By JACK CANNON and JOSH WARREN

Fishing Jobs Up Slightly in 2012

Gains in other fisheries offset minor salmon job losses

Alaska is among the world's leaders for seafood harvesting, with landings worth more than $1.7 billion in 2012 and more than half of all fish caught commercially in the United States.

Six of the top 10 national ports for value and four of the top 10 for poundage are in Alaska, and for the 16th straight year, Dutch Harbor-Unalaska led the nation for pounds landed.

In terms of employment, slight declines in salmon and halibut harvesting jobs in 2012 were more than offset by gains in other fisheries, especially crab and groundfish. Overall, Alaska's seafood harvesting employment was up from the prior year, from 8,067 average monthly jobs in 2011 to 8,189 in 2012. (See exhibits 1 and 2.)

Vital jobs that are hard to count

It's important to note that the number of average monthly harvesting jobs is different from the number of people who fished commercially last year — 31,800. This article focuses primarily on monthly averages because they allow more meaningful comparisons to other industries the Department of Labor and Workforce Development tracks.

Someone who reads *Trends* regularly might notice that despite its importance to the economy, seafood harvesting is absent from the department's monthly job numbers. Commercial fishermen are considered self-employed, and because they do not draw a typical salary and are generally not covered by unemployment insurance, they can't be tracked in the usual ways.

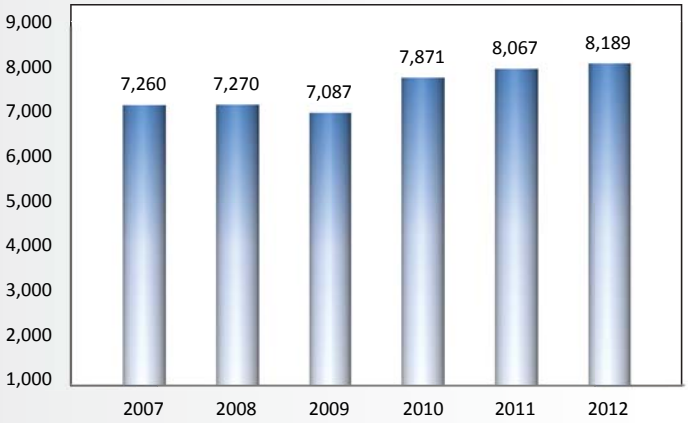
To fill that gap, the department estimates fish harvesting employment each year using other sources and methods. (See the sidebar on page 7 for more detail.) This special project, a collaboration with the Alaska Department of Fish and Game, attempts to provide a better picture of the industry's size and health as measured by the jobs it creates.

Though this article focuses on seafood harvesting, the importance of the seafood industry to Alaska's economy reaches far into other industries. In addition to those who fished commercially last year, thousands more worked in related jobs at seafood processing plants, hatcheries, and supporting businesses such as grocery stores and restaurants. For much of coastal Alaska, commercial fishing is the primary economic driver.

Harvesting jobs dominated by seasonal salmon fisheries

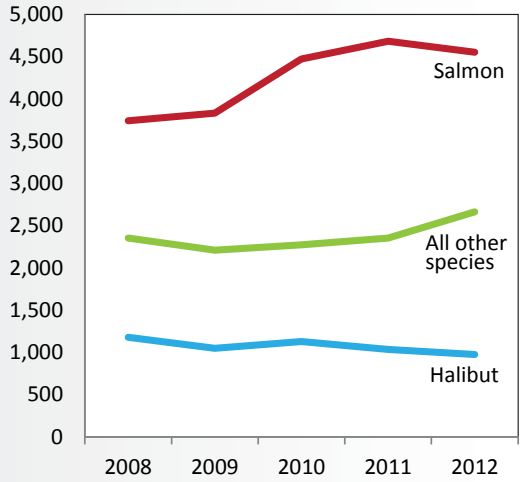
Although salmon generates more harvesting jobs than any other fishery, groundfish is the state's largest fishery in terms of both value and volume. A relatively small number of large boats catch large quantities of those fish, mostly pollock, without

1 Average Monthly Jobs Are Up
Seafood harvesting, 2007 to 2012



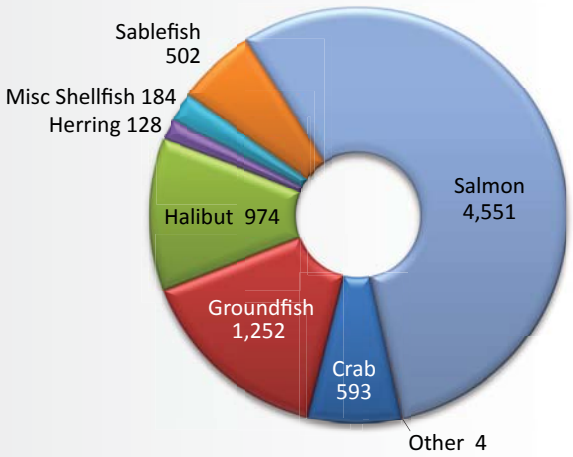
Sources: Commercial Fisheries Entry Commission; Alaska Department of Fish and Game; National Marine Fisheries Service; and Alaska Department of Labor and Workforce Development, Research and Analysis Section

2 Job Trends by Species
Average monthly jobs, 2008-12



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

3 Salmon Dominates Jobs
Monthly employment by species, 2012



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

requiring proportionate increases in manpower, so groundfish harvesting employment is relatively modest.

In terms of average monthly jobs, more than 56 percent last year were in salmon harvesting, or more than 4,500 jobs. Groundfish and halibut followed with about 15 percent and 12 percent respectively. (See Exhibit 3.)

Because most seafood harvesting jobs in Alaska are so seasonal, looking at average monthly job counts is more useful for identifying trends than comparing job counts by month, which often swing wildly.

Fishing employment peaks in the summer, with 57 percent of harvesting jobs statewide taking place between June and August. (See exhibits 4 through 6.) The vast majority of this high harvesting summer employment is in salmon fisheries.

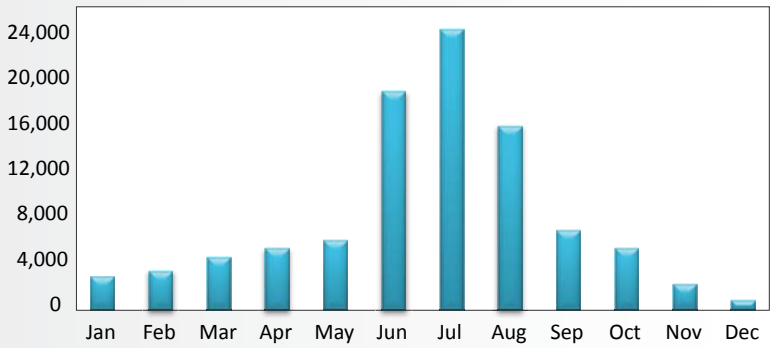
Salmon is a highly seasonal catch, with 44 percent of its employment in July alone. (See Exhibit 6.) Monthly harvesting employment peaked in July at more than 24,750 jobs, and the average for all fisheries from June through August was more than 20,000, with 80 percent of those jobs in salmon fishing.

While fishery employment for salmon is largely concentrated in the summer, some fisheries such as sablefish, crab, and groundfish have longer seasons with jobs spread out over a longer period of the year.

Southeast had the most monthly employment

The Bristol Bay summer sockeye run in Southwest is known for its intensity, and in 2012 it pushed the

4 Most Fishing Jobs Are in the Summer
Number of monthly harvesting jobs in Alaska, 2012



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

5 Monthly Fish Harvesting Jobs
Alaska, 2002 to 2012

	Monthly Average	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2002	7,168	3,590	4,047	4,334	4,913	6,715	16,292	18,224	11,975	6,983	5,794	2,632	524
2003	7,404	3,284	3,609	4,378	5,797	6,233	17,610	19,670	11,922	7,191	5,969	2,660	526
2004	7,330	3,594	3,492	4,110	5,050	6,476	17,139	19,634	12,308	7,371	6,023	2,259	509
2005	7,486	3,561	3,150	4,227	5,115	6,283	18,169	20,566	12,889	7,192	4,958	2,768	953
2006	7,314	2,700	3,038	4,573	4,293	5,709	17,748	20,066	13,700	7,719	5,003	2,507	720
2007	7,260	2,584	2,966	3,930	4,348	5,949	17,528	20,137	13,567	7,500	4,738	3,080	791
2008	7,270	2,738	3,138	4,511	4,445	5,572	17,022	20,446	13,633	8,225	4,202	2,708	602
2009	7,087	2,527	2,817	3,126	4,874	5,693	17,609	20,076	13,687	7,148	4,593	2,388	507
2010	7,871	2,668	3,060	4,005	5,255	5,685	18,878	23,128	15,287	7,759	4,992	2,887	850
2011	8,067	2,898	3,214	4,010	4,729	5,642	20,112	23,824	15,586	7,918	5,721	2,303	849
2012	8,189	2,923	3,409	4,609	5,402	6,163	19,237	24,761	16,191	6,988	5,453	2,274	853

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

area's June and July job averages higher than for any other two-month period in any other region. (See Exhibit 7.)

Averaged over the year, however, monthly jobs were highest in Southeast, followed by the Aleutians and Southcentral. Summer employment in Southeast and the Aleutians does not match Bristol Bay's high summer numbers, but those areas have more nonsummer fishing, leading to higher annual numbers.

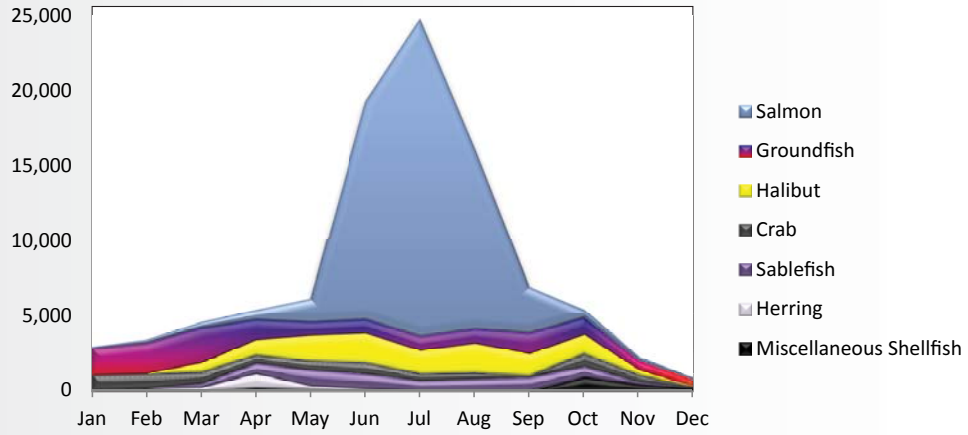
Prep and cleanup time for crew

Most of the employment numbers in this article are for time spent actively fishing, but those numbers don't include time that crew spend on preparation at the beginning of the season and cleanup at the end.

In 2013, the department's survey asked permit holders to specify the time their crew spent on prep and cleanup in 2012. This work on the edges of the seasons generated an additional monthly average of about 385 jobs. (See Exhibit 9.)

Annual average monthly prep and cleanup employment for longliners was about 130, higher than for any other single gear type. (See the box on page 8.) Close to half of the reported prep and cleanup employment was for those who fished salmon, including gillnetters, set netters, seiners, and trollers.

6 Monthly Job Distribution by Species
Alaska, 2012



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

Most are men, average age of 34

Of the 31,800 people who fished in Alaska last year, about 22,000 were crew members and 9,800 were permit holders. Crew tend to be young, with an average age of 34 and more than a third between ages 21 and 30. Permit holders were considerably older, at 47 on average. (See Exhibit 10.)

The vast majority of harvesters were male, at 86 percent. Specifically, 85 percent of permit holders were men as well as 88 percent of crew members.

About these numbers

Because fisheries data come from a variety of sources with different lag times, harvesting estimates are not available as quickly as other data series the Department of Labor and Workforce Development publishes. For example, information on fish landings is reported annually, several months after the end of the year. This can lead to delays between harvests and data publication.

As a substitute for detailed payroll records, the department applies a crew factor, explained below, to Alaska Department of Fish and Game's weekly landing and daily delivery records as well as National Marine Fisheries Service's landings data to estimate fish harvesting employment. A landing is the initial sale of harvested fish to a buyer.

The department receives these numbers from the Alaska Fisheries Information Network, or AKFIN, whose records are a combination of those two sources and also report fish type, value, and volume plus the number of permit holders who fished that year and their residency status.

The department assigns permit holders unique identifying numbers to ensure that if they make multiple landings in a month on the same permit, they are counted only once. Jobs are also assigned by place of work rather than the residence of the workers. Most permits have a geographic designation where specific species can be harvested and permits that allow fishing anywhere in the state receive a special harvest area code.

The department considers the permit itself the employer, which means a permit holder who makes landings under two different permits in the same month will generate two sets of jobs. Considering the permit the employer rather than the permit holder is a slightly more accurate approximation of how jobs and workers are counted in wage and salary numbers. If permit holders were the employers, it would appear that they maintain identical crew for every permit.

Who was counted

The department included all permit holders who made at least one landing in 2012. In most fisheries, a permit holder can crew for another fish harvester without buying a separate crew license, so it's possible some permit holders not only fished their own permit, but crewed on someone else's boat as well.

Because crew licenses are purchased for either a seven-day period or a calendar year, the department assumed that all 2012 license holders fished at least once that year.

Though most fish harvesters are exempt from paying into the state unemployment insurance program, some do. Labor records show 1,320 crew and 216 permit holders paid into the UI system last year and held positions that were likely fishing-related, so their jobs appeared in the regular wage and salary data. However, these fishermen are excluded from the part of the article that talks about other jobs, because the focus of that section is on salaried work other than fish harvesting. The "other" jobs not included were fishermen and related fishing workers, sailors and marine oilers, captains, mates, pilots of water vessels, and ship engineers.

Prep time not yet included

The department sent surveys to 9,161 permit holders in February of 2013 to determine maximum crew requirements by month. The return rate was 35 percent, with almost 94 percent of permit holders who replied indicating they fished in 2012.

Responses from the 2013 survey were combined with those from the 2012 survey to produce a crew factor by gear type. The department then applied the crew factor to landings data for active permit holders to estimate 2012 harvesting employment.

The 2013 survey also asked permit holders to identify months they had hired crew for prep and cleanup. Average monthly employment was calculated by finding the number of additional crew each permit holder used. Similar to the department's normal crew factors, this average employment for prep and cleanup workers was attributed to all landings during the calendar year.

Collecting prep and cleanup employment is new to the survey. For this cycle, that employment has not been combined with active fishing jobs, so the reported monthly estimates are probably low. In the future as we refine methods for collecting that information, we may combine active fishing and prep/cleanup jobs.

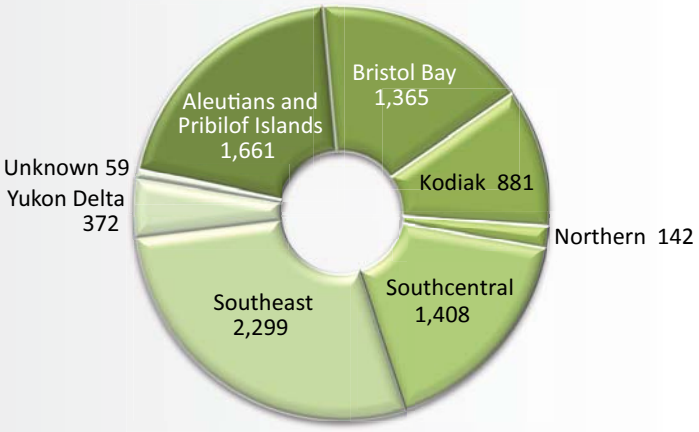
Harvesters' off-season jobs

Like many Alaskans, fish harvesters often have more than one job during the year. With a seasonal job like fishing, they often have lengthy periods of off-time for other kinds of work.

About 30 percent of the nearly 9,800 permit holders and 27 percent of the 22,000 crew had reported payroll wages in Alaska last year. (See Exhibit 11.) This means they showed up on some employer's payroll outside of fishing, but that doesn't include anything earned out of state, federal government work, or other self-employment.

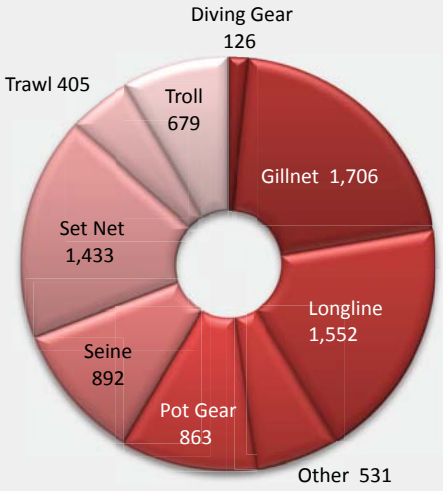
Harvesters earned more than $191 million in 2012 for these other jobs, making an average of $21,722. Permit holders as a group earned an average of $29,517 in other wages for the year compared to the crew average of $17,911.

7 Southeast Has the Most Fishing Jobs
Monthly average by Alaska area, 2012



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

8 Jobs by Gear Type
Average monthly jobs, 2012



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

Common harvesting gear and species caught

Set Net: A net placed in water with floats at the top and weights on the bottom that catches fish as they swim into the net. Used for salmon.

Gillnet: A net that is hung vertically to trap fish by their gills. Used for salmon and herring.

Longline: a type of deep-sea gear consisting of a long main line anchored to the bottom, to which shorter lines with baited hooks are fastened at intervals. Commonly used for halibut, rockfish, cod, and sablefish.

Troll: A baited line trailed behind a boat. Used for salmon.

Seine: A net that hangs vertically in the water with floats at the top and weights at the bottom edge, the ends being drawn together to encircle the fish. Used for salmon and herring.

Trawl: A large, wide-mouthed fishing net dragged by a vessel along the ocean bottom or in the midwater. Commonly used for shrimp, pollock, cod, rockfish, and flatfish.

Dive gear: Commonly used for sea cucumbers, geoducks, and sea urchins.

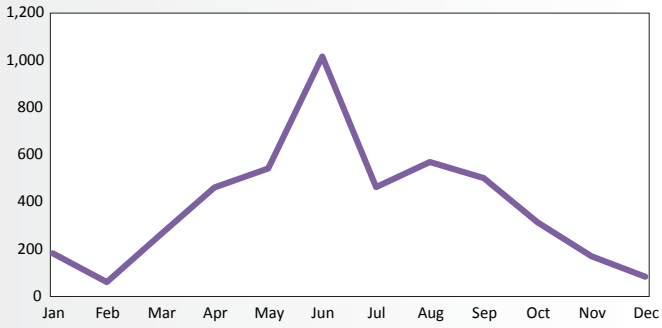
Pot gear: Commonly used for crab, shrimp, and cod.

80 percent with other jobs were salmon harvesters

About 80 percent of harvesters who also worked a regular job in 2012 were salmon harvesters, who typically had a short, intense summer fishing period and a longer off-season. (See Exhibit 12.) Salmon fishermen earned $68 million of the $85 million payroll earnings among all permit holders.

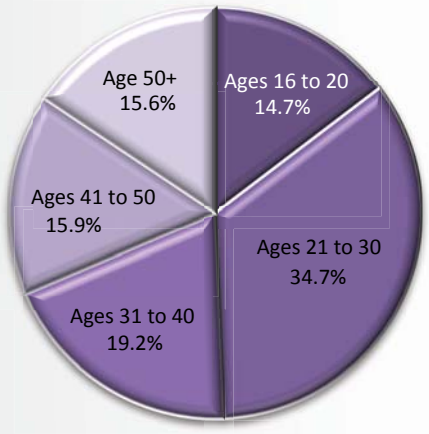
About a third of both halibut and salmon permit holders worked other jobs. At the other end of the scale, 10 percent or less of groundfish and sablefish permit holders held a payroll job in 2012, likely due in part to longer fishing seasons.

9 Prep Time Peaks in Late Spring
Prep and cleanup jobs, 2012



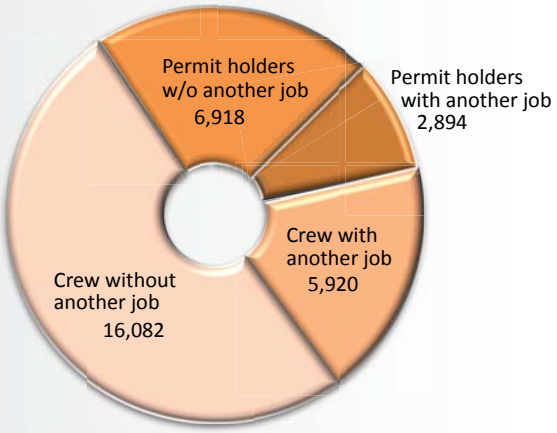
Sources: Commercial Fisheries Entry Commission; Alaska Department of Fish and Game; National Marine Fisheries Service; and Alaska Department of Labor and Workforce Development, Research and Analysis Section

10 Harvesters Are Young
Alaska, 2012



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

11 Harvesters' Other Jobs*
Alaska, 2012



*Other jobs refers to nonfishing-related wage and salary employment; meaning, the harvester showed up on an employer's payroll at some time during the year.

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

12 Other Earnings* by Species
Alaska permit holders, 2012

	Other earnings	No other earnings	% with other earnings	Avg other earnings
TOTAL	2,894	6,918	29.5%	$29,517
Salmon	2,311	4,793	32.5%	$29,417
Halibut	338	647	34.3%	$32,422
Crab	67	367	15.4%	$32,219
Misc Shellfish	67	221	23.3%	$26,560
Groundfish	41	441	8.5%	$21,331
Sablefish	41	364	10.1%	$25,878
Herring	19	83	18.6%	$26,731
Other/Unknown	10	2	83.3%	$10,033

13 Other Earnings* by Region
Alaska permit holders, 2012

	Other earnings	No other earnings	% with other earnings	Avg other earnings
TOTAL	2,894	6,918	29.5%	$29,517
Yukon Delta	730	256	74.0%	$22,449
Bristol Bay	613	1,597	27.7%	$32,421
Southeast	540	2,131	20.2%	$28,068
Southcentral	508	1,503	25.3%	$38,932
Northern	174	100	63.5%	$31,264
Aleutians/Pribilof Islands	119	711	14.3%	$28,366
Kodiak	108	583	15.6%	$32,359
Unknown in AK	102	37	73.4%	$18,801

14 Other Earnings* by Gear Type
Alaska permit holders, 2012

	Other earnings	No other earnings	% with other earnings	Avg other earnings
TOTAL	2,894	6,918	29.5%	$29,517
Set Net	1,412	1,275	52.5%	$28,110
Gillnet	611	2,189	21.8%	$33,286
Longline	327	1,058	23.6%	$32,492
Troll	265	799	24.9%	$29,167
Seine	91	646	12.3%	$21,650
Pot Gear	88	481	15.5%	$32,290
Diving Gear	38	149	20.3%	$26,444
Trawl	2	185	1.1%	ND
Other	60	136	30.6%	$20,392

*Other earnings refers to earnings from nonfishing-related wage and salary jobs, which means the permit holder showed up on an employer's payroll at some time during the year.
Notes: ND = nondisclosable

Sources for exhibits 12 to 14: Commercial Fisheries Entry Commission; Alaska Department of Fish and Game; and Alaska Department of Labor and Workforce Development, Research and Analysis Section

Most in Y-K have other earnings

Nearly three-quarters of all permit holders in the Yukon-Kuskokwim Delta held a second job in 2012. This ratio was higher than for any other region, but total and average earnings for the area were lower than in several other regions. (See Exhibit 13.)

The only other region close to Y-K Delta's high percent of permit holders with payroll jobs was Northern. It's likely that more fish are caught in both of these areas for subsistence use than commercial use, and residents who fish these areas are more dependent on supplementing their income with jobs that pay a wage. At the other end of the spectrum, permit holders in the Aleutians and Pribilof Islands and in Kodiak were least likely to have other earnings.

The highest total earnings from payroll jobs by region were in Bristol Bay and Southcentral with nearly $20 million each. The highest average annual earnings were in Southcentral at almost $39,000 per permit holder.

Second jobs by gear type

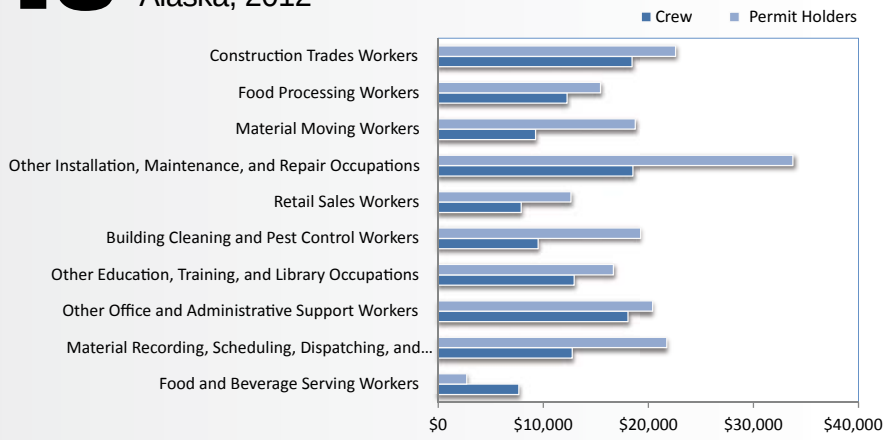
More than 1,400 of all set net permit holders, or

15 Fishermen's Other Occupations*
Alaska, 2012

*Other occupations refers to nonfishing-related wage and salary employment; meaning the harvester showed up on an employer's payroll at some time during the year.

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

16 Average Wages for Fishermen's Other Jobs*
Alaska, 2012



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

The fishing survey's final question

The 2013 Alaska Seafood Survey ended with this question: "What factors could allow/cause you to increase the number of crew used to fish this permit? (Check all that apply.) About 60 percent of returned surveys from harvesters who had fished in 2012 selected one or more of the following choices.

Increase in catch: 71.3%
Increase in fish dock price: 41.2%
Advancing age: 38.4%
Larger vessel: 32.1%
Lower noncrew share of related expenses (fuel, gear, bait): 21.2%
Change in length of season: 18.7%

53 percent, reported other earnings in 2012. Both the number of permit holders and percentage of set netters far exceeded that of any other gear type. (See Exhibit 14.) Set netters made nearly $40 million of the $85 million in payroll earnings of all permitted harvesters in 2012.

The small-scale nature of set netting provides income for families, but it is seldom the sole source of income. Many also worked other jobs for a wage.

Trawlers were at the other end of the scale. Only 1 percent of those holding a trawl license also earned a payroll wage. Most trawlers work on large vessels and have long seasons; for example, the shrimp beam trawl fishery in Southeast spans 10 months of the year.

Construction jobs most common

The most common type of other job for both permit holders and crew in 2012 was in construction trades. (See Exhibit 15.) When combined, crew and permit holders held more than 1,200 construction trade jobs.

Jobs in food processing and moving materials came in second and third respectively. Crew members were much more likely to work in food processing than permit holders, and most of these jobs were in fish processing plants.

Permit holders tended to earn more in their second jobs than crew. In nine of the top 10 occupations by number of workers in 2012, permit holders outearned crew. (See Exhibit 16.) Some of the wage difference is likely because crew members are younger on average and may not have as much experience or as many years invested in their second job.