate monthly employment in other industries.<sup>1</sup>

### Landings and crew factors

As a substitute for detailed payroll records, state and federal fish management agencies provide the Department of Labor with information on the specific "landings" made under each commercial fishing permit over the course of a year. A landing is the initial sale of harvested fish to a buyer. To create employment estimates from the landings, the Department of Labor uses

<sup>1</sup> Another reason why no employment data have been available for the fisheries is that the U.S. Bureau of Labor Statistics, which governs how employment is counted in the federal-state cooperative program called Current Employment Statistics, defines fishing as an agricultural activity and agricultural employment has traditionally been excluded from employment statistics under this program.

"crew factors" developed from surveys and industry research in an attempt to quantify the labor needed to fish specific permits.

For example, the crew factor for a S04Y permit – which is a permit to fish for salmon in the lower Yukon with gillnets – is two, so if a landing is recorded under a S04Y permit, two jobs are attributed to that permit. Each permit number is unique (the S04Y permit used in this example is the type of permit rather than the permit number itself), which allows the Department of Labor to assign only one set of jobs to a specific permit in any given calendar month even if numerous landings are made during the month.<sup>2</sup>

The jobs are assigned by place of work rather than by the residence of the job holders. Most permits have a geographic designation as to where specific species can be harvested. In the above example using a S04Y permit, the "Y" stands for the lower Yukon region, regardless of what species is fished. All landings made under that type of permit create employ-

<sup>2</sup> The same approach to counting the number of monthly jobs is used for other industries in that a person who works 60 hours a week for a single employer is counted the same as a person who works 20 hours a week. Each is said to hold one job in that month.

ment in the ports of Western Alaska. Employment generated under permits that allow fishing anywhere in the state is assigned by a special harvest area code.

### The permit is the employer

The permit itself is considered the employer, which means that a permit holder who makes landings under two different permits in the same month will generate two sets of jobs. Counting the permit as the employer rather than the permit holder is believed to be a slightly better approximation of how jobs are counted in wage and salary employment numbers.

### Prep time not counted

The harvesting employment estimates are conservative in that they don't reflect any time spent by permit holders or their crew preparing to fish or winding up operations at the end of the season. Until a landing is made under a permit, no employment is tallied.

So if the permit holder works for two weeks in May getting the boat ready to fish and then begins making landings in June, the efforts in May are not counted as employment despite their obvious importance to the enterprise.

2009. This year's catch surpassed both 2008's and the five-year average.

With a strong statewide sockeye run in 2009, it means that the other species' harvests were lower than previous years in order to pull the total salmon harvest below the average. Most of the low catches came from the king fisheries. The 2008 catch for the Yukon king fishery, for example, was limited to bycatch, and the commercial fishery was closed in 2009. The average for 2004 to 2008, however, includes a week in the beginning of July where 19,000 Yukon king salmon were caught.

### In conclusion

The fishing industry is more than a job for a lot of people – it's a lifestyle. Despite the popular-

ity of reality television shows focused on fish harvesting, people shouldn't have overly romanticized views of Alaska's seafood industry. The work is hard and is often dangerous and done in extreme weather conditions. The financial rewards are unpredictable, but potentially large. Despite experience, skill, trained crew, and good fishing vessels and equipment, earnings are often determined by Mother Nature, fuel prices and the market price of fish.