

Workforce Development

KEY TAKEAWAYS

- The F-35 beddown is expected to create an estimated 4,215 additional jobs relative to the baseline by year 2022, tapering off to 3,358 additional jobs relative to the baseline by 2030. This job growth will be phased over multiple years.
- An estimated 1,474 jobs, or one-third of total job gains will be from active duty and civilian employment at EAFB; the remaining non-military related jobs are forecasted increases in construction (563 jobs), business and household services (477 jobs), retail/wholesale trade (477 jobs) and other categories during the peak of F-35 Beddown-related employment in 2022.
 Construction employment peaks earlier than overall employment, with 922 additional jobs relative to the baseline in 2019.
- The FNSB workforce must be prepared to fill the increase in new non-military jobs. Targeted and accessible workforce development programs and policies will play an important role in recruiting and training residents and military spouses for these jobs. Partners such as the University of Alaska Fairbanks Community and Technical College (CTC), the Fairbanks Job Center, and the Fairbanks North Star Borough School District's Career and Technical Education Program all have adaptable and community-focused training programs. Building on these existing przograms to meet incoming needs will be critical.
- An estimated 535 non-military spouses will be accompanying active duty members to EAFB. Many
 of these individuals will be seeking local employment. The community, the Air Force and the State
 of Alaska can reduce barriers to military spouse employment through better information sharing,
 expanding access to affordable child care and removing occupational licensing barriers.
- Military bases are made up of transient households. While there will be a short-term increase in
 demand for workforce training and employment needs for EAFB dependents, this demand will
 not go away after the F-35 force increase. To be a military-friendly community, FNSB should put
 in place long-term sustainable tools for working with the Air Force to proactively assess and address
 needs to support incoming dependents, including conducting employment-related outreach to
 families prior to their arrival.



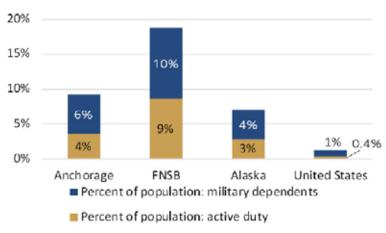


The Fairbanks North Star Borough (FNSB) has one of the highest concentrations of active duty military personnel in Alaska. According to the Alaska Department of Labor and Workforce Development (DOLWD), approximately nine percent of FNSB residents are active duty and another ten percent are dependents (See Figure 1). Military households in the FNSB generate economic activity, and dependents contribute to a significant portion of the regional workforce.

EAFB active duty members and dependents make up about one-quarter of the military population in the FNSB. There are currently 1,813 EAFB active duty and 3,535 EAFB dependents in the FNSB (Figure 2). ¹ EAFB is a key driver of the region's economy; according to a 2010 publication from the Fairbanks Economic Development Corporation, EAFB generates \$1.5 billion in annual revenue for the local economy, equivalent to ten percent of total annual revenue in the FNSB.

FIGURE 1: ACTIVE DUTY AND MILITARY

DEPENDENT POPULATION



Source: Alaska Dept. of Labor & Workforce Development, Research & Analysis Section: Alaska Population Overview, 2016 Estimates; U.S. Estimates from U.S. Department of Defense 2016 Demographic Profile of the Military Community

From U.S. Department of Defense (DoD) Alaskan Command (ALCOM), as reported in the fall 2017 issue of the FNSB Community Research Quarterly

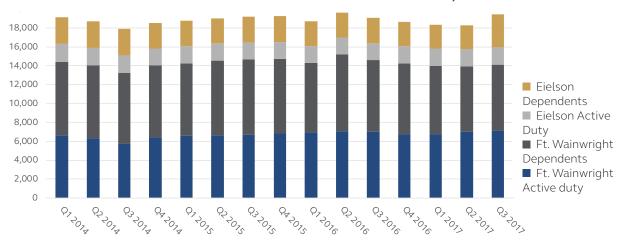


FIGURE 2: POPULATION ON EAFB AND FT. WAINWRIGHT, 2014-2017

Source: FTWW Plans, Analysis & Integration Office (PAIO) & ALCOM, Alaskan Command, 2014-2017; ALCOM, Alaskan Command & 2013-2016; as reported in the Fall 2017 issue of the FNSB Community Research Quarterly

The F-35 beddown will generate new economic opportunities for FNSB. It will directly create demand for business and jobs through construction contracts to complete on-base expansion projects. It will also create indirect growth: anticipated increases in population will generate demand for more businesses and services, creating a need for more jobs across industry sectors. This chapter includes job creation estimates broken out by

industry sector and occupation, description of existing employment and workforce development, and an analysis of FNSB's ability to meet the new job demand. It summarizes job projections, highlights potential gaps, and identifies preliminary opportunities to help connect residents with existing and expanding employment needs. The chapter also highlights the demand for and gaps to military spouse employment.



Methodology and Data Sources

The narrative in this section synthesizes quantitative and qualitative research from a range of federal, state and local sources; key resources are summarized below. The secondary data sources in particular each have their own methodology, time periods, definitions and focus; when patched together, they help tell the story of the FNSB workforce.

- Northern Economics' Alaska REMI model: this tool develops local population and employment forecasts based on historic, current and projected trends from national government sources such as the U.S. Bureau of Labor Statistics (BLS), U.S. Bureau of Economic Analysis (BEA), and U.S. Census data. For additional information on the methodology and inputs into the Alaska REMI model, please refer to the Growth Projections Focus Area.
- In October 2017, **five focus groups** were conducted with current EAFB families, with a combined total of 38 participants. Focus group participants shared insights on their experience and perspectives moving to and living in the FNSB, highlighted key gaps and offered recommendations to better support military families. While these focus groups provided detailed information about perceptions and opinions that are difficult to collect using other research tools, they are not meant to be representative of all EAFB personnel and their families.
- Input from interviews and a November 2017 strategy session with regional workforce development specialists and representatives.

- The FNSB Community Planning Department publishes the FNSB Community Research Quarterly four times each year, with a summary of relevant socio-economic data for the FNSB. Each issue includes a series of economic indicators such as airport passenger and freight volume, employment data, housing information, cost of living and other key indicators, collected from a variety of sources.
- The State of Alaska Department of Labor and Workforce Development (DOLWD), Section of Research and Analysis publishes a range of population, wage, employer and workforce characteristics data. Much of the workforce data came from unemployment insurance and therefore excludes federal workers (including military) and the self-employed. The department also releases monthly Economic Trends reports that explore different labor and workforce topics in depth.



- Blue Star Families and the Defense
 Manpower Data Center publishes
 statistically-valid surveys on active duty military
 members and their families that offer insights
 into key concerns, challenges and priorities of
 U.S. military households.
- The **U.S. Census Bureau** collects and publishes extensive information at the state, county and community scale. The Census Bureau's American Community Survey offers income and employment data, and estimates population data during the years between the decennial Census (last conducted in 2010). The Census Bureau also acts as a clearinghouse for many other data sources used in this chapter. This includes Nonemployer Statistics, which offers a snapshot of self-employment by providing data on establishments and earnings for businesses with no employees.
- The U.S. Department of Labor's
 Quarterly Census of Employment and
 Wages program publishes a quarterly count
 of employment and wages, based on state
 unemployment insurance data and classified
 by industry. The data excludes military
 employment.
- The University of Minnesota published a
 nationwide study in November 2017 titled
 "Military Spouse Licensure Portability
 Examination," which examines militaryspecific occupational licensing policies in
 each state. This report includes a review
 of Alaska-specific policies and associated
 recommendations.



PROJECTED NEED

Anticipated Job Creation

Alaska REMI model projections indicate the FNSB will see a 5.4 percent increase over baseline population over the coming years, for an estimated increase of 5,671 additional residents in FNSB by 2030. This brings the projected total population to 110,879 by year 2030. There are two primary factors driving this increase, summarized below and available in table form (Figure 3) and graphic form (Figure 4). For more details on anticipated increases, baseline projections and methodology, see Growth Projections Focus Area.

 An estimated direct increase of 3,256 active duty personnel, civilians, consultants and dependents by the year 2022 arriving through the F-35 beddown. • Indirect and induced population growth of 2,415 by the year 2030, relative to the baseline. Indirect and induced population growth occurs as new money is spent, jobs are added, and the economy grows and re-spends in response to the activity from the F-35 beddown. As the economy grows, natural growth (births exceeding deaths) and in-migration occur at a higher rate than out-migration (people moving away from FNSB) simultaneously occurring, resulting in a higher retention rate of residents.

FIGURE 3: BREAKDOWN OF FNSB POPULATION INCREASES

| Component of Population Change | Estimated Increase | Timing |
|---|---|--------------------|
| Direct EAFB Employees and Dependents (broken out below) | + 3,256 | By 2022 |
| active duty personnel | 1,353 | |
| federal civilian employees | 66 | Start to arrive in |
| technical consultants | 55 | 2017 |
| dependents of direct employees | 1,782 | |
| "Induced" and Natural Growth | + 2,415 | By 2030 |
| TOTAL | = 5,671 additional/ retained residents | By 2030 |

Source: Northern Economics; Alaska REMI Model

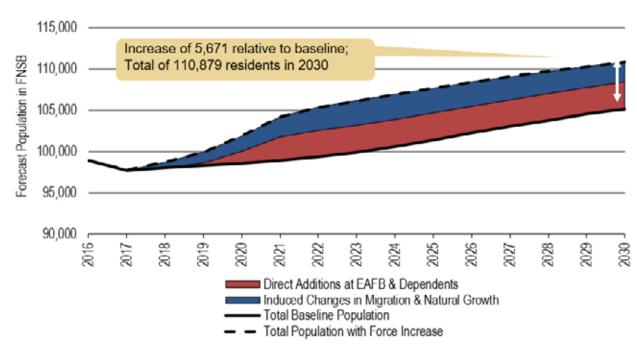


FIGURE 4: PRELIMINARY FNSB POPULATION PROJECTIONS

Source: Northern Economics; Alaska REMI Model

The Alaska REMI model F-35 baseline employment projections for FNSB forecast a decline in employment. This decline is due to the state's ongoing economic challenges and the outmigration of working-age residents away from FNSB. The F-35 beddown is expected to create an estimated 4,215 additional jobs relative to the baseline by year 2022, which will slightly decline to 3,358 additional jobs above baseline levels by 2030 (see Figure 5). Construction jobs peak in 2019 and overall jobs peak in 2022 with the full force increase at EAFB, with decreased intensity moving out toward 2030.

The employment projections in this plan compare baseline employment with new activity resulting from the F-35 beddown; they are not intended to be comprehensive predictions of the FNSB economy. The Limitations and Exclusions discussion at the end of the Growth Projections chapter summarize other relevant trends and potential projects that could impact future population and employment numbers in the FNSB.

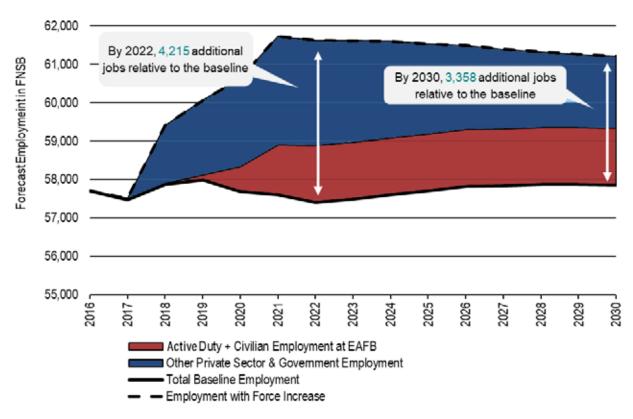


FIGURE 5: PRELIMINARY EMPLOYMENT PROJECTIONS FOR F-35 BEDDOWN
OPERATIONS AT EAFB

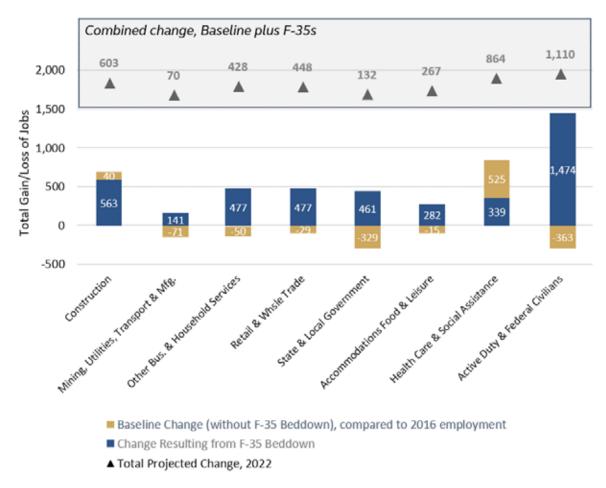
Note: "Civilian Employment" includes federal civilian employees and technical consultants working at EAFB. Source: Northern Economics; Alaska REMI Model

As shown in Figure 5, approximately one-third of F-35 related gains will be from active duty and civilian employment at EAFB; the remaining are from other private sector and government employment changes. These projections consider both baseline employment projections plus new growth from the F-35 beddown. In some industries, F-35 related growth balances a forecasted decline in baseline employment.

Figure 6: FNSB Projected Change in Employment by Industry: 2022, Peak of F-35-Related Growth shows a breakdown of the projected change in employment in year 2022, the peak of F-35-related growth. The gold bars show the estimated change in the baseline number of jobs for each industry compared with 2016 numbers; the blue bars show the estimated number of new jobs created as a

result of the F-35 beddown within each industry category. The grey bar at the top highlights the combined change for each industry; in some cases, such as the state and local government category, the F-35-related growth projection of 4,614 new jobs nearly balances the baseline employment losses of 329 lost jobs for a total increase of 32 jobs; in other categories such as health care and social assistance, both the baseline and the F-35 projections forecast industry sector growth for a combined 864 new jobs. While overall F-35 related employment growth peaks in 2022, the construction sector peaks earlier, with a high of 922 additional jobs in 2019.

FIGURE 6: FNSB PROJECTED CHANGE IN EMPLOYMENT BY INDUSTRY: 2022, PEAK OF F-35-RELATED GROWTH



Source: Agnew::Beck Consulting with data from Northern Economics; Alaska REMI Model

A detailed breakdown of the projected FNSB baseline, and F-35 beddown employment impacts by sector from 2016 to 2030 is laid out in Figure 7, and illustrated in Figure 8.

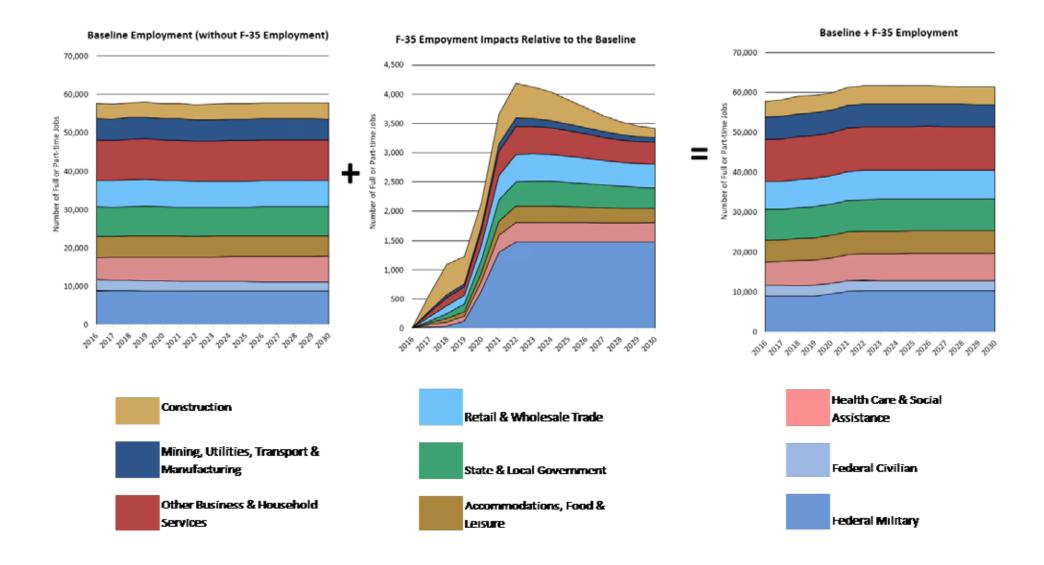
Figures 7 and 8 also provide total employment in the FNSB with F-35 beddown impacts included. For example, without the existence of F-35 beddown, the health care and social assistance sector in the FNSB is projected to employ 6,720 people by 2030 (under "Baseline Employment"). The F-35 beddown is projected to add 330 additional direct, indirect, and induced health care and social assistance employees to the FNSB by 2030 (under "F-35 Employment Impacts Relative to the Baseline"). The total health care and social assistance employment, with new additions from F-35 beddown, is expected to be 7,050 by 2030 (under "Baseline + F-35 Employment").



FIGURE 7: PROJECTED EMPLOYMENT INCREASES BY SECTOR AND YEAR FROM BASELINE

| | Employment Sector | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|--|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Construction | 3,944 | 3,864 | 3,917 | 3,934 | 3,933 | 3,963 | 3,984 | 4,030 | 4,098 | 4,155 | 4,183 | 4,211 | 4,233 | 4,243 | 4,249 |
| | Mining, Utilities, Transport & Manufacturing | 5,618 | 5,600 | 5,617 | 5,601 | 5,577 | 5,576 | 5,547 | 5,547 | 5,550 | 5,541 | 5,533 | 5,526 | 5,521 | 5,505 | 5,489 |
| ± | Other Business & Household Services | 10,546 | 10,509 | 10,604 | 10,629 | 10,565 | 10,542 | 10,496 | 10,507 | 10,524 | 10,523 | 10,527 | 10,512 | 10,499 | 10,479 | 10,456 |
| Baseline Employment | Retail & Wholesale Trade | 6,814 | 6,842 | 6,910 | 6,923 | 6,863 | 6,831 | 6,785 | 6,782 | 6,780 | 6,796 | 6,818 | 6,822 | 6,825 | 6,824 | 6,819 |
| Ş | State & Local Government | 7,811 | 7,673 | 7,676 | 7,678 | 7,594 | 7,537 | 7,481 | 7,478 | 7,483 | 7,498 | 7,523 | 7,534 | 7,551 | 7,569 | 7,595 |
| ם | Accommodations, Food & Leisure | 5,443 | 5,443 | 5,505 | 5,532 | 5,489 | 5,463 | 5,427 | 5,424 | 5,420 | 5,412 | 5,412 | 5,396 | 5,378 | 5,358 | 5,335 |
| Ē | Health Care & Social Assistance | 5,820 | 5,920 | 6,091 | 6,216 | 6,257 | 6,311 | 6,345 | 6,408 | 6,461 | 6,515 | 6,579 | 6,620 | 6,657 | 6,692 | 6,720 |
| Ē | Federal Civilian | 2,875 | 2,785 | 2,716 | 2,641 | 2,590 | 2,554 | 2,512 | 2,480 | 2,459 | 2,439 | 2,415 | 2,397 | 2,385 | 2,372 | 2,361 |
| ase | Federal Military | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 | 8,830 |
| • | Total Baseline Employment | 57,701 | 57,466 | 57,867 | 57,984 | 57,698 | 57,607 | 57,409 | 57,486 | 57,606 | 57,708 | 57,821 | 57,847 | 57,879 | 57,874 | 57,854 |
| | Annual Change in Baseline Employment (Jobs) | | -235 | 401 | 117 | -286 | -91 | -198 | 77 | 119 | 103 | 113 | 25 | 32 | -5 | -19 |
| | Annual Change in Baseline Employment (%) | | -0.4% | 0.7% | 0.2% | -0.5% | -0.2% | -0.3% | 0.1% | 0.2% | 0.2% | 0.2% | 0.0% | 0.1% | 0.0% | 0.0% |
| 2 | Construction | 0 | 5 | 778 | 922 | 790 | 708 | 563 | 518 | 445 | 362 | 286 | 223 | 177 | 146 | 130 |
| it Impact Baseline | Mining, Utilities, Transport & Manufacturing | 0 | 2 | 68 | 88 | 109 | 143 | 141 | 132 | 120 | 108 | 98 | 90 | 84 | 81 | 79 |
| ase <u>m</u> | Other Business & Household Services | 0 | 5 | 186 | 249 | 343 | 473 | 477 | 466 | 446 | 422 | 401 | 384 | 372 | 366 | 364 |
| | Retail & Wholesale Trade | 0 | 5 | 181 | 243 | 337 | 468 | 477 | 471 | 456 | 440 | 425 | 411 | 402 | 397 | 395 |
| ymer | State & Local Government | 0 | 4 | 97 | 185 | 308 | 438 | 461 | 455 | 442 | 424 | 405 | 386 | 369 | 356 | 347 |
| poy e to | Accommodations, Food & Leisure | 0 | 3 | 86 | 122 | 187 | 272 | 282 | 280 | 275 | 266 | 259 | 252 | 247 | 243 | 241 |
| 톭큺 | Health Care & Social Assistance | 0 | 3 | 110 | 152 | 225 | 326 | 339 | 341 | 337 | 331 | 327 | 323 | 323 | 324 | 328 |
| F-35 Emp Relative | Federal Civilians + Federal Military at EAFB | 0 | 20 | 30 | 125 | 638 | 1,298 | 1,474 | 1,474 | 1,474 | 1,474 | 1,474 | 1,474 | 1,474 | 1,474 | 1,474 |
| <u>. </u> | F-35 Impacts Relative to the Baseline | 0 | 48 | 1,537 | 2,085 | 2,937 | 4,126 | 4,215 | 4,136 | 3,994 | 3,826 | 3,675 | 3,543 | 3,447 | 3,387 | 3,358 |
| | Construction | 3,944 | 3,869 | 4,695 | 4,856 | 4,724 | 4,670 | 4,547 | 4,548 | 4,543 | 4,517 | 4,469 | 4,433 | 4,410 | 4,390 | 4,379 |
| ŧ | Mining, Utilities, Transport & Manufacturing | 5,618 | 5,602 | 5,685 | 5,689 | 5,686 | 5,718 | 5,688 | 5,679 | 5,670 | 5,649 | 5,631 | 5,616 | 5,605 | 5,585 | 5,567 |
| ä | Other Business & Household Services | 10,546 | 10,514 | 10,790 | 10,878 | 10,908 | 11,015 | 10,974 | 10,973 | 10,969 | 10,945 | 10,929 | 10,896 | 10,871 | 10,846 | 10,821 |
| 5 Employment | Retail & Wholesale Trade | 6,814 | 6,847 | 7,091 | 7,166 | 7,201 | 7,299 | 7,263 | 7,253 | 7,236 | 7,235 | 7,243 | 7,233 | 7,227 | 7,221 | 7,215 |
| E C | State & Local Government | 7,811 | 7,677 | 7,773 | 7,863 | 7,903 | 7,975 | 7,943 | 7,933 | 7,925 | 7,922 | 7,929 | 7,920 | 7,920 | 7,926 | 7,942 |
| 2 E | Accommodations, Food & Leisure | 5,443 | 5,446 | 5,592 | 5,654 | 5,676 | 5,735 | 5,710 | 5,704 | 5,694 | 5,678 | 5,672 | 5,648 | 5,625 | 5,602 | 5,576 |
| £. | Health Care & Social Assistance | 5,820 | 5,923 | 6,201 | 6,368 | 6,481 | 6,638 | 6,685 | 6,749 | 6,798 | 6,846 | 6,906 | 6,943 | 6,980 | 7,016 | 7,049 |
| + | Federal Civilian | 2,875 | 2,787 | 2,719 | 2,646 | 2,617 | 2,612 | 2,578 | 2,546 | 2,525 | 2,505 | 2,481 | 2,463 | 2,451 | 2,438 | 2,427 |
| Baseline | Federal Military | 8,830 | 8,850 | 8,860 | 8,955 | 9,467 | 10,128 | 10,304 | 10,304 | 10,304 | 10,304 | 10,304 | 10,304 | 10,304 | 10,304 | 10,304 |
| ase | Total employment Baseline + F-35 Impacts | 57,701 | 57,514 | 59,403 | 60,069 | 60,635 | 61,733 | 61,624 | 61,622 | 61,599 | 61,535 | 61,496 | 61,390 | 61,326 | 61,261 | 61,212 |
| | Annual Change in Baseline + F-35 Employment (Jobs) | | -187 | 1,890 | 665 | 567 | 1,097 | -109 | -1 | -23 | -64 | -38 | -107 | -63 | -65 | -49 |
| | Annual Change in Baseline + F-35 Employment (%) | | -0.3% | 3.2% | 1.1% | 0.9% | 1.8% | -0.2% | 0.0% | 0.0% | -0.1% | -0.1% | -0.2% | -0.1% | -0.1% | -0.1% |

FIGURE 8: PROJECTED EMPLOYMENT INCREASES BY SECTOR AND YEAR FROM BASELINE



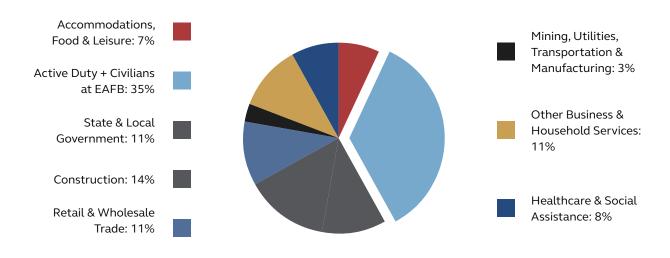
For certain industries and projects, a proportion of new jobs will likely be filled by residents outside of the FNSB. Non-FNSB resident jobs are not included in the FNSB-specific projections in the charts and tables in this chapter. For example, the Alaska REMI model estimates that for military construction projects at remote locations such as Clear Air Force Base, only 25 percent of estimated new construction employment positions will be filled by FNSB residents; the other 75 percent are likely to be filled by non-local contractors and are not factored into the REMI projections for FNSB.

The biggest non-military job gains will occur in the construction industry, with a high of 922 jobs in 2019. Most of the construction jobs are due to increases in on-base EAFB expansion construction plans, although the forecasts also factor in military-related construction projects on Fort Wainwright, Fort Greely and Clear Air Force Station. While construction employment peaks in 2019, overall F-35 Beddown-related employment peaks in 2022. The composition of new jobs by industry in 2022 is shown as a pie graph in Figure 9. Construction

is expected to be the largest non-military industry, with 563 new jobs in year 2022 (14 percent of all new jobs). An additional 33 percent of the gains are shared evenly across three sectors: retail and wholesale trade (477 jobs or 11 percent); state and local government (461 new jobs or 11 percent); and other business and household services (477 new jobs or 11 percent).

The military and construction increases are directly related to the F-35 beddown; growth in other sectors is primarily driven by increased demand for goods and services due to the overall population increase in the region. Growth in the "state and local government" category is almost all local government, which includes administrative support, the school district (including teachers) and public safety. The "other business and professional services" category includes financial, professional and information services, real estate, insurance and other administrative services, except for public administration captured in the government category.

FIGURE 9: DISTRIBUTION OF ESTIMATED NEW NON-MILITARY JOBS BY INDUSTRY, 2022

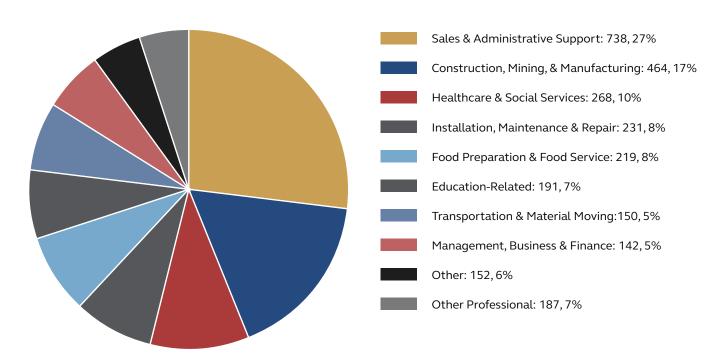


Source: Northern Economics; Alaska REMI Model

Figure 10 provides a summary of the projected new non-military jobs by occupation. The occupation categories are based on the specific duties associated with certain jobs and do not necessarily align with the industry categories on the previous pages. For example, an accountant from within the "management, business and finance" occupation could work in any one of the industries described above.

More than a quarter of the additional 2,741 new non-military jobs in 2022 will be in sales and support administration occupations (27 percent); this category includes a broad spectrum of professions including salespersons, office and administrative staff and professional business services. The second largest occupation is construction, mining and manufacturing (17 percent), followed by health care and social services (10 percent).

FIGURE 10: DISTRIBUTION OF ESTIMATED NEW NON-MILITARY JOBS BY OCCUPATION, 2022



Source: Northern Economics; Alaska REMI Model

Military Spouses

Many of the active duty members who will be stationed at EAFB are married and will be accompanied by their spouses. Approximately 81 percent of Air Force marriages are between an active duty member and a civilian spouse. This equates to an estimated 535 non-military spouses who will be accompanying active duty members. ² Many of these individuals will be seeking local employment in the FNSB. Sufficient workforce development programs should be in place so incoming residents can receive training that aligns with the types of employment opportunities available in the community. Fortunately, many programs already exist. It will also be important to ensure incoming families have easy access to job information and employment opportunities prior to and upon arrival.

// We have a military community of incredibly well-educated spouses.

-EAFB focus group participant

² This estimate uses a combination of personnel estimates from the U.S. Air Force and marriage demographics by rank from October 2017 and 2015 Demographics Profiles of the Military Community. It excludes active duty members who are married to civilians but arriving unaccompanied (relocating to EAFB without their spouse). More information on the estimated household composition of arriving Air Force families is available in the Housing Appendix A.



SUMMARY OF EXISTING WORKFORCE NUMBERS AND WORKFORCE DEVELOPMENT OPPORTUNITIES

The FNSB Workforce Today

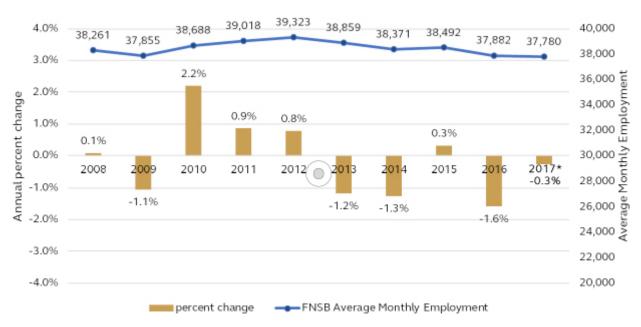
Overall Employment Trends

According to the Alaska DOLWD's January 2018 issue of Alaska Economic Trends, the FNSB has been losing jobs annually since an employment peak in 2012. Figure 11 shows average monthly FNSB employment over time and the annual percent change between years. The average monthly employment in 2012 was 39,323, compared with 37,780 for the first three quarters of 2017. 2016 saw the biggest job losses, with a 1.6 percent decline in monthly employment, equivalent to 610 fewer jobs. However, state economists predict that trend will reverse starting in 2018 due in large part to the military growth at

EAFB. The military has historically been a strong economic driver in the FNSB and remains so today; more than eight percent of FNSB residents are active duty and another 10 percent are military dependents.

This estimate uses a combination of personnel estimates from the U.S. Air Force and marriage demographics by rank from October 2017 and 2015 Demographics Profiles of the Military Community. It excludes active duty members who are married to civilians but arriving unaccompanied (relocating to EAFB without their spouse). More information on the estimated household composition of arriving Air Force families is available in the Housing Appendix A.

FIGURE 11: FNSB AVERAGE MONTHLY EMPLOYMENT

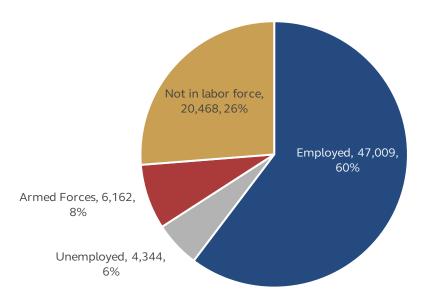


preliminary; does not include data from the 4th quarter of 2017

Source: Quarterly Census of Employment and Wages (QCEW) with supplemental information from the Alaska DOLWD, Research and Analysis section, as downloaded from DOLWD. Excludes fishermen, agricultural workers and the self-employed

The U.S. Census Bureau's American Community Survey includes local labor force data within the U.S. While the annual datasets for FNSB have high error margins due to small sample sizes, the five-year averages offer insight into the overall local labor force breakdown, as shown in Figure 12. Of the 77,983 residents age 16 and over, 57,515 (74 percent) are in the labor force, with 60 percent civilian employment, eight percent in the armed forces and six percent unemployed. The pages that follow break down each of these segments of the labor force in more detail.

FIGURE 12: EMPLOYMENT STATUS, FNSB POPULATION 16 AND OVER



Source: American Community Survey Five-Year Estimates, 2012-2016

The State of Alaska generates employment numbers based on unemployment data. Unlike the American Community Survey data above, this data excludes federal workers, the military and the self-employed. According to the state data, in 2016 there were 43,491 people employed in FNSB in state, local and private employment, a slight increase from 2015 but smaller than 2014 (Figure 13). Employment numbers have remained relatively consistent over the past ten years. There were 2,607 unemployed individuals in FNSB in 2016; over the past ten years, unemployment was highest in 2009 (7.1 percent) and 2010 (6.7 percent), reflecting nationwide trends during the national recession. Preliminary unemployment

numbers from DOLWD estimate FNSB's January 2018 unemployment rate at 7.5 percent, compared with 4.5 percent in the United States and 8.1 percent in Alaska. ³ As new employment opportunities open in the FNSB, it is expected unemployment numbers will decline as residents are hired to fill new positions.

These are preliminary estimates from DOLWD, Research and Analysis Section. They are not seasonally-adjusted, which means they have not been modified to remove seasonal fluctuations from the data; as a result, these monthly unemployment percentages are typically higher than annual estimates because FNSB and Alaska both experience higher unemployment during winter months. For the most current estimates and more information on methodology, visit http://live.laborstats.alaska.gov/labforce/

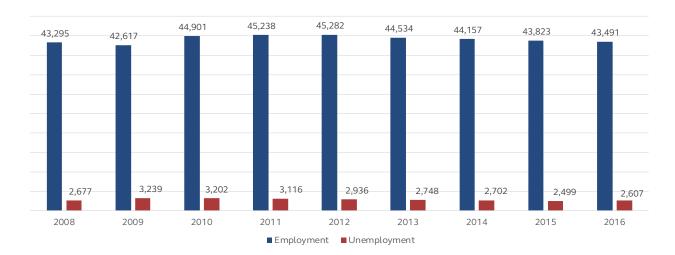


FIGURE 13: EMPLOYMENT AND UNEMPLOYMENT IN THE FNSB, 2008-2016

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

These unemployment counts include only those who do not have a job but are available to work and have actively looked for a job in the prior four weeks. Those who are not employed but have not sought work in the past four weeks are considered out of the labor force and are not included in the data; this includes groups such as students and seniors, those who opt not to work due to family responsibilities, and discouraged workers who are no longer actively seeking a job. For additional information on unemployment and labor force data in Alaska, see the May 2016 Alaska Economic Trends article, "The Working-Age Population and Unemployment": http://laborstats.alaska.gov/trends/may16art3.pdf.

As discussed above, the state's employment data does not capture those who are self-employed. The U.S. Census Bureau publishes non-employer statistics with data collected from Internal Revenue Service tax return information for firms with no employees, which can be used to approximate the number of self-employed individuals in FNSB. In 2015, the most recent data year available, there were 5,587 non-employer establishments; these

establishments collectively reported receipts of \$230 million. The number of establishments in FNSB has increased by 338 over the past two years; the receipts have remained constant, with a slightly higher uptick in 2014 to \$242.6 million receipts.

The state's employment data focuses on residential workers, but DOLWD also tracks information on non-resident employment. The FNSB has slightly lower non-resident employment than the statewide average. According to a 2016 DOLWD report on non-resident employment in Alaska, non-residents make up approximately 21.5 percent of Alaska's total workers, whereas in FNSB, 17 percent of total workers are nonresidents. The largest industry category for the non-resident workers in FNSB is the accommodation and food services with 31.5 percent of all FNSB non-resident employment, followed by retail trade, health care and construction. Having effective workforce development programs and policies in place will help ensure that local residents are trained and qualified for the additional jobs created through the F-35 beddown.

Much like the rest of Alaska, FNSB has a somewhat seasonal economy, with slightly higher employment in the summer and lower employment during winter months (see Figure 14). Average annual unemployment in FNSB was at 5.7 percent

in 2016, slightly lower than the statewide rate of 6.6 percent. Preliminary estimates for December 2017, the most recent month available, estimate FNSB unemployment is at 6.6 percent, which is consistent with historic rates for the month of December.

10% 45,000 896 43,000 6% 41,000 5% 496 39,000 2% 37,000 Winter Winter 1% 35,000 0%

--- Unemployment Rate

FIGURE 14: SEASONAL EMPLOYMENT TRENDS AND UNEMPLOYMENT RATE IN THE FNSB

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

Employment





Employment by Industry

The U.S. Bureau of Labor Statistics collects and publishes the Quarterly Census of Employment and Wages (QCEW). The QCEW provides monthly and annual snapshots of employment data in regions around the country based on unemployment insurance, federal agency reporting

and other sources, and helps broadly define the FNSB economy. The data excludes the self-employed and those in the military. Figure 15 shows average annual employment by sector in the FNSB from 2012 to 2016.

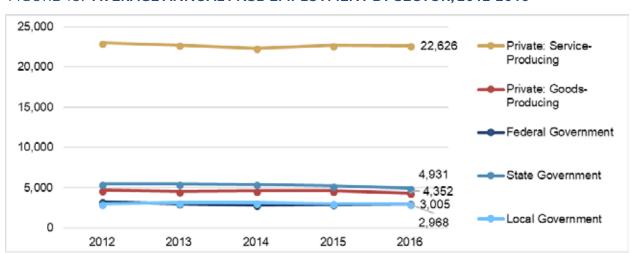


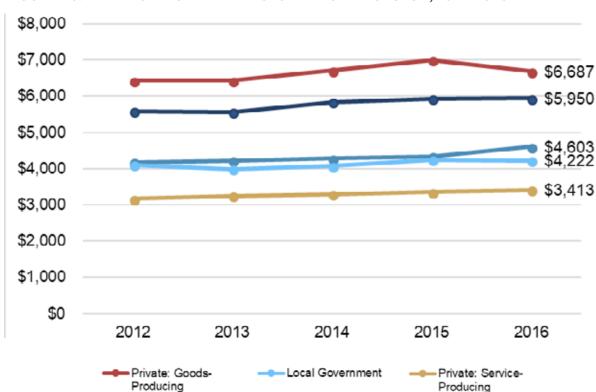
FIGURE 15: AVERAGE ANNUAL FNSB EMPLOYMENT BY SECTOR, 2012-2016

Source: U.S. Department of Labor, Bureau of Labor Statistics: Quarterly Census of Employment and Wages

In 2016, private sector employment comprised 71 percent of total employment. QCEW broadly classifies private sector employment into two categories: service-producing and goods-producing. 60 percent of FNSB employment is serviceproducing, including retail, professional services, health care and more; an additional 11 percent are in goods-producing industries such as mining and agriculture. The remaining 29 percent are in government employment, with 13 percent in state employment and eight percent each for federal and local government employment. It is important to note, the federal government estimates are actually higher because the QCEW data does not include active duty military personnel. In 2016 there were 8,763 active military personnel employed at Ft. Wainwright and EAFB. For additional details on private sector employment by industry, see Figure 18.4

Figure 16 depicts the average monthly wages for the sectors captured in Figure 15. While only 11 percent of total employment, the private sector goods-producing jobs pay the highest average monthly wages at \$6,687 per month in 2016, followed by federal government jobs with \$5,950 per month. The goods producing category includes natural resources and mining, construction and manufacturing. Many of the projected jobs related to the F-35 beddown will be in this category due to increased construction activity in the region. Private sector service-producing jobs are the largest employment sector but have the lowest wages, with average monthly wages of \$3,413 in 2016 – almost half the amount of the goods-producing category.

Source: Fall 2017 issue of the FNSB Community Research Quarterly



State Government

FIGURE 16: AVERAGE MONTHLY WAGES IN FNSB BY SECTOR, 2012-2016

Source: U.S. Department of Labor, Bureau of Labor Statistics: Quarterly Census of Employment and Wages

Federal Government

Alaska DOLWD also tracks and shares industry and occupational data for resident workers. The data does not include federal workers, the military, self-employed and non-resident workers. Figure 17 summarizes this data for the past three years

and highlights the percent change for each of the top industries between 2014 and 2016. Figure 18 shows the breakdown of employment by industry for 2016.

FIGURE 17: FNSB EMPLOYMENT BY INDUSTRY, 2014-2016

| | 2014 | 2015 | 2016 | % change, 2014 to 2016 |
|-----------------------------------|-------|-------|-------|---------------------------|
| Trade, Transportation + Utilities | 8,019 | 8,081 | 7,976 | -1% (-43 jobs) |
| Educational and Health Services | 4,988 | 5,063 | 5,187 | 4% (+199 jobs) |
| State Government | 5,018 | 4,881 | 4,629 | -8% (-389 jobs) |
| Leisure and Hospitality | 3,962 | 3,919 | 4,135 | 4% (+173 jobs) |
| Local Government | 3,646 | 3,486 | 3,410 | -6% (-236 jobs) |
| Professional + Business Services | 3,153 | 3,042 | 2,920 | -7% (-233 jobs) |
| Construction | 3,114 | 2,999 | 2,779 | -11% (-335 jobs) |
| Natural Resources and Mining | 1,810 | 1,914 | 1,794 | -1% (-16 jobs) |
| Financial Activities | 1,269 | 1,268 | 1,283 | 1% (+14 jobs) |
| Other | 1,054 | 1,028 | 961 | -9% (-93 jobs) |
| Manufacturing | 756 | 702 | 703 | -7% (-53 jobs) |
| Information | 510 | 527 | 504 | -1% (-6 jobs) |

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

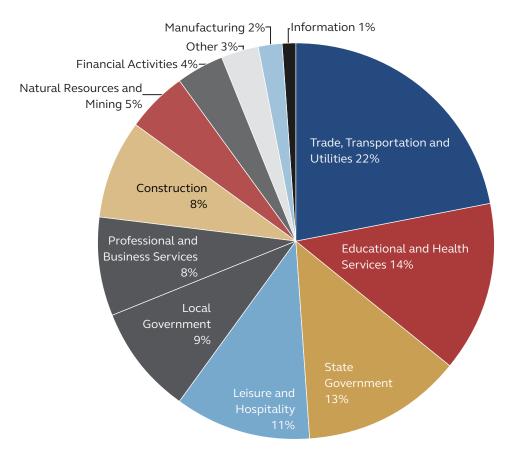
NOTE: Data based on worker residency; does not include federal workers, military, self-employed and nonresident workers

The largest industry in the FNSB, employing 7,976 residents, is the trade, transportation and utilities industry. This industry has remained relatively flat with a one percent decline between 2014 and 2016. The second largest employment industry is education and health services with 5,187 in 2016, which showed a four percent increase between 2014 and 2016. According to Economic Trends articles from DOLWD, most of this increase can be attributed to increases in the health sector. The leisure and hospitality industry has also grown four percent over the two-year period to 4,135 in 2016.

Many FNSB industries have seen a decline in employment since 2014. Construction has declined

11 percent in FNSB. The January 2018 Alaska Economic Trends, published by DOLWD, cites this construction decline to a lack of new residential and commercial construction, lower state capital budgets and shrinkage in contracting projects for the oil and gas industry. This trend is expected to reverse as EAFB buildout occurs. Other declines occurred in state government, down by eight percent over the two-year period. This decline is in part due to state budget cuts which have impacted employment at the University of Alaska Fairbanks (UAF). According to DOLWD's Alaska Economic Trends, UAF has lost more than 500 jobs since its employment peak in 2013.

FIGURE 18: FNSB EMPLOYMENT BY INDUSTRY, 2016



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section NOTE: Data based on worker residency; does not include federal workers, military, self-employed and nonresident workers

DOLWD data provides helpful insights into current and historic industry trends but they exclude one of the most important categories: military employment. The FNSB publishes the results in its Community Research Quarterlywhich shows active duty military counts for Eielson Air Force Base (EAFB) and Ft. Wainwright (FTWW), the two most prominent military installations in FNSB. The numbers reflect summer counts for active military; they do not include civilian positions or military dependents. As of summer 2017, EAFB and FTWW have a combined 8,930 members, exceeding the largest categories in the

DOLWD industry employment data. Active duty military counts have been increasing annually since 2014, mostly due to increases at FTWW. In 2017, approximately one-fifth (1,813) of these active duty military members were stationed on EAFB and the rest were at FTWW. As discussed in the Growth Projections Focus Area, these Air Force numbers will increase as EAFB personnel ramps up during F-35 beddown implementation.

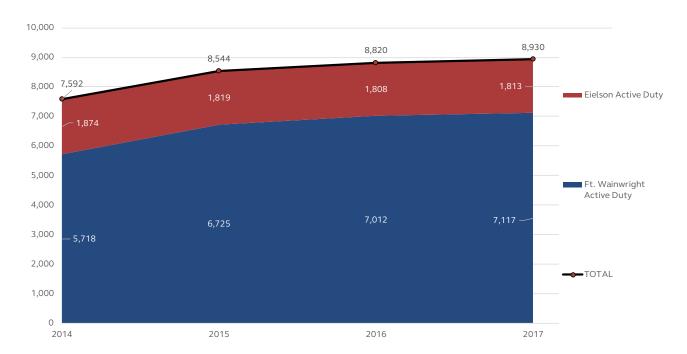


FIGURE 19: ACTIVE DUTY MILITARY AT EIELSON AND FT. WAINWRIGHT, 2014-2017

Source: FT. W.W. Plans, Analysis and Integration Office (PAIO), and ALCOM, Alaskan Command, as reported in the Fall 2017 issue of the FNSB Community Research Quarterly

Many veterans depart the military at a working age and become part of the local workforce; some may need training to help them transition into civilian positions. Alaska has the highest per capita concentration of veterans in the country. FNSB has the second highest concentrations of veterans in the state, slightly behind that of Southeast Fairbanks Census Area. According to the U.S. Census Bureau's American Community Survey 2012-

2016 Five-Year Estimates, 15.8 percent of FNSB residents are veterans, compared with 12.8 percent in Alaska and eight percent nationwide. Maintaining the FNSB's status as a military-friendly community encourages military families to stay in the area after they depart military service, including seeking local employment as they integrate into the community.

Employment by Occupation

Figure 20 shows the top ten occupations for FNSB for 2016, with comparative data for 2014. The column on the far right shows the percentage of workers in each occupation who are over the age of 45 as of 2016. The information comes from DOLWD's occupational database, where employers provide the occupation and place of work for all workers covered by Alaska unemployment insurance. The top two occupation categories in 2016 are both sales-related activities, with a combined 2,746 workers. According to a conversation with DOLWD staff, the large increase in retail salespersons and the decline in cashiers between 2014 and 2016 is likely a change in categorization from one or more major FNSB employers rather than an actual change in occupational employment; overall, the two combined categories saw a gain of 104 workers.

These retail categories are likely to see additional growth, since the Alaska REMI model predicts that sales and administrative support will be the largestgrowing occupation category (see Figure 10 for projections of new non-military jobs by occupation). The third largest FNSB occupation is food preparation and serving workers (766 workers). Office workers, construction laborers, truck drivers, janitors/cleaners, teachers and operating engineers/ construction equipment operators round out the top ten. In three of these categories (heavy and tractor-trailer truck drivers, janitors and cleaners and teachers and instructors), 50 percent or more workers are over the age of 45, indicating there may be a need for new workers to fill jobs of an aging and retiring workforce.

FIGURE 20: TOP TEN OCCUPATIONS IN THE FNSB. 2016

| Occupation | Number Employed, 2016 | Change from 2014 | Percentage over 45 |
|---|--------------------------|---------------------|-----------------------|
| Retail Salespersons | 1,967 | 417 | 27% |
| Cashiers | 779 | -313 | 29% |
| Combined Food Preparation and Serving Workers | 766 | 18 | 14% |
| Office and Administrative Support Workers, All Other | 676 | 0 | 36% |
| Construction Laborers | 620 | -45 | 26% |
| Office Clerks, General | 610 | -30 | 42% |
| Heavy and Tractor-Trailer Truck Drivers | 592 | -24 | 55% |
| Janitors and Cleaners, Except Maids and Housekeeping Cleaners | 576 | -64 | 49% |
| Teachers and Instructors, All Other | 504 | 113 | 52% |
| Operating Engineers and Other Construction Equipment Operators | 499 | -12 | 44% |

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section NOTE: Data based on worker residency; does not include federal workers, military, self-employed and nonresident workers

EXISTING WORKFORCE DEVELOPMENT PROGRAMS

On EAFB

The Airman and Family Readiness Center (A&FRC) offers assistance for military spouses seeking employment. The A&FRC offers resume classes, practice interviews and shares information about job openings through USA Jobs: https://www.usajobs.gov/. The A&FRC also has supportive staff who are able to provide one-onone personalized sessions for dependents seeking customized employment assistance. Resources such as a lending library with employment assistance information and computers for searching and applying for jobs are also available. The A&FRC also offers support materials on the Military Spouse Career Advancement Account (MyCAA) scholarship program, which provides up to \$4,000 of financial assistance for eligible military spouses to pursue a license, certification or Associate's degree in a portable career field and occupation. ⁵

The A&FRC has an active Facebook page where local jobs are posted. Occasionally, off-base partners participate in job fairs and other workforce development activities. The A&FRC works closely with the EAFB Civilian Personnel Office (CPO), which oversees hiring and aids with civilian positions on base. The A&FRC is also involved in the on-base high school, offering employment preparedness and training activities such as mock interviews, cover letter and resume reviews, and individualized feedback sessions. Further, spouses and dependents with disabilities who are seeking employment can receive guidance through Exceptional Family Member Program (EFMP), housed in the A&FRC.



The website http://www.militaryonesource.mil
is another resource for military spouses and dependents seeking information and resources. In particular, Military One Source includes Spouse Education and Career Opportunities Program (SECO) and Military Spouse Employment Partnership (MSEP), where individuals can receive support in the following areas:

- Career Exploration
- Education, Training, & Licensing
- Employment Readiness
- Career Connections
- Career Management
- Free Career Coaching

To learn about the MyCCA program, visit http://download.militaryonesource.mil/12038/MOS/Factsheets/SECO/MyCAA Factsheet Overview.pdf

In an interview with staff at the Airman and Family Readiness Center, staff shared that one of the most popular positions for EAFB spouses is a teaching job with the local schools. However, military spouses who are teachers must apply for an Alaska teaching certificate; this includes a required six credits of Alaska history. For some military spouses that would like to teach in Alaska, the cost and time required to fulfill the Alaska History requirement is a deterrent for Alaska certification. Fortunately, online courses that meet the Alaska History requirements are available and some spouses choose to take the course before arrival. Others choose to substitute teach because there are fewer requirements and increased flexibility; substitute teachers can choose when and how often to teach.

EAFB Regional Growth Plan focus group participants offered a variety of perspectives on employment and training opportunities for military dependents. On a scale of "A" through "F," with "A" as "very satisfied" and "F" as "very dissatisfied," participants were asked to grade their satisfaction with access to employment opportunities and training in the FNSB (see results in Figure 21). Of the 32 participants, only eight (25 percent) noted

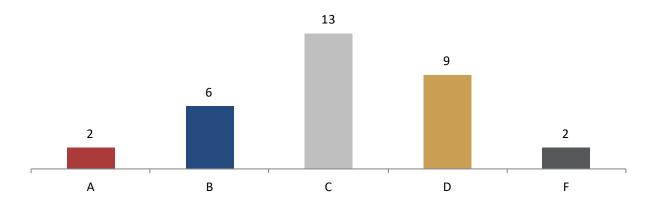
an "A" or "B" grade. Thirteen of the responses (41 percent) gave a "C" grade, and 11 (34 percent) "D" or "F" grades. Focus group participants expressed a variety of frustrations with the local job market, including EAFB's distance from Fairbanks, the challenge of transferring occupational licenses and the quality and pay of local positions. According to participants, many of these challenges are not unique to EAFB; spouse employment can be challenging during any Permanent Change of Station (PCS) move between military installations.

Job opportunities are plentiful but the quality of the jobs is low and the pay is low."

"It's a challenge across all military operations to help spouses find jobs and workforce development. This is always an issue. Often there is no education or workforce development on base.

-EAFB focus group participants

FIGURE 21: **EAFB FOCUS GROUP PARTICIPANT RESPONSES TO THE PROMPT, "GRADE**YOUR SATISFACTION WITH ACCESS TO EMPLOYMENT OPPORTUNITIES AND
TRAINING"





Education and Training Programs

Many education and training programs are available in the FNSB. Alaska DOLWD maintains an extensive list of training providers around the state, categorized by community. The list of training providers in the FNSB is shown below. For additional details on each provider, including a description, list of programs and contact information, visit the DOLWD website: http://live.laborstats.alaska.gov/atc/providers.cfm

- Alaska Joint Electrical Apprenticeship and Training Trust
- Alaska Laborers Training School
- Alaska West Training Center
- Alaska Works
- Associated General Contractors of Alaska
- Calypso Farm and Ecology Center
- Center for Employment Education
- Central Texas College, Ft. Wainwright
- Cherokee Riders
- Environmental Management Inc
- Fairbanks Area Carpenter Training Center
- Fairbanks Area Plumbers and Pipefitters
- Fairbanks Flight Training
- Kindred Spirits School of Massage
- Laborers Local 942
- Literacy Council of Alaska
- Mane Place Hair Design and Academy
- North Star Computing
- NTL Alaska, Inc.
- Painters and Allied Trades, Alaska Local 1959
- School of Integrating Shaitsu Alaska
- Thomas Edison State University

University of Alaska Programs

The University of Alaska's Technical Vocational Education Program (TVEP) funds many of UA's workforce classroom and trainings, including industry and on-the-job training. The TVEP fund was established by the Alaska Legislature in 2000 from a portion of unemployment insurance receipts. The program directs UA funding toward industry sector needs as identified in statewide workforce development plans. In fiscal year 2019, the UA Workforce Development Committee identified the following priority career clusters based on state and industry priorities:

- Agriculture, Food & Natural Resources (Includes Fisheries, Energy, Environmental Science & Green Jobs)
- Architecture & Construction
- Education & Training
- Health Sciences
- Human Services
- Manufacturing (Includes Mining & Process Technology)
- Science, Technology, Engineering & Mathematics (Includes Research)
- Transportation, Distribution & Logistics (Includes Maritime)

The TVEP funds are also intended to support the priority needs identified in Alaska's five completed workforce development plans: the Maritime Workforce Plan, the Teacher Education Plan, the Oil & Gas Workforce Plan, the Mining Workforce Plan and the Health Workforce Plan. Copies of these plans are available at: http://www.alaska.edu/research/wp/plans/.

The University of Fairbanks (UAF) ⁶ plays an important role in workforce development for FNSB residents. UAF is a flagship campus for the University of Alaska. The University has nine



colleges and schools that offer 178 degrees and certificates in 114 disciplines. UAF employs 2,603 staff, including 597 faculty. In 2016, the University enrolled 9,330 students including a mix of undergraduate students (87.6 percent) and graduate students (12.4 percent). Just over 6,000 of the enrolled students attend classes on the Fairbanks campus; the rest are spread around satellite campuses in the state, and/or participate through eLearning and Distance Education. UAF is also the primary research center for the University of Alaska system.

Information in this section comes from the University of Alaska Fairbanks Office of Admissions and the Registrar Fact Sheet: https://www.uaf.edu/pair/factsheet/

UAF's Community and Technical College (CTC) also plays a critical role in helping FNSB meet the existing and emerging employment needs of local businesses and FNSB industries through its various vocational and technical programs. CTC offers more than 40 one-year certificate and twoyear associate degree programs in high demand career fields to prepare graduates for immediate employment. CTC can adapt and develop new programs to meet emerging industry needs; for example, staff are in the early stages of developing a comprehensive aviation and maintenance program. This ability to respond to community and industry needs will be critical during the F-35 beddown as demand increases for workers in industries such as construction. CTC is also designated as a Military Friendly School and offers Northern Military Programs in partnership with local military installations, including EAFB. CTC works closely with local unions, and 99 percent of CTC graduates get a job. ⁷

In addition to UAF campus activities, the University of Alaska Anchorage oversees a network of Small Business Development Centers (SBDC), with funding from the U.S. Small Business Administration, the State of Alaska and other sponsors. An SBDC office is located in the Fairbanks area. The Centers offer no-cost advising services and low cost educational programs for entrepreneurs seeking to start or grow a small business. SBDC staff are available for one-on-one support to help with management, marketing, sales, finance, accounting and other topics. The Fairbanks SBDC offers a variety of programs, including a "Boots to Business" 2-day entrepreneurship program targeted toward those exiting active duty and considering opening a small business. 8

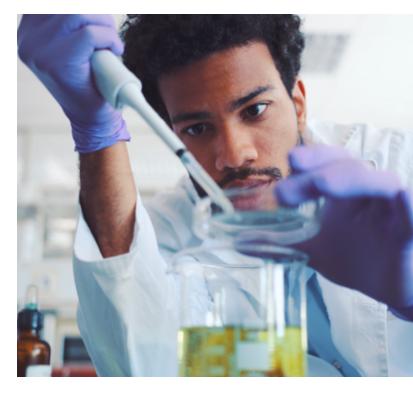
The University of Alaska launched the Emsi Career Coach in late 2017, a web-based career exploration tool that maps and guides users to varied academic

During the welcome [to Eielson] meetings, they showed the courses that were available and there are so many online options available now.

-EAFB focus group participant

pathways through an online assessment: https://alaska.emsicc.com. The tool offers customized career recommendations and current labor market and wage data for Alaska residents at varying career stages, from high school students to transitioning military service members and their spouses. The university hopes to collaborate with state agencies, school districts and other workforce and training programs to promote Career Coach and increase its use around the state.

- Information in this section comes from CTC staff and the CTC website: https://www.ctc.uaf.edu/
- Information in this section comes from SBDC staff and the SBDC website: https://aksbdc.org/





State of Alaska Resources

The Fairbanks Job Center, one of DOLDWD's 16 job centers in Alaska, specializes in helping job seekers connect with employment opportunities, such as workshops to build resume and networking skills, labor market information to identify potential career paths or occupations, and resources such as computers to improve access to job listings. Other more intensive counseling, assessment, training and support, offered in-house and through partnerships with local employers are also available. ⁹

Apprenticeships

Apprenticeships are becoming increasingly popular in Alaska as a method to train workers in specific technical fields. DOLWD covered Alaska apprenticeships in detail in the March 2016 issue of Alaska Economic Trends. Figure 22 shows the number of apprenticeship registrations in Alaska between 2004 and 2014. Over the tenyear period, the number of active apprenticeships increased from the single digits in 2003 and 2005, to 564 active registrations in 2014. Cancelled apprenticeships have also declined, with 2016 showing the fewest cancelations over the past ten

years. 10 DOLWD reports the most common industries for apprenticeship participants are construction with 40 percent, followed by natural resources and mining with 11 percent. On average, workers who complete an apprenticeship earn higher wages than industry averages. Based on average data from 2004 to 2014, the top occupations for registered apprenticeships are 1) electricians, 2) plumbers, pipefitters and steamfitters, 3) laborers, 4) carpenters and 5) operating engineers/other construction equipment operators. While apprenticeships have traditionally been used in trade industries, more recently the model has expanded into other fields such as aviation and health care. For example, the State of Alaska has expanded apprenticeship targets and Alaska Hire requirements for statefunded projects; additionally, new apprenticeship programs have been established through the Alaska Primary Care Association, the Alaska Air Carriers Association and the Pipeline Training Center.

Information in this section comes from Fairbanks Job Center staff and the Alaska Job Center Network website: http://www.ajcn.state.ak.us/jt/

According to the March 2016 Alaska Economic Trends, many apprenticeship programs last three to five years; if a program is not a good fit, participates may cancel. Most cancellations occur within the first 12 months.

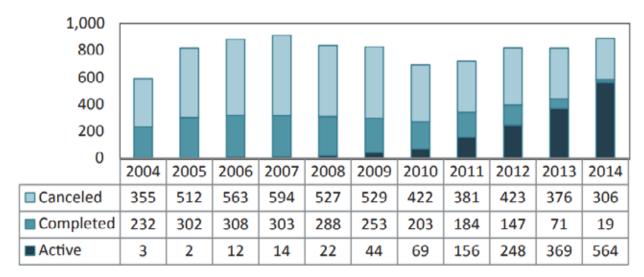


FIGURE 22: APPRENTICESHIP REGISTRATIONS IN ALASKA, 2004-2014

Source: Alaska Department of Labor and Workforce Development, as reported in March 2016 Issue of Alaska Economic Trends

Fairbanks North Star Borough School District

The Fairbanks North Star Borough School District (FNSBSD) also has a strong suite of vocational education programs through its Career and Technical Education (CTE) program. CTE seeks to introduce workforce training and skills into high schools, thereby building a younger generation of workers, ready for employment right after graduation with career readiness in mind.

Through CTE programs, high school students can earn college credits, enroll in union apprenticeships and develop specific trade and industry skills that align with community and industry needs. CTE offers eight career clusters and 126 courses, including 51 courses eligible for college credit. All five of FNSBSD's high schools offer CTE coursework; Hutchison High School in Fairbanks is a CTE intensive school. Many of CTE's students will graduate with the abilities to fill some jobs created through the F-35 beddown and related activities. Sustaining active partnerships between

CTE and local industries and employers (including the Air Force) will help ensure CTE's curriculum and programs remain relevant.

In early 2018, FNSB published the results of a CTE community assessment, which collected input from 72 employers, and a combined 2,055 FNSBSD students, staff and parents. The assessment identifies careers of interest for students and parents, the skills FNSB employers seek in job candidates, perspectives on education requirements for varied positions and recommendations for delivering CTE course work in the most effective ways possible. Notable findings from the assessment include:

 Students' top five industries of interest were #1 Health/Medical, #2 Science, Technology, Engineering and Math (STEM), #3 Arts, Audio/Visual Tech and Communications, #4 Military, and #5 Law, Public Safety, Corrections and Security.

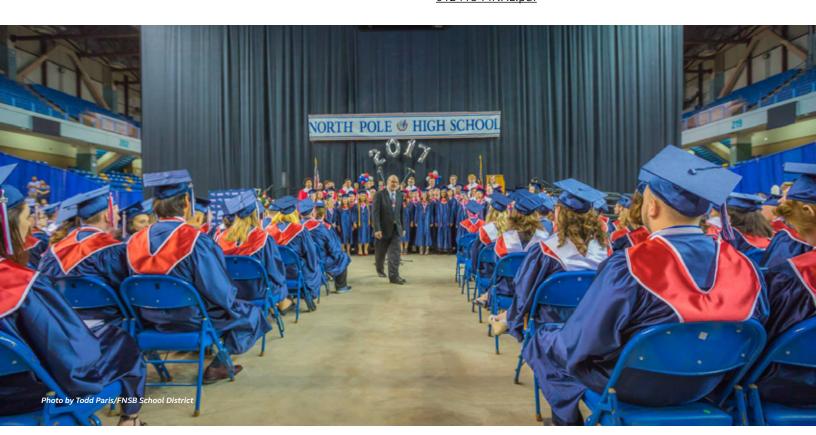
- Only one quarter of students indicated they are interested working in the Fairbanks area after graduation.
- Employers are looking for more than just hard skills. Critical soft skills most sought by employers include verbal communication, realworld problem solving and motivation/work ethic.
- Regardless of the industry, students, parents
 and staff all had the perception that the amount
 of education required by employers for entrylevel positions is much higher than what
 employers actually require.

The results from the assessment will help CTE and other workforce development programs adapt to accommodate the interests and preferences of young residents, while ensuring programs meet community and industry employment needs. The next phase of the assessment will be to develop a five-year plan for the CTE program. ¹¹

Unions

Unions are also part of the FNSB workforce development landscape. Labor councils seek labor agreements to provide service contracts, and are then able to offer that work to union contractors and train new workers to fill gaps through training and apprenticeship programs. Unions are also often able to help ease the transition for union workers arriving from other states. Local unions have been working closely with Lockheed Martin, UAF and other large regional employers to ensure the FNSB workforce is prepared to meet the employment demand related to the F-35 beddown.

Visit the CTE webpage to view the full report: https://www.k12northstar.org/cms/lib/ AK01901510/Centricity/Domain/1089/FNSBSD%20 CTE%20Needs%20Assessment%20Report%20v6-012418-FINAL.pdf





WORKFORCE DEVELOPMENT FOR MILITARY SPOUSES

Military Spouse Demographics

According to a 2015 report from the Defense Manpower Data Center (DMDC), based on a statistically-valid survey of active duty spouses, approximately 89 percent of active duty spouses are women and 11 percent are men; the average age of an active duty spouse is 32. ¹²

Forty-seven percent of all spouses have some college or a vocational diploma; an additional 28 percent have a four-year degree and 14 percent

have a graduate or professional degree. Out of all active duty Air Force spouses who are employed, the survey found that 59 percent work within the area of their education or training.

Defense Manpower Data Center (DMDC): Results from 2015 Survey of Active Duty Spouses & 2013-2014 Status of Forces Surveys of Active Duty Members. July 2016 Summary. Available here: http://download.militaryonesource.mil/12038/MOS/Surveys/MSO-VSO_Briefing_ADSS-SOFS-A_2016.pptx

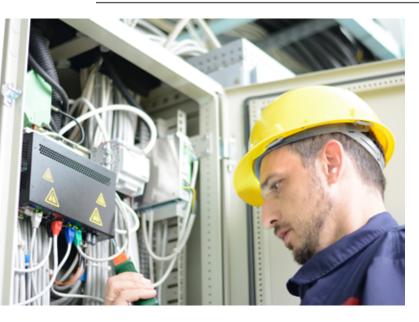
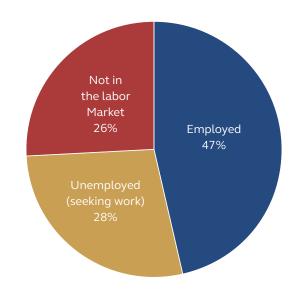


FIGURE 23: EMPLOYMENT STATUS OF MILITARY SPOUSES



Source: Blue Star Families Survey 2017

The logistics of living at
Eielson and having a spouse
commute to Fairbanks are so
stressful that our spouses just
take a time-out while here.
-EAFB focus group participant

Military Spouse Employment

Blue Star Families conducts an annual survey of active duty military members and their families to understand the challenges and needs of American military households, called the Military Family Lifestyle Survey. In 2017, the survey found that approximately 75 percent of military spouses are in the labor force. Of those in the labor force, 47percent are employed and 28 percent are unemployed but seeking work/in transition. Between 2016 and 2017, the total number employed stayed relatively flat, going from 48 percent to 47 percent. However, the number seeking work increased by seven percent (from 21 percent to 28 percent) and those not in the labor market decreased by five percent (from 31 percent to 26 percent), indicating more military spouses are trying to enter the workforce.

Of working military spouses, 55 percent report they are underemployed, meaning they may be overqualified, underpaid, or underutilized in their current position. More than half (51 percent) of all employed military spouses who responded to the survey earn less than \$20,000 per year. The 2015 DMDC survey shows 34 percent of employed military spouses work part time (less than 35 hours per week).

Lack of available, affordable child care is one of the biggest barriers to spouse employment. Blue Star Family Survey results indicate 67 percent of military respondents are not able to obtain the child care they need. According to the 2015 DMDC survey of active duty spouses, the primary reason they are not in the labor force is to care for children. Other reasons include the high costs of child care, attending school or training, preparing for a move, or unemployment due to a disability. The DMDC survey found that on average, unemployed spouses had been looking for work for about five months. For additional details on child care

programs, needs, gaps and recommendations, see the Education and Early Childhood Development focus area.

Licensing Challenges

The 2015 DMDC survey found 79 percent of active duty spouses have experienced a Permanent Change of Station (PCS) move during their partner's active duty career. Of these spouses, 14 percent acquired a new professional license or credential after their last move. For those acquiring a new professional license or credential, half of all respondents completed the process in less than four months. The other half took four months or more. Of those that took four months or more, 20 percent took four to seven months; eight percent took seven to ten months; and, 22 percent reported the licensing process took more than 10 months. Results from the Blue

Star Family survey referenced above show similar challenges: 63 percent of military spouses say they have experienced licensing challenges due to a geographic relocation.

To ease the relocation transition for military spouses who are employed in commonly licensed occupations, the Department of Defense (DoD) proposed three best practice guidelines for states to consider, outlined in Figure 24. ¹³

- U.S. Department of the Treasury and the U.S. Department of Defense: "Supporting our Military Families: Best Practices for Streamlining Occupational Licensing Across State Lines." February 2012. Available here: http://archive.defense.gov/home/pdf/Occupational Licensing and Military Spouses Report vFINAL.PDF
- University of Minnesota: "Military Spouse Licensure Portability Examination." November 2017. Available here: https://reachmilitaryfamilies.umn.edu/research/document/13865
- University of Minnesota: "Military Spouse Licensure Portability Examination." November 2017. Available here: https://reachmilitaryfamilies.umn.edu/research/document/13865

| | Recommendation | Legislation Passed in Alaska ¹⁴ | Implementation in Alaska ¹⁵ |
|----|---|---|---|
| 1. | Facilitate licensure by endorsement. Licensure by endorsement refers to occupational boards not requiring an examination for military spouses to transfer their licenses. Spouses are eligible for licensure by endorsement if they currently possess a license from a previous jurisdiction with requirements, similar to the board's requirements in the current jurisdiction. | No | No |
| 2. | Offer temporary or provisional licensing. Guidelines on temporary or provisional licensure are to grant spouses permission to practice in the current jurisdiction while they submit supplemental application materials and/or meet additional requirements. | Yes | Somewhat (see narrative for details) |
| 3. | Expedite the application process for military spouses. Expedited application processes allow prioritazation of spouses' applications so they may begin employment as soon as possible, after they submit completed applications. | Yes | Somewhat (see narrative for details) |



In November 2017, five years after the initial DoD recommendations were released, the University of Minnesota published a nationwide study titled "Military Spouse Licensure Portability Examination," which examined state-level policies to see if, how and where these guidelines are implemented and their effectiveness. The study focused on six common occupational boards: Cosmetology, Dental Hygiene, Massage Therapy, Mental Health Counseling, Occupational Therapy, and Real Estate Commission.

In Alaska, professional licensing is overseen by the Alaska Department of Commerce, Community and Economic Development. According to the study, Alaska has adopted two of the three policy recommendations via House Bill 28, passed by the Alaska Legislature in 2011. HB 28 states that boards may issue military spouses temporary licenses, valid for 180 days, with an optional extension period. In addition, the bill requires boards to expedite the application procedure for military spouses. To qualify, spouses must live with an active duty service member, be stationed in Alaska, and hold a current license or certificate in another jurisdiction with requirements equivalent to Alaska's occupational board requirements.

However, while the enabling legislation exists, the University of Minnesota study found that aside from staff at the Dentistry and Occupational Therapy boards, other Alaska board staff were unaware of the legislation and were therefore not expediting licenses or making accommodations for provisional licenses. In addition, except for the Massage Therapy and Occupational Therapy boards, the study found no process for spouses to transfer their occupational licenses.

Conversations with local workforce development stakeholders revealed there are fewer licensing barriers in trades fields, which were not considered by the University of Minnesota. Trade unions can often help with transitions; e.g., many unions allow members to transfer certifications from other states.

Removing licensing barriers for military spouses remains an ongoing priority for the U.S. military. In February 2018, the Secretaries of the Army, Air Force and Navy shared a joint memo at the National Governor's Association titled "Consideration of Schools and Reciprocity of Professional Licensure for Military Families in Future Basing or Mission Alternatives." The memo emphasizes the need to help ease transitions for military families highlights the importance of school quality/ease of school transitions for military families with children, and of professional licensing requirements for military spouses. In the memo, officials indicate they will take these criteria into consideration when selecting future troop locations.

ESTIMATED GAPS – WHAT ARE THE GAPS BETWEEN NEEDS AND EXISTING PROGRAMS AND SERVICES?

Need for More Technical and Vocational Experience

Compared to other states, Alaskans are less likely to have a postsecondary degree and less likely to complete a degree program. The 65% by 2025 effort seeks to increase the number of Alaska residents achieving all levels of postsecondary education, including bachelor's degrees, associate's degrees and certifications. To help meet industry needs and align worker skills with career objectives, more training and certification options are needed for those not needing and/or seeking a four, or even two-year degree. Many of the jobs that will be created through the F-35 Beddown, such as construction jobs, will likely require technical and trade experience versus associate or bachelor degrees.

In interviews and small group discussions, local workforce development experts emphasize the need for earlier introduction to employability and workforce development for Alaska youth. This could mean access to technical training and vocational education programs early in a young person's educational experience, potentially as early as elementary school. Students should also have better exposure to and information about the unique career opportunities and workforce needs in their communities.



Better Connection between the Unemployed and Available Jobs

The FNSB has been losing jobs over the past five years as construction, state government and other sectors shrink and workforce-age residents migrate out of the FNSB. However, according to workforce development specialists in the region, many unfilled jobs remain in the FNSB. To meet this gap, people who are unemployed or underemployed must have access to, and knowledge of the appropriate training opportunities, and the skills and interest to fill the unmet need. In addition, vacant positions must offer sufficient pay to attract workers.

Military Spouses Face Barriers to Employment

Military spouse unemployment and underemployment can have a negative impact on the financial security and wellbeing of military households, including lower retention rates and less willingness to continue in military service. According to national survey results, local interviews and EAFB focus groups, military spouses face several challenges to finding and retaining employment. Military spouses who work in a licensed occupational field are not always able to transfer licenses from other states. Alaska policies intended to accelerate the process have not been

fully implemented, creating delays and barriers for those who want to begin work quickly. In addition, the geographic isolation of EAFB discourages some military spouses who would like to work, but are uncomfortable and/or unwilling to make the drive to Fairbanks (approximately 25 miles from EAFB) or North Pole (approximately 12 miles from EAFB). These spouses often choose not to work, or opt to take positions on-base. Finally, military families with children sometimes struggle to find affordable child care options, thereby limiting the ability of the spouse to seek employment outside the home.



WORKFORCE DEVELOPMENT STRATEGIES WHAT ARE OUR RECOMMENDED SOLUTIONS FOR ANTICIPATED GAPS?

Connecting Military Spouses with Local Employment

WFD1. Remove barriers for military spouses to obtain occupational licenses.

- a. Consider expanding on House Bill 28 (2011) legislation so occupational boards can allow licensure by endorsement for military spouses seeking licensure in Alaska who already possess a license from another state with requirements that meet or exceed Alaska standards.
- b. Work with the Alaska Department of Commerce, Community and Economic Development to better implement the requirements of House Bill 28 (2011) so military spouses can access an expedited application process for occupational licensing and receive temporary licenses when needed. Proposed House Bill 262 of the 2017-2018 Legislative Session seeks to improve reporting and implementation. For updates on the bill, visit http://www.akleg.gov/basis/Bill/Detail/30?Root=HB%20262#tab6 4.
- Encourage military spouses relocating to EAFB
 to initiate the certification/licensure process
 prior to arrival.



WFD2. Coordinate with the Airman and Family Readiness Center (A&FRC) to supplement existing information sharing with Air Force families before they arrive at FAFR.

a. The A&FRC receives a list of incoming members 90 days prior to their PCS move to EAFB, and contacts them with an extensive list of information ranging from how to get across the border to local employment statistics and job information. This is an opportunity to collaborate and supplement the outreach with additional information on local workforce development, employment and training resources in the FNSB community.

WFD3. Encourage FNSBlocated Job Centers, workforce development program representatives and large employers to participate in military family welcoming programs.

Examples include:

- a. The bi-monthly information fair at the Spouse Welcome, when spouses get together to discuss tips on transitioning and living in the FNSB.
- b. The quarterly Heart Link program for spouses who are new to the Air Force.

WFD4. Prior to PCS, conduct debrief/departure interviews or focus groups with military families regarding experience with FNSB employment and workforce development.

Through these conversations, learn about military families' experiences in the FNSB with employment and workforce development, including most useful tools, barriers they experienced and recommendations to improve the process and resources for incoming families.







WFD5. Expand access to affordable child care services for military households.

Training the FNSB Workforce to Meet Industry Needs

WFD6. Host local training and employment events for residents and incoming military families to learn about education, training and employment opportunities available in FNSB.

a. Participants/sponsors could include the Alaska Department of Labor, local unions, the job center, the small business development center, service organizations, employers, industry organizations and education-training providers.

WFD7. Conduct targeted recruitment efforts to encourage businesses to relocate to the FNSB area.

Focus recruitment on businesses that offer an unmet service/retail gap and could benefit from the current employment pool, including military spouses.

This should be embedded as a strategy in the FNSB Comprehensive Economic Development Strategy and other community-wide planning efforts.

WFD8. Support implementation of Alaska's five workforce development plans, including the Maritime Workforce Plan, the Teacher Education Plan, the Oil & Gas Workforce Plan, the Mining Workforce Plan and the Health Workforce Plan.

Copies of these plans are available at: http://www.alaska.edu/research/wp/plans/. An April 2016 report, prepared by the McDowell Group for the Alaska Process Industry Careers Consortium, offers a helpful summary of the shared priorities and identified industry skills needed across the five state workforce development plans: http://apicc.org/wp-content/uploads/2016/07/McDowell-Cross-Industry-Workforce-Final-Formatted-4.28.16.pdf.

This could also feature guest lecture presentations or working with teachers to develop curriculum to help young people learn about the types of employment opportunities available in the community, including jobs that support the region's military installations.

WFD10. Expand and market the use of University of Alaska's Career Coach, as developed by Emsi.

The Career Coach tool maps and guides users to various academic pathways through an online assessment, followed by recommended fields and ultimately live job postings. The tool also has the potential to provide labor market analytics based on user responses.

Preparing Future Workers

WFD9. Continue to strengthen and expand existing secondary and postsecondary vocational and technical education programs.

Build future generations of workers who can meet increased demand for needed jobs, including military, technical and construction jobs generated by F-35 beddown activities.

Relevant programs and efforts include:

- a. Alaska CAN! Initiative
- FNSB School District's Career and Technical Education programs
- University of Alaska Fairbanks programs, including the Community and Technical College (CTC)

