

Health care occupations will have strongest growth

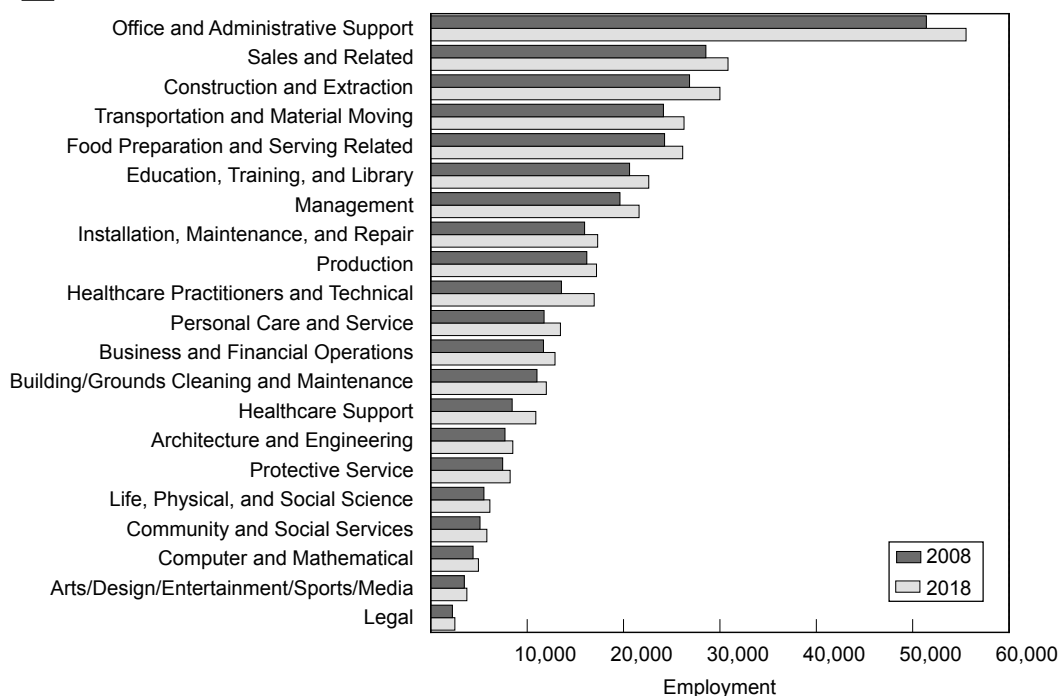
Given the recent economic climate, many workers have been less concerned about finding their dream job than about finding a job at all. However, in the longer term, Alaska's workers are likely to see opportunities in a wide range of occupations. From 2008 to 2018, Alaska is projected to add 33,670 new jobs and have about 89,000 job vacancies created by workers who leave their occupations – all together that's nearly 123,000 job openings.¹

¹ The total forecasted openings include new jobs from positive growth and jobs from replacement openings. Replacement openings occur when a worker leaves his or her occupation to take a position in another occupation or leaves the workforce.

An aging population will boost demand for health care occupations

Alaska's elderly population is expected to grow by at least 50 percent over the forecast period, significantly boosting the demand for health care workers. In terms of percentage growth, the two health care related occupational categories are far above any other category. The healthcare practitioners and technical occupations category is expected to increase by 3,402 jobs or 25.1 percent, and the healthcare support category is expected to grow by 2,455 jobs or 29.1 percent. (See Exhibits 1 and 2.) This adds up to 5,857 new jobs – about 17 percent of the state's total projected gains.

1 Projected Employment by Occupational Category Alaska, 2008 to 2018



At a more detailed level, 17 of Alaska's 20 fastest growing occupations are health care related. (See Exhibit 7.) The occupations most directly impacted by an aging population are projected to have the highest percentage growth. They include home health aides, pharmacists, pharmacy technicians, and personal and home care aides. (See Exhibit 7.)

Other health care occupations among the 10 fastest growing are respiratory therapists, licensed practical and vocational nurses, medical assistants, surgical technologists, registered nurses, and physician assistants.

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

Individual occupations outside of health care will also do well

All of the broad occupational categories that are not related to health care are projected to have less than 15 percent growth. (See Exhibit 2.) However, within those categories, a wide range of individual occupations are projected to grow by 15 percent or more.

These fast growing occupations are led by two financial occupations and also include five computer related occupations; three mining and extraction occupations; five architectural, engineering, or surveying occupations; and three construction or maintenance occupations. (See Exhibit 7.)

Seven of these occupations have projected growth of 20 percent or higher and include the following: financial examiners, personal financial advisors, self enrichment education teachers, computer and information scientists (research), computer software engineers (systems software), network systems and data communications analysts, and mining and geological engineers (including mining safety engineers).

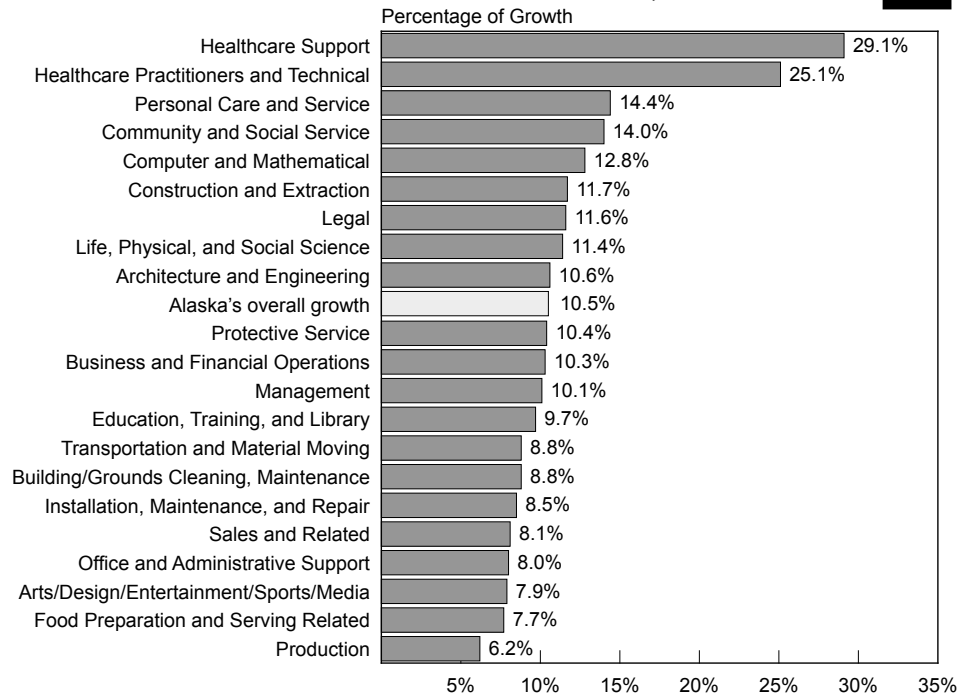
Personal financial advisors will benefit from a boom in the population of older Alaskans. Mining and geological engineers will benefit from expected increases in mining and oil exploration. The computer related occupations in this group will be bolstered by increasing reliance on technological solutions to industry needs. Also, employment in most computer related occupations is spread out over a wide range of industries, buffering them from potential slow growth in any particular industry.

Most openings are from high employment occupations

Despite health care's dominant growth, it will not generate the highest number of openings. Job openings are comprised of both growth and replacement openings. Job growth openings are equal to the positive change in employment

Growth by Occupational Category Alaska, 2008 to 2018

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

(added jobs). Replacement openings are vacancies that result when workers leave their occupations to take positions in different occupations or leave the workforce.

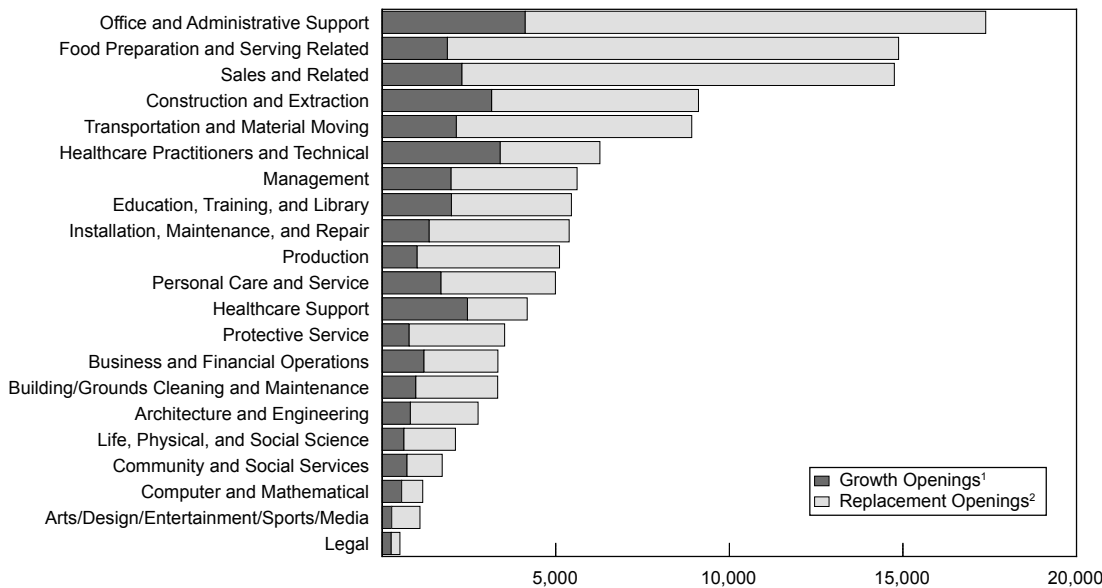
About 46 percent of Alaska's nearly 123,000 openings will come from the four top occupational categories: office and administrative support, sales and related, food preparation and serving related, and construction and extraction. (See Exhibit 3.)

High employment, low wage occupations generate the most openings

Occupations with the highest employment and lowest average wages typically have the highest number of projected openings. In fact, over this forecast period, nine out of ten occupations with the highest projected openings fit this profile. (See Exhibit 4.) These occupations generate a high percentage of their openings from replacements. Some of these replacement openings occur when workers move on to higher paying occupations.

Retail salespersons; meat, poultry, and fish cutters and trimmers; combined food prepara-

3 Job Openings by Occupational Category Alaska, 2008 to 2018



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

¹ Total growth openings are equal to the positive change in employment (new jobs).

² Replacement openings result from vacancies that occur when workers leave an occupation to take a job in a different occupation or leave the workforce.

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

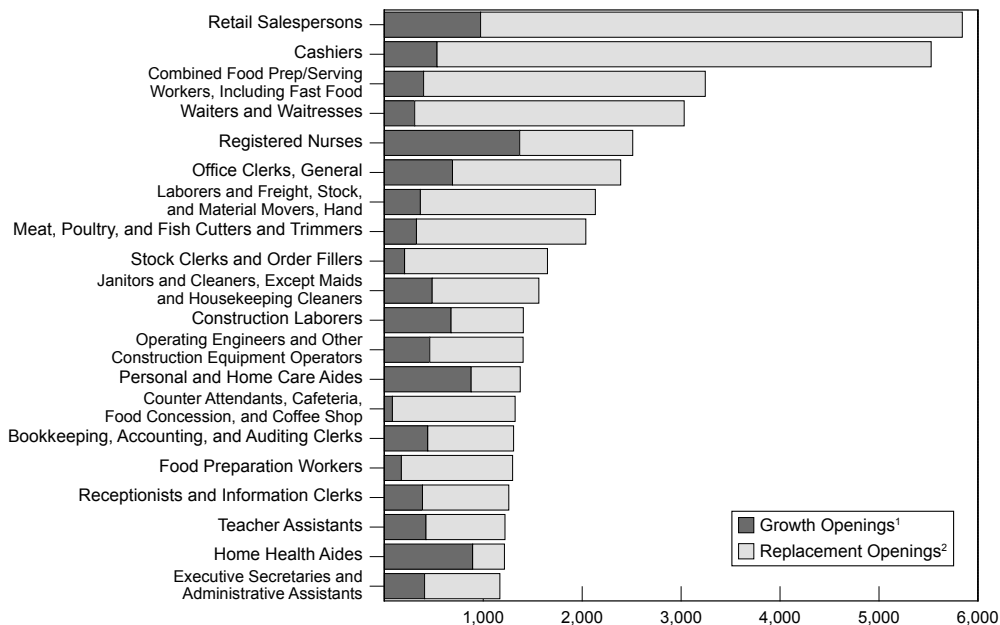
tion and serving workers (including fast food); and cashiers are examples of occupations that will each generate more than 80 percent of their total openings from replacement. (See Exhibit 6.) Even with the high number of openings, all of these occupations are projected to have percentage growth below Alaska's overall growth.

Although they're typically low paying, the jobs generated by these types of occupations provide important opportunities for entry-level, seasonal, and part-time workers.

In contrast, occupations

that have higher wages, more full-time positions, and less seasonality tend to be more stable and have a relatively high percentage of their openings from growth.

4 Occupations with the Most Projected Openings Alaska, 2008 to 2018



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

¹ Total growth openings are equal to the positive change in employment (new jobs).

² Replacement openings result from vacancies that occur when workers leave an occupation to take a job in a different occupation or leave the workforce.

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

Declining and low growth occupations aren't surprising

Fourteen occupations are projected to decline or have no growth, and some of these occupations are becoming obsolete. (See Exhibit 7.) Word processors (and typists), telephone operators, and file clerks are examples of occupations that are dying out due to changes in technology. The U.S. Postal Service's expected cost-cutting measures are likely to result in a decline in the number of mail sorters and postal clerks.

Alaska's Top Jobs, 2008 to 2018

Long-term occupation projections are a vital tool for administrators of workforce development agencies, job placement and counseling professionals, job seekers, and education and training providers. But how does one determine which occupations should get their attention?

In an attempt to respond to this question, economists at the Alaska Department of Labor and Workforce Development have developed Alaska's *Top Jobs* list. (See Exhibit 8.) The list focuses on occupations that are projected to fare well over the forecast period and also pay well. Of course, there is no single way to consider every possible aspect of what makes one occupation a better prospect than another, but the *Top Jobs* list is a good place to start.

In order to make the *Top Jobs* list an occupation must meet two criteria. First, an occupation is only considered if its average wages rank in the top half of all occupations.² Second, the occupation must have projected growth of at least 75 jobs and percentage growth that is higher than the growth for all occupations combined, or it must be among the 50 occupations with the most projected openings.

The *Top Jobs* list features a wide range of occupations

Of 465 occupations considered, only 58 occupations made the *Top Jobs* list.³ Health care related occupations are well represented as expected; however, 80 percent of occupations that made the list were in other fields.

A large number of so called "blue-collar" occupations are on the list. Six occupations are construction related and they include carpenters, electricians, construction equipment operators, construction laborers, supervisors of construction trades workers, and plumbers.⁴

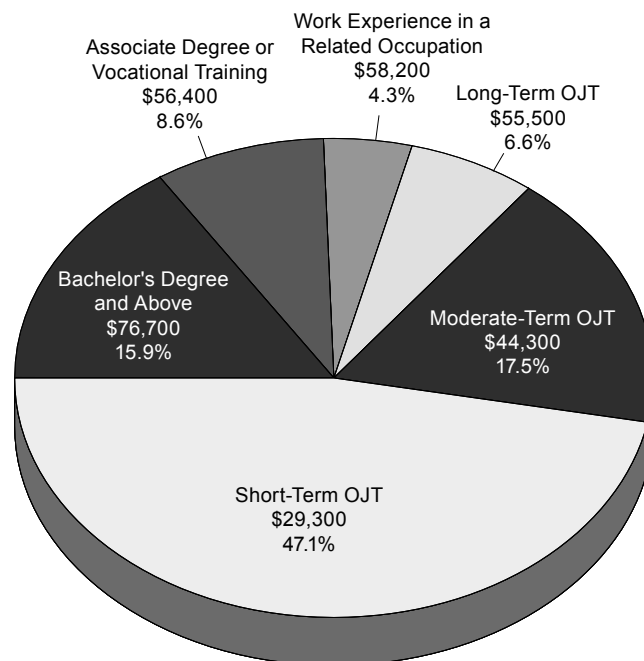
² Based on the May, 2009 OES wage estimates for Alaska. Wage estimates are not provided for all occupations and some are unreportable due to confidentiality issues. These occupations are not considered.

³ Occupations with 2008 employment under 50 were not considered. Some additional occupations are excluded due to suspected underreporting or unreliable data. In all, there were 465 reportable occupations.

⁴ Some occupational category names were shortened; see Exhibit 8 for full occupational category names.

Educational and Training Levels Percentage of total openings, 2008 to 2018¹

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Notes: OJT stands for on-the-job-training; short-term OJT is less than a month, moderate-term OJT is 1-12 months, and long-term OJT is 12 or more months. Education levels are the minimum needed to qualify for the job. Annual wage estimates are based on an employment-weighted averages of May 2009 OES occupation wage estimates for Alaska.

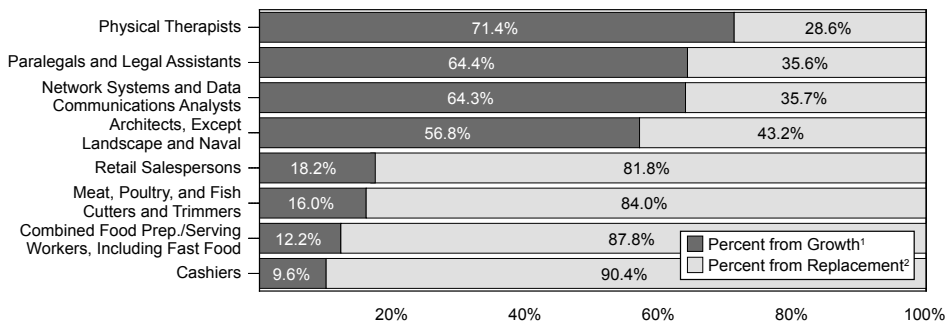
¹ Includes job openings from both growth and replacement for Alaska
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Another seven occupations are mechanics, maintenance, and repair related. They include mobile heavy equipment mechanics; automotive service technicians and mechanics; aircraft mechanics and service technicians; bus and truck mechanics and diesel engine specialists; roustabouts; supervisors of mechanics, installers, and repairers; and general maintenance and repair workers.⁵

There are 11 health care related occupations on the list. Remarkably, only 7 of the 17 health care occupations that were among the fastest growing occupations made the *Top Jobs* list. (See Exhibits 7 and 8.) Some of those that missed the list, such as pharmacy technicians and home health aides, did not earn high enough average wages to make the list. Others, such as respiratory therapists and surgical technologists, didn't have enough employment to generate the required openings.

⁵ See footnote 4

6 Openings from Growth and Replacements By selected occupations - Alaska 2008 to 2018



Note: Occupations are based on the federal *Standard Occupation Classification Manual*.

¹ Total growth openings are equal to the positive change in employment (new jobs).

² Replacement openings result from vacancies that occur when workers leave an occupation to take a job in a different occupation or leave the workforce.

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

Most Top Jobs requiring a bachelor's degree (or higher) pay top dollar

Twenty-three occupations on the *Top Jobs* list require a bachelor's degree (or higher), and all but one of these occupations earn wages in the highest quartile.⁶ In contrast, 12 occupations on the list require an associate degree or vocational training and only four of those jobs earn wages in the highest quartile. Eight of the 12 jobs at this education level were health care related or mechanic's occupations.

⁶ Occupations in the top wage quartile are ranked in the top 25 percent of all occupations and paid \$62,300 or more annually. Occupations in the second highest quartile paid between \$40,570 and \$62,330 annually.

7 Fastest and Slowest Growing Occupations and Annual Wages Occupational Categories - Alaska 2008 to 2018

Fastest Growing Occupations	Percent
Home Health Aides	47.3%
Pharmacists	37.1%
Pharmacy Technicians	35.7%
Personal and Home Care Aides	35.5%
Respiratory Therapists	33.6%
Licensed Practical and Licensed Vocational Nurses	29.8%
Medical Assistants	29.2%
Surgical Technologists	28.0%
Registered Nurses	27.2%
Physician Assistants	27.0%
Emergency Medical Technicians and Paramedics	26.4%
Medical and Clinical Laboratory Technicians	25.0%
Medical and Clinical Laboratory Technologists	25.0%
Financial Examiners	25.0%
Physical Therapists	24.9%
Opticians, Dispensing	24.6%
Personal Financial Advisors	24.2%
Self Enrichment Education Teachers	24.0%
Physicians and Surgeons	23.9%
Medical Records and Health Information Technicians	23.8%

Note: The list considers occupations with at least 50 workers. Residual occupations ending with "All Other" and a small number of occupations with incomplete or unreliable data are excluded.

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

Fastest Growing Occupations, Excluding Health Care Related ¹	Percent
Financial Examiners	25.0%
Personal Financial Advisors	24.2%
Self Enrichment Education Teachers	24.0%
Computer and Information Scientists, Research	20.7%
Computer Software Engineers, Systems Software	20.7%
Network Systems and Data Communications Analysts	20.4%
Mining and Geological Engineers, Including Mining Safety Engineers	20.0%
Computer Software Engineers, Applications	19.6%
Cartographers and Photogrammetrists	18.3%
Earth Drillers, Except Oil and Gas	17.6%
Insulation Workers, Mechanical	17.0%
Environmental Science and Protection Technicians, Including Health	16.4%
Computer Systems Analysts	16.1%
Environmental Engineering Technicians	16.1%
Helpers -- Pipelayers, Plumbers, Pipefitters, and Steamfitters	15.9%
Technical Writers	15.8%
Interpreters and Translators	15.4%
Architects, Except Landscape and Naval	15.3%
Millwrights	15.2%
Police, Fire, and Ambulance Dispatchers	15.2%
Atmospheric and Space Scientists	15.1%
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	15.0%
Social and Human Service Assistants	15.0%
Environmental Engineers	15.0%
Surveying and Mapping Technicians	15.0%

¹ Excludes any occupation primarily related to health care, regardless of broad occupational category

A bachelor's degree isn't the only path to high wages

The pie chart in this article might lead readers to believe that four years of college is the only way to get ahead. (See Exhibit 5.) This may be the route to most high paying occupations, but the *Top Jobs* list makes it evident that not all well-paying jobs require a bachelor's degree. Skilled trade workers such as electricians and plumbers can advance from apprenticeships and earn wages in the top quartile. Supervisors of construction workers and mechanics also have wages in the top quartile.⁷ Workers in these occupations and supervisors of other blue-collar occupations usually earn promotions from long-term, on-the-job-training or significant work experience in a related occupation.

⁷ See footnote 4

Occupations don't have to be on the list to be top jobs

When creating a list of this type, there is a risk of implying that occupations omitted from the list are somehow inferior, but this isn't necessarily the case. Cartographers, atmospheric scientists, and technical writers are some examples of well-paying occupations that are projected to grow by at least 15 percent and have more than 50 openings. It doesn't sound like that many openings, but some high paying occupations with moderate employment can provide rewarding opportunities for those who pursue them. In short, the *Top Jobs* list is only one of many possible tools for evaluating the most promising occupations.

Fastest and Slowest Growing Occupations and Annual Wages Occupational Categories - Alaska 2008 to 2018 (Continued)



Declining and Slowest Growing Occupations	
	Percent
File Clerks	-9.9%
Telephone Operators	-7.8%
Postal Service Mail Sorters, Processors, and Processing Machine Operators	-7.5%
Computer Operators	-6.6%
Word Processors and Typists	-4.4%
Postal Service Clerks	-2.7%
Sewing Machine Operators	-2.4%
Door-To-Door Sales Workers, News and Street Vendors, and Related Workers	-1.7%
Legislators	0.0%
Floral Designers	0.0%
Reporters and Correspondents	0.0%
Radio and Television Announcers	0.0%
Meter Readers, Utilities	0.0%
Postal Service Mail Carriers	0.0%
Switchboard Operators, Including Answering Service	0.6%
Gaming and Sports Book Writers and Runners	1.2%
Telemarketers	1.3%
Travel Agents	1.4%
Editors	1.6%
Data Entry Keyers	1.8%

Wages for the Occupational Categories	
Category	Average Annual Wages ¹
Architecture and Engineering	\$84,900
Arts/Design/Entertainment/Sports/Media	\$42,600
Building/Grounds Cleaning & Maintenance	\$29,500
Business and Financial Operations	\$64,000
Community and Social Services	\$45,600
Computer and Mathematical	\$66,700
Construction and Extraction	\$57,900
Education, Training, and Library	\$49,800
Food Preparation and Serving Related	\$24,000
Healthcare Practitioners and Technical	\$76,100
Healthcare Support	\$35,000
Installation, Maintenance, and Repair	\$53,600
Legal	\$80,000
Life, Physical, and Social Science	\$62,600
Management	\$85,700
Office and Administrative Support	\$38,000
Personal Care and Service	\$28,300
Production	\$35,200
Protective Service	\$49,700
Sales and Related	\$30,500
Transportation and Material Moving	\$44,600

¹ Wages are based on May 2009 OES occupation wage estimates for Alaska weighted by base year (2008) employment.

Alaska's Top Jobs 2008 to 2018¹

	Employment			Openings 2008-2018			Wage Quartile ²
	2008	2018	Percent Change	Growth	Replace- ment	Total	
Bachelor's degree or above							
Pharmacists**	361	495	37.1%	134	95	229	\$\$\$\$
Physician Assistants*	378	480	27.0%	102	75	177	\$\$\$\$
Physical Therapists*	338	422	24.9%	84	34	118	\$\$\$\$
Physician and Surgeon**	957	1,186	23.9%	229	143	372	\$\$\$\$
Medical and Health Services Managers**	1,112	1,294	16.4%	182	217	399	\$\$\$\$
Computer Systems Analysts*	465	540	16.1%	75	57	132	\$\$\$\$
Surveyors	464	532	14.7%	68	198	266	\$\$\$\$
Civil Engineers*	700	800	14.3%	100	114	214	\$\$\$\$
Environmental Scientists and Specialists, Including Health*	595	677	13.8%	82	107	189	\$\$\$\$
Administrative Services Managers**	1,604	1,806	12.6%	202	313	515	\$\$\$\$
Middle School Teachers, Except Special and Vocational Education**	676	760	12.4%	84	148	232	\$\$\$\$
Accountants and Auditors**	1,860	2,085	12.1%	225	356	581	\$\$\$\$
Financial Managers**	1,199	1,338	11.6%	139	166	305	\$\$\$\$
Lawyers**	1,134	1,265	11.6%	131	150	281	\$\$\$\$
Construction Managers**	946	1,053	11.3%	107	168	275	\$\$\$\$
Chief Executives**	1,640	1,822	11.1%	182	308	490	\$\$\$\$
Zoologists and Wildlife Biologists	635	705	11.0%	70	213	283	\$\$\$
Kindergarten and Elementary School Teachers, Except Special Education**	2,962	3,280	10.7%	318	466	784	\$\$\$\$
Petroleum Engineers	482	532	10.4%	50	172	222	\$\$\$\$
Postsecondary Teachers	3,135	3,442	9.8%	307	745	1,052	\$\$\$\$
General and Operations Managers	3,968	4,314	8.7%	346	715	1,061	\$\$\$\$
Airline Pilots, Copilots, and Flight Engineers	1,358	1,474	8.5%	116	356	472	\$\$\$\$
Secondary School Teachers, Except Special and Vocational Education	2,387	2,447	2.5%	60	648	708	\$\$\$\$
Associate degree or vocational training							
Licensed Practical and Licensed Vocational Nurses**	641	832	29.8%	191	160	351	\$\$\$
Registered Nurses**	5,032	6,400	27.2%	1,368	1,143	2,511	\$\$\$\$
Emergency Medical Technicians and Paramedics*	303	383	26.4%	80	50	130	\$\$\$
Radiologic Technologists and Technicians*	431	530	23.0%	99	90	189	\$\$\$
Dental Hygienists*	489	575	17.6%	86	47	133	\$\$\$\$
Welders, Cutters, Solderers, and Brazers**	768	870	13.3%	102	237	339	\$\$\$
Computer Support Specialists**	1,124	1,260	12.1%	136	132	268	\$\$\$
Geological and Petroleum Technicians	616	683	10.9%	67	157	224	\$\$\$\$
Commercial Pilots	1,045	1,140	9.1%	95	278	373	\$\$\$\$
Bus and Truck Mechanics and Diesel Engine Specialists	718	783	9.1%	65	197	262	\$\$\$
Automotive Service Technicians and Mechanics	1,680	1,830	8.9%	150	473	623	\$\$\$
Aircraft Mechanics and Service Technicians	1,339	1,430	6.8%	91	323	414	\$\$\$
Work experience in a related occupation							
Office and Administrative Support Workers, Supervisors/First Line Managers**	1,994	2,230	11.8%	236	432	668	\$\$\$
First Line Supervisors/Managers of Construction Trades and Extraction Workers**	1,130	1,250	10.6%	120	177	297	\$\$\$\$
Executive Secretaries and Administrative Assistants	3,953	4,360	10.3%	407	761	1,168	\$\$\$
Captains, Mates, and Pilots of Water Vessels	582	631	8.4%	49	179	228	\$\$\$
Mechanics, Installers, and Repairers, Supervisors/First Line Managers	758	818	7.9%	60	189	249	\$\$\$\$
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	968	1,035	6.9%	67	267	334	\$\$\$
Long-term on-the-job training							
Mobile Heavy Equipment Mechanics, Except Engines**	806	912	13.2%	106	177	283	\$\$\$
Water and Liquid Waste Treatment Plant and System Operators	548	615	12.2%	67	208	275	\$\$\$
Fire Fighters**	856	952	11.2%	96	248	344	\$\$\$
Carpenters**	3,239	3,600	11.1%	361	519	880	\$\$\$
Electricians**	2,372	2,635	11.1%	263	488	751	\$\$\$\$
Police and Sheriff's Patrol Officers**	1,254	1,390	10.8%	136	341	477	\$\$\$
Plumbers, Pipefitters, and Steamfitters**	1,766	1,955	10.7%	189	430	619	\$\$\$\$
Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	1,048	1,132	8.0%	84	241	325	\$\$\$
Moderate-term on-the-job training							
Dental Assistants**	959	1,130	17.8%	171	299	470	\$\$\$
Operating Engineers and Other Construction Equipment Operators**	3,421	3,880	13.4%	459	944	1,403	\$\$\$
Construction Laborers**	5,245	5,920	12.9%	675	730	1,405	\$\$\$
Truck Drivers, Heavy and Tractor-Trailer**	2,534	2,828	11.6%	294	412	706	\$\$\$
Correctional Officers and Jailers**	906	1,010	11.5%	104	202	306	\$\$\$
Service Unit Operators, Oil, Gas, and Mining	629	690	9.7%	61	197	258	\$\$\$
Eligibility Interviewers, Government Programs	732	800	9.3%	68	202	270	\$\$\$
Roustabouts, Oil and Gas	1,605	1,750	9.0%	145	457	602	\$\$\$
Maintenance and Repair Workers, General	3,431	3,720	8.4%	289	655	944	\$\$\$

¹ 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 among one the 50 occupations with the most projected openings (of those with wages in the top two quartiles).

² Earnings: \$\$\$ = \$19.50 - \$29.98 hourly (\$40,570 - \$62,330 annually), \$\$\$\$ = More than \$29.98 hourly (\$62,330 annually). Based on May 2009 OES estimates for Alaska.

³ Combines two standard occupations: Kindergarten Teachers (25-2012) and Elementary School Teachers (25-2021)

* Denotes occupations projected to grow by at least 75 jobs with percentage growth greater than growth for all occupations combined

** Denotes occupations projected to grow by at least 75 jobs with percentage growth greater than growth for all occupations; and among the top 50 occupations (in the top two wage quartiles) projected to have the most job openings throughout the forecast period

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