

Alaska OCCUPATIONAL FORECAST

2014 to 2024

Some growth, but replacements will create large number of openings

By **PAUL MARTZ**

Although the plunge in oil prices has muted the 10-year projections outlook, there will still be job opportunities in a range of occupations, especially through replacements as people retire, change occupations, or leave the state. Slower-than-normal growth is expected to produce only about 20,000 new positions between 2014 and 2024, but an additional 83,000 openings will be created by the need for replacements.

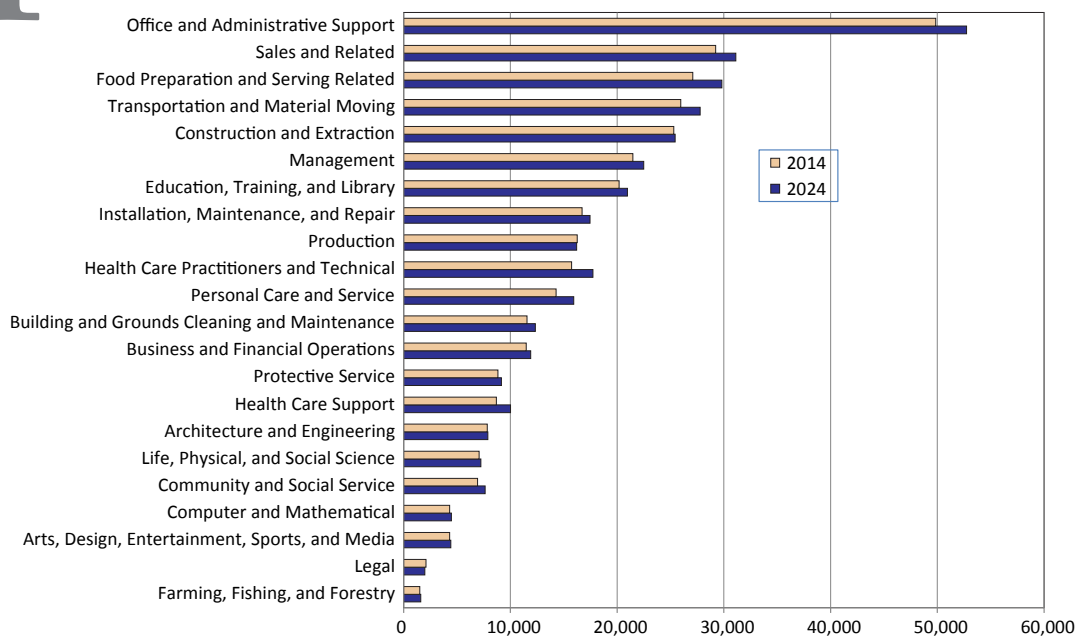
Health care continues to lead with 14 of the 25 top occupations, although its growth will likely slow. On the other end of the spectrum, production occupations have slipped into negative-to-slow growth territory, but replacements will still provide some opportunities there.

Health care will stay on top

Health care's continued strength is due to overall

1 Highest Total Jobs in Office Work

PROJECTED TOTAL JOBS BY OCCUPATIONAL CATEGORY, 2014 TO 2024

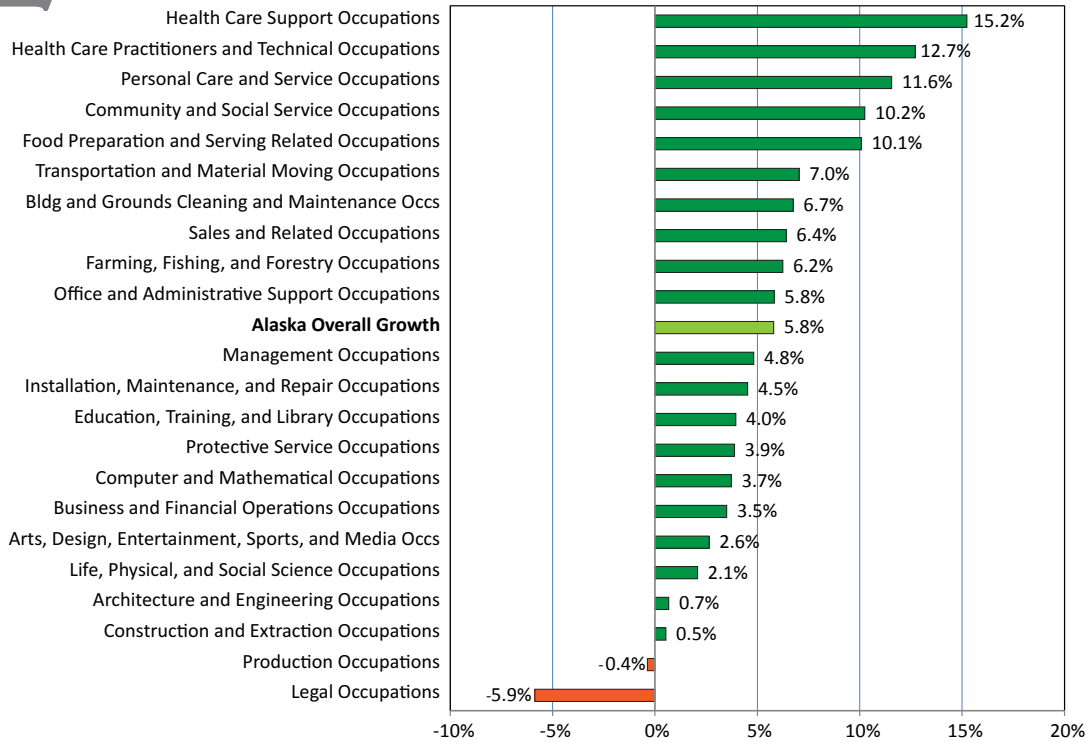


Note: Occupational categories are based on the federal Standard Occupational Classification Manual.
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

2

Health Care Support to Grow the Most

PERCENT GROWTH BY OCCUPATIONAL CATEGORY, 2014 TO 2024



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

population growth and especially the increase in senior citizens. The Alaska population between 0 and 64 years old is projected to grow by a minimal 1.6 percent from 2014 to 2024, while the 65-plus population is projected to boom, increasing 67.7 percent. Seniors will make up 15 percent of Alaska’s population by 2024, up from 10 percent in 2014.

The 25 occupations projected to have the highest percent growth reflect a related increase in demand for services. (See Exhibit 6). Eleven are in the health care practitioners and technical occupations category and three are in health care support. The two categories combined are expected to generate 3,305 new jobs and 5,538 additional openings by 2024. (See exhibits 1, 2, and 3.)

Two other high-growth occupations that aren’t in health care but still critical to meeting the needs of older Alaskans also made the list. Personal care aides are expected to grow by 17 percent (1,026 jobs). These workers help the elderly or disabled with daily tasks such as cooking, cleaning, and hygiene and may also provide limited medical assistance under the direction of a registered nurse. Social and human service assistants, while not explicitly limited to elder care, will have an estimated 125 new openings (15 percent).

Medicaid expansion is almost certain to affect health care employment, but we have yet to see any sharp increases outside of the normal rate of growth.

High growth outside health care

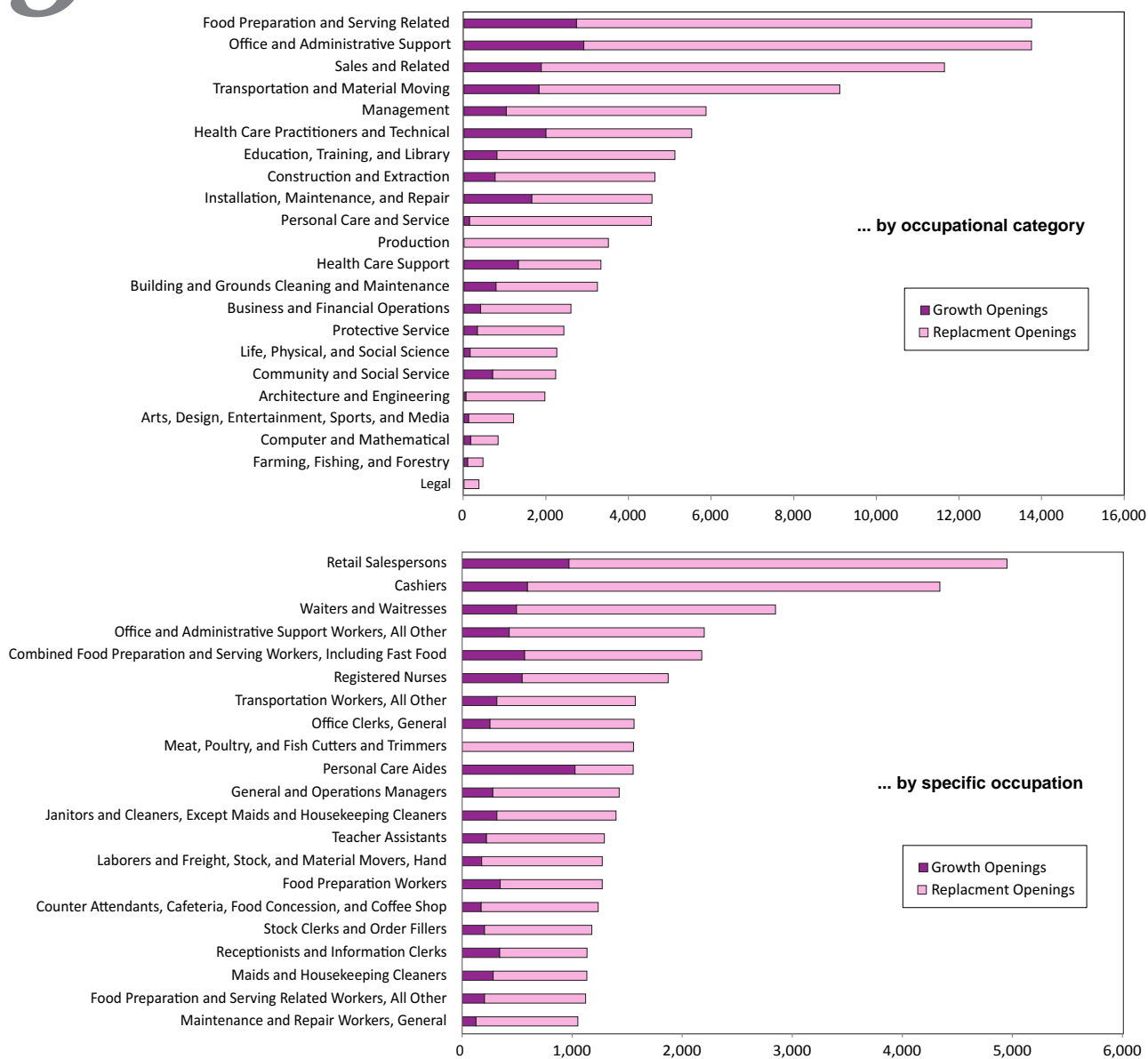
The other high-growth occupations are an atypical mix for Alaska, as some of the state’s more prominent industries are expected to decline or hold steady.

- With the recent legalization of commercial marijuana in Alaska, farm workers and laborers (crop, nursery, and greenhouses), and inspectors (testers, sorters, samplers, and weighers) are expected to increase, but projecting marijuana-related jobs is especially uncertain. The industry is new and we don’t yet know how many of its workers will be self-employed, among a variety of other unknowns.
- Referees and other sports officials are expected to increase by 17.7 percent, or 58 jobs. Most of the growth will come from youth sports, but a handful of new jobs will be professional sports referees and officials.
- Nonfarm animal caretakers will add a projected 51

3

Growth vs. Replacements

TYPES OF OCCUPATIONAL OPENINGS, 2014 TO 2024



Notes: Growth openings are new jobs. Replacement openings result from vacancies left by workers who retire or permanently leave an occupation. Occupational categories are based on the federal Standard Occupational Classification Manual.
 Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

jobs, or 16.1 percent. These workers are mostly dog sitters and employees at dog boarding facilities. (See Exhibit 6.)

Occupations in decline

Ninety-four occupations are likely to shrink over the 10-year projection horizon. The long term downward trend will likely continue for occupations in broadcasting, newspapers, and legal services. Low oil prices and

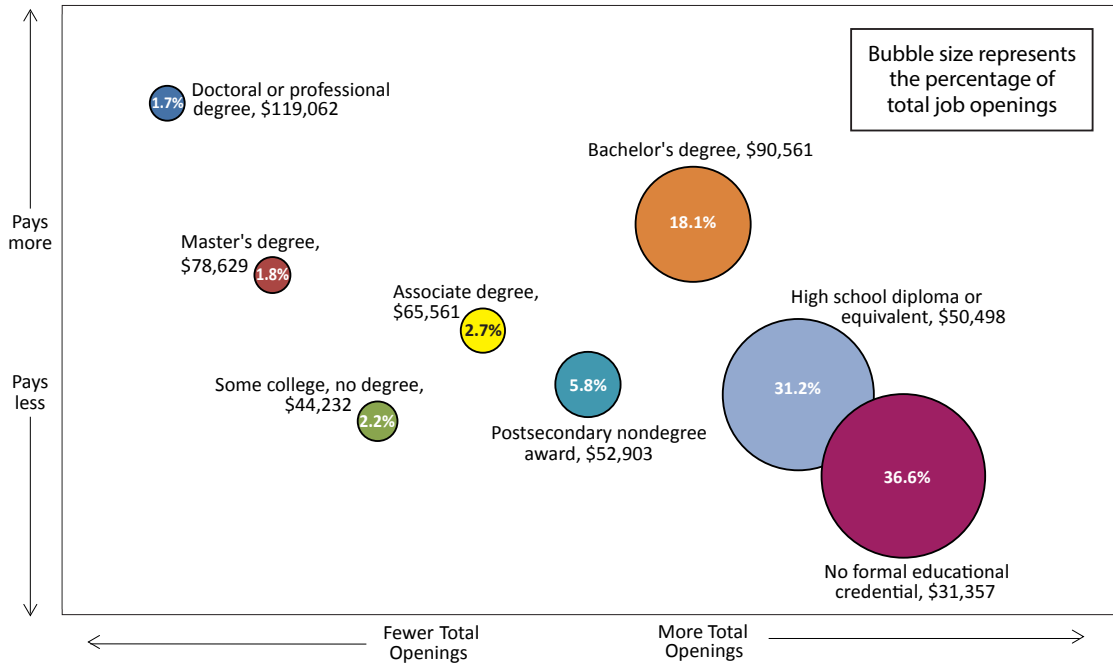
the long-term effects on oil and gas extraction, support services, construction, and state government are reducing job counts in occupations that have shown strong growth in the last decade.

- The oil and gas related occupations expected to decline most include derrick operators, rotary drill operators, roustabouts, and petroleum engineers.
- Downward pressure on state government jobs, including the University of Alaska, are expected to

4

Openings by Educational Level and Wages

ALASKA OCCUPATIONAL PROJECTIONS, 2014 TO 2024



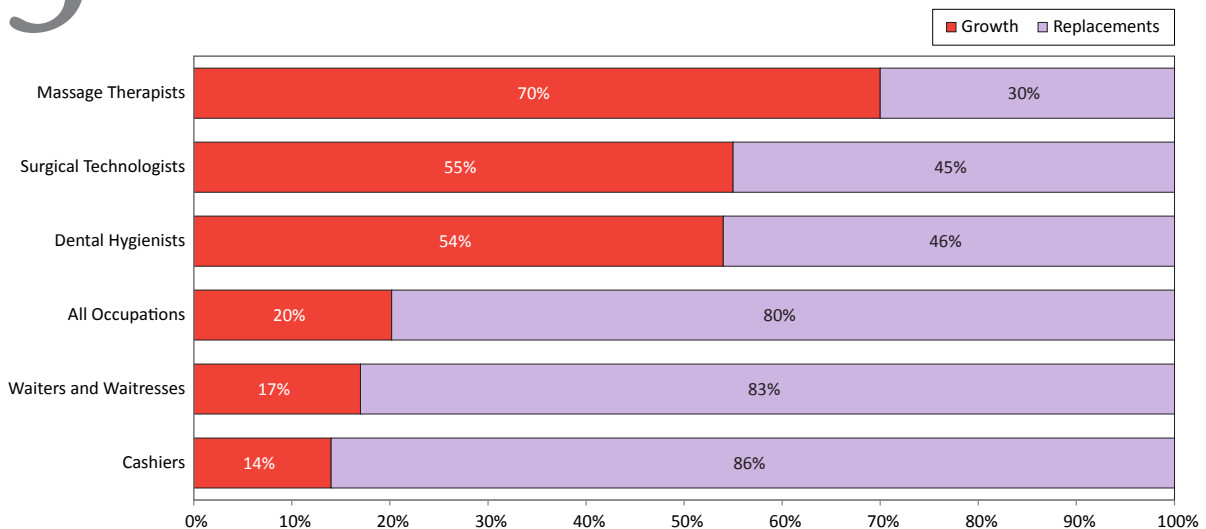
Notes: Includes openings from growth and replacements. Annual wage estimates are based on employment-weighted averages of 2015 Occupational Employment Statistics data.

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

5

Percent New Jobs vs. Replacement Openings

SELECT ALASKA OCCUPATIONS, 2014 TO 2024



Notes: Growth openings are new jobs. Replacement openings result from vacancies left by workers who retire or permanently leave an occupation.

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

6

Highest Projected Growth

TOP 25 OCCUPATIONS, 2014 TO 2024

Occupation	Percent growth
Dental Hygienists	21.6%
Dental Assistants	20.9%
Opticians, Dispensing	20.3%
Dentists, General	20.2%
Farmworkers/Laborers, Crop, Nursery, and Greenhouse	20.2%
Recreational Therapists	19.8%
Medical Assistants	19.4%
Nurse Practitioners	18.9%
Massage Therapists	18.7%
Umpires, Referees, and Other Sports Officials	17.7%
Mental Health and Substance Abuse Social Workers	17.3%
Personal Care Aides	17.0%
Substance Abuse and Behavioral Disorder Counselors	16.2%
Nonfarm Animal Caretakers	16.1%
Physician Assistants	16.1%
Medical and Clinical Laboratory Technicians	15.9%
Family and General Practitioners	15.6%
Physical Therapists	15.4%
Social and Human Service Assistants	15.0%
Inspectors, Testers, Sorters, Samplers, and Weighers	14.9%
Medical Secretaries	14.7%
Labor Relations Specialists	14.4%
Licensed Practical and Licensed Vocational Nurses	14.2%
Aircraft Cargo Handling Supervisors	13.8%
Psychiatric Technicians	13.4%

Highest Projected Loss

BOTTOM 25 OCCUPATIONS, 2014 TO 2024

Occupation	Percent loss
Reporters and Correspondents	-14.3%
Boilermakers	-13.2%
Helpers — Extraction Workers	-12.8%
Derrick Operators, Oil and Gas	-12.2%
Radio and Television Announcers	-12.0%
Logging Equipment Operators	-11.8%
Legal Secretaries	-11.8%
Broadcast Technicians	-11.4%
Advertising Sales Agents	-10.9%
Woodworkers, All Other	-10.8%
Printing Press Operators	-10.7%
Editors	-10.6%
Print Binding and Finishing Workers	-9.6%
Helpers — Pipelayers, Plumbers, Pipefitters, Steamfitters	-9.5%
Rotary Drill Operators, Oil and Gas	-9.3%
Petroleum Pump Sys Opers, Refinery Opers, Gaugers	-8.9%
Paralegals and Legal Assistants	-8.9%
Roustabouts, Oil and Gas	-8.4%
Dancers	-7.9%
Petroleum Engineers	-7.8%
Producers and Directors	-7.8%
Machine Feeders and Offbearers	-7.0%
Title Examiners, Abstractors, and Searchers	-6.8%
Legal Support Workers, All Other	-6.2%
Team Assemblers	-6.2%

Note: These lists only include occupations with at least 50 workers. For the growing occupations it includes only those with growth of at least 20 jobs, and excludes residual occupations ending with "all other" and a small number with incomplete or unreliable data.

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

cause losses in most postsecondary instructor and teacher occupations, correctional officers and jailers, and several administrative occupations.

- Construction job losses will be evident in fewer jobs for equipment operators, earth drillers, surveyors, and crane operators. (See Exhibit 6.)

Growth vs. replacements

Replacement openings are just as important as new jobs from the perspective of someone planning a career or assessing workforce training needs. Because of projected low growth this cycle, replacement openings will likely generate nearly four times more job openings than new positions.

It's important to note that a worker who moves from one employer to another in the same occupation creates turnover rather than a replacement opening, and this is more common. Although replacement openings don't include turnover, many occupations with high turnover also generate high numbers of replacement openings, because many are low-wage and frequently

filled by young workers who are likely to change careers as they age. For example, many cashiers are young seasonal workers who won't return to a cashiering job after the season ends. This leaves a large number of openings — in fact, 86 percent of openings for cashiers will be replacements. (See Exhibit 5.)

On the opposite end, more permanent and high-wage jobs typically have higher percentages of growth openings. Seventy percent of openings for massage therapists, for example, will be from growth and just 30 percent will be replacements.

Highest total openings in lower-paying occupations

The highest total openings will be in office and administrative support, food preparation and serving, and sales. (See Exhibit 3.) These categories are typically high-replacement, but food service slightly edges out administrative occupations in terms of replacements. In percentage terms, openings for all three will be approximately 80 percent replacements and 20 percent growth.

Openings by education level

Over the projection period, 67.8 percent of the available job openings will require a high school diploma or less, though many still require significant postsecondary training and, in some cases, years of vocational education through apprenticeships.

Jobs that require more education typically pay more. (See exhibits 4 and 8.) The average annual wage for a job requiring a diploma is about \$50,498, and for those that don't require a diploma, it's \$31,357. These wage estimates are based on a 40-hour work week year-round, so many that are seasonal or part-time will pay considerably less.

The remaining 32.2 percent of openings will be in occupations that require some college, a degree, or a certificate (known as a postsecondary nondegree award). Nursing assistants, automotive mechanics, and telecommunications equipment installers and repairers are common postsecondary nondegree award jobs. About 21.5 percent of openings will require at least a bachelor's degree or higher, meaning generally higher wages and a greater likelihood of full-time, year-round work.

What makes a 'top job'

Long-term occupation projections can be a powerful tool for workforce development agencies, job placement and counseling professionals, job seekers, and education and training providers, but it can be difficult for these stakeholders to determine which occupations should get the most attention.

To help, we developed Alaska's Top Jobs list. (See Exhibit 8.) The list focuses on occupations expected to grow and pay well over the projections period. To make the top jobs list, an occupation must meet two criteria:

1. Its average wage must rank in the top 50 percent of all occupations, and
2. It must either: a) have projected growth of at least 75 jobs and percentage growth that's higher than the overall growth rate, or b) be among the 50 occupations with the most projected openings.

The occupations in the top jobs list are a select group, representing 51 out of 782 occupations found in

7 Wages by Category

ALASKA, 2015

Category	Average wages
Management Occupations	\$108,080
Architecture and Engineering Occupations	\$100,945
Legal Occupations	\$92,444
Health Care Practitioners and Technical Occupations	\$89,477
Computer and Mathematical Occupations	\$80,055
Business and Financial Operations Occupations	\$78,528
Life, Physical, and Social Science Occupations	\$73,282
Construction and Extraction Occupations	\$63,003
Education, Training, and Library Occupations	\$62,980
Installation, Maintenance, and Repair Occupations	\$59,255
Protective Service Occupations	\$55,023
Arts, Design, Entertainment, Sports, and Media Occs	\$52,633
Community and Social Service Occupations	\$52,387
Transportation and Material Moving Occupations	\$52,004
Office and Administrative Support Occupations	\$43,115
Health Care Support Occupations	\$40,477
Production Occupations	\$39,053
Farming, Fishing, and Forestry Occupations	\$36,870
Sales and Related Occupations	\$33,853
Building and Grounds Cleaning and Maint Occs	\$30,811
Personal Care and Service Occupations	\$30,730
Food Preparation and Serving Related Occupations	\$27,618

Note: Wages are based on 2015 Occupational Employment Statistics occupation wage estimates for Alaska, weighted by base year (2014) employment.

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

Alaska, or 6.5 percent. Twenty-four require at least a bachelor's degree, and nine more require an associate degree or some form of postsecondary award such as a vocational certificate or some college. Fifteen out of the eighteen occupations requiring a high school diploma or less require some form of additional on-the-job training.

A high percentage of these top jobs, about 12 percent, are related to health care, but construction and extraction along with management make up 9.8 percent and 17.6 percent, respectively.

Even jobs with no projected growth can make the list if they have high replacement openings combined with high wages. For example, geoscientists are expected to decline by 3.8 percent, but the occupation has 166 projected openings and pays \$111,650 a year.

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



Alaska's Top Jobs

PROJECTED, 2014 TO 2024

		Employment			Openings 2014-2024			
		2014	2024	Percent change	New	Repla- cement	Total openings	Wage quartile ¹
		Doctoral or Professional Degree						
Internship or residency	Physical Therapists	446	515	15.5%	69	129	198	\$\$\$\$
	Family and General Practitioners	372	430	15.6%	58	108	166	\$\$\$\$
		Master's Degree						
		423	491	16.1%	68	103	171	\$\$\$\$
		491	515	4.9%	24	146	170	\$\$\$\$
		Bachelor's Degree						
Internship or residency	Elementary School Teachers, Except Special Education	2,474	2,600	5.1%	126	561	687	\$\$\$
	Secondary School Teachers, Exc Spec and Career/Technical	1,978	2,076	5.0%	98	481	579	\$\$\$\$
Long-term OJT*	Middle School Teachers, Exc Spec and Career/Technical Education	690	724	4.9%	34	156	190	\$\$\$\$
	Purchasing Agents, Except Wholesale, Retail, and Farm Products	604	613	1.5%	9	167	176	\$\$\$
Moderate-term on-the-job training*	Airline Pilots, Copilots, and Flight Engineers	1,717	1,914	11.5%	197	442	639	\$\$\$\$
	Construction Managers	1,216	1,223	0.6%	7	171	178	\$\$\$\$
	Registered Nurses	5,358	5,903	10.2%	545	1,328	1,873	\$\$\$\$
	General and Operations Managers	4,397	4,676	6.3%	279	1,148	1,427	\$\$\$\$
	Accountants and Auditors	1,728	1,814	5.0%	86	473	559	\$\$\$\$
	Chief Executives	1,478	1,592	7.7%	114	261	375	\$\$\$\$
	Medical and Health Services Managers	883	996	12.8%	113	237	350	\$\$\$\$
	Civil Engineers	1,063	1,088	2.4%	25	318	343	\$\$\$\$
	Financial Managers	1,124	1,184	5.3%	60	273	333	\$\$\$\$
	Zoologists and Wildlife Biologists	1,022	1,056	3.3%	34	278	312	\$\$\$
	Administrative Services Managers	1,159	1,232	6.3%	73	224	297	\$\$\$\$
	Environmental Scientists and Specialists, Including Health	672	680	1.2%	8	208	216	\$\$\$\$
	Sales Managers	693	731	5.5%	38	168	206	\$\$\$\$
	Human Resources Specialists	627	651	3.8%	24	156	180	\$\$\$
	Human Resources Managers	439	472	7.5%	33	133	166	\$\$\$\$
Geoscientists, Except Hydrologists and Geographers	550	529	-3.8%	0	166	166	\$\$\$\$	
		Associate Degree or Postsecondary Nondegree Award or Some College, No Degree						
Long-term OJT	Firefighters	1,422	1,487	4.6%	65	422	487	\$\$\$
	Air Traffic Controllers	480	512	6.7%	32	153	185	\$\$\$\$
	Geological and Petroleum Technicians	529	499	-5.7%	0	190	190	\$\$\$
	Aircraft Mechanics and Service Technicians	1,204	1,333	10.7%	129	302	431	\$\$\$
	Captains, Mates, and Pilots of Water Vessels	614	658	7.2%	44	247	291	\$\$\$
	Dental Hygienists	607	738	21.6%	131	110	241	\$\$\$\$
	Computer User Support Specialists	999	1,053	5.4%	54	132	186	\$\$\$
	Civil Engineering Technicians	643	646	0.5%	3	158	161	\$\$\$
	Massage Therapists	449	533	18.7%	84	36	120	\$\$\$\$
		High School Diploma or Equivalent						
Apprenticeship	Carpenters	2,616	2,750	5.1%	134	308	442	\$\$\$
	Electricians	2,139	2,161	1.0%	22	328	350	\$\$\$\$
Long-term on-the-job training	Plumbers, Pipefitters, and Steamfitters	1,509	1,521	0.8%	12	200	212	\$\$\$
	Mobile Heavy Equipment Mechanics, Except Engines	1,049	1,063	1.3%	14	250	264	\$\$\$
	Water and Wastewater Treatment Plant and System Operators	659	682	3.5%	23	170	193	\$\$\$
	Bus and Truck Mechanics and Diesel Engine Specialists	795	824	3.6%	29	139	168	\$\$\$
	Power Plant Operators	463	471	1.7%	8	160	168	\$\$\$
Moderate-term on-the-job training	Operating Engineers and Other Construction Equipment Operators	3,489	3,390	-2.8%	0	573	573	\$\$\$
	Police and Sheriff's Patrol Officers	1,369	1,402	2.4%	33	457	490	\$\$\$
	Correctional Officers and Jailers	1,331	1,294	-2.8%	0	361	361	\$\$\$
	Sales Reps, Wholesale and Manufacturing, Exc Tech/Sci Products	984	1,024	4.1%	40	207	247	\$\$\$
	Commercial Pilots	610	673	10.3%	63	156	219	\$\$\$
	Welders, Cutters, Solderers, and Brazers	725	709	-2.2%	0	206	206	\$\$\$
	Inspectors, Testers, Sorters, Samplers, and Weighers	457	525	14.9%	68	123	191	\$\$\$\$
	Executive Secretaries and Executive Administrative Assistants	3,226	3,383	4.9%	157	348	505	\$\$\$
	First-Line Supervisors of Office and Administrative Support Workers	1,854	1,954	5.4%	100	288	388	\$\$\$
	First-Line Supervisors of Mechanics, Installers, and Repairers	686	726	5.8%	40	141	181	\$\$\$\$
		No Formal Educational Credential						
Mod-term OJT	Service Unit Operators, Oil, Gas, and Mining	1,349	1,267	-6.1%	0	447	447	\$\$\$

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

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

¹\$\$\$ = \$57,410 - \$78,450 annually (\$27.60 - \$37.72 hourly), \$\$\$\$ = More than \$78,450 annually (\$37.72 hourly).

Based on 2015 Occupational Employment Statistics wage estimates for Alaska.

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