



ALASKA ECONOMIC
TRENDS

OCTOBER 2020

Employment projections
for Alaska, 2018 to 2028



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SARA WHITNEY
Editor

DAN ROBINSON
Chief, Research
and Analysis

Design by Sara Whitney

ON THE COVER:

Flying over the De Long Mountains in northwestern Alaska, photo by Flickr user "blarrggg"

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Trends is a nonpartisan, data-driven magazine that covers a range of economic topics in Alaska.

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ON THIS SPREAD: The background image for 2020 is the aurora borealis in the Arctic in Alaska, taken by Noel Bauza.

10-year industry projections

5.5 percent employment growth for Alaska from 2018 to 2028

By PAUL MARTZ

Alaska entered another downturn this spring, brought on by the pandemic, just as the state had begun to emerge from a three-year recession. When we began these projections, governments across the country were mandating shutdowns intended to last weeks, not months, and Alaskans expected tourism would resume later in the summer. That didn't happen.

More than six months later, continuing closures and other measures to stop COVID-19's spread have further cut consumption and production and disrupted global trade. We now know the short-term economic consequences will be significant, but it will take years to understand the long-term effects of this once-in-a-century crisis.

Long-term projections use the economy's past performance to determine how it might look 10 years out. They don't capture business cycles, structural changes, or unforeseen events. (See page 8 for more on how we create these projections.) However, we accounted for some of the pandemic's likely effects on the most vulnerable industries — retail trade, transportation, and leisure and hospitality — by lightly adjusting the parts that are unlikely to recover or are likely to remain stagnant long after the pandemic ends.

With these things in mind, we project Alaska will add approximately 18,000 jobs from 2018 to 2028, for total growth over that period of 5.5 percent.

Industries most affected by the COVID-19 pandemic

Retail shifts toward general merchandise stores, warehouse clubs

Jobs in electronics and appliance stores and department stores have dwindled for the past decade with changing consumer preferences. The pandemic

The short-term consequences of the pandemic will be significant, but it will take years to understand the long-term effects.

hastened the transition to online purchasing, so we upped the projected losses to -42 percent for electronics and appliance stores (-239 jobs) and -60 percent for department stores.

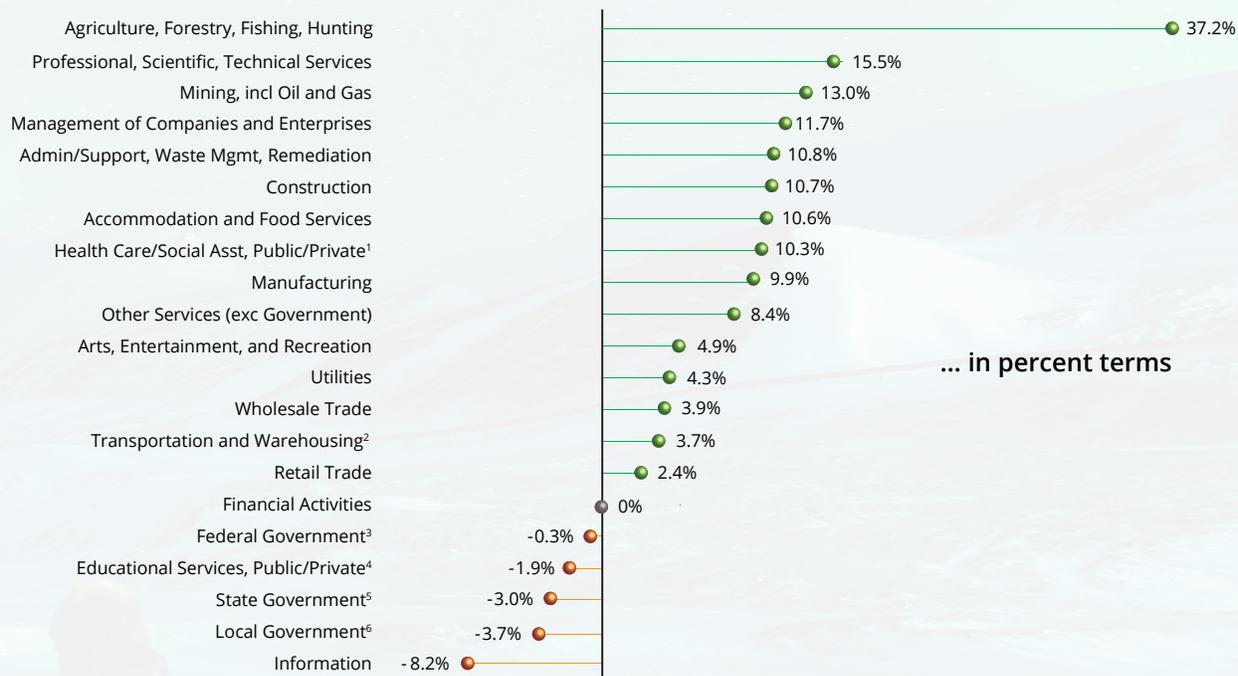
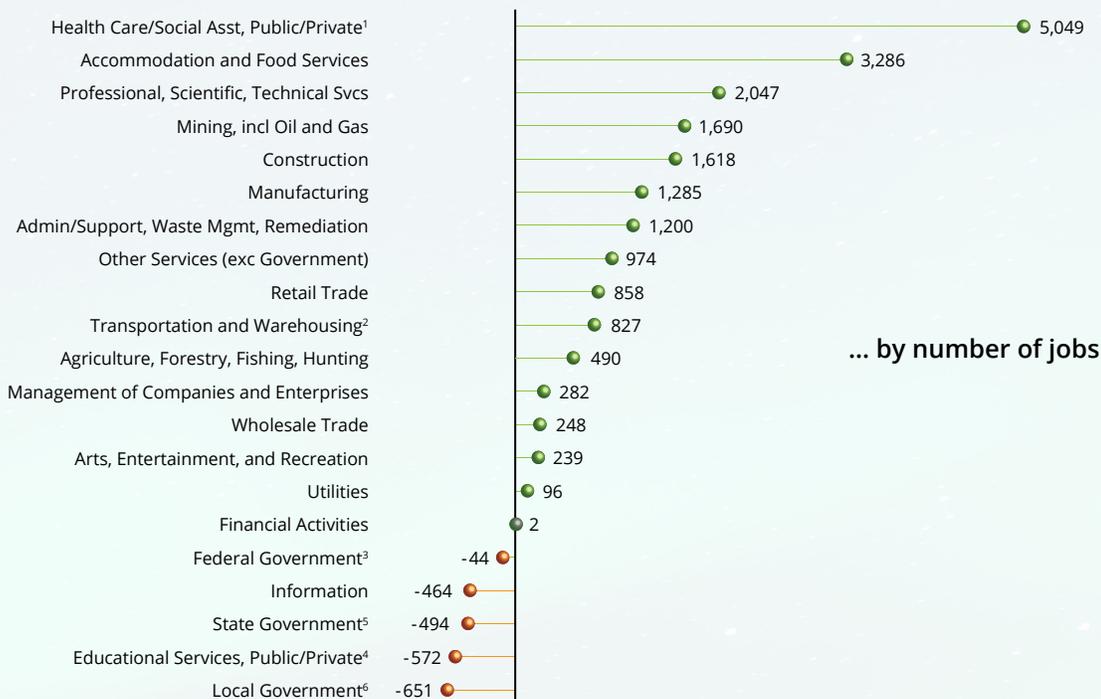
Clothing and clothing accessory stores are also high on the list of pandemic-susceptible industries. They were resilient during the recent state recession, losing just 50 jobs between 2015 and 2018 (-2.5 percent), but employment began to slide in 2019. Because that weakness was clear even before the pandemic, we project a loss of 153 jobs over the decade, or -8 percent.

Jobs in book, periodical, and music stores have been disappearing since the national recession of the late 2000s and face increasing pressure as media delivery continues to change. We project a loss of 25 jobs, or -12.1 percent. The outlook is similar for furniture stores at -7.7 percent (-34 jobs), although additional losses wouldn't be surprising.

Stores that sell essentials are retail's upside. General merchandise stores, including warehouse clubs and supercenters, have trended upward for three decades, and we expect that to continue at a gain of 781 jobs, or 7.7 percent. Similarly, miscellaneous retailers (mostly pet, office supply, and used merchandise such as thrift and consignment) are on track to add 445 jobs (15.8 percent).

Food and beverage stores — grocery, convenience, and liquor — will continue to compete with general merchandise stores, but they'll still grow slightly (0.7 percent, or 37 jobs). These stores' trends have been stable or slightly downward in recent years, and the pandemic probably won't spur any long-term change.

Projected job growth or loss by Alaska industry, 2018 to 2028



¹Includes public sector hospital employment

²Includes U.S. Postal Service employment

³Excludes uniformed military, U.S. Postal Service, and hospital employment

⁴Includes local and state government educational service employment

⁵Excludes university, railroad, and hospital employment

⁶Excludes public school and hospital employment

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

Transportation projected to end up just below pre-pandemic levels by 2028

Scheduled and nonscheduled air transportation face large declines in the short-term due to COVID-19, but they'll rebound to just under their pre-pandemic levels over the decade as flight demand mostly resumes. The projected losses are slight at -1.5 percent and -3.5 percent, respectively.

This won't be a big change for the scheduled air transportation industry, which has been stable for many years. On the other hand, employment in nonscheduled air transportation (mainly charter flights) jumped 45 percent between 2012 and 2018.

Tourists will return to the state, but many transportation businesses are small and won't survive the steep short-term losses.

Long-term, we project the scenic and sightseeing transportation industries (land, water, and other) will remain at their 2019 levels, which were up slightly from the year before. These industries have added jobs at a steady clip over the last few years in a strong recovery from the national recession, but the pandemic won't leave them unscathed short-term. We'll watch these industries closely over the next two years as we prepare for the next round of projections, and by then the data will have caught up with the early pandemic responses.

Tourists will return to the state, but the ways people travel and the activities they pursue may change, so it's uncertain how these industries will look in the pandemic's aftermath. Many transportation businesses are small, and some won't survive the steep short-term losses.

In the long term, as tourism rebounds, fewer businesses will be available to capitalize on that demand. Some larger companies will acquire smaller ones, but the perceived risks in starting tourism-based businesses or expanding existing ones could linger. The difficulty of securing funding is likely to persist, too. If commercial lenders absorb the costs of a significant number of closures, they may balk at loaning to tourism-based businesses even when market conditions improve.

Accommodation, food service will resume growing even if preferences change

Tourists' return will boost the accommodations

industry, as people will need lodging and food even if their travel habits change. We've kept the original projections intact for this reason, with traveler accommodations growing 10 percent (818 jobs) and RV parks expanding 25.8 percent (202 jobs).

Restaurants will also recover in the long term, growing a projected 12.7 percent (2,365 jobs), but immediate losses will be significant. Local demand is critical for restaurants, and that demand will probably re-

sume quickly. As with accommodations, the type of demand may change — diners might want more delivery options long-term, for example — but people aren't likely to dine out less in the future. Population growth will also buoy restaurants in the coming years.

Industries less likely to be affected by the pandemic

Marijuana's meteoric rise will continue, leading agriculture industry's growth

Marijuana will continue to drive strong growth in agriculture, a small sector whose projected gain of 490 jobs is the largest in percentage terms (37 percent).

Greenhouses and nurseries represent most of that increase, at 443 of the 490 new jobs (91 percent growth). Thirty new jobs will be in "other" crop production, such as fruits and vegetables: a 41 percent increase. We project 54 additional jobs for aquaculture (16.3 percent).

Oil and gas particularly uncertain, but long-term growth remains likely

Oil and gas employment ticked up slightly in 2019 as the state recession ended and oil prices stabilized. Support and drilling services gained most of those jobs, in line with new exploration the industry had announced over the previous few years. The pandemic will slow some of that progress, but the industry will rebound in the long run.

We project 9 percent growth for oil and gas support activities (515 jobs) by 2028 and 35.8 percent for drilling oil and gas wells (234 jobs).

Alaska industry projections, 2018 to 2028

Industry ¹	2018 estimated jobs ²	2028 projected jobs	Change from 2018 to 2028	Total % change ³
Total Employment, All Jobs ⁴	326,935	344,899	17,964	5.5%
Goods-Producing	42,356	47,439	5,083	12.0%
Natural Resources and Mining	14,344	16,524	2,180	15.2%
Agriculture, Forestry, Fishing and Hunting	1,318	1,808	490	37.2%
Mining	13,026	14,716	1,690	13.0%
Oil and Gas Extraction	3,511	3,624	113	3.2%
Mining (except Oil and Gas)	2,803	3,587	784	28.0%
Support Activities for Mining	6,712	7,505	793	11.8%
Construction	15,075	16,693	1,618	10.7%
Construction of Buildings	4,256	5,138	882	20.7%
Heavy and Civil Engineering Construction	3,574	3,901	327	9.1%
Specialty Trade Contractors	7,245	7,654	409	5.6%
Manufacturing	12,937	14,222	1,285	9.9%
Food Manufacturing	9,339	10,164	825	8.8%
Seafood Product Preparation and Packaging	8,782	9,482	700	8.0%
Manufacturing, All Other	3,598	4,058	460	12.8%
Services-Providing	284,493	297,376	12,883	4.5%
Trade, Transportation, and Utilities	66,438	68,467	2,029	3.1%
Wholesale Trade	6,363	6,611	248	3.9%
Retail Trade	35,569	36,427	858	2.4%
Transportation and Warehousing ⁵	22,274	23,101	827	3.7%
Air Transportation	6,466	6,343	-123	-1.9%
Water Transportation	1214	1213	-1	-0.1%
Truck Transportation	2,609	2,888	279	10.7%
Transportation and Warehousing, All Other	11,985	12,657	672	5.6%
Utilities	2,232	2,328	96	4.3%
Information	5,646	5,182	-464	-8.2%
Financial Activities	12,480	12,482	2	0.0%
Finance and Insurance	6,815	6,527	-288	-4.2%
Real Estate and Rental and Leasing	5,665	5,955	290	5.1%
Professional and Business Services	26,701	30,230	3,529	13.2%
Professional, Scientific, and Technical Services	13,212	15,259	2,047	15.5%
Management of Companies and Enterprises	2419	2701	282	11.7%
Administrative, Support and Waste Mgmt./Remediation Svcs	11,070	12,270	1,200	10.8%
Education and Health Services	78,906	83,383	4,477	5.7%
Educational Services, Public and Private ⁶	29,688	29,116	-572	-1.9%
Elementary and Secondary Schools, Public and Private	20,968	20,777	-191	-0.9%
Educational Services, Public and Private, All Other	8,720	8,339	-381	-4.4%
Health Care and Social Assistance, Public and Private ⁷	49,218	54,267	5,049	10.3%
Ambulatory Health Care Services	21,069	23,016	1,947	9.2%
Hospitals	15,112	16,152	1,040	6.9%
Health Care and Social Assistance, All Other	13,037	15,099	2,062	15.8%
Leisure and Hospitality	35,890	39,415	3,525	9.8%
Arts, Entertainment, and Recreation	4,906	5,145	239	4.9%
Accommodation and Food Services	30,984	34,270	3,286	10.6%
Accommodation	8,602	9,623	1,021	11.9%
Food Services and Drinking Places	22,382	24,647	2,265	10.1%
Other Services (Except Government)	11,621	12,595	974	8.4%
Total Government	46,811	45,622	-1,189	-2.5%
Federal Government ⁸	12,955	12,911	-44	-0.3%
State Government ⁹	16,415	15,921	-494	-3.0%
Local Government ¹⁰	17,441	16,790	-651	-3.7%
Unreported	86	84	-	-

¹Industry categories differ from other data sets we publish, largely because these combine public and private employment.

²May not sum to total employment due to rounding

³Percent change may be inconsistent with employment change due to employment rounding.

⁴Excludes self-employed workers, fishermen, domestic workers, unpaid family workers, and nonprofit volunteers

⁵Includes U.S. Postal Service employment

⁶Includes local and state government education employment

⁷Includes public sector hospital employment

⁸Excludes uniformed military, postal service, and hospital employment

⁹Excludes university, railroad, and hospital employment

¹⁰Excludes public school and hospital employment

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

How we create these 10-year projections for industries

The Alaska Department of Labor and Workforce Development's Research and Analysis Section creates 10-year industry and occupational projections for Alaska every other year. These projections are the product of four steps:

Step 1: Project industry employment using a base year with solid data

We use data from the Quarterly Census of Employment and Wages to determine the number of jobs for each industry during the first year, or "base year," of the projection period. We used 2018 as the base year because it's important to begin with a solid set of numbers that won't be revised further rather than to use newer but preliminary data.

Estimates and projections do not include self-employed workers, private household workers, most agricultural workers and fishermen (who are self-employed), and others not covered by the state's unemployment insurance program. We combine certain types of public sector employment — such as education, hospitals, rail transportation, and the U.S. Postal Service — with private sector industries because their underlying drivers differ from most government employment.

We create projections for each industry based primarily on historical trends, Alaska and U.S. population projections, and other industry-specific variables. The projections also factor in knowledge of specific projects, if certain, and observations of the current economic climate.

Step 2: Determine the occupational makeup, or staffing pattern, of each industry

To estimate base year employment for each occupation, we determine the occupational staffing pattern of each industry. Most industries have a variety of occupations. The staffing pattern is the breakdown of each occupation's share of the industry's total employment, referred to as "staffing ratios."

Employers in Alaska report their workers' occupations when they submit unemployment insurance quarterly contribution reports, which form the basis of Alaska's Occupational Database. We use an analysis of the data that corresponds to the projections' base year, the most recent Occupational Employment Statistics data available, and a baseline of historic industry staffing patterns to calculate occupational staffing ratios for the industries.

Step 3: Calculate base year and projected occupational employment

For each occupation, we multiply each industry's estimated base year employment by the staffing ratio, and then sum the results to get the base year estimate. We make some adjustments to staffing ratios within an industry, called "change factors." Change factors are multipliers that increase or decrease an occupation's estimated share of industry employment based on factors other than an industry's projected employment change. Examples include changes in consumer demand, technology, or business practices.

We then multiply each industry's projected employment by the adjusted staffing ratio for each occupation, and then sum the results by each occupation to get the projections.

Step 4: Estimate job openings

Job openings for an occupation result from new jobs and vacated positions, called separation openings. An occupation's growth openings are equal to its change over the projection period. Estimates of separation openings are based on rates provided by the U.S. Bureau of Labor Statistics that account for labor force exits and occupational transfers. For more on separations, see <https://www.bls.gov/emp/documentation/separations-methods.htm>.

Regular oil and gas extraction probably won't grow much, adding just 113 projected jobs over the decade (3.2 percent). Employment will take time to level out after BP withdrew from Alaska and sold its assets to Hilcorp.

Historically, extraction employment hasn't fluctuated

much with price or production changes. The only significant shift of the past decade was during the high-price periods in 2014 and 2015, but this jump was short-lived, and employment quickly settled back at its 30-year average.

Still, significant price changes could radically alter

these numbers, especially over 10 years. For example, the oil and gas industry lost more than 5,000 jobs between 2015 and 2018 as prices slid from the \$90 range to the low \$40s before settling around \$60 a barrel. The pandemic introduced further uncertainty, especially on the demand side. If demand resumes and global production stabilizes around current levels, which is what history suggests will happen, then prices will land in the \$40 to \$70 range. That price environment appears sufficient to maintain interest in expanding North Slope projects.

Pebble project uncertain again, but outlook for mining remains strong

The mining sector is projected to add 784 jobs from 2018 to 2028 (28 percent). Operating mines will continue to expand, and a large-scale project, Donlin, reached significant permitting milestones recently. While these projections don't include the Donlin or Pebble mines, those projects' continued permitting work and exploration add weight to the likelihood of growth.

It will be several years before any new large-scale mine is final due to the complexities of financing, state and federal policies, and environmental regulations as well as the certainty of court challenges. Future rounds of these projections will be better able to capture developments in these projects, especially Pebble.

During this round's modeling phase, the outlook for Pebble was optimistic. In July, the U.S. Army Corps of Engineers issued their favorable final Environmental Impact Statement, as expected. However, just before releasing a final Record of Decision, the Corps said the project "as currently proposed cannot be permitted under Section 404 of the Clean Water Act" due to "significant degradation of the environment," and that it would "likely result in significant adverse effects on the aquatic system or human environment."

The Corps' letter requires the project to submit a compensatory mitigation plan within 90 days, a response that was pending when this article was published. No matter the outcome, this sudden reversal reinforces the need to exclude projects from the projections before they are nearly guaranteed, regardless of what appears imminent.

Long-term, construction will likely end up slightly above its pre-recession job levels.

Most construction growth will be recovery from the recent recession

We project 10.7 percent growth for construction over the decade, and a good portion of the 1,619 additional jobs will be recovery from the 2015-2018 state recession. Pent-up demand, military construction, and repairs to Alaska's aging infrastructure will also create jobs.

The nonresidential building category lost 465 jobs from 2015 to 2017. Things improved in 2018, and the November 2018 earthquake in Anchorage created extra construction demand through 2019.

In the long-term, we project employment will end up slightly above its pre-recession levels, with the industry adding 616 jobs (21.7 percent).

The recession took a toll on home building as well, reversing the gains from 2014 and 2015 and costing the industry 126 jobs by 2018. We anticipate additional demand and replacement of aging homes to push the industry back into its previous upward trajectory. Residential construction will add a projected 267 jobs, for 18.8 percent growth, and it could be more if the cost of borrowing remains low.

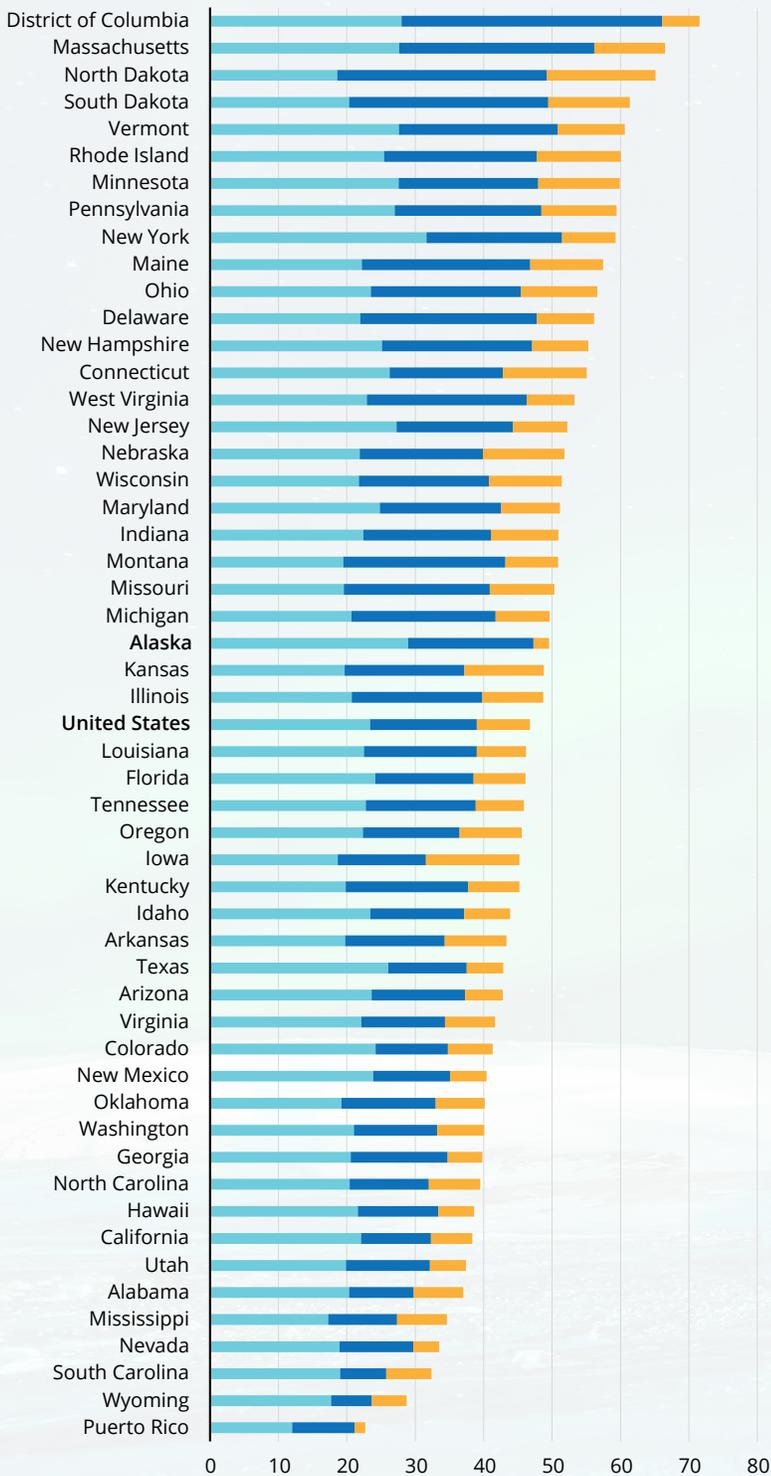
Specialty trade contractors will also recover as residential and nonresidential construction improve. This category lost around 950 jobs during the recession, but we project it will regain 409 (5.6 percent) by 2028.

Heavy and civil engineering construction will also climb out of the previous recession, based on the improved outlook for oil and gas-related construction projects. The oil and gas construction industry is set to add 129 jobs (21.1 percent growth) over the decade. We project "other" heavy and civil engineering construction will recover 136 of its lost jobs (53.9 percent growth), which would place it near pre-recession levels in the long run.

While most construction categories took a hit in recent years, federal money softened the landing for highway, street, and bridge construction. The industry didn't begin to lose jobs until 2017, and it only lost about 100 before rebounding in 2018 to a 30-year high of 1,907 total jobs. We expect the industry will stabilize at this elevated level, and employment will increase slightly over the next decade (1.2 percent, or 26 additional jobs).

Number of private health care jobs per every 1,000 people, 2019 by state

■ Practitioners' offices ("ambulatory") ■ Hospitals ■ Nursing homes/elderly care



Note: Excludes all residential treatment facilities

Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section; U.S. Bureau of Labor Statistics; and U.S. Census Bureau

Online services dim prospects for finance, insurance industry

Automation and self-service improvements will drive long-term declines in finance and insurance. The intermediation and related activities industry, which is primarily banks and related services, is projected to decline 4 percent (-190 jobs) over the decade. Online banking and potentially permanent reductions in frontline employees after the pandemic will drive that loss. The insurance industry will also continue to decline as online tools become standard (-92 jobs, or -7.2 percent).

Professional, scientific, tech growth tied to oil and mining

Growth in oil and gas, mining, and construction will boost most of the professional, scientific, and technical services sector that serves these projects:

- Engineering and drafting services: 17.3 percent (587 jobs)
- Geophysical surveying and mapping services: 35.0 percent (137 jobs)
- Testing labs: 19.5 percent (107 jobs)
- Environmental and other scientific and technical consulting services: 42.8 percent (401 jobs)

The rest of the industries in this sector are less tied to resource development, but they are also likely to gain ground as they climb out of their recessionary slumps.

The standout is veterinary services, which has grown steadily and tripled its employment between 1990 and 2018. We project veterinary services will add 233 jobs over the decade (27 percent growth).

Projected growth for the other categories includes:

- Research and development in the physical, engineering, and life sciences: 5.7 percent (27 jobs)

- Research and development in the social sciences and humanities: 50.1 percent (30 jobs)
- Advertising, public relations, and related services: 23.5 percent (110 jobs)

Slight projected education decline based on budget cuts, no school-age growth

Public and private education faces a projected decline of 1.9 percent (-572 jobs) through 2028. Elementary and secondary schools will lose 191 jobs (-0.9 percent) while business, technical, trade, and other schools are projected to lose 4.4 percent (-381 jobs).

The lack of school-age population growth continues to drive declines in K-12 jobs, exacerbated by reduced state education funding and other forms of state assistance to local governments and communities. To cope with these broad cuts, local governments will divert resources to other local projects and programs, which will further constrain public education funding.

The business, technical, trade, and other schools industry is primarily University of Alaska employment. The remainder is in private colleges, sports and recreational instruction, and trade schools. This category's projected loss of 381 jobs (-4.4 percent) will be concentrated in the UA system. It's difficult to see any prospects for growth at UA over the projections period given the long-term state budget, population projections, and poor enrollment statistics.

Health care growth will be slower but remain strong through 2028

Health care growth surged for 30 years, then slowed as Alaska caught up to national health care capacity, as shown in the graph on the previous page. While this is a change in this sector's trajectory, we still project strong growth through 2028 with the addition of 5,049 jobs. That would be a growth rate of 10.3 percent, which is almost twice the projected rate for the economy as a whole. Aging and overall population growth will keep increasing demand, and continued expansion into rural hubs could boost these numbers further.

Health care is set to grow at twice the rate of the economy overall.

Although health care growth slowed well before the pandemic, we expect COVID-19 will cause considerable job loss in the short term. Ambulatory care, which is mainly the offices of various practitioners, will take the brunt of the loss as people forego preventive care or delay procedures through 2020 and potentially longer. We don't know how long that will last, but the industry is sure to rebound quickly once conditions improve. As a result, we project growth of 9.2 percent, or 1,947 jobs, by 2028.

Hospitals will add a projected 1,040 total jobs (6.9 percent). Hospital growth has been volatile since 2013 when employment stalled and then dipped 1.7 percent the following year.

Employment picked up after the 2015 Medicaid expansion, growing 4 percent in 2016 and 7 percent in 2017. Although some assumed that pace was the new normal, it was short-lived. Job growth slowed to under 1 percent in 2019, suggesting flatter employment in the future.

State government projected to end up at 2000s levels; local government faces cuts

Government (excluding public education, the U.S. Postal Service, and hospitals) is projected to lose 1,189 jobs (-2.5 percent) through 2028, a continuation of stagnant or declining employment since 2011.

Federal employment will fare best, remaining essentially flat at a -0.3 percent decline (-44 jobs).

State government, excluding the University of Alaska, will shed a projected 494 jobs (-3.0 percent) as losses continue after the plunge in oil revenue that began in 2015. We don't anticipate the decline will accelerate, but further loss is a given. State government employment will probably settle around its early-2000s levels.

Local and tribal government, excluding public schools, weathered the recession with no job loss, but the trend will reverse as the state continues to pull back funding. We project a decade loss of 3.7 percent (-651 jobs).

Paul Martz is an economist in Juneau. Reach him at (907) 465-6028 or paul.martz@alaska.gov.

10-year occupational projections

Highest-growth jobs list for 2018 to 2028 is an eclectic mix

By PAUL MARTZ

The pandemic is a much smaller factor in the outlook for occupations than it is for industries. In the occupational projections, these disruptions add uncertainty to the growth component of future job openings, but 96 percent of all openings come from people leaving existing positions.

Growth produces just 1,800 jobs each year, on average, while occupational separations result in about 39,000 openings per year. These separations include retirements, people returning to school, and workers leaving one occupation for another — the normal cycle of worker movements that will continue regardless. So, even if COVID-19 throws growth estimates way off, total openings won't change much.

Highest-growth occupations

Marijuana cultivation is a small group, but leads in percent terms

Agricultural occupations will increase most in

percentage terms from 2018 to 2028, mainly due to marijuana, but they will account for just 2.7 percent of all new jobs, or about 49 per year.

The legalization of marijuana created a new market that has steadily added farm workers and laborers for crops, nurseries, and greenhouses in recent years and will continue to grow over the decade. These workers will account for 91 percent of the projected new jobs in agriculture and 125 additional separation openings, making it the fastest-growing occupation in Alaska.

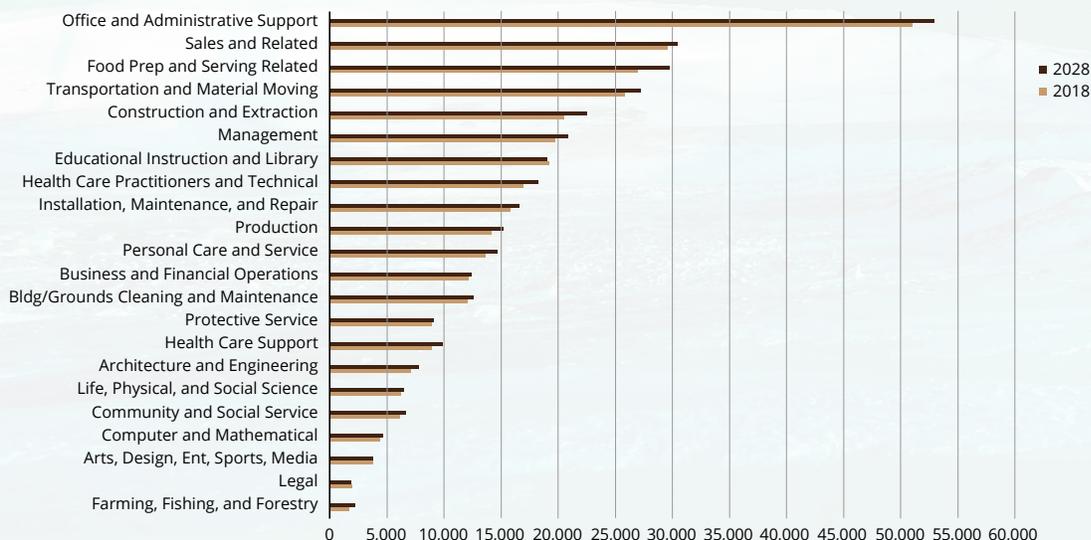
The rest of agriculture's growth will be in supervisory and related jobs.

Health care jobs will keep growing, but pandemic adds short-term uncertainty

Health care support is the next-highest category for percent growth at 10.9 percent, which equates to 97 projected new jobs each year over the decade.

Growth in most health care occupations will slow, except for home health aides and nursing assistants. These two occupations are projected to add 252 and

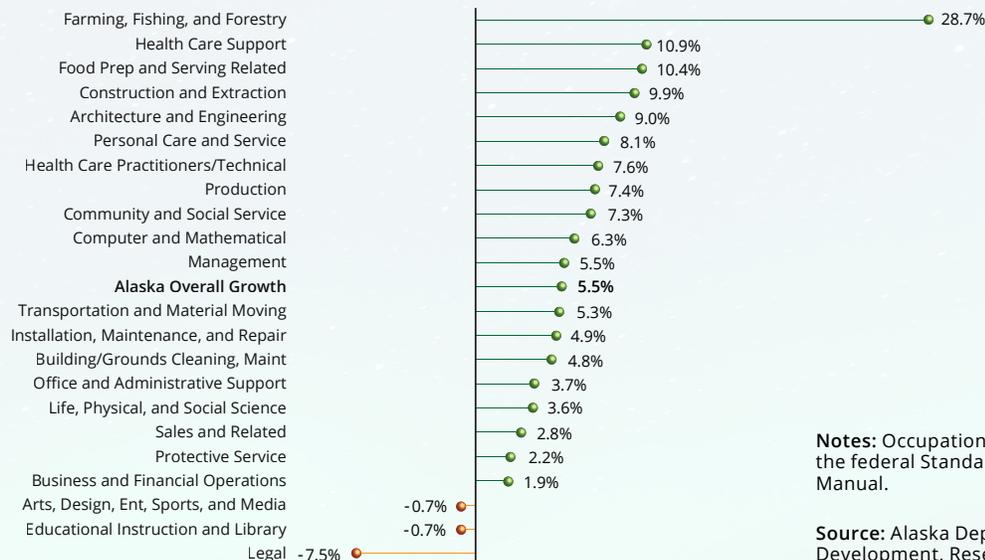
Projected total employment by occupational group, 2018 to 2028



Notes: Occupational categories are based on the federal Standard Occupational Classification Manual.

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

Projected percent growth for occupational groups, 2018-2028



Notes: Occupational categories are based on the federal Standard Occupational Classification Manual.

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

175 jobs, respectively, by 2028. Separations will create an additional 137 job opportunities per year for home health aides and 246 for nursing assistants.

Growth in health care practitioners will also slow to a projected 1,294 new jobs (7.6 percent). Registered nurse is this group’s largest occupation, projected to grow 6.9 percent (404 jobs) and generate 323 additional openings through separations.

Health care practitioners and support workers combined represent about 12.6 of the total projected new jobs in Alaska over the decade. They appear disproportionately sensitive to the pandemic, however. Some businesses will close if people put off medical visits for too long, which could also spur early retirements. New health care businesses would be slower to replace them than, say, a retail operation could, as health care providers can’t form as quickly due to high educational and licensing requirements. They also cost more to open and operate.

Health care slowdown means other occupations made the high-growth list

Health care has led the state’s job growth for decades, and its slowdown means the higher-growth list of 25 occupations has become more varied. The rebound of oil and gas after the recent statewide recession and continued growth in mining account for many of the jobs on this list, which was rounded out by veterinary services and manufacturing workers, mainly in beverage manufacturing. (See the table at the top of the next page for the full list.)

The marijuana workers mentioned previously topped the list, and “separating, filtering, clarifying, precipitating, and still machine” workers came in second. This occupation is small, at about 59 workers in 2018, and it’s projected to grow 64 percent, to 97 jobs. These workers are split between two divergent but growing industries: beverage manufacturing, which is mostly beer, and mining. While the work differs widely, both deal with industrial processing of materials suspended in liquids — from grains to minerals — giving this relatively obscure job a major bump in the percent rankings.

Another job near the top of the list, packing and filling machine operators and tenders, also falls into multiple industries but made the list because of beverage manufacturing. Still, while its projected percent growth is large, this occupation accounts for just 33 projected new jobs over 10 years.

Nonfarm animal caretaker is another atypical entry for this list, and it’s linked to the veterinary industry’s growth. These workers include dog groomers, staff in kennels and shelters, and dog walkers. We project it will grow 14.7 percent (63 jobs) by 2028.

Occupations in decline

Media-related jobs will continue to disappear

The list of declining occupations is less varied and more predictable. Six of the first 10 are media-related. Traditional formats such as newspapers

High 25, low 25 occupations for projected growth, 2018-2028

Highest-growth occupations	Growth, 2018-28
1 Farmworkers/Laborers, Crop, Nursery, Grnhouse	72.7%
2 Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	64.4%
3 Packaging/Filling Machine Operators and Tenders	42.3%
4 Veterinary Technologists and Technicians	26.6%
5 Veterinary Assistants, Lab Animal Caretakers	25.7%
6 Helpers: Extraction Workers	24.8%
7 Veterinarians	23.5%
8 Home Health Aides	23.0%
9 Millwrights	22.7%
10 Surveyors	21.9%
11 Mining/Geological Engrs, incl Mining Safety	20.2%
12 Food Batchmakers	20.0%
13 Demonstrators and Product Promoters	19.4%
14 Earth Drillers, Except Oil and Gas	18.4%
15 Rotary Drill Operators, Oil and Gas	17.8%
16 Chemical Technicians	15.4%
17 Architectural and Civil Drafters	15.2%
18 Personal Care Aides	14.9%
19 Nonfarm Animal Caretakers	14.7%
20 Carpenters	14.1%
21 Software Developers, Applications	14.0%
22 Surveying and Mapping Technicians	13.8%
22 Roustabouts, Oil and Gas	13.8%
24 Geological and Petroleum Technicians	13.6%
25 Inspectors, Testers, Sorters, Samplers, Weighers	13.4%

Occupations to decline most	Loss, 2018-28
1 Radio and Television Announcers	-22.2%
2 Broadcast Technicians	-21.4%
3 Reporters and Correspondents	-20.9%
4 Fallers	-13.3%
5 Printing Press Operators	-12.9%
6 Gaming and Sports Book Writers and Runners	-12.9%
7 Legal Secretaries	-12.4%
8 Editors	-12.4%
9 Logging Equipment Operators	-11.3%
10 Print Binding and Finishing Workers	-11.1%
11 Paralegals and Legal Assistants	-10.9%
12 Dancers	-9.7%
13 Producers and Directors	-9.3%
14 Title Examiners, Abstractors, and Searchers	-9.2%
15 Sewing Machine Operators	-7.4%
16 Insurance Underwriters	-6.6%
17 Lawyers	-6.3%
18 Legal Support Workers, All Other	-6.1%
19 Laundry and Dry-Cleaning Workers	-6.1%
20 Media and Communication Workers, All Other	-5.8%
21 Petroleum Pump System Operators, Refinery Operators, and Gaugers	-5.5%
22 Insurance Claims and Policy Processing Clerks	-5.5%
23 Education Teachers, Postsecondary	-4.4%
24 Engineering Teachers, Postsecondary	-4.4%
25 Biological Science Teachers, Postsecondary	-4.4%

Note: Occupations with at least 50 workers

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

and broadcasting have declined for years with the growth of the internet, a shift we covered in depth in last month's issue of *Alaska Economic Trends*.

The extent of this change is harder to gauge. We know that jobs have disappeared, but we don't know how many former media workers have become self-employed, which our data sets don't cover. Freelance writing and production, for example, aren't new — but the extent to which they are becoming the de facto type of work might be.

Educators appear on the 'bottom' list

The newcomers to this list are education-related. We anticipate fewer postsecondary teachers as the University of Alaska system faces immediate cuts, but this drop will probably level out later in the decade.

Policy choices will dictate which departments, and therefore which occupations, will be cut. Therefore, for these projections, we assumed the related occupations with the largest numbers of workers would see the largest percentage declines.

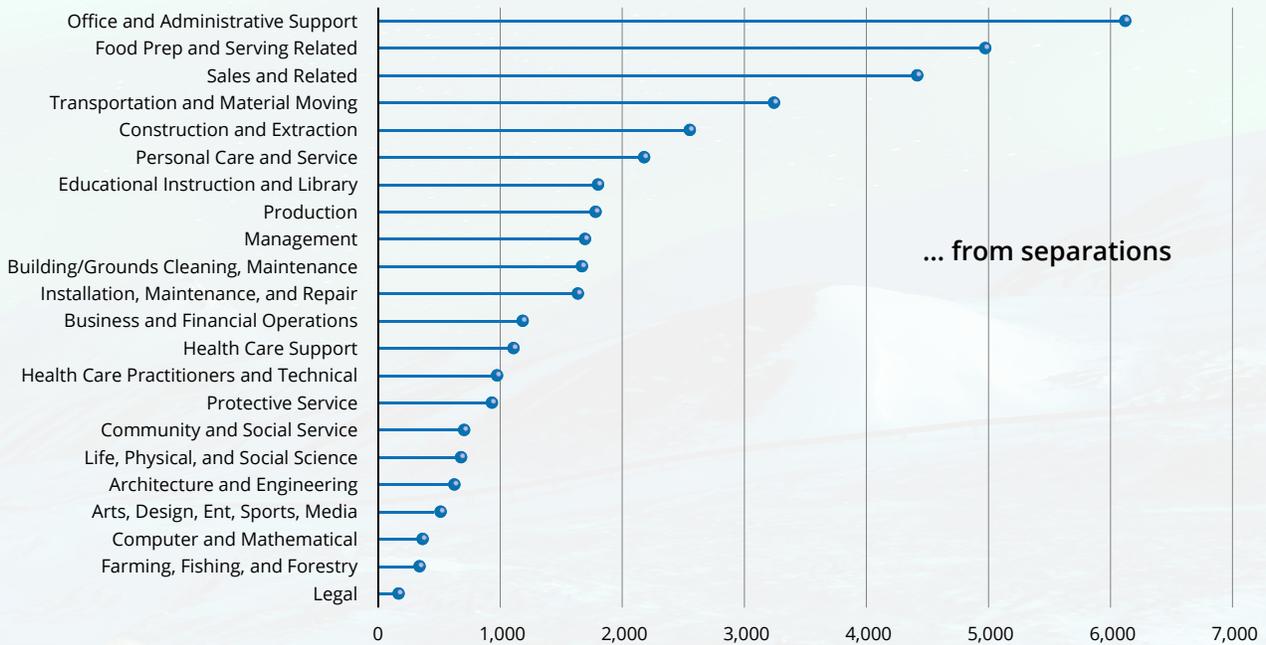
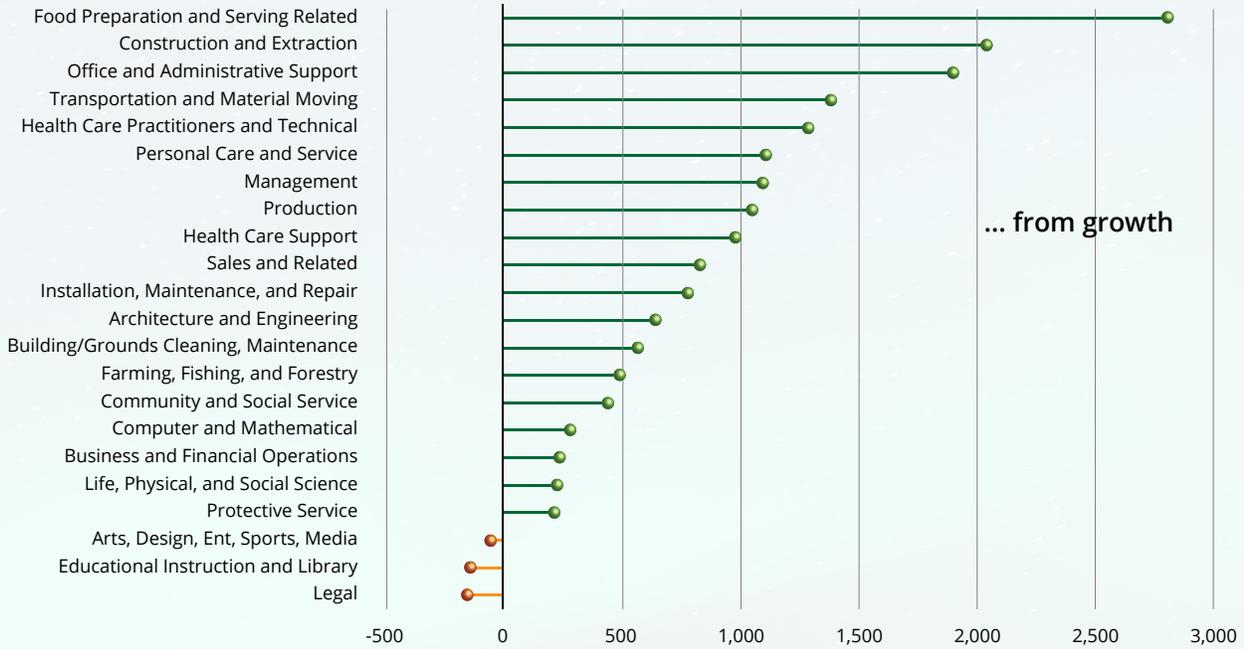
Job openings from growth versus occupational separations

The categories set to grow the most numerically over the decade also have the largest numbers of workers. The food preparation and serving category is projected to grow the most with increasing demand for dining out, and it's also the state's third-largest, at 26,943 jobs in 2018.

The pandemic could put a damper on this expansion if it persists, but we project the 10-year increase at 2,806 new jobs, or 281 per year. That's a large number of new jobs, but it's dwarfed by the anticipated separation openings: 4,968 each year. This isn't unusual, as most of these positions have low wages and low barriers to entry. People tend to hold them for a short time as they gain skills or education.

The office and administrative support occupational group is Alaska's largest at more than 50,000 jobs. It ranks third for the number of projected new jobs, at 1,890 over the decade and 189 each year, and ranks first for yearly separation openings (6,087). Like food service, many of these jobs require little education and training and are low on the pay scale, so separation openings are common as people gain experience and move on.

Types of job openings by occupational group, 2018 to 2028



Notes: Occupational categories are based on the federal Standard Occupational Classification Manual. Growth openings are new jobs between 2018 and 2028. Occupations in decline will have no growth openings but may have openings from separations, which are vacated positions. Separations result from people leaving the labor force or transferring to a different occupations. Separations typically represent openings for new workers, but in declining occupations, not all separations result in openings.

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

Most job openings come from separations, not growth, 2018-28



Notes: Annual openings are a combination of new jobs (growth), people permanently leaving the labor force (labor force exits), and people leaving an occupation for a different one (occupational transfers). Occupational separations are the sum of labor force exits and transfers. In declining occupations, not all separations result in job openings.

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

The second-highest growth category is construction and extraction workers, with a projected increase of 2,033 jobs (203 per year). This category represents around 20,500 jobs, which is only 5,000 less than food service, but it will produce around half as many separation openings (2,503).

While this category also includes lower-paid occupations, many of its occupations require significant education and training investment — for example, electricians, plumbers, and carpenters. When people leave these occupations, it’s typically for related work in management, inspection, or other technical services. Others go back to school to advance in engineering or project management.

Most jobs won’t require higher education but will require training

In terms of openings by education level, just under 73 percent will require a high school diploma or less. These positions often have other requirements, though, such as postsecondary training or vocational education through apprenticeships. Of the 19 “top jobs” that require a high school diploma or less, 12

require at least moderate-term on-the-job training.

The remaining 27.2 percent of openings will require some college or a degree, certificate, or award. The largest subset is bachelor’s degrees, which will be necessary for 14.9 percent of projected openings.

... but education still equates to significantly higher pay

As mentioned earlier, higher education requirements typically mean fewer separations. These occupations usually pay more, with those requiring a bachelor’s degree paying \$89,603 a year on average while jobs occupations without formal education requirements pay just \$34,259. Those requiring a diploma pay \$52,218 — but with the caveat that many mandate an apprenticeship or significant on-the-job training.

Wages by occupational category tell a similar story. On the high end are management, health care, engineering, and legal occupations, which all pay more than \$80,000 per year. On the lower end are food

Percent of yearly openings by education, 2018-2028



Notes: Annual wage estimates are based on employment-weighted averages of 2019 Occupational Employment Statistics wage data. Occupational education levels are based on the U.S. Census Bureau American Community Survey Public Use microdata. Openings include annual average wage growth and separations for occupations with a reported OES wage.

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

preparation, personal care, and building cleaning and maintenance occupations.

How a job's requirements relate to the types of separations

Separations are of two types: labor force exits and occupational transfers. Labor force exits include people retiring but also leaving the workforce for school or other job training.

Transfers are permanent moves from one occupation to another, which are common as people advance. Transfers differ from turnover, which comes from workers switching employers but staying in the same type of job.

Occupations with lower entry requirements typically have more separations. The types of separations can differ, though.

Separation openings among retail salespeople total about 1,982 per year. (Just 31 openings come from growth.) About 61 percent of separations are transfers to another occupation and the remaining 39 percent are labor force exits. While some of the latter are retirements, it's more common for retail workers to leave the labor force for education or training.

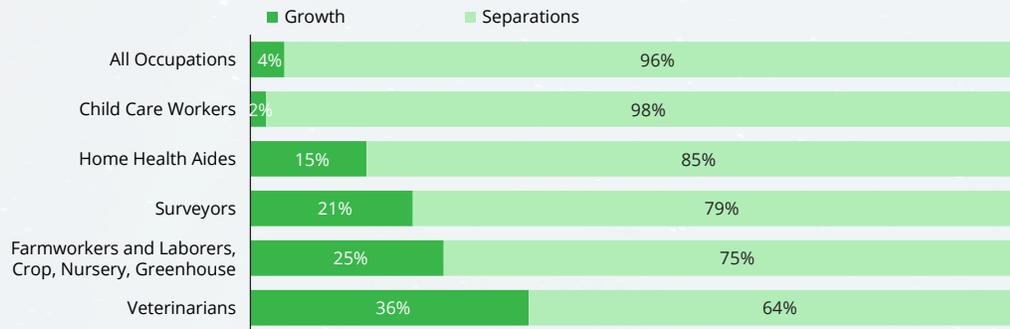
Projected yearly wage for select occupations, 2018 to 2028

Occupational category	Avg annual wages
Management Occupations	\$109,940
Health Care Practitioners and Technical Occs	\$97,223
Architecture and Engineering Occupations	\$95,244
Legal Occupations	\$88,730
Business and Financial Operations Occupations	\$78,973
Computer and Mathematical Occupations	\$77,363
Life, Physical, and Social Science Occupations	\$74,666
Transportation and Material Moving Occupations	\$64,751
Construction and Extraction Occupations	\$64,145
Installation, Maintenance, and Repair Occupations	\$61,133
Educational Instruction and Library Occupations	\$60,097
Protective Service Occupations	\$59,490
Community and Social Service Occupations	\$55,958
Arts, Design, Ent, Sports, and Media Occupations	\$52,421
Office and Administrative Support Occupations	\$46,339
Health Care Support Occupations	\$45,603
Production Occupations	\$42,213
Sales and Related Occupations	\$36,368
Farming, Fishing, and Forestry Occupations	\$35,946
Building, Grounds Cleaning/Maintenance Occs	\$35,858
Personal Care and Service Occupations	\$34,005
Food Preparation and Serving Related Occupations	\$28,791

Note: Wages are based on 2019 Occupational Employment Statistics wage estimates for Alaska, weighted by base year 2018 employment.

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

Projected growth and separations for select occupations, 2018-28



Notes: Growth openings are new jobs. Separations are the projected numbers of workers permanently leaving an occupation.

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

Types of separation openings for select occupations, 2018-28



Notes: Occupational transfers are the projected numbers of workers permanently leaving an occupation for another. Labor force exits are the projected numbers of workers leaving the labor force, and are common at retirement age but can happen at any age.

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

On the other hand, family doctors' separations are 58 percent exits and 42 percent transfers. Because medical school is such an undertaking and investment, people tend to remain in that career.

Exits among doctors are mainly retirements, and when they transfer, it's to other high-paying medical occupations. Some high-requirement occupations have high transfer rates because they create opportunities for advancement.

50 of Alaska's 777 occupations made the 'top jobs' list

Long-term projections are a vital tool for workforce development agencies, job placement and counseling professionals, job seekers, and education and

training providers. To help them determine where to focus, we developed Alaska's top jobs list, shown on the next page, which identifies the occupations we expect to fare well and pay well over the decade.

To make the list, an occupation must pay higher-than-average wages plus have higher-than-average growth or a large number of openings.

Out of Alaska's 777 occupations, 50 made the list this year. Twenty-four require a bachelor's degree and six require an associate degree or some type of postsecondary education, such as a vocational certificate or college attendance. Of the 19 top jobs that require a high school diploma or less, 12 require on-the-job training or an apprenticeship.

Paul Martz is an economist in Juneau. Reach him at (907) 465-6028 or paul.martz@alaska.gov.

Alaska's top jobs, 2018 to 2028

	Employment			Average annual openings, 2018-28			Training* required	Wage** quartile
	2018	2028	Percent change	Growth	Separations	Total openings		
Master's degree								
Educational, Guidance, School, and Vocational Counselors	505	499	-1.2%	-1	51	50	None	\$\$\$
Bachelor's degree								
Chief Executives	1,704	1,830	7.4%	13	126	139	None	\$\$\$\$
General and Operations Managers	4,368	4,622	5.8%	25	390	415	None	\$\$\$\$
Sales Managers	808	846	4.7%	4	74	78	None	\$\$\$\$
Administrative Services Managers	1,234	1,300	5.4%	7	106	113	None	\$\$\$\$
Computer and Information Systems Managers	931	963	3.4%	3	74	77	None	\$\$\$\$
Financial Managers	1,146	1,188	3.7%	4	90	94	None	\$\$\$\$
Human Resources Managers	561	595	6.1%	3	49	52	None	\$\$\$\$
Construction Managers	993	1,089	9.7%	10	75	85	Moderate OJT	\$\$\$\$
Medical and Health Services Managers	962	1,036	7.7%	7	79	86	None	\$\$\$\$
Buyers and Purchasing Agents	690	705	2.2%	2	73	75	Moderate OJT	\$\$\$
Compliance Officers	730	731	0.1%	0	64	64	Moderate OJT	\$\$\$\$
Human Resources Specialists	625	659	5.4%	3	64	67	None	\$\$\$
Management Analysts	524	534	1.9%	1	49	50	None	\$\$\$\$
Accountants and Auditors	1,932	2,053	6.3%	12	185	197	None	\$\$\$\$
Computer Systems Analysts	570	626	9.8%	6	43	49	None	\$\$\$
Network and Computer Systems Administrators	752	785	4.4%	3	54	57	None	\$\$\$\$
Civil Engineers	999	1,077	7.8%	8	81	89	None	\$\$\$\$
Zoologists and Wildlife Biologists	920	927	0.8%	1	84	85	None	\$\$\$\$
Environmental Scientists and Specialists, Including Health	613	689	12.4%	8	70	78	None	\$\$\$\$
Substance Abuse, Behavioral Disorder, Mental Health Counselors	675	733	8.6%	6	72	78	None	\$\$\$
Elementary School Teachers, Except Special Education	2,283	2,264	-0.8%	-2	168	166	None	\$\$\$
Secondary School Teachers, Exc Special and Career/Tech Ed	1,695	1,680	-0.9%	-2	118	117	None	\$\$\$
Registered Nurses	5,856	6,260	6.9%	40	323	363	None	\$\$\$\$
Airline Pilots, Copilots, and Flight Engineers	2,083	2,163	3.8%	8	216	224	Moderate OJT	\$\$\$\$
Associate degree or postsecondary nondegree award or some college, no degree								
Civil Engineering Technicians	638	669	4.9%	3	64	67	None	\$\$\$
Dental Hygienists	670	733	9.4%	6	47	53	None	\$\$\$\$
Massage Therapists	518	560	8.1%	4	63	67	None	\$\$\$
Telecomms Equip Installers and Repairers, Except Line Installers	770	752	-2.3%	-2	84	82	Moderate OJT	\$\$\$\$
Aircraft Mechanics and Service Technicians	1,476	1,504	1.9%	3	122	125	None	\$\$\$
Captains, Mates, and Pilots of Water Vessels	642	681	6.1%	4	62	66	None	\$\$\$
High school diploma or equivalent								
Food Service Managers	595	660	10.9%	7	72	79	None	\$\$\$
Correctional Officers and Jailers	1,283	1,243	-3.1%	-4	111	107	Moderate OJT	\$\$\$
Police and Sheriff's Patrol Officers	1,283	1,242	-3.2%	-4	88	84	Moderate OJT	\$\$\$\$
First-Line Supervisors of Office and Administrative Support	2,062	2,151	4.3%	9	221	230	None	\$\$\$
Executive Secretaries and Executive Administrative Assistants	3,209	3,353	4.5%	14	367	381	None	\$\$\$
Supervisors of Construction and Extraction Workers	740	829	12.0%	9	81	90	None	\$\$\$\$
Carpenters	2,162	2,467	14.1%	31	239	270	Apprentice	\$\$\$
Operating Engineers, Other Construction Equipment Operators	2,788	2,951	5.9%	16	330	346	Moderate OJT	\$\$\$
Electricians	1,769	1,901	7.5%	13	212	225	Apprentice	\$\$\$
Plumbers, Pipefitters, and Steamfitters	1,307	1,411	8.0%	10	151	161	Apprentice	\$\$\$\$
First-Line Supervisors of Mechanics, Installers, and Repairers	672	720	7.1%	5	64	69	None	\$\$\$\$
Bus and Truck Mechanics and Diesel Engine Specialists	701	747	6.6%	5	67	72	Long OJT	\$\$\$
Mobile Heavy Equipment Mechanics, Except Engines	822	910	10.7%	9	86	95	Long OJT	\$\$\$
First-Line Supervisors of Production and Operating Workers	619	674	8.9%	6	67	73	None	\$\$\$
Welders, Cutters, Solderers, and Brazers	590	639	8.3%	5	68	73	Moderate OJT	\$\$\$
1st-Line Supervisors of Transp/Matl Movers, Exc Air Cargo	685	727	6.1%	4	75	79	None	\$\$\$
Commercial Pilots	932	939	0.8%	1	95	96	Moderate OJT	\$\$\$\$
Flight Attendants	463	458	-1.1%	-1	52	52	Moderate OJT	\$\$\$\$
No formal educational credential								
Service Unit Operators, Oil, Gas, and Mining	993	1,074	8.2%	8	146	154	Moderate OJT	\$\$\$

Note: To rank as a "top job," an occupation must: 1) rank in the top two wage quartiles; AND 2) have total 10-year projected growth of at least 75 jobs and greater percentage growth than all occupations combined, OR be among the 50 occupations with the most projected average annual openings (of those with wages in the top two quartiles). Residual "all other" occupations are excluded.

*OJT = on-the-job training. Moderate-term is one to 12 months and long-term is more than 12 months.

**Wages: \$\$\$ = \$60,370 to \$78,010 annually (\$29.02 to \$37.50 hourly), \$\$\$\$ = More than \$78,010 annually (\$37.50 hourly), based on 2019 Occupational Employment Statistics wage estimates for Alaska.

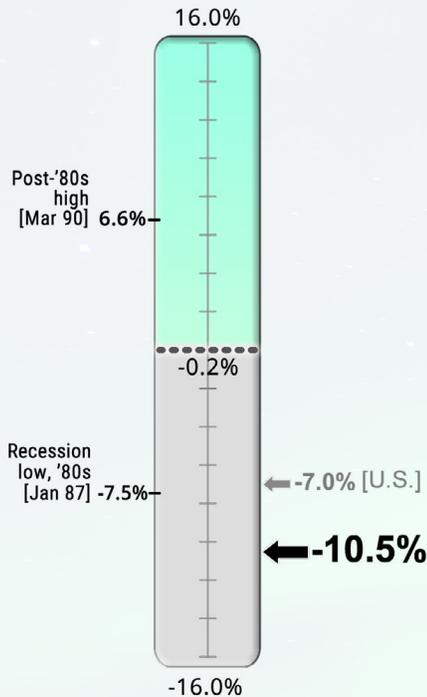
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Gauging The Economy



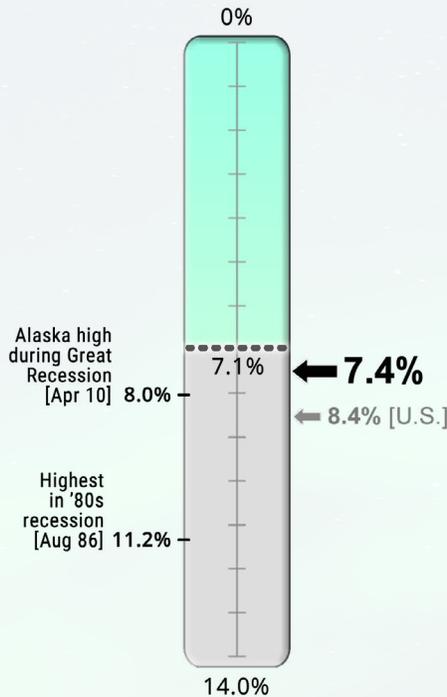
Job Growth

August 2020
Over-the-year percent change



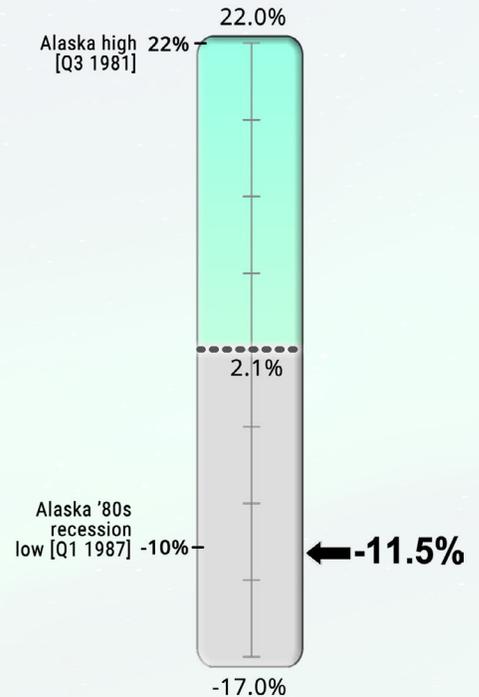
Unemployment Rate

August 2020
Seasonally adjusted



Wage Growth

2nd Quarter 2020 (estimate)
Over-the-year percent change

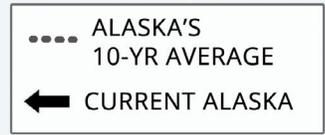


- The shutdowns to slow the spread of COVID-19 caused a rapid drop in employment, beginning in April.
- Over-the-year job losses have been over 10 percent each month since March.

- Alaska's unemployment rate fell substantially in August, but much of the decline was due to technical issues with the way the U.S. Bureau of Labor Statistics calculates the rate rather than actual economic change.

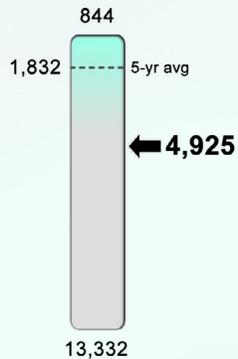
- After 10 straight quarters of wage growth, Alaska's total wages fell dramatically with the pandemic.
- Second quarter wage data for Alaska are estimated. U.S. wage growth data are only available through the first quarter of 2020.

Gauging The Economy



Initial Claims

Unemployment, week ending Sept. 5, 2020**

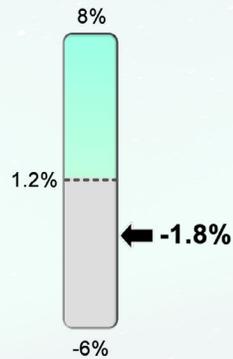


➤ Unemployment claims jumped in the spring with the coronavirus pandemic as many businesses shut down or limited services, and they remain elevated.

**Four-week moving average ending with specified week

GDP Growth

1st Quarter 2020
Over-the-year percent change*

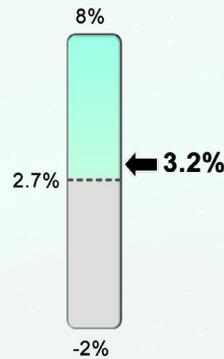


➤ Gross domestic product is the value of the goods and services a state produces. This GDP decline was the first over-the-year loss since the third quarter of 2016.

*In current dollars

Personal Income Growth

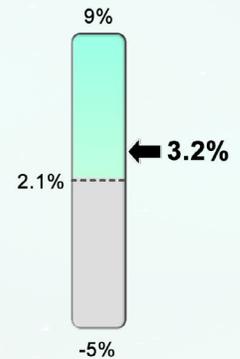
1st Quarter 2020
Over-the-year percent change



➤ Personal income includes wages as well as transfer payments (such as Social Security, Medicaid, and the PFD) and investment income. After five quarters well above the 10-year average, growth slowed in the first quarter of 2020.

Change in Home Prices

Single-family, percent change from prior year, Q2 2020**

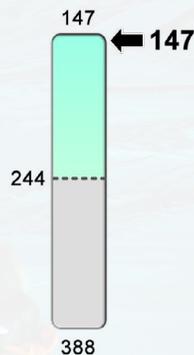


➤ Home prices include only those for which a commercial loan was used. This indicator tends to be volatile from quarter to quarter.

**Four-quarter moving average ending with specified quarter

Foreclosures

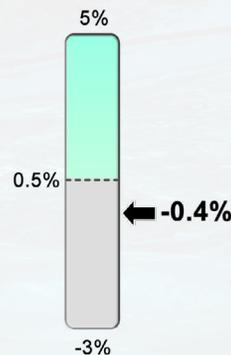
1st Quarter 2020



➤ Foreclosure rates remain very low and were low throughout the recent state recession, highlighting how different it was from the '80s recession when foreclosures exceeded 2,000 in some quarters.

Population Growth

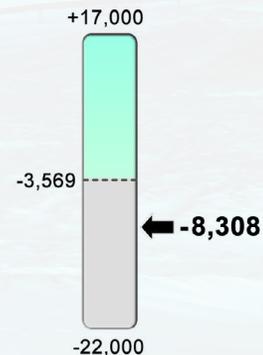
2018 to 2019



➤ This was the third straight year of population decline.

Net Migration

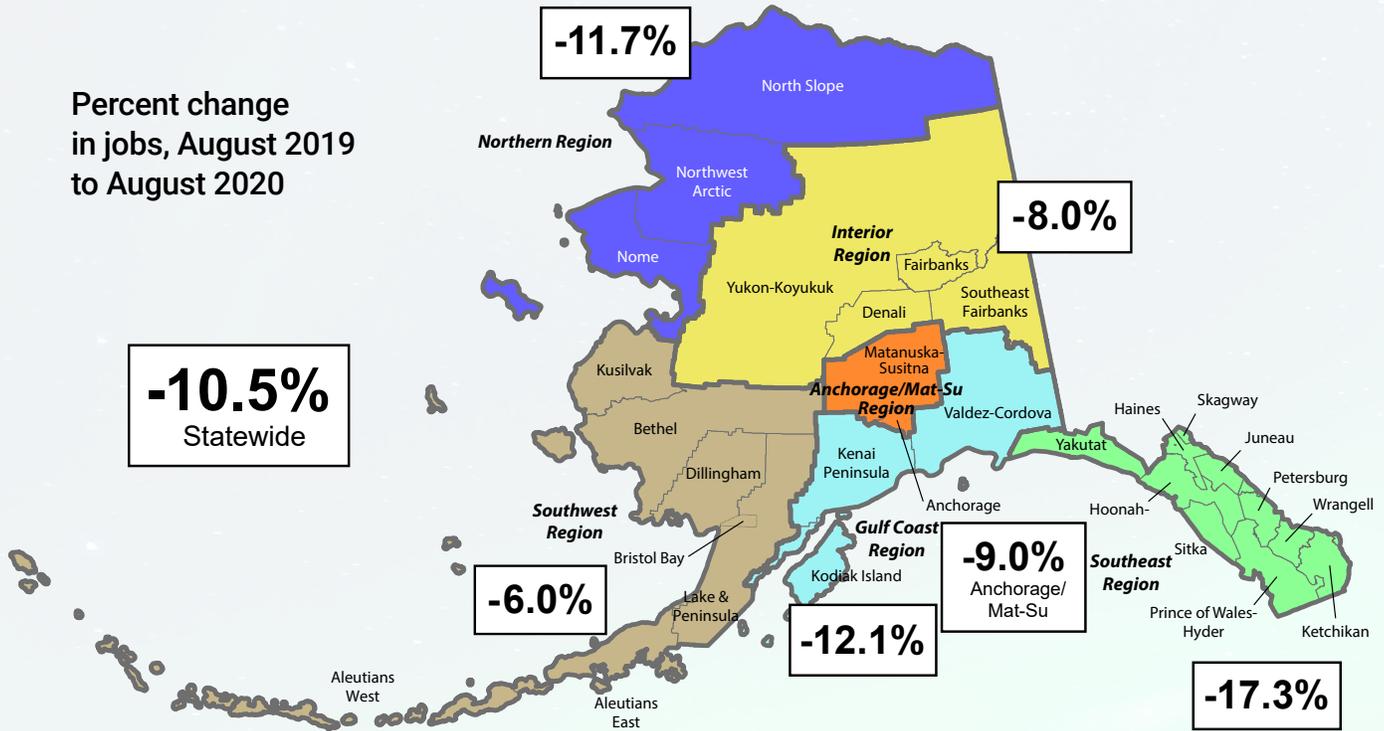
2018 to 2019



➤ The state had net migration losses for the seventh consecutive year in 2019. Net migration is the number who moved to Alaska minus the number who left.

Employment by Region

Percent change in jobs, August 2019 to August 2020



Seasonally adjusted

	Prelim.	Revised	
	08/20	07/20	08/19
United States	8.4	10.2	3.7
Alaska	7.4	11.6	6.2

Not seasonally adjusted

	Prelim.	Revised	
	08/20	07/20	08/19
United States	8.5	10.5	3.8
Alaska	6.4	10.8	5.3

Regional, not seasonally adjusted

	Prelim.	Revised			Prelim.	Revised			Prelim.	Revised	
	08/20	07/20	08/19		08/20	07/20	08/19		08/20	07/20	08/19
Interior Region	5.2	9.3	5.0	Southwest Region	6.7	10.6	8.9	Southeast Region	6.5	11.4	4.5
Denali Borough	5.9	9.5	3.3	Aleutians East Borough	1.7	3.1	1.6	Haines Borough	9.5	16.1	4.8
Fairbanks N Star Borough	5.0	8.9	4.6	Aleutians West	2.2	4.1	2.7	Hoonah-Angoon	8.8	14.5	6.0
Southeast Fairbanks	5.3	9.2	7.1	Census Area				Census Area			
Yukon-Koyukuk	9.1	15.8	12.0	Bethel Census Area	10.0	16.1	13.7	Juneau, City and Borough	5.7	10.3	3.7
Census Area				Bristol Bay Borough	3.7	2.9	3.6	Ketchikan Gateway	7.7	12.9	4.6
Northern Region	8.0	13.6	10.2	Dillingham Census Area	5.7	7.4	7.0	Borough			
Nome Census Area	8.6	15.4	10.6	Kusilvak Census Area	13.9	25.3	18.1	Petersburg Borough	5.3	9.3	6.4
North Slope Borough	4.9	8.2	6.6	Lake and Peninsula	5.7	9.1	7.1	Prince of Wales-Hyder	7.8	13.4	8.4
Northwest Arctic Borough	10.3	16.8	13.8	Borough				Census Area			
Anchorage/Mat-Su Region	6.6	11.0	5.0	Gulf Coast Region	6.1	10.7	4.9	Sitka, City and Borough	4.8	9.0	3.4
Anchorage, Municipality	6.6	10.8	4.7	Kenai Peninsula Borough	6.8	11.7	5.3	Skagway, Municipality	12.0	19.4	2.6
Mat-Su Borough	6.8	11.8	6.0	Kodiak Island Borough	4.4	8.3	4.0	Wrangell, City and Borough	6.3	10.8	6.1
				Valdez-Cordova	4.6	8.3	4.2	Census Area			
								Yakutat, City and Borough	6.7	10.8	5.4

How Alaska Ranks



Note: Government employment includes federal, state, and local government plus public schools and universities.

¹August seasonally adjusted unemployment rates

²August employment, over-the-year percent change

Sources: U.S. Bureau of Labor Statistics and Alaska Department of Labor and Workforce Development, Research and Analysis Section

Other Economic Indicators

	Current	Year ago	Change
Urban Alaska Consumer Price Index (CPI-U, base yr 1982=100)	225.049 1st half 2020	228.858	-1.66%
Commodity prices			
Crude oil, Alaska North Slope, * per barrel	43.36 August 2020	61.14	-29.08%
Natural gas, residential, per thousand cubic feet	13.46 June 2020	13.83	-2.68%
Gold, per oz. COMEX	1,940.50 9/21/2020	1,531.50	+26.71%
Silver, per oz. COMEX	24.79 9/21/2020	18.71	+32.50%
Copper, per lb. COMEX	311.20 9/21/2020	261.15	+19.17%
Zinc, per MT	2,538.00 9/18/2020	2,331.50	+8.86%
Lead, per lb.	0.85 9/21/2020	0.94	-9.57%
Bankruptcies			
Business	76 Q2 2020	106	-28.30%
Personal	5 Q2 2020	9	-44.44%
Personal	71 Q2 2020	97	-26.80%
Unemployment insurance claims			
Initial filings	21,548 August 2020	3,431	+528.04%
Continued filings	150,521 August 2020	20,335	+640.21%
Claimant count	36,099 August 2020	5,617	+542.67%

*Department of Revenue estimate

Sources for this page and the preceding three pages include Alaska Department of Labor and Workforce Development, Research and Analysis Section; U.S. Bureau of Labor Statistics; U.S. Bureau of Economic Analysis; U.S. Energy Information Administration; Kitco; U.S. Census Bureau; COMEX; Bloomberg; Infomine; Alaska Department of Revenue; and U.S. Courts, 9th Circuit