

# 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

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#### 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

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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.

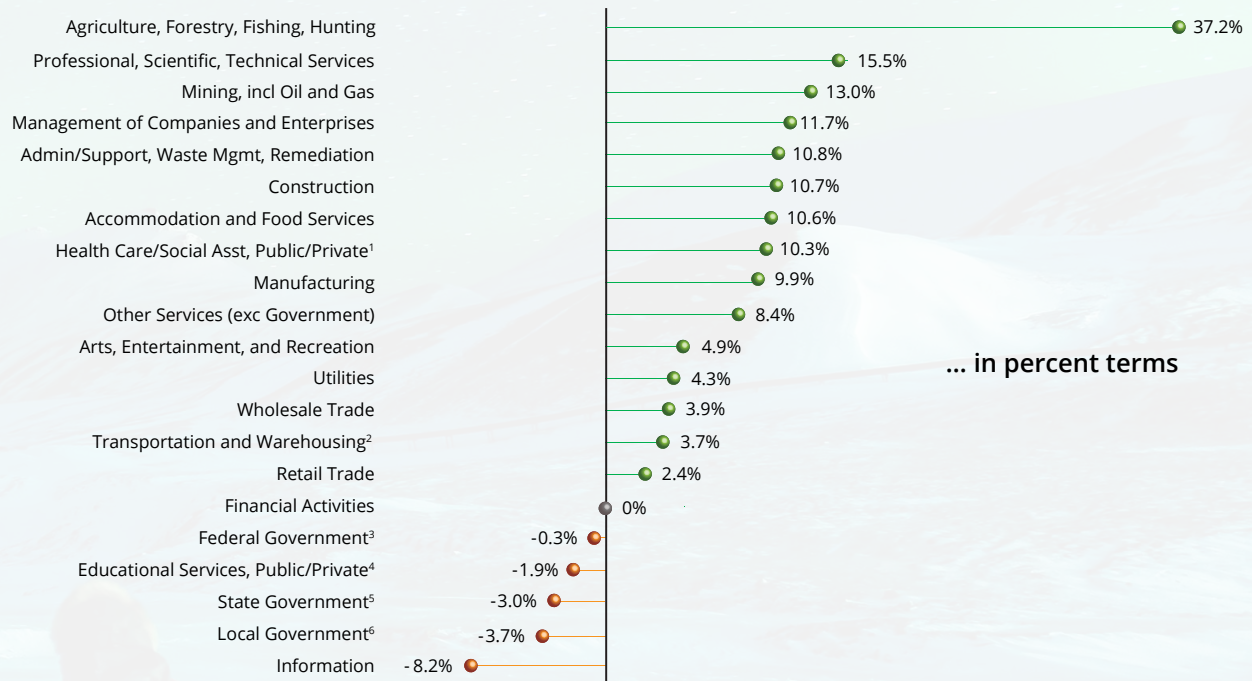
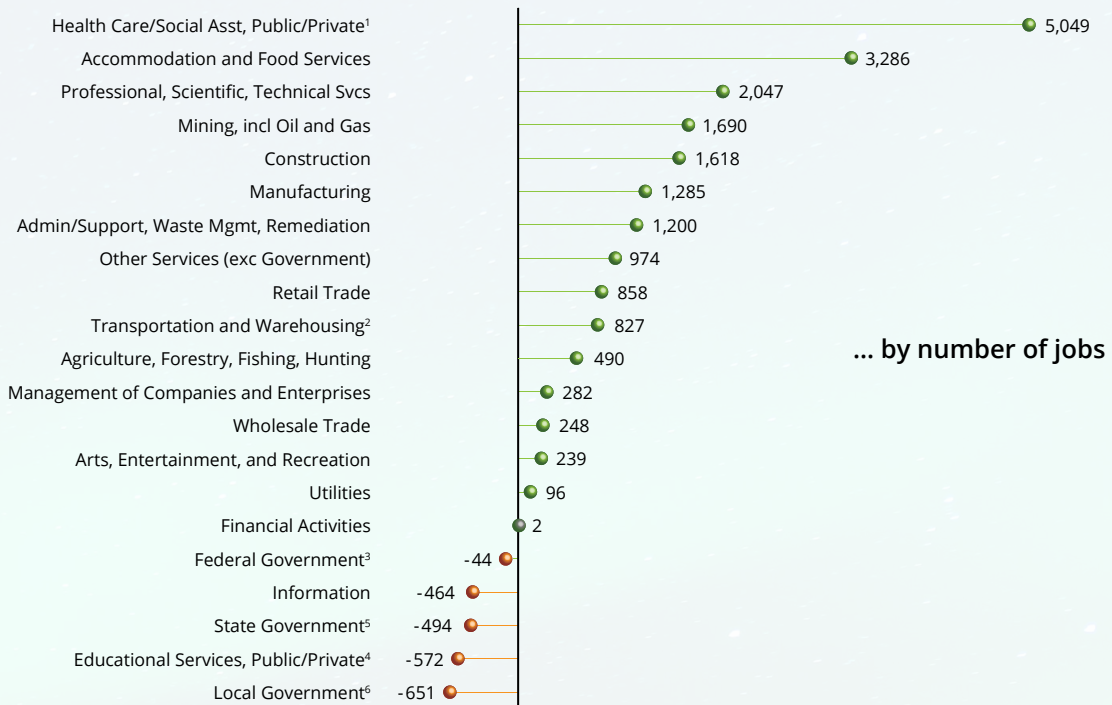
Clothing and clothing accessory stores are also high on the list of pandemic-susceptible industries. They were resilient during the recent state recession, losing just 50 jobs between 2015 and 2018 (-2.5 percent), but employment began to slide in 2019. Because that weakness was clear even before the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



<sup>1</sup>Includes public sector hospital employment

<sup>2</sup>Includes U.S. Postal Service employment

<sup>3</sup>Excludes uniformed military, U.S. Postal Service, and hospital employment

<sup>4</sup>Includes local and state government educational service employment

<sup>5</sup>Excludes university, railroad, and hospital employment

<sup>6</sup>Excludes 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 <sup>1</sup>	2018 estimated jobs <sup>2</sup>	2028 projected jobs	Change from 2018 to 2028	Total % change <sup>3</sup>
Total Employment, All Jobs <sup>4</sup>	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 <sup>5</sup>	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 <sup>6</sup>	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 <sup>7</sup>	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 <sup>8</sup>	12,955	12,911	-44	-0.3%
State Government <sup>9</sup>	16,415	15,921	-494	-3.0%
Local Government <sup>10</sup>	17,441	16,790	-651	-3.7%
Unreported	86	84	-	-

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

<sup>2</sup>May not sum to total employment due to rounding

<sup>3</sup>Percent change may be inconsistent with employment change due to employment rounding.

<sup>4</sup>Excludes self-employed workers, fishermen, domestic workers, unpaid family workers, and nonprofit volunteers

<sup>5</sup>Includes U.S. Postal Service employment

<sup>6</sup>Includes local and state government education employment

<sup>7</sup>Includes public sector hospital employment

<sup>8</sup>Excludes uniformed military, postal service, and hospital employment

<sup>9</sup>Excludes university, railroad, and hospital employment

<sup>10</sup>Excludes 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.

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

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## 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.

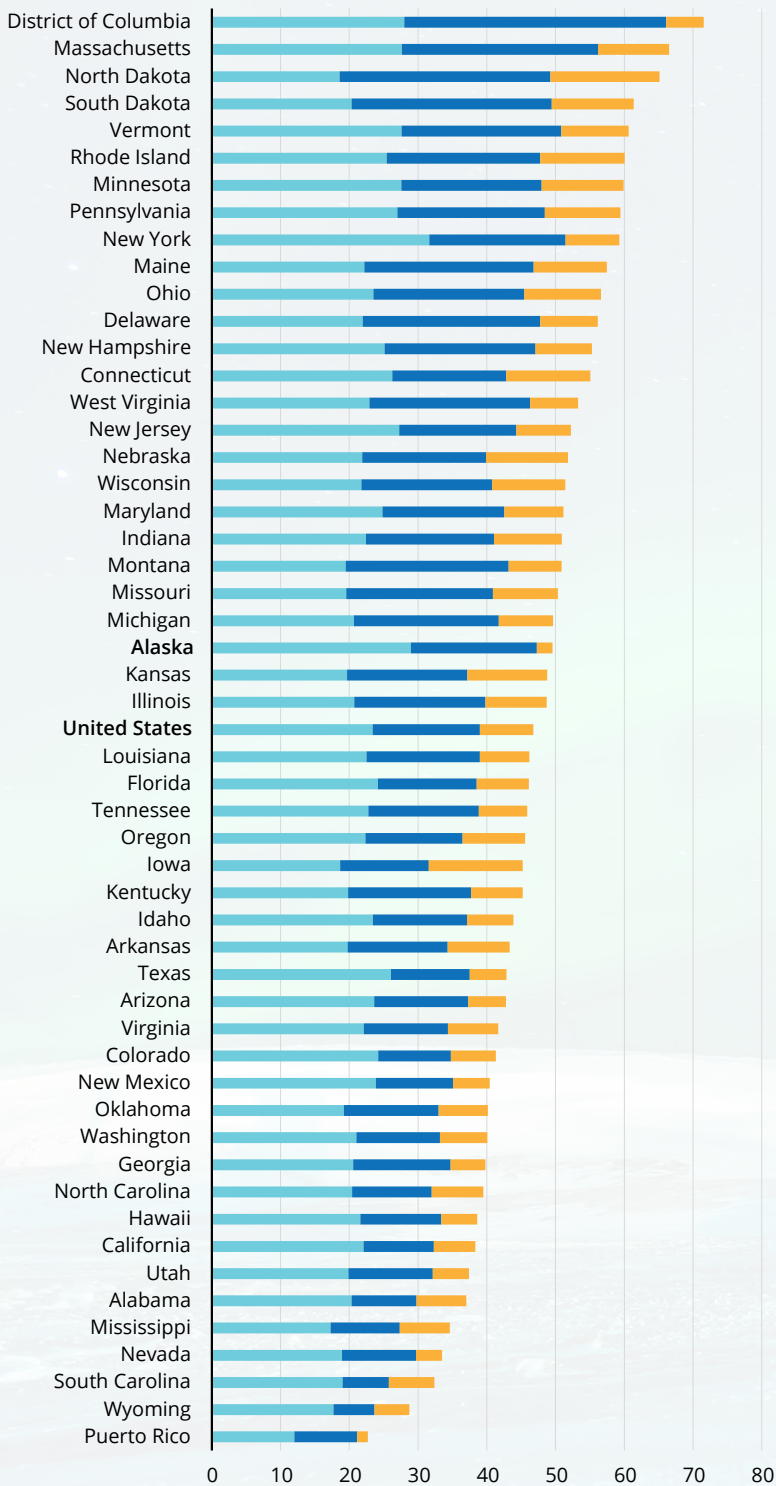
Heavy and civil engineering construction will also climb out of the previous recession, based on the improved outlook for oil and gas-related construction projects. The oil and gas construction industry is set to add 129 jobs (21.1 percent growth) over the decade. We project "other" heavy and civil engineering 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).

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