ALASKA ECONOMIC TRENDS OCTOBER 2024

ALASKA JOB PROJECTIONS for 2022 to 2032

ALASKA DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT • RESEARCH AND ANALYSIS

FROM THE COMMISSIONER

Nome visit showcases focus on future workforce needs

By Catherine Muñoz, Commissioner

In this issue of *Trends*, we explore industry and occupational projections. Last updated two years ago, these projections help us understand where the labor market may move in the decade ahead.

On a recent trip to Nome, I saw how the area is tackling workforce development needs to address the region's occupational outlook. Accompanying me to Nome was Dr. Deena Bishop, Department of Education and Early Development Commissioner. We had the opportunity to visit Nome and Teller at the invitation of Dr. Doug Walrath at the Northwestern Alaska Career and Technical Education Center, or NACTEC. We saw how NACTEC is preparing students through career and technical skills, career exploration, life



Rock samples from the proposed Graphite One project

skills, and work readiness, and how our respective departments are supporting this important work.

NACTEC sets an excellent example as an integrated career and technical education provider. We were impressed by the extensive resources it provides to residents and how NACTEC is using technology to design learning experiences tailored to them.

We also met with Nome

Mayor John Handeland, representatives of Bering Straits Native Corporation and Kawerak Inc., and other community and business leaders to learn more about economic priorities, Alaska's Arctic deep draft port in Nome, and the Graphite One Alaska project. The latter would produce high-grade anode material for the lithium-ion electric vehicle battery market.

We were encouraged to see students in Nome, Teller, and other regional communities have the opportunity



From left, Nome Mayor John Handeland; Paloma Harbour, Director of the Employment and Training Services Division; Commissioner Catherine Muñoz; and Doug Walrath, Director of Northwestern Alaska Career and Technical Center

to learn valuable skills for future careers.

Governor Mike Dunleavy has challenged us to increase the number of Alaskans trained for highdemand skilled jobs. The projected need for skilled labor such as electricians and plumbers is large, and we are focused on expanding training, streamlining certification processes, and supporting programs like NACTEC as they meet this demand. Public and private partnerships are key to preparing Alaskans for the many opportunities now and in the future.

We are grateful to the many community leaders who shared time with us, and we look forward to continuing to work with the region's leaders to ensure Alaskans succeed in this new world of opportunity.

Sincerely,

athenine Muinz

Contact Commissioner Catherine Muñoz at (907) 465-2700 or commissioner.labor@alaska.gov.



Follow the Alaska Department of Labor and Workforce Development on <u>X</u> and <u>Facebook</u>.

OCTOBER 2024

Volume 44 Number 10 ISSN 0160-3345

> SARA WHITNEY Editor

Luitoi

DAN ROBINSON

Chief, Research and Analysis

Design by Sara Whitney

ON THE COVER:

A moose in the Denali Borough, photo by Flickr user <u>Jason Ahrns</u> License: <u>Creative Commons license BY-NC-SA 2.0</u>

ALASKA ECONOMIC TRENDS

4 INDUSTRY PROJECTIONS 2022 to 2032

12 OCCUPATIONAL PROJECTIONS 2022 to 2032

ALASKA DEPARTMENT of LABOR and WORKFORCE DEVELOPMENT

> Governor Mike Dunleavy

Commissioner Catherine Muñoz

$22 \quad \begin{array}{c} \text{GAUGING} \\ \text{The economy} \end{array}$

Trends is a nonpartisan, data-driven magazine that covers a variety of economic topics in Alaska.

ON THIS SPREAD: The background watermark for 2024 is an aerial view of the mountains around Anchorage. Photo by Flickr user <u>Raúl AB</u> under Creative Commons license <u>by-nc-sa 2.0.</u>

If you have questions or comments, contact the authors listed at the end of each article or the editor at sara.whitney@alaska.gov or (907) 465-6561. This material is public information, and with appropriate credit it may be reproduced without permission. To sign up for a free electronic subscription, read past issues, or purchase a print subscription, visit labor.alaska.gov/trends.

10-year industry projections

Varying pandemic recoveries muddy some long-term growth rates

Alaska ended 2023 barely below pre-pandemic job level

At the time of publication, finalized 2023 numbers put Alaska's total employment at 328,532. That was just 560 jobs shy of 2019, before COVID. First-quarter 2024 employment was 1.3 percent higher than the same quarter in 2019. Both show Alaska is, overall, past the pandemic job recovery stage.

This article uses 2022 job numbers to project 10 years forward, a challenging base year because at that time, pandemic job recovery was ongoing. In many cases, the low starting point makes the 10-year growth rate for an industry or occupation look much bigger than it actually is. For context, we include 2019 numbers.

For more on how we create these projections, see page 11.

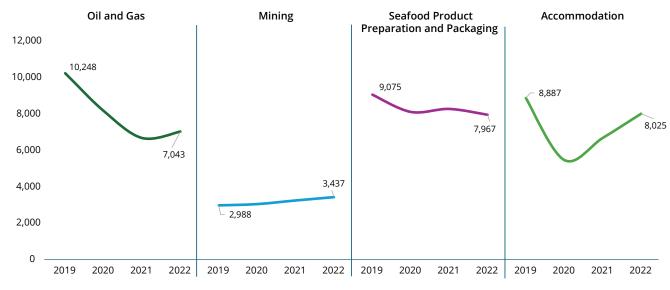
By PAUL MARTZ

By the end of 2022, Alaska had recovered 62.6 percent of the jobs lost during the pandemic. That put us about 3 percent below our total pre-COVID job count. From that base year, we project total employment will grow 6.9 percent through 2032.

It's important to note that pandemic job recovery has varied widely across industries, though. Some were still way below pre-pandemic job levels in 2022, meaning much of their projected growth over the decade will be catch-up. (See the sidebar on the left.)

For example, the accommodation industry was one of the hardest hit during COVID but its recovery curve was strong as tourism rebounded, putting the industry only about 800 jobs below the pre-pandemic count after just two years. The oil and gas industry, however, shed 20 percent of its jobs in 2020 and another 18 percent the following year. It wasn't until 2022 that oil and gas began a meager recovery, growing 5 percent that year.

Both are stark contrasts to hard rock mining, which continued to grow throughout the pandemic and beyond.



Industries' pandemic job recovery trajectories differ considerably

Alaska industry¹ projections, 2022 to 2032 and remaining recovery

	2019 est jobs²	2020 est jobs²	2021 est jobs²	2022 est jobs ²	2032 projected	Change, 2022-32	% change, 2022-32 ³
Total Employment⁴	329,092	303,046	310,555	319,345	341,442	22,097	6.9%
Goods-Producing	44,102	40,325	39,663	40,408	46,729	6,321	15.6%
Natural Resources and Mining	14,980	12,996	11,900	12,461	15,612	3,151	25.3%
Agriculture, Forestry, Fishing and Hunting	1,495	1,553	1,615	1,608	1,567	-41	-2.5%
Mining	13,485	11,443	10,285	10,853	14,045	3,192	29.4%
Oil and Gas⁵	10,248	8,179	6,690	7,043	9,718	2,674	38.0%
Oil and Gas Extraction	3,528	3,208	2,865	2,783	3,575	792	28.5%
Mining (except Oil and Gas)	2,988	3,058	3,255	3,437	3,969	533	15.5%
Support Activities for Mining	6,969	5,178	4,165	4,633	6,500	1,867	40.3%
Construction	15,754	15,196	15,331	15,567	16,968	1,401	9.0%
Construction of Buildings	4,598	4,585	4,796	4,752	4,908	156	3.3%
Heavy and Civil Engineering Construction	3,762	3,474	3,254	3,390	3,999	609	18.0%
Specialty Trade Contractors	7,394	7,138	7,281	7,425	8,061	636	8.6%
Manufacturing	13,368	12,133	12,432	12,380	14,149	1,769	14.3%
Food Manufacturing	9,660	8,660	8,923	8,654	9,867	1,212	14.0%
Seafood Product Preparation and Packaging	9,075	8,124	8,288	7,967	9,121	1,155	14.5%
Manufacturing, All Other	3,708	3,473	3,509	3,726	4,282	557	14.9%
Services-Providing	284,938	262,690	270,827	278,775	294,420	15,645	5.6%
Trade, Transportation, and Utilities	66,650	61,088	63,404	66,419	69,534	3,115	4.7%
Wholesale Trade	6,465	6,099	6,082	6,156	6,543	387	6.3%
Retail Trade	35,427	33,495	34,457	35,191	35,692	502	1.4%
Transportation and Warehousing ⁶	22,460	19,169	20,383	22,584	24,688	2,104	9.3%
Air Transportation	6,345	5,246	5,543	6,177	6,947	770	12.5%
Water Transportation	1,214	1,090	1,151	1,185	1,212	27	2.3%
Truck Transportation	2,680	2,588	2,558	2,652	2,881	229	8.6%
Transportation and Warehousing, All Other	12,222	10,245	11,130	12,570	13,648	1,078	8.6%
Utilities	2,298	2,326	2,482	2,488	2,611	122	4.9%
Information	5,311	4,933	4,984	4,955	4,367	-588	-11.9%
Financial Activities	12,441	11,790	11,846	11,962	11,759	-203	-1.7%
Finance and Insurance	6,673	6,430	6,327	6,314	6,121	-193	-3.1%
Real Estate and Rental and Leasing	5,768	5,360	5,519	5,648	5,639	-10	-0.2%
Professional and Business Services	27,244	25,547	26,142	26,910	29,195	2,286	8.5%
Professional, Scientific, and Technical Services	13,488	12,826	13,009	13,145	14,318	1,173	8.9%
Management of Companies and Enterprises	2,307	2,122	2,205	2,203	2,460	257	11.7%
Admin, Support and Waste Mgmt/Remediation Svcs	11,449	10,598	10,928	11,562	12,417	855	7.4%
Education and Health Services	78,257	74,713	76,093	76,194	82,854	6,660	8.7%
Educational Services, Public and Private ⁷	28,818	26,464	26,874	27,302	28,276	974	3.6%
Elementary and Secondary Schools, Public/Private	20,476	18,797	18,943	19,263	19,433	170	0.9%
Educational Services, Public and Private, All Other	8,341	7,668	7,931	8,039	8,843	804	10.0%
Health Care and Social Assistance, Public and Private ⁸	49,439	48,249	49,219	48,892	54,579	5,686	11.6%
Ambulatory Health Care Services	21,633	21,067	21,824	21,796	24,001	2,205	10.1%
Hospitals	15,185	15,056	15,197	15,342	17,260	1,918	12.5%
Health Care and Social Assistance, All Other	12,622	12,127	12,198	11,755	13,318	1,563	13.3%
Leisure and Hospitality	36,496	26,869	30,393	34,101	37,230	3,129	9.2%
Arts, Entertainment, and Recreation	4,958	3,327		4,651	5,623	972	20.9%
Accommodation and Food Services	31,537	23,541	26,600	29,450	31,607	2,158	7.3%
Accommodation	8,887	5,476	6,690	8,025	9,005	980	12.2%
Food Services and Drinking Places	22,650	18,065		21,425	22,602	1,177	5.5%
Other Services (Except Government)	11,716	10,676		11,524	11,734	209	1.8%
Total Government	46,824	47,074		46,709	47,746	1,037	2.2%
Federal Government ⁹	12,927	13,492		12,948	13,218	269	2.1%
State Government ¹⁰	16,405	16,208		16,053	16,279	227	1.4%
Local Government ¹¹	17,492	17,375	17,527	17,708	18,249	540	3.1%

¹Industry categories differ from other data sets we publish, largely because these combine public and private employment. ²May not sum to total employment due to rounding ³Percent change may be inconsistent with employment change due to rounded employment ⁴Excludes self-employed workers, fishermen, domestic workers, unpaid family workers, and nonprofit volunteers ⁵Includes oil and gas exploration and oilfield services ⁶Includes U.S. Postal Service employment ¹Includes Local and tate government education amplement

⁷Includes local and state government education employment

⁸Includes public-sector hospital employment

⁹Excludes uniformed military, postal service, and hospital employment

¹⁰Excludes university, railroad, and hospital employment

¹¹Excludes public school and hospital employment

These variances in recovery require different interpretations of the projected growth because the base year we use can vastly change the projection.

For example, from 2022, we project a 10-year growth rate of 12.2 percent for accommodation; for oil and gas, it's 38 percent.

If we use 2019 as the base year, that pre-pandemic starting point gives vastly different decade change rates of 1.3 percent and -5.2 percent, respectively.

In other words, even by 2032, we don't expect oil and gas to have regained its pre-COVID job level.

Cannabis industry hits its ceiling

The agriculture sector's recent pattern shows the booming cannabis industry has stalled. We project overall agriculture employment, which in Alaska is mainly cannabis, will decline by 2.5 percent between 2022 and 2032.

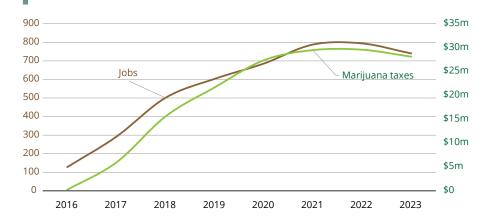
The greenhouse, nursery, and floriculture production industry expanded 520 percent between 2016 and 2022 as the newly legal cannabis industry took off. From 2021 to 2022, it grew just 0.8 percent, and then last year, it began to decline (-6.8 percent). This industry is small, with about 800 jobs at the 2022 peak.

Marijuana tax receipts mirrored the job decline (see the graph on this page). Even tourism's resurgence in Alaska in 2021 and 2022 didn't spur additional demand, suggesting that widespread legalization and decriminalization of marijuana has softened its novelty.

Our data also show some firms are moving away from vertical integration — that is, both cultivating and selling cannabis products — and focusing on the retail side of the industry. Jobs manufacturing or selling cannabis products are counted in those industries rather than in agriculture.

The move away from vertical integration could mean cultivation competition is steep, that there's more money in sales, or both. But altogether, signs point to cannabis transitioning from a new, stronggrowth industry to a stable one.

Greenhouse jobs, marijuana taxes track



Sources: Alaska Department of Revenue, Tax Division; and Alaska Department of Labor and Workforce Development, Research and Analysis Section

Large projected growth for oil and gas will be all recovery

Oil and gas has struggled for upward momentum in recent years after back-to-back economic shocks. The pandemic came on the tail of the state recession that arose from the historic oil price collapse in 2015.

From 2015 to 2021, the oil and gas industry lost 8,431 jobs, or 56 percent of its total. The industry added back just 354 jobs in 2022 and 518 more in 2023.

While job recovery has been slow, Alaska is not alone. No state with more than 1,000 oil and gas jobs had fully bounced back from COVID-related losses by 2022, and only Utah had more oil jobs in 2023 than it had in 2019 before demand and prices plummeted because of the pandemic. (See the table on page 8.)

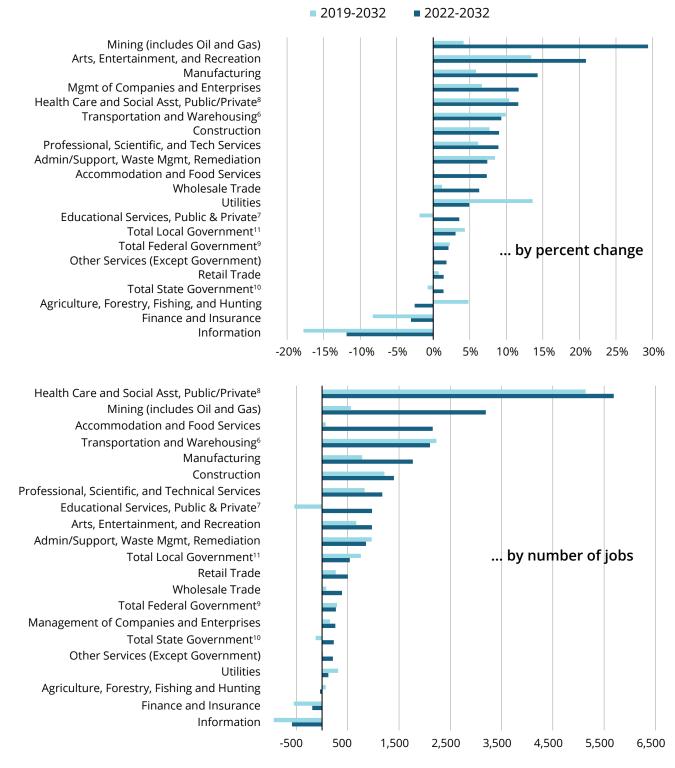
The fact that the industry differs widely in all of these states but most have been slow to recover suggests pandemic-related structural problems are lingering.

In Alaska, as the Pikka and Willow projects are developed, we expect employment to spike in the short term. The shape of growth after that is hard to predict, but we project the industry will reach 9,718 total jobs by 2032, which would be 5 percent below its 2019 peak but 38 percent higher than in 2022.

Hard rock mining growth will be mainly in existing infrastructure

Mineral mining flourished throughout the pandemic,

Projected job change by industry, 2019 and 2022 to 2032 comparisons



Oil and gas industry recovery by state, 2019 to 2023

	2019*	2020*	2021*	2022*	2023*	Chg 19-23	Pct chg
Utah	3,811	3,018	2,959	3651	4,138	327	9%
Michigan	1,914	1,527	1,553	1713	1,802	-112	-6%
New Mexico	21,816	16,345	15,135	17,748	20,132	-1,684	-8%
Texas	234,014	178,162	166,003	185,693	197,503	-36,511	-16%
Louisiana	33,588	27,736	26,435	27,954	28,053	-5,535	-16%
North Dakota*	19,347	13,125	11,796	14,220	16,076	-3,271	-17%
Illinois	2,157	1,704	1,672	1,777	1,781	-376	-17%
U.S. total	471,772	353,487	326,160	361,957	382,703	-89,069	-19%
West Virginia	6,479	4,814	4,754	5,145	5,078	-1,401	-22%
California	14,252	11,427	10,305	11,020	11,120	-3,132	-22%
Ohio	6,531	4,525	4,310	4,632	4,991	-1,540	-24%
Alaska**	10,248	8,179	6,690	7,043	7,532	-2,716	-27%
Colorado	24,066	17,365	15,415	16,406	17,160	-6,906	-29%
Wyoming	12,593	8,530	7,372	8,413	8,969	-3,624	-29%
Pennsylvania	17,541	13,012	11,806	12,081	12,146	-5,395	-31%
Oklahoma	45,596	28,977	25,097	28,154	28,926	-16,670	-37%

*Due to data suppression, North Dakota employment includes more industries than just drilling oil and gas wells and support jobs for oil and gas, making its oil and gas employment higher. We analyzed nonsuppressed data for other years and determined the expanded employment wasn't sufficient to invalidate these broad comparisions.

**Alaska employment data were changed to reflect the data series used in projections and will not match the Quarterly Census of Employment and Wages data that we typically publish in *Trends*.

Source: U.S. Bureau of Labor Statistics

growing consistently from 2019 to 2022. We project 15.5 percent growth over the decade. Most of the gains will come from exploration intended to sustain existing mines or use current infrastructure, as many of Alaska's operating mines are approaching their end-of-life time frames.

Information on new large-scale mines has been slim, and because of the long lead times in these projects, we don't include them in the projections until they are near-certain. The Donlin Gold Project is a good example. Donlin has passed all of the major permitting hurdles, but a final decision on construction and operation may still be years away.

That's not to say new mines won't open. The Manh Choh project has recently begun operating, although with a short five-year time frame. Other similarly structured projects could crop up over the next decade.

A robust outlook for construction

We project 9 percent growth for construction from 2022 to 2032. Although the industry lost jobs during COVID, the decline was minor and concentrated in the heavy and civil engineering industry, which tends to track with oil and gas.

Residential construction employment grew with the surging demand for home improvements

during the pandemic, rising 18 percent from 2020 through 2023. We expect demand to return to normal from 2022 to 2032 and for employment to drop 15 percent.

Nonresidential construction will add a projected 14.9 percent through 2032. The industry had been on the rebound from the oil price recession before slowing drastically during the pandemic. We expect it to gradually ramp back up to pre-pandemic levels.

The specialty trade contractor side of the construction sector remained mostly stable during the pandemic, losing some jobs through 2021 and then fully recovering and adding more in 2022. We project 8.6 percent growth through 2032.

As mentioned earlier, heavy and civil engineering tends to move with oil and gas, and this category lost about 9.9 percent of its jobs during the 2019-2022 downturn. We expect recovery to speed up as federal infrastructure projects start in earnest and the oil industry grows, for projected 18 percent growth by 2032.

Headwinds for seafood processing but job recovery likely eventually

Seafood processing's trajectory has been atypical, as challenging market conditions followed the pandemic shutdowns and disrupted its recovery.

COVID made hiring seasonal workers difficult, leading to a 10.5 percent job loss in 2020. Employment ticked up 2 percent in 2021, fell again in 2022, then resumed growing in 2023.

The short-term outlook is bleak, however, as the broader seafood industry grapples with less demand. Ample supply from Alaska and Russia has lowered prices, compounded by U.S. trade embargoes with China and inflation pushing consumers toward cheaper options. In the long run, we expect the industry will stabilize and processing employment will settle close to its pre-pandemic level of 9,121 by 2032.

Small growth for retail, wholesale

Wholesale and retail trade have added jobs over the last few years, but as of 2022, both were still below pre-COVID levels (4.8 and 0.7 percent lower, respectively).

We project wholesale will eventually level off at just over 6,500 jobs, which would be 6.3 percent above 2022 and 1.2 percent over 2019.

Retail's recovery trajectory has been steeper since the pandemic, and we project 1.4 percent growth over the decade. With the rise of online shopping, some parts of retail had been on long-term declines even before the pandemic, which will continue into the next decade and dampen growth.

Strong projected growth for most of transportation

Tourism drove transportation employment up in recent years, but the labor scarcity muted those gains. Tourism-centered scenic and sightseeing operations, for example, which rely heavily on nonresident workers, remained well below 2019 levels in 2022, but by 2023 they were just 1.4 percent short.

Scheduled air transportation (mainly commercial airlines) still has ground to recover. Airline employment fell 11.6 percent between 2019 and 2022 and remained 6.4 percent below pre-pandemic levels in 2023 but is headed in a positive direction.

In contrast, nonscheduled air transportation (chartered flights, for example) lost just 145 jobs in 2020 and then regained them plus 96 more in 2021. A large part of this industry depends on tourism, but it also moves cargo, which appears to be the source of the post-COVID gains.

Altogether, air transportation will grow a projected 12.5 percent over the decade.

Skyrocketing online shopping during the shutdowns drove shipping demand and created jobs in warehousing and storage as well as for couriers and express delivery services. By 2022, these industries combined added 592 jobs, but 73 disappeared the following year. We project that by 2032, employment will settle about 5.4 percent below pandemic highs but 15.8 percent above pre-pandemic levels.

Long-term declines for finance with technological advances

We don't expect finance and insurance to regain their recent losses, and we project a loss of about 193 jobs over the decade. Banks haven't grown for the past decade, with employment peaking in 2016 and declining every year since. Insurance has followed a similar trend.

Many of the jobs in these industries deal directly with customers, and over time, more will be performed remotely or shift to self-service as technology advances.

Education employment to level off after pandemic recovery

With population declines and budgetary constraints, we project elementary and secondary school employment will end up 5.1 percent below 2019 levels in 2032. However, because school employment was still down in the base year, 2022, the projected decade change is 0.9 percent growth.

Education employment was remarkably stable before COVID. Between 2001 and 2019, jobs ranged from a low of 19,998 in 2001 to 21,838 in 2011.

The school-age population declined 0.5 percent a year on average over that period. We expect the school-age population to continue decreasing through 2032, by an average of 0.8 percent a year.

Educational services, which is mainly jobs in public and private universities and colleges along with technical and trade schools, will grow a projected 10 percent over the decade, to 8,843 jobs. The industry peaked in 2014 at 9,776 jobs, then declined sharply in 2019 as the University of Alaska adapted to budget cuts and falling enrollment.

Modest health care gains ahead

Ambulatory health care, which is doctors' offices and other outpatient services, is the largest category in the health care sector at about 44 percent of all jobs. We project the industry will reach 24,001 jobs by 2032 for a decade growth rate of 10.1 percent.

Hospitals, given their essential nature, lost fewer jobs during the pandemic than outpatient services. We project 12.5 percent growth through 2032, bringing total employment to 17,260.

Nursing and residential care expanded rapidly from the early 2000s to a plateau in 2016. In-home health care lost some jobs from 2016 through 2019 but remained essentially stable throughout the pandemic. We project it will grow strongly over the next decade, adding 758 jobs (19.5 percent).

Social assistance, which includes private and nonprofit services for children, the elderly, and people with disabilities, peaked in 2013 with 9,532 jobs, then lost ground through 2015 and stabilized between 2016 and 2019 at around 8,700. These services fell 6.4 percent in 2020, then faced a few years of minor ups and downs.

We expect modest growth to continue through 2032 (10.3 percent) as Alaska's population

continues to age. Over the past 10 years, the population aged 65-plus grew 71.5 percent, from 64,434 seniors to 110,490. By 2032, that number will increase another 21.7 percent to 134,423.

Flat projection for restaurants, eventual solid growth for hotels

Food services and bars were still recovering lost ground in 2022 after employment plunged 20 percent in 2020. Tourism's return boosted their recovery, but then the sector settled back into its pre-pandemic stable trend. We project food services and bar employment will increase 5.5 percent from 2022 to 2032, putting them roughly back to pre-COVID levels.

Accommodation lost 38 percent (-3,411 jobs) during the pandemic, which was about double the food and drink job loss in percent terms. Tourism's brief halt meant essentially no demand for hotels. Recovery has been surprisingly slow, with hotel employment still down 10 percent in 2023.

Other types of accommodations, such as jobs in RV parks and campgrounds, were 25 percent above 2019 levels in 2022.

We expect the sector as a whole to catch up in the long run and grow 12.2 percent by 2032.

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

How we create 10-year industry and occupational projections

The Alaska Department of Labor and Workforce Development's Research and Analysis Section creates 10-year industry and occupational projections for Alaska every other year. These projections are the product of four steps.

Step 1: Project industry employment using a base year with solid data

We use data from the Quarterly Census of Employment and Wages to determine the number of jobs for each industry during the first year, or base year, of the projection period. We used 2022 as the base year because it's important to begin with a solid set of numbers that won't be revised further rather than use newer but preliminary data — however, for this set of projections we have included 2019 numbers for context, for the reasons explained on page 4.

Estimates and projections do not include self-employed workers, private household workers, most agricultural workers and fishermen (who are self-employed), and others not covered by the state's unemployment insurance program. We combine certain types of public sector employment – such as education, hospitals, rail transportation, and the U.S. Postal Service – with private sector industries because their underlying drivers differ from most government employment.

We create projections for each industry based primarily on historical trends, Alaska and U.S. population projections, and other industry-specific variables. The projections also factor in knowledge of specific projects, if certain, and observations of the current economic climate.

Step 2: Determine the occupational makeup, or staffing pattern, of each industry

To estimate base year employment for each occupation, we determine the occupational staffing pattern of each industry. Most industries have a variety of occupations. The staffing pattern is the breakdown of each occupation's share of the industry's total employment, referred to as "staffing ratios."

Employers in Alaska report their workers' occupations when they submit unemployment insurance quarterly contribution reports, which form the basis of Alaska's Occupational Database. We use an analysis of the data that corresponds to the projections' base year, the most recent Occupational Employment Statistics data available, and a baseline of historic industry staffing patterns to calculate occupational staffing ratios for the industries.

Step 3: Calculate base year and projected occupational employment

For each occupation, we multiply each industry's estimated base year employment by the staffing ratio and then sum the results to get the base year estimate. We adjusted staffing ratios within an industry, called "change factors." Change factors are multipliers that increase or decrease an occupation's estimated share of industry employment based on factors other than an industry's projected employment change. Examples include changes in consumer demand, technology, or business practices.

We then multiply each industry's projected employment by the adjusted staffing ratio for each occupation and then sum the results by each occupation to get the projections.

Step 4: Estimate job openings

Job openings for an occupation result from new jobs and vacated positions, called separation openings. An occupation's growth openings are equal to its change over the projection period. We base estimates of separation openings on rates provided by the U.S. Bureau of Labor Statistics that account for labor force exits and occupational transfers. For more on separations, see https://www.bls.gov/emp/documentation/separations-methods.htm.

10-year occupational projections

Types of job opportunities likely to arise in Alaska through 2032

By PAUL MARTZ

Cupational projections spotlight the types of work people do across industries and provide a detailed look at the numbers of job openings we expect to arise over the decade. Most job openings in Alaska don't come from job growth but from people vacating positions when they change careers or leave the workforce, referred to as separations.

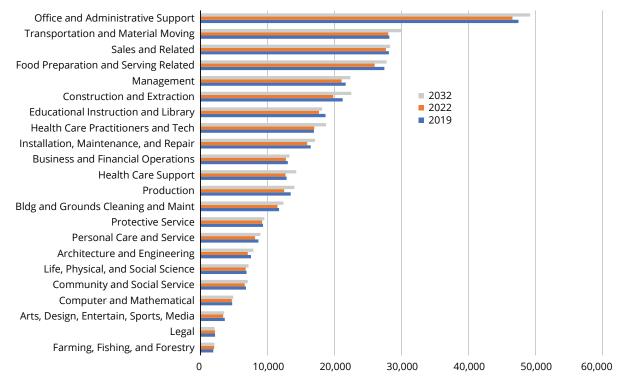
Job growth and loss are important too, but new jobs will create just 2,210 openings in Alaska each year from 2022 to 2032 while separations will generate roughly 37,000 annual job openings.

How ongoing pandemic job recovery affects these rates

As with the projections by industry, this round of occupational projections makes the most sense when we add 2019 as a reference point. The pandemic's effects on the economy were widespread and the recoveries have been uneven.

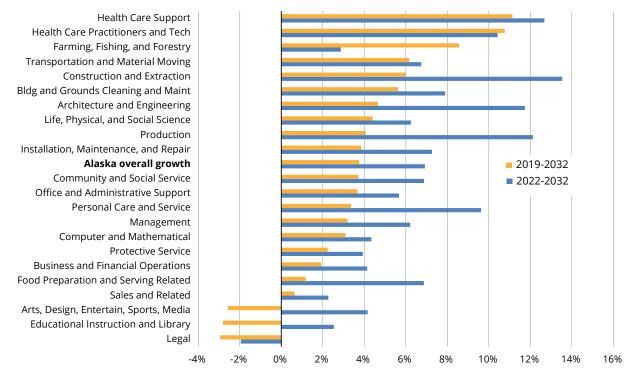
Where relevant, we also break down the growth estimates into two types: the typical employment growth that comes from normal economic activity and the recovery of jobs lost during the pandemic's unusual disruptions.

Projected total job counts by occupational group through 2032



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

Projected percent growth for occupational groups through 2032



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

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

Many occupations are dispersed across all industries — for example, accountants or administrative support workers — which makes those occupations less sensitive to conditions that might affect a single industry. Overall, job recovery by occupation was widespread in 2022, the base year for these projections, despite the pandemic's lingering effects in certain industries.

Some occupations only exist in one industry, however, and track with their trends. Roustabouts work exclusively in the oil and gas industry, for example, and the number of openings for that occupation depends entirely on that industry.

Two occupational categories had recovered and continued to grow

Of the 22 broad occupational categories, 11 were within 3 percent of their pre-pandemic job levels by 2022 (see the table at right) and two had fully recovered and continued to grow.

Occupations growing cannabis

One of the two fully-recovered categories was

Job categories that had not fully recovered in 2022 but were close

Occupation	Pct difference, 2019 to 2022
Transportation and Material Moving	-0.5%
Legal	-1.0%
Computer and Mathematical	-1.2%
Health Care Support	-1.4%
Sales and Related	-1.6%
Protective Service	-1.6%
Life, Physical, and Social Science	-1.7%
Office and Administrative Support	-1.9%
Building/Grounds Cleaning, Maintenance	-2.1%
Business and Financial Operations	-2.1%
Management	-2.8%

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

High, low 25 jobs for growth through 2032

		Highest-growth occupations	Growth, 2019-32	Growth, 2022-32	Change, 2019-22
	1	Helpers: Extraction Workers	18%	25%	-5%
2	2	Hazardous Materials Removal Workers	26%	18%	6%
11	3	Welders, Cutters, Solderers, and Brazers	12%	17%	-4%
4	4	Geological Technicians, Exc Hydrologic Techs	11%	17%	-5%
5	5	Underground Mining Machine Operators, Other	33%	16%	15%
6	5	Home Health and Personal Care Aides	10%	16%	-4%
-	7	Helpers: Production Workers	13%	15%	-2%
8	8	Environmental Engineering Techs	13%	15%	-2%
9	Э	Architects, Except Landscape and Naval	15%	13%	2%
	10	Excavating, Loading Machine/Dragline Operators, Surface Mining	18%	13%	5%
-	11	Psychiatric Technicians	12%	13%	-1%
-	12	Commercial Pilots	22%	13%	8%
-	13	Electricians	7%	13%	-5%
-	14	Occupational Health and Safety Specialists	7%	12%	-5%
-	15	Surgical Technologists	13%	12%	1%
-	16	Cost Estimators	9%	12%	-3%
-	17	Healthcare Social Workers	10%	12%	-2%
1	18	Radiologic Technologists and Technicians	13%	12%	1%
-	19	Nursing Assistants	12%	12%	0%
2	20	Geoscientists, Exc Hydrologists/Geographers	8%	12%	-3%
2	21	Millwrights	20%	12%	8%
2	22	Heavy and Tractor-Trailer Truck Drivers	6%	11%	-5%
2	22	Clinical Lab Technologists and Technicians	12%	11%	1%
2	24	Veterinary Assts and Lab Animal Caretakers	19%	11%	7%
2	25	Phlebotomists	12%	11%	1%

	Occupations in decline	Loss, 2019-32	Loss, 2022-32	Change, 2019-22
1	Broadcast Announcers and Radio Disc Jockeys	-37%	-21%	-19%
2	News Analysts, Reporters, and Journalists	-35%	-19%	-19%
3	Logging Equipment Operators	-32%	-9%	-25%
4	Advertising Sales Agents	-27%	-14%	-15%
5	Producers and Directors	-25%	-10%	-17%
6	Printing Press Operators	-25%	-3%	-22%
7	Editors	-21%	-12%	-10%
8	Order Clerks	-11%	-3%	-7%
9	Tellers	-11%	-3%	-8%
10	Loan Interviewers and Clerks	-10%	-3%	-8%
11	Loan Officers	-10%	-2%	-8%
12	Ushers, Lobby Attendants, and Ticket Takers	-10%	-2%	-8%
13	Telecommunications Equip Installers and Repairers, Except Line Installers	-9%	-4%	-5%
14	New Accounts Clerks	-9%	-2%	-7%
15	Insurance Sales Agents	-8%	-5%	-3%
16	Claims Adjusters, Examiners, Investigators	-7%	-6%	-1%
17	Bill and Account Collectors	-7%	-4%	-3%
18	Telecommunications Line Installers/Repairers	-7%	-3%	-4%
19	Computer, Automated Teller, Office Mach Repair	-6%	-1%	-5%
20	Advertising and Promotions Managers	-5%	-2%	-4%
21	Carpet Installers	-5%	-2%	-3%
22	Paralegals and Legal Assistants	-4%	-4%	-1%
23	Coin, Vending, Amusement Mach Svc/Repair	-4%	-2%	-2%
24	Insurance Claims and Policy Processing Clerks	-3%	-3%	-1%
25	Legal Secretaries and Administrative Assistants	-3%	-2%	-1%

Note: The top 25 list includes only the occupations that had at least 50 workers, projected growth of at least 20 jobs, and recovered 95 percent of their pandemic job losses by 2022. 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

Outliers with most growth from pandemic recovery

Occupation		Growth, 2022-32
Derrick Operators, Oil and Gas	-7%	43%
Rotary Drill Opers, Oil and Gas	-4%	39%
Roustabouts, Oil and Gas	-4%	38%
Service Unit Opers, Oil/Gas	-3%	34%
Petroleum Engineers	0%	27%

farming, fishing, and forestry, where new jobs came mainly from cannabis cultivation. The cannabis industry grew throughout the pandemic, although employment began to level off in 2022.

Jobs in the "farmworkers and laborers, crop, nursery, and greenhouse" category — mainly cannabis — increased from 657 in 2019 to 805 in 2022, but we project they will dip slightly, to 792 jobs by 2032. (See the industry article for more details.)

Health care and nurses

The other category that had exceeded pre-pandemic job levels by 2022, health care practitioners and technical occupations, had mostly held steady during COVID aside from registered nurses and veterinary-related occupations, which boosted the category trend slightly.

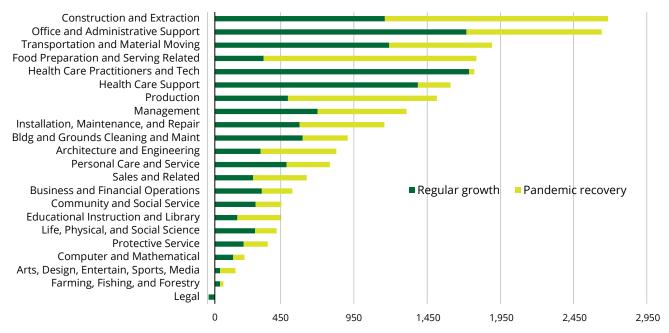
Registered nurses are the largest occupation in this category at approximately 6,100 jobs in 2022. (The next-largest, physical therapists, had a tenth of the jobs, at around 600.)

All nursing occupations combined, which include nurse anesthetists and other specialist nurses, will grow a projected 11 percent, adding 773 jobs by 2032 and generating an additional 4,000 separation openings.

Others have a lot of ground to make up

On the opposite end of the spectrum were the production, construction,

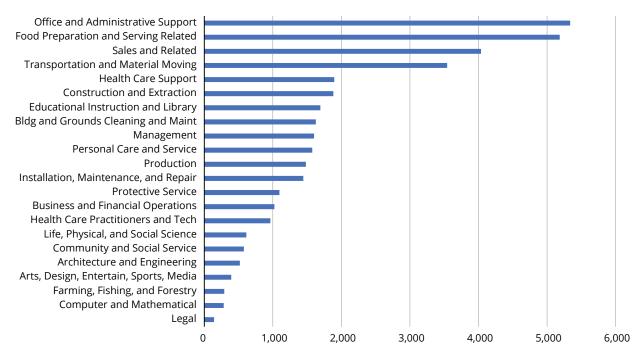
Growth from new jobs vs. pandemic recovery by occupation, 2022-2032



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).

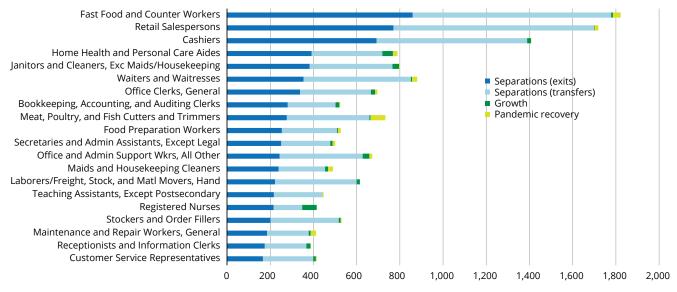
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Annual separation openings by occupational category, 2022 to 2032



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).

Where total projected job openings will come from, by 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

Openings from exits and transfers, select occupations

	Exits	Transfers		
Environmental Sci and Protection Techs, Incl Health	17%		83%	
Geoscientists, Exc Hydrologists and Geographers	18%		82%)
Forest and Conservation Technicians	23%		78	%
Social Science Research Assistants	25%		7	5%
Waiters and Waitresses		42%		58%
Mechanical Drafters		43%		57%
Retail Salespersons		45%		55%
Cooks, Fast Food		45%		55%
Counter and Rental Clerks		49%		51%
Maintenance and Repair Workers, General		49%		51%
Cashiers		50%		50%
Surveyors		50%		50%
Elementary School Teachers, Except Special Ed		50%		50%
Registered Nurses		62%		38%
Radiologists			100%	
Emergency Medicine Physicians			100%	

Notes: Growth openings are new jobs. Separations are the projected numbers of workers permanently leaving an occupation. Values may not sum to 100 because of rounding.

and extraction category and the architecture and engineering category; all were still down at least 6 percent from pre-pandemic levels in 2022.

The hardest-hit jobs were tied to oil and gas, seafood processing, and certain types of construction, which at the industry level were still decreasing through 2022. (See the industry article.)

The highest and lowest growth occupations through 2032

Trends for individual occupations in these categories were harder to tease out for this cycle. Because of the uneven post-COVID recoveries, many occupations show outsized growth for the 2022 to 2032 period but very little growth if we use 2019 as the base year.

For example, occupations tied to oil and gas show massive projected growth from 2022 to 2032 because they start at such a low point. (See the small table at the top of page 14.) Using pre-pandemic job levels as a reference point shows the projected growth will bring total employment to just *below* the full recovery of 2019's job count by 2032.

To resolve these irregularities, we've balanced the highest-growth occupations against the different recovery trajectories. For an occupation to score near the top during this round of projections, it must have been within 95 percent of full job recovery in 2022. This paints a more accurate picture of the occupations that will actually grow and not just recover. (See page 14 for the top and bottom occupations.)

The occupations in decline over the last decade have been fairly consistent between projection cycles, led by media and related occupations. Some jobs are transitioning from in-house to freelance, which is becoming more common in media. Technology is also driving some declines, especially for jobs that serve customers face-to-face or require repetitive, computer-based tasks.

These occupations will continue to struggle because those transitions are still in progress. For example, it wasn't that long ago that applying for a car loan or mortgage required a visit to a bank. Similarly, in recent years, some claims adjustors moved from physically inspecting property damage to analyzing photos that customers send. Not all of these types of jobs will disappear, but the increasing technological efficiencies will restrict the number of needed positions and blunt growth.

Types of job openings and where they will come from

Even with the turmoil in the labor market over the last few years, one thing has remained consistent — workers leaving their occupations create the vast majority of job openings.

Occupational separations come from exits and transfers. Exits are people leaving the workforce entirely, often to retire but also to pursue higher education or training or to care for a family member full-time. Transfers are workers leaving one occupation permanently for another.

Occupations with proportionally more exits than transfers are typically careers from which people retire, such as physicians. They also tend to have much higher educational requirements.

Occupations with more transfers are usually career stepping stones. For example, many technician positions have high percentages of transfer openings because those jobs have clear advancement options. A research assistant might become a researcher or scientist, and some drafters and engineering technologists/technicians advance to become architects or engineers.

Most occupations have a balance of transfers and exits, however, reflecting the range of reasons people stay in or change their careers. Retail salespeople are a good example. This might be a first job for someone who will eventually go to college or postsecondary training, and for others, it's an entry-level position that leads to a job as a sales manager.

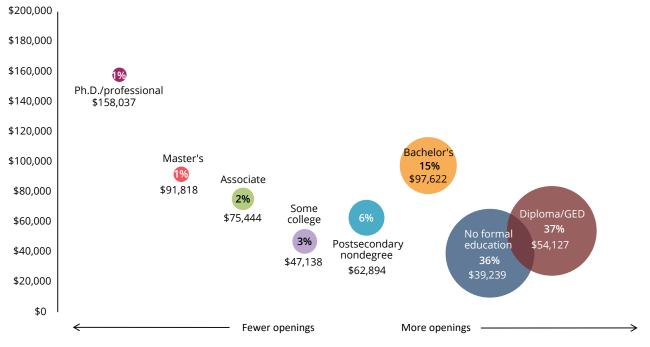
Overall, we expect occupational separations to generate 37,208 job openings a year, with 56 percent coming from transfers and 44 percent from exits. (The exhibits on the previous page show the breakdowns for select occupations.)

In contrast, Alaska is projected to add 22,097 new jobs *total* from 2022 to 2032, which averages out to 2,209 per year — a number that's skewed upward because it includes pandemic job recovery. The same measure if started from 2019 pencils out to 1,235 new jobs created annually.

Most openings will have few prerequisites, lower pay

Educational requirements and wages are linked to the number of projected openings for a given

Percentages of yearly openings by education* and wages, 2022-2032



*Training and experience requirements are calculated separately. Many jobs that require a high school education only, for example, also require apprenticeships or other types of training or experience.

Notes: Annual wage estimates are based on employment-weighted averages of 2022 Occupational Employment Statistics wage data. Education levels are based on the U.S. Census Bureau American Comuunity Survey Public Use microdata. Openings include annual average growth and separations for occupations with a reported OES wage. Percentages may not sum to 100 because of rounding.

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

Select categories' wages, 2022

Occupational category	Avg annual wages
Management	\$120,857
Health Care Practitioners and Technical	\$109,851
Architecture and Engineering	\$101,127
Legal	\$93,417
Computer and Mathematical	\$90,658
Business and Financial Operations	\$84,347
Life, Physical, and Social Science	\$79,752
Construction and Extraction	\$69,089
Educational Instruction and Library	\$67,455
Installation, Maintenance, and Repair	\$64,836
Transportation and Material Moving	\$62,119
Protective Service	\$61,254
Community and Social Service	\$60,581
Arts, Design, Entertainment, Sports, and Media	\$52,545
Production	\$50,125
Office and Administrative Support	\$47,850
Health Care Support	\$46,246
Farming, Fishing, and Forestry	\$44,847
Sales and Related	\$41,589
Personal Care and Service	\$39,137
Building and Grounds Cleaning and Maintenance	\$38,932
Food Preparation and Serving Related	\$33,069

Note: Wages are based on 2022 Occupational Employment Statistics wage estimates for Alaska, weighted by base year 2022 employment.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section occupation, as the bubble chart above shows.

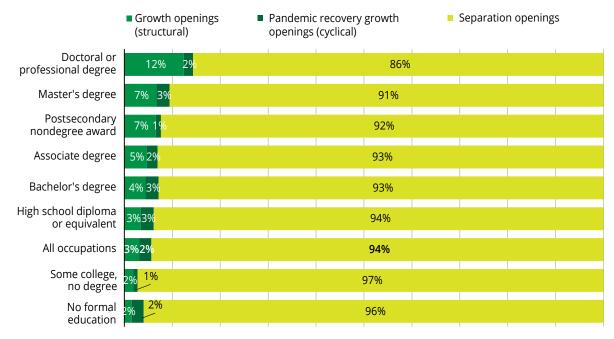
Jobs with few or no formal educational requirements will generate about 75 percent of all job openings each year. Those jobs paid \$39,293 to \$54,127 a year, on average, as of 2022.

The remaining 25 percent of openings will come from jobs that require some form of postsecondary education, with wages ranging from \$62,894 to \$158,037. (See the table on the left.)

Training and work experience can also factor into how much an occupation pays. Many construction jobs require a high school diploma, but they may also require an apprenticeship or other long-term training. For occupations that fall into the diplomaplus-apprenticeship requirement, wages can range from around \$56,000 for structural iron and steel workers to \$90,000 for boilermakers.

Jobs with high education requirements have more projected growth than separations. Occupations that require a Ph.D. or other professional degree will grow by a projected 12 percent, while those requiring some college or lower will grow by just 2 percent. One reason is the associate degree

Breakdown of projected openings by education required, 2022-2032



Notes: Growth openings are new jobs. Pandemic recovery growth is the new jobs still needed to reach pre-pandemic employment levels. Separations are the projected numbers of workers permanently leaving an occupation.

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

through professional degree categories are concentrated in health care, which has been growing consistently for decades.

Jobs requiring bachelor's degrees and high school diplomas are much more dispersed across multiple industries, keeping them in line with the 3 percent of total annual openings from structural growth.

The number of occupations that require some college is small, and the group's wages are weighted down by the lower-paying teaching assistant occupation, which makes up 46 percent of the category's jobs.

A look at the decade's top jobs

Because there are numerous ways to measure outcomes for an occupation, it can be hard for

workforce development and education stakeholders to create meaningful comparisons or rankings for long-term occupational opportunities. To fill that gap, we compile a list of top jobs that takes wages, growth, and separations into account to rank 50 occupations we expect to have high earnings and openings over the projected decade. The top jobs table spans the next two pages.

Sorting by education, 26 of the 50 top jobs require a bachelor's degree and 17 require a high school diploma. Of the latter group, five also require moderate-term on-the-job training and five require an apprenticeship and on-the-job training of a year or more. The remaining seven are supervisory or management occupations that have additional shortterm training or work experience requirements.

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

		Employment	ment			Average annual openings, 2022-2032	Average annual enings, 2022-20	ual -2032			
	2019	2022	2032 2	Pct chg 2019-32	Pct chg 2022-32	Structural growth*	Sepa- rations	Total* openings	Training** required	Work exp Wage*** required quartile	Wage*** quartile
		Bac	Bachelor's degree	egree							
Registered Nurses	6,104	6,125	6,799	11.4%	11.0%	67	348	415	None	None	\$\$\$\$
General and Operations Managers	4,555	4,425	4,725	3.7%	6.8%	17	360	377	None	5+years	\$\$\$\$
Accountants and Auditors	2,311	2,277	2,403	4.0%	5.5%	6	178	187	None	None	\$\$\$
Elementary School Teachers, Except Special Education	2,238	2,111	2,128	-4.9%	0.8%	0	141	141	None	None	\$\$\$
Airline Pilots, Copilots, and Flight Engineers	1,986	2,182	2,310	16.3%	5.9%	13	252	265	Moderate OJT	<5 years	\$\$\$\$
Chief Executives	1,786	1,743	1,855	3.9%	6.4%	7	118	125	None	5+years	\$\$\$\$
Secondary School Teachers, Except Special and Career/Tech Education	1,766	1,663	1,680	-4.9%	1.0%	0	102	102	None	None	\$\$\$
Administrative Services Managers	1,448	1,432	1,507	4.1%	5.2%	9	112	118	None	<5 years	\$\$\$\$
Medical and Health Services Managers	1,237	1,244	1,365	10.4%	9.7%	12	06	102	None	<5 years	\$\$\$\$
Construction Managers	1,185	1,116	1,223	3.2%	9.6%	4	82	86	Moderate OJT	None	\$\$\$\$
Civil Engineers	1,177	1,107	1,199	1.9%	8.3%	2	68	70	None	None	\$\$\$\$
Financial Managers	1,106	1,064	1,112	0.5%	4.5%	-	72	73	None	5+years	\$\$\$\$
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	1,010	992	1,085	7.4%	9.4%	80	85	93	None	None	\$\$\$
Computer and Information Systems Managers	1,001	066	1,025	2.4%	3.5%	2	65	67	None	5+years	\$\$\$\$
Zoologists and Wildlife Biologists	890	894	917	3.0%	2.6%	2	99	68	None	None	\$\$\$
Compliance Officers	793	779	809	2.0%	3.9%	2	60	62	Moderate OJT	None	\$\$\$
Human Resources Specialists	746	728	763	2.3%	4.8%	2	61	63	None	None	\$\$\$
Environmental Scientists and Specialists, Including Health	697	644	733	5.2%	13.8%	4	53	57	None	None	\$\$\$\$
Sales Managers	691	661	683	-1.2%	3.3%	0	48	48	None	<5 years	\$\$\$\$
Social and Community Service Managers	684	662	698	2.1%	5.4%	-	52	53	None	<5 years	\$\$\$
Buyers and Purchasing Agents	656	634	681	3.8%	7.4%	m	59	62	Moderate OJT	None	\$\$\$
Human Resources Managers	642	608	661	3.0%	8.7%	2	47	49	None	5+years	\$\$\$\$
Clinical Laboratory Technologists and Technicians	596	602	699	12.3%	11.1%	7	41	48	None	None	\$\$\$
Training and Development Specialists	565	545	596	5.5%	9.4%	m	47	50	None	<5 years	\$\$\$
Management Analysts	514	509	536	4.3%	5.3%	2	42	44	None	<5 years	\$\$\$\$
Occupational Health and Safety Specialists	390	371	417	6.9%	12.4%	ω	41	44	None	None	\$\$\$\$
		Ass	Associate degree	egree							
Civil Engineering Technologists and Technicians	599	573	601	%0	4.9%	0	52	52	None	None	\$\$\$
Postsec	ondary n	ondegre	e award	or some	Postsecondary nondegree award or some college, no degree	io degree					
Massage Therapists	454	448	494	8.8%	10.3%	4	63	67	None	None	\$\$\$\$
Telecommunications Equip Installers and Repairers, Exc Line Installers	618	585	562	-9.1%	-3.9%	-2	57	55	Moderate OJT	None	\$\$\$
Aircraft Mechanics and Service Technicians	1,434	1,466	1,625	13.3%	10.9%	16	111	127	None	None	\$\$\$
Commercial Pilots	532	574	647	21.6%	12.7%	7	68	75	Moderate OJT	None	\$\$\$\$
Captains, Mates, and Pilots of Water Vessels	784	734	828	5.6%	12.8%	4	79	83	None	<5 years	\$\$\$\$
	Higl	ר school	High school diploma or equivalent	or equiv	/alent						
Operating Engineers and Other Construction Equipment Operators	3,204	2,777	3,231	0.8%	16.4%	m	251	254	Moderate OJT	None	\$\$\$
Carpenters	2,169	2,164	2,315	6.7%	7.0%	15	183	198	Apprenticeship	None	\$\$\$
First-Line Supervisors of Office and Administrative Support Workers	1,906	1,883	2,010	5.5%	6.7%	10	185	195	None	<5 years	\$\$\$
Electricians	1,728	1,638	1,845	6.8%	12.6%	12	152	164	Apprenticeship	None	\$\$\$
Police and Sheriff's Patrol Officers	1,419	1,419	1,456	2.6%	2.6%	4	109	113	Moderate OJT	None	\$\$\$
Correctional Officers and Jailers	1,248	1,224	1,243	-0.4%	1.6%	0	106	106	Moderate OJT	None	\$\$\$

Alaska's top jobs, 2019 to 2032

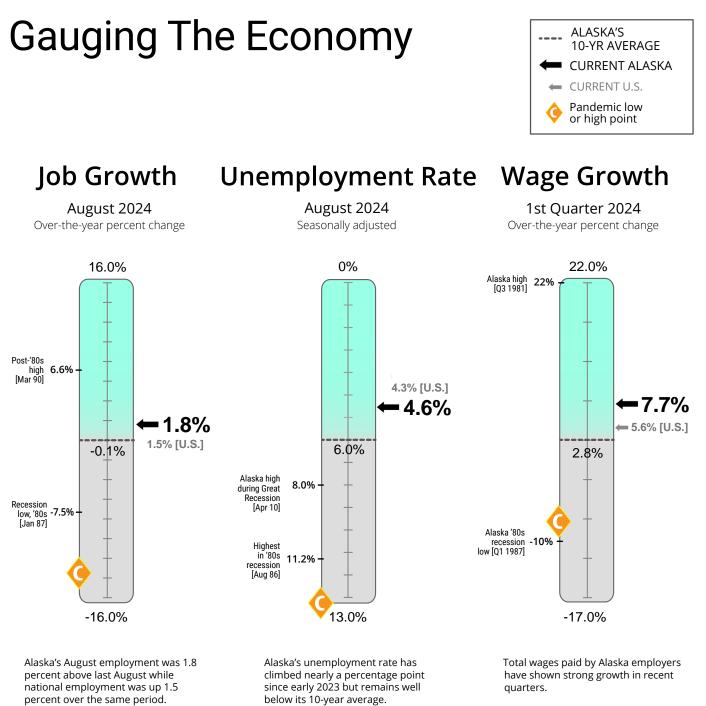
Alaska's top jobs, 2019 to 2032, continued

		Employment	yment			Aver openin	Average annual openings, 2022-2032	al 2032			
	2019	2022	2032	Pct chg 2019-32	Pct chg 2022-32	Structural growth*	Sepa- rations	Total* openings	Training** required	Work exp required	Wage*** quartile
–	igh schoc	ol diplom	ia or equ	uivalent,	High school diploma or equivalent, continued						
Plumbers, Pipefitters, and Steamfitters	1,179	1,108	1,246	5.7%	12.5%	7	100	107	07 Apprenticeship	None	\$\$\$\$
Mobile Heavy Equipment Mechanics, Except Engines	1,011	945	1,082	7.0%	14.5%	7	83	06	Long OJT	None	\$\$\$
First-Line Supervisors of Construction Trades and Extraction Workers	978	806	991	1.3%	23.0%	-	71	72	None	5+years	\$\$\$\$
Welders, Cutters, Solderers, and Brazers	753	722	846	12.4%	17.2%	6	76	85	Moderate OJT	None	\$\$\$
First-Line Supervisors of Production and Operating Workers	652	581	668	2.5%	15.0%	2	58	60	None	<5 years	\$\$\$
Property, Real Estate, and Community Association Managers	646	638	650	0.6%	1.9%	0	49	49	Short OJT	<5 years	\$\$\$
First-Line Supervisors of Mechanics, Installers, and Repairers	605	599	644	6.5%	7.5%	4	51	55	None	<5 years	\$\$\$
Food Service Managers	604	571	609	0.8%	6.7%	-	65	99	Short OJT	<5 years	\$\$\$
First-Line Supervisors of Trans/Matl Moving Wkrs, Exc Aircraft Cargo	585	623	645	10.3%	3.5%	2	63	65	None	<5 years	\$\$\$
Water and Wastewater Treatment Plant and System Operators	505	517	556	10.1%	7.5%	4	50	54	Long OJT	None	\$\$\$
Inspectors, Testers, Sorters, Samplers, and Weighers	490	461	488	-0.4%	5.9%	0	54	54	Moderate OJT	None	\$\$\$
	Nof	ormal ec	ducation	No formal educational credential	htial						
Service Unit Operators, Oil and Gas	1,627	1,176	1,580	-2.9%	34.4%	0	139	139	Moderate OJT	None	\$\$\$\$

Notes: To rank as a "top job," 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 combined, OR be among the 50 occupations with the most projected average annual openings (of those with wages in the top two quartiles). Residual "all other" occupations are excluded. *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 growth openings and separations.

**0JT = on-the-job training. Short-term is one month or less, moderate-term is one to 12 months, and long-term is more than 12 months.

***Wages: \$\$\$ = \$64,235 to \$86,165 annually (\$30.88 to \$41.43 hourly), \$\$\$\$ = More than \$86,165 annually (\$41.43 hourly), based on Bureau of Labor Statistics Occupational Employment and Wage Statistics' May 2022 Estimates for Alaska



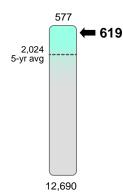
Wages were up 7.7 percent from year-ago levels in the first quarter of 2024 — well above the 5.6 percent growth for the U.S. — and 25.7 percent above first quarter 2019.

Gauging The Economy

ALASKA'S 10-YR AVERAGE CURRENT ALASKA

Initial Claims

Unemployment, week ending Sept. 7, 2024*

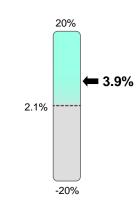


Pandemic-driven high claims loads have fallen, and new claims for benefits are well below their long-term average.

*Four-week moving average ending with specified week

GDP Growth

1st Quarter 2024 Over-the-year percent change*

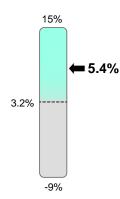


Gross domestic product is the value of the goods and services a state produces. It's an important economic measure but also a volatile one for Alaska because commodity prices influence the numbers so much especially oil prices.

*In current dollars

Personal Income Growth

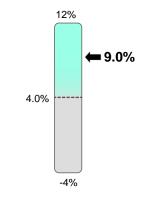
1st Quarter 2024 Over-the-year percent change



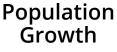
Personal income consists of three main parts: 1) wages and salaries; 2) dividends, interest, and rents; and 3) transfer payments (payments from governments to individuals).

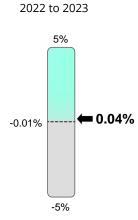
Change in Home Prices

Single-family, percent change from prior year, Q2 2024



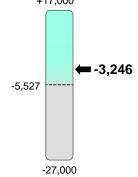
Home prices shown include only those for which a commercial loan was used. This indicator tends to be volatile from quarter to quarter.





After four years of decline, Alaska's population has grown slightly in each of the last three years as natural increase (births minus deaths) has slightly exceeded migration losses.

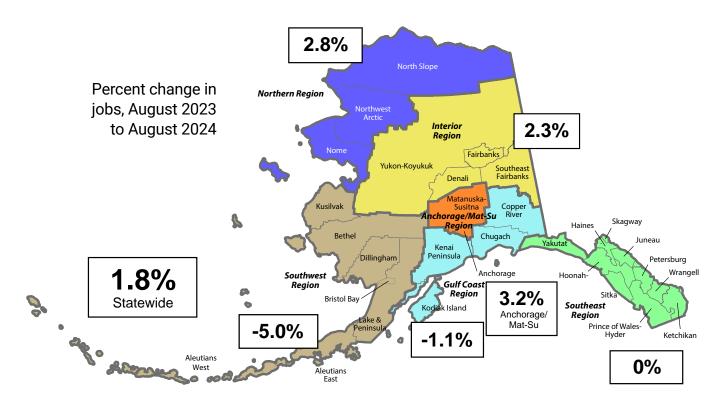
Net Migration 2022 to 2023 +17,000



The state had net migration losses for the 11th consecutive year in 2023. Losses were larger than the previous two years but smaller than the late 2010s. Net migration is the number who moved to Alaska minus the number who left.

gration

Employment Growth by Region



Unemployment Rates

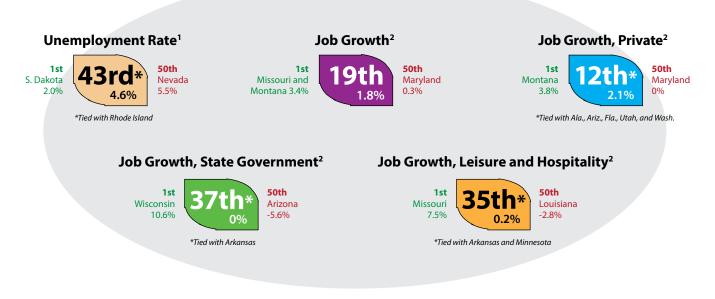
Seasonally adjusted

Not seasonally adjusted

Regional, not seasonally adjusted

	Prelim.	Revi			Prelim.	Revi	sed		Prelim.	Revi	sed
	8/24	7/24	8/23		8/24	7/24	8/23		8/24	7/24	8/23
Interior Decion	•	4.2	3.5	Southwest Region	8.0	7.9	6.9	Southeast Region	3.2	3.5	3.0
Interior Region	3.7			Aleutians East Borough	1.9	1.8	1.7	Haines Borough	3.8	4.7	3.8
Denali Borough Fairbanks N Star Borough	2.3 3.5	2.5 3.9	2.4 3.3	Aleutians West Census Area	2.7	3.0	2.2	Hoonah-Angoon Census Area	2.8	3.0	2.8
Southeast Fairbanks Census Area	4.7	5.4	4.7	Bethel Census Area	11.7	12.1	9.9	Juneau, City and Borough	2.7	3.0	2.7
Yukon-Koyukuk Census Area	7.2	8.0	8.0	Bristol Bay Borough Dillingham Census Area	1.8 7.4	1.5 6.8	1.8 6.5	Ketchikan Gateway Borough	3.3	3.3	2.8
				Kusilvak Census Area	19.2	22.6	17.6	Petersburg Borough	4.0	3.7	4.0
Northern Region	7.7	8.6	7.2	Lake and Peninsula	6.2	4.9	5.1	Prince of Wales-Hyder	7.0	7.2	6.1
Nome Census Area	8.5	9.4	8.3	Borough				Census Area			
North Slope Borough	5.0	5.7	4.7	0 // 0 · D ·	• •			Sitka, City and Borough	2.6	2.8	2.6
Northwest Arctic Borough	9.4	10.7	8.5	Gulf Coast Region	3.9	4.3	3.6	Skagway, Municipality	2.0	2.2	2.1
				Kenai Peninsula Borough	4.0	4.5	3.9	Wrangell, City and Borough	4.2	5.2	3.2
Anchorage/Mat-Su Region	3.6	4.0	3.5	Kodiak Island Borough	3.6	3.6	3.0	Yakutat, City and Borough	5.2	5.8	5.4
Anchorage, Municipality	3.4	3.7	3.3	Chugach Census Area	3.2	3.5	2.6	Takutat, City and Borough	5.2	5.8	5.4
Mat-Su Borough	4.2	4.9	4.2	Copper River Census Area	4.6	4.6	5.0				

How Alaska Ranks



Note: Government employment includes federal, state, and local government plus public schools and universities. ¹August seasonally adjusted unemployment rates ²August employment, over-the-year percent change

Sources: U.S. Bureau of Labor Statistics; and Alaska Department of Labor and Workforce Development, Research and Analysis Section

Other Economic Indicators

	Current		Year ago	Change
Urban Alaska Consumer Price Index (CPI-U, base yr 1982=100)	264.367	1st half 2024	257.938	+2.5%
Commodity prices				
Crude oil, Alaska North Slope,* per barrel	\$79.97	Aug 2024	\$87.80	-8.9%
Natural gas, Henry Hub, per thousand cubic feet (mcf)	\$2.09	Aug 2024	\$2.65	-21.1%
Gold, per oz. COMEX	\$2,646.20	9/20/2024	\$1,967.10	+34.5%
Silver, per oz. COMEX	\$31.51	9/20/2024	\$23.84	+32.2%
Copper, per lb. COMEX	\$4.34	9/20/2024	\$3.78	+15.0%
Bankruptcies	69	Q2 2024	70	-1.4%
Business	6	Q2 2024	6	0%
Personal	63	Q2 2024	64	-1.6%
Unemployment insurance claims				
Initial filings	2,510	Aug 2024	2,922	-14.1%
Continued filings	13,848	Aug 2024	13,498	2.6%
Claimant count	3,866	Aug 2024	3,384	14.2%

*Department of Revenue estimate

Sources for this page and the preceding three pages include Alaska Department of Labor and Workforce Development, Research and Analysis Section; U.S. Bureau of Labor Statistics; U.S. Bureau of Economic Analysis; U.S. Energy Information Administration; U.S. Census Bureau; COMEX; NASDAQ; Alaska Department of Revenue; and U.S. Courts, 9th Circuit



SAFETY MINUTE

Noise levels on the job and how to prevent damage

In honor of National Protect Your Hearing Month in October, the National Institute on Deafness and Other Communication Disorders, with support from the Centers for Disease Control, has designed an annual event to raise public awareness about hearing loss and its contributing factors and hazards.

Exposure to loud noises can lead to permanent hearing damage, including conditions such as tinnitus that diminish a person's quality of life. Early identification of hearing loss is crucial for effective intervention, as many people are unaware of their impairment. This month provides an opportunity to educate workers and the public about noise-induced hearing loss and encourage getting hearing checked as a first step in protection.

The CDC estimates that 22 million workers in the U.S. are exposed to hazardous noise levels on the job each year. Whether on a construction site or tarmac, or whether operating power tools such as jackhammers (102 dBA) or chainsaws (110 dBA), hearing loss is preventable. Employers are required by the Occupational Safety and Health

Association's Hearing Conservation Standard to provide hearing protection equipment when workers are exposed to sounds of 85 decibels (dB) or higher over an eight-hour average.

Hearing loss is the third most common chronic physical condition in the U.S. and one of the most common work-related illnesses. Anything over 70 dB can reduce hearing over time, while noises above 125 dB can damage hearing within seconds. Once hearing is lost, it cannot be restored, even with hearing aids. Noise-induced hearing damage affects the ability to hear high-frequency sounds and understand speech.

To prevent hearing loss, workers should avoid or limit exposure to loud noises, use proper hearing protection when necessary, and consult a doctor if concerned about their hearing.

This Safety Minute was written by Rod Bracken, an occupational safety and compliance officer at the Alaska Occupational Safety and Health Consultation and Training Section of the Alaska Department of Labor and Workforce Development.