10-year occupational projections

Types of job opportunities likely to arise in Alaska through 2030

By PAUL MARTZ

Projections by occupation show growth in certain types of work and the additional job openings we expect from people vacating existing positions. These separations will generate 90 percent of the nearly 40,000 job openings we project for Alaska between 2020 and 2030. The remaining 10 percent will come from job growth, which for this edition includes the recovery of jobs lost during the pandemic.

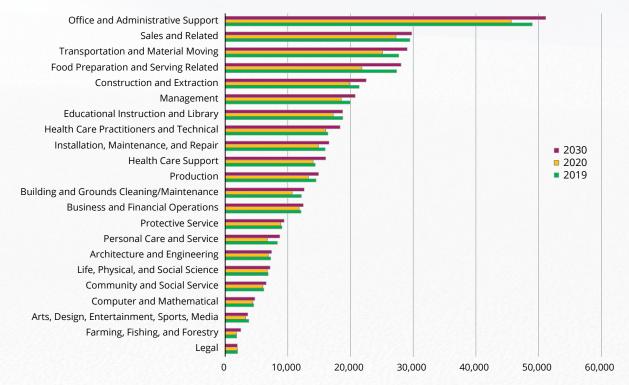
Even though the occupational projections focus more on openings than growth, recovery from the pandemic will still make the growth we project look bigger than it is. As with the industry projections, we included 2019 job numbers here to add

context and to separate longer-term growth or decline from pandemic recovery. Using 2020 as the base year makes the starting point artificially low. (For more on how drastic the difference can be between using 2019 and 2020 as base years, see the section on page 4 in the industry article called "uncharted territory.")

Where relevant, we also break down the growth estimates into two types: the typical job growth that springs from economic trends and the recovery of the jobs lost during the pandemic. (These are called structural and cyclical growth, respectively.)

While the economic upheaval of the last two years was extreme, it probably won't permanently reshape the state's economy or change the

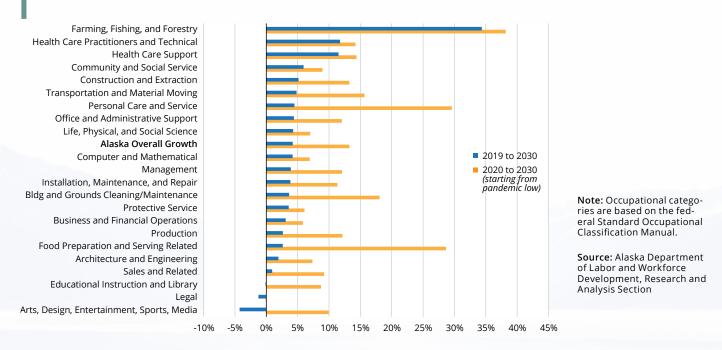
Projected total job counts by occupational group through 2030



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

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

Projected percent growth for occupational groups through 2030



long-running trends in the types of job opportunities we expect.

Pandemic's disparate impacts on occupations and the ripple effects

The pandemic's varying effects on occupations were just as extreme. Occupations that are mainly white-collar fared relatively well when COVID-19 hit. Many have few public-facing duties and easily transition to remote work.

Blue-collar and service occupations took the brunt of the losses, especially with mandated shutdowns, capacity restrictions, and customers shying away from in-person services.

Office work and jobs preparing or serving food are good examples of the differences. The office and administrative support category is Alaska's largest, representing more than 49,000 jobs in 2019. In 2020, this group shrunk 6.8 percent while the food preparation and serving category, which is roughly half the size, contracted 20 percent.

The drastic losses weren't limited to occupations hit by stay-at-home orders and wary consumers, though. Some damage was secondary. Jobs in building maintenance and groundskeeping don't depend on interaction or consumer behavior, for example, but these declined 12.2 percent as office

workers began teleworking, leaving many buildings empty.

Fewer people commuted or traveled, so the drop in gasoline demand spurred an oil price freefall. For Alaska, this meant a wipeout of oil and gas jobs that reverberated into production and construction/extraction occupations. These two categories fell 8.5 and 7.2 percent, respectively.

We can't attribute all of those losses to the oil price shock, as the industry grappled with COVID mitigation measures as well, but the price drop and growing uncertainty about future oil demand dealt an outsized blow.

Marijuana cultivation and health care occupations will grow most

We project most occupational categories will grow over the next decade.

The farming, fishing, and forestry category will add the most jobs proportionally, at a projected 38.2 percent, largely because of marijuana. Though still relatively small, this category has skyrocketed since legalization established the industry throughout Alaska. Its dominant occupation is farmworkers and laborers (crop, nursery, and greenhouse), which represents about 40 percent of marijuana employment but 78 percent of its projected growth

between 2020 and 2030. This occupation didn't decline during the pandemic.

Health care is also well-represented in the list of growing occupational categories. Practitioners and technical health care occupations are projected to grow 11.8 percent from 2019, and health care support occupations by 11.5 percent. Both lost jobs during the pandemic, but not many.

14 of the fastest-growth jobs are in health care

For individual occupations, health care represents 14 of the top 25 for percent growth. Respiratory therapists are ninth, at 14.9 percent between 2019 and 2030. Registered nurses, nursing assistants, and nurse practitioners also made the list, all at around 12 percent. These combined occupations represented 8,206 jobs in 2019, which dipped by only 134 jobs the following year.

The rest of the top 10, shown at right, are mainly productionrelated work in mining, oil and gas, agriculture, and manufacturing.

New on the list this year is couriers (17 percent). This occupation grew with COVID-driven demand for home delivery — a trend that will outlast the pandemic.

Media occupations will continue declining

Media occupations have made the fastest-declining list for the last decade. Seven of the occupations on this list are in the arts, design, entertainment, sports, and media category. One caveat is that we don't know how many are transitioning to freelance work, as the data do not capture the selfemployed.

High 25, low 25 jobs for growth through 2030

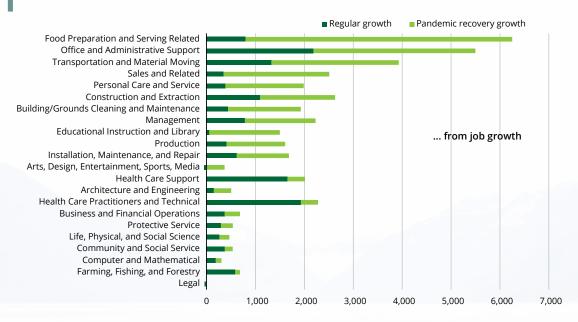
	Highest-growth occupations	Growth,	•	Change
	Trigitest-growth occupations	2019-30	2020-30	in 2020
1	Farmworkers/Laborers, Crop, Nursery, Greenhouse	89.4%	75.1%	8.2%
2	Helpers: Extraction Workers	23.1%	81.3%	-32.1%
3	Earth Drillers, Explosives Wkrs, Ordnance/Blasters	22.3%	45.2%	-15.7%
4	Machine Setters, Operators, and Tenders	19.1%	32.8%	-10.3%
5	Millwrights	17.3%	15.2%	1.9%
6	Couriers and Messengers	17.0%	18.8%	-1.5%
7	Veterinary Technologists and Technicians	16.1%	18.5%	-2.1%
8	Aircraft Cargo Handling Supervisors	16.0%	22.1%	-5.0%
9	Respiratory Therapists	14.9%	15.6%	-0.6%
10	Veterinary Assts and Lab Animal Caretakers	14.7%	17.7%	-2.6%
11	Veterinarians	13.9%	16.0%	-1.8%
12	Diagnostic Medical Sonographers	13.7%	15.5%	-1.5%
13	Radiologic Technologists and Technicians	13.4%	15.1%	-1.5%
14	Surgical Technologists	13.4%	15.0%	-1.4%
15	Medical Secretaries and Administrative Assistants	13.3%	15.5%	-1.9%
16	Derrick Operators, Oil and Gas	13.2%	81.8%	-37.7%
17	Clinical Laboratory Technologists and Technicians	12.8%	14.9%	-1.8%
18	Physical Therapists	12.4%	14.6%	-1.9%
19	Registered Nurses	12.4%	14.3%	-1.7%
20	Nursing Assistants	12.4%	14.0%	-1.4%
21	Health Care Social Workers	12.3%	15.1%	-2.5%
22	Medical and Health Services Managers	12.2%	14.1%	-1.7%
22	Dietitians and Nutritionists	11.7%	12.4%	-0.6%
24	Nurse Practitioners	11.7%	14.6%	-2.5%
25	Recreational Therapists	11.6%	14.6%	-2.6%

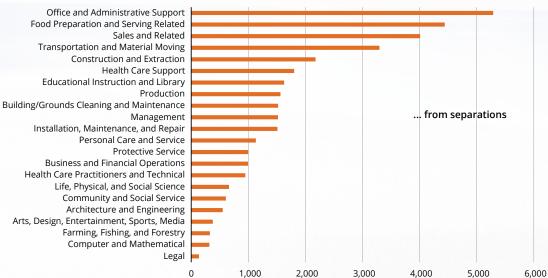
	Occupations to decline most	Loss, 2019-30	Change, 2020-30	Change in 2020
1	Broadcast Announcers and Radio Disc Jockeys	-43.0%	-37.1%	-9.3%
2	News Analysts, Reporters, and Journalists	-40.8%	-34.4%	-9.7%
3	Broadcast Technicians	-40.6%	-34.5%	-9.4%
4	Editors	-20.3%	-11.9%	-9.5%
5	Advertising Sales Agents	-17.0%	-4.2%	-13.4%
6	Printing Press Operators	-15.0%	3.0%	-17.5%
7	Insurance Sales Agents	-14.8%	-12.7%	-2.4%
8	Print Binding and Finishing Workers	-10.0%	8.0%	-16.7%
9	Media and Communication Workers, All Other	-9.6%	1.5%	-11.0%
10	Insurance Claims and Policy Processing Clerks	-7.8%	-6.1%	-1.7%
11	Logging Equipment Operators	-5.6%	-1.4%	-4.2%
12	Bartenders	-5.0%	31.1%	-27.5%
13	Fallers	-4.3%	-1.5%	-2.9%
14	Legal Secretaries and Administrative Assistants	-4.3%	-2.6%	-1.8%
15	Ushers, Lobby Attendants, and Ticket Takers	-4.2%	39.5%	-31.3%
16	Audio and Video Technicians	-4.0%	11.9%	-14.2%
17	Mechanical Drafters	-3.4%	4.9%	-7.9%
18	Rehabilitation Counselors	-3.1%	4.0%	-6.8%
19	Insurance Underwriters	-2.5%	-4.1%	1.7%
20	Tellers	-2.5%	2.3%	-4.7%
21	Paralegals and Legal Assistants	-2.5%	-1.9%	-0.6%
22	Advertising and Promotions Managers	-2.4%	8.1%	-9.8%
23	Personal Financial Advisors	-2.4%	1.9%	-4.2%
24	Merchandise Displayers and Window Trimmers	-2.3%	6.7%	-8.4%
25	Graphic Designers	-2.2%	11.9%	-12.6%

Note: The top 25 list includes only the occupations that have at least 50 workers and projected growth of at least 20 jobs. It excludes residual occupations ending with "all other" and jobs with a high ratio of self-employment to covered employment. The bottom 25 list covers only occupations with at least 50 workers.

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

Types of job openings by occupational group through 2030

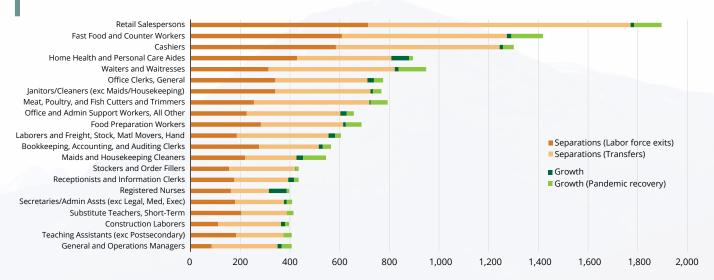




Notes: Occupational categories are based on the federal Standard Occupational Classification Manual. Occupations in decline will have no growth openings but may have openings from separations, which are vacated positions. Separations result from people leaving the labor force or transferring to a different occupations. Separations typically represent openings for new workers, but in declining occupations, not all separations result in openings (i.e. if the position is cut).

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

Most job openings will come from workers leaving an occupation



Notes: Annual openings for these projections are a combination of new jobs (growth), pandemic recovery, people permanently leaving the labor force (labor force exits), and people leaving an occupation for a different one (occupational transfers). Occupational separations are the sum of labor force exits and transfers. In declining occupations, not all separations result in job openings.

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

The fastest-declining occupation is broadcast announcers/radio disc jockeys, which we project will shrink 43 percent from 2019 to 2030. It's a small group, as that decline represents just 36 lost jobs over the decade, 10 of which disappeared when the pandemic started. However, this occupation would have continued declining without the pandemic.

Others on the bottom 25 list include bartenders and ushers, lobby attendants, and ticket takers. If we were to look only at 2020-2030, these occupations would appear to be among the fastest growing — but they hemorrhaged jobs during the pandemic, making the recovery look like massive growth. From pre-pandemic levels, the decade decline is around 5 percent.

Most job openings will come from people leaving existing positions

As mentioned earlier, people leaving the labor force or changing careers will be the main source of job opportunities over the next decade. These exits and transfers are called separations, and they will outnumber growth openings 25 to 1 if we exclude pandemic recovery.

We anticipate separations will generate 35,829 job openings annually. For comparison, the number of projected growth openings averages just over

4,000 a year, and that's inflated because of the 2020 declines. Using the more stable 2019 to 2030 period puts the average at just 1,386 growth openings per year.

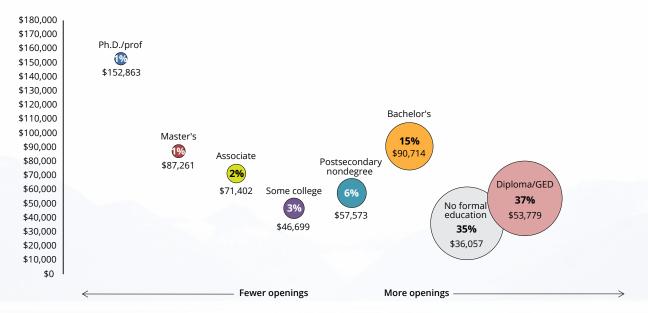
The occupational group with the most growth and separations is also the largest. Office and administrative support will generate a projected 215 new jobs per year from 2019 and another 5,290 separation openings. This category encompasses a diverse set of office jobs that span nearly every industry in Alaska, which insulates it from economic shocks.

Size partly predicts the number of separation openings, but separations also tend to be high in categories with lower-paying occupations requiring minimal education or training.

The breakdown of openings by occupation reveals more nuance. Retail salespeople require little training or education and are lower on the pay scale, so these are the first job for many people. People transferring to another field — often advancing to a higher-paying job with more prerequisites — will create about 1,056 openings a year in retail sales, and labor force exits will open another 715 positions a year. (Labor force exits are people dropping out for any reason, from retirement to attending school to caring full-time for family members.)

Through 2030, 93.4 percent of job opportunities

Percent of yearly openings by education level and wages, 2020-30



Notes: Annual wage estimates are based on employment-weighted averages of 2020 Occupational Employment Statistics wage data. Occupational education levels are based on the U.S. Census Bureau American Community Survey Public Use microdata. Openings include annual average wage growth and separations for occupations with a reported OES wage.

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

Projected yearly wages by category, 2020 to 2030

Occupational category	Avg annual wages
Management	\$110,030
Health Care Practitioners and Technical	\$102,275
Architecture and Engineering	\$96,653
Legal	\$90,906
Computer and Mathematical	\$81,914
Business and Financial Operations	\$81,287
Life, Physical, and Social Science	\$75,615
Construction and Extraction	\$66,646
Installation, Maintenance, and Repair	\$63,912
Transportation and Material Moving	\$63,187
Educational Instruction and Library	\$63,038
Protective Service	\$62,453
Community and Social Service	\$56,926
Arts, Design, Entertainment, Sports, and Media	\$52,830
Production	\$48,257
Office and Administrative Support	\$47,789
Farming, Fishing, and Forestry	\$43,188
Health Care Support	\$42,176
Sales and Related	\$37,469
Building and Grounds Cleaning and Maintenance	\$37,431
Personal Care and Service	\$35,653
Food Preparation and Serving Related	\$29,456

Note: Wages are based on 2020 Occupational Employment Statistics wage estimates for Alaska, weighted by base year 2020 employment.

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

in retail sales will come from separations. Of the remaining 6.6 percent, 5.9 percent of the growth openings will be pandemic recovery.

At the other end of the spectrum, registered nurses leaving their jobs will open 162 positions each year from exits and 153 from transfers to other occupations.

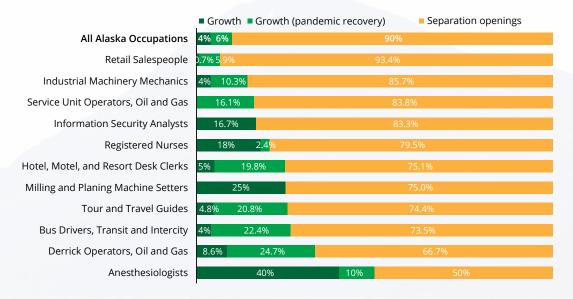
In percent terms, for registered nurses, job openings will be 79.5 percent separations, 18.1 percent growth openings, and 2.4 percent pandemic job recovery.

Registered nurses' exits are usually a mix of retirements and temporary departures from the labor force to further their education. Unlike many occupations, registered nurses have a direct path to advancement. With a master's degree, they can become nurse midwives, nurse anesthetists, or nurse practitioners. Nurses who continue working while getting these additional credentials are counted as occupational transfers when they move up.

Three-quarters of job openings will have minimal prerequisites

The numbers of openings are tied to educational

Projected growth and separation openings for select jobs



Notes: Growth openings are new jobs. Separations are the projected numbers of workers permanently leaving an occupation.

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

requirements and wages. Those requiring no formal education or minimal credentials, such as high school graduation or some college, will generate 75 percent of job openings in Alaska.

Wages increase with the required level of education, with one exception in Alaska: master's degrees. On average, jobs requiring a master's pay slightly less than those requiring a bachelor's degree, at \$87,261 versus \$90,714.

This is mainly because the number of occupations that require a master's degree is small, and a few are notably low-paying, pushing down the average. For example, medical occupations that require a master's pay about 50 percent more than social work and counseling, but Alaska has far more social workers and counselors.

Another reason for the disparity is the degree requirement doesn't factor in additional prereguisites that significantly boost earnings, such as training, apprenticeships, or work experience. This is a factor in some bachelor-level occupations, too, with many of the higher-paying occupations requiring medium- or long-term on-the-job training or experience in addition to the degree.

Many 'top jobs' require a bachelor's degree

There are numerous ways to gauge an occupation's outlook — whether it's growing, pays well, and has good prospects — which can make it difficult for workforce development and education stakeholders to determine the most meaningful comparisons or rankings. To help with these comparisons, we created a list of "top jobs" we anticipate will have high earnings and openings between 2020 and 2030. This table begins on the next page, and the footnote explains what makes an occupation a top job.

By education, 22 of the 51 on this year's list require a bachelor's degree and 21 require a diploma or GED. Of the occupations requiring only high school education, nine need additional moderate-term onthe-job training, and six require an apprenticeship or long-term on-the-job training. The remaining six are supervisory or management occupations that require additional work experience.

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Alaska's top jobs, 2019 to 2030

		Employment	ment			Aver	Average annual openings, 2020-2030	al :030			
	2019	2020	2030	Pct chg 2019-30	Pct chg 2020-30	Structural growth*	Sepa- rations c	Total* openings	Training** required	Work exp required	Wage*** quartile
		Back	Bachelor's degree	gree							
Registered Nurses	5,778	5,682	6,495	12.4%	14.3%	72	315	387	None	None	\$\$\$\$
General and Operations Managers	4,398	3,984	4,561	3.7%	14.5%	16	350	366	None	5+ years	\$\$\$\$
Elementary School Teachers, Except Special Education	2,230	2,053	2,213	-0.8%	7.8%	0	150	150	None	None	\$\$\$
Airline Pilots, Copilots, and Flight Engineers	2,080	1,915	2,320	11.5%	21.2%	24	227	251	Moderate OJT	<5 years	\$\$\$\$
Accountants and Auditors	1,944	1,858	2,014	3.6%	8.4%	7	169	176	None	None	\$\$\$
Chief Executives	1,706	1,589	1,773	3.9%	11.6%	7	114	121	None	5+ years	\$\$\$\$
Secondary School Teachers, Except Special and Career/Tech Education	1,656	1,522	1,642	-0.8%	7.9%	0	106	106	None	None	\$\$\$
Administrative Services and Facilities Managers	1,236	1,147	1,288	4.2%	12.3%	5	96	101	None	<5 years	\$\$\$\$
Financial Managers	1,134	1,071	1,164	2.6%	8.7%	8	79	82	None	5+ years	\$\$\$\$
Construction Managers	1,021	947	1,061	3.9%	12.0%	4	72	9/	Moderate OJT	None	\$\$\$\$
Civil Engineers	1,018	978	1,024	%9.0	4.7%	7	70	71	None	None	\$\$\$\$
Medical and Health Services Managers	196	945	1,078	12.2%	14.1%	12	9/	88	None	<5 years	\$\$\$\$
Computer and Information Systems Managers	931	922	972	4.4%	5.4%	4	69	73	None	5+ years	\$\$\$\$
Zoologists and Wildlife Biologists	913	911	952	4.3%	4.5%	4	81	85	None	None	\$\$\$
Sales Managers	807	750	817	1.2%	8.9%	_	65	99	None	<5 years	\$\$\$\$
Network and Computer Systems Administrators	745	718	777	4.3%	8.2%	m	48	51	None	None	\$\$\$\$
Compliance Officers	732	728	757	3.4%	4.0%	m	28	61	Moderate OJT	None	\$\$\$\$
Buyers and Purchasing Agents	691	693	712	3.0%	7.4%	2	29	69	Moderate OJT	None	\$\$\$
Environmental Scientists and Specialists, Including Health	629	298	644	2.4%	7.7%	2	29	61	None	None	\$\$\$
Human Resources Specialists	619	297	654	5.7%	%9.6	4	29	63	None	None	\$\$\$
Clinical Laboratory Technologists and Technicians	601	290	829	12.8%	14.9%	∞	40	48	None	None	\$\$\$
Management Analysts	522	519	220	5.4%	%0.9	3	48	21	None	<5 years	\$\$\$\$
		Asso	Associate degree	gree							
Dental Hygienists	701	678	779	11.1%	14.9%	∞	44	52	None	None	\$\$\$\$
Civil Engineering Technologists and Technicians	647	623	642	-0.8%	3.1%	0	28	28	None	None	\$\$\$
Paralegals and Legal Assistants	528	525	515	-2.5%	-1.9%	<u>-</u>	55	54	None	None	\$\$\$
	Postsecondary nondegree award	ndegree	award c	r some c	or some college, no degree	degree					
Aircraft Mechanics and Service Technicians	1,480	1,313	1,538	3.9%	17.1%	9	115	121	None	None	\$\$\$
Telecommunications Equip Installers and Repairers, Except Line Install	738	723	789	%6.9	9.1%	5	84	88	Moderate OJT	None	\$\$\$\$
Captains, Mates, and Pilots of Water Vessels	999	526	701	5.3%	33.3%	4	19	9	None	<5 years	\$\$\$\$
Massage Therapists	540	496	298	10.7%	20.6%	9	61	67	None	None	\$\$\$
	High	school	High school diploma or equivalent	or equiva	lent						
Operating Engineers and Other Construction Equipment Operators	2,874	2,627	2,946	2.5%	12.1%	7	291	298	Moderate OJT	None	\$\$\$
Carpenters	2,284	2,206	2,388	4.6%	8.3%	10	210	220	Apprentice	None	\$\$\$
First-Line Supervisors of Office and Administrative Support Workers	2,068	1,940	2,163	4.6%	11.5%	10	201	211	None	<5 years	\$\$\$
Electricians	1,819	1,694	1,881	3.4%	11.0%	9	183	189	Apprentice	None	\$\$\$
Plumbers, Pipefitters, and Steamfitters	1,342	1,242	1,383	3.1%	11.4%	4	132	136	Apprentice	None	\$\$\$\$
Police and Sheriff's Patrol Officers	1,284	1,276	1,298	1.1%	1.7%	_	26	86	Moderate OJT	None	\$\$\$\$
	1,283	1,268	1,289	0.5%	1.7%	-	117	118	Moderate OJT	None	\$\$\$
Sales Reps, Wholesale and Manufacturing, Except Tech and Sci Products	1,180	1,103	1,162	-1.5%	5.4%	0 (110	110	Moderate OJT	None	\$ \$
Commercial Pilots	974	66/	984	6.5%	73.2%	٥	96	102	Moderate OJ I	None	A A A

Alaska's top jobs, 2019 to 2030, continued

		Employment	ment			Average annual openings, 2020-2030	Average annual enings, 2020-20	lal .2030			
	2019	2020	2030	Pct chg 2019-30	Pct chg 2020-30	Structural growth*	Sepa- rations	Sepa- Total* rations openings	Training** required	Work exp Wage*** required quartile	Vage*** quartile
High	High school diploma or equivalent, continued	diploma	or equiv	valent, co	ntinued						
Mobile Heavy Equipment Mechanics, Except Engines	842	795	924	9.7%	16.2%	8	84	92	Long OJT	None	\$\$\$
First-Line Supervisors of Construction Trades and Extraction Workers	992	682	807	5.4%	18.3%	4	69	73	None	5+ years	\$\$\$\$
Bus and Truck Mechanics and Diesel Engine Specialists	713	651	727	2.0%	11.7%	_	63	64	Long OJT	None	\$\$\$
1st-Line Supervisors of Transp/Matl Moving Wkrs, Exc Aircraft Cargo	685	654	734	7.2%	12.2%	2	73	78	None	<5 years	\$\$\$
First-Line Supervisors of Mechanics, Installers, and Repairers	681	638	718	5.4%	12.5%	4	9	64	None	<5 years	\$\$\$\$
First-Line Supervisors of Production and Operating Workers	642	290	999	3.7%	12.9%	2	61	63	None	<5 years	\$\$\$\$
Welders, Cutters, Solderers, and Brazers	809	564	642	2.6%	13.8%	c	64	29	Moderate OJT	None	\$\$\$
Food Service Managers	604	492	625	3.5%	27.0%	2	62	64	None	<5 years	\$\$\$
Water and Wastewater Treatment Plant and System Operators	499	489	538	7.8%	10.0%	4	46	20	Long OJT	None	\$\$\$
Miscellaneous Construction and Related Workers	481	455	496	3.1%	%0.6	2	54	26	Moderate OJT	None	\$\$\$
Flight Attendants	458	373	456	-0.4%	22.3%	0	51	51	Moderate OJT	<5 years	\$\$\$\$
Hazardous Materials Removal Workers	409	400	458	12.0%	14.5%	5	51	99	Moderate OJT	None	\$\$\$
	No fo	rmal edu	ıcational	No formal educational credentia	al						
Service Unit Operators, Oil and Gas	1,029	820	1,030	0.1%	25.6%	0	109	109	Moderate OJT	None	\$\$\$

Notes: To rank as a "topjob," an occupation must: 1) rank in the top two wage quartiles; AND 2) have total 10-year projected growth of at least 75 jobs and greater percentage growth than all occupations with the most projected average annual openings (of those with wages in the top two quartiles). Residual "all other" occupations are

*Structural growth is typical job growth that comes from stable trends in the economy and does not include recovery of pandemic job losses. The total openings category only includes structural

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

growth openings and separations.

^{**}OJT = on-the-job training, Moderate-term is one to 12 months and long-term is more than 12 months.
***Wages: \$\$\$ = \$60,740 to \$80,520 annually (\$29.20 to \$38.71 hourly), \$\$\$\$ = More than \$80,520 annually (\$38.71 hourly), based on Bureau of Labor Statistics Occupational Employment and Wage Statistics' May 2020 MB3 Estimates for Alaska