

Alaska OCCUPATIONAL FORECAST

2012 to 2022

Most 'top jobs' connected to an aging population

By **PAUL MARTZ**

The next few years will bring Alaskans a range of job opportunities through 36,000 new positions and 95,000 additional replacement openings. Because of the shift to an older Alaska and a growing population overall, more than half of the top 25 occupations for growth will be in health care.

Health care occupations are intrinsically linked to population dynamics. Older people rely more heavily on these services, and between 2012 and 2022, the senior population will grow considerably, generating more

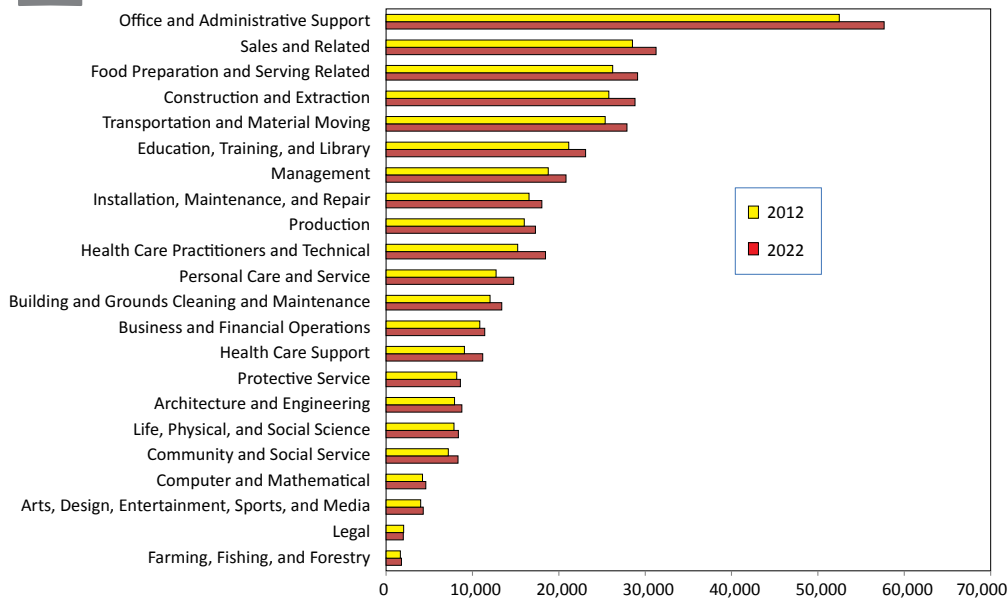
demand.

The age group from 65 to 79 will increase by a projected 85.4 percent, and those 80 and older will grow by 51.1 percent. For comparison, the rest of the population between 0 and 64 is expected to increase by just 3.6 percent.

Health care is at the top

Alaska's changing demographics are particularly noticeable when looking at the 25 occupations we expect to grow most, by percentage. (See Exhibit 6.) Twelve are in the health care practitioners and technical occupations

1 Highest Total Jobs in Office Work PROJECTED TOTAL JOBS BY OCCUPATIONAL CATEGORY, 2012 AND 2022

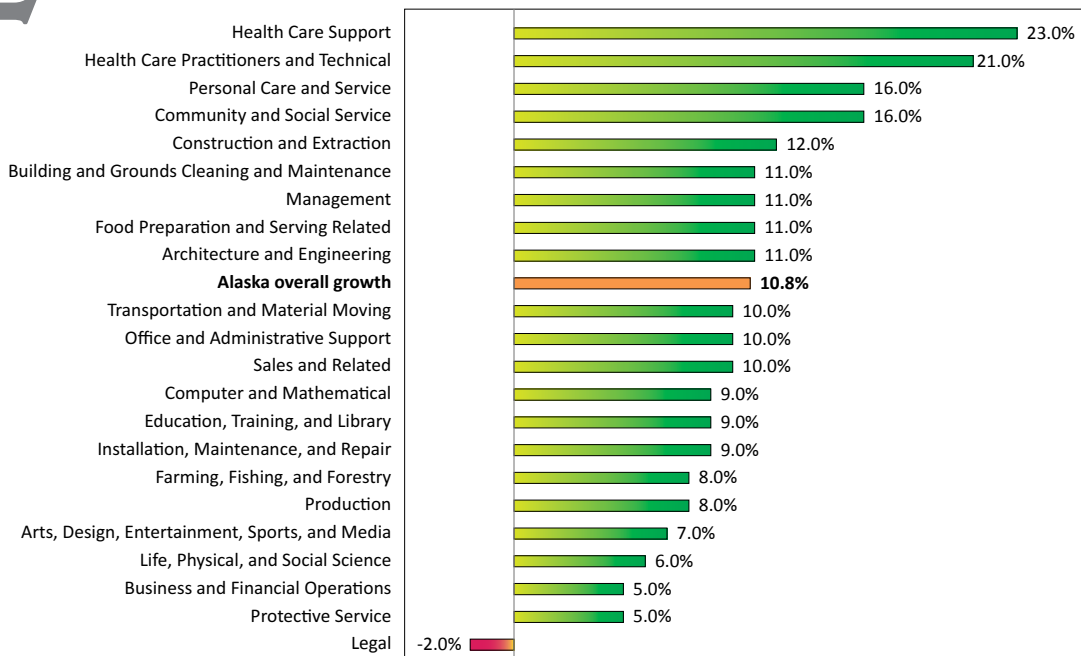


Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

2

Health Care Support to Grow the Most

PERCENT GROWTH BY OCCUPATIONAL CATEGORY, 2012 AND 2022



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

category and four are in health care support. Together, these two occupational categories will grow a projected 22 percent, adding 5,350 jobs. (See Exhibits 1 and 2.) People who leave these occupations, usually due to retirement or changing careers, will create an additional 4,707 openings. (See Exhibit 3.)

Several other high-growth occupations that aren't categorized in health care but will still be critical to meeting the needs of older Alaskans include:

- Personal care aides, which will increase by a projected 26 percent, or 1,033 jobs, with another 1,155 replacement openings. Personal care aides help the elderly or disabled with daily tasks such as cooking, cleaning, and hygiene. Some within this category also provide limited medical assistance under the direction of a registered nurse.
- Funeral attendant, which is a small occupation in Alaska at just 34 jobs in 2012, but one that we expect to grow 29.2 percent by 2022.
- Health care social workers and social and human service assistants, who help chronically ill or injured people and their families, are projected to increase by 18.9 and 17.6 percent respectively.

High growth outside health care

The other highest-growth occupations are mainly in pro-

duction and in construction and extraction. At the top, with a projected growth rate of 25 percent, are continuous mining machine operators. This mining occupation includes operating mining equipment for ore removal.

Closely following with expected growth of 24.3 percent are millwrights. Millwrights aren't mining-specific, but their duties, which include installation and movement of heavy equipment, are important to the mining industry.

Occupations in decline

Forty-one occupations face projected declines between 2012 and 2022. Most are casualties of continual cuts to U.S. Postal Service and Alaska Railroad Corporation jobs. Others are due to large reductions in the federal workforce and anticipated drops in broadcasting, newspapers, and legal services.

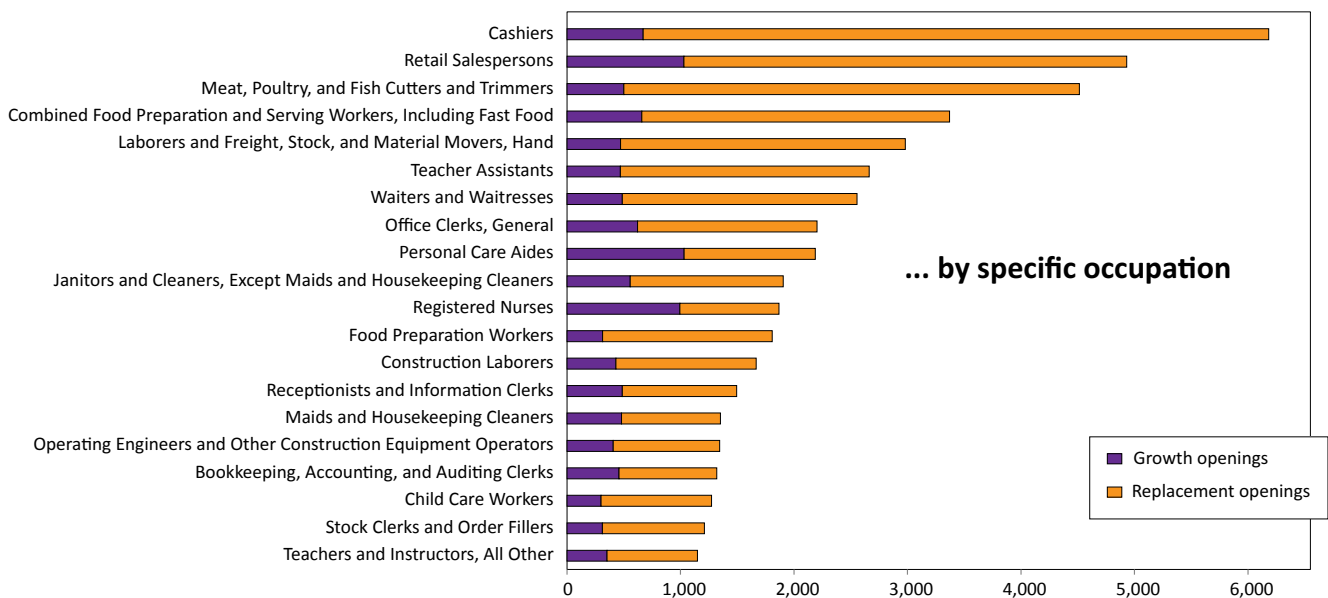
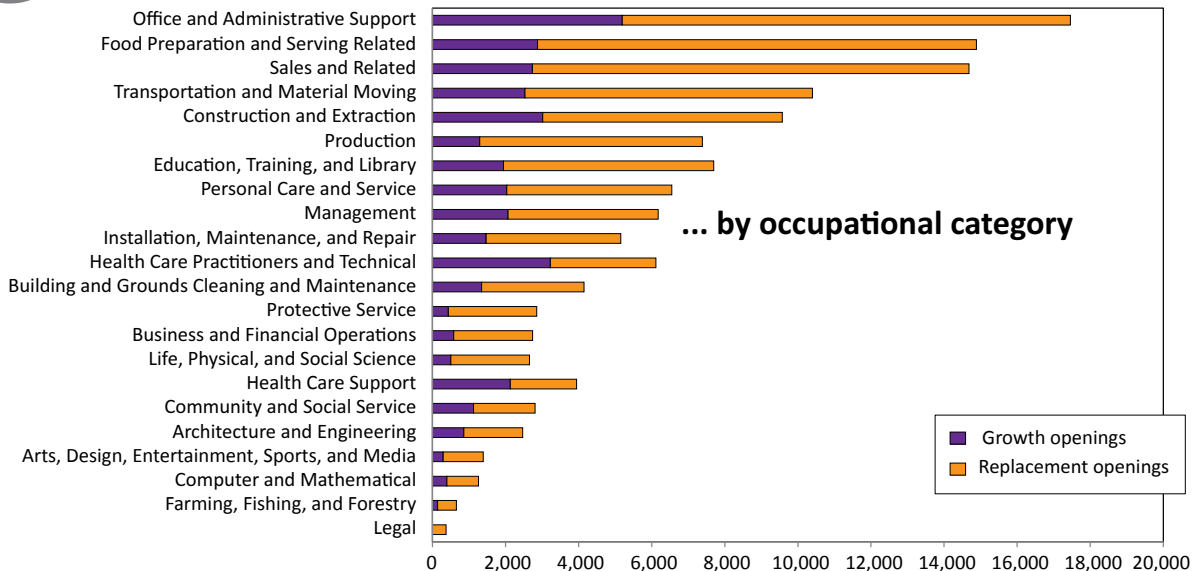
Some of the expected federal losses will include psychologists, biological scientists, historians, and compensation and benefits managers. Broadcasting and newspaper losses will include broadcast technicians, print binding and finishing workers, and editors. We anticipate the legal industry to lose lawyers, legal secretaries, and legal assistants. (See Exhibit 6.)

Most openings are replacements

When looking at the long-term outlook for any occupa-

3 Growth vs. Replacements

TYPES OF OCCUPATIONAL OPENINGS, 2012 AND 2022



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

tion, replacement openings are just as important as new jobs from the perspective of someone planning a career or assessing workforce training needs. For this 10-year period, replacement openings will generate 2.5 times more job opportunities than openings from growth. Replacement openings are vacancies left by a worker who retires or otherwise permanently leaves an occupation, whether that's from changing careers or leaving Alaska.

It's important to note that a vacancy left by a worker who moves from one employer to another in the same

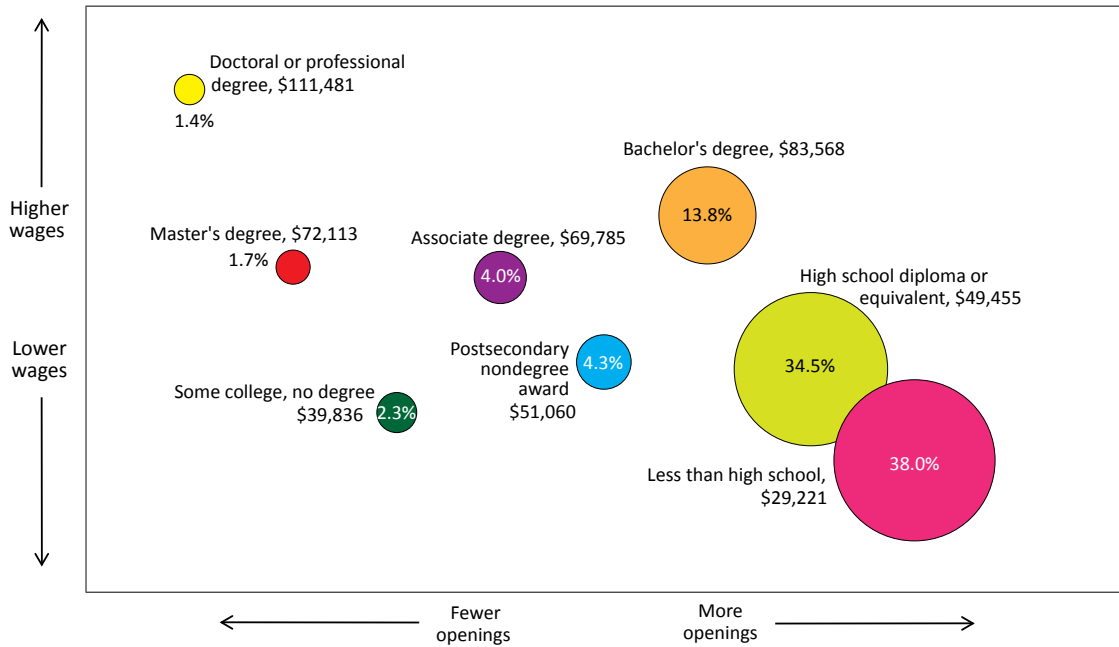
occupation doesn't count as a replacement opening. This is called job turnover, and it's much more common. Though replacement openings don't include turnover, many occupations with high turnover also generate high numbers of replacement openings.

This is because many of these occupations are low-wage and frequently filled by young workers who are likely to change careers as they age. For example, many cashiers are young people doing seasonal work rather than making a career choice, and many will never return to a

4

Openings by Educational Level* and Wages

ALASKA OCCUPATIONAL PROJECTIONS, 2012 TO 2022



*See sidebar on page 16 to learn more about the different between education and training.

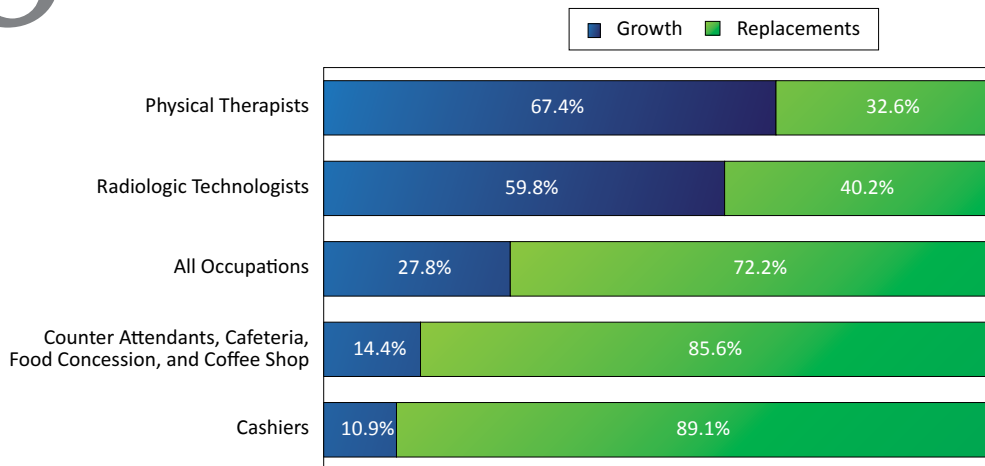
Note: includes openings from growth and replacements

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

5

Percent New Jobs vs. Replacement Openings

SELECT ALASKA OCCUPATIONS, 2012 TO 2022



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, 2012 TO 2022

Occupation	Percent growth
Opticians, Dispensing	29.7%
Dental Hygienists	27.8%
Dental Assistants	27.0%
Home Health Aides	26.0%
Personal Care Aides	26.0%
Medical Assistants	25.7%
Physician Assistants	25.5%
Mental Health and Substance Abuse Social Workers	25.0%
Continuous Mining Machine Operators	25.0%
Dentists, General	24.6%
Millwrights	24.3%
Recreational Therapists	24.2%
Family and General Practitioners	24.1%
Massage Therapists	23.9%
Medical Secretaries	23.7%
Nurse Practitioners	23.7%
Hazardous Materials Removal Workers	23.4%
Substance Abuse and Behavioral Disorder Counselors	23.2%
Packaging and Filling Machine Operators and Tenders	23.2%
Medical and Clinical Laboratory Technicians	23.1%
Physical Therapists	23.0%
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	22.3%
Radiologic Technologists	22.2%
Surgical Technologists	22.0%
Medical and Clinical Laboratory Technologists	21.8%

Note: This list only includes occupations with at least 50 workers and growth of at least 20 jobs. It 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

cashiering job after the season ends. This leaves a large number of openings — in fact, 89.1 percent of openings for cashiers will be replacements. (See Exhibit 5.)

On the opposite end, more permanent and high-wage jobs typically have more growth openings. Openings for physical therapists, for example, will be 67.4 percent new positions. (See Exhibit 5.)

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 and sales jobs slightly edge out administrative occupations for replacements because they're often seasonal and lower-wage.

Openings by education level

Over the projection period, 72.5 percent of the avail-

Highest Projected Loss

BOTTOM 25 OCCUPATIONS, 2012 TO 2022

Occupation	Percent loss
Postmasters and Mail Superintendents	-21.1%
Pressers, Textile, Garment, and Related Materials	-20.7%
Postal Service Mail Carriers	-19.9%
Mail Sorters, Processors, Proc Machine Operators	-19.9%
Railroad Brake, Signal, and Switch Operators	-17.6%
Postal Service Clerks	-17.2%
Locomotive Engineers	-16.1%
Rail Track Laying/Maintenance Equipment Operators	-14.3%
Radio, Cellular, and Tower Equip Installers/Repairers	-14.0%
Broadcast Technicians	-10.8%
Machine Feeders and Offbearers	-10.0%
Reporters and Correspondents	-9.9%
Rail Car Repairers	-9.6%
Print Binding and Finishing Workers	-9.4%
Psychologists, All Other	-9.1%
Radio and Television Announcers	-8.1%
Prepress Technician and Workers	-7.7%
Compensation and Benefits Managers	-5.1%
Biological Scientists, All Other	-5.0%
Legal Secretaries	-5.0%
Transportation Inspectors	-4.9%
Social Scientists and Related Workers, All Other	-4.8%
Paralegals and Legal Assistants	-4.5%
Title Examiners, Abstractors, and Searchers	-4.0%
Historians	-3.3%
Printing Press Operators	-3.2%
Artists and Related Workers, All Other	-3.0%
Physical Scientists, All Other	-3.0%
Dancers	-2.8%
Hydrologists	-2.6%
Business Operations Specialists, All Other	-2.6%
Forest and Conservation Technicians	-2.4%
Media and Communication Equip Workers, All Other	-2.3%
Helpers: Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	-2.3%
Advertising Sales Agents	-2.1%
Laundry and Dry Cleaning Workers	-1.9%
Producers and Directors	-1.0%
Foresters	-0.9%
Lawyers	-0.9%
Editors	-0.8%
Conservation Scientists	-0.3%

able 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 a high school diploma or less typically pay less than those requiring higher levels of education. (See Exhibit 4 and the sidebar on page 16.) The average annual wage for a job requiring a high school diploma is about \$49,455, and for those that don't require a diploma, wages average \$29,221. 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 27.5 percent of openings will be in occupations that require some college, a degree, or a post-secondary nondegree award. Aircraft mechanics, medical assistants, and commercial drivers are common post-secondary nondegree award jobs. About 13.8 percent of these openings will require at least a bachelor's degree, meaning higher wages and full-time, year-round work.

What makes a 'top job'

Long-term occupation projections are a vital tool for workforce development agencies, job placement and counseling professionals, job seekers, and education and training providers, but it can be difficult to determine which occupations should get the most attention from these stakeholders. To help answer this question, we developed the Alaska's Top Jobs list. (See Exhibit 8.)

The list focuses on occupations we project will fare well and pay well over the projections period. To make the top jobs list, an occupation must meet two criteria:

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

The occupations in the top jobs list represent 53 out of 788 occupations found in Alaska, or 6.7 percent. It comprises a select group of occupations that are at the top end of 13 out of 23 broad occupational categories.

A high percentage of these occupations, about 17 percent, are related to health care, but construction and extraction along with management make up 13.2 percent and 15.1 percent respectively. The remaining occupations run the gamut from petroleum engineers to air traffic controllers, with elementary school teachers in between.

7 Wages by Category

ALASKA PROJECTED, 2012 TO 2022

Category	Average wages
Management Occupations	\$103,634
Architecture and Engineering Occupations	\$94,515
Legal Occupations	\$90,913
Health Care Practitioners and Technical Occupations	\$81,900
Business and Financial Operations Occupations	\$74,513
Computer and Mathematical Occupations	\$72,297
Life, Physical, and Social Science Occupations	\$67,794
Construction and Extraction Occupations	\$59,070
Education, Training, and Library Occupations	\$57,681
Installation, Maintenance, and Repair Occupations	\$56,067
Transportation and Material Moving Occupations	\$52,298
Protective Service Occupations	\$52,246
Community and Social Service Occupations	\$50,099
Arts, Design, Entertainment, Sports, and Media Occ	\$47,961
Office and Administrative Support Occupations	\$41,324
Production Occupations	\$38,194
Health Care Support Occupations	\$37,191
Farming, Fishing, and Forestry Occupations	\$33,078
Sales and Related Occupations	\$32,012
Personal Care and Service Occupations	\$29,477
Building and Grounds Cleaning and Maintenance Occupations	\$29,389
Food Preparation and Serving Related Occupations	\$24,867

Note: This list only includes occupations with at least 50 workers and growth of at least 20 jobs. It 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

This list centers on occupations that would be considered professions, not just a job. They're typically long-term and require considerable investments to pursue. Twenty-seven require at least a bachelor's degree, and eight more require at least an associate degree or some form of postsecondary award such as a vocational certificate.

'Educational level' is not the same as 'postsecondary training'

Although a significant number and percentage of projected occupational openings won't require more than a high school diploma, that doesn't mean those jobs don't require postsecondary training.

The key point is that "educational level" is a formal measure of education that doesn't include the many types of

postsecondary training. A few examples will be helpful. To qualify for a job as an electrician, a person doesn't need a bachelor's or associate degree or any college at all, but they do generally need an apprenticeship. Likewise, a commercial pilot (different from an airline pilot) doesn't need a degree but does need a significant number of flight hours before being fully qualified.



Alaska's Top Jobs

PROJECTED, 2012 TO 2022

	Employment			Openings 2012-2022			Wage quartile ¹
	2012	2022	Percent change	New	Replacement	Total openings	
Doctoral or Professional Degree							
Family and General Practitioners	399	495	24.1%	96	76	172	\$\$\$\$
Physical Therapists	400	492	23.0%	93	45	138	\$\$\$\$
Lawyers	1,019	1,010	-0.9%	0	188	188	\$\$\$\$
Master's Degree							
Physician Assistants	376	472	25.5%	97	69	166	\$\$\$\$
Mental Health Counselors	349	423	21.2%	74	101	175	\$\$\$
Education Administrators, Elementary and Secondary School	517	566	9.5%	48	141	190	\$\$\$\$
Bachelor's Degree							
Medical and Health Services Managers	949	1,137	19.8%	188	224	412	\$\$\$\$
Petroleum Engineers	539	622	15.4%	83	115	198	\$\$\$\$
Environmental Scientists and Specialists, Including Health	697	804	15.4%	108	162	270	\$\$\$
Captains, Mates, and Pilots of Water Vessels	608	701	15.3%	93	218	311	\$\$\$
Administrative Services Managers	1,818	2,084	14.6%	266	435	702	\$\$\$\$
Geoscientists, Except Hydrologists and Geographers	509	583	14.5%	75	118	193	\$\$\$\$
Construction Managers	1,044	1,183	13.3%	139	253	392	\$\$\$\$
Chief Executives	1,270	1,438	13.2%	169	184	353	\$\$\$\$
General and Operations Managers	3,350	3,752	12.0%	402	603	1005	\$\$\$\$
Sales Managers	657	732	11.4%	75	185	260	\$\$\$\$
Financial Managers	1,128	1,252	11.0%	124	200	324	\$\$\$\$
Middle School Teachers, Exc Spec and Career/Tech Ed	799	879	10.0%	79	170	250	\$\$\$
Elementary School Teachers, Except Special Education	2,797	3,068	9.7%	272	595	867	\$\$\$
Secondary School Teachers, Exc Spec and Career/Tech Ed	1,432	1,570	9.6%	138	379	517	\$\$\$
Accountants and Auditors	1,732	1,894	9.4%	162	360	522	\$\$\$\$
Civil Engineers	849	910	7.2%	62	167	228	\$\$\$\$
Probation Officers and Correctional Treatment Specialists	697	736	5.6%	39	146	185	\$\$\$
Airline Pilots, Copilots, and Flight Engineers	1,735	1,828	5.4%	92	504	597	\$\$\$\$
Compliance Officers	765	795	3.9%	30	148	179	\$\$\$
Zoologists and Wildlife Biologists	976	1,006	3.1%	30	213	243	\$\$\$
Computer and Information Systems Managers	907	912	0.6%	5	220	225	\$\$\$\$
Associate Degree or Postsecondary Nondegree Award							
Dental Hygienists	571	730	27.8%	159	111	270	\$\$\$\$
Medical and Clinical Laboratory Technicians	355	437	23.1%	82	67	149	\$\$\$
Radiologic Technologists	441	539	22.2%	98	66	164	\$\$\$
Registered Nurses	4,979	5,973	20.0%	994	873	1867	\$\$\$\$
Geological and Petroleum Technicians	821	969	18.0%	148	231	378	\$\$\$
First-Line Supervisors of Production and Operating Workers	855	929	8.7%	74	166	239	\$\$\$\$
Aircraft Mechanics and Service Technicians	1,303	1,399	7.4%	96	316	412	\$\$\$
Air Traffic Controllers	549	554	0.9%	6	170	176	\$\$\$\$
High school diploma or equivalent							
Hazardous Materials Removal Workers	346	427	23.4%	81	117	198	\$\$\$
Welders, Cutters, Solderers, and Brazers	732	861	17.6%	129	189	318	\$\$\$
Inspectors, Testers, Sorters, Samplers, and Weighers	510	591	15.9%	81	107	189	\$\$\$
Supervisors of Construction and Extraction Workers	973	1,116	14.7%	142	217	360	\$\$\$\$
Bus and Truck Mechanics and Diesel Engine Specialists	697	793	13.8%	96	146	243	\$\$\$
Mobile Heavy Equipment Mechanics, Except Engines	981	1,112	13.4%	131	247	378	\$\$\$
Commercial Pilots	837	944	12.8%	107	284	391	\$\$\$
Operating Engineers and Other Const Equip Operators	3,225	3,632	12.6%	407	937	1344	\$\$\$
First-Line Supervisors of Office and Admin Support Workers	2,164	2,425	12.1%	262	561	822	\$\$\$
Carpenters	2,973	3,318	11.6%	345	610	956	\$\$\$
Plumbers, Pipefitters, and Steamfitters	1,670	1,830	9.6%	160	467	627	\$\$\$
First-Line Supervisors of Mechanics, Installers, and Repairers	721	789	9.4%	68	184	252	\$\$\$\$
Electricians	2,355	2,531	7.5%	176	615	791	\$\$\$\$
Purchasing Agents, Except Wholesale, Retail, and Farm	542	574	5.9%	32	141	173	\$\$\$
Correctional Officers and Jailers	883	924	4.6%	41	150	192	\$\$\$
Water and Wastewater Treatment Plant and Sys Operators	606	630	4.0%	25	152	176	\$\$\$
Police and Sheriff's Patrol Officers	1,209	1,228	1.6%	19	316	335	\$\$\$\$
Less than high school							
Service Unit Operators, Oil, Gas, and Mining	892	1,058	18.6%	166	182	348	\$\$\$

Notes: 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 with wages in the top two quartiles).

¹Earnings \$\$\$ = \$54,370 to \$73,245 annually (\$26.14 to \$35.21 hourly), \$\$\$\$ = More than \$73,245 annually (\$35.21 hourly), based on 2013 OES estimates for Alaska.

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