



ALASKA ECONOMIC
TRENDS
OCTOBER 2018

INDUSTRY and
OCCUPATION
PROJECTIONS
for 2016 to 2026

FROM THE COMMISSIONER

Gasline a once-in-a-generation opportunity for Alaskans

Project development in Alaska is about to spur incredible growth and opportunity. A North Slope renaissance in oil and gas, breaking ground at Donlin Gold Mine, expansions at Fort Knox and Kensington Mines, extensive military construction in the Interior, and construction of the Alaska LNG Project are all on the horizon. These projects will require thousands of skilled workers to fill high-paying positions, including long-term operations and maintenance “legacy” jobs and indirect jobs.



HEIDI DRYGAS
Commissioner

Alaska Hire remains a priority for these new projects, and a Project Labor Agreement on the Alaska LNG Project will help us hire our neighbors and our sons and daughters who want to live and work here. The Department of Labor and Workforce Development will work with partners to give Alaskan workers, contractors, employers, private businesses, and residents the competitive advantage they need to stand first in line for these positions: jobs with good wages and benefits that will support families and strengthen our economy.

The Alaska LNG Project is an immediate priority that will deliver Alaska’s abundant natural gas to in-state customers and international markets, reducing energy costs for residents and putting thousands of Alaskans to work. While Alaska maintains a strong construction workforce despite the recent downturn in our economy, the demands of building an 807-mile gas pipeline and associated infrastructure will quickly outstrip the current labor supply. This project is just one of several that calls for immediate expansion of training opportunities to prepare our workforce. Ensuring the maximum number of Alaskans work on these projects will require increased state, federal, and private sector investment for career and technical education and workforce development programs.

For perspective, constructing the Alaska LNG Project will require 12,000 workers and create another 1,000

long-term legacy jobs once built. The project will also generate 6,000 indirect jobs during construction and another 500 during operation.

Governor Walker and Alaska Gasline Development Corporation President Keith Meyer have repeatedly voiced support for a PLA on this project, which will help maximize Alaska Hire goals. With strategic planning in the works this year, Alaskans will be first in line for these jobs.

This spring, the department published the Alaska LNG Project Gasline Workforce Plan. In developing the plan, the department conducted public meetings in Anchorage, Fairbanks, and Kenai, which brought together employers, education leaders, organized labor representatives, training professionals, and industry stakeholders who shared strategies for putting Alaskans to work on the natural gas pipeline. Stakeholder input shaped the resulting workforce plan, and it will drive our actions moving forward.

With a similar collaborative approach, I have asked experts from across the state to join me at the end of October for a meeting of industry leaders, employers, organized labor representatives, and education and training partners at the forefront of major upcoming projects. Leaders from the oil and gas, mining, maritime, and construction industries will identify workforce needs that come with exciting yet demanding development opportunities.

We are closer than ever to a final agreement to finance and build a gasline to monetize Alaska’s vast natural resource and provide energy for Alaskans for decades to come. On this project’s timeline alone, pre-construction activities could start in 2019 and transition into full-swing construction soon after. We must rise to the challenge of preparing Alaskans for these once-in-a-generation opportunities. I am confident that through collective preparation, Alaskans will build and operate the major projects on our state’s horizon. Training starts now — there is no time to waste.

Contact the office of Commissioner Heidi Drygas at (907) 465-2700 or commissioner.labor@alaska.gov.



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ON THE COVER:

The Seven Summits Challenge team of six airmen descends Denali, part of a challenge that takes 14 days. Photo courtesy of U.S. Air Force

ALASKA
DEPARTMENT of LABOR
and WORKFORCE
DEVELOPMENT

Governor Bill Walker
Commissioner Heidi Drygas

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Industry Projections

5.1 percent job growth projected from 2016 to 2026

By **PAUL MARTZ**

Although the state remains in a protracted recession with job losses continuing in 2018, we project Alaska will add roughly 17,000 jobs from 2016 to 2026, for 5.1 percent growth. Oil prices have rebounded since the plunge that began in late 2014, but the recession's lingering effects will dampen some industries' growth over the decade.

Industries tied to oil and gas as well as state government grew steadily from 2010 through 2015 while oil prices were high, and then lost jobs rapidly when prices fell. We expect some of those losses to stick.

Extraction and support activities for oil and gas — an oil and gas related subset of “support activities for mining” — are projected to decline by 3.6 percent (-136 jobs) and 6.1 percent (-477 jobs), respectively. State government will also continue to decline, with a projected loss of 868 jobs (-5.1 percent). These industries' employment will likely settle around their early-to-mid-2000s levels, with most of the loss in the near term.

Led by health care, a number of industries' projected growth will more than offset those losses. Health care has been on a decades-long growth streak, even throughout the current recession, a trend we expect to continue through the projection period. We project 21.4 percent growth in health care and social assistance employment, or about 10,100 jobs, in the long term. Population increases and aging will be the primary drivers, but state and federal policies are also important factors.

We produce a new set of projections every two years. That's especially important in Alaska, where large resource extraction and development projects play an outsized role in the state's economy and can significantly change the employment picture.

However, these projects have long lead times, extensive permitting requirements, and complicated economics — a natural gas pipeline and Pebble Mine are

Why is 2016 the base year?

Readers sometimes question why the projections begin with 2016 when we're already more than halfway through 2018. The short answer is 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. For more detail on how we create the projections, see the sidebar on page 8.

examples — so we don't include them here until they are nearly certain to happen during the projection period.

Marijuana will boost agriculture

Although agriculture is a tiny industry in Alaska, it's set to be the second-fastest growing in percent terms (24.4 percent) due to the legalization of recreational marijuana in 2014.

The broader sector — agriculture, forestry, fishing, and hunting, of which marijuana cultivation is a part — will add a projected 254 jobs from 2016 to 2026. Most will be in the greenhouse, nursery, and floriculture production industry, with the remainder in aquaculture and support activities for crop production. Greenhouse, nursery, and floriculture production employment is likely to more than double, from 128 jobs to 367 — a gain of nearly 190 percent.

Growth mainly in existing mines

Mineral mining has been stable over the past decade, aside from downward pressure on coal mining. We project 16.9 percent growth over the decade, or 460 jobs, mainly in existing mines. Continued expansion has become necessary as most active mines seek additional resources to extend their lives.

The greatest potential for a new mine is Barrick and

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Alaska Employment Projections by Industry 2016 to 2026

Industry ¹	2016 estimated jobs ²	2026 projected jobs	Change from 2016 to 2026	Total % change ³
Total Employment, All Jobs ⁴	332,283	349,286	17,003	5.1%
Goods-Producing	45,575	46,711	1,135	2.5%
Natural Resources and Mining	16,256	16,621	365	2.2%
Agriculture, Forestry, Fishing and Hunting	1,043	1,297	254	24.4%
Mining	15,213	15,324	112	0.7%
Oil and Gas Extraction	3,762	3,625	-136	-3.6%
Mining (except Oil and Gas)	2,727	3,187	460	16.9%
Support Activities for Mining	8,725	8,512	-213	-2.4%
Construction	15,646	16,344	698	4.5%
Construction of Buildings	4,346	4,567	221	5.1%
Heavy and Civil Engineering Construction	3,443	3,657	214	6.2%
Specialty Trade Contractors	7,857	8,119	263	3.3%
Manufacturing	13,674	13,745	72	0.5%
Food Manufacturing	10,221	10,134	-86	-0.8%
Seafood Product Preparation and Packaging	9,777	9,537	-240	-2.4%
Manufacturing, All Other	3,453	3,611	158	4.6%
Services-Providing	286,347	302,240	15,893	5.6%
Trade, Transportation, and Utilities	67,141	68,161	1,020	1.5%
Wholesale Trade	6,389	6,512	123	1.9%
Retail Trade	36,681	36,776	95	0.3%
Transportation and Warehousing ⁵	21,929	22,626	697	3.2%
Air Transportation	6,219	6,469	251	4.0%
Water Transportation	1,341	1,355	14	1.0%
Truck Transportation	2,841	2,784	-57	-2.0%
Transportation and Warehousing, All Other	11,528	12,017	489	4.2%
Utilities	2,142	2,247	105	4.9%
Information	6,301	5,734	-567	-9.0%
Financial Activities	12,829	13,097	269	2.1%
Finance and Insurance	7,002	7,048	46	0.7%
Real Estate and Rental and Leasing	5,827	6,049	223	3.8%
Professional and Business Services	27,740	29,010	1,269	4.6%
Professional, Scientific, and Technical Services	13,790	13,968	178	1.3%
Management of Companies and Enterprises	2,686	3,037	351	13.1%
Administrative and Support and Waste Management and Remediation Services	11,264	12,004	741	6.6%
Education and Health Services	77,535	87,938	10,403	13.4%
Educational Services, Public and Private ⁶	30,288	30,557	269	0.9%
Elementary and Secondary Schools, Public and Private	21,213	21,387	174	0.8%
Educational Services, Public and Private, All Other	9,075	9,170	96	1.1%

Table continues on next page

NovaGold's Donlin Creek Gold Project, situated on lands owned by the Kuskokwim and Calista corporations. The project received its final Environmental Impact Statement, required under the National Environmental Policy Act, and a Record of Decision issued Aug. 13, 2018, although additional permits and a final development decision are pending.

The number of jobs this project could generate is uncertain, but it would significantly change mining's employment picture. This is a complex project, though, and it will be sensitive to expectations about future mineral prices and the regulatory environment.

Mining support to recover losses

Just under half of the mining jobs in Alaska are in the primary oil and gas extraction and mineral mining industries ("mining, except oil and gas"), and the remainder — 57 percent — are in "support activities for mining."

Within support activities, oil and gas drilling is expected to add 197 jobs over the projection period — but that growth will come on the heels of a loss of about half the industry's employment since 2014 (-544 jobs). Given the extent of that decline, the projected

1

Alaska Employment Projections by Industry, continued 2016 TO 2026

Industry	2016 estimated jobs ²	2026 projected jobs	Change from 2016 to 2026	Total % change ³
Health Care and Social Assistance, Public and Private ⁷	47,247	57,381	10,134	21.4%
Ambulatory Health Care Services	20,100	25,125	5,026	25.0%
Hospitals	13,759	16,999	3,241	23.6%
Health Care and Social Assistance, All Other	13,389	15,256	1,868	14.0%
Leisure and Hospitality	35,757	39,060	3,303	9.2%
Arts, Entertainment, and Recreation	4,827	5,348	521	10.8%
Accommodation and Food Services	30,930	33,712	2,782	9.0%
Accommodation	8,496	9,296	800	9.4%
Food Services and Drinking Places	22,434	24,416	1,982	8.8%
Other Services (Except Government)	11,632	12,397	765	6.6%
Total Government	47,411	46,843	-568	-1.2%
Federal Government ⁸	13,195	13,195	0	0%
State Government ⁹	16,867	15,998	-868	-5.1%
Local Government ¹⁰	17,349	17,649	300	1.7%
Unreported	362	336	-	-

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

increase wouldn't replace every lost job but would put industry employment close to its mid-2000s level of about 900 jobs.

Jobs in support activities for oil and gas operations are in a similar position, having fallen 36.5 percent from 2015 to 2017 (-3,644 jobs). We expect employment to settle around 7,297 jobs by 2026, which would be a loss of 477 since 2016 (-6.1 percent).

The smaller mining support industries focus on metal and nonmetallic minerals, and these combined are projected to grow 24.9 percent (68 jobs).

Slower growth for construction

We expect construction employment will grow slightly slower than the rest of the economy, at 4.5 percent (698 jobs). The sector lost 2,178 jobs (-12.9 percent) between 2014 and 2017.

Specialty trade contractors have taken the biggest hit in this recession, losing 1,006 jobs (-12.1 percent) between 2015 and 2017, followed by nonresidential building construction at a 14.9 percent loss over that period (-468 jobs). We project both of these will recover slightly, with specialty trades adding 263 jobs (3.3 percent) and nonresidential building gaining 36 (1.3

percent). Residential building will grow a bit more, at a projected 12.2 percent (185 jobs).

The heavy and civil engineering construction category includes oil and gas pipeline-related construction as well as a mix of highway, street, bridge, and other heavy and civil engineering construction.

Employment in oil and gas pipeline and related construction reached a 19-year high in early 2014 at 957 jobs, climbed to 999 jobs in 2015, then dropped to 824 the following year. We expect employment to continue falling and hit 782 jobs by 2026. That would still be higher than most of the last two decades' employment levels, however.

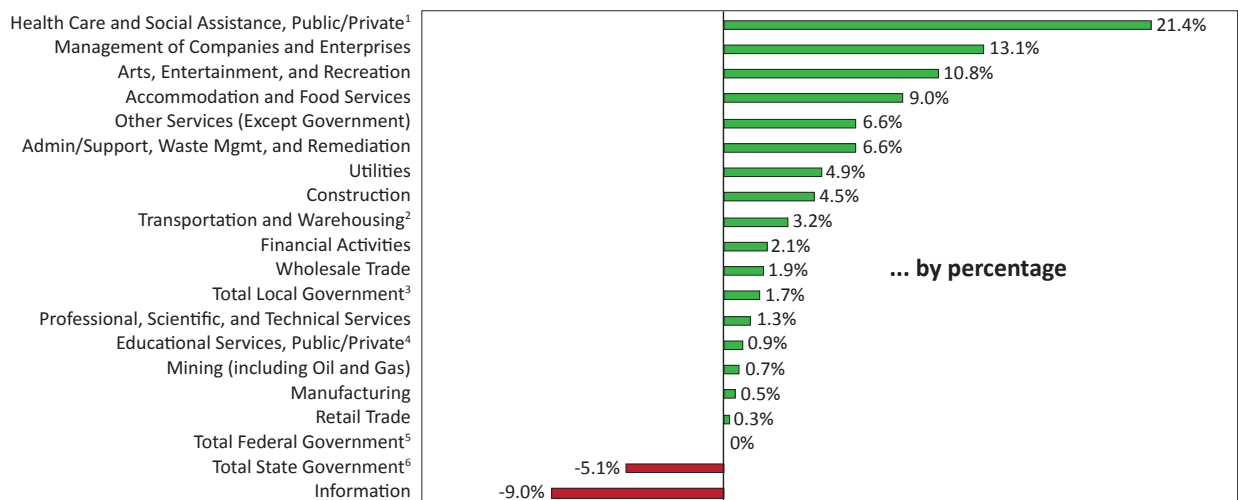
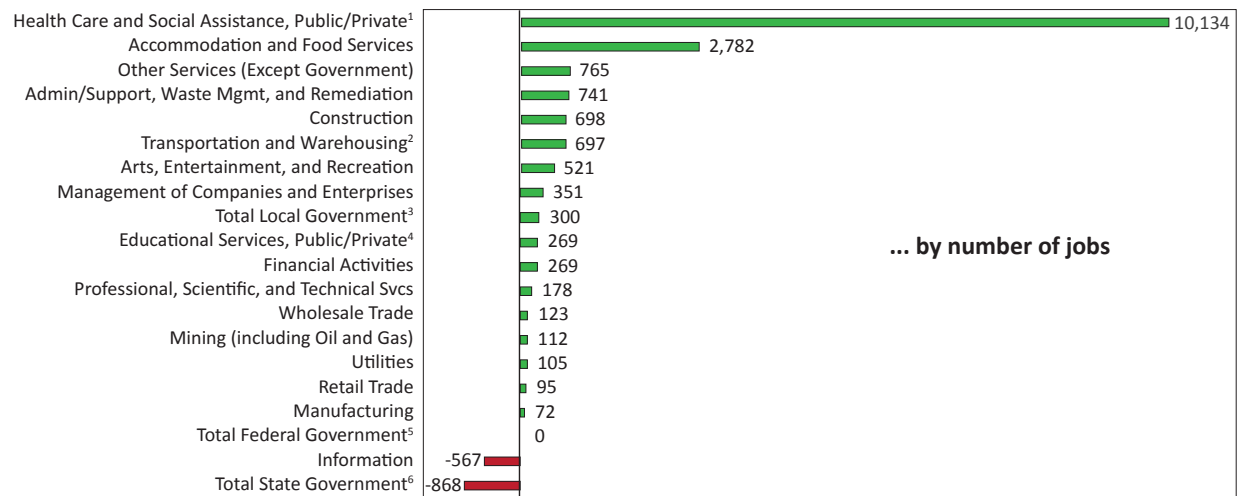
Highway, street, and bridge construction will grow by a projected 5.6 percent (90 jobs). This industry has been remarkably stable over the past 18 years, and although it declined in 2017, we don't anticipate a permanent shift to lower employment.

The "other" heavy and civil engineering construction industry is set to grow from 298 jobs in 2016 to 392 jobs by 2026. This industry's employment fell 53.4 percent between 2014 and 2017, and the projected 2026 level would still be near the low end for the last 27 years. Large state capital budgets and oil and gas projects have bolstered this industry in the past, but the

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Projected Job Growth by Industry

ALASKA, 2016 TO 2026



¹Includes public sector hospital employment

²Includes U.S. Postal Service employment

³Excludes public school and hospital employment

⁴Includes local and state government educational employment

⁵Excludes uniformed military, postal service, and hospital employment

⁶Excludes university, railroad, and hospital employment

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

state is unlikely to regain an oil price or state budget environment that would sustain such high job levels.

Seafood manufacturing mostly flat

Manufacturing will add a projected 72 jobs (0.5 percent), leaving it mostly flat for the next decade. The vast majority of its jobs are in the seafood product preparation and packaging industry, which we project will decline 2.4 percent (-240 jobs). The seafood harvesting side lost 14.1 percent of its wholesale value

statewide between 2011 and 2016, but the value jumped 13.4 percent from 2016 to 2017, which erased much of the loss.¹

Total pounds processed have been up and down since recovering from the significant declines of 2007-2009. The trend has been up, though, and total pounds processed increased 34.0 percent between 2010 and 2017, even figuring in a major drop in 2016 due to lower-than-expected pink salmon returns.¹

¹Change in value is in 2017 dollars and comes from Alaska Department of Fish and Game's COAR Report, current as of June 23, 2018.

How we create these projections

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

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. 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 U.S. Postal Service — with private sector industries.

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 take into account any knowledge of specific projects 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 ODB 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.

For the projections, adjustments to staffing ratios within an industry are 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 both job growth and occupational separations. 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 Bureau of Labor Statistics that account for labor force exits and occupational transfers. For more information on separations, see the sidebar in the occupation article on page 15 or visit: <https://www.bls.gov/emp/documentation/separations-methods.htm>.

Even with the relative stability in harvesting, seafood processing employment has continued to decline. The industry lost 1,177 processing jobs between 2014 and 2017 (-11.1 percent). Automation, changes in consumer preferences, and increases in exports for processing are all likely factors.

Modest growth in retail, wholesale

Wholesale and retail trade are projected to add jobs in

line with the overall trend of flat to slight growth. We project 1.9 percent growth for wholesale (123 jobs) and just 0.3 percent for retail (95 jobs) over the decade. Both have lost ground during the recession, but wholesale has remained markedly flat aside from its losses in durable goods and wholesale electronic markets, agents, and brokers.

After adding 2,020 jobs between 2010 and 2015 (5.8 percent), retail trade lost 856 jobs between 2015 and 2017, a 2.3 percent decline. The biggest losses were

in food and beverage stores at 4.7 percent (-257 jobs) and in sporting goods, hobby, and musical instrument stores at 11.0 percent (-234 jobs).

Food and beverage stores have long been losing ground to general merchandise stores such as warehouse clubs and supercenters, so the recent losses weren't a surprise. The industry is projected to decline 5 percent through 2026 (-272 jobs).

The brief expansion of sporting goods stores between 2013 and 2014 offset some of the recent losses, but the gains from the new stores had mostly disappeared by 2017. The industry's long-term projection is a decline of 8.5 percent (-171 jobs), but with most of the losses in the short term followed by flat employment in the later part of the projection period. If we look at 2017 as the base year instead of 2016, the projected loss is far less dramatic at 2.9 percent, or 54 jobs.

Parts of the retail trade industry projected to grow include:

- General merchandise stores, including warehouse clubs and supercenters: 395 jobs (3.9 percent). Closures of Sam's Clubs throughout the state will cause some decline in 2018, but overall growth has been strong and Costco plans to expand into at least one of the two Alaska markets.
- Miscellaneous store retailers: 207 jobs (8.2 percent). This industry covers mostly smaller retailers such as gift shops, pet stores, and office supply stores.
- Building material and garden equipment and supplies dealers: 145 jobs (4.0 percent).
- Direct selling establishments: 81 jobs (7.5 percent).

Tourism to bolster transportation

We project 3.2 percent growth for the transportation and warehousing sector (697 jobs). Tourism-related transportation will drive most of that gain. This includes:

- Scenic and sightseeing transportation, land: 127 jobs (12.5 percent).
- Scenic and sightseeing transportation, water: 168 jobs (22.0 percent).
- Scenic and sightseeing transportation, other: 40 jobs (40 percent).

Air transportation, scheduled and nonscheduled, will add a projected 251 jobs (4.0 percent). Water transportation's projection is essentially flat at just 14 jobs (1.0 percent).

We expect a 2 percent decline in truck transportation (-57 jobs), a 7.4 percent decline in rail transportation (-50 jobs), a 1.3 percent dip for postal service (-20 jobs), and a decrease of 6.5 percent in freight transportation arrangement (-19 jobs).

Professional, scientific, and technical services

This sector is an amalgam of industries, most of which we expect to grow somewhat but with lingering effects from the recession. The hardest-hit industries have been oil related, with engineering and drafting services losing 583 jobs between 2014 and 2017 (-14.5 percent). The combined geophysical surveying and nongeophysical mapping services industry's employment plummeted 40.5 percent (-284 jobs), and environmental and other scientific and technical consulting services fell 19.6 percent (-219 jobs).

Although these industries will continue to struggle in the short term, we expect their employment to stabilize at relatively high levels, historically speaking, in the long run.

We project engineering and drafting services will add 76 jobs (2.1 percent) from 2016 to 2026, but disregarding the major loss in 2016 and looking only at 2017-2026 puts growth at 5 percent (172 jobs). The industry is projected to provide 3,621 jobs by 2026, which would be close to its employment level at the end of the last decade.

The geophysical surveying and nongeophysical mapping services industry is an extreme example of the effect that losses extending into 2017 can have on expected growth rates. The 2016 to 2026 timeline shows projected growth of 8.3 percent (45 jobs), but again, narrowing the period to 2017-2026 increases the rate to 40.7 percent (169 jobs).

The outlook for environmental and other scientific and technical consulting services is similar. The 2016 to 2026 projection is 75 new jobs (7.8 percent), but because losses have continued into 2018, growth when it resumes is projected to be even stronger than 7.8 percent to reach the total projected level of 1,034 jobs.

Minor job growth for education

The public and private educational services industry — elementary and secondary schools as well as business, technical, trade, and other schools — is projected to add 269 jobs (0.9 percent) over the decade.

The projected growth for elementary and secondary schools is a modest 0.8 percent (174 jobs), based on lower anticipated population growth among 5-to-18-

year-olds as well as continued constraints on state education funding.

We project slow growth for business, technical, trade, and other schools as well, at 1.1 percent (96 jobs). Most of these jobs are in the University of Alaska, but the category includes other private colleges plus trade schools and sports and recreational instruction. Lower state budgets will be a similar drag on this industry, even with slightly more population growth in the 19-to-25-year-old group than in recent years.

Health care continues to climb

Alaska's 65-plus population will increase an estimated 58.8 percent over the projection period, from 78,957 seniors in 2016 to 125,423 in 2026, as the large baby boomer generation continues to move into that age group. By 2026, senior citizens will represent 16 percent of Alaska's population, up from 11 percent in 2016. The 36-to-50 age group will increase by an estimated 21,548 people. In contrast, we anticipate the 21-to-35 age group will decline by 12,118.

Given the aging trend plus overall population growth, we project employment in private health care and social assistance will increase 21.4 percent (10,134 jobs) by 2026, making health care the largest contributor to the state's total projected job growth at 59.6 percent of all new jobs.

The largest industry in this sector is ambulatory health care services, which we project will add 5,026 jobs (25.0 percent), roughly in line with its 2007 to 2017 average annual growth rate of 2.9 percent. The industry is mostly physician's offices, outpatient care centers, and home health care services. While federal and state policies affect this industry, its primary drivers are population growth and an aging population.

We project corresponding employment growth in nursing and community care facilities for the elderly, at 30.3 percent (535 jobs), and in services for the elderly and those with disabilities at 28.2 percent (709 jobs).

In contrast, hospitals lost 117 jobs from 2013 to 2014, which was the first decline since 1994. Growth resumed quickly, jumping to 12.1 percent from 2015 to 2017 (a gain of 1,590 jobs). Given what appears to be a return to the historical growth curve, we expect hospitals will add 3,241 jobs (23.6 percent) over the projection period.

Strong growth in leisure, hospitality

The leisure and hospitality sector will benefit from

continued growth in tourism as well as overall population increase. We project its employment will increase 9.2 percent from 2016 to 2026, or 3,303 jobs. The tourism-based industries in this sector and their projected gains are:

- Traveler accommodation, including rooming and boarding houses: 717 jobs (9.3 percent).
- RV parks and recreational camps: 83 jobs (11.2 percent).
- Museums, historical sites, and similar institutions: 41 jobs (10.3 percent).
- Other amusement and recreation industries: 594 jobs (20.0 percent).

The remainder of the sector is mostly restaurants, bars, and specialty food services that when combined will grow a projected 8.8 percent (1,982 jobs).

Restaurants lost about 1.7 percent of their employment (-325) in 2016 and 2017 due to less spending in a weak economy, and we expect further short-term declines.

Bars are also likely to continue their long-term decline, to a projected total loss of 15.5 percent (-230 jobs). These losses will be due mostly to competition with restaurants that serve alcohol rather than to the recession or reduced alcohol consumption.

Specialty food services range from oil field catering services and airline food handling to traditional catering services, a mix projected to add 250 jobs (11.8 percent) over the decade.

Long-term decline for government

Government employment — excluding public education, the postal service, and hospitals — is projected to shrink 1.2 percent (-568 jobs) from 2016 to 2026.

We anticipate federal employment will remain flat after a loss of 2,374 jobs from 2010 to 2014. Federal employment fluctuated a little from 2015 to 2017, and while that's likely to continue, a change in the trend is unlikely. The upcoming arrival of new F-35s at Eielson Air Force Base near Fairbanks could change the employment picture, but we don't yet know how many of those new jobs will be federal civilian and how many will be private contractors or active duty, which aren't included in these employment data.

State government (excluding health care and the university) faces continued losses after sharp declines following the drop in oil prices. From 2014 to 2016, state

Continued on page 22

Occupation Projections

Most high-growth jobs will be in health care for 2016 to 2026

By **PAUL MARTZ**

After almost negligible job growth in 2013 and 2014, Alaska lost roughly 10,000 jobs from 2015 to 2017 when the recession hit, mainly in the oil industry and industries tied to it.

We're set to slowly climb out of the recession, but projected growth will average just 1,700 new jobs per year from 2016 to 2026 — and 510 of those will be in a health care occupation (see exhibits 1 and 3), driven by the demands of an older population as well as overall population increase.

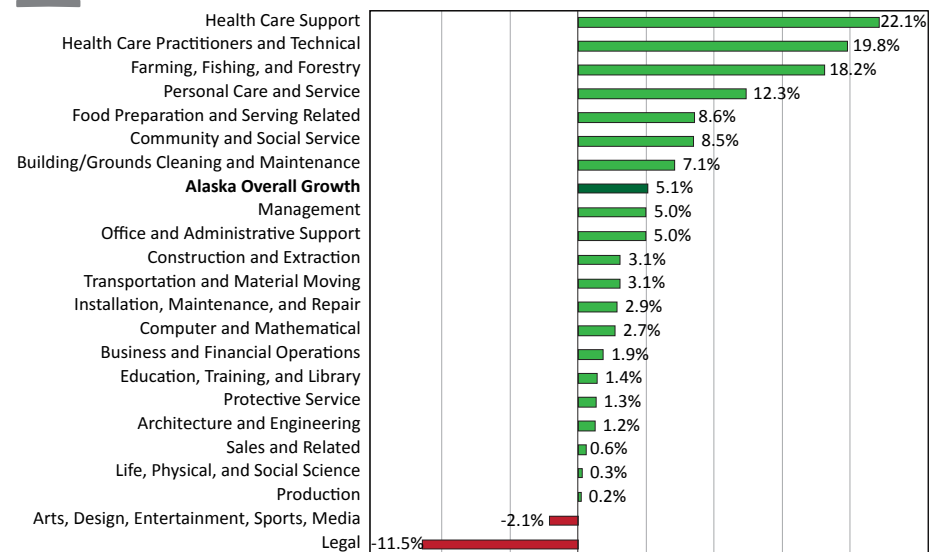
Though the most growth will be in health care occupations, the most openings overall, when separations are considered, will be in the three largest occupational categories: office and administrative support, food preparation and serving, and sales. (See exhibits 2 and 9.)

An estimated 37,700 job openings per year — nearly 96 percent of total openings — will come from retirements and other separations rather than growth. (See the sidebar on page 16 for more on separations.)

Health care and high growth jobs

Fifteen of the 25 occupations with the highest projected percent growth are health care practitioners or technicians, and five are in health care support. (See Exhibit 3.)

1 Projected Growth by Occupation Category ALASKA, 2016 TO 2026



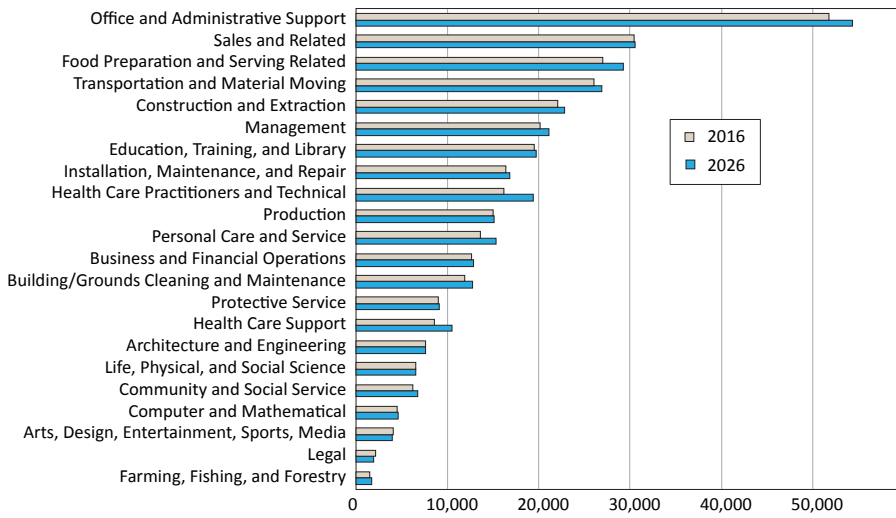
Note: Occupational categories are based on the federal Standard Occupational Classification Manual. Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Three of the remaining five are also health care related: medical secretaries, personal care aides, and health care social workers. The largest of those is personal care aides, at an estimated 5,387 in 2016. (For context, the closest related occupation with that many jobs was registered nurses at 5,476.) Personal care aides provide in-home services including cooking, cleaning, help with personal hygiene, and in some cases limited medical assistance under the direction of a registered nurse who provides advanced medical care.

The remaining two occupations in the top 25 are linked to marijuana and mining. The number of workers in nurseries and greenhouses is likely to double as a result of marijuana legalization, from 242 to 484,

2 Projected Total Jobs by Category

ALASKA, 2016 TO 2026



Note: Occupational categories are based on the federal Standard Occupational Classification Manual.
 Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

making this the highest-growth occupation in percent terms, although small in number. A similar small group is extraction worker helpers, who round out the list at 22.3 percent projected growth.

Other high-growth occupations outside health care that didn't quite make the list include:

- Earth drillers (except oil and gas): 20 percent, mostly in mineral mining and construction related drilling.
- Nonfarm animal caretakers: 16.1 percent, listed under the personal care and service occupations category and typically working at dog boarding facilities.

3 Top 25 Occupations

PROJECTED GROWTH, 2016 TO 2026

Occupation	Percent growth	Health care	Health support	Soc Svc
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	100.0%			
Home Health Aides	27.1%		✓	
Nurse Midwives	25.2%	✓		
Chiropractors	25.0%	✓		
Dentists, General	24.1%	✓		
Dental Assistants	24.0%		✓	
Medical and Clinical Lab Techs	24.0%	✓		
Radiologic Technologists	24.0%	✓		
Dental Hygienists	23.9%	✓		
Physical Therapist Assistants	23.8%		✓	
Phlebotomists	23.8%		✓	
Surgical Technologists	23.8%	✓		
Medical Secretaries	23.7%			✓
Family and General Practitioners	23.6%	✓		
Diagnostic Medical Sonographers	23.6%	✓		
Healthcare Social Workers	23.6%			✓
Medical Assistants	23.4%		✓	
Nurse Practitioners	23.2%	✓		
Medical and Clinical Lab Techs	23.0%	✓		
Internists, General	22.8%	✓		
Physical Therapists	22.6%	✓		
Helpers: Extraction Workers	22.3%			
Recreational Therapists	22.2%	✓		
Physician Assistants	22.0%	✓		
Personal Care Aides	20.9%			

Note: The list of the 25 occupations with the highest percent growth is limited to occupations with at least 50 workers and growth of at least 20 jobs. It excludes residual occupations ending with "all other."
 Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

4 Bottom 25 Occupations

PROJECTED LOSS, 2016 TO 2026

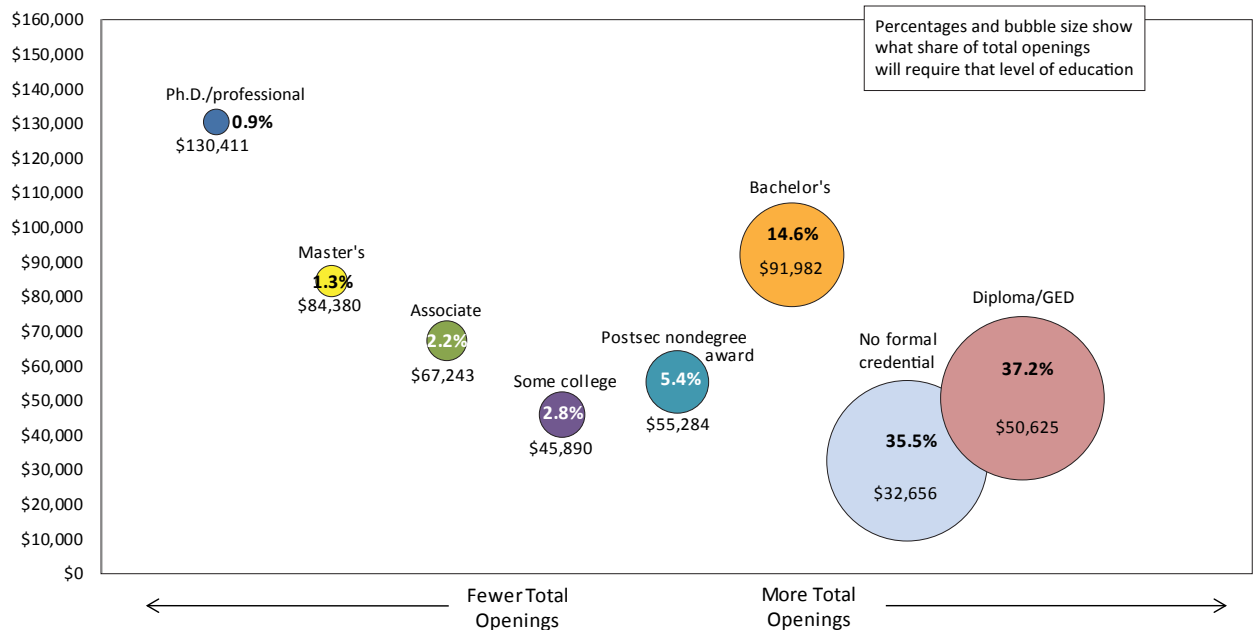
Occupation	Percent loss
Reporters and Correspondents	-31.6%
Editors	-26.0%
Machine Feeders and Offbearers	-26.0%
Radio and Television Announcers	-21.7%
Broadcast Technicians	-20.8%
Legal Secretaries	-18.5%
Printing Press Operators	-18.5%
Fallers	-17.3%
Logging Equipment Operators	-17.3%
Paralegals and Legal Assistants	-16.3%
Advertising Sales Agents	-15.1%
Gaming Dealers	-13.3%
Gaming Cage Workers	-10.9%
Gaming and Sports Book Writers and Runners	-10.8%
Legal Support Workers, All Other	-10.4%
Lawyers	-10.2%
Title Examiners, Abstractors, and Searchers	-9.7%
Gaming Service Workers, All Other	-8.8%
Producers and Directors	-8.8%
Gaming Change Persons and Booth Cashiers	-8.6%
Rail-Track Laying and Maintenance Equipment Operators	-7.8%
Judicial Law Clerks	-7.5%
Graphic Designers	-7.4%
Locomotive Engineers	-7.0%
Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	-7.0%

Note: The occupations with the most projected job loss are only those with 50 or more workers. Additional occupations with fewer than 50 workers are projected to lose jobs.
 Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

5

Yearly Openings by Education Level vs. Wages

PROJECTED, 2016 TO 2026



Notes: Average annual wages are based on 2017 OES occupation wage estimates for Alaska, weighted by base year (2016) employment. Occupational education levels are based on 2015 and 2016 American Community Survey Public Use Microdata from the U.S. Census Bureau. Openings include annual average growth and separations for occupations with a reported OES wage.
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

- Tour guides and escorts: 15.5 percent, through strong growth in tourism.

Declining occupations

While some occupations took a heavy hit during the recession, the list of occupations projected to decline over the decade resembles those that were already on long-term downward trajectories. These include media, legal, logging, and railroad-related occupations. (See Exhibit 4.)

The five occupations projected to decline most are all in media, in line with the downward trend for the newspaper and broadcasting industries as news becomes increasingly digital. With the caveat that some may be transitioning to freelance, we project a 31.6 percent decline for reporters and correspondents, closely followed by editors and machine feeders/offbearers at losses of 26 percent each. Other industries have machine feeders, but in Alaska, most operate industrial printing equipment.

The next two are radio and television announcers at -21.7 percent and broadcast technicians at -20.8 percent. Like legal and other media occupations, their declines are part of the shift to

6

Wages by Occupation Category

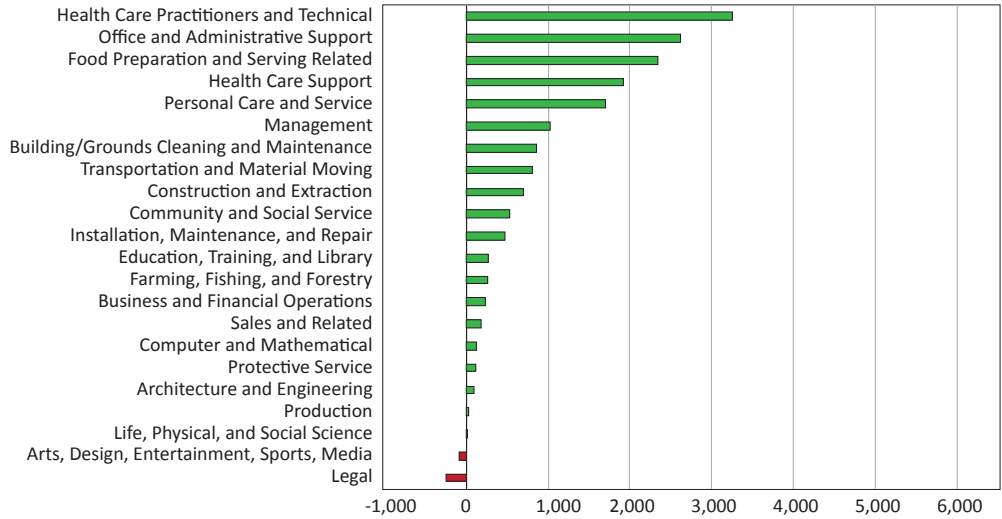
PROJECTED, 2016 TO 2026

Category	Wages ¹
Management Occupations	\$110,628
Architecture and Engineering Occupations	\$99,531
Legal Occupations	\$96,042
Health Care Practitioners and Technical Occupations	\$94,832
Business and Financial Operations Occupations	\$79,678
Computer and Mathematical Occupations	\$79,494
Life, Physical, and Social Science Occupations	\$74,172
Construction and Extraction Occupations	\$64,352
Education, Training, and Library Occupations	\$63,111
Installation, Maintenance, and Repair Occupations	\$60,602
Protective Service Occupations	\$59,296
Transportation and Material Moving Occupations	\$55,066
Arts, Design, Entertainment, Sports, and Media Occ	\$53,459
Community and Social Service Occupations	\$52,629
Office and Administrative Support Occupations	\$44,950
Health Care Support Occupations	\$43,511
Production Occupations	\$40,234
Farming, Fishing, and Forestry Occupations	\$38,484
Sales and Related Occupations	\$35,848
Building and Grounds Cleaning and Maintenance Occ	\$34,674
Personal Care and Service Occupations	\$31,973
Food Preparation and Serving Related Occupations	\$27,920

¹Average annual wages are based on 2017 OES occupation wage estimates for Alaska, weighted by base year (2016) employment.
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

providing services online. For legal occupations, another likely factor is that lawyers are increasingly self-employed — and these projections cover only wage and salary jobs.

7 Total 10-Year Growth Openings by Category PROJECTED, 2016 TO 2026



Most openings will have low prerequisites

About 73 percent of openings over the period will require a high school diploma or less, though many require postsecondary training or years of vocational education through apprenticeships. The line between education and training is blurring, and readers should be careful not to conclude that someone is fully qualified when they graduate high school for jobs that only require a diploma. In many cases, training requirements are intensive, difficult, and ongoing. Electricians, commercial pilots, and diesel mechanics are just a few examples.

The remaining 27.3 percent will require some college or a degree, certificate, or award. Examples include nursing assistants, paramedics, and mechanics. About 17 percent will require a bachelor's degree or higher.

Notes: Occupational categories are based on the federal Standard Occupational Classification Manual. Growth openings are new jobs created from 2016 to 2026. Occupations in decline will have no growth openings but may have openings through separations. Separation openings result from labor force exits and occupational transfers.

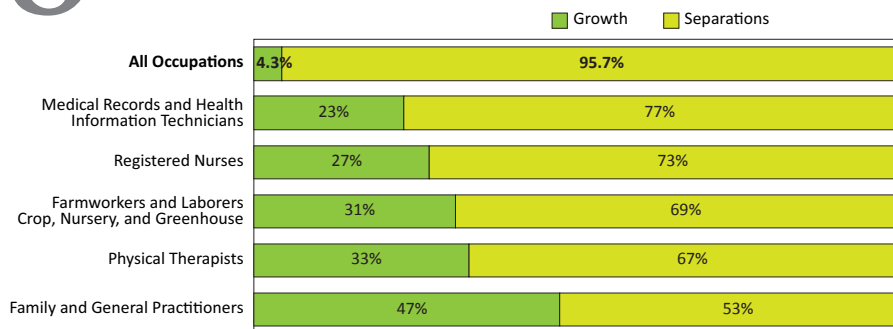
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

These jobs typically have higher wages and a greater likelihood of full-time, year-round work. (See Exhibit 5.)

Jobs that require more education typically pay more. (See exhibits 5 and 6.) The average annual wage for a job requiring a high school diploma is \$50,625. (Although again, many require apprenticeships or further training. See the Top Jobs table on page 17.)

For occupations with no formal educational requirements, it's \$32,656. These estimates are based on full-time, year-round work, so seasonal and part-time jobs pay considerably less.

8 Growth vs. Separations, Total Openings PROJECTED, FOR SELECT OCCUPATIONS, 2016 TO 2026



Notes: Growth openings are new jobs, and separations are the projected number of openings produced by workers permanently leaving that occupation. Separations are the sum of occupational transfers and labor force exits.

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

Types of separation openings

Over the decade, 95.7 percent of job opportunities will come from people vacating existing positions rather than from growth. (See Exhibit 8.) These are called occupational separations, and they consist of labor force exits and occupational transfers.

Labor force exits are mainly re-

tirements but include leaving the labor force permanently or temporarily for other reasons, such as college or job training, resulting in a permanent occupational change.

Occupational transfers are common as people advance through their working years. For example, an auto parts salesperson might become an auto mechanic. Transfers shouldn't be confused with turnover, where a worker switches employers but continues to work in the same occupation.

How separations vary by education requirements

Occupations with lower educational requirements make it easier for workers to enter and leave, resulting in high separations of both types but particularly occupational transfers as people move up to higher-paying jobs. (See Exhibit 10.) Labor force exits for these occupations are more

often people enrolling in school or training rather than retiring.

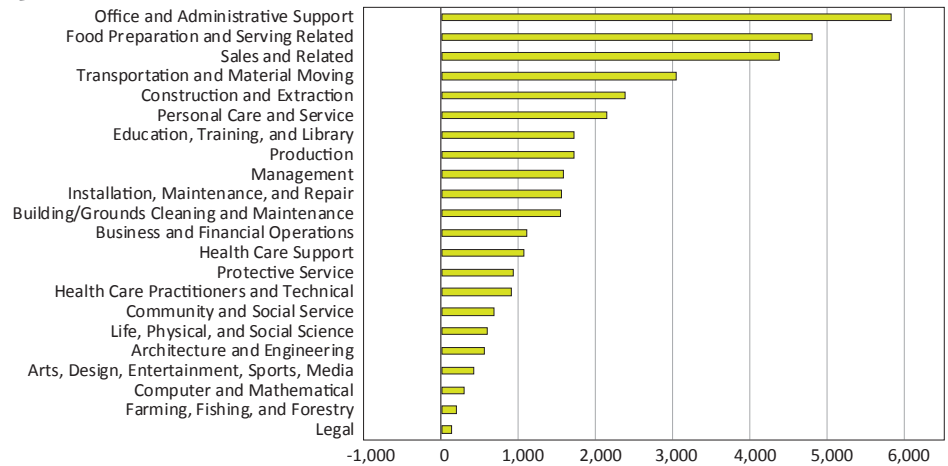
A good example is personal care aides, which have more than double the projected openings of reg-

istered nurses, and 88.1 percent will be from separations. Of those, about 43 percent will be transfers and 57 percent will be exits. This shows personal care aides often take the job as an entry to the health care field or the job market in general, and they are highly likely to return to school or job training or to move to a different occupation that also requires minimal training and education. They may also move up to higher-paying occupations (such as nursing assistants) as they gain experience.

Positions with high educational requirements can have high separation rates, but for different reasons. Among registered nurses, nearly 73 percent of projected openings will be

9 Yearly Separation Openings by Category

PROJECTED ANNUAL AVERAGE, 2016 TO 2026

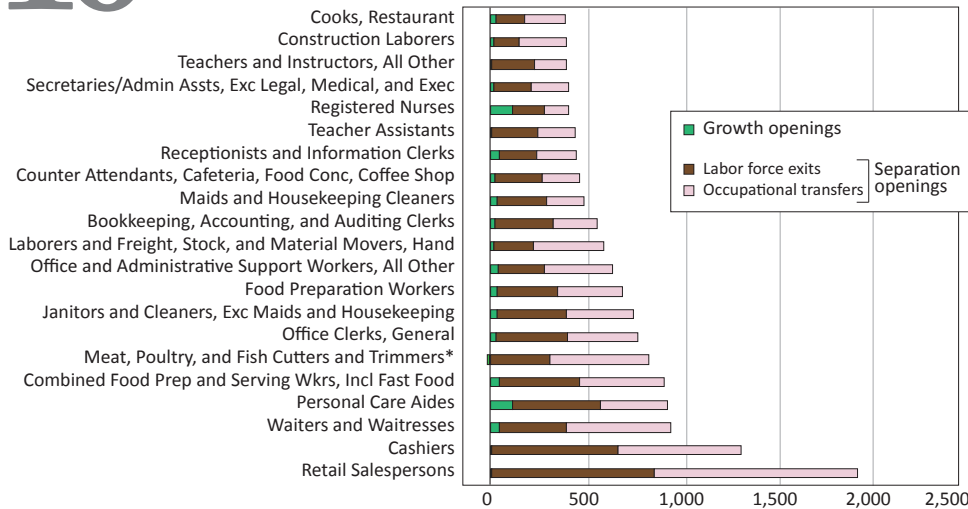


Notes: Occupational categories are based on the federal Standard Occupational Classification Manual. Separation openings result from labor force exits and occupational transfers. In declining occupations, some separations may not result in openings if positions are eliminated.

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

10 Where Yearly Openings Will Come From

ANNUAL AVERAGE FOR SELECT OCCUPATIONS, 2016 TO 2026



*This occupation has no projected growth openings and has a projected loss of 153 jobs over the period.

Notes: Annual openings are a combination of those generated from new jobs (growth), people permanently leaving one occupation for another (occupational transfers), and people leaving the labor force (labor force exits). Occupational separations are the sum of the exits and transfers. Separations typically represent openings for new workers, but in declining occupations, not all separations produce openings.

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

A change in how we measure openings in existing positions

The numbers of separation openings in this set of projections (called “replacements” in prior projections) are considerably higher than they have been in the past, but this is due to a change in the Bureau of Labor Statistics’ methods rather than any economic change.

From 1991 through 2016, BLS estimated job openings from replacements using a cohort-component method. Because these replacement estimates weren’t capturing all actual replacements, BLS developed a new method called “occupational separations.” It produces a much higher number of openings — about four times as many — but these are simply due to an improvement in capturing actual openings.

Occupational separations are created when workers permanently leave an occupation, and there are two types: labor force exits and occupational transfers. A labor force exit is created when a person drops out of the labor force entirely. If the person ever re-enters the labor force, it’s in a different occupation. Retirements are the most common labor force exits, but people can leave for other reasons, including returning to school. In an occupational transfer, a person permanently leaves one occupation for another. Transfers capture normal job movements as people move through their working years; for example, a retail sales worker might become a manager or a registered nurse. Transfers do not include those who change employers but remain in the same occupation, which is turnover.

For detailed methodology, see: <https://www.bls.gov/emp/documentation/separations-methods.htm> or <https://www.bls.gov/opub/mlr/2018/article/occupational-separations-a-new-method-for-projecting-workforce-needs.htm>.

through separations, and the makeup of these nongrowth openings is the same as personal care aides at 43 percent transfers and 57 percent exits. For nurses, this reflects both their high mobility and their continuing education requirements. Registered nurses’ credentials give them more opportunities for advancement as well as further training, and advancing often requires returning to school. Their labor force exit rate also reflects a large number of retirements because of the time and effort spent building a nursing career.

In general, though, occupations that require high levels of training or education have a lower percentage of separations, and they reflect more exits than transfers. (See exhibits 10 and 11.) Openings for doctors, for example, will be just 53 percent separations, made up of 40 percent transfers and 60 percent exits. Doctors have fewer advancement options, and they tend to stay in that career and retire.

Mental health counselors are an exception in that they transfer out of the occupation at nearly the same rate as parts salespeople and hotel clerks: roughly 64 percent. This could reflect advancement potential but also the difficulty of the work.

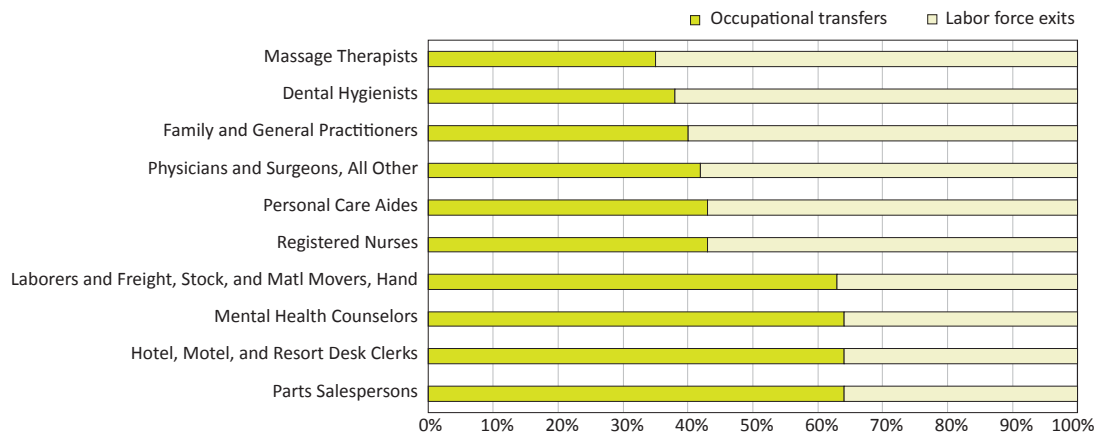
Alaska’s top jobs

Long-term occupation projections are a vital tool

Continued on page 22

11 Yearly Separations Broken Down into Transfers and Exits

PROJECTED, ANNUAL AVERAGE FOR SELECT OCCUPATIONS, 2016 TO 2026



Notes: Separations are the projected number openings produced by workers permanently leaving that occupation, and are the sum of occupational transfers and labor force exits.

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

12

Alaska's Top Jobs¹

PROJECTED, 2016 TO 2026

	Employment			Average Annual Openings			Training requirements ²	Wage quartile ³
	2016	2026	Percent change	Growth	Separations	Total openings		
Doctoral or Professional Degree								
Physical Therapists	496	608	22.6%	11	22	33	None	\$\$\$\$
Family and General Practitioners	360	445	23.6%	9	10	19	Intern/Resident	\$\$\$\$
Masters Degree								
Educational, Guidance, School, and Vocational Counselors	517	526	1.7%	1	53	54	None	\$\$\$
Physician Assistants	419	511	22.0%	9	24	33	None	\$\$\$\$
Nurse Practitioners	332	409	23.2%	8	18	26	None	\$\$\$\$
Bachelor's Degree								
Airline Pilots, Copilots, and Flight Engineers	2054	2130	3.7%	8	192	200	Moderate OJT	\$\$\$\$
Construction Managers	1073	1088	1.4%	2	73	75	Moderate OJT	\$\$\$\$
Compliance Officers	746	747	0.1%	0	59	59	Moderate OJT	\$\$\$\$
Registered Nurses	5476	6617	20.8%	114	304	418	None	\$\$\$\$
General and Operations Managers	4465	4665	4.5%	20	367	387	None	\$\$\$\$
Accountants and Auditors	2037	2112	3.7%	8	180	188	None	\$\$\$\$
Elementary School Teachers, Except Special Education	2306	2326	0.9%	2	162	164	None	\$\$\$
Chief Executives	1732	1844	6.5%	11	125	136	None	\$\$\$\$
Secondary School Teachers, Exc Spec and Career/Tech Educ	1715	1728	0.8%	1	117	118	None	\$\$\$\$
Administrative Services Managers	1254	1344	7.2%	9	103	112	None	\$\$\$\$
Medical and Health Services Managers	909	1098	20.8%	19	76	95	None	\$\$\$\$
Financial Managers	1160	1217	4.9%	6	86	92	None	\$\$\$\$
Zoologists and Wildlife Biologists	948	920	-3.0%	-3	79	76	None	\$\$\$
Civil Engineers	1031	1040	0.9%	1	73	74	None	\$\$\$\$
Training and Development Specialists	732	751	2.6%	2	71	73	None	\$\$\$\$
Sales Managers	847	854	0.8%	1	71	72	None	\$\$\$\$
Computer and Information Systems Managers	950	963	1.4%	1	69	70	None	\$\$\$\$
Human Resources Specialists	652	682	4.6%	3	63	66	None	\$\$\$
Environmental Scientists and Specialists, Including Health	634	645	1.7%	1	58	59	None	\$\$\$\$
Human Resources Managers	572	609	6.5%	4	47	51	None	\$\$\$\$
Network and Computer Systems Administrators	778	798	2.6%	2	48	50	None	\$\$\$\$
Associate Degree/Postsecondary Nondegree Award or Some College, No Degree								
Firefighters	1444	1466	1.5%	2	95	97	Long-term OJT	\$\$\$
Telecomm Equip Installers and Repairers, Exc Line Installers	843	832	-1.3%		87	86	Moderate OJT	\$\$\$
Aircraft Mechanics and Service Technicians	1390	1447	4.1%	6	107	113	None	\$\$\$
Computer User Support Specialists	996	1027	3.1%	3	73	76	None	\$\$\$\$
Captains, Mates, and Pilots of Water Vessels	647	679	5.0%	3	66	69	None	\$\$\$
Massage Therapists	509	612	20.2%	10	57	67	None	\$\$\$\$
Dental Hygienists	641	794	23.9%	15	42	57	None	\$\$\$\$
Civil Engineering Technicians	662	645	-2.6%	-2	55	53	None	\$\$\$
Radiologic Technologists	431	534	23.9%	10	24	34	None	\$\$\$
High School Diploma or Equivalent								
Electricians	1958	2002	2.3%	4	216	220	Apprenticeship	\$\$\$
Carpenters	2254	2350	4.3%	10	207	217	Apprenticeship	\$\$\$
Plumbers, Pipefitters, and Steamfitters	1481	1480	-0.1%	0	153	153	Apprenticeship	\$\$\$
Mobile Heavy Equipment Mechanics, Except Engines	887	919	3.6%	3	85	88	Long-term OJT	\$\$\$
Bus and Truck Mechanics and Diesel Engine Specialists	737	753	2.2%	2	66	68	Long-term OJT	\$\$\$
Operating Engineers and Other Construction Equip Operators	2996	2992	-0.1%	0	324	324	Moderate OJT	\$\$\$
Sales Reps, Wholesale and Manufacturing, Exc Tech/Sci Products	1189	1221	2.7%	3	121	124	Moderate OJT	\$\$\$
Correctional Officers and Jailers	1314	1255	-4.5%	-6	103	97	Moderate OJT	\$\$\$
Commercial Pilots	818	876	7.1%	6	78	84	Moderate OJT	\$\$\$\$
Police and Sheriff's Patrol Officers	1291	1286	-0.4%		81	81	Moderate OJT	\$\$\$\$
Welders, Cutters, Solderers, and Brazers	642	674	5.0%	3	69	72	Moderate OJT	\$\$\$
Hazardous Materials Removal Workers	434	461	6.2%	3	53	56	Moderate OJT	\$\$\$
Executive Secretaries and Executive Administrative Assistants	3269	3409	4.3%	14	355	369	None	\$\$\$
First-Line Supervisors of Office and Admin Support Workers	2068	2206	6.7%	14	206	220	None	\$\$\$
Supervisors of Construction and Extraction Workers	810	835	3.1%	3	78	81	None	\$\$\$\$
First-Line Supervisors of Production and Operating Workers	648	655	1.1%	1	63	64	None	\$\$\$
First-Line Supervisors of Mechanics, Installers, and Repairers	690	721	4.5%	3	59	62	None	\$\$\$\$
Property, Real Estate, and Community Association Managers	609	631	3.6%	2	47	49	None	\$\$\$\$
No Formal Educational Credential								
Service Unit Operators, Oil, Gas, and Mining	1265	1205	-4.7%	-6	146	140	Moderate OJT	\$\$\$

¹To rank as a top job, the occupation must: 1) rank in the top two wage quartiles AND 2) have 10-year projected growth of at least 75 jobs and greater percent growth than all occupations combined; OR be one of the 50 with the most projected average annual openings (of those in the top two wage quartiles).

²OJT is on-the-job training. Moderate-term is one to 12 months and long-term is more than 12 months.

³Earnings: \$\$\$ = \$59,310 to - \$78,360 annually (\$28.51 - \$37.67 hourly); \$\$\$\$ = More than \$78,360 annually (\$37.67 hourly). Based on 2017 Occupational Employment Statistics (OES) wage estimates for Alaska.

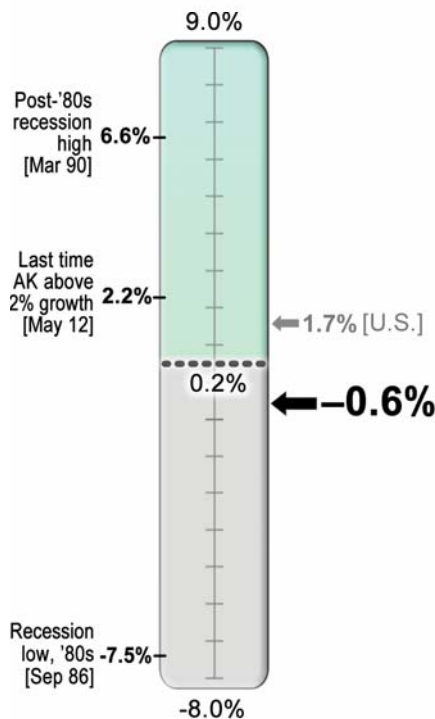
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Gauging Alaska's Economy



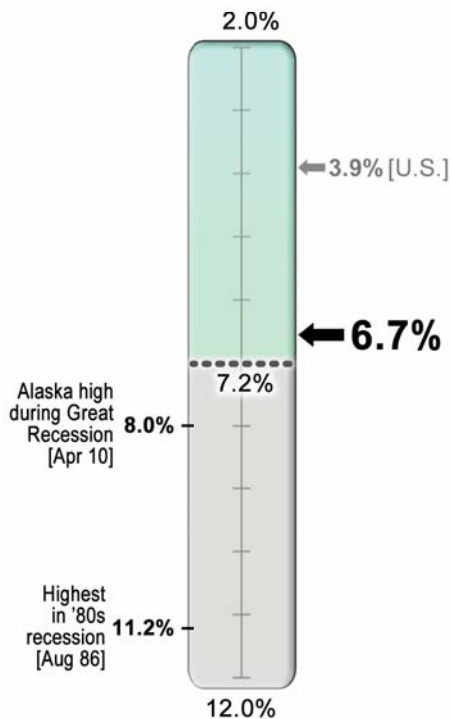
Job Growth

August 2018
Over-the-year percent change



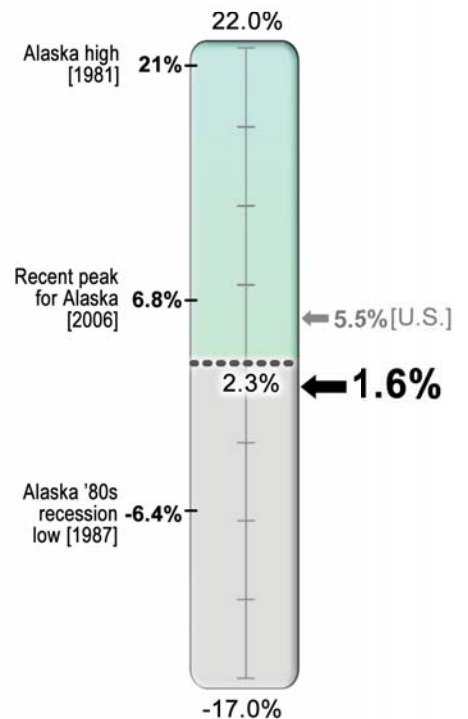
Unemployment Rate

August 2018
Seasonally adjusted



Wage Growth

1st Quarter 2018
Over-the-year percent change



- August was the 35th consecutive month Alaska has recorded job losses.
- Alaska had 25 consecutive months of job losses during the state's 1980s recession, although the magnitude of the losses in the '80s was much larger as a percentage of total jobs.
- Job losses during the current recession were at their worst from September 2015 to September 2016 (-2.5 percent).

- Alaska's rate remains the highest in the nation but is five-tenths of a percentage point below its 10-year average.
- Unemployment rates are more complicated as an economic indicator than job growth, although most of the time high rates signal economic weakness.
- In the short term, unemployment rates can rise because a state is especially attractive to job seekers (a positive) or fall because people have given up on looking for work (a negative).

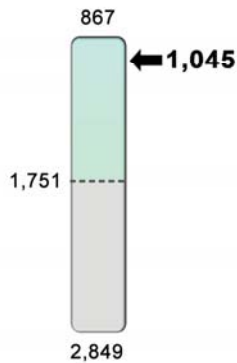
- Wages have been up for two consecutive quarters after being down for the prior seven.
- Sustained wage growth, which may have resumed, will be one of the best early indicators that the current Alaska recession is ending.

Gauging Alaska's Economy

----- ALASKA'S 10-YR AVERAGE
 ← CURRENT ALASKA

Initial Claims

Unemployment, week ending Sep. 8, 2018†

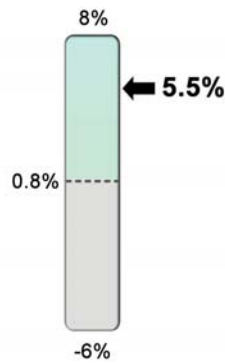


➤ For a variety of reasons, initial claims are well below the 10-year average despite job losses.

† Four-week moving average ending with the specified week

GDP Growth

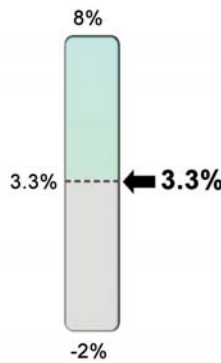
1st Quarter 2018
Over-the-year percent change



➤ Gross domestic product is the market value of all goods and services. It has grown over the year for the past six quarters after declining for the prior 17.

Personal Income Growth

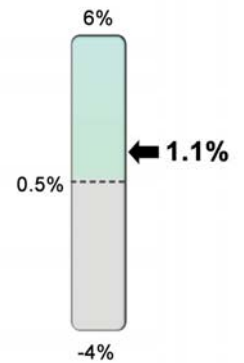
2nd Quarter 2018
Over-the-year percent change



➤ Personal income includes wages as well as government transfer payments (such as Social Security, Medicaid, and the PFD) and investment income. Growth has now resumed and is at the 10-year average.

Change in Home Prices

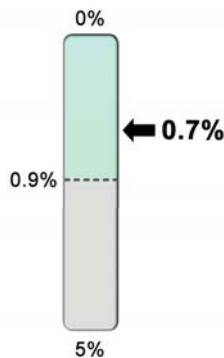
1st Quarter 2018
4-quarter moving average



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

Foreclosure Rate

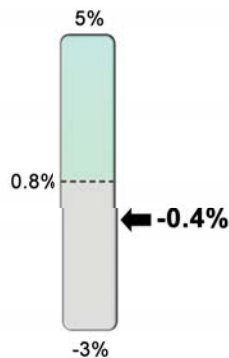
1st Quarter 2018



➤ Foreclosure rates remain very low, highlighting how different the current recession is from the '80s recession when foreclosure rates exceeded 10 percent.

Population Growth

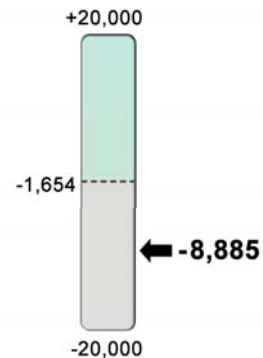
2016 to 2017



➤ The state's population has remained remarkably stable during the state's recession, although 2017 was the first year of population decline since 1988.

Net Migration

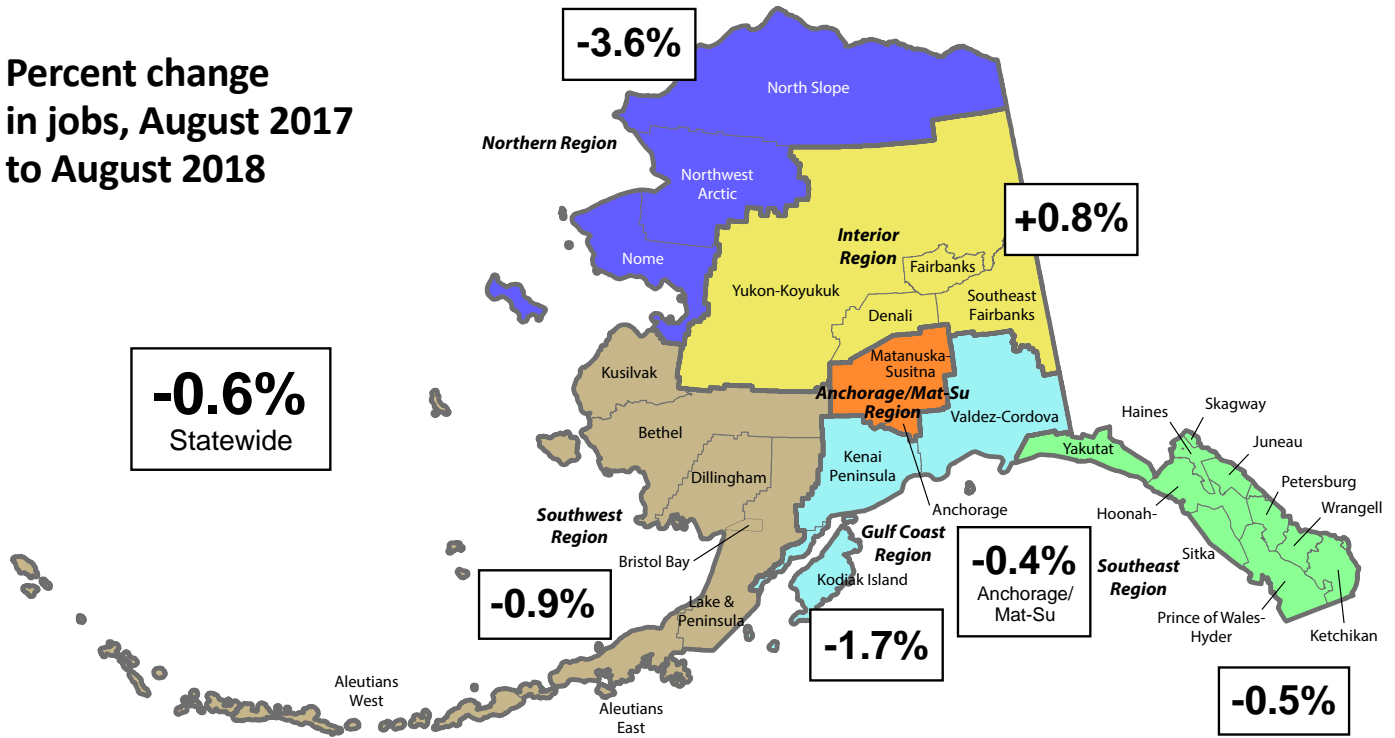
2016 to 2017



➤ The state had net migration losses for the fifth consecutive year in 2017, although natural increase (births minus deaths) offset those losses each year until 2017.

Employment by Region

Percent change
in jobs, August 2017
to August 2018



Unemployment Rates

Seasonally adjusted

	Prelim.		Revised
	8/18	7/18	8/17
United States	3.9	3.9	4.4
Alaska	6.7	6.9	7.2

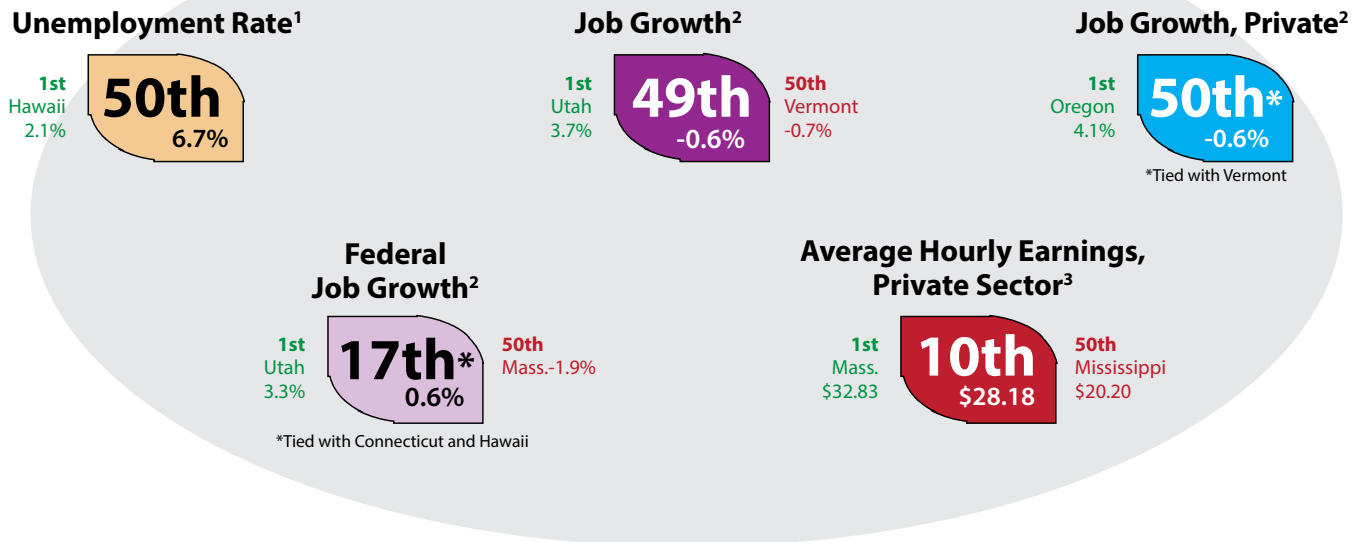
Not seasonally adjusted

	Prelim.		Revised
	8/18	7/18	8/17
United States	4.1	4.2	4.6
Alaska	5.4	5.8	6.4

Regional, not seasonally adjusted

	Prelim.			Revised		
	8/18	7/18	8/17	8/18	7/18	8/17
Interior Region	4.9	5.7	6.2			
Denali Borough	2.7	3.0	3.5			
Fairbanks N Star Borough	4.4	5.1	5.5			
Southeast Fairbanks Census Area	7.5	8.6	8.8			
Yukon-Koyukuk Census Area	13.0	15.4	16.9			
Northern Region	10.6	11.6	12.6			
Nome Census Area	11.8	12.6	13.4			
North Slope Borough	6.6	7.1	7.9			
Northwest Arctic Borough	13.9	15.8	16.9			
Anchorage/Mat-Su Region	5.1	5.4	6.1			
Anchorage, Municipality	4.7	5.0	5.6			
Mat-Su Borough	6.4	6.9	7.8			
Southwest Region	8.8	8.9	9.8			
Aleutians East Borough	1.6	1.7	1.6			
Aleutians West Census Area	2.8	2.7	2.9			
Bethel Census Area	13.1	13.6	14.6			
Bristol Bay Borough	3.6	1.8	4.1			
Dillingham Census Area	5.9	6.1	7.8			
Kusilvak Census Area	17.9	22.4	19.2			
Lake and Peninsula Borough	8.9	8.2	9.8			
Gulf Coast Region	5.3	5.7	6.1			
Kenai Peninsula Borough	5.8	6.1	7.0			
Kodiak Island Borough	4.5	5.5	4.0			
Valdez-Cordova Census Area	4.1	4.2	4.8			
Southeast Region	4.2	4.4	4.9			
Haines Borough	5.2	5.5	5.2			
Hoonah-Angoon Census Area	6.7	7.4	7.5			
Juneau, City and Borough	3.5	3.7	4.1			
Ketchikan Gateway Borough	4.1	4.2	4.6			
Petersburg Borough	5.8	6.1	7.5			
Prince of Wales-Hyder Census Area	8.4	8.9	9.3			
Sitka, City and Borough	3.0	3.3	3.7			
Skagway, Municipality	2.7	3.0	2.7			
Wrangell, City and Borough	4.7	4.8	6.4			
Yakutat, City and Borough	7.3	7.5	8.2			

How Alaska Ranks



¹August seasonally adjusted unemployment rates
²August employment, over-the-year percent change
³August hours and earnings

Sources are U.S. Bureau of Labor Statistics and Alaska Department of Labor and Workforce Development, Research and Analysis Section, unless otherwise noted.

Other Economic Indicators

	Current		Year ago	Change
Urban Alaska Consumer Price Index (CPI-U, base yr 1982=100)	223.099	1st half 2018	218.660	+0.9%
Commodity prices				
Crude oil, Alaska North Slope, * per barrel	\$73.82	August 2018	\$51.37	+43.70%
Natural gas, residential, per thousand cubic feet	\$16.53	June 2018	\$16.13	+2.48%
Gold, per oz. COMEX	\$1,210.70	9/20/2018	\$1,316.40	-8.03%
Silver, per oz. COMEX	\$14.35	9/20/2018	\$17.33	-17.20%
Copper, per lb. COMEX	\$271.10	9/20/2018	\$296.90	-8.69%
Zinc, per MT	\$2,434.00	9/19/2018	\$3,132.00	-22.29%
Lead, per lb.	\$0.92	9/19/2018	\$1.08	-14.81%
Bankruptcies				
	105	Q1 2018	97	+8.2%
Business	6	Q1 2018	7	-14.0%
Personal	99	Q1 2018	90	+10.0%
Unemployment insurance claims				
Initial filings	4,244	August 2018	4,603	-7.80%
Continued filings	24,027	August 2018	29,284	-17.95%
Claimant count	6,133	August 2018	7,283	-15.79%

*Department of Revenue estimate

Sources for pages 18 through 21 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. Census Bureau; COMEX; Bloomberg; Infomine; Alaska Department of Revenue; and U.S. Courts, 9th Circuit

INDUSTRY PROJECTIONS

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government lost 1,219 jobs (-6.7 percent), a trend that continued into 2017 with an additional loss of 419 jobs. With no plan in place to address the entire state budget deficit and oil prices and production unlikely to rise dramatically, we project an additional loss of 868 jobs over the projection period (-5.1 percent) and expect state government to eventually settle near its 2005 employment level.

Local government, excluding education and hospitals, continued to grow during the recession, gaining 556 jobs from 2014 to 2017. Whether the recession could catch up with local governments is still in question, but negative effects would probably be short-lived. Sales and property taxes, along with federal funds, have covered municipal costs even amid state cuts. Overall, we project local government will add 300 jobs (1.7 percent) over the decade.

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OCCUPATION PROJECTIONS

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for workforce development agencies, job placement and counseling professionals, job seekers, and education and training providers. To help them determine which occupations to focus on, we developed Alaska's Top Jobs list, which ranks the occupations we expect to fare well and pay well over the projection period. (See Exhibit 12.)

To make the top jobs list, an occupation must essentially pay higher-than-average wages plus have higher-than-average growth or a large number of openings. (See the footnote to Exhibit 12 for more detail.)

Out of 784 occupations in Alaska, 54 make the list. Twenty-six require at least a bachelor's degree and nine require an associate degree or some type of postsecondary education, such as a vocational certificate or some college attendance. Of the 19 top jobs that require a high school diploma or less, 13 require apprenticeship or other on-the-job training.

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EMPLOYER RESOURCES



Veterans and Military Spouses

JOB FAIR

Friday, Nov. 16, 2018
10 a.m.-2 p.m.

**University Center Mall,
3801 Old Seward Highway, Anchorage**

Dress for success
Explore career opportunities
Bring your resumé and business cards

Register for this event at 2018veteransjobfair.eventbrite.com

Workshops and
resumé assistance
provided.



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