

ALASKA ECONOMIC **TRENDS**

NOVEMBER 2013



Seafood Harvesting Jobs

WHAT'S INSIDE

**Salmon hatcheries boost harvests
Sitka's diverse economy**



**ALASKA DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT**

**Sean Parnell, Governor
Dianne Blumer, Commissioner**

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On the cover:
This photo was taken in Nakwasina Sound, just north of Sitka, during the March 2011 herring fishery.
Photo by Joel Brady-Power

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Alaska's wild seafood a sustainable, global commodity



**By Dianne Blumer,
Commissioner**

This month's *Trends* focuses on seafood harvesting jobs in Alaska. Seafood was recognized early in Alaska's history as one of our most important economic assets and continues to play a critical role in the state's economy.

More than half of the fish commercially landed by United States fishermen comes from Alaska waters, and the state remains a worldwide leader in producing highly desirable seafood for global markets. In 2012, Dutch Harbor-Unalaska was the nation's most productive port by poundage for the 16th year in a row.

Seafood harvesting has grown from an average of 8,067 jobs each month in 2011 to 8,189 in 2012. More than 4,500 of these average monthly harvesting jobs were in seasonal salmon fisheries. The seafood industry also includes thousands of jobs in processing, hatcheries, and support businesses, which are a large economic driver in many Alaska communities.

The Alaska Department of Labor and Workforce Development's Research and Analysis Section provides a wide range of labor market data, including statistics on Alaska's seafood industry. The information is available online at Laborstats.Alaska.Gov. Our research staff updates current data and posts new analyses often.

Also this month, we profile Sitka, a Southeast community in transition that blends rich history and a new future as its residents returned to fishing and tourism after the end of the timber era in the early 1990s. The National Oceanic and Atmospheric Administration reports that Sitka is the ninth largest port in the nation by value.

When Alaska became a state in 1959, its constitution mandated that fish be

used, developed, and maintained on the "sustained yield principal." This has translated into an Alaska fishery that is recognized worldwide as a model for responsibility and sustainability. The Alaska Department of Fish and Game's rigorous science and intensive monitoring of stocks provides managers with the data to make the most effective fisheries management decisions.

Through the Alaska Seafood Marketing Institute, Alaska successfully markets its wild Alaska seafood as not just a commodity, but a premium brand, commanding premium prices from savvy consumers.

The Parnell Administration has championed Alaska's wild seafood message and opposed incursions by inferior farmed seafood, especially salmon.

"Alaska" as a brand for seafood is the second most commonly menued protein brand behind Angus beef, according to a study by DataSentials, a food industry market research firm.

Hire a Veteran

November is also our month to not just remember, but to hire Alaska veterans. Each year we celebrate Veterans Month in Alaska with our Alaska Veterans Job Fair, drawing thousands of vets and their spouses to meet hundreds of Alaska employers. This year's Veterans Fair is Nov. 8 from 10 a.m. to 3 p.m. at the University Center Mall in Anchorage. It is consistently the largest job fair in Alaska each year.

Employers who hire veterans can receive substantial tax credits on top of the even-larger satisfaction of rewarding our fighting men and women with well-earned successful careers after their service. For more information, go to Jobs.Alaska.Gov.

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.

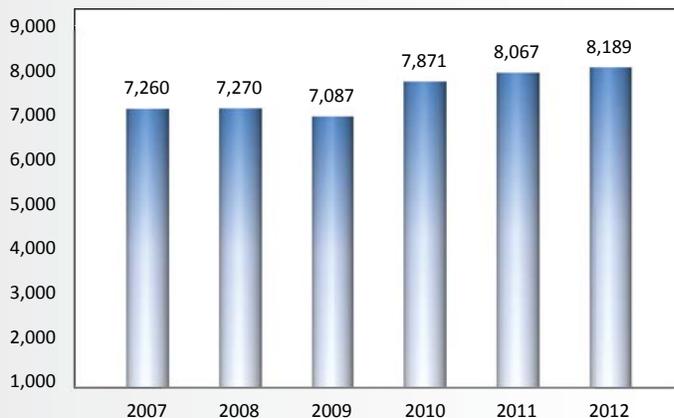
To fill that gap, the department estimates fish harvesting employment each year using other sources and methods. (See the sidebar on page 7 for more detail.) This special project, a collaboration with the Alaska Department of Fish and Game, attempts to provide a better picture of the industry's size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

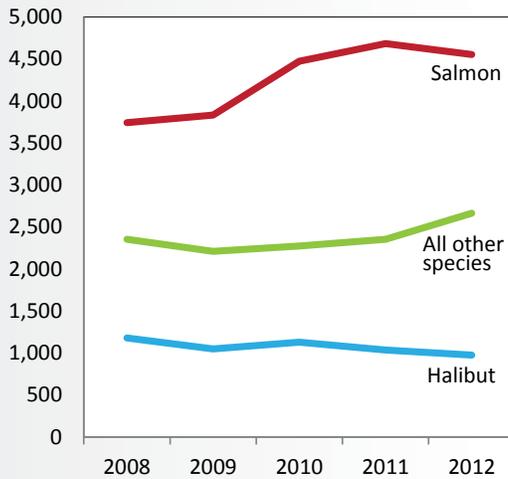
1 Average Monthly Jobs Are Up Seafood harvesting, 2007 to 2012



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

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.

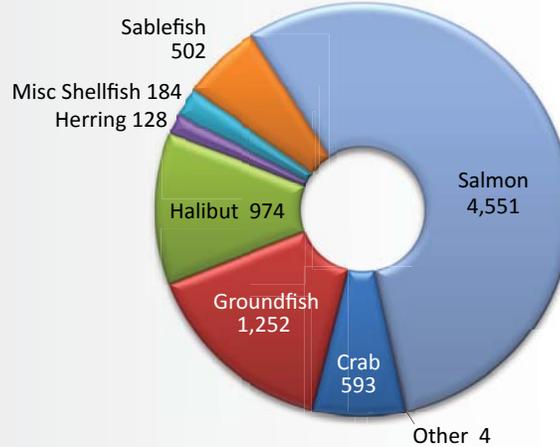
Fishing employment peaks in the summer, with 57 percent of harvesting jobs statewide taking place between June and August. (See exhibits 4 through 6.) The vast majority of this high harvesting summer employment is in salmon fisheries.

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

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

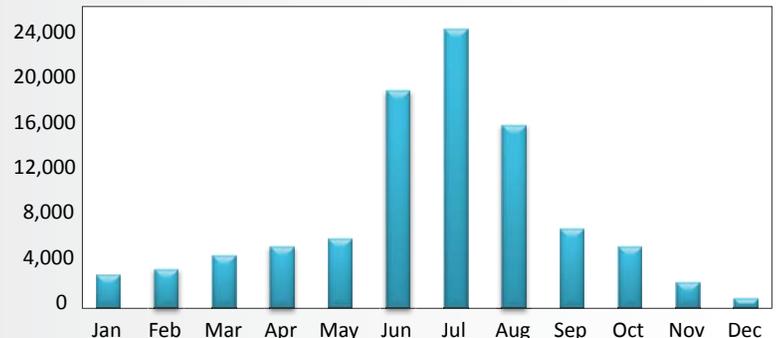
concentrated in the summer, some fisheries such as sablefish, crab, and groundfish have longer seasons with jobs spread out over a longer period of the year.

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

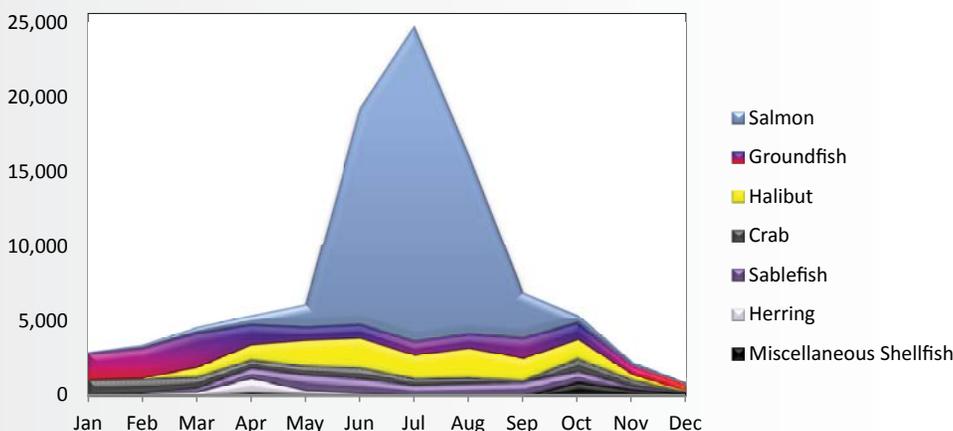
Most of the employment numbers in this article are

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

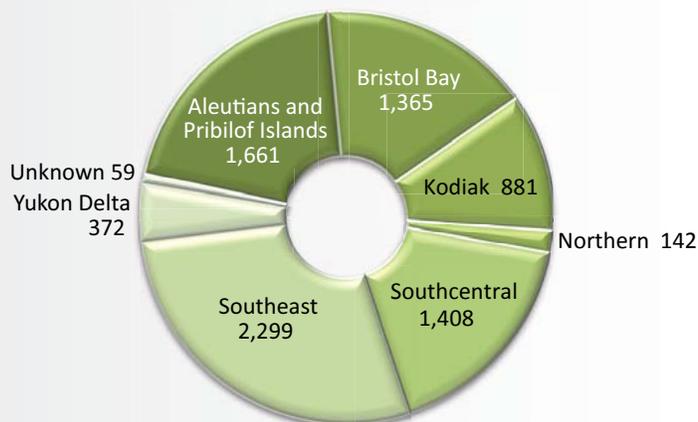
Like many Alaskans, fish harvesters often have more than one job during the year. With a seasonal job like fishing, they often have lengthy periods of off-time for other kinds of work.

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

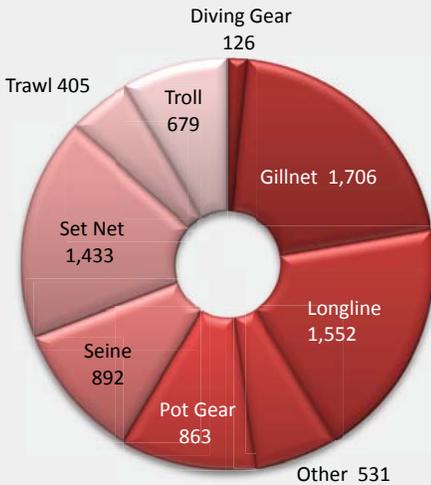
Monthly average by Alaska area, 2012



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.

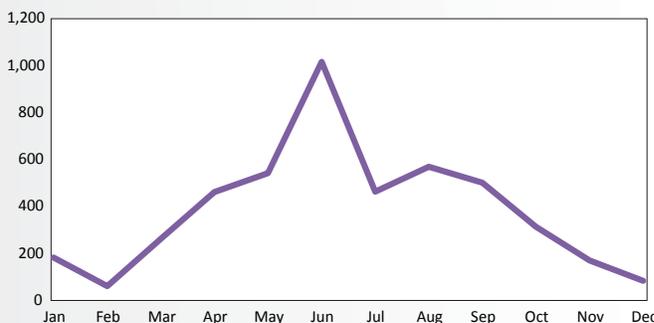
80 percent with other jobs were salmon harvesters

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

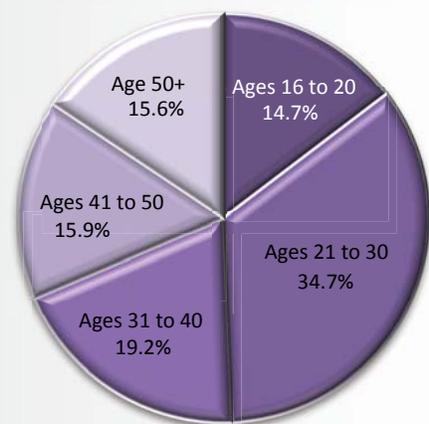
Prep and cleanup jobs, 2012



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

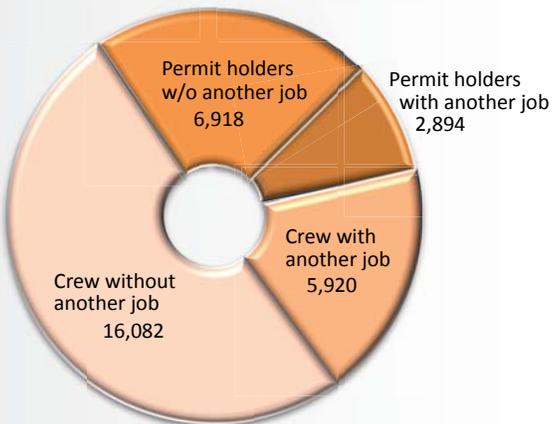
10 Harvesters Are Young

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

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

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

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

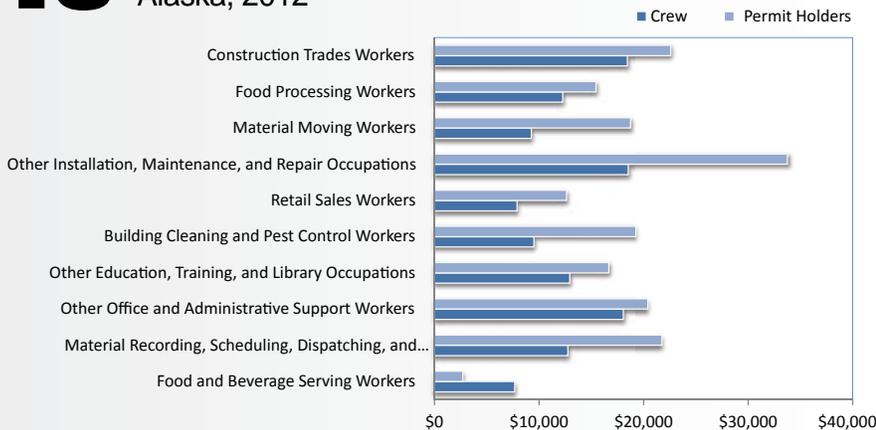
53 percent, reported other earnings in 2012. Both the number of permit holders and percentage of set netters far exceeded that of any other gear type. (See Exhibit 14.) Set netters made nearly \$40 million of the \$85 million in payroll earnings of all permitted harvesters in 2012.

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.

16 Average Wages for Fishermen's 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

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 out-earned 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.

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%

Alaska's Salmon Hatcheries

Hatchery fish enhance sport, commercial harvests



Hatcheries play a critical role in Alaska's commercial salmon harvests by boosting fish abundance. About 31 percent of 2012's total catch originated in a hatchery — more than 37 million fish — and another 7 million were harvested as part of the hatchery cost recovery program, which allows a special harvest of returning hatchery fish to pay for operations.

Salmon culturing, also known as “ocean ranching,” differs from salmon farming, as hatchery fish are released into the ocean while immature. All salmon in Alaska, whether from natural runs or hatchery-born, are caught “in the wild.” Farmed salmon, which are raised and harvested in captivity, are prohibited in Alaska.

Hatchery work is much less labor-intensive than harvesting the fish. Average monthly employment was just over 300 at the 34 hatcheries operating in 2012. Around half the jobs were in Southeast Alaska, where 20 hatcheries are located. The

remaining 14 operate in Prince William Sound, Cook Inlet, Kodiak, Anchorage, and Fairbanks. For comparison, a monthly average of 4,500 people harvested salmon.

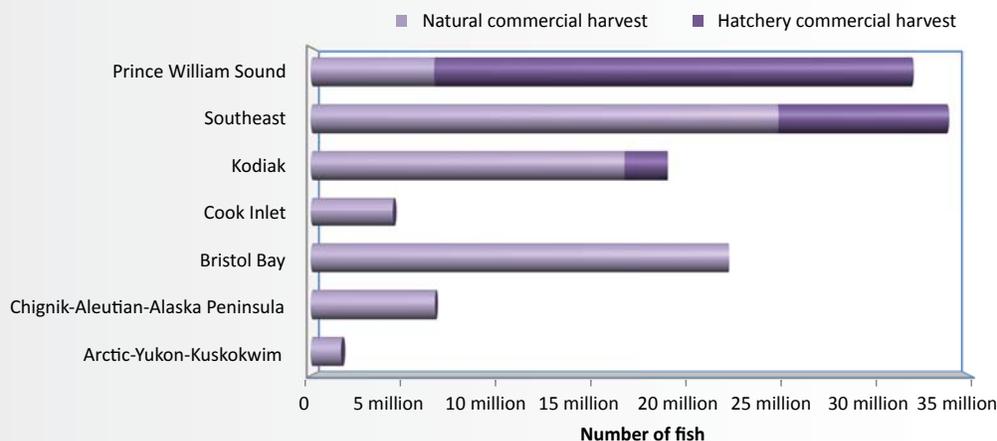
For some species in some areas, hatchery fish — also called “enhanced” fish — make up the majority of the harvest. In Prince William Sound, hatchery fish are 80 percent of commercial landings. Just over a quarter of Southeast Alaska's commercial harvest and an eighth of Kodiak's are hatchery-produced. In contrast, less than 1 percent of the Cook Inlet harvest was from enhanced stocks. (See Exhibit 1). Western and Northern Alaska have no operating hatcheries.

Chum salmon stocks are the most heavily enhanced of all salmon species, with over 60 percent of the statewide ex-vessel¹ chum value from hatchery fish in 2012. Pink salmon are the second

¹Ex-vessel is the price for fish at the dock, before processing.

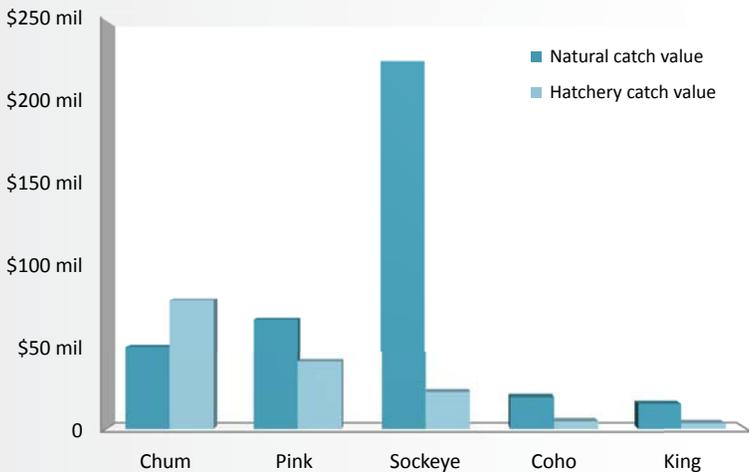
1 Hatchery Fish Often Dominate Commercial Catch

Numbers of hatchery-produced and natural fish caught, 2012



Source: Alaska Department of Fish and Game

2 Natural vs. Hatchery Species Values Alaska salmon, 2012



Note: Values are ex-vessel, or the cost off the boat before processing.
Source: Alaska Department of Fish and Game

most enhanced stock, and close to 40 percent of the ex-vessel value of commercially caught pinks were from hatcheries. (See Exhibit 2.)

History of hatcheries

Salmon hatcheries have operated in Alaska with varying functionality since the 1890s. Alaska's earliest fisheries management was technically the responsibility of distant federal regulators, but for the most part, Seattle-based canneries called the shots.

Fish hatcheries were still a relatively new idea for Pacific salmon in those days, and from California to Alaska, salmon propagation was a much more popular solution to over-fishing than harvest restrictions. The initial hatcheries failed almost universally to generate salmon returns, and improved fishing techniques and habitat destruction decimated wild stocks in Washington, Oregon, and California.

With hatchery programs deemed largely unsuccessful, the only operating hatcheries by the mid-century were government-run research stations in Alaska.

Alaska's newly formed state government took over state fisheries management in 1960 during a period of historically low salmon abundance. The idea of propagation as a way to reverse decline in

the fishery again became popular in the new state. In 1971, the Alaska Legislature created the Division of Fisheries Rehabilitation, Enhancement, and Development — or FRED — to ensure perpetual and increasing production of the state's fisheries and encourage private-sector investment in fish rehabilitation and enhancement.

In the years that followed, the state introduced limited-entry fishing — harvest by permit only — and created the private nonprofit hatchery program, intended to meet public need by both conserving wild stocks and contributing to the harvest by increasing salmon abundance.

How they operate

Private hatcheries, which are all nonprofit, were also granted ownership of a certain percentage of the value of the fish they raise and allowed cost-recovery harvests, which are typically permitted in areas and dates otherwise closed to the common property commercial harvest. (See Exhibit 3.) Hatcheries are also permitted to take fish for brood stock.

Part of the private nonprofit hatchery program allowed the formation of regional associations, composed of local stakeholder representatives authorized to operate hatcheries and collect a tax on commercial landings, provided the tax was voluntarily approved by a majority of commercial permit-holders in the region.

Five regional aquaculture associations operated 17 hatcheries in 2012. The other 11 private hatcheries operating in Alaska last year were run by eight nonprofit organizations that funded operations through cost-recovery harvests and some state grants.

Federal and state governments manage the remaining six hatcheries. Three state-run hatcheries mostly cater to sport fisheries. The National Oceanic and Atmospheric Administration hatcheries at Little Port Walter and Auke Bay in Southeast Alaska are the two oldest operating hatcheries in the state and are largely research-oriented. The remaining federal hatchery is run by the Metlakatla Indian Community on the Annette Island Reserve.

A small, seasonal job source

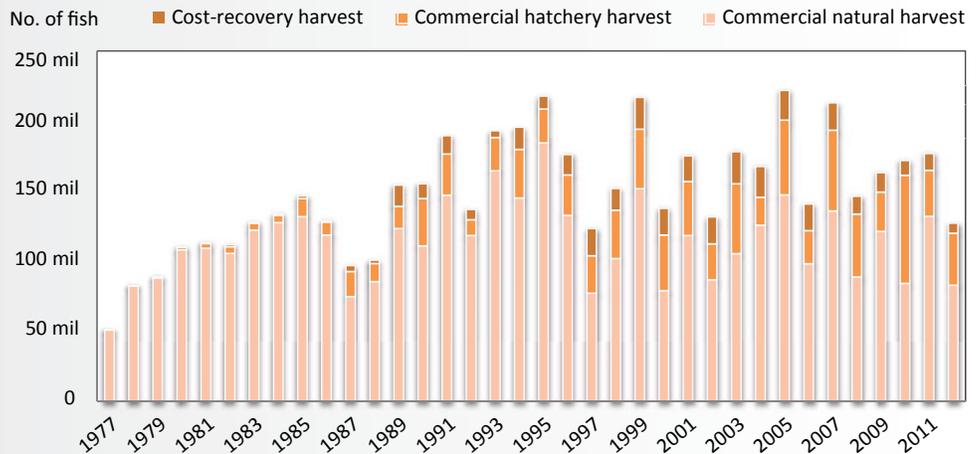
Jobs in Alaska aquaculture are highly seasonal

because they are dictated by the salmon's life cycle, with employment peaking in the summer at around 400 and dropping to about 175 in the winter. Hatchery workers earned around \$13 million in wages in 2012. The return of hatchery salmon provided an estimated \$149 million, or 28 percent, of the total commercial ex-vessel value.

Despite their small role as employers, salmon hatcheries play a larger and important role in Alaska's fishing industry and coastal communities. Hatcheries don't just augment Alaska's commercial fisheries; sport and personal-use fishermen also benefit from enhanced stocks near the hatcheries. Many hatcheries have tours and teaching programs on salmon life cycles and Alaska's fisheries, and some host special events.

3 Cost-Recovery vs. Regular Harvests

Alaska salmon, 1977 to 2012



Source: Alaska Department of Fish and Game



This month in Trends history

NOVEMBER 1967

Alaska's unemployment rate rose to 8.6 percent in November 1967.

The Coast Guard cleared the way in November for Alaska Governor Walter J. Hickel to expand Alaska's Marine Ferry service from Ketchikan to Washington state, beginning the first of December.

President Lyndon Johnson signed a bill this month authorizing the sale of the Alaska Communications System to private industry.

To further entice development of Alaska's minerals

and other natural resources, the Alaska NORTH Commission voted to spend funds on studies calling for a 400-mile extension of the federally owned Alaska Railroad north from the Fairbanks area.

There are a total of 24 rotary drilling rigs (five land-based and 19 off shore) operating in the state versus a total of 19 last year.

The number of barrels of oil is almost double the August average per day. Although costs are higher, Alaska already produces more oil per well than any other state.

Alaska Economic Trends has been published in Alaska since 1961. Historical articles are available at labor.alaska.gov/trends as far back as 1978, and complete issues are available from 1994.

Sitka's Diverse Economy

Fishing town returns to its roots after end of timber era



The Southeast city of Sitka has one of the longest colonial histories of any place in Alaska. Known to the Russians as Novo Arkhangelsk — “New Archangel” — Sitka was established as the capitol and administrative headquarters for Russian America.

In 1799, Russians set up the headquarters of the Russian American Company near what was originally a Tlingit settlement, taking advantage of the lucrative fur trade between Alaska Natives and Russians along the Alaska coast. The high price that otter pelts fetched in the Chinese and European markets brought enormous profits for traders who bartered for pelts in Sitka, then crossed the Pacific to deliver to eastern Asian ports such as Canton and Okhotsk.

In 1867, the transfer of Alaska to the United States from Russia took place in Sitka, and until 1906 the town served as the capital of what was then known

as a district.

Alaska's first gold discovery was near Sitka in 1872, a few years after the purchase. This ignited mining interests and spurred the stream of prospectors during the Klondike Rush who spread by the thousands into the Juneau mining district and eventually the interior.

Despite the presence of potentially economic mineral deposits nearby, a stigma developed over mining in Sitka. According to a recent assessment by Avalon Development of Fairbanks, Sitka's reputation in the mining world during the rush was damaged by speculation, lack of capital, and poor management despite enormous endeavors in Juneau and elsewhere. Other political factors and land ownership precluded mining firms from exploring the region in the mining revivals up to the present day, so few data are available on the resource.

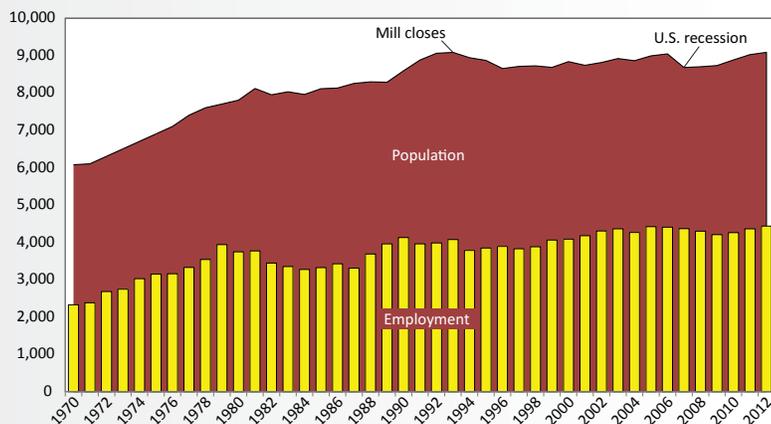
Seafood would eventually become the base of Sitka's economy, which was punctuated by the tumultuous rise and fall of the timber industry. Unlike some communities in Southeast that took a long-term hit from the removal of a large industry from a small economy, Sitka's population, jobs, and wages have recovered due to its relatively diverse economy. (See Exhibit 1.)

Structural change from timber

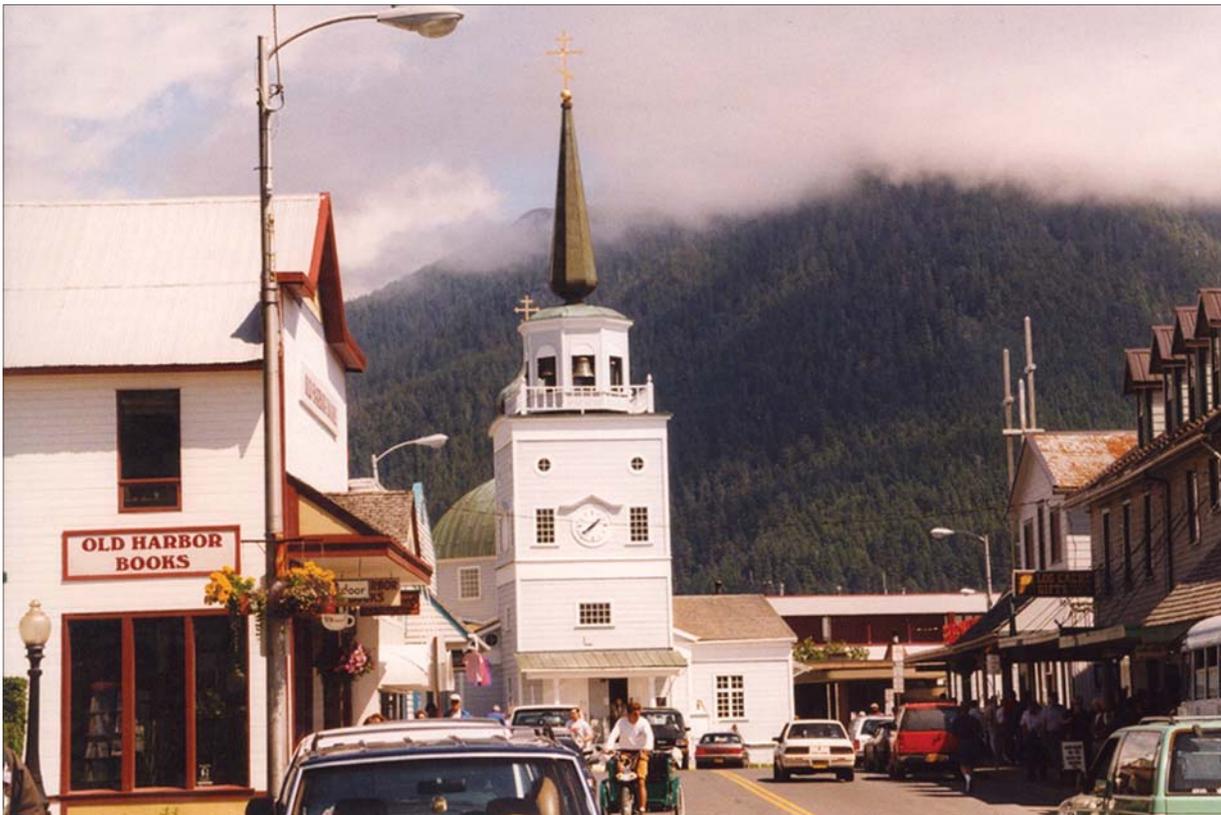
The timber era in Sitka was instigated by the federal government, which signed several long-term contracts in the 1950s to supply timber to mills in Southeast. One of these was the Alaska Lumber and Pulp Company, which was the largest employer in Sitka from the 1960s through its closure in 1993. Population also peaked that year at 9,000, a gain of about 3,000 since the start of timber's rise.

The mill's closure was followed by stagnating

1 Stability Despite Economic Changes Sitka's population and employment, 1970 to 2012



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section



Above, Lincoln Street is the main street in downtown Sitka. In the center is St. Michael's Russian Orthodox Cathedral. Photo by Roger Wollstadt. Above left is a peregrine falcon in Sitka. Photo by Alan Wu

employment and a 5 percent decline in the population over the next three years. (See Exhibit 1). An Alaska Department of Labor and Workforce Development study of former workers found that by 1996, 30 percent of the mill workers had left Alaska. The remaining workers had difficulty finding other jobs and saw their once-high earnings fall despite Sitka's relatively diversified economy.

Average monthly wages also peaked in 1993 due to high-paying mill jobs, then dipped considerably from a high of \$3,700 (in 2012 dollars). After a few solid years of growth, wages were still well below that level in 2012, at \$3,350.

Today, Sitka's population has grown to just over 9,000, recovering its 1993 high. The area's slowdown from the 2007-09 U.S. recession was small and short-lived, much like it was for the rest of the state, and 2012 brought record employment of 4,433.

The numbers from 2012 don't show surging growth, but given the increasing pace of retirement and seasonal industries, slow employment and population growth don't signify an unhealthy economy. Sitkans have a high quality of life — low utility rates and

unique access to health care, education, and recreation for a town of its size. Healthy earnings from fisheries have also helped shield the economy after the loss of the timber industry.

Sitka's unemployment rate was the fifth-lowest of any borough or census area in 2012 and was second-lowest in Southeast, after Juneau. Though Sitka's per capita income is slightly below the state average, it tops the U.S. average. Sitka residents also rely less on government transfer payments such as food and income assistance than other Alaskans.

Fish brings in \$47 million a year

The National Oceanic and Atmospheric Administration — or NOAA — reports that Sitka is the ninth-largest port in the United States by value and the 14th largest by volume of seafood harvested.

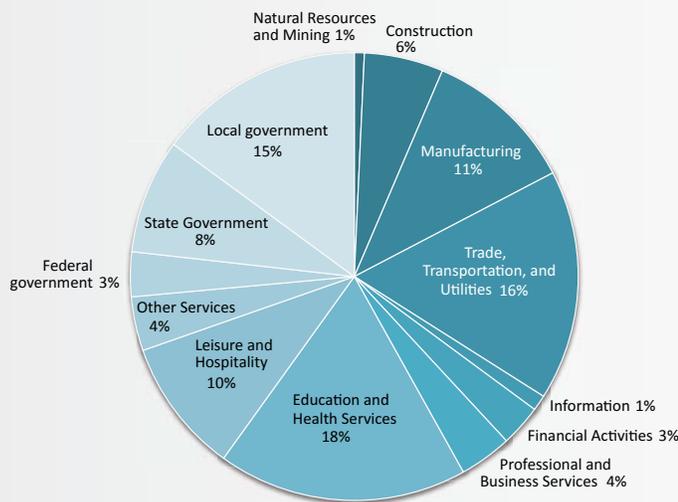
Seafood harvesters aren't reflected in regular employment data because most are self-employed,¹ but according to the U.S. Census Bureau's analysis of tax receipts, 596 of these "nonemployers" — the

¹For more on fishing jobs and how they're counted, see the main article on page 4 of this issue.

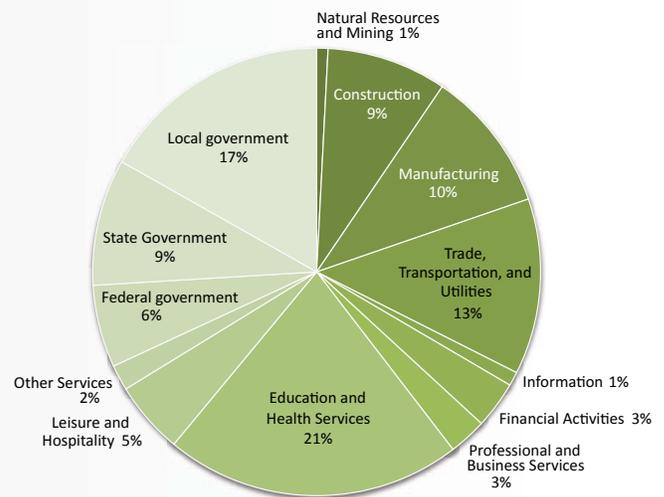
2 Sitka's Range of Industries

Percentages of jobs and wages, 2012

Employment



Wages



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Census term for businesses without employees — in Sitka's fishing industry reported \$47 million in receipts in 2012. This was about 9 percent of the state total for self-employed fishermen's earnings, another indicator of the major role fishing plays in Sitka.

Salmon is critical to the area, both from a commercial perspective and a history of subsistence. According to Alaska Department of Fish and Game reports, Sitka permit holders received an estimated \$16 million in gross ex-vessel² value from salmon in 2012, and adding high-value sablefish, halibut, and other seafood harvests brings the total to \$41 million.

Natives historically harvested herring roe on the branches of hemlock trees (see the photo on page 18), and today, commercial herring openers in the spring are one of the most iconic derby fisheries in the world, even having been featured on reality television.

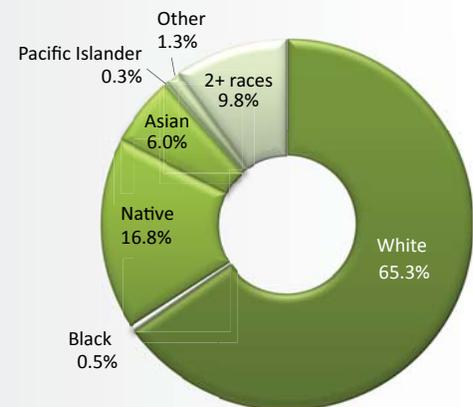
Other natural resources have also spurred fledgling businesses such as a tribal-run tannery, sea salt manufacturing, and bulk water sales.

Manufacturing mainly processing

Seafood processing has ramped up in recent years

²Ex-vessel is the price for fish at the dock, before processing.

3 Sitka's Racial Makeup 2012



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

with the added capacity from the opening of the Silver Bay plant in 2007. July processing employment had peaked at about 400 until that year, then reached a record 1,100 jobs in 2011. In that stellar fishing year, Sitka plants processed a net 87.8 million pounds of seafood with a wholesale value of \$170.8 million.

High plant numbers are helping drive the last four years of job growth shown in Exhibit 1. Although



Above, this photo shows Sitka with a herring fleet in the harbor. Photo by Flickr user BackwaterSurfer

the numbers have yet to be finalized, 2013 appears to have been a similarly epic year for salmon throughout Southeast.

Though the majority of manufacturing jobs are in seafood, Sitka also has a well-established ship-building firm and a brewery that distributes outside the area.

Tourism in Sitka

Tourism is a well-supported primary industry in the community, and cruise passengers have typically been shuttled into downtown to see its myriad historic and educational sites. A private entity recently built a new mooring facility just north of town and hopes to attract ships in future tourism seasons.

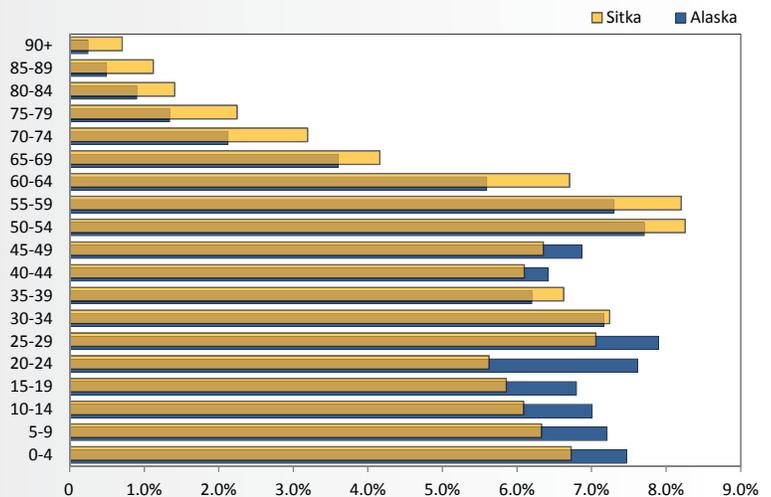
Several hotels and restaurants in the downtown area cater to fly-in visitors and locals. These leisure and hospitality employers provide 10 percent of local jobs but only 5 percent of wages. (See Exhibit 2.) These types of jobs are often part-time, lower paying, and seasonal.

A niche for health care

While fishing and tourism bring in money from outside, health care and education organizations

4 Sitkans Older Than Alaskans

On average, percents by age group, 2012



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

generate significant wages and jobs in the area. In an unusual mix of public and private facilities, Sitka has made a small-town niche for these services, which provide higher average wages than Sitka's rural Southeast counterparts.

The regional Native hospital SEARHC, Sitka's

largest employer, is a major contributor to the 18 percent of private health care jobs and 21 percent of the industry's private wages. (See Exhibit 2.)

Another major health care contributor is the state-run Sitka Pioneers' Home, which houses 75 of Alaska's elders. The Pioneers' Home also affects Sitka's overall age distribution, which is four years older than the state median. (See Exhibit 4.)

A legacy of education

The community remains focused on education despite the 2007 closure of Sheldon Jackson College, which opened in 1878 and was once the only institution of higher learning in the territory. The college campus was transferred to the Sitka Fine Arts Camp, drawing artists who perform and offer workshops for all ages.

The fine arts camp is one of the two private education organizations that create jobs and bring worldwide talent to Sitka. The other, the Sitka Sound Science Center, hosts students from several outside universities for their field courses in marine science.

The two state-run educational institutions are the Alaska State Trooper Academy and Mount Edge-



Above, harvested Sitka herring roe attached to hemlock branches. Photo by juneautek.com

cumbe High School. The trooper academy offers instruction in criminal investigation, police procedure, laws, physical skills, and the training of village public safety officers, troopers, and wildlife officers. Mount Edgecumbe, the state-run boarding school, serves students from all over Alaska and is the largest school in Sitka by enrollment. These organizations add state jobs, but also employment for housing, catering, and maintenance contractors.

The University of Alaska Southeast also has a branch in Sitka, with 80 to 90 jobs during the school year and enrollment of 1,160 in spring 2012.

Education and health made up a third of all employment in 2012 when private and government jobs were combined, and many of those were year-round positions. This is reflected in the high proportions of nurses and teachers shown in Exhibit 5.

Government's share of jobs

Sitka's government employment is similar to that of the state as a whole, accounting for 26 percent of payroll jobs in 2012 when schools, hospitals, and tribes are included. There are small offices at the trooper academy (Department of Corrections), Department of Fish and Game, Department of Health and Social Services, and Indian Health Service.

Sitka's federal employment has declined, which is also similar to the rest of the state. Federal jobs in Sitka peaked at 210 in 2004 with many seasonal forestry jobs, and has been reduced by about 25 percent since then, shrinking the overall government share of jobs and wages.

5 Seafood Processing Tops Occupations Sitka, total workers and wages in 2012

Occupations	Workers	Wages
Meat, Poultry, and Fish Cutters and Trimmers	617	\$5,378,616
Retail Salespersons	297	\$2,832,517
Waiters and Waitresses	200	\$1,348,616
Cashiers	192	\$1,739,710
Registered Nurses	184	ND
Construction Laborers	165	\$2,352,802
Teachers and Instructors, All Other	160	ND
Nursing Assistants	133	\$3,398,125
Janitors/Cleaners, Exc Maids and Housekeeping Cleaners	132	\$2,097,355
Combined Food Prep and Serving Workers, Incl Fast Food	122	\$677,956
Fishers and Related Fishing Workers	115	\$1,835,922
Secondary Teachers, Exc Spec and Career/Tech Ed	108	ND
Maids and Housekeeping Cleaners	106	\$703,438
Office and Administrative Support Workers, All Other	95	\$1,731,100
Bartenders	91	\$669,525
Recreation Workers	87	ND
General and Operations Managers	85	\$4,293,660
Stock Clerks and Order Fillers	85	ND
Bookkeeping, Accounting, and Auditing Clerks	83	\$2,106,586
Social Workers, All Other	79	\$1,824,066

Notes: This table counts workers by occupation regardless of seasonality or longevity of their employment. It excludes federal workers. ND means wages are suppressed to protect the confidentiality of an employer or its workers.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Employment Scene

Due to the recent shutdown of the federal government, no employment or unemployment numbers were available for this issue. Release of September and October data will be delayed until Nov. 22. Research and Analysis will post the data online at laborstats.alaska.gov when they become available.

Employer Resources

November is 'Hire a Veteran Month' in Alaska

For many years, Alaska and the nation have honored veterans during the month of November. Veterans Day, observed on Nov. 11, is the anniversary of the World War I armistice that ended hostilities on the 11th hour of the 11th day of the 11th month of 1918.

Alaska also marks Hire a Veteran Month in November, beginning with a proclamation by the governor and led by the Alaska Department of Labor and Workforce Development. The department will host its annual Alaska Veterans' Job Fair on Friday, Nov. 8 from 10 a.m. to 3

p.m. at the University Center Mall, located at 3801 Old Seward Highway in Anchorage. More than 120 employers and 1,500 job seekers are expected.

Employers can receive a federal tax credit for each unemployed veteran they hire. Employers who want to learn more about how to attract and retain veterans and why it's good for business can contact their nearest Alaska Job Center or call (877) 724-2539. For more information about the Veteran Employment and Training Program, visit jobs.alaska.gov/veterans/.

Alaska Career Ready Program saves businesses money

The Alaska Career Ready Program gives business owners and community leaders a tool set to help maintain and retain a more qualified workforce. Alaska Career Ready promotes the National Career Readiness Certificate, or NCRC, for members of Alaska's labor force.

The NCRC, which has been adopted nationwide, is a portable credential that certifies essential skills for success in the workplace. More than 28,000 Alaskans have earned the NCRC at the bronze, silver, gold, or platinum level. The NCRC was developed by the American College Testing program, also known for developing the ACT® college entrance test.

The NCRC includes three key ACT WorkKeys® assessments common to most jobs. These are: Reading for Information, Locating Information, and Applied Mathematics. The assessments measure core "real world" skills that are critical to job success. Assessments are available to adults at Alaska Job Centers at no cost. High school 11th graders also take the assessments. The Alaska Department of Labor and Workforce Development's career guides partner with teachers, counselors,

and parents to coach high school students on the value of the NCRC as they search for careers and suitable training, and to present their NCRC to employers.

For businesses, hiring applicants who hold the NCRC helps reduce recruiting costs, increase productivity, and decrease turnover. Businesses collaborate with Alaska Job Center staff members to "Recognize, Request, or Require the NCRC" in their recruitments.

When an employer requires the NCRC, a job analysis by a Department of Labor WorkKeys job profiler is recommended to determine the skill levels required. By comparing job profile information with WorkKeys assessment scores from applicants, businesses can make reliable decisions about hiring, training, and program development. There is no charge to businesses for the first profile.

For more information, visit jobs.alaska.gov/acrw.html or contact Kim Kolvig, Alaska Career Ready Program coordinator, at (907) 465-5948.