

ALASKA ECONOMIC **TRENDS**

DECEMBER 2016



AIR TRAFFIC CONTROLLERS

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ALASKA DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT

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**ALASKA DEPARTMENT
of LABOR
and WORKFORCE
DEVELOPMENT**

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ON THE COVER: The runway at Dutch Harbor, photo by Doug Helton, NOAA, NOS, ORR.
On page 9, the Yukon-Kuskokwim Delta Regional Hospital in Bethel, photo by Tiffany Beardslee. License: <https://creativecommons.org/licenses/by-nc-sa/2.0/legalcode>

Alaska Economic Trends is a monthly publication whose purpose is to objectively inform the public about a wide variety of economic issues in the state. *Trends* is funded by the Employment and Training Services Division of the Alaska Department of Labor and Workforce Development and is published by the department's Research and Analysis Section. *Trends* is printed and distributed by Assets, Inc., a vocational training and employment program, at a cost of \$1.37 per copy. Material in this publication is public information, and with appropriate credit may be reproduced without permission.

Solid data help us make critical investment decisions



Heidi Drygas
Commissioner

Our economy is in transition, and it's important that we understand the changes so we can respond effectively. This month's *Trends* highlights air traffic controller jobs, employment in hospitals, and the composition of state government. Each of these articles explores our labor market in far more detail than you'll find in the average news article. This is exactly the kind of detailed information we use to inform decisions about job training and other policies.

Despite low oil prices, the transportation industry has continuing opportunities for job growth — and they aren't limited to air traffic controller positions. For example, we're building apprenticeships with the Alaska Air Carriers Association for airframe and power plant mechanics and for commercial pilots.

These are just a few of the exciting apprenticeship programs we will highlight at our Registered Apprenticeship Roundtable on Dec. 6 and 7 in Chugiak. We're also collaborating with the Anchorage Economic Development Corporation to meet employer needs in transportation and logistics at Ted Stevens Anchorage International Airport.

Health care is another sector with job growth opportunities, even in a low oil price environment. I'm excited about the progress we've made expanding apprenticeship in partnership with the Alaska Health Care Appren-

ship Consortium, Alaska Native Tribal Health Consortium, Alaska Primary Care Association, and other partners.

This month's *Trends* article on hospital employment is a reminder that there are many opportunities for middle class job growth, even in this fiscal environment. And as previous *Trends* articles have noted, the health care industry has a 90 percent Alaska Hire rate, meaning most of these jobs will be held by Alaskans.

State employment has fallen dramatically as departments have cut costs in response to budget pressure. Our department's budget has been cut by more than a third in two years, and we've achieved major cost savings by consolidating divisions and reducing our leased space footprint.

However, the job market in state government isn't as simple as job reductions overall. *Trends* notes how partnerships with tribal employers also has an impact on state employment as our state/tribal partnerships continue to evolve.

Over the last two years, we have made ambitious and innovative investments in training even while cutting our overall departmental costs. Sound research helped inform those investments in health care, aviation, and other registered apprenticeship programs. We will continue to rely on robust data as we invest in job training in the future.



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Air traffic controllers

Alaska has the highest concentration in the nation

By **DAN STRONG**

Air traffic controllers play an outsized role in a state that relies heavily on air transportation and where pilots face a wide range of hazards. Alaska has more air traffic controllers per capita than any other state — seven times the national average and nearly twice that of the next-highest state, New Hampshire.

Alaska has about 500 civilian air traffic controllers — 2.2 percent of the U.S. total — and nearly all of them work for the Federal Aviation Administration or as federal contractors. An additional 117 controllers are military.

Shifting duties in tough conditions

Air traffic controllers coordinate the movements of aircraft and ground vehicles to maintain safe distances. About 55 to 60 percent of Alaska's massive airspace has limited radar visibility, and the job is further complicated by military operations, rocket launches, unmanned aircraft, inclement weather, and a system of 33 active North Pacific volcanoes.

They often switch quickly between duties, which include issuing instructions to pilots, monitoring the movement of aircraft on the ground and in the air, transferring control to other control centers, accepting control of incoming flights, providing information to pilots on weather and unusual conditions, and dealing with emergencies.

Alaska's massive airspace is served by 146 aviation weather reporting stations, 227 weather camera sites, eight FAA control towers, five military towers, two terminal radar approach facilities, 17 flight service stations, a commercial spaceport near Kodiak, UAF's land-based rocket and unmanned aircraft facility, and the Anchorage Air Route Traffic Control Center (ZAN).

Three types and their stations

Although controllers rotate between different roles in the course of a shift, they fall into three main categories, depending on which phase of air travel they deal with: tower (ground and local), approach/departure, and en route.

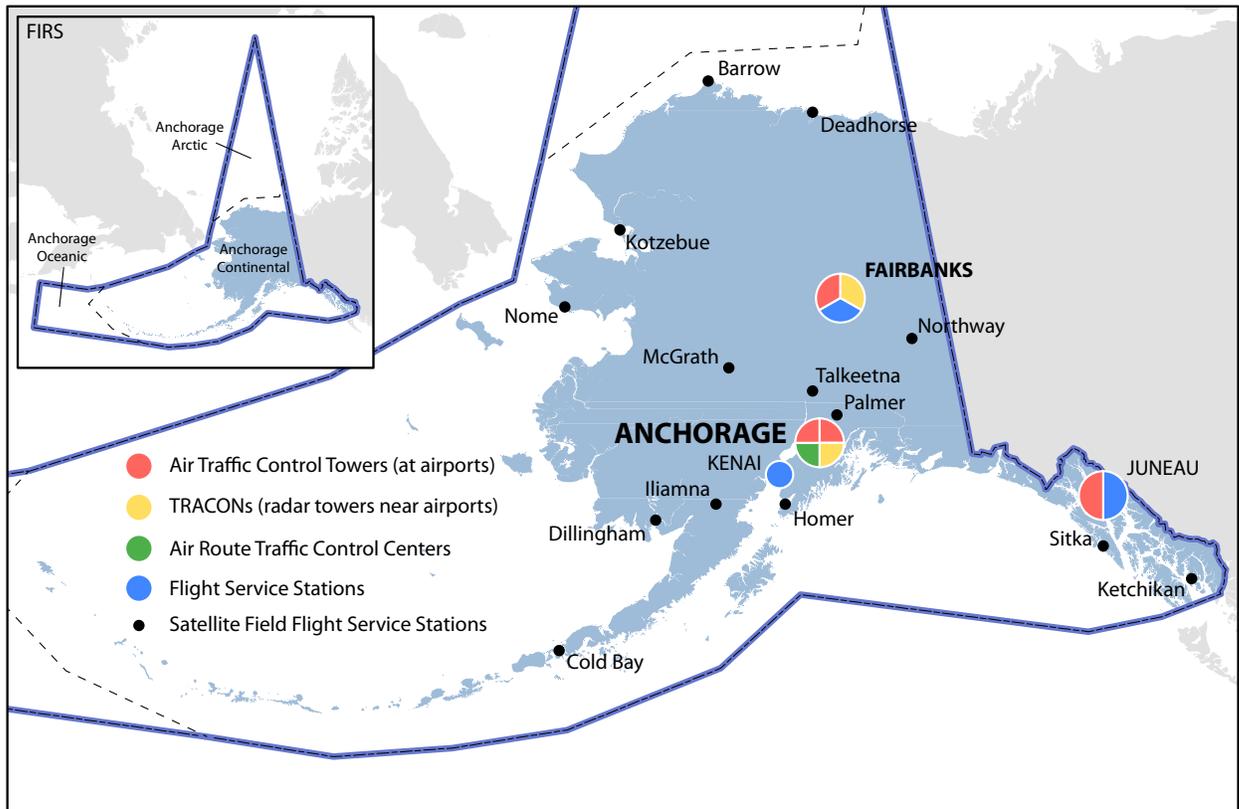
Ground and local tower controllers work at airports in tower cabs, managing traffic within a few miles of the airport. Ground tower controllers instruct pilots during taxiing, then hand off control to local controllers for takeoff and landing. Local tower controllers grant clearance to fly while ensuring minimum distances between landing and departing aircraft.

Once planes leave airport airspace, responsibilities transfer to *approach and departure controllers*, who typically work in Terminal Radar Approach Control

1

Where Alaska's Air Traffic Control Services Are Located

2016



Sources: Federal Aviation Administration; and Alaska Department of Labor and Workforce Development, Research and Analysis Section

facilities, or TRACONs. They use radar and GPS to ensure minimum separation standards within a 40-mile radius of airports. They also communicate with pilots, providing weather information and clearance to enter controlled airspace.

Once flights are 40 miles away from airports, *en route controllers* take over, with responsibility for pilots transferring along successive en route centers as a flight progresses. These centers are called Air Route Traffic Control Centers, or ARTCCs, and they cover wide swaths of the country. En route controllers are responsible for monitoring aircraft over large sections of airspace and provide approach control services to small airports around the country where no terminal service is provided.

Anchorage center oversees airspace

Alaska's ARTCC, called ZAN,¹ is in Anchorage and

¹All ARTCCs have a three-letter FAA code: a "Z" followed by two letters for the city.

serves as central command for Alaska's 24 million-plus square miles of airspace. The nation's largest military airspace, 60,780 square miles, is also under ZAN's purview.

ZAN handled 581,244 flights in 2015. These included 4.9 million passenger enplanements (getting on or off the plane), which was about 6.7 times Alaska's population and more than twice the per capita national average.

ZAN employed 108 of the state's roughly 500 air traffic controllers as of September 2015. For comparison, the Anchorage and Fairbanks TRACON facilities employed about 20 controllers each.

Highest concentration in U.S.

Anchorage is home to 290 of Alaska's 500 air traffic controllers. Alaska's top-ranking concentration of these workers is largely due to the high traffic through the Anchorage area, and among U.S. cities, Anchorage has the second-highest concentration of these workers.

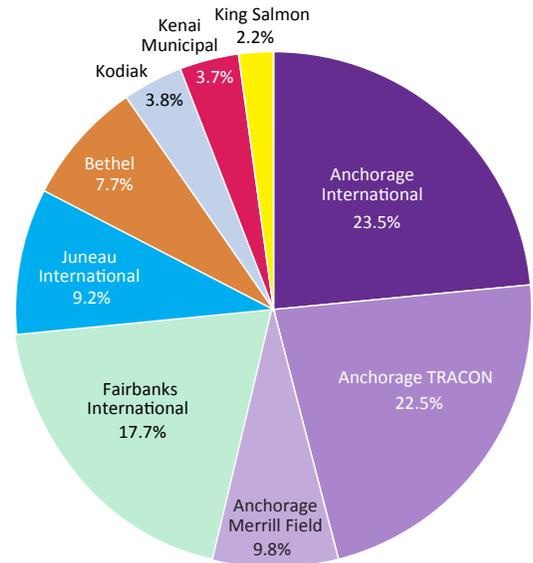
In 2015, more than half of takeoffs and landings in Alaska were in Anchorage facilities (55.8%), followed by Fairbanks (17.7%) and Juneau (9.2%). (See Exhibit 2.)

Ted Stevens Anchorage International Airport ranked as the fourth-busiest airport in the world by cargo traffic in 2015 after Hong Kong, Memphis, and Shanghai. Anchorage was also No. 2 among U.S. airports for landed weight, second only to FedEx's main terminal, Memphis International. Three other airports are also densely packed near downtown Anchorage: Merrill Field, Lake Hood Seaplane Base, and Joint Base Elmendorf-Richardson.

The Ted Stevens airport is a convenient refueling stopover for at least 30 international cargo airlines with destinations across Asia and the United States. Many passenger planes have the capability to fly over Anchorage, but most cargo planes stop and refuel, which allows them to carry less fuel and more cargo. The Anchorage and Fairbanks international airports also have special exemptions that allow airlines to co-mingle domestic and foreign cargo and transfer cargo between planes and carriers without being subject to federal regulations.

2 Share of Takeoffs and Landings by Facility

ALASKA, 2015



Source: Federal Aviation Administration

Among the highest-paying jobs

Air traffic controller is one of the state's highest-paying occupations, and since 2000, air traffic controllers' wages have risen 11 percent faster in Alaska than they have nationally.

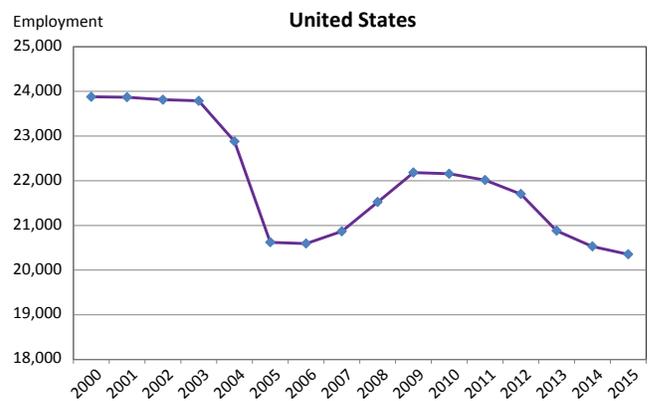
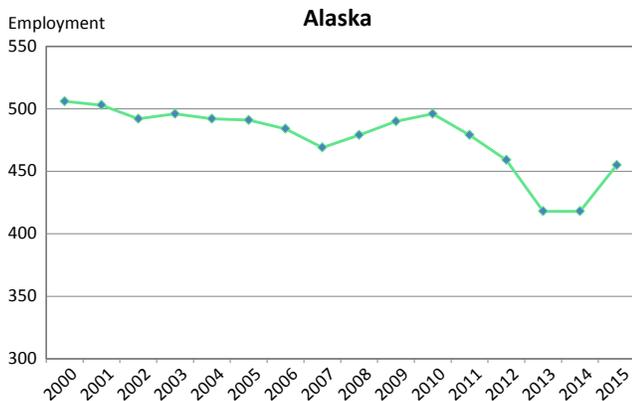
The median salary for Alaska's air traffic controllers was \$103,750 in 2015, plus a nontaxable locality adjustment of 25 percent. The 58 percent who worked

in Anchorage made 17.7 percent over the median. Controllers in Southeast Alaska and Alaska areas outside any community were also among the highest-paid and most concentrated in the United States.

The FAA allows early retirement at age 50 with 20 years of service and at any age after serving 25 years. Retirement is mandatory at age 56.

3 Alaska Federal Air Traffic Control Jobs Up While U.S. Declines

FEDERAL EMPLOYMENT ONLY, 2000 TO 2015



Note: The Alaska numbers shown here differ from the 500 total Alaska air traffic controllers reported in the article because that number includes those who work in other industries.

Source: U.S. Office of Personnel Management

History of Air Traffic Control in Alaska

On July 3, 1913, James Martin made the first successful powered flight in Alaska, flying a 60 horsepower biplane at low speed and low altitude over Exposition Park in Fairbanks, which is now Airport Way. That was less than 10 years after the first powered flight near Kitty Hawk, North Carolina.

Planes wouldn't replace dogsleds for quite some time, however, and aviation didn't become an important part of Alaska until after World War I, when war veterans and barnstormers often ended up flying people, mail, and supplies to bush communities in the 1920s.

Many former World War I pilots became airmail pilots, and the U.S. Post Office began operating airmail radio stations using the same technology the Army employed to direct and track aircraft movement.

The nation's first air traffic control center opened in Newark, New Jersey, in 1935, and the following year the federal Bureau of Air Commerce took over air traffic control operations at the three extant centers at Newark, Chicago, and Cleveland.

Alaska wasn't far behind. World War II militarization was a



This is a 1913 photo of James and Lilly Martin, aerial performers on the aviation demonstration circuit, in Fairbanks. This eight-cylinder Gage-Martin tractor biplane was designed and built by James Martin and was shipped from Seattle by steamboat as part of an aerial exhibition put on by local businessmen to bolster Fairbanks' status as a commercial hub. Photo courtesy of Alaska State Archives, Clemons Photo, D13 P281-082 [detail]

driving force behind the development of the state's modern aviation infrastructure. Starting in the 1940s, the Civil Aeronautics Authority built airfields, navigation, and radio communication beacons and staffed field stations. By 1943, the CAA had commissioned an air traffic control system at Ladd Field in Fairbanks and similar facilities in Anchorage.

Since then, flight services and weather readings have become mostly automated, and many field stations have been decommissioned or are operated remotely.

Training requirements extensive

The FAA has relatively modest education requirements for hiring air traffic controllers. Applicants must be English-speaking U.S. citizens younger than 31 and have a bachelor's degree or three years of work experience, or a combination of the two. Before advancing to take the Air Traffic Standardized Aptitude Test, however, applicants must also go through a biographical assessment, psychological testing, medical screening, and an extensive background check.

After the initial screenings, successful candidates train for six to 12 weeks at the FAA Academy in Oklahoma City. Those who complete FAA Academy training are assigned a field location where they work alongside certified air traffic controllers and learn the specifics of that facility's airspace.

Historically, it's taken between one and four years to achieve Certified Professional Controller status, or CPC, but the training can take less than a year. As of 2016, nearly 84 percent of those who began training between 2007 and 2011 have become CPCs. Achieving a

higher status means higher pay, and senior controllers have more choices of work location and hours.

The University of Alaska Anchorage is one of 36 colleges and universities nationwide approved by the FAA as participants in the Collegiate Training Initiative, an FAA program meant to prepare students for careers in aviation. UAA offers an associate degree and a minor in air traffic control, which allow graduates to bypass the introductory five-week Air Traffic Basics course at the FAA Academy.

Experienced controllers are in short supply nationwide

Federal air traffic controller employment in Alaska has declined by 10 percent since 2000 while nationwide employment has dropped by 14.8 percent. (See Exhibit 3.) Nationally, the FAA anticipates a loss of 11,943 controllers between 2016 and 2025, primarily due to retirements.

According to the U.S. Department of Transportation's

Alaska is at the forefront of air traffic control technology

Air traffic controllers depend on automation and other technology to keep up with their heavy workload, and Alaska has been at the forefront of implementing new technology.

In 2001, Anchorage's Air Route Traffic Control Center, called ZAN, was the first facility to implement a GPS-based surveillance system called Automatic Dependent Surveillance Broadcast.

ADS-B is part of a \$2.7 billion FAA program to transition air traffic control from radar and radio communications to satellite-based technologies. All en route air traffic control and major terminal radar facilities now use ADS-B, and most aircraft in the U.S. will be required to have it by 2020.

ZAN was also the first center to integrate ADS-B with Advanced Technologies and Procedures Surveillance, a system that automates some procedures that were previously the responsibility of air traffic controllers.

Finally, in 2010, ZAN began using Wide Area Multilateration technology to track the difficult, mountainous approach into Juneau's airport. WAM uses mountain-top sensors to establish a precise location, allowing controllers to bring planes within five nautical miles of each other and also allowing landings in marginal visibility.

Office of the Inspector General, as of September 2015, the Anchorage TRACON was one of 13 critical facilities across the U.S. that had fewer certified air traffic controllers than the FAA mandates because a high percentage stationed there were still in training.

Although U.S. air traffic has dropped by 24 percent since its peak in 2000, the FAA anticipates a 2 percent yearly rise in passenger travel and 3.6 percent for air cargo over the next few decades. To accommodate these increases and attrition, the FAA plans to hire 6,300 air traffic controllers over the next five years. The FAA has also changed its hiring policies, improved its scheduling, and increased time off to mitigate fatigue.

In Alaska, air traffic controller is identified as a "top job" because of its high wages combined with high projected growth: 6.7 percent between 2014 and 2024. (See October 2016 *Trends* for more detail.) It's one of just nine occupations in the top jobs list that don't require a bachelor's degree or more and is the highest-paying occupation in that group.

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Alaska's Hospitals



Employment has grown steadily to serve a bigger, older population

By **MALI ABRAHAMSON**

As with health care overall, employment in Alaska's hospitals has grown steadily over the past 15 years. Two new hospitals opened — one in Nome and one in Wrangell — and a number of others expanded or moved into new facilities to serve a growing population. (See Exhibit 1.)

The state has fewer hospital jobs per capita than the national average, and Alaska's size and the remoteness of many populated areas complicates access. However, stronger-than-average growth over the past decade has brought the state's hospital jobs up to about 4 percent of total wage and salary employment, close to the nation's 4.4 percent.

How Alaska's early hospitals were established

Alaska's hospitals were established in the same pattern as early Euro-American exploration and settlement. The first American hospital in Alaska opened in Sitka in 1867 at the site of a former Russian hospital that had been operating since around 1820.

Although that first hospital was an army post, many of the hospitals that followed were founded by mission-



Alaska Native laborers move a hospital building on St. Paul Island Aug. 24, 1914. Photo by Wilfred Hudson Osgood and Edward Alexander Preble. Photo courtesy of the Freshwater and Marine Image Bank at the University of Washington

aries as they arrived and settled throughout the early 1900s. Religious organizations have long been providers of traditional health care, and they were instrumental in establishing facilities in the frontier towns as they grew. Catholic nuns founded the first hospital in Juneau, and Episcopalians opened a log cabin hospital in Skagway. The health care legacy of churches remains strong, with two of the larger hospitals in Alaska, Providence in Anchorage and Peace-Health in Ketchikan, owned by religious organizations.

The U.S. Bureau of Education was the other major

force behind establishing Alaska's hospitals alongside the assorted social services it delivered in the territorial days. The agency built hospitals in Juneau, Unalaska, Akiak, Noorvik, and Tanana. That role shifted to the Bureau of Indian Affairs in 1931, which continues to provide care at federally owned hospitals and through transfers and joint ventures with Alaska Native organizations.

How hospitals are categorized

The U.S. Bureau of Labor Statistics and the U.S. Census define hospitals as facilities that provide inpatient medical, diagnostic, and treatment services that include physician, nursing, and other health services, plus the specialized accommodation services required for inpatient care. Hospitals may also provide outpatient

services, but as a secondary activity. As this definition suggests, the line between hospitals and outpatient facilities can be blurry.

Hospitals are divided into general medical and surgical hospitals, psychiatric and substance abuse hospitals, and specialty hospitals. Alaska has one psychiatric and substance abuse hospital and one specialty hospital, and the U.S. Department of Health and Human Services identifies 21 general hospitals, including religious and tribal organizations.

For the purpose of administering Medicare, the department divides general hospitals into two categories: critical access and acute care. (See Exhibit 2.) *Acute care* hospitals are what we typically think of as larger city hospitals. *Critical access* facilities are in rural areas and must provide 24-hour emergency care. They have a limited number of beds and limits on how long a patient can stay, and are far away from other hospitals.

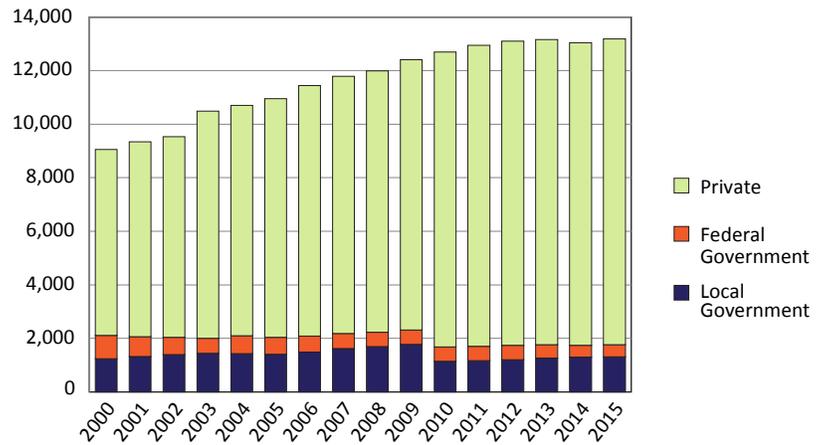
Most employment is in private hospitals

The bulk of hospital employment is in the private sector (11,420 jobs), and those facilities are often the largest private employers in rural areas.

Alaska also has a small amount of government hospital employment. Six local government-owned hospitals employed 1,316 in 2015, and

1 Private Hospital Jobs Continue to Rise

ALASKA, 2000 TO 2015



Source: U.S. Bureau of Economic Analysis

2 General Hospitals by Type, Place ALASKA, 2016

| Hospital | Location | Type | Ownership |
|--------------------------------------|------------|-----------------|-----------|
| Yukon-Kuskokwim Delta Reg Hospital | Bethel | Acute Care | Private |
| Alaska Native Medical Center | Anchorage | Acute Care | Private |
| Samuel Simmonds Memorial Hospital | Barrow | Critical Access | Private |
| Bartlett Regional Hospital | Juneau | Acute Care | Local |
| Sitka Community Hospital | Sitka | Critical Access | Local |
| Providence Valdez Medical Center | Valdez | Critical Access | Private |
| Providence Seward Hospital | Seward | Critical Access | Private |
| Petersburg Medical Center | Petersburg | Critical Access | Local |
| Wrangell Medical Center | Wrangell | Critical Access | Local |
| Cordova Community Medical Center | Cordova | Critical Access | Local |
| Alaska Regional Hospital | Anchorage | Acute Care | Private |
| Norton Sound Regional Hospital | Nome | Critical Access | Private |
| Providence Alaska Medical Center | Anchorage | Acute Care | Private |
| Peace-Health Ketchikan Medical Ctr | Ketchikan | Critical Access | Private |
| Fairbanks Memorial Hospital | Fairbanks | Acute Care | Private |
| Central Peninsula General Hospital | Soldotna | Acute Care | Private |
| Mat-Su Regional Medical Center | Palmer | Acute Care | Private |
| Mt. Edgecumbe Hospital | Sitka | Acute Care | Private |
| Providence Kodiak Island Medical Ctr | Kodiak | Critical Access | Private |
| Kanakanak Hospital | Dillingham | Critical Access | Private |
| South Peninsula Hospital | Homer | Critical Access | Local |

Note: Does not include military, substance abuse, or specialty hospitals
Source: U.S. Department of Health and Human Services, Center for Medicaid and Medicare Services

the federal government employed about 450 in the Indian Health Service and at two military facilities: Bassett Hospital on Fort Wainwright in Fairbanks and Joint Base Elmendorf-Richardson near Anchorage.

As hospitals have continued to expand, their overall employment has increased by about 3 percent per year since 2000, with the vast majority of the growth in private facilities. Private employment alone increased by 65 percent between 2000 and 2015.

Average wages also continued to grow during that period, rising by an average of 1.5 percent per year. Total wages paid to hospital employees more than doubled over that 15-year period, reaching \$900 million in 2015.

Municipal-run hospital employment has remained mostly flat, and federal hospital employment has been cut in half since 2000, because some of those services have been ceded to tribal corporations over time. (See Exhibit 1.)

Most common jobs are in nursing

In 2015, more than 16,740 people worked in Alaska hospitals. The workforce included a veritable army of

nurses: more than 4,200 registered nurses and 1,500 nursing assistants. Alaska also had 464 health care managers, 600 therapists, 564 physicians and surgeons, and hundreds of technicians and technologists.

To help run these large enterprises, hospitals also employ various managers and administrative, maintenance, and food service workers. (See Exhibit 3.)

3 Hospital Occupations and What They Pay

ALASKA, 2015

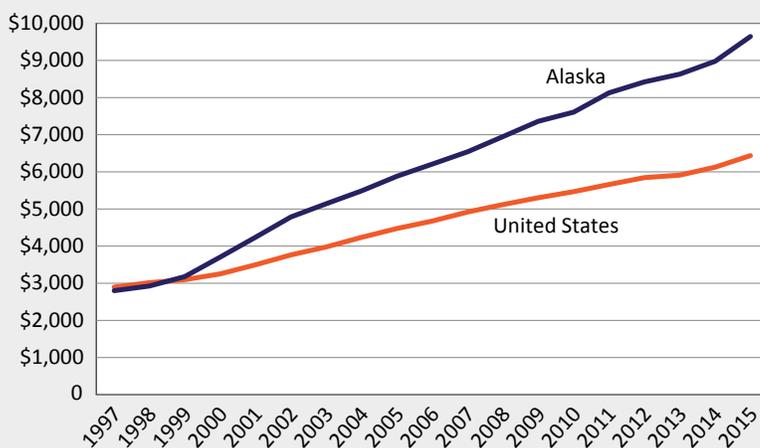
| Occupations | Number of workers | Average wages |
|---|-------------------|-----------------|
| Health Care Practitioners and Technical Occupations | 8,090 | \$65,593 |
| Health Care Support Occupations | 2,628 | \$28,488 |
| Office and Administrative Support Occupations | 2,146 | \$34,922 |
| Management Occupations | 980 | \$94,067 |
| Building and Grounds Cleaning and Maintenance Occs | 550 | \$29,792 |
| Community and Social Services Occupations | 476 | \$39,497 |
| Food Preparation and Serving Related Occupations | 425 | \$28,222 |
| Business and Financial Operations Occupations | 265 | \$55,034 |
| Computer and Mathematical Occupations | 217 | \$61,331 |
| Installation, Maintenance, and Repair Occupations | 211 | \$52,551 |
| Protective Service Occupations | 141 | \$35,220 |
| Production Occupations | 110 | \$38,253 |
| Education, Training, and Library Occupations | 97 | \$37,705 |
| Construction and Extraction Occupations | 92 | \$72,113 |
| Architecture and Engineering Occupations | 84 | \$65,090 |
| Personal Care and Service Occupations | 75 | \$22,265 |
| Life, Physical, and Social Science Occupations | 60 | \$44,983 |
| Transportation and Material Moving Occupations | 34 | \$49,586 |
| Arts, Design, Entertainment, Sports, and Media Occs | 27 | \$37,823 |
| All Other Occupations | 32 | \$46,733 |
| Total | 16,740 | \$53,304 |

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

4

Alaska's High Per Capita Hospital Expenses

VERSUS THE UNITED STATES AVERAGE, 2000 TO 2015



Alaskans spend more per capita on hospital care than any other state, at an average of \$9,600 per year. The U.S. average is \$6,400.

Source: U.S. Bureau of Economic Analysis



Above, St. John's Hospital in Ketchikan was part of St. John's Episcopal Church, on its right. This photo was taken in 1904 by John Nathan Cobb.

At right, actress Olivia DeHaviland visits with PhM1/C Arthur J. Dodd at the Naval Air Station hospital in Kodiak on March 20, 1944. Photo courtesy of the National Museum of the U.S. Navy



These employment numbers don't fully capture the economic impact of hospitals, which also employ a substantial number of subcontractors. For example, some facilities hire a catering service for the cafeteria or use a separate restaurant franchise. Other specialty or ambulatory health care services may also be housed in and affiliated with a hospital, but may be independently owned.

Mostly women, older, and mobile

Hospitals employ far more women than men. About 75 percent of hospital workers were women in 2015, and 80 percent of registered nurses and 85 percent of nursing assistants were female. Women also outnumbered men in management, which is unusual for most industries — but more top hospital executives were male.

Hospital workers were also older than most workers. In 2015, they were a median 42.7 years old versus 38 statewide, with managers skewing older and health support workers tending to be younger.

Hospitals have a lot of turnover, with about half of hospital employees having worked there for fewer than three years. Much of the movement includes workers such as resident doctors matriculating through their programs. Many working in hospitals also have a range of options because their skills are in high demand.

Among those working in a hospital in 2015, 13 percent had been working in hospitals for 15 or more years, and most of them had stayed at the same facility.

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THE MAKE-UP OF STATE GOVERNMENT

Where the workers are by location and department

By **TIFFANY WADEL**

In 2015, state government made up 7.6 percent of all Alaska employment and 7.9 percent of wages. (See Exhibit 1.) That equates to 25,778 jobs and \$1.4 billion in wages, spread across every borough and census area in Alaska except Kusilvak.

University, HSS, and DOT are the largest

Roughly 29 percent of all state government employment was in the University of Alaska system, more than double that of the next-biggest component, Health and Social Services. (See Exhibit 2.)

HSS administers public health services throughout the state, so like the university, it has a presence in most of the state's boroughs and census areas. In terms of numbers, half of HSS jobs are in Anchorage, but the university has the largest slice of its employment in Fairbanks, where its systems offices are located. (See Exhibit 3.)

Third-largest is the Department of Transportation and Public Facilities, which also has workers spread across the state because its regulation and administration of

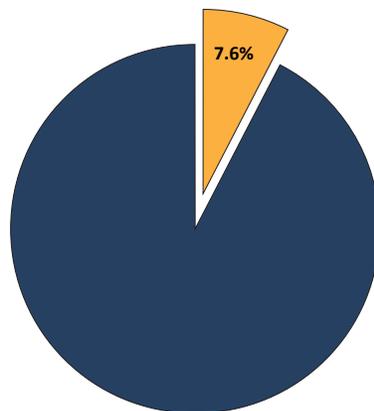
transportation programs require a presence in every area with transportation projects: 28 out of 29 boroughs and census areas. DOT&PF is also most concentrated in urban areas — nearly a third of its jobs are in Anchorage — because operations are scaled based on population.

Together, the three largest departments account for 54 percent of all state government employment and 50 percent of its wages.

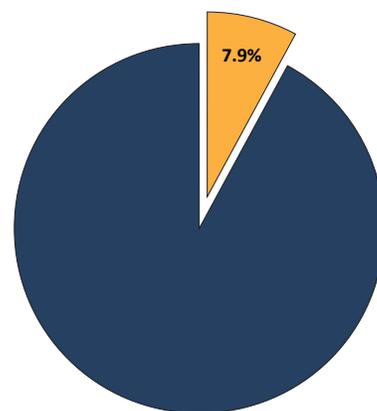
1 State Government's Slice of Jobs, Wages

SHARE OF ALASKA TOTAL, 2015

Share of Alaska Employment



Share of Alaska Wages



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

Employment doesn't necessarily reflect the size of a department's budget, however, nor its full impact on an area's economy. For example, the Department of Education has only about 1 percent of state government jobs, but its funding is the largest slice of the state's operating budget. That's largely because education money goes to local school districts, so the vast majority of people working in education work for local governments.

Anchorage has the most jobs

Anchorage has about 40.5 percent of the state's population, and it has a similar share of state government at 41 percent. (See Exhibit 4.)

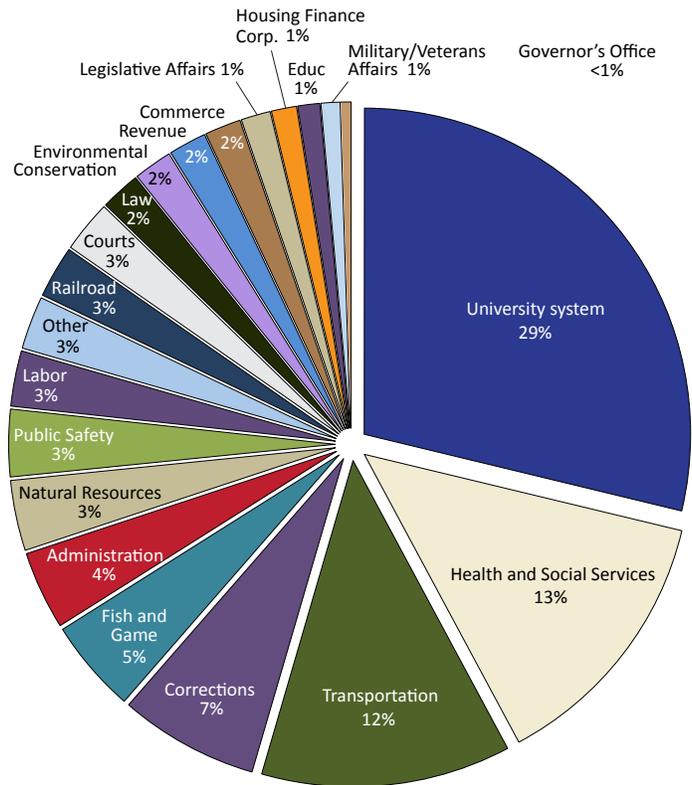
Fairbanks has just 13.4 percent of the state's population but 20 percent of state government, mainly due to its large university campus.

Juneau is even more dependent on state government. As the capital city, it has just 4.5 percent of the population but 16 percent of state government jobs.

2

University System Has the Most Jobs

SHARE OF STATE GOVERNMENT JOBS BY DEPARTMENT, 2015

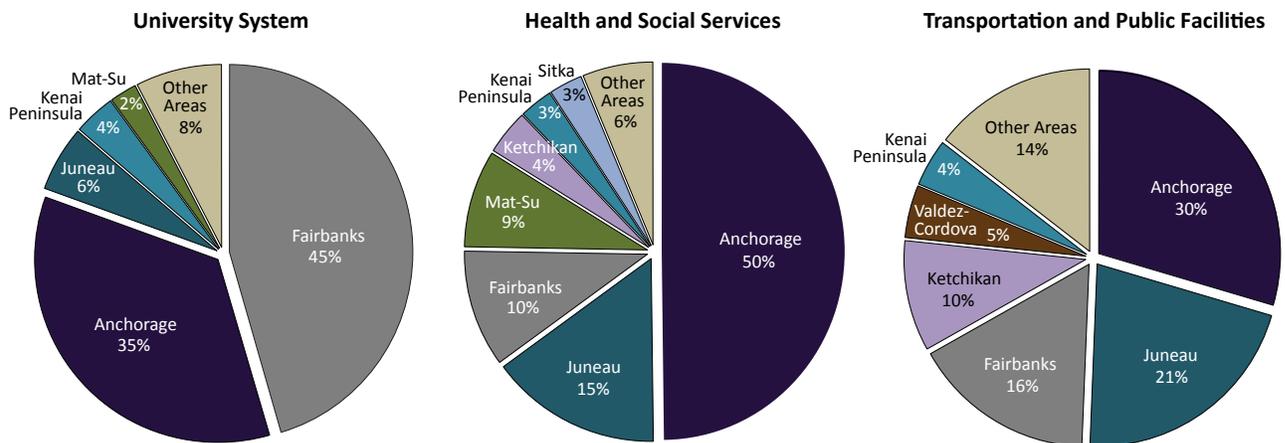


Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

3

Where the Three Largest Departments' Jobs Are Located

STATE GOVERNMENT, 2015



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

Although Anchorage has the biggest *number* of state government jobs, they make up just 6.8 percent of the city's employment and 6.6 percent of its wages. (See Exhibit 5.)

State government is a much larger presence in some areas' economies even if their job numbers are smaller. Concentration varies from 22.9 percent of Juneau's jobs and 27.0 percent of its wages to just 0.4 percent and 0.3 percent respectively for the North Slope Borough. Fairbanks has the second-highest percentages at 13.6 percent of jobs and 14.1 percent of wages. At the low end, state government makes up less than 2 percent of employment in eight boroughs and census areas, including North Slope.

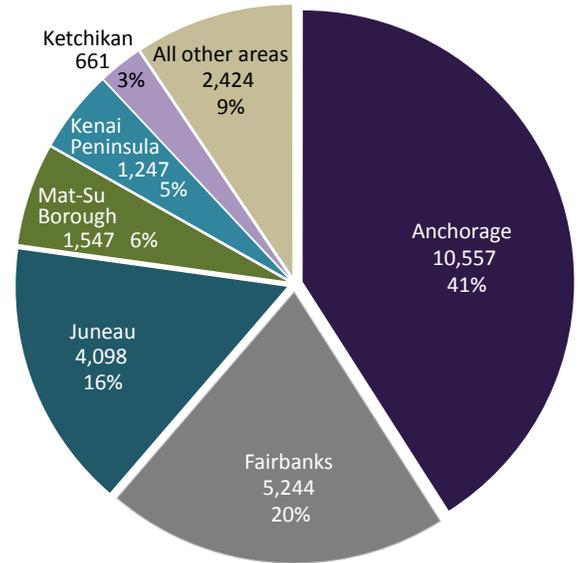
Some departments are seasonal

Although averaging monthly employment over the course of a year makes it easier to compare employment levels across departments, it's important to note that for some departments, job levels change significantly throughout the year. Figure 6 shows the change in employment levels in 2015 for departments with the most seasonal fluctuation.

For Fish and Game, Natural Resources, and the state-owned Alaska Railroad Corporation, employment rises in the summer when tourism and fishing increase. Those months are also the best time for work on transportation infrastructure. Summer is the low point for the Department of Education and Uni-

4 Anchorage Has the Most Jobs

STATE GOVERNMENT BY AREA, 2015



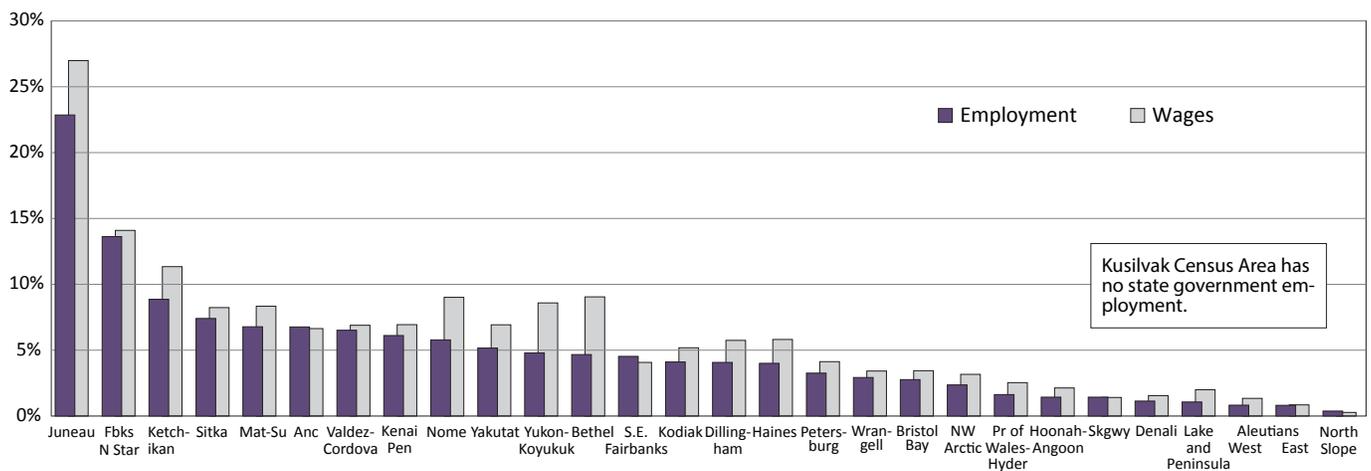
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

versity of Alaska, however, because of the academic year.

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5 State Government a Big Slice for Some Areas, Absent Elsewhere

PERCENTAGE OF AN AREA'S TOTAL JOBS AND WAGES, 2015

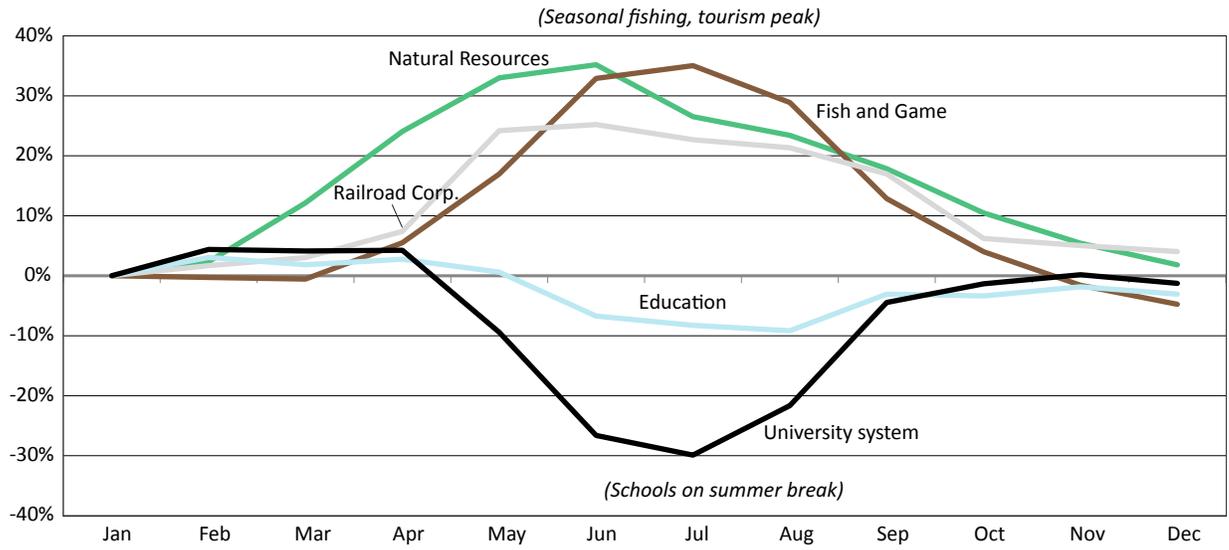


Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

6

Certain State Departments are Seasonal

MONTHLY EMPLOYMENT CHANGE BY SELECT DEPARTMENT, 2015



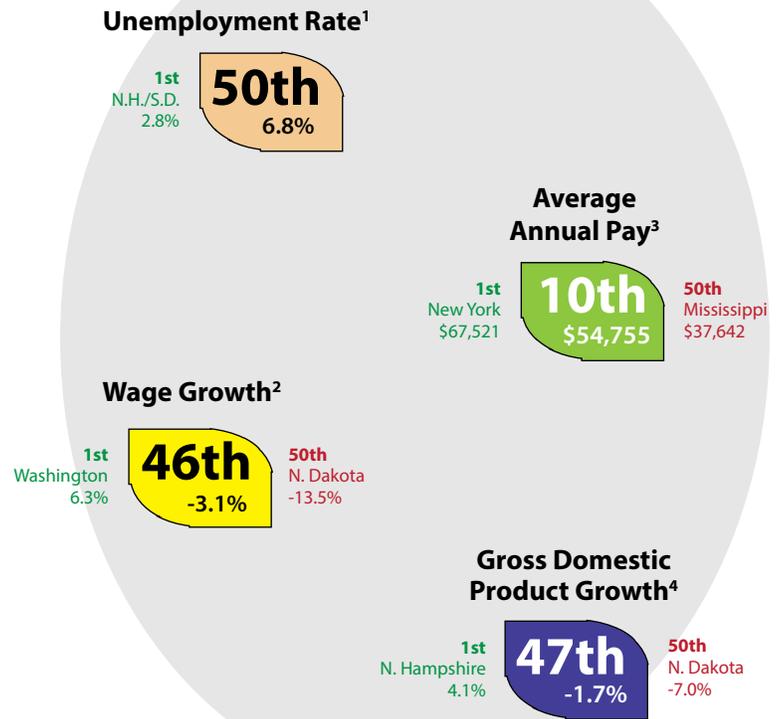
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

The Month in Numbers

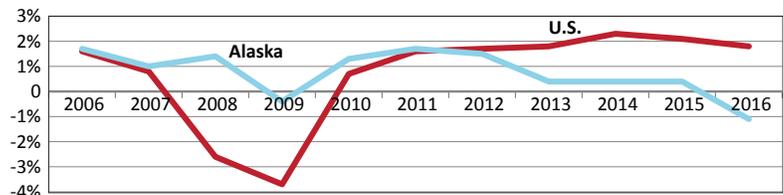
Unemployment Rates

| | Prelim. | | Revised | |
|--------------------------------|---------|------|---------|--|
| SEASONALLY ADJUSTED | 10/16 | 9/16 | 10/15 | |
| United States | 4.9 | 5.0 | 5.0 | |
| Alaska Statewide | 6.8 | 6.8 | 6.6 | |
| NOT SEASONALLY ADJUSTED | | | | |
| United States | 4.7 | 4.8 | 4.8 | |
| Alaska Statewide | 6.3 | 6.4 | 6.2 | |
| Anchorage/Mat-Su Region | | | | |
| Municipality of Anchorage | 5.1 | 5.4 | 4.8 | |
| Matanuska-Susitna Borough | 7.7 | 7.7 | 7.3 | |
| Gulf Coast Region | | | | |
| Kenai Peninsula Borough | 7.8 | 7.5 | 7.6 | |
| Kodiak Island Borough | 4.3 | 4.8 | 4.2 | |
| Valdez-Cordova Census Area | 8.8 | 6.8 | 9.5 | |
| Interior Region | | | | |
| Denali Borough | 10.4 | 4.4 | 9.6 | |
| Fairbanks North Star Borough | 5.4 | 5.6 | 5.3 | |
| Southeast Fairbanks CA | 9.5 | 9.4 | 10.3 | |
| Yukon-Koyukuk Census Area | 15.8 | 15.7 | 15.9 | |
| Northern Region | | | | |
| Nome Census Area | 11.9 | 11.8 | 9.8 | |
| North Slope Borough | 6.7 | 7.2 | 5.4 | |
| Northwest Arctic Borough | 16.6 | 16.2 | 13.7 | |
| Southeast Region | | | | |
| Haines Borough | 9.7 | 6.4 | 9.3 | |
| Hoonah-Angoon Census Area | 12.1 | 8.3 | 13.5 | |
| Juneau, City and Borough | 4.4 | 4.4 | 4.5 | |
| Ketchikan Gateway Borough | 6.0 | 5.1 | 7.0 | |
| Petersburg Borough | 7.6 | 6.6 | 7.6 | |
| Prince of Wales-Hyder CA | 10.9 | 9.4 | 11.5 | |
| Sitka, City and Borough | 3.9 | 4.0 | 4.4 | |
| Skagway, Municipality | 11.4 | 3.5 | 16.8 | |
| Wrangell, City and Borough | 6.8 | 6.9 | 7.1 | |
| Yakutat, City and Borough | 6.9 | 6.2 | 5.7 | |
| Southwest Region | | | | |
| Aleutians East Borough | 2.6 | 2.8 | 3.5 | |
| Aleutians West Census Area | 3.6 | 3.4 | 4.3 | |
| Bethel Census Area | 13.2 | 13.4 | 13.2 | |
| Bristol Bay Borough | 9.5 | 8.7 | 11.8 | |
| Dillingham Census Area | 9.9 | 9.6 | 11.1 | |
| Kusilvak Census Area | 17.7 | 16.5 | 20.4 | |
| Lake and Peninsula Borough | 10.4 | 9.3 | 12.0 | |

How Alaska Ranks



Job Growth in Alaska and the Nation⁵



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

¹QCEW, 2016 1st quarter, over-the-year change

²QCEW, 2015

³Bureau of Economic Analysis, 2016 1st quarter, over-the-year change

⁵Annual average percent change; 2016 data are for January to October compared to the same months in 2015

Employer Resources

Registered apprenticeship roundtable Dec. 6-7 in Chugiak

For many years, Alaskans have worked together to establish and expand registered apprenticeship training programs. Apprenticeship is a cornerstone of Alaska's strong middle class, and a major contributor to our high median wages and low inequality.

Continuing a tradition started by then-Commissioner Click Bishop, on Dec. 6 and 7 we will hold the 2016 Annual Registered Apprenticeship Roundtable, an annual event to expand awareness and facilitate partnerships for continued expansion of apprenticeship. This year, the roundtable will be at the Alaska Laborers' new apprenticeship training center at 17805 Old Glenn Highway in Chugiak.

The first day of the roundtable will have panels of industry and training program experts from the health care, aviation, construction, and maritime industries. The second day will have more detailed breakout sessions for

each sector. To RSVP, email: Commissioner.Labor@alaska.gov.

Over the last year, a wide range of businesses have started or expanded apprenticeships, either on their own or through multiemployer sponsoring organizations. This expansion of health care, aviation, and maritime apprenticeships creates new opportunities for additional employers in these sectors. The state also continues to pursue policies to support apprenticeships in these sectors as well as construction, which has Alaska's longest-standing apprenticeships.

If you want to learn more about these training opportunities, please sign up to attend the roundtable.

Employer Resources is written by the Employment and Training Services Division of the Alaska Department of Labor and Workforce Development.