

# Harvesting jobs down in 2020

## The pandemic took its toll on jobs across fisheries, areas

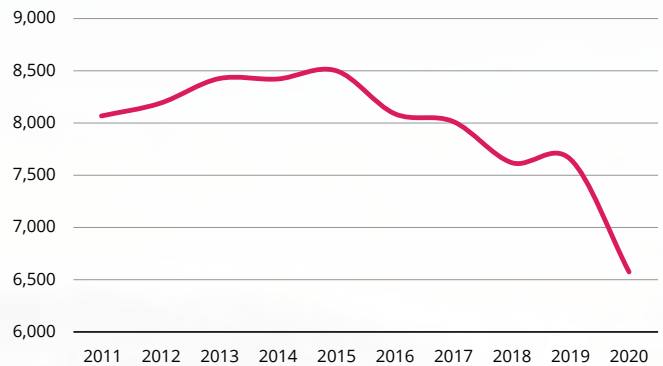
By JOSHUA WARREN

Last year's 14.1 percent drop in seafood harvesting employment was the largest recorded since we created these job estimates in 2000. Alaska's commercial fishing employment decreased from a monthly average of 7,653 in 2019 to 6,575 in 2020.

In a typical year, declines are tied to specific species or seasons. Last year's decline was not only steep, it was across almost all months and all fisheries. The only fishery to add jobs last year was crab, which was still recovering from losing more than a quarter of its employment a few years ago.

While COVID-19 made last year's employment trends anything but typical, it's difficult to isolate the pandemic's effects because harvesting employment can change dramatically from year to year anyway. The swings are subject to a range of factors, including when openings happen — *if* they happen — and environmental and biological factors.

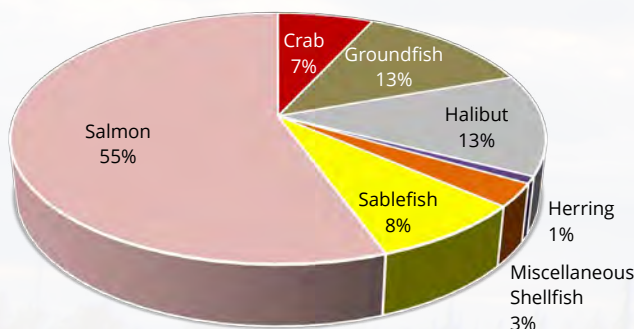
### A decade of seafood harvesting jobs



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

Some of the declines were likely part of that typical yearly flux, as job levels during the first three pre-pandemic months of 2020 were all lower than the year before. Still, COVID was the main story for fish harvesting in 2020.

### Majority of harvesting jobs are for salmon, 2020



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

### Losses hit in spring, hardest in salmon

The big declines began in April. Fewer permits fished that month and fewer crew members working those permits meant 1,266 fewer jobs, which was a 29 percent drop from the previous April.

December's decline was largest in percent terms at 31 percent, but that equated to just 211 jobs.

August, the typical yearly peak, recorded the biggest numeric drop, with 3,300 fewer harvesters than the year before. Nearly all of those

# How many of Alaska's jobs are in the seafood industry?

By TRENDS STAFF

Alaska's world-class fisheries are a critical part of the state's economy, generating \$1.3 billion-plus in gross estimated earnings in 2020. More than \$450 million went to permit holders who were Alaska residents.

While seafood harvesting took a hit during the pandemic, as most industries did, it still generated tens of thousands of jobs last year, including those lasting just a month or two. At the summer peak, despite the pandemic, harvesting represented more than 20,000 jobs — and that doesn't include the seafood processing jobs needed to handle the catch.

Most fish harvesters are self-employed, but estimating harvesting employment and comparing it to other industries is also tricky because of the differences between a job as a fisherman and a job as a teacher or nurse. One of the reasons we created these estimates in 2000 (for how we do it, see page 9) was the lack of consistently produced harvesting job numbers, especially the type that would allow these industry comparisons.

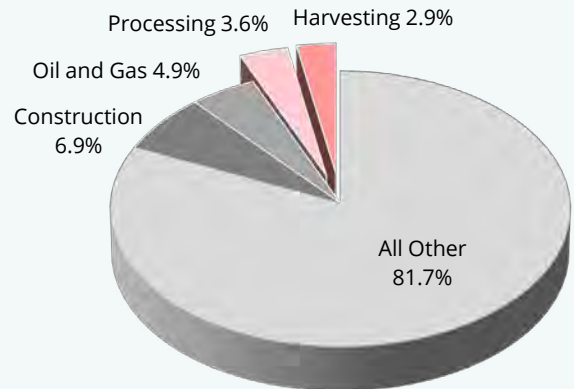
The most important difference is how they're paid. Compensation for wage and salary jobs — work done for a paycheck from an employer — is based on the time worked: usually the hours or days in a given pay period. Payroll records, which are the primary source of employment numbers, tie the work to a specific month.

Compensation for permit holders and crew is based on earnings. Crew members are paid a percentage, or share, of the earnings that result from fishing trips, so there's no convenient measure for the months they worked and for how long.

Another key difference is that fishing regulations and management limit the pool of available employers in a way that restrains and caps job growth. To participate in one of the state's limited entry fisheries, such as salmon, a person must hold a permit. The permits can be bought and sold, but the total number of permits doesn't typically change in an established fishery.

When economic conditions are favorable, most permit holders will fish, generating jobs for themselves and their crew members. But when costs rise or the value of the catch falls — as we saw in 2020 when pandemic-related costs led some permit holders to decide fishing wouldn't be as profitable — the percentage of permit holders who fish declines.

## Jobs in Alaska's private sector, 2020



**Note:** Pie shows wage and salary jobs except fish harvesting, which we estimate using landings data. See page 9.

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

For jobs, that means the numbers fluctuate with the numbers of permits fished, so there's no long-term expansion like other industries in a growing economy. Under the most favorable conditions, a fishery will have "full employment" — all permits fished — but no further growth is possible without structural or management changes.

Harvesting job growth is further constrained in fisheries managed with a quota share system, such as halibut, sablefish, and the Bering Sea and Aleutian Islands crab fisheries. Unlike limited entry permits, quota shares guarantee the holder the right to harvest a certain percentage of the total allowable catch rather than just a right to participate in a competitive fishery. Quota shares can be bought and sold and are almost always fished since they represent a tangible asset and can be "stacked," or fished in multiples from the same vessel for greater efficiency.

Often, introducing a quota share management system spurs an initial concentration of shares and employment as the more efficient producers acquire quota shares from the less efficient operations. Because the total percentage of the allowable catch isn't free to grow, however, these fisheries don't create additional harvesting jobs even under the most favorable economic conditions.

With these caveats, the harvesting estimates in this article are roughly comparable to other industries' job counts and equivalent to about 3 percent of the state's total private-sector employment. Adding seafood processing jobs puts the commercial fishing industry at around 6.5 percent of Alaska's private sector jobs.

## Statewide fish harvesting jobs by month and year, 2001 to 2020

Year*	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Average yearly
2001	2,972	4,286	4,505	4,681	7,053	18,884	21,571	13,921	8,095	6,194	2,617	726	7,959
2002	3,590	4,047	4,334	4,913	6,715	16,292	18,224	11,975	6,983	5,794	2,632	524	7,168
2003	3,284	3,609	4,378	5,797	6,233	17,610	19,670	11,922	7,191	5,969	2,660	526	7,404
2004	3,594	3,492	4,110	5,050	6,476	17,139	19,634	12,308	7,371	6,023	2,259	509	7,330
2005	3,561	3,150	4,227	5,115	6,283	18,169	20,566	12,889	7,192	4,958	2,768	953	7,486
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	20,446	13,633	8,225	4,202	2,708	602	7,270
2009	2,527	3,817	3,126	4,874	5,693	17,609	20,076	13,687	7,148	4,593	2,388	507	7,087
*Because of a change in how harvest jobs are calculated, data before 2010 are not comparable to data from 2010 forward.													
2010	2,668	3,060	4,005	5,255	5,685	18,878	23,128	15,287	7,759	4,992	2,887	850	7,871
2011	2,898	3,214	4,010	4,729	5,642	20,112	23,824	15,586	7,918	5,721	2,303	849	8,067
2012	2,923	3,409	4,609	5,402	6,163	19,237	24,761	16,191	6,988	5,453	2,274	853	8,189
2013	2,736	2,930	4,091	5,516	6,270	22,012	25,351	15,419	7,559	5,496	2,780	930	8,424
2014	2,242	2,776	4,879	5,407	6,489	21,167	24,594	16,593	8,018	5,190	2,596	1,097	8,421
2015	2,520	3,247	4,961	5,029	6,749	21,164	24,649	16,283	8,232	5,252	2,661	1,264	8,501
2016	2,678	3,374	5,222	5,363	6,329	18,840	23,695	16,055	7,909	4,953	1,886	765	8,089
2017	2,205	3,076	4,444	5,026	5,646	19,881	23,541	15,407	8,562	5,334	2,292	754	8,014
2018	2,126	2,538	3,379	4,310	5,166	18,942	22,790	14,763	9,211	4,849	2,681	689	7,620
2019	2,347	2,548	3,637	4,372	4,721	18,154	23,440	15,632	8,664	5,201	2,443	679	7,653
2020	1,975	2,289	2,973	3,106	4,015	16,279	20,913	12,304	7,299	5,094	2,184	468	6,575
Average monthly	2,743	3,200	4,195	4,851	5,928	18,633	22,054	14,356	7,777	5,250	2,530	753	7,685

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

came from salmon harvesting.

More than half of Alaska's yearly harvesters fish for salmon. While groundfish represents the state's biggest harvest in terms of poundage, salmon is more work-intensive to fish, requiring more crew.

Over the year, statewide salmon harvesting lost about 700 jobs on an average monthly basis, with a drop of nearly 3,000 in August alone.

The fisheries active during the spring saw the biggest declines in percent terms. The number of monthly halibut harvesters was down nearly 20 percent, with most of the yearly decline stemming from April's 55.4 percent plunge.

For more detail on jobs by species harvested in recent years, see last November's article on the five-year trends in Alaska fish harvesting.

### COVID's immediate challenges

Restaurant closures and fewer customers tanked demand for food service seafood products last year. The price crashes that came with COVID-19 hampered

seafood harvesting the most, as the math of fishing a permit profitably can be hard to work out as prices get lower and lower.

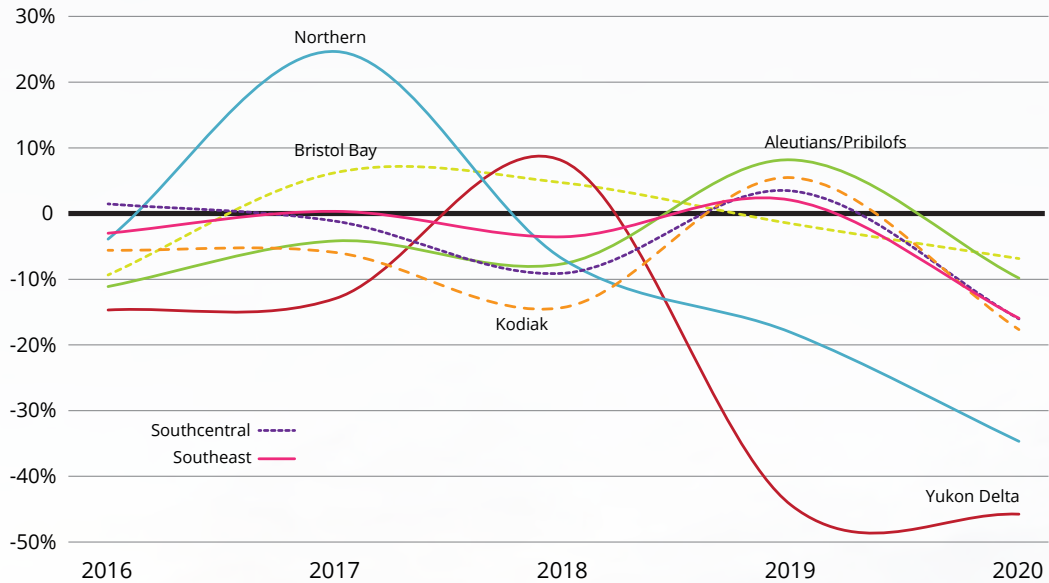
Health and safety mandates such as quarantine and travel restrictions and their strict documentation rules also made it hard to get people to Alaska and on the water. Once they were there, COVID created obstacles on the boat. Social distancing was unwieldy in the tight confines of fishing vessels. Eliminating buffet-style dining and common snacks and regularly disinfecting surfaces added to the time and expense.

All of these complications, especially early in the pandemic when little was known about the virus and what mitigation measures were effective, prompted some permit holders to not fish last year. Those who did often reported using fewer crew members.

### Problems that will outlast COVID

While COVID-19 is the clear headline for 2020, climate change continues to create long-term, unpredictable shifts for Alaska fisheries, which will persist long after the pandemic ends. These complex factors are outside the scope of this article's employment numbers,

## Percent harvesting job loss or gain by region, 2016 to 2020



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

but they are important to note.

Closing fisheries to human harvests some years, which can be financially devastating to some Alaska communities, still can't mitigate the environmental damage to stocks in the long term.

### Some job recovery so far in 2021

The short-term outlook is for some job recovery in 2021. As with most industries in Alaska, seafood harvesting shows signs of improvement. Operations ran smoother this year as employers adapted to health and safety measures, and some fisheries have performed well during their 2021 seasons.

While an increase in poundage won't necessarily translate to job growth, and harvesting job numbers are unlikely to return to historical averages this year, employment will rise from the pandemic lows of 2020.

Southeast's pink salmon run reportedly came in strong. Bristol Bay continues to be a high performer for salmon, even outperforming its harvesting forecasts, and 2021's forecast is above the decade average. While some of Bristol Bay's salmon runs were down this year, its sockeye harvest — the region's main catch — was abundant.

Some stocks are in peril, though, and some areas face

further job losses. Bristol Bay's highly valuable red king crab fishery has been closed for 2021-2022 due to a sudden decline in stocks, the reasons for which are under debate.

The Yukon Delta, which lost more than two-thirds of its salmon harvesting employment between 2018 and 2020, faces additional declines in 2021.

### A closer look at regions in 2020

#### Southeast

The Southeast Region is the state's largest in terms of average monthly harvesting employment, with jobs all year and in a range of fisheries.

While its summer peak doesn't compare to the heights of Bristol Bay, Southeast harvests multiple species, and the diversity of the catch means most months have more than 1,000 jobs, whereas some regions have a large summer peak and comparatively little or no winter activity.

That diversity and a large number of jobs — 2,183 in 2019 — typically buffer Southeast from extreme losses or gains. But Southeast took the biggest blow numerically last year, losing nearly 16 percent of its harvesting jobs and hitting its lowest fishing employment level in at least 20 years. Southeast's 2020 job count fell 14 percent under its previous low, in 2008.

Southeast also represented most of the state's spring harvesting decline. In March alone, the region was down more than 500 jobs from the previous March, a nearly 40 percent drop.

The pandemic declines spread across fisheries, but because salmon harvesting dominates the region, it lost the largest number of jobs.

In percent terms, Southeast's halibut harvesting took the biggest hit in April, when it had 53 percent fewer harvesters.

## Aleutians and Pribilof Islands

The Aleutians and Pribilof Islands also harvest a range of species, and only one of the six fisheries — crab — saw job growth last year. Overall, the region's count dropped from 1,300 jobs in 2019 to well below 1,200, bringing it to a 21st century low.

The region lost salmon, halibut, sablefish, and other groundfish harvesters last year. Its small herring fishery dwindled from 21 jobs during its single active month in 2019, July, to just five in July and August of 2020.

The Aleutians winter crab fishery hasn't yet recovered from its steep decline of 2016-2017 when some tanner fisheries were closed and catch limits were reduced.

Crab harvesting employment grew 22 percent, largely because its active months were mostly outside of those hit by the pandemic — 41 percent of its employment is from January through March. The fishery bucked most of the statewide trends, though, and grew during the pandemic months as well.

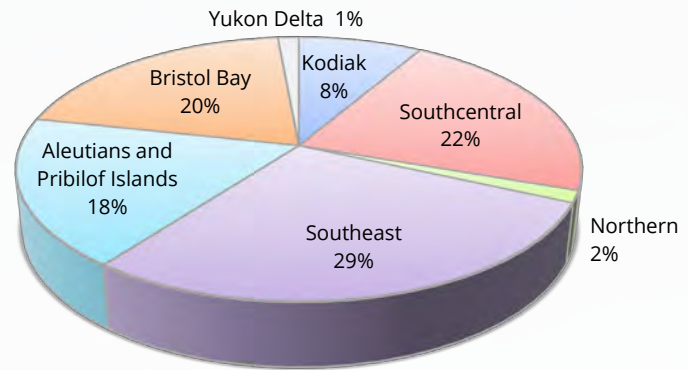
## Bristol Bay

Bristol Bay's salmon harvests are massive. The region has just two active fisheries, and only one month's jobs are in something other than salmon.

Salmon fishing in Bristol Bay is often an outlier, growing even when other regions lose salmon harvesting jobs. But even Bristol Bay saw a drop in 2020, from around 1,400 to 1,300. In monthly terms, only August increased slightly.

The herring fishery declined from a peak of 81 jobs in April 2019 to a peak of just 10 in May 2020.

## Southeast has the most harvesting jobs, 2020



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

As mentioned earlier, Bristol Bay's red king crab fishery, the second most valuable crab fishery in the state, is now closed through 2022 because of a sharp decline in stocks.

## Kodiak

All but one of seven of Kodiak's fisheries lost employment in 2020, dropping from a total of 657 jobs to 541, a decline of almost 18 percent. That was a 20-year low for Kodiak. Only its herring fishery added jobs, and only because the fishery had been closed the year before.

Most of Kodiak's fisheries recorded job gains in some months, but the other months' massive losses pushed their total numbers down. Salmon was an outlier, though, in that no months showed growth. Employment was down sharply every month from 2019 during the openings of Kodiak's summer salmon harvest.

Very low cod harvests and reductions in the total allowable catch for pollock have also depressed employment over the last few years.

## Northern

The Northern Region's harvesting workforce is one of the state's smallest, and its handful of jobs are mostly in salmon fishing. That means the region's main harvesting season coincided with the worst economic months of the pandemic, driving down its total monthly harvesting average from 142 jobs to 93.

June's salmon harvesting job count ticked up slightly,

# How we use landings to estimate seafood harvesting jobs

Unlike the wage and salary job numbers we and our federal partner the Bureau of Labor Statistics publish each month, data on the employment fish harvesting generates is not readily available. Harvesters are self-employed, and permit holders aren't required to report the numbers of people they employ in the same way as employers subject to state unemployment insurance laws.

To estimate fisheries employment that's roughly comparable to wage and salary job numbers, we infer jobs in a given month from landings. A landing, or the initial sale of the catch, signals recent fishing activity.

Because fishing permits are associated with a specific type of gear, including boat size, we know roughly how many people a landing requires under various types of permits. The number of people associated with a certain permit is called the crew factor.

For example, a permit to fish for king crab in Bristol Bay with pot gear on a vessel more than 60 feet long requires about six people, according to a survey of those permit holders. So when crab is landed under that permit, we assume the permit generated six jobs

that month. We count each permit only once per month regardless of the number of landings, which is similar to the way people in wage and salary jobs work different numbers of hours.

Most permits designate where specific species can be harvested, so we assign jobs to the harvest location rather than the residence of the permit holder. This approach also best approximates wage and salary employment, which is categorized by place of work rather than worker residence. Jobs generated under permits that allow fishing anywhere in the state receive a special harvest area code and are estimated differently.

We produce the job counts by month because, as with location, that comes closest to wage and salary employment data. And because seafood harvesting employment is much higher in summer than winter, similar to tourism and construction, averaging employment across all 12 months allows for more meaningful comparisons among job counts in different industries.

For more on how fishing jobs are structured and how they fit into Alaska's total employment, see page 5.

but that growth didn't continue into the rest of the season, and July and August brought steep losses. Total employment for the Northern salmon fisheries averaged 82, its lowest level since 2013.

## Southcentral

The Southcentral Region harvests mostly salmon, accentuated by a halibut harvest and a few other small fisheries. Southcentral's average monthly job count dropped from 1,690 in 2019 to 1,419 last year.

Some Southcentral fisheries had already lost jobs in 2020 before COVID hit. Groundfish are harvested year-round, and its biggest job losses came in January and February, before the pandemic. The losses were all in groundfish harvesting, the only species active in Southcentral at that time of year.

The region's small shellfish fishery recorded a 25 percent job loss, and its other small fishery, herring, was unaffected. Herring has fewer than 10 active permit holders, and that group all fished in 2020.

## Yukon Delta

Yukon Delta's harvesting workforce is the state's smallest, meaning even minor numeric changes can

produce huge percent swings. Yukon Delta lost the biggest share of its harvesting employment last year, at nearly 46 percent.

As with the August loss statewide, Yukon Delta took the biggest hit during the typical yearly peak, with harvesters down 87.5 percent from August 2019.

Although Yukon Delta's fishing industry is small, commercial and subsistence catches are both critical to the area. Its only harvests are salmon and groundfish, and many of the months in 2020 when groundfish would normally be harvested were zeroed out. The worst came in March and April, which were among the biggest loss months statewide.

The region's salmon fishery didn't fare better than elsewhere. While the number of jobs it lost was smaller than salmon-heavy regions like Southeast and Bristol Bay, the Yukon Delta's salmon harvesting job loss represented a 44 percent drop over the year.

Yukon Delta's salmon fishery didn't begin until June, but its hiring was low all year compared to historical averages. August's drop was steepest, from 932 jobs to 119.

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