4-Year Local/Regional Plan for the Central Oklahoma Workforce Investment Board

For Review & Approval by Governor Kevin Stitt

CENTRAL OKLAHOMA
WORKFORCE INNOVATION BOARD
A proud partner of the americanjobcenter network

June 1, 2023

Submitted by:
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Executive Summary

The Central Oklahoma Workforce Innovation Board's (COWIB) 4-Year Local/Regional Plan was created with strategic considerations from Board Members, Elected Officials, One-Stop partners and community-based organization partners. The Workforce Innovation and Opportunity Act (WIOA) of 2014 brings an action of all workforce system stakeholders to work collaboratively to achieve a common goal to improve the economic well-being of individuals and communities by providing them with the education, training and support they need to succeed in today's labor market, while also meeting the needs of employers for a skilled and productive workforce.

COWIB's strategy for fulfilling the demands of employers in our nine-county jurisdiction and vicinity is encapsulated in the Local/Regional Plan. As an organization, we have reviewed our objectives and aims to ascertain how we can synchronize with the latest post-pandemic circumstances and accommodate the shifts in the labor market's constantly changing landscape. The plan remains a valuable resource to support workforce partners in addressing the workforce's requirements within our service area. It serves as a roadmap to enhance their ability to be agile in their response.

We recognize the historically low unemployment rate of 2023, along with a low labor participation rate has resulted in a tight labor market. This situation has led to fewer job seekers and employers struggling to find qualified candidates while retaining their existing employees. In response, COWIB is committed to hearing the feedback of our business partners and providing a pipeline of skilled workers to bridge the skills gap in central Oklahoma.

The effectiveness of any Local/Regional Plan hinges on the combined efforts of policymakers, education and training providers, workforce development organizations, and employers. By collaborating and executing the strategies and measures outlined in this plan, we can build a more competitive and robust workforce that supports the continued growth and prosperity of our region. This Local/Regional Plan is compliant with the format specified in Oklahoma Workforce Development Issuance #10-2020: Regional and Local/Regional Planning Instructions. COWIB welcomes input on this plan from all our key stakeholders and partners.

Sincerely,

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A. Local Workforce Development System Vision

1. Provide a description of the local board's strategic vision and goals to support economic growth and economic self-sufficiency, including:
a. Goals for preparing an educated and skilled workforce, including individuals with barriers to employment; and,

Our planning region is committed to enhancing the standard of living in our communities by cultivating a proficient workforce through education and establishing connections between job seekers and employers. Our aim is to create a system that fosters mutual support among the business, educational, and governmental sectors to achieve common objectives, such as promoting job growth, enhancing employee productivity, and increasing employer satisfaction. Ultimately, our initiatives will contribute to boosting per capita income in central Oklahoma.

To put it simply, our decisions are based on the requirements of the local business community, and we equip our clients with training and employment opportunities that correspond with the skills necessary for the businesses in our region.

Education attainment may help individuals secure interviews, but work experience is often the key factor in obtaining a job. Work experience equips our workforce with the competencies and knowledge necessary to acquire and maintain well-paying jobs in high-growth, high-demand industries. To ensure that we offer more Work-Based Learning programs, including paid work experiences, paid transitional jobs, and on-the-job training opportunities, we have incorporated a provision in our service provision contract that mandates spending at least 29% of the assigned training funds on these services.

We have implemented an adult work experience program that enables our shared clients to learn and earn, irrespective of their employment status. This program has been particularly beneficial for clients who face various employment barriers, including single parenthood, women diversion from incarceration, displaced homemakers, individuals with prior drug offenses, and those who have reintegrated into society after incarceration.

We have implemented specialized training programs to equip individuals with new skills that are highly sought after in the job market. These training programs are designed to prepare individuals for in-demand occupations, such as Heavy and Tractor-Trailer Truck Drivers, Manufacturing workers, Carpenters, and Automotive Body and Related Repairers.

The Board has set a goal to conduct regularly scheduled AJC Partners and Friends meetings on a monthly basis, which will be led by the COWIB One-Stop Operator. These meetings are aimed at promoting effective collaboration and coordination among partner agencies and organizations involved in delivering services under the Workforce Innovation and Opportunity Act (WIOA). By combining their resources, expertise, and knowledge, partner agencies can provide comprehensive and effective workforce development services that cater to the needs of job seekers, workers, and employers in the community. Furthermore, the COWIB One-Stop Operator creates a weekly Hot Jobs flyer that highlights immediate job vacancies available in the nine-county service area for employers. The flyer is then distributed via email to a combined group of job seekers and AJC Partners. This initiative aims to increase awareness of available job opportunities and facilitate the matching of job seekers with suitable job openings.

The Board has established a monthly Business Services Network (BSN) meeting, which adopts a "no wrong door" approach for employers. The Business Services Network promotes an integrated service delivery model that allows employers to access and utilize our comprehensive range of services, irrespective of their particular needs. These meetings aim to foster resource sharing, address challenges, and promote best practices to support employers and businesses. Through the Business Services Network, we aim to provide a One-Stop-shop for employers, where they can access a range of services and support to help them grow and thrive. Our integrated approach ensures that businesses receive the assistance they need, regardless of which agency or organization they approach. This approach promotes collaboration, resource sharing, and effective service delivery to support the success of local businesses.

Our AJC Partners and Friends meetings, as well as the Business Services Network meetings, provide an ideal platform for exchanging information about our partners and community-based organization programs and initiatives. These meetings also facilitate identifying pressing workplace needs and issues faced by employers. In addition, these meetings create a professional networking environment for our partners and community-based organizations. This networking environment is akin to an in-person 211 meeting for all workforce stakeholders. We have established multiple Memorandums of Understanding (MOUs) that specify how we engage with all our partners.

Our goal is to increase the number of agreements with new partners, particularly those that work with individuals facing employment barriers. By doing so, we aim to co-enroll shared clients and combine resources in a braided fashion to deliver skilled workforce services more effectively. This approach ensures that our clients receive the best possible services and support to achieve their career goals.

The Board aims to achieve this strategy by ensuring that all staff members are proficient in using the O*Net crosswalk to identify and leverage relevant skills, knowledge, and abilities. Currently, most of our workforce lacks this essential skill set, and the Board acknowledges that our system has not adequately trained staff on how to use the crosswalk to support clients in transitioning to in-demand occupations. However, with minimal additional training, either in the classroom or on the job, staff members can quickly become proficient in this area.

Although the Board's funding focus has shifted to opportunity youth, we remain committed to fulfilling the WIOA mandate to prioritize career information for secondary school students. To this end, we plan to promote resources such as the OKCareerGuide assessment, which is supported by the Oklahoma Department of Career and Technology Education, in all new publications developed by COWIB to promote WIOA programs. In addition, the Board has proactively allocated a significant portion of funds towards paid work experience opportunities for our participants, which meets the WIOA requirement of 20%. By doing so, we are providing our participants with valuable opportunities to gain practical work experience, develop new skills, and enhance their resumes, which will increase their chances of success in the job market. Our commitment to providing comprehensive career information and work experience opportunities reflects our dedication to ensuring that our clients are well-prepared to achieve their career goals and succeed in the workforce.

Our Business Services team, which comprises of three dedicated professionals, plays a pivotal role in helping businesses find skilled workers and providing workforce solutions to meet their needs. The team offers a comprehensive range of services that includes job postings through the weekly Hot Jobs flyer, job fairs, and hiring events. In addition, they promote on-the-job training opportunities and apprenticeships options, which provide valuable opportunities for individuals to acquire new skills and gain practical work experience. The team also works closely with the Board's service provider to ensure that WIOA participants have the necessary skills to meet the needs of employers.

To achieve our primary objective of equipping the workforce with the necessary skills and knowledge to meet the demands of businesses, we prioritize regularly providing business demand information and data, sharing success stories of both WIOA participants and businesses, maintaining an updated list of One-Stop partners through a quick access portal on our website, and offering a comprehensive resource list of community-based organizations. Additionally, we strive to make all local policies user-friendly for interested parties and easily accessible on our website at www.cowib.org .

Again, our ultimate goal is to facilitate the matching of employers with the talent they need to succeed while also helping job seekers find meaningful employment opportunities. Through our Business Services team and other Board initiatives, we are working to bridge the gap between job seekers and employers, ensuring that our local workforce is equipped with the skills and knowledge needed to succeed in today's competitive job market.

b. Goals relating to the performance accountability measures based on performance indicators.

Our ability to achieve performance indicators rests on the number of individuals we can place in-demand occupations within our growing industry sectors. The key to achieving this lies in ensuring that each partner is held accountable for measuring their contribution to this component. Placing qualified clients in expanding industries should naturally result in meeting wage rate and retention measures. However, to create a functional workforce system, it is imperative that all partners comprehend these measures and collaborate to achieve them. Local partners possess the ability to respond to changes in the local economy better than statewide organizations. To advance the economy, we must empower our partner staff to act in the best interests of their communities.

As we continue to evolve into a fully integrated system, with each partner gaining a deeper understanding of their role in serving our common clients, including those with barriers, we can shift our focus on integrating more of those individuals into our growing workforce system. By educating our clients on the importance of high education attainment, we can increase then number of individuals who earn recognized credentials. In turn, this would enhance their skillset, making them more desirable to the labor market.

Central Oklahoma faces a significant challenge: our workforce is not growing fast enough to meet the increasing demand for vacancies. To address this issue, the Board must encourage individuals with barriers to become more involved in the workforce. One way to achieve this is by providing affordable and convenient access to advanced education, which would quip them with the skills needed to gain employment. By demonstrating that employment provides greater benefits than not working, the Board can help individuals realize the value of being an active member of the workforce.

We will maintain accountability for our service provider and partners, not only based on lagging performance numbers required by the state, but on actual monthly count. This approach ensures that staff understands their role in facilitating employment for our clients by providing them with every possible option, including additional training, on-the-job training opportunities, and workplace accommodations. To assist our clients who face multiple barriers, the Board has created a specialized list of high demand and critical occupations that specifies the necessary skills needed to begin and successfully complete training in each career field. Our service provider employs career navigators who conduct extensive research on in-demand occupations to identify those that offer a livable wage and require additional training. This approach helps improve our outcome rates and ensures that individuals secure desirable wages, thereby meeting our negotiated performance targets. By focusing on in-demand occupations, we can help our clients acquire the skills and knowledge needed to succeed in the workforce while also supporting the growth of our local economy.

2. Describe the strategy to work with entities that carry out the core programs and required partners to align resources available to the local area, to achieve the strategic vision and goals.

The Board assumes the responsibility of bringing together and coordinating all essential stakeholders to develop a strategy that aligns with our strategic vision and objectives. We frequently collaborate with our partners to communicate our vision and deliberate on the necessary actions to foster a skilled workforce and drive growth and prosperity in our community. Our conversations center around targeted outcomes that are consistent with our strategy, including enhancing employment opportunities for all job seekers, with a particular emphasis on underutilized labor sources such as individuals with disabilities, English language learners, and formerly incarcerated citizens. Throughout these discussions, we share relevant data, best practices, and training needs, and work collaboratively with our partners to establish actionable items. While we understand that not all partners may agree on every item, we remain committed to working with those who share our commitment to improving the quality of life in our region. We anticipate that this process will evolve over time in response to changing economic, demographic, and funding factors. Nonetheless, we remain steadfast in our pursuit of our strategic vision and goals with the support of all our partners.

B. Local Workforce Development System Response to Regional Plan

1. Provide an analysis of the local area's economic conditions, including:
a. Existing and emerging in-demand industry sectors and occupations; and
b. Employment needs of employers in existing and emerging in-demand industry sectors and occupations.

The Central Oklahoma Workforce Innovation Board (COWIB) closely monitors the economic conditions of our region using various sources, including data from Economic Modeling Specialist Inc., the Bureau of Labor Statistics, the Oklahoma Employment Security Commission, and the U.S. Department of Census, including The North American Industry Classification System – NAICS. We will continue to review all available data to gain insights into our economic conditions, including emerging high-growth industry sectors and occupations.

The Oklahoma Department of Commerce has identified several target industry sectors for the state, including Aerospace and Defense, Agribusiness, Automotive, Bioscience, Film and Music, Information and Finance Services, Manufacturing, Renewable and Traditional Energy, and Transportation and Logistics. Our review of Oklahoma's key industry sectors has provided us with a better understanding of the diverse industries that drive our state's economy. By analyzing workforce demographics, purchasing power, and supply chain requirements across these sectors, we can identify opportunities for growth and development in our region. We remain committed to using this knowledge to inform our strategies and initiatives aimed at promoting a skilled workforce and driving economic prosperity for all residents of Central Oklahoma.

In Program Year 2021, the Oklahoma Office of Workforce Development identified the top 10 Critical Occupations to be Heavy and Tractor-Trailer Truck Drivers, Registered Nurses, General and Operations Managers, Maintenance and Repair Workers, Accountants and Auditors, First-Line Supervisors of Construction Trades and Extraction Workers, Welders, Medical Secretaries, Insurance Sales Agents, and Sales Representatives.

Also, the top 10 Industries by total jobs in our region, listed in order, are Government, Health Care and Social Assistance, Retail Trade, Accommodation and Food Services, Administrative and Support, Waste Management and Remediation Services, Manufacturing, Construction, Transportation and Warehousing, and Finance and Insurance. There were an estimated 620,936 total jobs in Central Oklahoma in 2021, with Government being the largest sector employing 118,910 people, followed by Health Care and Social Assistance with 81,115 jobs, and Finance and Insurance as the tenth largest sector with 24,626 jobs. These industries make up 85% of the total jobs in the area.

The Target Sectors recorded in our region include Aerospace and Defense, Agribusiness and Bioscience, Energy (Renewable and Traditional), Information and Financial Services, Manufacturing, and Transportation and Logistics (including Automotive). The Complementary Sectors are identified as Construction, Health Care, Education, and Creative Industries. The wide range of industries with projected growth offers us ample opportunity to focus on those that will have the most significant economic impact in our area, while also providing multiple options for individuals seeking a career or career change. It is clear that some occupations within our growth industries will cross industry sectors.

In Oklahoma County, a variety of top private employers contribute to the local job market, including Love's Travel Stops & Country Stores, Paycom, Hobby Lobby, OG+E, Sonic, and American Fidelity. In addition, global companies such as Boeing, AT&T, Dell, Hertz, UPS, and the multi-platform content creation production company Prairie Surf Studios maintain a significant presence in the region, as outlined in the Great Oklahoma City Region Major Employers data sheet.

Located in downtown Oklahoma City, Prairie Surf Studios is a rapidly growing multi-platform content creation production company that operates out of a 1.3 million square foot building. With its impressive growth in the film industry, Prairie Surf Studios has quickly become a major player in our local economy. COWIB has played a pivotal role in bringing together film industry partners, training partners, and local school districts, including Oklahoma City and Mustang. Under COWIB's leadership, these entities are engaging in meaningful discussions to explore ways to create a basic high school program that introduces students to various aspects of the film industry. Recognizing the growth of the film industry in Oklahoma, COWIB realized the importance of cultivating a diverse and skilled workforce that can adapt to the industry's changing demands. This initiative is a testament to COWIB's unwavering commitment to promoting economic growth by connecting employers with the resources they need to develop a pipeline of skilled workers. Through collaborative efforts, the film industry partners, training partners, and school districts have identified ways to provide students with hands-on exposure to different aspects of the film industry. This includes learning about film assistants, grip, construction prop sets, boom operators, electrics, sound mixers, and other relevant areas. The construction of the district film lab at Douglas High School campus in Oklahoma City is a compelling model for regional school districts to follow to ensure that students are well-prepared to contribute to the growing film industry in Oklahoma. Overall, COWIB's leadership in connecting key stakeholders and promoting collaboration has resulted in a valuable asset that benefits the local community and the film industry by ensuring access to a pool of skilled workers who are well-equipped to contribute to the industry's success.

Agribusiness and Bioscience, Transportation and Logistics (including Automotive), and Aerospace are the sectors with the most growth potential from 2023 to 2026. Agribusiness and Bioscience are expected to see a growth of 1,708 new jobs, while Transportation and Logistics are projected to create 3,445 new jobs. The Aerospace industry is also showing significant growth across various occupations. Tinker Air Force Base, located in Midwest City, is one of the region's largest employers and is projected to create around 2,091 jobs during FY 22-23, with more than half of the job openings falling under the category of In-Demand Occupations for aircraft maintenance, as outlined in Attachment 7, "Tinker Air Force Base Hiring Forecast FY 22-23." The Greater Oklahoma City Region Aerospace Industry and Economic Impact Assessment of 2020 highlights that Tinker Air Force Base has emerged as the center of the region's

aerospace sector and plays a critical role in maintaining U.S. defense readiness. Additionally, the FAA's Mike Monroney Aeronautical Center provides essential products and services that impact various aspects of the U.S. commercial and general aviation sectors. Furthermore, the greater Oklahoma City region features a thriving private aerospace sector that includes traditional maintenance, repair, and overhaul (MRO), research and development on unmanned vehicles, and aircraft design and manufacturing. The growing synergies between the region's public sector aerospace entities and private sector firms are fostering a large and resilient aerospace ecosystem with a highly skilled and versatile workforce.

COWIB recognizes the essential importance of the Aerospace Industry to our regional economy. In response to the industry's evolving needs, we have identified several key in-demand occupations, including Aerospace Engineers, Aircraft Mechanics & Service Technicians, Avionics Technicians, and Aircraft Structure, Surfaces, Rigging & Systems Assemblers. We are committed to working closely with eligible training providers to ensure that job seekers and employers in critical Aerospace Industry fields have access to the resources they need to develop the skills and knowledge necessary to thrive in this dynamic and evolving industry. By providing targeted training, resources, and support, we are fostering a skilled and competitive workforce that can meet the demands of this vital sector, while promoting the overall economic growth and prosperity of our region.

At COWIB, we recognize the vital role that rural businesses play in promoting economic growth and enhancing labor participation in rural communities. We understand that these businesses face unique challenges and are committed to developing innovative strategies that enable them to thrive. By building strong and collaborative partnerships with rural businesses, we can leverage their unique strengths and insights to drive sustainable workforce development and promote economic growth in our region.

Through these partnerships, we can identify job openings, offer skill-building programs, and support entrepreneurship, generating more job opportunities and stimulating economic growth in rural communities. To ensure that our services are accessible to all, including those in the rural counties of Pottawatomie, Lincoln, Seminole, Hughes, and Okfuskee, we have stationed a dedicated and experienced Business Services consultant at the Shawnee Oklahoma Works center. This consultant is a valuable resource for local businesses, providing guidance and support for their workforce development needs.

To provide more opportunities for work-based learning, COWIB has established long-term partnerships with multiple rural businesses across different industry sectors. These enduring partnerships have enabled us to connect job seekers with meaningful work experience and skill-building opportunities, while also supporting the growth and success of our rural business partners. Some of these businesses include Oklahoma Custom Coating, CH&W Commercial Tire, Speir Insurance, Kalka Steel Erectors, Lincoln County Commission, Dusti Dennie Insurance Agency, Blue Wave Boats, City of Wewoka, Jasmine Moran Children's Museum, Pioneer Nursing Home, Bison Metal Technologies, CLM Construction, Shawnee Bridges Out of Poverty, TT Enterprises, Town of Earlsboro, Castle Grocery, RD Welding and

Millwright, Tryon Public Library, Yearwood Design Works, Rock On Trucking, Sand Bar Repair, and Shawnee Tax and Accounting Services.

2. Describe the knowledge and skills needed to meet the employment needs of the employers in the local area, including employment needs in in-demand industry sectors and occupation.

The Journal Record Staff reported on July 20, 2022, in The Journal Record article "Oklahoma pitches aerospace industry to global" that Governor Kevin Stitt and other Oklahoma representatives attended the Farnborough International Airshow in England to promote the state's aerospace industry. According to the Oklahoma Department of Commerce, the delegation included businesses, economic development organizations, and universities interested in expanding the industry. The article noted that aerospace is Oklahoma's second-largest industry and directly employs over 120,000 people through more than 1,100 entities. Additionally, nine Oklahoma colleges and universities offer degrees and certifications in aerospace, and a half-dozen technology centers provide aerospace-focused training and testing. The industry's annual economic impact on Oklahoma has been estimated at more than $44 billion, and it has been identified as the state's fastest-growing industry sector.

To fully support economic growth in our region, we must not only prioritize the aerospace industry, but also address other occupational categories that are currently experiencing high demand and growth. These cross-cutting clusters include Data Analysts, Systems Architects, and Cybersecurity Specialists; Software Developers and Engineers; Business and Market Intelligence Analysts; and Operation and Compliance Specialists. These occupations are essential to the long-term success of businesses and our economy as a whole, as they are required in a variety of industry sectors. While most of these jobs require a Bachelor's degree, they also require soft skills to interact with internal and external customers, articulate specific solutions to industry problems, and ensure successful outcomes. System Architects, Data Analysts, and Cybersecurity Specialists are not only relevant to IT companies but also to all companies that depend on the collection of data, protection of their proprietary information, and optimization of digital interfaces with customers and suppliers. Similarly, Software Development and Data Integration specialists are responsible for embedded software, mobile applications, and real-time customer interfaces, which are increasingly important in non-tech industries such as finance and retail that rely on digital communication with customers. Despite being one of the highest-demand jobs, Software Engineers do not have a standard occupational code, making it challenging to identify specific skill sets.

A list of in-demand occupations includes skilled trades such as electricians, plumbers, and welders, all of which were identified in the previous demand occupation list. Other occupations on this list include Precision Machinery Maintenance and Repair Technicians, Technically-Skilled Machinists and Operators, and First-Line Supervisors. These positions require some sort of post-secondary education, whether it be a nationally recognized competency-based certificate or the journeyman process through a registered apprenticeship. However, there is a lack of educational providers currently offering training and opportunities for skilled trades. These jobs require some of the same basic skill sets mentioned earlier that are traditionally associated with “soft skills” but also require a basic understanding from a STEAM (Science, Technology, Engineering, Arts and Mathematics) curriculum and the ability to work with

technology. The skill gap in manufacturing and related industries is directly linked to economic competitiveness and affects the daily operations of firms as well as their ability to innovate. These skill gaps are anticipated to widen as automation and digitization of the factory floor increase, especially among existing workers.

In March 30, 2022, Deloitte and The Manufacturing Institute reported on “Big Gains in Perceptions of US Manufacturing as Innovative, Critical and High Tech.” The key takeaways from the surveys were listed as follows:

- Sixty-four percent of consumers surveyed view manufacturing as innovative, up from 39% of respondents five years ago.
- Big gains in technology advances in manufacturing, but public awareness lags.
- Attracting and retaining a quality workforce is a top focus for 83% of manufacturers surveyed.
- Almost 45% of manufacturing executives surveyed have turned down business opportunities due to lack of workers.
- Majority of workers still prefer jobs in other sectors, such as retail, services, and technology.

According to a Deloitte and The Manufacturing Institute article, the U.S. manufacturing industry is increasingly viewed as crucial to economic and pandemic recovery. However, outdated public perceptions could be affecting the recruitment of new workers, potentially slowing down economic growth and manufacturing competitiveness due to a persistent shortfall of workers and a skills mismatch for smart manufacturing. The study found that perceptions do not reflect the current level of technological advances, benefits, and salary levels in the industry. Therefore, the manufacturing sector should bring public perceptions in line with the current reality to attract the skilled workforce needed for economic growth and global competitiveness. One of the key issues highlighted in the article is that manufacturing companies are increasingly competing with other sectors for skilled labor, with manufacturing ranking behind technology, healthcare, communications, energy, and financial services as preferred career options. Another issue is the perception that technology will replace jobs in the industry, whereas, in reality, technology is expected to enhance, rather than replace, jobs. The COVID-19 pandemic has raised awareness of the essential role of manufacturing in the U.S. economy, especially given the industry's designation as essential in producing ventilators and PPE and keeping supply chains rolling. The manufacturing industry is critical to bolstering the long-term U.S. economic competitiveness, and a new wave of workers is needed to further advance the use of technology.

COWIB understands the importance of identifying the specific skills required by the local business community to promote sustainable economic growth and enhance workforce participation. We rely on a diverse array of partnerships and collaborations to understand the unique demands and challenges facing our local business community. Our industry sector groups, Impact Partnership Grant (IPG) committees, Business Services Network, economic development organizations, chambers of commerce, and individual company partnerships all play a crucial role in providing valuable input on workforce needs and trends in our region's industries. Through these partnerships, we stay up-to-date on the latest developments and tailor our workforce development initiatives to meet the specific needs of our local employers.

In addition, we participate in industry advisory boards such as the Greater Oklahoma City Chamber Partnership and other business groups to gain insight into industry-specific skills. By directly partnering with industry sectors, training and education providers, we gain a deeper understanding of the precise skills necessary for each industry. We incorporate these essential skills into our analysis of in-demand occupations, seeking approval from our business members on the board before finalizing and publishing our list of in-demand occupations. These efforts enable us to identify the skills needed within specific industries and develop targeted programs and initiatives to support our local workforce.

Through our numerous engagements with the business community, we have found that one of the major obstacles that industries are encountering is the lack of individuals with strong work ethics. Our partners place a high value on employees who demonstrate effective time management, problem-solving, adaptability, willingness to learn, teamwork, strong communication skills, and emotional intelligence. These qualities are highly sought after in today's job market and are essential for success in any workplace. Most businesses are willing to train both entry-level employees and existing staff to acquire the necessary skills to advance in their company, as long as they fit and adapt to their work culture. To address this need, our service provider offers a comprehensive soft skills training program designed to equip job seekers with these critical skills**.**

3. Provide an analysis of the local workforce, including current labor force employment and unemployment data, information on labor market trends, and educational and skill levels of the workforce, including individuals with barriers to employment.

The COWIB region covers 6,774 square miles and includes nine Oklahoma counties, namely Canadian, Cleveland, Hughes, Lincoln, Logan, Okfuskee, Oklahoma, Pottawatomie, and Seminole. As of 2021, the region's population has grown to over 1.4 million residents, which accounts for more than 37% of the state's population, according to the U.S. Census Bureau. Between 2016 and 2021, the region experienced a population growth of 64,093, with Oklahoma County and Canadian County leading the way. Oklahoma County saw an increase from 784,684 in 2016 to 811,679, yielding 26,995 new residents, while Canadian County grew from 136,508 in 2016 to 157,615 in 2021, yielding 21,107 new residents.

COWIB acknowledges the significant challenges posed by historically low unemployment rates and low labor force participation rates in Oklahoma. These conditions can create difficulties for businesses seeking skilled workers, leading to lower productivity and limited job opportunities. Various factors can create barriers to employment, including an aging population, limited education or training, transportation difficulties, inadequate job opportunities in rural areas, high childcare costs, limited availability of childcare providers, and health issues, all of which contribute to the low labor force participation rate. These factors can have long-term effects on the state's economy and workforce development efforts. According to the U.S. Bureau of Labor Statistics Economy at a Glance report, the unemployment rate in Oklahoma has decreased gradually from 3.2% in September 2022 to 3.0% in February 2023.

The Central WDA (Central Region) Lightcast Q1 2023 - Economy Overview, shows in December 2022 there are concerns regarding educational attainment in the area. The report shows that only 20.2% of the region's residents have a Bachelor's Degree, which is 0.6% below the national average, and 8.3%

hold an Associate's Degree, which is 0.5% below the national average. The population and educational attainment levels in Central Oklahoma are as follows:

- 4.1% - Less than 9th grade (39,804)
- 6.6% - 9th to 12th grade (64,786)
- 26.5% - High School Diploma (258,139)
- 22.5% - Some College (219,745)
- 8.3% - Associates Degree (81,086)
- 20.2% - Bachelor's Degree (197,138)
- 11.7% Graduate Degree or Higher (114,056)

Of the projected 2026 new jobs, 32% will only require a high school diploma, 41% will require post-secondary education below a bachelor's degree, 23% will require a bachelor's degree, and 4% will require a graduate degree or higher. This presents both challenges and opportunities for our region in the coming years. We must focus on improving the educational attainment levels of our citizens, as a significant portion of our population has some college experience and could benefit from completing a post-secondary technical associate's degree or earning a nationally recognized certificate or credential. Through our partnership with the Regents for Higher Education and community colleges, we provide support to individuals facing obstacles such as family, work, or financial obligations to complete their degrees. The Regents offer scholarships and resources through their Reach Higher Campaign (reachhigherok.org) to help these adults earn the remaining credit hours needed to complete their degree. In 2018, the Reach Higher Program expanded its efforts to provide adult students with the opportunity to complete their degree in any of the Oklahoma Works critical occupation industries, in collaboration with two regional universities.

The Hispanic population in our area faces significant educational disparities, with nearly 40% lacking a high school diploma despite being the fastest-growing ethnic demographic in our region. We recognize this challenge and are committed to partnering with the Hispanic community to develop effective strategies to encourage younger Hispanics to complete their high school education and pursue post-secondary credentials. To this end, we have partnered with the Hispanic Chamber of Commerce and ORO Development Corporation to provide support through the Migrant and Seasonal Farmworkers Program. Our service provider has also recruited bilingual career navigators to support English language learners in the community.

Additionally, individuals who speak English as a second language (ESL) face unique challenges to securing employment, particularly in our region where there is a substantial population of Hispanic ethnicity and other linguistic backgrounds. We have established partnerships with contractors of the Adult Education and Family Literacy Act programs, specifically with the Oklahoma City Community College Community Outreach and Education department, to address this challenge. Our service provider has designated career navigators to collaborate with the OCCC staff to identify individuals with language barriers and receive referrals to WIOA programs. We also work closely with the OKC Metro Literacy Coalition, which consists of various organizations specializing in this area. Furthermore, Metro Technology Center joined as a partner in March 2021, and we share expenses at the OKC Central

Oklahoma Works center, providing Student Career Services and Adult Basic Education prep classes to the public and WIOA participants. Additionally, OIC-OKC offers ESL classes for job seekers as part of our commitment to support the diverse linguistic needs of job seekers in our region and help them overcome language barriers in employment.

A large population that encounters substantial barriers to obtaining employment are individuals who have been released from correctional institutions or juveniles with court-related involvement. To combat these obstacles, COWIB has formed partnerships with multiple state and local agencies. Currently, we have teamed up with Remerge of Oklahoma City, a female diversion program that offers employment counseling and placement services to women enrolled in a yearlong program designed to prevent incarceration. To make it easier to refer participants, the service provider has stationed a full-time career navigator on-site. Additionally, we are providing on-the-job training and work experience opportunities to bolster this initiative.

COWIB is committed to helping justice-involved individuals successfully reintegrate into society by providing them with training and employment opportunities in partnership with the Department of Corrections. We recognize the unique challenges that these individuals face and have taken proactive steps to address them. We work with several companies and businesses that offer second-chance opportunities to hire this population and provide on-the-job training and work experience to support their success. Moreover, we collaborate with community organizations such as TEEM, Diversion Hub, OIC-OKC, Urban League of Greater Oklahoma City, Work Ready Oklahoma and Goodwill of Central Oklahoma, all of whom share our mission of providing second-chance opportunities to those who need them most.

Furthermore, we have established a strong alliance with the Office of Juvenile Affairs to provide work-based learning opportunities in their medium secure facility located in Pottawatomie County and Level E group homes throughout Oklahoma, Cleveland and Canadian counties. We believe that investing in upskilling and training opportunity youth can provide them with the necessary skills and experience to secure and advance in jobs, resulting in increased employment and economic growth in their communities. By prioritizing the skills development of opportunity youth, we can help prevent them from becoming disconnected from the labor market and facing long-term unemployment or poverty. This can also foster a more skilled and diverse workforce, ultimately benefiting businesses and communities in the long run. Additionally, we are working with the Guthrie Job Corps, which has two in-house outreach and admission specialists at the OKC Central Oklahoma Works center. Guthrie Job Corps and COWIB have established a long-standing partnership to facilitate the co-enrollment of both youth and young adults in the WIOA programs.

As workforce development professionals, we are faced with a philosophical dilemma when working with groups that have barriers to employment. Our objective is to assist individuals in finding sustainable employment that fulfills their needs. However, we need to consider whether it would be more beneficial to train them for jobs in other regions with greater opportunities or for the limited jobs available in their local county. Although we prioritize individual choice, our career navigators must be informed of both options and collaborate with each client to determine the optimal approach. Our challenge is to provide

individuals facing obstacles with genuine choices that enable them to succeed in the workforce, particularly if they need to remain close to their support systems. To address this challenge, we are dedicated to equipping our career navigators with the necessary training to work with all clients on an individual basis, including those who encounter obstacles to employment. We will continue partnering with community stakeholders and engaging in innovative problem-solving to assist individuals with employment barriers in overcoming challenges and attaining their career objectives.

In July 2019, Pioneer Library System (PLS) and Central Oklahoma Workforce Innovation Board (COWIB) formed a unique partnership to enhance workforce development initiatives in this area. As part of this collaboration, COWIB stationed an experienced Career Navigator at newly opened Central library in Norman, located close proximity to the University of Oklahoma. Through this one-of-a kind partnership in the state, the library offers office and interview spaces along with additional administrative support, to the career navigator. Given the closure of the Cleveland County Oklahoma Works center in 2019, there was a significant gap in workforce development services available for this community. This innovative partnership has bridged this gap and serves as a mutually beneficial solution to address the need for such services.

As we move forward, it is imperative that we create pathways for individuals with barriers to become a productive member of our workforce. This includes those individuals with disabilities, but also those individuals that have English as a second language, formerly incarcerated individuals, members of families receiving some sort of public assistance and those wanting to enter non-traditional occupations. While we have increased our involvement with the Department of Rehabilitative Services to co-enroll those individuals we have also engaged in a variety of other programs that demonstrate our commitment to working with those who have barriers to a successful entry to work. ESL classes are available within some of our centers and we have staff stationed at a female diversion program in Oklahoma City and are providing them not only employment related counseling, but also training in non-traditional employment. We understand that most individuals that need that post-secondary education increase are already working and we need to provide their companies the ability to increase their skill levels through recognized credentials, but at the same time we need to be able to back fill those entry-level positions as incumbent workers get the skills they need to advance in their careers. Again, COWIB creates the weekly COWIB Hot Jobs flyer that is emailed to over 300+ job seekers, AJC Partners and Community Based Organizations has proven to be a beneficial resource. Job seekers feedback has been overwhelmingly positive. Many AJC Partners and Community Based Organizations share the weekly flyer to their customers as well as add it to their social media outlets. COWIB understands and is working to make those kinds of employer engagements available through the use of sector strategies.

Although individuals with disabilities represent a significant portion of our population, their unemployment rate is consistently higher than the current rate. To address this issue, we have been improving our partnership with government agencies that administer programs for individuals with disabilities. Additionally, we have sought out other community-based organizations such as Dale Rogers Training Center and New View Oklahoma to collaborate with in the delivering services to these individuals. Our partnership with New View Oklahoma aims to remove barriers for individuals with

limited sight. Through their assistance, we have installed software on all computers at the American Job Centers (AJC) to make them accessible for individuals with no or limited sight, benefitting both our clients and staff. We are committed to providing equal employment opportunities for individuals with disabilities and working with our partners to deliver the necessary services to help them overcome barriers to employment.

COWIB has established several successful partnerships with key stakeholders, allowing for a robust and comprehensive approach to workforce development. These partnerships have played a crucial role in enhancing the effectiveness of the board's initiatives and achieving its goals. Here are a few examples of the board's successful partnerships:

The Oklahoma Department of Rehabilitation Services, Central Oklahoma Workforce Innovation Board, and the University of Oklahoma's National Center for Disability and Training have collaborated to create two programs aimed at providing summer work experience and employment readiness skills to youth with disabilities aged 16 to 21. Building Employment Skills for Today (BEST) and Summer Transition Employment Program (STEP) have been successful thanks to the contributions of Central Oklahoma Workforce Innovation Board, which has provided onboarding orientation through Talent Reef, implemented tracking and payment software, and provided liability coverage. In Summer 2022 (PY21), the programs supported 68 participants across four counties (Oklahoma, Cleveland, Canadian and Logan) in several industry sectors. Interns gained experience in various settings, such as organizing and cleaning books in a library, performing janitorial duties and floor waxing in a school district, and assisting with vehicle cleaning in a bus barn. Other work placements included stocking shelves and caring for plants in a hardware store, managing product expiration dates and organizing shelves in a pharmacy, and assisting with park clean-up and maintenance tasks in a city maintenance position. Interns also worked in food service, construction, a veterinary office, a print shop, a clothing store, a grocery store, a bakery, a daycare, a gym, and a hotel. For Summer 2023 (PY22), the programs plan to expand to four local Workforce areas and serve 408 participants, partnering with over 100 employers.

The labor force harbors undiscovered and underutilized pools of talent, among which refugees represent just one example that tends to be disregarded in hiring practices. In Oklahoma, COWIB, Catholic Charities, and Citizen Potawatomi Nation collaborated to connect refugees with gainful, culturally fitting full-time employment, filling a gap of 75 immediate job openings. Citizen Potawatomi Nation is addressing workforce barriers by implementing solutions such as offering transportation services and providing ESL classes during employees' lunch breaks. By taking these proactive measures, Citizen Potawatomi Nation is empowering their workforce and removing obstacles that may have previously hindered their ability to excel on the job. This success story showcases the efforts of these organizations and the positive impact they had on the lives of the refugees, their families, and the employees of Citizen Potawatomi Nation. https://www.youtube.com/watch?v=lTvJJwQDwB0 .

As highlighted in the VeloCity Newsletter on Thursday, January 20, 2022, eight women enrolled in the ReMerge Oklahoma diversion program completed computer programming classes offered by Cultivating Coders, a New Mexico-based organization, in 2021. Given the high demand for computer coding skills, the Central Oklahoma Workforce Innovation Board (COWIB) and ReMerge Oklahoma collaborated to

connect a shared client with TeamLogic IT, a local business in Oklahoma City, for an internship that culminated in a full-time job opportunity. This success story serves as a testament to the dedication of COWIB and its partnerships in facilitating life-changing employment opportunities for individuals. https://www.youtube.com/watch?v=7sWp5paj6dE

The need for individuals with software development skills continues to grow at an unprecedented pace, with the US Department of Labor projecting a 21% increase in software developer positions by 2028. Currently, over 630,000 computing-related job openings exist in the US, as reported by Code.org. However, only 23 states have implemented policies that provide computer science courses to high school students, and only 11 states offer such courses to all K-12 students. Oklahoma adopted K-12 computer science standards in 2020, and over 71,000 computer science graduates joined the workforce last year.

The Central Oklahoma Workforce Innovation Board is dedicated to promoting diversity, equality, and inclusion. We also strive to utilize sector strategies to encourage employer engagement, enabling us to provide job opportunities that cater to the specific needs of every individual. Through these efforts, we aim to empower individuals to flourish within our workforce, as evidenced by our many success stories.

4. Provide an analysis of workforce development activities, including providing the SWOT analysis that indicates how the local area's service delivery system is prepared to meet the community's workforce development needs. The local area may add additional information to the regional SWOT analysis that was developed with the regional plan.
a. Describe the strengths and weaknesses of workforce development activities.
b. Describe the workforce development system's capacity to provide the workforce development activities to address the education and skill needs of the workforce, including individuals with barriers to employment.
c. Describe the employment needs of employers.

The Central Oklahoma Workforce Innovation Board has performed a SWOT analysis to evaluate the strengths, weaknesses, opportunities, and threats present within the Central Oklahoma workforce development system. Our analysis of the region's workforce development activities has uncovered both strengths and weaknesses. On the positive side, our SWOT analysis highlighted several strengths that distinguish us as a local workforce board. We benefit from a dedicated and engaged group of members, including Chief Elected Officials, Board members, and a well-established network of AJC Partners and community-based organizations that share our dedication to achieving our goals. Our transparent leadership style fosters open communication and collaboration, and our strong networking among partners enables us to pool resources and develop strong relationships. The COWIB One-Stop Operator plays a critical role in connecting us with new and established partners and maximizing our financial resources. The longevity of our service provider staff and dedicated career navigators enables us to build strong relationships and develop expertise over time. We have experience with sector partnerships that enable us to address industry-specific workforce needs effectively. We have also created and distributed a valuable resource, the weekly Hot Jobs flyer, which connects partners and job seekers. Our commitment to serving the community and achieving positive outcomes for our clients is reflected in

our accessible website, policies, forms, and training programs, which have produced successful outcomes for our clients. In addition, we offer a wide range of training options throughout the region and have a successful track record in implementing sector strategies for over a decade. Furthermore, one of our key strengths is the projected growth in most industries in our region, which creates exciting opportunities for job seekers and reinforces our commitment to building a robust and sustainable workforce.

Despite our strengths, we have identified several weaknesses that require attention. While the engagement of many partner organizations is a strength, it can also be a weakness that causes confusion among the general population about where to go for assistance. Consolidation of resources and policies would create a more customer-friendly environment and benefit the economic well-being of the area. The job matching programs of the state can be cumbersome and not user-friendly, which limits individual help for customers. The curricula are not always aligned with business needs, and the approval process for degree programs can be overly complex, whereas non-degree programs are more adaptable to changing workforce needs. Other weaknesses include agency transitions and a lack of innovation at the state level. Many partners have only a limited understanding of each other's operations, and eligibility requirements for each partner can be unclear. We also need to improve staff availability at every location to ensure services are available to anyone accessing the system. Our most significant weakness is that most partners work for state agencies, which are more responsive to funders than local communities. As a result, the varied needs in local communities often go unmet unless they align with state priorities.

The analysis revealed several opportunities, including steady population growth, with Canadian County being one of the fastest-growing counties in Oklahoma and the nation. Additionally, the board identified the opportunity to provide free training for employers and employees, including micro-credentials from various training providers. The state's recent economic growth in attracting new businesses, particularly in the Bio-Tech industry, was also identified as an opportunity. The governor's new Executive Order 2023-02 to create a statewide Workforce Transformation Task force and Impact Partnership Grants were also identified as opportunities for the board to make progress. Finally, the board has the ability to align its partners to provide better business services and meet the people where they are at by making the Oklahoma Works centers in central Oklahoma available during nontraditional work hours, similar to libraries. These opportunities will help the board to improve workforce development services in Central Oklahoma and create a more robust and sustainable economy for the region.

Moreover, the SWOT analysis has highlighted several threats that could impede the achievement of the board's goals. The loss of experienced elected officials due to state and local elections, combined with prevalent biases that hinder access to workforce services for disenfranchised populations, are major concerns. The board also recognizes that existing workforce system policies are misaligned, and economic recovery from the post-COVID era may be arduous. Oklahoma's labor force participation rate stands at 60.4%, ranking the state 35th in the nation, which leaves approximately 39.6% of the population not engaged and presents a significant challenge. Furthermore, the rural areas' unique workforce requirements pose different challenges than those in metropolitan areas. The burgeoning marijuana industry is also absorbing a considerable number of available workers. Lack of adequate

transportation options in both rural and urban areas, insufficient internet access for low-income and rural regions, and the rising costs of childcare and shortage of quality childcare providers are potential threats. Nevertheless, the board remains resolute in its pursuit of solutions that will enable them to provide effective workforce services to their constituents.

Although our local SWOT analysis revealed some negative aspects, our workforce development system continues to excel in providing development activities that address the education and skill needs of the workforce. One of our strengths is the abundance of educational institutions available in the region, such as eleven colleges and universities, and nine CareerTechs. These institutions have advisory groups that include business members who guide them in addressing the skills required in the curricula.

Listed below are the educational assets that help support the workforce for our businesses and organizations.

CareerTech:

There are 9 CareerTechs with various locations in the Area:

- Canadian Valley Technology Center (Chickasha, El Reno, and Yukon)
- Eastern Oklahoma County Technology Center (Choctaw/Harrah)
- Francis Tuttle Technology Center (3 Oklahoma City campuses: Rockwell, Portland and Reno)
- Gordon Cooper Technology Center (Shawnee)
- Metro Technology Center (4 Oklahoma City campuses: Airport, Downtown, South Bryant, and Spring lake)
- Meridian Technology Center (Guthrie)
- Mid Del Technology Center (Midwest City)
- Moore Norman Technology Center (Norman, Oklahoma City)
- Wes Watkins Technology Center (Wetumka)

Colleges & Universities:

There are 11 public colleges and universities in the Central Oklahoma Workforce Development Area:

- Langston University
- Langston University – Oklahoma City
- Oklahoma City Community College
- Oklahoma State University
- Oklahoma State University – Oklahoma City
- Redlands Community College
- Rose State College
- Seminole State College
- University of Central Oklahoma
- University of Oklahoma
- University of Oklahoma Health Sciences Center

The State Department of Career Technology is responsible for administering the Adult Education and Family Literacy Act (AEFLA) programs in our region and overseeing the grant funding provided by the Carl D. Perkins Career and Technical Education program. As a result of their efforts, the local CareerTechs have been able to develop innovative training programs that meet the needs of businesses in the area while keeping costs reasonable.

The Manufacturing Extension Agents and Industrial Coordinators at CareerTechs and community colleges are reliable partners in meeting the requirements of our business community. With a primary focus on working with manufacturers and businesses, they represent a significant avenue for growth in the years ahead, as outlined in our plan.

Institutions of higher education that offer degree programs are valuable assets to our region, especially through their continuing education divisions. These divisions create and provide credential and certificate programs that meet the needs of our region, covering a wide range of in-demand skills. These include first responder training, electrical lineman, waste water specialist, OSHA, and numerous others.

CareerTechs have shown their flexibility in introducing new adult training programs and utilizing credentials to verify the competencies of trainees. They provide a variety of medical training programs and also address the increasing need for aerospace and defense industry skills. Their training curricula are informed by industry-based advisory groups to ensure that they remain relevant and aligned with industry needs.

We are fortunate to have the support of multiple economic development organizations in our region, including the Greater Oklahoma City Chamber, Oklahoma State Chamber, and Select Oklahoma. This partnership covers Oklahoma and the nine contiguous counties, comprising a significant portion of the metro area. The group convenes monthly as well as quarterly to improve the economic well-being of our area and includes a diverse range of economic development organizations, county governments, education representatives focused on economic development, and local Chambers of Commerce located throughout our region, including Okemah, Wetumka, Chandler, Stroud, Wewoka, Seminole, Shawnee, Guthrie, Yukon, and El Reno. These diverse groups share valuable business information that is not available elsewhere. This information is used to inform our many partners who are not directly involved in these organizations, but who work with us to improve the economic well-being of our region.

Collaboration with our essential partners plays a critical role in meeting the needs of our shared clients/participants and strengthening the capacity of our workforce system to serve our business partners. We have successfully partnered with these organizations in the past and are committed to maintaining this collaborative approach to ensure their continued active participation in the workforce development system.

We with the Oklahoma Rehabilitation Services (ORS) also known as Oklahoma Department of Rehabilitation Services to ensure that employment-related services are provided to individuals with disabilities. ORS has demonstrated its commitment to the cause by hosting a virtual Business Summit, which aimed to raise awareness and provide tools and collaborations to "inspire a more inclusive,

productive workforce community." However, this does not imply that the rest of the system will not be involved in delivering these services. AJC partners will receive additional training on how to interact with a broader range of clients, rather than automatically referring them to a partner outside their facility. ORS will take the lead in training all partners on how to work with and develop individual employment plans for people with disabilities.

In February 2023, the Central Oklahoma Workforce Innovation Board signed an exclusive contract with the OU-National Center for Disability Education and Training to employ two full-time staff members, called Work Skills Trainers. The salaries of these trainers are fully funded by ORS (Oklahoma Rehabilitation Services). Their primary role is to provide Pre-Employment Transition Services to youths with documented disabilities. Specifically, they will engage students between the ages of 14-21, who are currently enrolled in school, in evidence-based learning activities that support their independent living and work skills.

The Pre-ETS activities offered by the Work Skills Trainers will be tailored to meet the individual needs of all learners and will cover all five required activities under the Workforce Transition and Opportunity Act (WIOA). These five WIOA Pre-Employment Services categories include Job Exploration, Counseling, Work-Based Learning, Post-Secondary Counseling, Workplace Readiness, and Introduction to Self-Advocacy."

The Oklahoma Human Services (OHS), also known as the Oklahoma Department of Human Services, will play a critical role in defining the parameters for the system's interaction with clients who receive TANF and Food Stamp benefits, as both programs have work requirements. However, the TANF employment program is primarily administered through local CareerTech, which limits employment options for recipients. To enhance our partnership and improve outcomes, we have collaborated with OHS/Hope Community Center at 10th & Rockwell in Oklahoma City. In addition to its role in establishing work requirements, OHS also provides child care subsidies and child care enforcement programs that significantly impact our ability to serve customers with employment barriers. These customers, who are often single mothers, rely on these support services to become active members of the workforce.

In fact, we have established active partnerships with our Community Action Agencies, which manage employment funds via Community Services Block Grants. As a part of this collaboration, we have assigned a business services consultant to the Shawnee Oklahoma Works center to work closely with them in developing rural employment programs that are essential for the area. We are determined to maintain this alliance and continuously support the creation of programs that cater to the employment needs of our rural communities.

Our partnership with the Oklahoma Employment Security Agency (OESC), our longest-standing partner, has been essential to the success of the workforce system. Through our shared space, work, and costs, OESC provides significant workforce services related to the employment of all individuals, including those receiving Unemployment Insurance benefits. Additionally, OESC administers the Federal Bonding programs, which is an asset in aiding those who cannot be bonded to obtain bonding through the U.S. Department of Labor (DOL). This program is particularly useful in assisting returning citizens. Moreover, OESC administers two separate veteran programs, Veterans Upward Bound and OESC Veterans Services,

both of which are located on-site at the OKC Central AJC. These agencies provide veterans and their spouses with comprehensive employment assistance services to help them transition from service to jobs. Furthermore, the proximity of ODVA (Oklahoma Department of Veterans Affairs) and Volunteers of America - Oklahoma Veterans Services (Homeless initiative) to the AJC allows for a warm handoff of additional supportive services to this population. OESC is responsible for maintaining the electronic system for both placement activity and case management of WIOA Title I participants.

Our AJCs will continue to deliver services in a seamless fashion, with both state merit staff and contracted service providers working as a cohesive unit. Our aim is to improve this partnership's effectiveness in serving clients and making it more beneficial for businesses looking for help in recruiting credentialed and certified employees. We will strive to enhance the coordination and communication between our staff and partners to ensure a more integrated and streamlined service delivery model. This will enable us to provide our clients with a comprehensive range of workforce services and support, tailored to their unique needs and requirements. By working collaboratively, we will enhance our capacity to help job seekers find meaningful employment and assist businesses in meeting their workforce needs.

Over the past five years, the Central Oklahoma Region has demonstrated a strong commitment to working together for the betterment of our communities. Our focus has always been on providing high-quality, locally-delivered services to our clients and customers. We are deeply invested in ensuring that our workforce system meets the needs of our business community while also improving employment options for our citizens. As a local organization, we have a unique understanding of the challenges facing our community and are well-positioned to tailor our services to meet those needs. However, we recognize that there are state-level requirements that we must adhere to, even if they may not always align with our local priorities. Despite these challenges, we remain committed to working collaboratively and creatively to find solutions that benefit both our communities and the state as a whole.

We take a customer-focused approach in working with businesses, which enables us to better understand and meet their needs. For more than ten years, we have conducted sector analyses and collaborated with educational institutions to develop new programs that align with industry demands. We recognize that to engage employers, we must provide value beyond our human resource consulting services. As such, we offer a range of options and continuously gather feedback from our employer engagements. Going forward, we will use this feedback to work with educational institutions to ensure that our workforce's skill level is continually growing and adapting to meet evolving industry demands.

Several of our partner organizations have established relationships with numerous businesses that offer valuable insights not only in terms of the skills they require but also in providing employment opportunities for individuals, particularly those who face barriers. Many businesses in our region have a track record of employing individuals with disabilities, those with English as a second language, and those who were formerly incarcerated. We have collaborated with a number of such businesses to provide financial resources that enable them to employ such individuals.

The key to ensuring that the workforce system has the capacity to address the education and skill needs of the workforce is to establish a primary point of contact for the business community. COWIB, as a

neutral non-service provider, is ideally positioned to take on this role. While we may not always be the primary contact for the business community, we need to ensure that all of the workforce development programs are aligned to meet their needs. To achieve this, we will continue to have conversations with our partners and establish a system to share information on a consistent platform. We will also work with our partners to teach them how to properly interact with the business community and communicate their needs to other partners in Central Oklahoma. Our goal is to establish a business connection alliance that sets training criteria for individuals making calls on behalf of the workforce development system. Additionally, we will work on developing a system that enables partners to gather and share information about current workforce issues. This will serve as the backbone of our workforce system.

Although certain skill sets such as healthcare credentials, skilled trades licenses, and bachelor degrees will always be essential, employers have expressed apprehension about a more overarching problem. Every sector advisory group that we have engaged with in the last decade has raised concerns about the scarcity of basic work ethics among new hires. Employers, in particular, look for employees who have a grasp of the significance of being punctual, accountable, a team player, and possessing interpersonal skills. Inadequate verbal and written communication skills, as well as an inadequate understanding of their industry or the particular skill sets required to enter it, are often cited as challenges faced by new employees.

The labor participation and the workforce have been significantly impacted by the recent surge in telework, or remote work, which can be attributed largely to the global pandemic that has swept across the world. With the rise of telework, there has been a shift towards a "customer choice" labor market where employers are competing for employees' time and skills. This has resulted in an increase in the number of job openings available, with many job seekers having 2.5 job opportunities to choose from. While this has created a favorable environment for job seekers, it has also led to a situation where many people who are eligible to work are choosing not to apply for employment. This has created a labor shortage in certain industries and regions, leading to difficulties in finding workers for essential jobs.

The impact of telework on labor participation has also been felt in terms of the types of jobs that are available. While remote work has enabled many people to work from home, it has also created a shift towards jobs that are more suited to remote work, such as those in the technology or finance industries. This has led to a decrease in demand for certain types of jobs, such as those in the hospitality or retail industries, which may require more face-to-face interaction.

Overall, telework has had both positive and negative impacts on labor participation and the workforce. While it has created a more customer-centric labor market and enabled more people to work remotely, it has also led to a labor shortage in certain industries and regions and a shift towards jobs that are more suited to remote work. As telework continues to evolve, it will be important to monitor its impact on the workforce and ensure that all individuals have the opportunity to participate in the changing nature of work.

Instead of solely attributing the lack of workplace ethics to education, it would be more beneficial to examine multiple factors that may contribute to this problem. The board perceives this as a chance for

the workforce system to demonstrate its value. The question we need to answer is how to effectively communicate the importance of incorporating these so-called "soft skills" or character traits into the educational environment. While individuals may have the required hard skills, they can still lose their jobs if they do not fit into the work culture or environment. Unfortunately, this is not typically part of the course work in educational institutions, which is why it is important to bridge the gap between education and the workforce system.

Our goal is to maintain strong partnerships and identify opportunities to address the needs of the business community. Our primary focus is on industry-recognized credentials and certificates, and we have made noteworthy progress by collaborating with our partners. Together, we have established courses that cater to specific industry trade skills, such as apprenticeship programs like the Western Oklahoma Electrical JATC, IBEW (International Brotherhood of Electrical Workers), and Oklahoma Rural Water Association.

In addition, COWIB has endorsed the free D-level water/wastewater treatment program offered by Rose State College Workforce Development, which emphasizes obtaining two certifications issued by the Oklahoma Department of Environmental Quality (DEQ). This career path is considered critical with the potential for earning well above the board's definition of a self-sufficient wage, despite not being listed as an in-demand occupation.

In June 2021, COWIB established a unique partnership with InTune Mother School of Perinatal Health, an eligible training provider located in Midwest City. This partnership provides training for individuals to become Perinatal Wellness Coaches, which is an in-demand occupation falling within the scope of Community Health Workers. InTune Mother School of Perinatal Health & Wellness aims to bridge the gap in education and provide access to high-impact services for birth workers, both new and seasoned, through economic stimulation and innovative collaboration. Their ultimate goal is to provide culturally-centered perinatal education to diverse populations, including individuals, organizations, and institutions, to increase access to specialized self-care with a focus on perinatal health and reproductive well-being. This career path also has the potential for earning well above the board's definition of a self-sufficient wage.

We have renewed our partnership with the University of Central Oklahoma to attract and recruit high school students interested in becoming K-12 teachers in math, science, and special education. This initiative aims to prepare highly-skilled professionals who can teach critical subjects and meet the needs of the community, thereby supporting the education sector.

5. Based on the regional plan's data analysis, describe the local area's key workforce development issues and possible solutions to be implemented within the local area.

Our region's workforce development challenges are complex and multifaceted. One key issue is that our current curricula do not align with the demands of businesses, which means that our citizens, including those with disabilities, do not have the necessary skills to join the workforce. To address this challenge, our proposed solution is to designate COWIB as the primary organization responsible for developing a system that identifies the real-time skills required by the workforce and sharing this information with all

educational institutions. This will help determine the best provider(s) for the necessary skill training, whether through a single provider, multiple providers, or incorporation into all curricula. Furthermore, we will partner with the Governor's newly established Workforce Transformation Task Force, which will concentrate on designing a new workforce delivery system in Oklahoma. To accomplish this, we will consolidate state workforce resources into a single entity responsible for workforce development. This will enable us to establish Centers of Excellence and offer letters of support to the Greater Oklahoma City Chamber of Commerce and other entities for noteworthy and impactful projects in our region.

Our current job matching system is inadequate in providing necessary information to all partners to share employment opportunities with their clients. Therefore, we will work together to find a solution that allows all partners to access the job matching system and define their rights to utilize it for placement activities. The job matching system will help identify key skills that businesses require when posting job announcements in the system. Each partner will need to sign an acknowledgment accepting the conditions of use of the electronic matching system to gain access.

One major weakness of the workforce development system is the lack of alignment among partner policies. To address this issue, the Central Workforce Area will collaborate with its partners to establish comprehensive policies for providing employment opportunities to all clients, including those facing barriers to employment. The policy will also guide interactions with the business community and help gather labor market intelligence to inform how the workforce system can meet business needs and provide clients with necessary information on required skills. The policy will direct clients to appropriate training venues and explore financial assistance options for accessing training.

Another weakness of the workforce development system is the lack of knowledge about the services offered to clients, resulting from a lack of community-level involvement from state agencies. We plan to provide training to all front-line staff who engage clients in collaboration with our partner agencies. This will ensure that knowledgeable staff members are available within all partner organizations to refer clients to direct services. As staff turnover is a workforce threat in our area, this will be an ongoing training opportunity. Our partners will approach discussions about workforce opportunities from the perspective of being members of the local community and their goal is to provide help to our business customers and workforce clients to ensure continued economic growth in Central Oklahoma. Unfortunately, we face a branding issue and cannot use funds for advertising, so we must continuously explore alternative ways to overcome this issue.

We will maintain our engagement with business partners and facilitate a two-way flow of information between them and educational institutions to ensure that their skill requirements are met by relevant and up-to-date courses. We will also ensure that our partner agencies serving individuals are aware of industry-specific skill needs and develop a framework to ensure that no client is referred to a business unless they possess the necessary skills and fit the company culture. Regular partner meetings will be conducted to disseminate information about industries and companies in our area.

Furthermore, the Central Oklahoma Workforce Innovation Board (COWIB) is committed to promoting the growth and prosperity of individuals in the community by creating impactful employment opportunities. In line with this goal, COWIB was awarded the Impact Partnership Grant funding by the

Oklahoma Office of Workforce Development. This grant was specifically designed to support COWIB's efforts in focusing on two critical industry sectors - childcare and healthcare.

By focusing on these sectors, COWIB is able to address two critical needs in the community. The demand for quality childcare services is rapidly increasing, while the healthcare industry is experiencing a shortage of skilled workers. Through this grant funding, COWIB aims to promote the development of a highly skilled and diverse workforce that can meet the evolving demands of these industries.

COWIB recognizes the importance of investing in the future of these industries, and the positive impact that a strong and dynamic workforce can have on the community as a whole. With this grant funding, COWIB is committed to developing innovative strategies and partnerships that will foster economic growth, create job opportunities, and support the success of individuals in Central Oklahoma.

C. Local Workforce Development System Description

1. Describe the workforce development system in the local area by addressing each of the following.
a. List and describe the programs that are included in the system.

Please refer to the chart for all our partners in Central Oklahoma:

Program/Activity			One-Stop Partner
(a)	Programs authorized under Title I of WIOA:		
	i	Adults & Dislocated Worker Activities	Board of Local Elected Officials (Central Oklahoma)
	ii	Youth Workforce Investment Activities	Board of Local Elected Officials (Central Oklahoma)
	iii	Job Corps	Guthrie Job Corps Center; Talking Leaves Job Corps Center
	iv	YouthBuild	(No programs in Central Oklahoma)
	v	Native American programs	Absentee Shawnee Tribe; Cheyenne and Arapaho Tribes of OK; Citizen Potawatomi Nation; Seminole Nation of Oklahoma; United Urban Indian Council
	vi	Migrant and Seasonal Farmworker	ORO Development Corporation
(b)	Programs authorized under the Wagner-Peyser Act		Oklahoma Employment Security Commission
(c)	Adult education and literacy activities authorized under title II		Oklahoma Department of Career and Technology Education
(d)	Programs authorized under title I of the Rehabilitation Act of 1973		Oklahoma Department of Rehabilitation Services
(e)	Activities authorized under title C of the Older Americans Act of 1965		AARP Senior Employment Foundation; Association of South-Central Oklahoma Governments (ASCOG); National Indian Council on Aging (NICOA)
(f)	Career and technical education programs under the Carl D. Perkins Act of 2006		Francis Tuttle Technology Center; Metro Technology Center; Oklahoma City Community College; Oklahoma State University - OKC; Rose State College
(g)	Activities authorized under chapter 2 of title II of the Trade Act of 1974		Oklahoma Employment Security Commission
(h)	Activities authorized under chapter 41 of Title 38		Oklahoma Employment Security Commission
(i)	Employment and training activities under the Community Services Block Grant Act		Central OK Community Action Agency; Deep Fork Community Action Foundation; CAA of Oklahoma City
(j)	Employment and training activities under the Department of Housing and Urban Development		Norman Housing Authority; Oklahoma City Housing Authority
(k)	Programs authorized under State unemployment compensation laws		Oklahoma Employment Security Commission
(l)	Programs authorized under section 212 of the Second Chance Act of 2007		(No programs in Central Oklahoma)

(m)	Programs authorized under part A of title IV of the Social Security Act	Oklahoma Department of Human Services (TANF)

b. List the location(s) of the comprehensive One-Stop Center(s) (at least one) within your local area; and any affiliated or specialized centers (both physically and electronically linked, such as libraries) in the local workforce development area. Identify the workforce system partners who are physically co-located in those centers.

In Central Oklahoma, we have 3 Comprehensive Centers, 3 Specialized Centers and 5 Community-Based Offices serving the following counties: Canadian, Cleveland, Hughes, Lincoln, Logan, Okfuskee, Oklahoma, Pottawatomie & Seminole.

Our Comprehensive Centers include:

- *Oklahoma County*
  5005 N Lincoln Blvd
  Oklahoma City, OK 73105
  Partners physically located at this center: COWIB, OESC, Veterans Upward Bound, Guthrie Job Corps, and Metro Technology Center.

- *Seminole County*
  229 N 2nd
  Seminole, OK 74868
  Partners physically located at this center: Central LWDB and OESC.

- *Pottawatomie County*
  2 John C. Bruton Blvd
  Shawnee, OK 74804
- Partners physically located at this center: Central LWDB, OESC, Guthrie Job Corps, and Department of Rehabilitation Services.

Our Specialized Centers Include:

- *Lincoln County*
  722 Manvel Ave
  Chandler, OK 74834

- *Canadian County*
  210 N Choctaw Ave
  El Reno, OK 73036

- *Logan County*

114 W Harrison
Guthrie, OK 73044

Our Community-Based Offices Include:

- *Cleveland County*
  Pioneer Central Library
  103 W Acres
  Norman, OK 73069

- *Hughes County*
  Grace M. Pickens Public Library
  209 E. 9th St
  Holdenville, OK 74848

  Wes Watkins Technology Center
  7892 OK-9
  Wetumka, OK 74883

- *Oklahoma County*
  Hope Center Office
  7201 NW 10th St
  Oklahoma City, OK 73127

  ReMerge
  823 N Villa Ave
  Oklahoma City, OK 73107

c. Describe the roles and resource contributions of each of the One-Stop partners. Please include the completed Job Seeker and Business Services service matrices.

The One-Stop Partners of the Central Oklahoma Workforce Innovation Board play various roles and provide resources that support the workforce development needs of job seekers and employers. Some of these roles and resources include providing career guidance and counseling, job search assistance, training and education programs, access to job listings and labor market information, and connections to community resources and support services. In addition, the One-Stop Partners work closely with COWIB to ensure that their services are in line with the local workforce development strategies and goals. As a result, the following One-Stop Partners are co-located at a comprehensive center to

maximize their coordination and collaboration in providing high-quality services to job seekers and employers:

The Oklahoma Employment Security Commission (OESC) is among the One-Stop Partners that operate in co-located centers, including the OKC Central, Shawnee, and Seminole Oklahoma Works centers. OESC offers a range of services to job seekers and residents in Oklahoma, such as referring them to appropriate job opportunities and providing job training assistance to individuals who are economically disadvantaged or have been displaced due to business closures or layoffs. Additionally, OESC evaluates the needs of individuals and directs them to relevant support agencies and programs as needed. Furthermore, OESC manages the Unemployment Insurance Program, which extends financial aid to eligible unemployed workers. OESC makes concerted efforts to locate suitable employment opportunities and provide reemployment assistance to those receiving unemployment benefits, with the goal of helping them re-enter the workforce as quickly as possible.

Oklahoma Rehabilitation Services (ORS) is another One-Stop Partner that operates in co-located centers, including the OKC Central, Shawnee, and Seminole Oklahoma Works centers. ORS works towards expanding opportunities for employment, independent living, and economic self-sufficiency for individuals with disabilities in Oklahoma, by helping them overcome barriers to success in the workplace, school, and home.

Moreover, ORS offers vocational rehabilitation, employment, and limited independent living services to eligible individuals with disabilities. In case medical equipment, assistive technology, or related services are part of an Individual Plan for Employment (IPE) developed with a vocational rehabilitation client, ORS may provide them. Additionally, ORS may offer assistive technology devices and services for independent living purposes in certain cases.

The Adult Education and Family Literacy (AEFL) Division of the Oklahoma Department of Career and Technology Education (ODCTE) serves as the pass-through agency for the federal Adult Education Family Literacy Act (AEFLA) grants. AEFLA is a federal law that can be found in Title II of the Workforce Innovation and Opportunity Act (WIOA), and its primary purpose is to help adults acquire literacy skills, gain knowledge and skills for employment and self-sufficiency, and improve the economic prospects of their families.

Apart from the federal grants provided under the AEFLA, ODCTE's AEFL team also oversees adult education allocations supported with state funds. Currently, Oklahoma AEFL has 32 programs across approximately 111 sites, and COWIB's providers include Canadian Valley Technology Center, Metro Technology Center, Meridian Technology Center, OIC of Oklahoma City, Oklahoma City Community College, Oklahoma Department of Corrections, and Shawnee Public Schools.

Guthrie Job Corps is another program that operates at the co-located OKC Central and Shawnee Oklahoma Works centers. Guthrie Job Corps offers a wide range of services, including career planning,

on-the-job training, job placement, residential housing, food service, driver's education, health and dental care, a biweekly basic living allowance, and a clothing allowance.

The mission of Guthrie Job Corps is to equip eligible young people, between the ages of 16 and 24, with the skills necessary to achieve employment and independence, and to place them in meaningful jobs or further education.

Veterans Upward Bound is another program that operates in the co-located OKC Central Oklahoma Works center. Its mission is to motivate and support veterans in developing the academic and other necessary skills to succeed in a postsecondary education program. The program offers counseling, mentoring, tutoring, and academic instruction in core subject areas to assess and improve the basic skills of the veterans. The primary objective of the program is to increase the rate at which participants enroll in and complete postsecondary education programs.

All Veterans Upward Bound projects are required to provide instruction in mathematics up to pre-calculus, laboratory science, foreign language, composition, and literature. The projects may also offer short-term remedial or refresher courses for veterans who are high school graduates but have postponed pursuing postsecondary education. The projects are expected to assist veterans in securing support services from locally available resources such as the Veterans Administration, state veterans' agencies, veteran associations, and other state and local agencies that serve veterans.

The Work Ready Oklahoma (WRO) program is also located at the OKC Central Oklahoma Works center. It provides comprehensive services to help Oklahomans quickly find employment, reduce their chances of future job loss, and advance in their careers. Leveraging the latest research and best practices, Work Ready Oklahoma is committed to bringing innovation to the workforce development field.

For employers, Work Ready Oklahoma is a valuable resource that offers free soft skills training, vocational training, continuing education, job placement, job coaching, and more. By meeting the needs of local employers, WRO helps build a stronger workforce in Oklahoma. Additionally, WRO is a contracted provider for the Oklahoma Department of Human Services (OHS), offering free training opportunities for TANF and SNAP participants. Furthermore, WRO partners with community colleges, career techs, and nonprofits to ensure access to a diverse range of training options, enabling individuals to launch their careers to new heights.

Attachment III in this Local/Regional Plan contains a copy of the Job Seeker Business Services Matrix for our region.

2. Identify your key strategies for aligning the core programs (WIOA Title I, II, III, and IV programs) as well as all required partner programs within the local One-Stop system of comprehensive and affiliate offices by addressing each of the following items. (Include a copy of any completed Process Maps and how they are used to align services and avoid duplication of services).

a. Assess the types and availability of adult and dislocated worker employment and training activities in the local area.

Career services for adults and dislocated workers are available throughout all nine counties of the Central Oklahoma workforce area, although these services are typically limited in resources. Nonetheless, thousands of workers benefit from these services annually. In this Local/Regional Plan, we showcase the many One-Stop partner programs that offer career services to adults and dislocated workers. These programs include the Wagner-Peyser program, which provides basic career services to any eligible adult in the United States, the Unemployment Insurance program, which disburses benefit payments to more than 19,000 claimants each month, and the RESEA program, which provides valuable reemployment services.

The One-Stop partner programs also provide support to the general population of adults and dislocated workers, including through the WIOA Title I Adult and Dislocated Worker grants. In Program Year 21, these programs provided individualized career services to a total of 946 participants. Moreover, certain subsets of adults and dislocated workers receive tailored services from our SCSEP program partners, AEFLA program partners, WIOA Native American programs, TANF, TAA, Jobs for Veterans State Grant, and National Farmworker Jobs Program, which offer various types of services as specified in WIOA Section 134(c)(2)(A).

In addition to the career services outlined in WIOA Section 134(c)(2)(A), the WIOA Adult and Dislocated Worker formula grant programs offer an array of training activities and supportive services, although they may be limited by program resources. WIOA Section 134(c)(3)(E) gives priority to individuals who receive public assistance, have low income, or have basic skills deficiencies. Furthermore, we adhere to the priority guidelines established by the Jobs for Veterans Act.

b. Provide an explanation of how the local board addresses local rapid response activities.

The Central Oklahoma Workforce Innovation Board (COWIB) is a critical player in supporting local rapid response activities, particularly during times of economic uncertainty, layoffs, and business closures. COWIB collaborates closely with local employers, employees, and community organizations to respond quickly and effectively to minimize the negative impact on the workforce.

COWIB is well-prepared to coordinate resources and services, including job search assistance, training programs, and supportive services such as childcare and transportation. This ensures that displaced workers can access the resources they need to secure new employment opportunities and overcome any barriers they may face.

Moreover, COWIB has established robust partnerships with key stakeholders, including educational institutions, industry associations, and economic development organizations. These partnerships allow COWIB to leverage a wide network of resources and expertise to develop effective strategies for responding to rapid workforce changes in the local community.

While rapid response activities are primarily the responsibility of the state, COWIB understands its critical role in supporting the Oklahoma Office of Workforce Development's guidance. As such, we monitor the engagement of our One-Stop partners in responding to layoff events as outlined in the state plan. We recognize the urgent need for career services among workers impacted by such events and strive to ensure that they receive timely and effective access to available employment and training activities.

Furthermore, our commitment to assisting area employers through our Business Service Team remains steadfast, and we collaborate closely with the One-Stop Operator to provide support upon request. Through our continued efforts, COWIB remains dedicated to promoting economic growth, supporting a skilled and adaptable workforce, and navigating any challenges that may arise in Central Oklahoma.

c. Describe how the local board will coordinate relevant secondary and post-secondary education programs and activities with workforce investment activities to coordinate strategies, enhance services, and avoid duplication of services.

COWIB, as the convener of One-Stop partners in Central Oklahoma, will facilitate the coordination of secondary and post-secondary education programs and activities with workforce investment activities in our area. This coordination will enhance services, prevent duplication of effort, and foster a closer working relationship between education and workforce partners. To achieve this, one of our key strategies is to support, develop, and implement Career Pathways.

Career Pathways, as we understand them, are adaptable to meet the needs of a wide range of individuals, including youth, adults, and dislocated workers. Our vision for Career Pathways initiatives involves collaboration among multiple One-Stop partners, including eligible Adult Education providers, Registered Apprenticeship programs, WIOA Title I Formula grant programs, TANF activities, Oklahoma Department of Rehabilitation Services programs, and Job Corps, as well as relevant secondary and post-secondary education programs and activities. We anticipate that our Postsecondary Perkins grant partners will play an especially critical role in these efforts.

Features of our career pathways initiatives will include:

> **Aligned with the Skill Needs of Industries.** To ensure that Career Pathways initiatives in our area are aligned with the needs of businesses, we will actively seek input from employers. This will involve establishing advisory committees composed of representatives from local businesses to guide the development of career pathways in Central Oklahoma. We will also collaborate with existing advisory groups convened by career technology schools, community colleges, and other relevant institutions. Additionally, we will leverage the expertise of the industry advisory boards that have already been established by the COWIB to support our Sector Strategy efforts. We recognize the importance of aligning Career

Pathways with our sector strategies and other business engagement efforts in the local workforce development system.

Implemented in a Full Range of Secondary and Postsecondary Education Options. We aim to ensure that each Career Pathway is comprehensively developed to incorporate a diverse array of educational opportunities, including training and education provided by secondary schools, community colleges, career tech schools, registered apprenticeship programs, and other relevant organizations.

Includes Career Counseling appropriate to all participant groups. To ensure the success of our Career Pathways initiatives, we acknowledge the importance of providing effective career counseling to various participant groups. This may require us to develop activities that enhance the ongoing training of career counselors, such as career exploration programs, among others.

Provides for Workforce Preparation Activities and Training to be offered concurrently with Educational Activities / Programs. We envision that educational activities and programs will be enhanced by student participation in workforce preparation activities and training programs focused on a specific occupation or occupational cluster.

Accelerates Educational and Career Advancement of Individuals, as much as possible. We will strive to facilitate the development of Career Pathway initiatives that enable individuals to achieve their educational and career objectives more efficiently than would otherwise be possible, to the extent feasible.

Supports the Attainment of a Secondary School Diploma (or equivalent) as well as Postsecondary Credential (one or more). We will endorse programs that enable high school students to embark on a Career Pathway that can be continued in postsecondary education, either in the same or a different pathway. We will evaluate the success of each initiative based on the achievement of relevant credentials and the long-term success of participants in their careers.

Helps Individuals to Advance within a Specific Occupation or Occupational Cluster. We are committed to ensuring that our Career Pathways initiatives are adaptable and inclusive, allowing underemployed workers to benefit from additional training and skill-building activities. COWIB will take a collaborative approach with our partners, providing support rather than direct management or direction. Our role will be to facilitate the development of these initiatives, monitor their effectiveness, and promote their impact on meeting the workforce needs of our region.

d. Describe how the local board, in coordination with the One-Stop operator, maximizes coordination, improves service delivery, and avoids duplication of Wagner-Peyser Act services and other services provided through the delivery system.

COWIB has had a successful partnership with the Oklahoma Employment Security Commission (OESC) since our inception under the Workforce Innovation Opportunity Act. OESC is the recipient of Wagner-Peyser grant funds in Oklahoma, and we have maintained co-located operations in a One-Stop setting. Our Career Services have been delivered in a coordinated manner to avoid duplication of effort.

In Central Oklahoma, our One-Stop Operator plays a crucial role in coordinating service providers across the One-Stop delivery system, including coordination with our Wagner-Peyser partner. The COWIB's contract with our One-Stop operator outlines this coordination function in detail.

“Contractor will provide integrated services and/or services being delivered in a functional delivery system. This may require Contractor to provide some services that are traditionally delivered by other entities that are none-the-less allowable services. In the integrated / functional delivery system, other entities may also be required to deliver some of the services that are included in the statement of work in this contract. Contractor’s staff may be functionally supervised by staff from other partner agencies that are assisting in the provision of services in the workforce system or Contractor’s staff may functionally supervise staff of other entities working in the Workforce Centers.”

We will include additional measures to coordinate services and enhance service delivery in Central Oklahoma through the negotiation of a Memorandum of Understanding (MOU) among the One-Stop partners in our area.

e. Describe how the local board will coordinate WIOA Title I workforce investment activities with adult education and literacy activities under WIOA Title II, including how the local board will carry out the review of local applications submitted under Title II.

Title II of the Workforce Innovation and Opportunity Act outlines the creation of a partnership among the Federal Government, States, and localities to voluntarily provide adult education and literacy activities in order to achieve certain goals, including:

“Assist adults to become literate and obtain the knowledge and skills necessary for employment and economic self-sufficiency….”

The administration of policy for adult education and literacy activities in Oklahoma is the responsibility of the Oklahoma Department of Career and Technology Education (ODCTE), which distributes funds to local areas in the state in accordance with the methodology described in the State's Unified Plan, as required by Title II of the Workforce Innovation and Opportunity Act. Eligible

providers may receive grants or contracts from ODCTE to develop, implement, and improve adult education and literacy activities in the state through a competitive application process. The review of applications and awarding of grants or contracts is conducted periodically.

Section 231(e) describes 13 evaluation criteria that must be reviewed by ODCTE before it makes any award of grants or contracts. Three out of the 13 "considerations" relate to coordination with the local workforce development system in one way or another. Here are excerpts:

> (e) CONSIDERATIONS. — In awarding grants or contracts under this section, the eligible agency shall consider —
>
> (1) the degree to which the eligible provider would be responsive to—
>
> (A) regional needs as identified in the Local/Regional Plan under section 108; and
>
> (B) serving individuals in the community who were identified in such plan as most in need of adult education and literacy activities, including individuals—
>
> (i) who have low levels of literacy skills; or
>
> (ii) who are English language learners….
>
> (4) the extent to which the eligible provider demonstrates alignment between proposed activities and services and the strategy and goals of the Local/Regional Plan under section 108, as well as the activities and services of the One-Stop partners…
>
> (10) whether the eligible provider's activities coordinate with other available education, training, and social service resources in the community, such as by establishing strong links with elementary schools and secondary schools, postsecondary educational institutions, institutions of higher education, local workforce investment boards, One-Stop centers, job training programs, and social service agencies, business, industry, labor organizations, community-based organizations, nonprofit organizations, and intermediaries, for the development of career pathways;

This focus on appropriate linkages with the local workforce system is intentional. The emphasis on strong linkages is reiterated in the description of the application that must be submitted by each local eligible provider. Pursuant to WIOA Section 232, each eligible provider desiring a grant or contract from ODCTE "shall submit an application" including, at a minimum, the following information:

> (1) a description of how funds awarded under this title will be spent…;
>
> (2) a description of any cooperative arrangements the eligible provider has with other

agencies, institutions, or organizations for the delivery of adult education and literacy activities;

(3) a description of how the eligible provider will provide services in alignment with the Local/Regional Plan under section 108, including how such provider will promote concurrent enrollment in programs and activities under title I, as appropriate;

(4) a description of how the eligible provider will meet the State adjusted levels of performance described in section 116(b)(3), including how such provider will collect data to report on such performance indicators;

(5) a description of how the eligible provider will fulfill One-Stop partner responsibilities as described in section 121(b)(1)(A), as appropriate.

Obviously, the law envisions that there will be appropriate coordination between the local workforce system and local eligible providers of adult education and literacy activities.

To drive this coordination, Section 107(d) (11) of the WIOA law provides that COWIB will review the applications submitted to ODCTE in order to "determine whether such applications are consistent with the Local/Regional Plan." Additionally, COWIB will make recommendations to ODCTE in order to "promote alignment" with the Local/Regional Plan.

With respect to COWIB's review of grant applications, our priority will be to confirm that each applicant properly describes their willingness to:

- Provide access through the One-Stop delivery system to such program or activities carried out by the entity, including making their applicable career services available at the One-Stop centers (in addition to any other appropriate locations), as described in WIOA Section 121(b)(1)(A)(i).

- Use a portion of the funds available for adult education and literacy activities to maintain the One-Stop delivery system, including funds to support the infrastructure costs of One-Stop centers in the Central Oklahoma area, as described in WIOA Section 121(b)(1)(A)(ii).

- Participate, as may be directed by the ODCTE, in the Memorandum of Understanding for the local workforce system in Central Oklahoma, as described in WIOA Section 121(b)(1)(A)(iii).

- Participate in the operation of the local One-Stop system consistent with WIOA Section 121(b)(1)(A)(iv). Eligible providers may do this, for example, by participating in periodic meetings of the COWIB's One-Stop Partners group.

• Promote concurrent enrollment in programs and activities under title I – including, as appropriate, WIOA Formula Grant programs, WIOA Native American programs, WIOA Farmworker program, etc.

COWIB aims to coordinate workforce investment activities under Title I with local adult education and literacy activities by implementing various service alignment strategies in collaboration with our One-Stop partners. These strategies may include identifying suitable referral activities, exploring co-location strategies, and providing staff cross-training.

To ensure effective co-enrollment of AEFL participants in the core programs of WIOA Title I, COWIB will establish annual goals and a reliable reporting system for co-enrollments, services rendered, and outcomes achieved. Our objective is to achieve a specific number of co-enrollments in the WIOA Adult and WIOA Youth programs.

f. Describe and assess the type and availability of youth workforce investment activities in the local area, including activities for youth who are individuals with disabilities, and provide an identification of successful models.

The Central Oklahoma Workforce Innovation Board (COWIB) has created a Youth Council composed of representatives from the counties within the Central Oklahoma workforce development area. The Youth Council's role is to offer specialized knowledge in youth policy and to support the COWIB Board in overseeing Youth programs under the Workforce Innovation and Opportunity Act.

Duties of the Council are as follows.

1. Provides the framework for developing comprehensive and effective strategies that ensure youth acquire the education, skill, work experience and support they will need to reach their full potential and successfully transition to productive adulthood. The mandated partners represented bring together a diverse set of stakeholders and resources to accomplish this mission.

2. Facilitates engagement of employers, including small employers and employers in in-demand industry sectors and occupations, in workforce development programs; and

3. Supports a local workforce development system that meets the needs of businesses in the local area.

The Youth Council members are community representatives who collaborate to engage employers and youth in expanding employment and training opportunities in the Central Oklahoma area. The COWIB Youth Program aligns with the action plan of the State youth program committee to ensure strategic actions are taken.

As identified in the State's Unified Plan, the action items identified by the state's Youth Program Committee include:

- Work with the education system to support the prevention and recovery of affected youth.
- Develop strategies for both in-school and out-of-school youth.
- Develop a plan in support of youth which would include a communication infrastructure that will inform and engage all stakeholders.
- Provide guidance to assist in achieving compliance.

Assessment of the WIOA Title I Youth Formula Grant Program.

During Program Year 21, quantitative goals were established based on performance and/or contractual measures. It was found that the program provided generally positive results, including:

- 75 obtaining HS diploma or post-secondary credential
- 298 participants received individualized career services
- 68 participants in STEM field of study
- 77 Placed in Work Experience activities;

Conclusions have been drawn from these assessments, and they have been taken into consideration during the development of this 4-year Local/Regional Plan.

Successful Models of Youth Workforce Investment Activities.

Our Local/Regional Plan underscores our commitment to providing high-quality services to youth and young adults, including career exploration and guidance, ongoing support for educational attainment, access to skills training in in-demand industries and occupations, and ultimately leading to successful employment or enrollment in postsecondary education along a career pathway.

COWIB is dedicated to promoting workforce investment models that prioritize school retention

and completion for in-school youth. Our goal is to support each participant in transitioning successfully to employment or postsecondary school enrollment. We will provide a full range of Youth program elements to participants as required, with a special focus on work experience activities, career exploration, tutoring, and other relevant services.

Additionally, COWIB will extend support to Out-of-School Youth through models that provide a range of services aimed at helping disconnected youth transition between the educational and workforce systems. We will make sure that all the elements listed in WIOA Section 129 are accessible to participants who need them. In particular, we will offer paid work experience activities that feature academic and occupational education components, including:

- Summer employment opportunities and other employment opportunities available throughout the school year;
- Pre-apprenticeship programs;
- Internships and job shadowing; and
- On-the-job training opportunities.

As suggested by Department of Labor guidance, we will coordinate our work experience activities with other youth serving organizations and agencies. We will strengthen our partnership-building efforts by reaching out to Temporary Assistance for Needy Families, Community Services Block Grant activities, and Community Development Block Grant programs.

Furthermore, we will endeavor to expand our linkages with our Adult Education partners, WIOA Native American programs, and Job Corps.

3. Describe how the local board will work with entities carrying out core programs to accomplish the following outcomes:

a. Expand access to employment, training, education, and supportive services for eligible individuals, particularly eligible individuals with barriers to employment.

The core programs in our local workforce development system are:

1. The Wagner-Peyser Employment Service (ES) Program;
2. The WIOA Title I Adult program;
3. The WIOA Title I Dislocated Worker program;
4. The WIOA Title I Youth program;

5. The Adult Education and Literacy Activities under WIOA Title II; and

6. The programs of Title I of the Rehabilitation Act of 1973 (amended by WIOA Title IV).

Collectively, these programs serve thousands of individuals within the Central Oklahoma area. Even so, there is always the possibility to expand and improve access to these programs and services.

Our local board is committed to working with our core program partners to expand access to employment, training, education, and supportive services. We will do this by:

(1) Improving our outreach efforts to the community – aiming to increase awareness of our services, particularly with regard to community groups with barriers to employment.

(2) Locating our services in places that are conveniently accessible to the 1.4 million residents of our 9-county area.

(3) Creating and maintaining electronic service delivery systems that are user-friendly, effective, and accessible to individuals who reside in remote parts of our area.

(4) Maintaining our efforts to identify individuals with barriers to employment when they present themselves during intake.

(5) Making sure that the participants of all core partners are made aware of the full scope of services that are available to them through the American Job Center network in Central Oklahoma.

(6) Assuring that services are delivered equitably, in full compliance with Section 188 of WIOA – "Nondiscrimination" — including the language accessibility provisions of the law. (See "Complying with Section 188 of WIOA," Page 83)

And,

(7) Assuring compliance with the Americans with Disabilities Act, including a focus on physical accessibility at all of our locations. (See "Complying with the Americans with Disabilities Act," page 83)

Our local board has initiated a monthly performance meeting with our service provider to ensure that our adult, dislocated worker, and youth programs are meeting their performance goals and delivering the intended benefits. The purpose of this engagement is to ensure that our clients are not missing out on any of the benefits of being a WIOA participant and that they are receiving the maximum amount of support possible. This proactive approach allows us to identify and address any gaps in service, ensuring that our clients receive the highest level of care and support.

COWIB intends to monitor and evaluate its progress in enhancing service accessibility by regularly generating a report on the quantity of participants served through the core programs. The report will

provide a detailed breakdown of the services offered, including employment, training, education, and supportive services, for various participant groups, especially those with recognized barriers to employment. The goal is to monitor progress in each core program from year-to-year and continually improve the delivery of services.

If deemed necessary, the local board will collaborate with the State Equal Opportunity Officer to suggest improvements for expanding access to services for eligible individuals.

b. Facilitate the development of career pathways*. Provide a list of the career pathways, and for each include:

- **The phase of development (conceptual, in initial implementation, being sustained, or, expanding);**
- **Workforce Demand (need) – Describe the business workforce need being addressed by the strategy. Indicate the industry(s) and occupations being represented, how the need was determined, and the occupational skills to be addressed;**
- **Relevance – Indicate the connection between the demand and the priority(ies) for the region;**
- **Strategy – Identify the sector partners and the role of each;**
- **Funding – Describe available resources that will support the strategy;**
- **Unfunded Critical Elements – Identify any critical elements for the identified strategy that must be done for the success of the strategy that cannot be met with available resources. This may include: the expansion of an existing strategy, in any phase, from one LWDA to others in the region; the need to procure new training vendors; planning sessions involving multiple partners; training of One-Stop staff; and development of regional data collection systems.**

This item relates, in part, to how the local board will coordinate education and workforce investment activities carried out in the local area with relevant secondary and postsecondary education programs and activities.

In a broader sense, though, Career Pathways offer opportunities for all job seekers – not just students in secondary and postsecondary education programs and activities. For example, Career Pathways can be important for meeting the needs of dislocated workers, older workers, and workers who are underemployed.

As defined in Section 3 of WIOA:

> (7) CAREER PATHWAY. — The term ‘‘career pathway’’ means a combination of rigorous and high-quality education, training, and other services that—
>
> (A) aligns with the skill needs of industries in the economy of the State or regional economy involved;

(B) prepares an individual to be successful in any of a full range of secondary or postsecondary education options, including apprenticeships registered under the Act of August 16, 1937 (commonly known as the ''National Apprenticeship Act''; 50 Stat. 664, chapter 663; 29 U.S.C. 50 et seq.) (referred to individually in this Act as an ''apprenticeship'', except in section 171);

(C) includes counseling to support an individual in achieving the individual's education and career goals;

(D) includes, as appropriate, education offered concurrently with and in the same context as workforce preparation activities and training for a specific occupation or occupational cluster;

(E) organizes education, training, and other services to meet the particular needs of an individual in a manner that accelerates the educational and career advancement of the individual to the extent practicable;

(F) enables an individual to attain a secondary school diploma or its recognized equivalent, and at least 1 recognized postsecondary credential; and

(G) helps an individual enter or advance within a specific occupation or occupational cluster.

COWIB will seek to identify, review, expand, and create new career pathways to benefit workers in Central Oklahoma. We recognize that some of our partners have previously been engaged with the development of career pathways. As much as possible, we will avoid the duplication of their efforts.

In our work to facilitate the development of career pathways, we will be guided by the U.S. Department of Labor's Career Pathways Toolkit: An Enhanced Guide and Workbook for System Development.

Additionally, we will rely on guidance from the state's Career Pathways Committee. We note that the Governor's Council has a duty to assist the Governor in developing "strategies to support the use of career pathways." (WIOA Section 101(d)(3)(B)).

A copy of the Department of Labor's Toolkit can be found online, here:

https://careerpathways.workforcegps.org/resources/2016/10/20/10/11/Enhanced_Career_Pathways_Toolkit

The Toolkit recommends a step-by-step process for building career pathways, including:

Element One: Build Cross-Agency Partnerships

Element Two: Identify Industry Sector and Engage Employers

Element Three: Design Education and Training Programs

Element Four: Identify Funding Needs and Sources

Element Five: Align Policies and Programs

Element Six: Measure System Change and Performance

COWIB and its One-Stop partners are constantly seeking to establish cross-agency partnerships. In December 2018, COWIB introduced an electronic AJC Partners referral form that is entirely accessible. However, only a few partners are presently utilizing this form. Since 2020, numerous partners and community-based organizations (CBOs) have joined the Unite Us Oklahoma (sponsored by Oklahoma Health Care Authority) and the Be A Neighbor platform (sponsored by the Oklahoma Human Services).

Conceptually, our career pathways efforts will begin with initiatives designed to meet the needs of employers in our most important industry sectors. We recognize that an effective career pathways system must be employer driven.

As stated in the Toolkit: "As a full partner, employers have active and continual involvement from program inception through implementation. Engaging employers early on in the design of an initiative will help ensure that a career pathways system aligns with business needs."

As a consequence, our career pathways initiatives in Oklahoma will parallel, to a large degree, the COWIB's work on sector strategies. Both career pathways and sector strategies will involve a strengthened relationship with employers.

As noted in the toolkit: "A sector strategy is a strategic approach to engage employers by bringing together industries critical to the economic success of a region and identifying the skills that are necessary to build the region's talent pipeline."

During the 4-year scope of our Local/Regional Plan, COWIB will develop a list of career pathways. During the first year of the Plan, our focus will be on building partnerships within our One-Stop delivery system, engaging employers, and identifying the industries and occupations on which to focus our attention.

Our career pathways development efforts will address the following list of careers:

- Childcare
- Healthcare
- STEAM

Here is more detail:

Childcare:

a. The phase of development … ongoing

b. Workforce Demand (need) – Childcare Worker occupation has a Location Quotient of 1.20 and a projected job growth in Central Oklahoma of 50% between 2018 and 2028. While childcare is a

tertiary sector of the economy, it is essential to employees of the primary and secondary industries because of their reliance on this service sector. Occupational skills include Monitoring, Service Orientation, Social Perceptiveness, Active Listening, Coordination, Critical Thinking, Speaking, and Active Learning. Related occupations include Home Health Aides, Kindergarten Teachers, Except Special Education, Nannies, Personal Care Aides, and Preschool Teachers, Except Special Education.

c. Relevance – Highly relevant; Childcare is fundamental to economic security and strengthens businesses, families, and communities. A well-funded childcare sector will help parents remain in the labor force, work the number of hours and schedule that are best for their career and family, earn a living, and join in our shared economic prosperity.

d. Strategy – Central Oklahoma Workforce Innovation Board (COWIB) will serve as the intermediary organization for this sector partnership. COWIB has been engaging and convening employers, educators, EDO's, and other various stakeholders, including the following: Crossroads Head Start, Community Action Agency of Oklahoma City, Mid-Del Public Schools, Stroud Community Foundation, Oklahoma City Public Schools, Shawnee Forward, Oklahoma State Department of Education, Canadian Valley Technology Center, Avedis Foundation, Pioneer Library System, Eastern Oklahoma Technology Center, Gordon Cooper Technology Center, Oklahoma State School Boards Association, Shawnee Bridges out of Poverty, Oklahoma State Regents of Higher Education, Sunbeam Family Services, Oklahoma School Readiness, Urban League of Greater Oklahoma City, University of Central Oklahoma, Northcare, and Peltier Lawn Services. Together, we will identify workforce gaps, barriers to employment, and other talent pipeline or industry needs. This will specifically include meeting space, supplies, travel expenses, facilitation, time and effort.

e. Funding – OOWD Impact Partnership Grant Funds

f. Unfunded Critical Elements – We anticipate that there will be planning sessions involving multiple partners, and the funding source for these planning sessions has not yet been identified. Other critical elements will be identified in the course of our planning process.

Healthcare:

a. The phase of development … conceptual

b. Workforce Demand (need) – Healthcare Industry has a Location Quotient of 1.13 and a projected job growth in Central Oklahoma of 18% between 2018 and 2028. Registered Nurse, as example, occupational skills include Social Perceptiveness, Active Listening, Coordination, Critical Thinking, Service Orientation, Speaking and Judgment and Decision Making. Related occupations include Acute Care Nurses, Clinical Nurse Specialists, Critical Care Nurses, Licensed Practical and Licensed Vocational Nurses, and Nurse Practitioners.

c. Relevance – Highly relevant; Healthcare has undergone a severe shift due to COVID concerns and hospitalizations. The healthcare industry is an economic force and requires technical advances that continue to change the healthcare system, which makes access and improvement of education and employment possibilities that much more important.

d. Strategy – The recruitment of sector partners is not yet complete; roles have not yet been determined.

e. Funding – OOWD Impact Partnership Grant Funds

f. Unfunded Critical Elements – We anticipate that there will be planning sessions involving multiple partners, and the funding source for these planning sessions has not yet been identified. Other critical elements will be identified in the course of our planning process.

STEAM (Science, Technology, Engineering, Arts, and Math):

a. The phase of development … ongoing

b. Workforce Demand (need) – Steady growth is predicted for Architecture, Engineering, and Construction (AEC) industry over the next decade. There is an expected 1.7-3.2% growth over the next decade. The AEC sector will lose billions of dollars of production due to an aging workforce, difficulty finding entry-level employees that are “work ready”, shortages in the skilled trades, low workforce participation rates, and low unemployment.

c. Relevance – Highly relevant; AEC supports economic development across all industries as companies build, expand, and improve their facilities and physical infrastructure.

d. Strategy – STEAM Engine OKC will serve as the intermediary organization for this sector partnership. STEAM Engine OKC has been engaging and convening employers, educators, EDO’s, and other various stakeholders. Together, we will identify workforce gaps, barriers to employment, and other talent pipeline or industry needs. This will specifically include meeting space, supplies, travel expenses, facilitation, time and effort.

e. Funding – OOWD Impact Partnership Grant Funds.

f. Unfunded Critical Elements – We anticipate that there will be planning sessions involving multiple partners, and the funding source for these planning sessions has not yet been identified. Other critical elements will be identified in the course of our planning process.

Many of the one-stop partners in our local workforce development system offer valuable services that are intended to improve the productivity and profitability of businesses in the Central Oklahoma area. These services are designed to meet the needs of area employers.

c. Facilitate co-enrollment, as appropriate, in core programs.

This planning requirement is distilled from WIOA Section 108(b)(3):

(3) a description of how the local board, working with the entities carrying out core programs, will expand access to employment, training, education, and supportive services for eligible individuals, particularly eligible individuals with barriers to employment, including how the local board will facilitate the development of career pathways and co-enrollment, as appropriate, in core programs, and improve access to activities leading to a recognized postsecondary credential (including a credential that is an industry-recognized certificate or certification, portable, and stackable);

In context, the focus is on co-enrollment in core programs for the purpose of promoting career pathways and improving access to services leading to a recognized postsecondary credential.

With this in mind, our local board is wholeheartedly dedicated to promoting the establishment of career pathways. We are equally dedicated to collaborating with our "core" partners - OESC, DRS, ODCTE - to enhance access to services.

At present, there are no policy impediments to co-enrolling an eligible individual in two or more of our core partner programs. However, technical barriers exist that can complicate the sharing of participant data among programs.

To demonstrate the lack of policy barriers, it is worth noting that co-enrollments frequently take place between the WIOA Adult program and the Wagner-Peyser program. Other examples of co-enrollment involve TAA participants who are concurrently counted as participants in the WIOA Dislocated Worker program, as well as older youth who may be co-enrolled in the WIOA Adult program, among others. If an individual meets the eligibility criteria, they may be co-enrolled in as many programs as they choose to apply for.

However, tracking co-enrollments can be challenging due to the existence of multiple "core" programs that use different case management and reporting systems. This means that, for instance, an Adult Education service provider may not be aware that one of their students has co-enrolled in the WIOA Youth program. The automated case management system for the WIOA Youth program (the OSL system) does not directly communicate with the LACES system utilized by Adult Education and Family Literacy providers.

This represents a technical limitation in our current system. However, it is a challenge that can be surmounted. To that end, our local board is committed to prioritizing the identification and/or creation of a supplementary data tracking system that can facilitate the management of co-enrollments in Career Pathways activities, and other related programs.

It is important to note that the scope of this supplementary data management system will have certain limitations. Our intention is not to create a large-scale database that shares enrollments across all "core" programs. Rather, the focus will be on establishing a secondary data system that can support Career

Pathways activities and programs leading to a recognized postsecondary credential. With this specific purpose in mind, we believe it is possible to develop a feasible solution.

We plan to collaborate with our "core" program partners in pursuing this co-enrollment strategy.

d. Improve access to activities leading to a recognized post-secondary credential (including a credential that is an industry-recognized certificate or certification, portable, and stackable).

The phrase “recognized postsecondary credential” is defined in Section (3) of WIOA:

(52) RECOGNIZED POSTSECONDARY CREDENTIAL. — The term ‘‘recognized postsecondary credential’’ means a credential consisting of an industry-recognized certificate or certification, a certificate of completion of an apprenticeship, a license recognized by the State involved or Federal Government, or an associate or baccalaureate degree.

Our local board will direct our One-Stop Operator to work with our Adult Education and Family Literacy, Vocational Rehabilitation, and Wagner- Peyser partners to improve access to recognized post-secondary credentials.

We aim to strengthen career pathways by focusing on various strategies, such as increasing postsecondary opportunities in high school, expanding adult degree completion efforts, improving basic skills remediation, and providing supportive services for participants who require financial assistance. Our objective is to offer effective career counseling to unemployed, underemployed, and dislocated workers and to raise awareness of viable career paths, particularly in-demand occupations in the Central Oklahoma area.

As a state priority, we will work towards increasing postsecondary opportunities in high school to enable more students to graduate with specialized knowledge or credentials that lead to in-demand occupations or continue their education in a shorter time frame. Although our local workforce system may have limited influence on this objective, we will allocate a portion of resources to in-school youth while focusing primarily on out-of-school youth through our WIOA Youth program.

COWIB, in partnership with several local workforce boards, has joined hands with the Oklahoma State Department of Education's new initiative called the Summer Bridge program. This program aims to increase the number of Oklahoma high school graduates with access to postsecondary opportunities by providing career preparation, identifying student interests and skills, and connecting them with workforce leaders. The program targets high school seniors who do not have a job or a clear plan to pursue a postsecondary credential, certification, or college degree.

COWIB is collaborating with both metro and rural school districts to identify eligible candidates who may face various barriers, including being a low-income individual, basic skills deficient, an English language learner, an offender, homeless, a runaway, in foster care or has aged out of it, pregnant or parenting, or have a disability (IEP or 504 plan). Our service provider will work with these candidates to determine

their eligibility to receive WIOA services. By doing so, we aim to provide support to candidates who need it the most, thereby enabling them to pursue their education and career goals.

We will also provide support for WIOA Adult and Dislocated Worker participants through our Individual Training Account system, offering them a broad range of training and education options. Our Policy on Informed Customer Choice prioritizes training services that lead to recognized postsecondary credentials aligned with in-demand industry sectors or occupations in the Central Oklahoma area.

e. Facilitate engagement of employers* in workforce development programs, including small employers and employers in in-demand industry sectors and occupations to:

Our local workforce development system has established a Business Services Network – the purpose of which is to:

(i) facilitate engagement of employers, including small employers and employers in in- demand industry sectors and occupations, in workforce development programs; and
(ii) support a local workforce development system that meets the needs of businesses in the local area;

Members of the Business Services Network are representatives of One-Stop Partner agencies who agree to work cooperatively to engage employers in a common purpose — to expand employment and training opportunities in the Central Oklahoma area.

The partners in our system understand that businesses play a large role in workforce development. The Association for Talent Development estimates that American companies spend close to $164 billion annually on all kinds of employee training and development. [1] The federal budget for workforce development programs is dwarfed by the scale of these private sector investments.

Therefore, we will regard employers in Central Oklahoma, not just as customers of our workforce development system, in many cases, they may also be partners with us. For example, they may collaborate with us in providing work experience activities, Transitional Jobs, workplace literacy activities, and so on.

In this regard, from time to time, we will engage employers as providers of occupational skills training – as, for example, when we enter into On-the-Job Training Agreements, Customized Training contracts, etc.

When we engage employers as providers of training or as partners in other types of workforce development activities, we will approach this task with professionalism and honesty. We recognize that the best partnerships are those which yield benefits to all stakeholders — including the employer, as well as, the local workforce development system. We will have a commitment to fairness. To the extent possible, we will engage with all employers, large and small, who are willing to work with us to support employment opportunities in in-demand occupations / industry sectors.

Moreover, we will have a commitment to compliance with the regulatory requirements of each of our One-Stop partner programs, as appropriate. We will be especially focused on assuring that the labor standards of Section 181(b) are fully upheld.

A special type of Employer Engagement is the delivery of Business Services. Many of our One-Stop partner agencies offer valuable services that are intended to improve the productivity and profitability of businesses in the Central Oklahoma area.

The members of the Employer Engagement Team are dedicated representatives from One-Stop Partner agencies who collaborate to engage employers in a shared goal: expanding employment and training opportunities in Central Oklahoma. We recognize that businesses are vital to workforce development, as American companies invest an estimated $164 billion annually in employee training and development, dwarfing the federal budget for workforce development programs [1].

Therefore, we view employers in Central Oklahoma not only as customers of our workforce development system, but also as potential partners. We may collaborate with them to provide work experience activities, Transitional Jobs, workplace literacy programs, and more. At times, we may even engage employers as providers of occupational skills training through On-the-Job Training Agreements or Customized Training contracts.

In all of our engagement with employers, we prioritize professionalism, honesty, and fairness. We believe that the most successful partnerships are those that benefit all stakeholders, including the employer and the local workforce development system. As such, we are committed to engaging with all employers who are willing to collaborate with us to support employment opportunities in in-demand occupations and industry sectors, regardless of their size.

We also recognize the importance of compliance with regulatory requirements for each of our One-Stop Partner programs, with a particular focus on upholding the labor standards of Section 181(b).

Finally, we understand that delivering Business Services is a crucial part of Employer Engagement. Many of our One-Stop Partner agencies offer valuable services aimed at improving the productivity and profitability of businesses in the Central Oklahoma area.

- **Support a local workforce development system that meets the needs of businesses in the local area;**

Many of the One-Stop partners in our local workforce development system offer valuable services that are intended to improve the productivity and profitability of businesses in the Central Oklahoma area. These services are designed to meet the needs of area employers.

Examples of business services include:

Hot Jobs – Hot Jobs is a collection of new job openings delivered weekly to 300+ of the

Central Oklahoma Workforce Innovation Board's partner organizations working directly with job seekers, as well as job seekers who have selected to subscribe to the weekly Hot Job emails. Through this listing, companies can reach an untapped talent pool of job seekers with various skills and backgrounds;

Incumbent Training – The Incumbent Worker Training (IWT) Program is a competitive grant program provided through COWIB using local-area funds to address the skills gaps of existing incumbent workers employed by qualified businesses. The maximum training amount is $10,000 per grant recipient (business), per COWIB program year. COWIB will pay the training provider or reimburse the company after training is completed. Applications may be submitted to the COWIB Business Services Team at any time during the program year by completing the application;

Job Descriptions – Using the tools offered through ONetOnline.org, the DOL Job Writer, and Skillful, prepare a job description for an Employer Partner;

Job Fairs – Job fairs can be provided either virtually or in-person either at our American Job Center or at one of our partners' locations;

Job Postings – OKJobMatch is a free tool that makes it easy to list and manager the positions employers have open. Search through current résumés to find the most qualified candidates that will take a business to the next level;

Job Referrals – Giving an employer the list of matched and screened job candidates for the business' current job openings;

Labor Market Info – Business Services Consultants provide businesses with reporting of local labor market information such as wage surveys, high growth industries and occupations, as well as talent demographics through the utilization of Lightcast and Bureau of Labor Statistics. This resource benefits businesses and educational institutions who need this data for recruiting, wage analysis and comparison, industry supply chain, and occupational training development;

Lay-Off Aversion/Incumbent Worker Training – Activities that increase the skill level of existing employees and connect companies facing financial difficulties to resources that may prevent or reduce the need for layoffs;

On-The-Job Training – Businesses provide: a vacant, full-time position (minimum 32 hours per week), Workers' compensation coverage, and the ability to train on-the-job to WIOA. Oklahoma Works will reimburse up to 50% of the wages paid to new employees to offset the cost of training for a period of up to 6 months;

Provide Interviewing Space – Providing space within your facility for an employer to

conduct interviews. This may include, but is not limited to: providing a room, equipment, refreshments, staff to greet the job candidates, and logistics for the interviews;

Rapid Response – Providing short-term, early intervention and immediate assistance with layoffs and/or plant closures (affected by corporate restructuring, plant closures, or loss of jobs due to natural disasters) affecting a significant number of workers. Activities may include, but are not limited to the establishment of onsite contact with employers and employee representatives, the provision of information and access to available employment and training activities, assistance in establishing a labor-management committee with the ability to devise and implement a strategy for assessing the employment and training needs of dislocated workers, and obtaining services to meet those needs, the provision of emergency assistance adapted to the particular closure, layoff or disaster, and, the provision of assistance to the local community in developing a coordinated response and state economic development assistance;

Registered Apprenticeship – Registered Apprenticeship combines on-the-job training with job-related, technical instruction. Apprentices are full-time, paid employees that receive instruction and mentoring from skilled-workers who have done the job they are training to do. Upon successful completion of the program, apprentices receive a national recognized and portable credential. Apprenticeships are available for thousands of competitive occupations in nearly a dozen major industries;

Schedule interviews – Contacting job candidates electronically, by phone or in person on behalf of a business to schedule a time for the business to interview the candidate for a job;

Skills-Based Hiring – Skillful, a non-profit initiative of the Markle Foundation, is dedicated to enabling all Americans – particularly those without a four-year college degree – to secure good jobs in a changing economy. In partnership with Microsoft and others, Skillful is developing skills-based training and employment practices in collaboration with state governments, local employers, educators and workforce development organizations;

Work Experience/Transitional Jobs – Work Experience/Transitional Jobs are opportunities to provide short-term employment, up to 240 hours, to Oklahoma Works participants to gain hands-on work experience and build a résumé. Participant wages are completely paid by Oklahoma Works.

Our Business Services Team has created a Business Services Network to support the needs of businesses in Central Oklahoma. The network consolidates all available services and provides a single point of contact for employers to access resources. Our network includes system partners, chambers of commerce, economic development organizations, and community-based organizations.

Training and Employment Guidance Letter No. 16-16 ("One-Stop Operations Guidance for the American Job Center Network") provides guidance on how business services are to be provided through the local workforce development system.

TEGL 16-16 states:

To support area employers and industry sectors most effectively, American Job Center staff, including designated partner program staff, must:

- Have a clear understanding of industry skill needs;

- Identify appropriate strategies for assisting employers, and coordinate business services activities across American Job Center partner programs, as appropriate; and

- Incorporate an integrated and aligned business services strategy among American Job Center partners to present a unified voice for the American Job Center in its communications with employers.

To enhance our support for businesses in Central Oklahoma, we have established the Business Services Network, a comprehensive collection of available resources that enables employers to access services through a single point of contact. The COWIB's Business Services Team has been supporting these efforts for over a decade, using a multi-faceted approach to enhance employer services.

We will continue to fund an active business services consulting project, with three COWIB staff members dedicated to making calls to businesses in the region to identify workforce needs and make appropriate referrals to partners when necessary. To ensure comprehensive coverage of the region, one team member will be stationed in Pottawatomie County to interact with businesses in the eastern counties.

As part of our Local/Regional Plan, we will submit an Employer Engagement Matrix to the Governor's Council for Workforce and Economic Development. This matrix will outline the various types of business services and employer engagement opportunities available to Central Oklahoma employers.

- **Provide better coordination between workforce development programs and economic development;**

In any local area, access to a skilled workforce is the number one need for economic growth and sustainability. To support the needs of businesses in Central Oklahoma, our local workforce system regularly engages with economic development organizations in our 9- county area.

The Central Oklahoma workforce development area falls within the boundaries of two regional economic development areas (EDA's), as designated by the Economic Development Administration of the U.S. Department of Commerce:

- The Association of Central Oklahoma Governments (ACOG) Economic Development District aligns perfectly with the four western-most counties of the Central Oklahoma area.

- The Central Oklahoma Economic Development District (COEDD) encompasses the five eastern-most counties of our area.

Additionally, through the COWIB board, our local workforce development system will maintain close coordination with regional economic development organizations such as the Greater Oklahoma City Regional Partnership (which crosses the boundaries between the EDA's), Select Oklahoma, and other local economic development agencies. By design, the COWIB board includes representatives of governmental and economic and community development entities serving the Central Oklahoma area.

COWIB is widely recognized as the go-to partner in efforts to address skill shortages wherever they may exist.

In order to better coordinate workforce development programs and economic development, COWIB will support the following strategies:

1. COWIB's Chief Executive Officer (or designate) will attend all ACOG meetings on the subject of CEDS implementation. CEDS is the Comprehensive Economic Development Strategy. Elected officials from our 9-county area also attend these meetings.

2. Elected officials from our 9-county area will attend COEDD meetings.

3. COWIB's CEO (or designate) will attend meetings of the Greater Oklahoma City Regional Partnership.

4. As required by WIOA Sec. 107(b)(2)(D), the membership of the COWIB board of directors will include one or more representatives of economic and community development entities.

5. All opportunities for appropriate coordination between workforce development programs and economic development efforts will be explored.

- **Support sector partnership strategies, including a list of active sector partnerships. For each, describe:**
  - **The phase of development (conceptual, in initial implementation, being sustained, or, expanding)**
  - **Workforce Demand (need) – Describe the business workforce need being addressed by the strategy. Indicate the industry(s) being represented, how the need was determined, the occupational skills to be developed, the number of jobs being addressed, and the timeframe(s) associated with the need.**
  - **Relevance – Indicate the connection between the demand and the priority(ies) for the region.**
  - **Strategy – Identify the sector partners and the role of each.**
  - **Funding – Describe available resources that will support the strategy.**
  - **Unfunded Critical Elements – Identify any critical elements for the identified strategy that must be done for the success of the strategy that cannot be met with available resources. This may include: the expansion of an existing strategy, in any phase, from one LWDA to others in the region; the need to procure new training vendors; planning sessions involving multiple partners; training of One-Stop staff; and development of regional data collection systems.**

Pursuant to WIOA Section 107(d)(4)(D), a local workforce development board like COWIB has a duty to "lead efforts to engage with a diverse range of employers" in order to achieve certain objectives, including:

"…To develop and implement proven or promising strategies for meeting the employment and skill needs of workers and employers (such as the establishment of industry and sector partnerships), that provide the skilled workforce needed by employers in the region, and that expand employment and career advancement opportunities for workforce development system participants in in-demand industry sectors or occupations."

As defined in WIOA Section 3(26), an ''industry or sector partnership'' means a workforce collaborative, convened by or acting in partnership with a local board, that organizes key stakeholders in an industry cluster into a working group that focuses on the shared goals and human resources needs of the industry cluster. A properly-designed sector partnership includes, at the appropriate stage of development of the partnership—

• Representatives of businesses;

• One or more representatives of a labor organization or central labor council, or another labor representative, as appropriate;

• One or more representatives of a provider of education or training programs that support the industry cluster; and

• Optionally: Representatives of local government, business or trade associations, economic development organizations, nonprofit organizations, community-based organizations, or intermediaries, philanthropic organizations, industry associations; and others.

Throughout the four-year duration of this Local/Regional Plan, COWIB will continue to employ its successful sector strategy approach for engaging the employer community. This approach involves creating individual industry advisory boards for each critical sector in our regional economy, which has led to the formation of sector partnerships in the healthcare, childcare, and STEAM sectors. Our primary objective is to maintain a job-driven and employer-responsive local workforce development system.

As our sector partnerships continue to develop over the next four years, we will work to identify the strategies necessary to meet the unique needs of each sector. Additionally, we will determine the operational and budgetary requirements required to sustain these partnerships. Our aim is to remain current on issues that impact critical industries and promote economic growth in our region.

Our framework aims to promote alignment in the region and keep us up-to-date on the issues impacting the industries that are essential to the economic health of the region. Our sector partnerships include:

• Healthcare

• Childcare

• STEAM (Science, Technology, Engineering, Arts and Mathematics)

COWIB is committed to collaborating with the Association of Central Oklahoma Governments (ACOG) initiatives through their Community Development Block Grants program. ACOG administers the CDBG entitlement program, which provides annual grants to larger cities and urban counties in order to develop sustainable communities that offer decent housing, a suitable living environment, and opportunities for economic expansion, particularly for low- and moderate-income individuals.

ACOG has extensive experience in administering CDBG projects for local governments in the region. As such, our partnership with ACOG allows us to tap into their expertise and resources, ensuring that our efforts to support economic growth and development in the region are well-informed and effective.

Over the course of the 4-year Local/Regional Plan, we plan to create additional sector partnerships and may re-purpose existing ones to meet emerging needs.

- **Strengthen linkages between the One-Stop delivery system and unemployment insurance programs; and,**

We fully endorse the contents of Unemployment Insurance Program Letter No. 14-18 that emphasizes:

“UI programs play a vital role in the comprehensive, integrated workforce system by providing temporary income support to eligible individuals, who are important customers of the workforce

system. These benefits allow unemployed workers to survive economically while engaging in work search activities for suitable work; and the workforce system is a key source of services to support the reemployment of UI claimants.

As a required One-Stop partner program in the local One-Stop delivery system, not only does UI make a financial contribution towards infrastructure costs, but UI claimants benefit from services provided by other One-Stop partners in the American Job Center network. Depending on program requirements, such services may be provided in-person or virtually.

In addition, a key role of the workforce system is to connect skilled workers with employers who need them, and because UI claimants have recent attachment to the workforce, they are a significant part of the available labor pool for employers"

Furthermore, we agree with this statement in Training and Employment Guidance Letter 16- 16, ("Attachment II: Coordination with Partner Programs"):

"The American Job Center network must provide reemployment services to UI claimants for whom such services are required as a condition for receipt of UI benefits. Services must be appropriate to the needs of UI claimants who are referred to reemployment services under any Federal or State UI law."

TEGL 16-16, goes on to identify some of the needs of UI claimants and how they are met by a properly-designed workforce development system:

- Provision of information and assistance regarding filing claims under UI programs, including meaningful assistance to individuals seeking assistance in filing a claim.
- The American Job Center has current labor market information and provides a wide array of re-employment services free of charge.
- Employment Service staff can refer claimants to job openings in the local area, or in other parts of the State or country if the claimant is willing to relocate.
- Referral to various training programs.
- Assistance in establishing eligibility for programs of financial aid assistance for training and education programs not provided under WIOA.
- If job openings in current field are limited, can offer testing and counseling to determine other appropriate jobs for the claimant.
- Claimants who believe they have special needs or considerations, such as physical needs, which may prevent them from getting a job, can be referred to other agencies for help with those needs.

Through the staff and managers of the Oklahoma Employment Security Commission, our local system will offer services to UI claimants, including services delivered through the voluntary Reemployment Services and Eligibility Assessment (RESEA) program.

Required RESEA services are described in Unemployment Insurance Program Letter 10-22:

> Each RESEA must include the following minimum components to serve the needs of the claimant:
>
> • UI eligibility assessment and referral to adjudication, as appropriate, if an issue or potential issue(s) is identified;
>
> • Requirement for the claimant to report to an AJC;
>
> • Orientation to AJC services;
>
> • The provision of labor market and career information that addresses the claimant's specific needs;
>
> • Registration with the state's job bank;
>
> • Enrollment in Wagner-Peyser-funded Employment Services;
>
> • Development or revision of an individual reemployment plan that includes work search activities, accessing services provided through an AJC or using self-service tools, and/or approved training to which the claimant acknowledges agreement; and
>
> • Provision of at least one additional career service, such as:
>
> - Referrals and coordination with other workforce activities, including the WIOA Dislocated Worker Program;
> - Labor Exchange, including information about in-demand industries and occupations and/or job search assistance;
> - Information about the availability of supportive services;
> - Information and assistance with financial aid resources outside of those provided by WIOA;
> - Financial literacy services; and
> - Career readiness activities, including assistance with resume writing and/or interviewing.

The local workforce development system in Central Oklahoma will support these services by assuring that there is space available for these activities at our comprehensive One-Stop centers in Oklahoma City, Seminole, and Shawnee.

Additionally, we will explore the capacity of our system to facilitate some or all of these services at our specialized locations in Chandler, El Reno, and Guthrie.

The partners in our system firmly believe that UI claimants should receive "meaningful" staff-assisted services, as needed. As stated in UIPL 14-18, "'Meaningful assistance' means having staff well-trained in UI claims filing and claimant rights and responsibilities, available in the One-Stop centers to provide UI claim-filing assistance, if requested…."

We recognize that the ultimate goal of UI / RESEA services is the reemployment of our customers to meaningful employment as quickly as possible.

In this regard, it is our plan to enter into a separate MOU with OESC that will outline how we will better integrate the services to individuals utilizing the unemployment insurance program. It is our intent to intercede with these individuals as they come into the centers as required by state law. Our efforts will be to enroll these clients into WIOA and work with the OESC staff to provide the full array of services available to all customers. As part of this effort we will work to establish placement performance of UI claimants. We will not measure how many returns to employment, but how quickly we can reengage them in the workforce.

We will measure the number of weeks that these individuals draw against the number of possible weeks and use that to determine the amount of potential dollars saved to the UI trust fund. This information will be published on a quarterly basis. We will also track the number of claimants that are enrolled in occupational training placing them on another career path. When we have utilized all of our dislocated worker funds we will petition the state for part of funds set aside for rapid response and if that isn't available we will complete the necessary paperwork asking for National Emergency Grant funds.

- **Implement initiatives such as incumbent worker training programs, on-the- job training programs, customized training programs, work-based learning, industry and sector strategies, career pathways initiatives, utilization of effective business intermediaries, and other business services and strategies designed to meet the needs of regional employers.**

As noted in other sections of this Plan, our local workforce development board has a realistic plan to facilitate the engagement of employers in workforce development programs, provide business services, coordinate the workforce development programs in our area with local economic development efforts, and strengthen linkages between the One-Stop delivery system and unemployment insurance programs.

To further meet the needs of employers, we intend to support additional initiatives that will advance workforce development in the Central Oklahoma area. These initiatives include:

Incumbent Worker Training Programs. Under Title I of WIOA, up to 20 percent of Adult and Dislocated Worker formula grant funds may be used for incumbent worker training projects. Projects like this will be designed and implemented in conjunction with one or more employers for the purpose of helping

their workers to obtain the skills necessary to retain employment or avert layoffs. As described in WIOA Section 134(d)(4)(C), the employer is required to pay for part of the training. The employer's share of the training cost ranges from 10 to 50 percent, depending on the size of the employer.

The employer may provide their share in cash or in kind, fairly evaluated. The employer's share may include the amount of the wages paid by the employer to a worker while the worker is attending the training program.

We have explored opportunities to align our WIOA Incumbent Worker Training programs with similar programs that may be provided with state or local funding and we have created an effective policy.

On-the-Job Training Programs. WIOA Section 134(d)(3)(D)(ii) permits the use of WIOA Adult and Dislocated Worker funds to support on-the-job training (OJT) activities. In this context, "OJT" means training by an employer that is provided to a paid participant while engaged in productive work in a job that—

> (A) provides knowledge or skills essential to the full and adequate performance of the job;
>
> (B) is made available through a program that provides reimbursement to the employer of up to 50 percent of the wage rate of the participant; and
>
> (C) is limited in duration, as appropriate to the occupation for which the participant is being trained.

COWIB routinely uses our WIOA Adult and Dislocated Worker funds to support OJT training activities with qualifying employers. We will continue to do so during the 4-year scope of this Local/Regional Plan. The Board already requires of our Service Provider that 15% of all training funds must be spent for on-the-job training opportunities.

Customized Training Programs. This is another type of occupational skills training designed to meet the specific needs of employers. As defined in Section 3 of WIOA, "customized training" is training:

> (A) that is designed to meet the specific requirements of an employer (including a group of employers);
>
> (B) that is conducted with a commitment by the employer to employ an individual upon successful completion of the training; and
>
> (C) for which the employer pays—
>
> > (i) a significant portion of the cost of training….

COWIB will use a portion of our WIOA Title I funds to support customized training projects in our area.

To the extent possible, we will implement these training projects in coordination with other One-Stop partners.

Industry and Sector Strategies. This portion of our plan is described in “Sector Strategies.”

Career Pathways Initiatives. Elsewhere in this Plan, we describe how we will coordinate education and workforce investment activities in our local area with relevant secondary and postsecondary education programs. In particular, we make a commitment to lead efforts in the local area to develop and implement career pathways.

The term ‘‘career pathway’’ refers to a combination of rigorous and high-quality education, training, and other services. By definition, career pathways must align with the skill needs of industries in the regional economy.

We will ask employers to voluntarily serve on advisory committees to help guide the development of career pathways in Central Oklahoma. We will also work with existing advisory groups that have been convened by area career technology schools and community colleges, etc. Not least of all, we intend to use the expertise of the industry advisory boards that have been convened by the COWIB to support our Sector Strategy efforts.

Our goal will be to make sure that our Career Pathways initiatives are properly aligned with the needs of business.

Utilization of Effective Business Intermediaries. In WIOA Section 134(d)(1)(A)(ix), the law allows local boards to use a portion of their Adult and Dislocated Worker program funds to provide activities to provide business services and strategies that meet the workforce investment needs of area employers.

The law goes on to say that these services may include:

- Developing and implementing industry sector strategies;
- Developing and delivering innovative workforce investment services and strategies for area employers, which may include career pathways, skills upgrading, skill standard, and more;
- Assistance to area employers in managing reductions in force and with strategies for the aversion of layoffs; and
- Marketing of business services to appropriate area employers, including small and mid-sized employers.

According to WIOA Section 134(d)(1)(A)(ix)(I), these services and strategies “…may be provided through effective business intermediaries working in conjunction with the local board, and may also be provided on a fee-for-service basis or through the leveraging of economic development, philanthropic, and other public and private resources in a manner determined appropriate by the local board.”

A further explanation of these services is given in the WIOA Final Joint Rule, which was published jointly by the U.S. Department of Labor and the U.S. Department of Education. The Joint Rule states:

"These business services may be provided by the Local WDB or through effective business intermediaries working in conjunction with the Local WDB, or through other public and private entities in a manner determined appropriate by the Local WDB and in cooperation with the State…."

During the duration of the 4-year Local/Regional Plan for Central Oklahoma, COWIB intends to use a unit of our board staff (the COWIB Business Services Team) to function as a business intermediary. We will also work with other public and private entities, as appropriate, to develop and deliver the business services, innovative workforce investment services, and strategies described in the WIOA law.

4. Describe how the local board will implement the goals and strategies of Oklahoma's Unified State Plan and the Regional Plan.

The State's strategic vision for its workforce development system is described beginning on Page 42 of the 2020-2023 Unified State Plan:

"The State's strategic vision: Align resources, education, training and job opportunities to build Oklahoma's workforce."

In terms of the state's goals, these are defined beginning on Page 43 of the Unified State Plan. There are 2 goals:

Goal 1: Goals for preparing an educated and skilled workforce, including preparing youth and individuals with barriers to employment and other populations.

Goals 2: Goals for meeting the skilled workforce needs of employers.

Under these goals, the State's Unified plan includes objectives and strategies, including:

Objective/Goal 1: EXPAND OKLAHOMA'S WORKFORCE TO SATISFY INDUSTRY AND

ECONOMIC DEVELOPMENT GOALS: An expanded workforce will provide a larger pool of potential workers, increase the financial and economic opportunities of workers, and encourage greater business investment, economic development, and job creation.

Objective/Goal 2: UPSKILL OKLAHOMA'S WORKFORCE: A well-trained workforce will reduce the incidence and effects of unemployment, increase the financial and economic opportunities of workers, and encourage greater business investment and job creation.

Objective/Goal 3: OFFER WORKFORCE SOLUTIONS TO OKLAHOMA'S BUSINESSES: Businesses

that have access to a responsive, effective and solutions-focused public workforce system will be better positioned to expand the availability of quality jobs and capital investments.

Objective/Goal 4: BUILD OKLAHOMA'S WORKFORCE SYSTEM CAPACITY: A public workforce system able to respond to changing business needs and deliver innovative solutions will support the expansion of business investments and job creation.

Listed below are the job seeker goals that include a focus on specific populations:

Goals for Youth:

- A greater focus and clearer strategies for out-of-school youth with regard to credential attainment, work experience, and work-based learning;
- An increased awareness of jobs that are currently available and lead to economic success, as demonstrated by labor market information.
- An increased awareness of and access to other options/paths, in addition to college, such as Registered Apprenticeships;
- And, a fully deployed Individual Career and Academic Plan (ICAP) integrated with all students within the secondary school system as a preventative measure.

Goals for Individuals with Barriers to Employment:

- Clearer strategies for ex-offenders, including the exploration of a pay for performance strategy, as ex-offenders represent a large population of Oklahoma's workforce;
- Connecting more WIOA participants to Registered Apprenticeship opportunities;
- Increased on-the-job training opportunities (e.g., registered apprenticeships, internships, etc.) to ensure the integration of relevance with education and training, as well as enculturation into appropriate professional and soft skills;
- Greater assistance for those who experience a job loss and are supporting a family (e.g., re-training);
- An increased focus on lifelong learning through development of a state-level strategy to ensure individuals are both successful in the current job market, as well as the future economy as skills are increasingly changing as technology develops; and
- Supporting and guiding a shift from survival mode to a vision for the future (adult and youth; consider mentors) for those hard-to-serve and opportunity populations.

COWIB will cultivate and maintain productive relationships between regional employers, educators, and other workforce partners to ensure an appropriately skilled workforce that meets the needs of employers. For example, we are actively engaged in a sector strategy process that draws together a

meeting of regional employers. This ensures that we understand and can make our partners aware of the skilled workforce needs of employers in our region.

We are a Board that strives to continually improve the conditions of our communities, both on the individual and business level. This includes optimizing our resources by creating models that blend the efforts of similar workforce programs. Programs that increase the effectiveness and efficiency of delivery by eliminating duplication and realizing that our efforts should be about the efforts needed to improve the economic condition of everyone in our region.

With regard to the state's second goal ("Goal 2: Meeting the Needs of Employers"), our board understands how important it is to engage the business community — to listen, learn and translate their needs to our individual clients and to our partner organizations. We set aside money specifically for Business Services, providing services to small businesses that often are searching for an organization to provide them with the support they need to continue to grow and be profitable.

We will support each of the state's goals and objectives by participating appropriately on statewide planning groups and offering our input, as may be asked, on the development of models for partnership and resources. We will fully support the state's efforts to meet the needs of employers.

5. Describe how the local board will coordinate local workforce development activities with regional economic development activities that are carried out in the local area and how the local board will promote entrepreneurial skills training and microenterprise services.

The One-Stop partners in Central Oklahoma represent various programs and funding sources. Some of the partners have a service area that is statewide in scope. Some of them serve smaller areas.

The COWIB board will strive to coordinate the workforce investment activities in Central Oklahoma so that economic development activities are properly supported throughout all 9 counties of our region.

We will do this by:

- Convening regular meetings of the COWIB board of directors;
- Inviting the participation of all One-Stop partners in regular meetings;
- Sharing relevant information with economic development organizations in our area;
- Making regular reports to our Board of Chief Elected Officials.
- With regard to Entrepreneurial Skills Training and Microenterprise Services, COWIB will direct the use of its WIOA Title I Adult, Dislocated Worker, and Youth funds in order to supplement the training and services available through other One-Stop partner programs. Our goal will be to supplement, support, and expand the availability of such training and services in our 9-county area.

Entrepreneurial Skills Training. It is notable that entrepreneurial skills training is listed as an allowable activity in several WIOA Title I programs.

In Section 129, entrepreneurial skills training is given as one of the elements of the WIOA Youth program;

In Section 134(a)(3)(A), the WIOA law provides that statewide funds may be used to carry out microenterprise and entrepreneurial training and support programs;

In Section 134(c)(3)(D), entrepreneurial training is listed as a type of training services that may be supported with the COWIB's local Adult / DLW funds.

In Section 166 of WIOA ("Native American Programs"), training on entrepreneurial skills is included as one of the comprehensive workforce development activities that are authorized by the law.

During the 4-year period of our Local/Regional Plan, COWIB's goals for supporting Entrepreneurial Skills Training include:

(1) Determine the scope and scale of Entrepreneurial Skills Training available through our One-Stop partners and others, including:

- The TANF program of the Oklahoma Department of Human Services;
- Small Business Training offered through the Community Action Agency of Central Oklahoma;
- Programs available through the Oklahoma Small Business Development Center;
- The programs of the Oklahoma Cooperative Extension Services;
- OIC-OKC Business Academy (program intended to assist entrepreneurs in marginalized communities in starting businesses within their own neighborhoods)

(2) COWIB's Service Provider will establish relevant connections to offer Entrepreneurial Skills Training to eligible participants in the Adult, Dislocated Worker, and Youth programs.

(3) COWIB will establish suitable Memorandums of Understanding (MOUs) with providers of Entrepreneurial Skills Training and

(4) Ensure that Entrepreneurial Skills Training is equitably represented in the delivery of entrepreneurship training programs in Central Oklahoma.

6. Describe how:
a. The local board will ensure the continuous improvement of eligible providers of services through the system in order to meet the employment needs of local employers, workers, and jobseekers; and,

Across the system, continuous improvement is supported through evaluation, accountability, identification of best practices, and data driven decision making. (Source: workforcegps.org)

WIOA Section 101(d)(6)(A) gives a leading role to the "State Board" (i.e., the Governor's Council for Workforce and Economic Development) in the development of policies and guidelines promoting the continuous improvement of One-Stop centers and their services:

> "(d) FUNCTIONS. — The State board shall assist the Governor in…
>
> > "(6) the development and review of statewide policies affecting the coordinated provision of services through the State's One-Stop delivery system described in section 121(e), including the development of—
> >
> > "(A) objective criteria and procedures for use by local boards in assessing the effectiveness and continuous improvement of One-Stop centers described in such section."

At the local level, the COWIB has complementary functions as described in WIOA Section 107(d). For example:

> "(d) FUNCTIONS OF LOCAL BOARD.—Consistent with section 108, the functions of the local board shall include the following…
>
> > "(6) PROVEN AND PROMISING PRACTICES. — The local board shall lead efforts in the local area to—
> >
> > > "(A) identify and promote proven and promising strategies and initiatives for meeting the needs of employers, and workers and jobseekers (including individuals with barriers to employment) in the local workforce development system…; and
> > >
> > > "(B) identify and disseminate information on proven and promising practices carried out in other local areas for meeting such needs….
> >
> > "(8) PROGRAM OVERSIGHT. — The local board, in partnership with the chief elected official for the local area, shall—
> >
> > > "(A)(i) conduct oversight for local youth workforce investment activities authorized under section 129(c), local employment and training activities authorized under subsections (c) and (d) of section 134, and the One-Stop delivery system in the local area; and
> > >
> > > "(ii) ensure the appropriate use and management of the funds provided under subtitle B for the activities and system described in clause (i); and

> "(B) for workforce development activities, ensure the appropriate use, management, and investment of funds to maximize performance outcomes under section 116."

§ 682.220 of the WIOA Final Rule reinforces the role of the State Board. It asserts that, "States must use funds reserved by the Governor for statewide activities to conduct evaluations of activities under the WIOA title I core programs in order to promote continuous improvement, research and test innovative services and strategies, and achieve high levels of performance and outcomes."

The WIOA Final Rule also suggests that Local Boards have a role in supporting the design and implementation of those evaluations.

Consistent with the WIOA law and regulations, our local workforce development board will give great attention to supporting and implementing the state policies and procedures.

In addition to supporting the improvement of our One-Stop centers, we will absolutely accept our responsibility to support the continuous improvement of service providers. In particular, we will give attention to monitoring the performance outcomes achieved by eligible providers of services in Central Oklahoma — including providers of career services (as described in Section 134(c) of WIOA), providers of youth services (WIOA Section 129), and providers of training services (as referenced in WIOA Section 122).

Career Services and Youth Services. WIOA Section 134(b) authorizes the use of WIOA Title I Adult and Dislocated Worker core funds to provide the career services described in Section 134(c). WIOA Section 129 authorizes the use of WIOA Title I Youth core funds to provide youth services.

Our local board and elected officials are fiscally responsible for these core funds, and we will monitor their use and effectiveness as a part of our regular oversight duties. Our board will create a local monitoring and oversight policy for this purpose. Board staff have been identified to carry out these functions.

Training Services. With regard to measuring the continuous improvement of eligible providers of training, the WIOA law and regulations describe duties for both the state and the local board. For example, Section 122(a) authorizes the Governor to "establish criteria, information requirements, and procedures regarding the eligibility of providers of training services to receive funds" under WIOA Title I, Subtitle B.

The eligibility criteria for training providers under Section 122 includes information on program completion rates, credentials earned by participants, and "appropriate measures of performance outcomes determined by the Governor."

Additionally, Section 122 provides that local areas may have a role in receiving and reviewing applications from providers of training and in making determinations of eligibility based on the state's criteria and procedures.

COWIB will fully comply with the policy and procedures established by the Oklahoma Office of Workforce Development. In this way, we will contribute to the continuous improvement of eligible providers of training.

b. Entities within the One-Stop delivery system, including system/center operators and partners, will comply with section 188 of WIOA, if applicable, and applicable provisions of the Americans with Disabilities Act of 1990 regarding the physical and programmatic accessibility of facilities, programs and services, technology, and materials for individuals with disabilities, including providing staff training and support for addressing the needs of individuals with disabilities.

Section 188 is the "Nondiscrimination" section of the WIOA law. Here is an excerpt:

> SEC. 188. NONDISCRIMINATION.
>
> (a) IN GENERAL.—
>
> (1) FEDERAL FINANCIAL ASSISTANCE. — …programs and activities funded or otherwise financially assisted in whole or in part under this Act are considered to be programs and activities receiving Federal financial assistance.
>
> (2) PROHIBITION OF DISCRIMINATION REGARDING PARTICIPATION, BENEFITS, AND EMPLOYMENT. — No individual shall be excluded from participation in, denied the benefits of, subjected to discrimination under, or denied employment in the administration of or in connection with, any such program or activity because of race, color, religion, sex (except as otherwise permitted under title IX of the Education Amendments of 1972), national origin, age, disability, or political affiliation or belief.
>
> (3) PROHIBITION ON ASSISTANCE FOR FACILITIES FOR SECTARIAN INSTRUCTION OR RELIGIOUS WORSHIP. ….
>
> (4) PROHIBITION ON DISCRIMINATION ON BASIS OF PARTICIPANT STATUS. — No person may discriminate against an individual who is a participant in a program or activity that receives funds under this title, with respect to the terms and conditions affecting, or rights provided to, the individual, solely because of the status of the individual as a participant.
>
> (5) PROHIBITION ON DISCRIMINATION AGAINST CERTAIN NONCITIZENS. ….

As described in the Federal Regulations at 29 CFR Part 38, Section 188 applies to any recipient of funding under Title I of WIOA. It is also applicable to:

1. Programs and activities that are part of the One-Stop delivery system and that are operated by One-Stop partners, to the extent that the programs and activities are being conducted as part of the One-Stop delivery system; and

2. The employment practices of a recipient and/or One-Stop partner, to the extent that the employment is in connection with programs and activities that are being conducted as a part of WIOA Title I or the One-Stop delivery system.

The Federal Regulations go on to describe how the implementation of certain requirements of Section 188 will be the responsibility of "The Governor or the LWDA grant recipient, as provided in the State's Nondiscrimination Plan…."

As an example, § 38.73 states:

38.73 Responsibility for developing and publishing complaint processing procedures for service providers.

The Governor or the LWDA grant recipient, as provided in the State's Nondiscrimination Plan, must develop and publish, on behalf of its service providers, the complaint processing procedures required in § 38.72. The service providers must then follow those procedures.

In addition, the COWIB One-Stop Operator has established an Access for All Star Accessibility team comprising joint system partners. COWIB designated two Board Directors who are core WIOA Partners and a County Commissioner (BCEO) to oversee compliance with Section 188 and assess the need for staff training, among other responsibilities. The team is focused on facilitating access to services and has three main goals:

- To provide information and guidance to One-Stop partners who are interested in making their facilities and services more accessible to all customers.
- To explore and implement electronic linkages to services.
- To establish a process for sharing space within the American Job Centers in our area.

By achieving these goals, we aim to make our services more accessible to all customers and promote inclusivity within the workforce development system.

Our local workforce development system in Central Oklahoma is committed to ensuring accessibility for all job seekers and businesses, in compliance with the Americans with Disabilities Act (ADA). We share the perspective of Unemployment Insurance Program Letter No. 20-15 that underscores the importance of accessibility for people with disabilities.

Collaborating with the Governor's Council for Workforce and Economic Development (GCWED) and other partners, we aim to further develop and employ more Oklahomans with disabilities. The Oklahoma Department of Rehabilitation Services (ORS), as the lead agency in enhancing accessibility, is working with our workforce system partners to provide equitable services and ensure ADA compliance.

In Central Oklahoma, we are implementing the Access for All initiative developed by ORS and Oklahoma Able Tech. This initiative focuses on recruitment, hiring, and promotion of individuals with disabilities within the state's workforce system, including American Job Center partners and employers. We have completed Phase I of the Star Accessibility Assessment and are awaiting guidance from the state for Phase 2.

Through the Access for All initiative, we aim to equip our One-Stop partners with the knowledge and resources to make our entire system more accessible to individuals with disabilities, in person, on the phone, and through the web. We are committed to cross-training staff, technical assistance, sharing information, and collaborating with employers to enhance the provision of services to individuals with disabilities and others.

To ensure compliance with the American Disabilities Act of 1990 (ADA), COWIB will enter into an agreement with the Oklahoma Department of Rehabilitation Services, committing to cooperation, collaboration, and coordination efforts for enhanced service provision to individuals with disabilities.

7. Describe how the local board will coordinate WIOA Title I workforce development activities with the provision of transportation, child care, and other appropriate supportive services in the local area. Include a copy of a completed Job Seeker Wrap Around Services service matrix.

While each partner program has different requirements for providing transportation, childcare, and other supportive services, our local board and Title I partners acknowledge that there is potential to coordinate these services in a way that may result in cost savings. By identifying gaps and areas of duplication, we analyzed the availability of various services, including supportive services. This information, along with our comprehensive and robust resource guide, is accessible to the public at:

https://docs.google.com/document/d/1eQ1pg3I1HvdVss2QTPp490ywB4E7VdR5qBOIfsJ2eHE/edit#heading=h.o8jg7s1roq8t

While there are no formal agreements in place on who provides support services, the Board mandates a policy that requires Title I service providers to coordinate with partners in the provision of support services, if available, before utilizing Title I funds for support services. We are exploring case management options that would be accessible to all partners, which would simplify and enhance coordination and referrals.

Finally, we recognize that transportation can be a significant barrier for many job seekers, particularly in rural parts of the Central Oklahoma region. As a result, the board is prioritizing efforts to address these needs with our partners and workforce stakeholders.

A copy of our regions Job Seeker Wrap Around Services Service Matrix is included in this Local/Regional Plan as Attachment II.

8. Provide the executed cooperative agreements* which define how service providers will carry out the requirements for integration of, and access to, the entire set of services available in the local One-Stop system. This includes cooperative agreements between the local WDB and other local entities with respect to efforts that will enhance the provision of services to individuals with disabilities and to other individuals, such as cross training of staff, technical assistance, use and sharing of information, cooperative efforts with employers, and other efforts at cooperation, collaboration, and coordination.

COWIB is committed to properly carrying out all of our defined functions as a local workforce development board, including the duty to coordinate with education providers, as described in Section 107(d)(11) of the WIOA law.

Section 107(d)(11) provides that local boards will coordinate activities with education and training providers in the local area, including:

> … Providers of workforce investment activities;
>
> … Providers of adult education and literacy activities under Title II;
>
> … Providers of career and technical education (as defined in Section 3 of the Carl D. Perkins Career and Technical Education Act of 2006 (20 U.S.C. 2302)); and
>
> … Local agencies administering plans under Title I of the Rehabilitation Act of 1973.

Paragraph (B) of Section 107(d)(11) describes how the local board is to coordinate these activities. Two specific requirements are identified.

First, the local board is required to carry out certain functions related to Title II of WIOA. As described in WIOA Section 232, the board has an obligation to review the applications to provide adult education and literacy activities under Title II for the local area.

Second, the board is required to replicate certain cooperative agreements in accordance with subparagraph (B) of Section 101(a)(11) of the Rehabilitation Act of 1973.

Section 101(a) of the Rehabilitation Act relates to the “vocational rehabilitation services portion” of the Unified State Plan. Section 101(a)(11) lays out a requirement for there to be a cooperative agreement between the designated State agency (ORS) and “other entities that are components of the statewide workforce development system.”

Paragraph (A) of Section 101(a)(11) of the Rehabilitation Act explains that the state's cooperative agreement must describe efforts that will enhance the provision of services to individuals with disabilities and to other individuals, such as cross training of staff, technical assistance, use and sharing of information, cooperative efforts with employers, and other efforts at cooperation, collaboration, and coordination.

Then, in Paragraph (B) of Section 101(a)(11), this requirement is given:

> (B) REPLICATION OF COOPERATIVE AGREEMENTS. — The State plan shall provide for the replication of such cooperative agreements at the local level between individual offices of the designated State unit and local entities carrying out activities through the statewide workforce development system.

As stated above, COWIB is committed to properly carrying out all of our defined functions as a local workforce development board. We will work diligently to maintain a positive working relationship with each of our One-Stop partners.

It is our understanding that, as a local workforce development board, we should work cooperatively with our state partners – including, as described in the Rehabilitation Act – to replicate the state's cooperative agreement. As much as possible, our local agreement with ORS will copy the state model in form and content. If possible, we will execute this agreement before the end of June, 2017.

As we interpret this requirement, the cooperative agreements mentioned in § 679.560(b)(13) of the WIOA Final Rule are much different from other types of agreements that the COWIB might have with our One-Stop partners. In particular, there is a distinction between a "One-Stop partner" and a "service provider."

A One-Stop partner is a grant recipient or organization that manages a One-Stop program as defined in WIOA Section 121(b)(1)(B). A service provider, on the other hand, is a provider of training services or a provider of career services, etc. For example, the WIOA law refers to "eligible providers of training services," "eligible providers of youth workforce investment activities," "providers of adult education," "providers of career and technical education activities," and so on. In some cases, a One-Stop partner may be a service provider. In other instances, the One-Stop partner may have more of a management role — awarding contracts to service providers, for example.

COWIB will enter into cooperative agreements with service providers for the purpose of promoting integration / access, etc. We will prioritize such agreements after we have completed the negotiation of our Memorandum of Understanding with our One-Stop partners.

9. Identify the local:
a. Fiscal agent

The Board of Chief Elected Officials for the Central Oklahoma workforce area has designated a Fiscal Agent for WIOA grant funds: It is the Central Oklahoma Workforce Investment Board (COWIB).

b. One-Stop Operator(s)

In the summer of 2016, our local workforce development board conducted a competitive procurement in order to identify a One-Stop operator for the Central Oklahoma. A contract was awarded to Kaiser Group, Inc. dba Dynamic Workforce Solutions.

c. Service Provider(s) for Adult and Dislocated Worker WIOA Title I Basic and Individualized Career Services

COWIB conducted a competitive procurement in order to identify a provider of Basic and Individualized Career Services for our WIOA Title I core Adult and Dislocated Worker programs. A contract was awarded to Kaiser Group, Inc. dba Dynamic Workforce Solutions.

d. Service Provider(s) for Youth WIOA Title I Services

Our Youth service provider (WIOA Title I core Youth program) is Kaiser Group, Inc. dba Dynamic Workforce Solutions. Kaiser Group was selected as the result of a competitive procurement process.

10. Describe the competitive process used to award the subgrants and contracts for WIOA Title I activities.

In context, this requirement relates to the procurement of WIOA Title I services by the local workforce board.

As our local board identifies the need to award a sub-grant or contract for WIOA Title 1 services, we will follow the state mandated procurement process.

That is, if we believe the resulting contract might be for an amount in excess of $24,999.00 we follow a competitive sealed bid process. If it is designed for a sub-grant we use a Request for Proposals (RFP); and if we looking to fulfill a very specific list of requirements, we use an Invitation to Bid (ITB) method.

Notice of the RFP or ITB is published as well as distributed to a list of suggested bidders. It is our intent to allow up to six weeks between the publication of the notice and when sealed bids are due. The proposals and/or bids are evaluated by a committee of the Board specifically for that duty. Their recommendation to enter a contract is forwarded to the entire Board for ratification and the Chief Executive Officer is the point for the negotiation of the contract.

11. Describe the local levels of performance negotiated with the State.

COWIB entered into negotiations with the Oklahoma Office of Workforce Development (OOWD) with regard to the local levels of performance for these four programs:

- WIOA Adults (PY22/PY23)
- WIOA Dislocated Workers (PY22/PY23)
- WIOA Youth (PY22/PY23)
- Business Services (PY22)

The local levels of performance for Program Year (PY) 2022 and 2023were determined after considering economic data for the local area, previous performance data, and predicted outcomes resulting from the use of a statistical adjustment model.

WIOA Adult, Dislocated Workers, and Youth Performance Measures for PY 2022 and PY2023

WDA	**Program**	**Performance Metric**	**2022/2023 Negotiated Goals**
Central	Adult	Credential Attainment	68.9%
Central	Adult	Employment 2nd Quarter After Exit	70.0%
Central	Adult	Employment 4th Quarter After Exit	68.0%
Central	Adult	Measurable Skills Gain	61.0%
Central	Adult	Median Earnings 2nd Quarter After Exit	$5,700
Central	DW	Credential Attainment	75.3%
Central	DW	Employment 2nd Quarter After Exit	74%
Central	DW	Employment 4th Quarter After Exit	72.0%
Central	DW	Measurable Skills Gain	61.0%
Central	DW	Median Earnings 2nd Quarter After Exit	$8,900
Central	Youth	Credential Attainment	62.0%
Central	Youth	Employment 2nd Quarter After Exit	74.0%
Central	Youth	Employment 4th Quarter After Exit	75.5%
Central	Youth	Measurable Skills Gain	59.0%

Central	Youth	Median Earnings 2nd Quarter After Exit	$3,900

Business Services Performance Measures for PY2021

Performance Measure	**Negotiated**
Customer Satisfaction Survey Results (out of 5)	4.5
Number of Employer Focused Events per Quarter	3
Number of Sector Partnerships Per Year	1
Number of Registered Apprenticeship Presentations/Program Development per Quarter	3
Number of Business Core Program Services per Quarter (OWDI #06-2018-Attachment 1)	100

12. Describe the actions the local board will take toward becoming or remaining a high performing board.

The key to ensuring that a local board is highly effective can be found in the criteria defined for certifying the local board. As determined by the GCWED, the certification criteria include:

- Appropriate LWDB membership;
- Proper LWDB area organizational structure;
- Separation of LWDB, One-Stop Operator, and WIOA Title I provider staff; and
- Collaboration with Economic Development Partners.

COWIB's re-certification as the local workforce development board for the Central Oklahoma area was confirmed in May 2021 and will be reconfirmed in May 2023.

Our local board understands that being a high-performing board requires innovation and a willingness to create opportunities for employment. We are committed to working closely with our business community to ensure that we are meeting their needs for a strong workforce.

To maximize our training dollars, we will continuously seek out cost-effective ways to provide industry-focused and short-term training programs to our clients. Our focus will be on providing credentials and skills that are in high demand by employers and that lead to immediate employment opportunities.

We also recognize the importance of partnering with other organizations to provide employment-related activities for individuals who have barriers to employment. By working together, we can provide a comprehensive set of services that help move these individuals into the labor force and ultimately, improve their economic well-being.

Our region has more potential growth in employment than in population, which means we need to explore all options to ensure we have the talent needed to sustain this growth. We will work to create career paths that provide individuals with meaningful growth opportunities and benefits, and we will engage our opportunity youth to ensure they are an energized part of our growing economy. By demonstrating that today's work environments value and support them, we can help to create a more inclusive and vibrant regional economy.

In the future, the members and staff of the Central Oklahoma Workforce Innovation Board will take additional steps toward remaining a high-performance board. Planned actions include:

(1) Participation in regular board member development activities – such as those offered by the Oklahoma Association of Workforce Boards (OAWB);

(2) Leadership attendance at the Annual Forum of the National Association of Workforce Boards (NAWB);

(3) Enforcement of the COWIB's conflict of interest standards as published in the board's bylaws;

(4) Enforcement of bylaws with respect to attendance in board and committee meetings.

13. Describe how training services will be provided through the use of individual training accounts, including, if contracts for training services will be used, how the use of such contracts will be coordinated with the use of individual training accounts, and how the local WDB will ensure informed customer choice in the selection of training programs regardless of how the training services are to be provided.

This planning requirement is distilled from WIOA Section 108(b):

"(b) CONTENTS.—The Local/Regional Plan shall include—

"(19) a description of how training services under chapter 3 of subtitle B will be provided in accordance with section 134(c)(3)(G), including, if contracts for the training services will be used, how the use of such contracts will be coordinated with the use of individual training accounts under that chapter and how the local board will ensure informed customer choice in the selection of training programs regardless of how the training services are to be provided."

In context, Chapter 3 of Subtitle B of the WIOA Law encompasses Sections 131, 132, 133, and 134 of the Act. This chapter deals with Adult and Dislocated Worker Employment and Training Activities and how they are funded through grants awarded to the states by the U.S. Department of Labor. A majority of the funds described in this chapter are distributed by the states to local workforce areas on the basis of an allocation formula. The requirement for the allocation of funds to local areas is specified in Chapter 3.

Section 134(c) describes "Required Local Employment and Training Activities."

Section 134(c)(3) provides that a portion of the allocated funds must be used "to provide training services to adults and dislocated workers" who meet certain eligibility criteria. Training services may be provided to individuals who are "in need of training services" and who "have the skills and qualifications" to participate successfully in a "selected program of training services."

Additionally, pursuant to Section 134(c)(3)(A)(i)(II), the individual must select a program of training services that is "directly linked to the employment opportunities in the local area or the planning region, or in another area to which the adults or dislocated workers are willing to commute or relocate."

Section 134(c)(3)(G) of the WIOA Law states:

> "(G) USE OF INDIVIDUAL TRAINING ACCOUNTS.—
>
> "(i) IN GENERAL. — Except as provided in clause (ii), training services provided under this paragraph shall be provided through the use of individual training accounts in accordance with this paragraph, and shall be provided to eligible individuals through the One-Stop delivery system."

An individual training account — known as an "ITA" — is a payment mechanism that may be used to provide the training services described in Section 134(c)(3) of WIOA. The definition of the term "Individual Training Account" appears in the WIOA Final Regulations issued by the U.S. Department of Labor:

> "§ 680.300 How are training services provided?
>
> "Training services for eligible individuals are typically provided by training providers who receive payment for their services through an ITA. The ITA is a payment agreement established on behalf of a participant with a training provider. WIOA title I adult and dislocated workers purchase training services from State eligible training providers they select in consultation with the career planner, which includes discussion of program quality and performance information on the available eligible training providers. Payments from ITAs may be made in a variety of ways, including the electronic transfer of funds through financial institutions, vouchers, or other appropriate methods…."

Although the WIOA Regulations say that training services are typically provided through an ITA, the law does allow for the use of an alternative under certain circumstances. The alternative is a training contract, as described in clause (ii) of Section 134(c)(3)(G):

> "(ii) TRAINING CONTRACTS. — Training services authorized under this paragraph may be provided pursuant to a contract for services in lieu of an individual training account if—
>
> > "(I) the requirements of subparagraph (F) are met;
> >
> > "(II) such services are on-the-job training, customized training, incumbent worker training, or transitional employment;
> >
> > "(III) the local board determines there are an insufficient number of eligible providers of training services in the local area involved (such as in a rural area) to accomplish the purposes of a system of individual training accounts;
> >
> > "(IV) the local board determines that there is a training services program of demonstrated effectiveness offered in the local area by a community-based organization or another private organization to serve individuals with barriers to employment;
> >
> > "(V) the local board determines that—
> >
> > > "(aa) it would be most appropriate to award a contract to an institution of higher education or other eligible provider of training services in order to facilitate the training of multiple individuals in in-demand industry sectors or occupations; and
> > >
> > > "(bb) such contract does not limit customer choice; or "(VI) the contract is a pay-for-performance contract."

With respect to the training services described in Section 134(c)(3) of WIOA, Individual Training Accounts will be used extensively. As stated in the WIOA Regulations, "Training services for eligible individuals are typically provided… through an ITA."

Pursuant to the law, ITA's will be awarded to eligible individuals who are in need of training services, who have the skills to succeed in training, and who select a program of training services that is appropriately "linked to employment opportunities," etc.

At times, the Central Oklahoma Workforce Investment Board will allow for the limited use of training contracts as described in clause (ii) of Section 134(c)(3)(G). Each contract will be developed in response to a specific need, and the terms of each contract will be negotiated by the COWIB's Chief Executive Officer with oversight by the COWIB's Executive Committee.

Here is a general description of how training contracts will be used in lieu of ITA's in appropriate circumstances:

(1) The use of On-the-Job Training, Customized Training, Incumbent Worker Training, or Transitional Employment activities.

COWIB will support the use of these training options when a determination is made that a training contract is necessary to fill a void in services and/or to provide additional value to the COWIB and its stakeholders. Specific local policies will be developed to govern the use of these training activities.

(2) The use of a training contract upon a determination that there are an insufficient number of eligible providers of training services in the local area.

There are a large number of eligible providers of training services in the Central Oklahoma workforce area, and COWIB has not made a determination that the number of training providers is insufficient. However, the members of the COWIB will continue to review and monitor the availability of training services throughout our local area — including rural parts of the Central Oklahoma region.

If the number of training providers shrinks to such a level that the purpose of an ITA system cannot be reasonably accomplished, the COWIB board will be asked to make a determination. Any such decision will be made pursuant to a motion and a vote in a public meeting of the board.

(3) The use of a training contract upon a determination that there is a training program of demonstrated effectiveness offered in the local area by a community-based organization or another private organization to serve individuals with barriers to employment.

Presently — as of the time of the submission of this plan — COWIB has not been asked to make a determination that there is a "training services program of demonstrated effectiveness…" as described in WIOA Section 134(c)(3)(G)(ii)(IV). Any such determinations will be made on a case-by-case basis after a fair review by members of the COWIB board voting in open session.

We interpret the term "individuals with barriers to employment" in a manner that is consistent with Section 3 of WIOA. That is:

> (24) INDIVIDUAL WITH A BARRIER TO EMPLOYMENT. — The term "individual with a barrier to employment" means a member of 1 or more of the following populations:
>
> (A) Displaced homemakers.
>
> (B) Low-income individuals.

(C) Indians, Alaska Natives, and Native Hawaiians, as such terms are defined in section 166.

(D) Individuals with disabilities, including youth who are individuals with disabilities.

(E) Older individuals.

(F) Ex-offenders.

(G) Homeless individuals (as defined in section defined in section 725(2) of the McKinney- Vento Homeless Assistance Act (42 U.S.C. 11434a(2))).

(H) Youth who are in or have aged out of the foster care system.

(I) Individuals who are English language learners, individuals who have low levels of literacy, and individuals facing substantial cultural barriers.

(J) Eligible migrant and seasonal farmworkers, as defined in section 167(i).

(K) Individuals within 2 years of exhausting lifetime eligibility under part A of title IV of the Social Security Act (42 U.S.C. 601 et seq.).

(L) Single parents (including single pregnant women).

(M) Long-term unemployed individuals.

(N) Such other groups as the Governor involved determines to have barriers to employment.

(4) The use of a training contract upon a determination that it would be most appropriate to award a contract to an institution of higher education or other eligible provider of training services in order to facilitate the training of multiple individuals in in-demand industry sectors or occupations.

COWIB recognizes that some occupational training options are very highly sought-after. In our experience, there is a very high demand for training services for truck drivers, certified nurse aides, welders, and other high-demand occupations. At times, it may be most appropriate to award a training contract for a class-size training program rather than to rely on the usual system of Individual Training Accounts.

For example, in October 2016, the COWIB board approved a training contract with Metro Technology Centers in Oklahoma City for the purpose of preparing up to 50 eligible WIOA participants to enter into welding jobs. The contract was developed under Section 134(c)(3)(G)(ii)(V) of the WIOA law.

The COWIB board will rely on our CEO, working under the supervision of our Executive Committee, to develop and award appropriate training contracts that will serve to expand training opportunities in our local area while also providing a favorable value compared to the usual system of ITA's.

(5) The use of pay-for-performance contracts.

The term "Pay For Performance Contract" is defined in Section 3 of the WIOA Law:

> "(47) PAY-FOR-PERFORMANCE CONTRACT STRATEGY.—The term 'pay-for-performance contract strategy' means a procurement strategy that uses pay-for-performance contracts in the provision of training services described in section 134(c)(3) or activities described in section 129(c)(2), and includes—
>
> "(A) contracts, each of which shall specify a fixed amount that will be paid to an eligible service provider (which may include a local or national community-based organization or intermediary, community college, or other training provider, that is eligible under section 122 or 123, as appropriate) based on the achievement of specified levels of performance on the primary indicators of performance described in section 116(b)(2)(A) for target populations as identified by the local board (including individuals with barriers to employment), within a defined timetable, and which may provide for bonus payments to such service provider to expand capacity to provide effective training;
>
> "(B) a strategy for independently validating the achievement of the performance described in subparagraph (A); and
>
> "(C) a description of how the State or local area will reallocate funds not paid to a provider because the achievement of the performance described in subparagraph (A) did not occur, for further activities related to such a procurement strategy, subject to section 189(g)(4)."

Presently — as of the time of the submission of this plan — COWIB has not yet developed a Pay- for-Performance contract strategy. When we do, it will include the proper features to assure that the Customer Choice requirement of Section 134(c)(3)(F) is fully honored.

With regard to Customer Choice, Section 134(c)(3)(F) of the WIOA Law states:

> "(F) CONSUMER CHOICE REQUIREMENTS.—
>
> "(I) IN GENERAL. — Training services provided under this paragraph shall be provided in a manner that maximizes consumer choice in the selection of an eligible provider of such services."

This part of the law is consistent with Section 134(c)(3)(G)(ii)(I) of the Act which allows a training contract to be used in lieu of an ITA only when the Consumer Choice Requirements of subparagraph (F) have been met.

In October, 2017, the COWIB board adopted a 22-page Policy on Informed Consumer Choice. In this policy, we state:

"Whether training is delivered through an ITA or through a Training Contract, COWIB is committed to honoring the value of informed customer choice. Therefore, when an eligible participant has been properly determined to have the skills and qualifications to successfully participate in more than one program of training services, we will always provide an opportunity for the consumer to make an informed choice of training programs / providers."

Additionally:

"In all cases, the Career Planners in our One-Stop Centers will adhere to the Consumer Choice Requirements of the law. We believe that training success is best achieved when the client has made an informed choice of training program and training provider."

For additional details on this subject, see the COWIB Policy on Informed Consumer Choice. Here is a link to the policy on the COWIB website:

http://cowib.org/knowledge-base/informed-consumer-choice/

14. Describe how One-Stop centers are implementing and transitioning to an integrated, technology-enabled intake and case management information system for programs carried out under WIOA.

Our One-Stop partners in Central Oklahoma are highly interested in utilizing an integrated, technology-driven intake and case management information system to promote service integration. In order to achieve this, our board staff will consistently seek input from our One-Stop partners regarding the most desirable features of such a system to be implemented in our One-Stop centers.

We will also collaborate with our partners to eliminate any duplication of services and address the needs of all core partners. Furthermore, we will aim to maximize our efforts in data sharing with our core partners. Sharing data will assist in eliminating service duplication and provide greater partner utilization for client servicing. Our objective is to streamline the intake and case management system by collaborating with our core partners and having a mutual understanding of our WIOA accountability measures.

15. Describe the direction given to the One-Stop center operator to ensure priority for adult career and training services will be given to recipients of public assistance, other low-income individuals, and individuals who are basic skills deficient.

In February, 2023, our board approved and published COWIB's Priority of Service policy. Please refer to Attachment X for a copy of our Priority of Service policy. To ensure the priority of service, our policy reads as follows:

Due to the statutorily required priority for Adult funds, priority must be provided in the following order:

- First, to veterans and eligible spouses who are also included in the groups given statutory priority for WIOA Adult formula funding. This means that veterans and eligible spouses who are also recipients of public assistance, other low-income individuals, or individuals who are basic skills deficient receive first priority for services provided with WIOA Adult formula funds for individualized career services and training services.
- Second, to non-covered persons (i.e., individuals who are not veterans or eligible spouses) who are included in the groups given priority for WIOA Adult formula funds.
- Third, to veterans and eligible spouses who are not included in WIOA's priority groups.
- Fourth, to priority populations established by the LWDB (for example, for non-covered persons who are not included in groups given priority for WIOA Adult formula funds, such as persons living within a designated Promise Zone).
- Last, to non-covered persons outside the groups given priority under WIOA.

16. Describe the process used by the local board to provide a 30-day public comment period prior to submission of the plan, including an opportunity to have input into the development of the Local/Regional Plan, particularly for representatives of businesses, education, and labor organizations. The required public comment process is outlined in section 108(d) of WIOA.

The COWIB's proposed 4-Year Local/Regional Plan was created through collaboration with Board Members, Elected Officials, One-Stop partners, COWIB Business Service Network, COWIB Youth Council, and the general public. The plan outlines the COWIB's role in aligning and integrating workforce development service strategies and resources.

Nearly two dozen One-Stop partners, such as the Oklahoma Department of Career and Technical Education, Oklahoma Department of Human Services, Oklahoma Department of Rehabilitation Services, Oklahoma Employment Security Commission, Native American WIOA programs, Senior Community Service Employment programs, and community action agencies, were involved in developing the plan.

As required by guidance from the Oklahoma Office of Workforce Development, the proposed plan was published for public review and comment not later than May 14th, 2023.

It was published on our website, here: https://cowib.org/about/

… and an announcement of the availability of the proposed plan was sent to board members, One-Stop partners, business representatives, educational partners, labor unions, news media, local elected officials, and other stakeholders in our local workforce development system.

COWIB Executive Committee will convene a regular meeting on **May 16th, 2023**. Members of the Executive Committee will review and approve the plan.

Once approved, as required by WIOA Section 108(d)(2), there will be a 30-day period during which comments will be received from the public. After receiving public comments, the plan, along with any comments representing disagreement with the plan, will be submitted to the Governor's Council for Workforce Development no later than June 1st, 2023. If approved by the governor, the plan will go into effect on **July 1st, 2023**.

Assurances

The Central Oklahoma Workforce Innovation Board agrees to the following assurances:

- The Local Workforce Development Board assures it will establish fiscal control and fund accounting procedures to ensure the proper disbursement of, and accounting for all fundsreceived through the Workforce Innovation and Opportunity Act.

- The Local Workforce Development Board assures it shall keep records that are sufficient to permit the preparation of reports required by the Act and shall maintain such records, includingstandardized records for all individual participants, and submit such reports as the State may require.

- The Local Workforce Development Board assures it will collect and maintain data necessary toshow compliance with the nondiscrimination provisions of the Act.

- The Local Workforce Development Board assures funds will be spent in accordance with the Workforce Innovation and Opportunity Act, regulations, written Department of Labor Guidancewritten Oklahoma guidance, and all other applicable Federal and State laws.

- The Local Workforce Development Board assures that veterans will be afforded employmentand training activities authorized in the Jobs for Veterans Act and 20 C.F.R. Part 1010.

- The Local Workforce Development Board assures it will comply with any grant procedures prescribed by the Secretary which are necessary to enter into contracts for the use of fundsunder WIOA, but not limited to the following:

    - General Administrative Requirements – Uniform Guidance at 2 C.F.R. Part 200 and 2 C.F.R.Part 2900.

    - Assurances and Certifications – SF 424B – Assurances for Non-Construction Programs; 29

C.F.R. Part 31,32 – Nondiscrimination and Equal Opportunity Assurance (and Regulation); 29
C.F.R. Part 93 – Certification Regarding Lobbying (and Regulation); 29 C.F.R. Parts 94 and 95 – Drug Free Workplace and Debarment and Suspension; Certifications (and Regulation).

Attestation – COWIB 4 Year Local/Regional Plan

Workforce Board Chair

Local Area	Printed Name	Signature	Date
Central	**Richard Brown**		

Workforce Board CLEO

Local Area	Printed Name	Signature	Date
Central	**Melissa Dennis**		

Workforce Board Executive Director

Local Area	Printed Name	Signature	Date
Central	**Ashley Sellers**		

Attachments

(I) **SWOT Analysis**

(II) **Central Oklahoma Workforce Development Area – Local Briefing**

(III) **Partner Organizations & Friends of COWIB**

(IV) **The Central WDA (Central Region) Lightcast Q1 2023 - Economy Overview,**

(V) **Tinker Hiring Forecast PY23-24 (Amended Booklet)**

(VI) **Greater Oklahoma City Region Aerospace Industry Survey & Economic Impact Assessment 2020**

(VII) **Greater Oklahoma City Region Major Employees – December 2020**

(VIII) **COWIB's Priority of Service Policy**

Attachment I – SWOT Analysis

Strengths:

- Strong WDB – engaged members, transparent leadership
- Good networking among partners – OSO has been key to bridge connections
- Longevity of service/experience of staff/service provider
- Maximize and leverage financial resources within the system – braiding funds
- Experience with sector partnerships
- Hot Jobs flyer – connects the partners/CBOs
- Accessible website, policies and forms
- Training programs producing client successes

Weaknesses:

- Not true business approach - core partners are not aligned on how to serve businesses (duplication)
- Job matching (skills of job seekers to needs of employers could be improved), it's better but on-going improvement
- Partners have different policies and regulations that are not aligned – no data sharing
- Partners get information from AJC monthly meetings – however still doesn't know what each agency partner does/offers
- State's approach does not always reflect community needs

Opportunities:

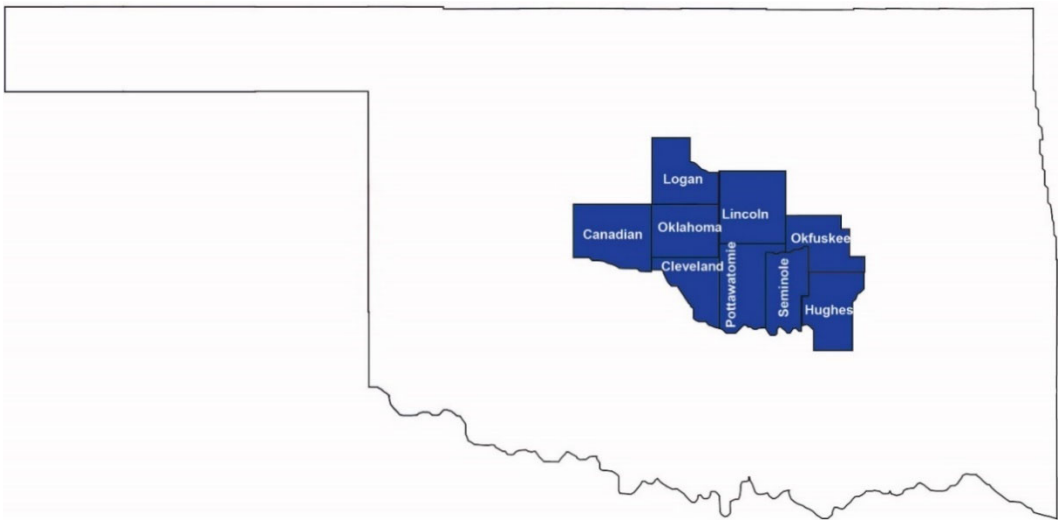
- Steady population growth – Canadian County is fastest growing county in COWIB area and one in the nation
- Provide free Training for employers/employees – micro credentials
- The need to partner with workforce stakeholders –
- DHS/Work Ready Oklahoma (statewide initiative)
- Economic growth – attract new business Bio tech industry (OKC Innovation District – Convergence Project)
- Elections - new ideas – Governor's Executive Order to create a streamline workforce system in Oklahoma
- Ability to align the partners to provide better business services
- IPG – Impact Partnership Grants (Child Care and Health Care)
- Meet the people where they are at – AJCs having nontraditional work hours like libraries

Threats:

- State and Local Elections - we lose experience (at capital, Dept. of Education and BCEO)
- Stereotypes/biases of disenfranchised populations
- Workforce System Policies misaligned
- Economy Recovery from a post-Covid era
- Low Unemployment - 61% in labor force; 39% not engaged
- Lack of budget/funds
- Rural area's needs may be different than the metro area's needs
- Marijuana industry – losing workers
- Lack of sufficient transportation options in both rural and metro
- Lack of internet access
- Lack of child care services & cost of cc services
- Baby Boomers retiring

Attachment II - Central Oklahoma Workforce Development Area – Local Briefing

CENTRAL OKLAHOMA WORKFORCE DEVELOPMENT AREA



2022 LOCAL BRIEFING

OKLAHOMA WORKS®

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Introduction

The Central Oklahoma Workforce Development Area (WFDA) is comprised of nine Oklahoma counties: Canadian, Cleveland, Hughes, Lincoln, Logan, Okfuskee, Oklahoma, Pottawatomie, and Seminole. According to the U.S. Census Bureau, this combined centralized region of Oklahoma covers 6,774 square miles and is home to more than 1.4 million residents. The following reviews the population, education, labor force, top industries by total jobs, and staffing patterns of state target sectors for the Central Oklahoma WFDA.

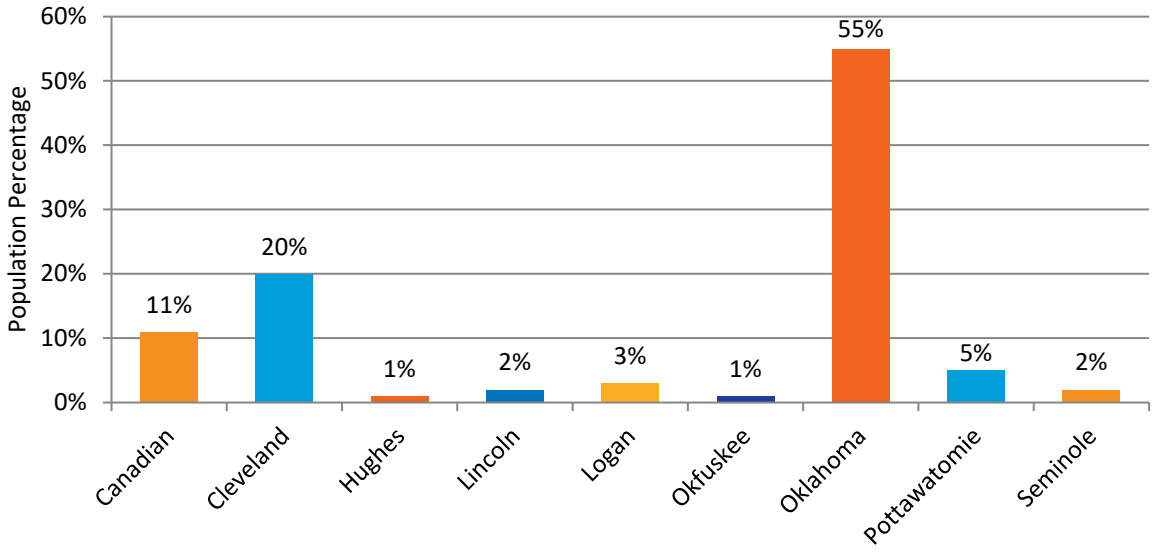
Population

Between 2016 and 2021, the Central WFDA grew by approximately 5%, from 1,402,907 to 1,467,000, or around 64,093 additional people. By 2026, the area is expected to grow by an additional 5% to 1,539,245 people. The following shows population figures and analyses by county, age, race, and ethnicity in the Central WFDA.

Population by County

Figure 1 shows the Central WFDA population breakdown by county. Oklahoma County had the largest population, representing 55% of the population in the Central WFDA. Cleveland County had the second largest population at 20%. Okfuskee County and Hughes County had the smallest population, each representing 1% of the population in the Central WDFA.

Figure 1: Population by County



Source: Lightcast- economicmodeling.com- 2022.3

Table 1 provides the population change from 2016 to 2021. During this period, six out of nine counties grew in population. Oklahoma County grew the most at 26,995 people by 2021. Canadian County was next at 21,107 more people. Alternatively, Seminole County experienced the largest population decrease at 984 fewer people.

Table 1: Population by County

County	2016 Population	2021 Population	Total Change
Canadian	136,508	157,615	21,107
Cleveland	278,062	290,442	12,380
Hughes	13,417	13,155	-262
Lincoln	34,907	35,273	366
Logan	46,032	49,715	3,683
Okfuskee	12,089	11,754	-335
Oklahoma	784,684	811,679	26,995
Pottawatomie	72,051	73,194	1,143
Seminole	25,157	24,173	-984
Total	**1,402,907**	**1,467,000**	**64,093**

Source: Lightcast- economicmodeling.com- 2022.3

Table 2 shows the projected population change from 2021 to 2026. During this period, eight out of nine counties are projected to increase in population. All counties are expected to gain positive growth while Seminole County is expected to continue declining in population, losing another 183 people by 2026.

Table 2: Projected Population by County

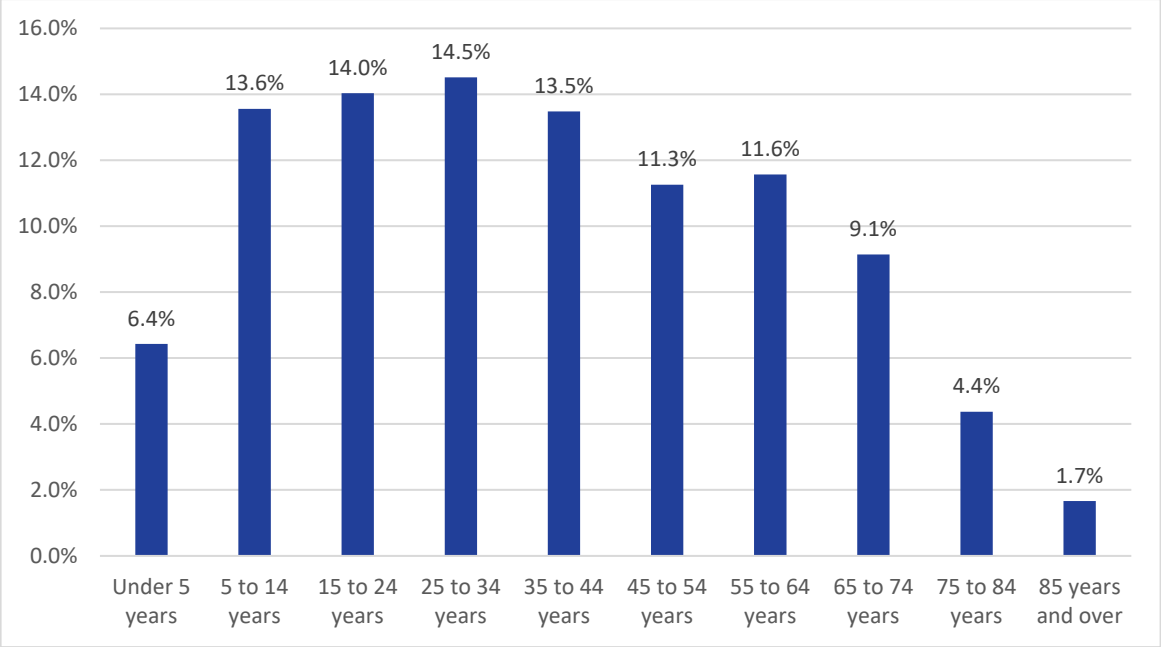
County	2021 Population	2026 Population	Total Change
Canadian	157,615	178,176	20,561
Cleveland	290,442	304,672	14,230
Hughes	13,155	13,412	257
Lincoln	35,273	36,377	1,104
Logan	49,715	54,062	4,347
Okfuskee	11,754	11,922	168
Oklahoma	811,679	842,688	31,009
Pottawatomie	73,194	73,946	752
Seminole	24,173	23,990	-183
Total	**1,467,000**	**1,539,245**	**90,397**

Source: Lightcast- economicmodeling.com- 2022.3

Population by Age

Figure 2 shows Central's population by age in 2021. 25- to 34-year-olds made up the largest percentage of the population at 14.5%. Individuals 15- to 24-years of age were the second largest percentage of the population at 14%. Those aged 85-years and over made up the smallest percentage of the population at 1.7%.

Figure 2: Population by Age



Source: Lightcast- economicmodeling.com- 2022.3

Table 3 provides the population change by age group from 2016 to 2021. During this period, nearly all age groups grew in population. In particular, those 65- to 74-years of age grew the most at 23,096 while 35- to 44-year-olds were next at 19,388 more people. 25- to 34-year-olds grew the least at just 613 more people added in the last 5 years. Alternatively, those aged under 5 and 45 to 54 were the only age groups to decline in population during this period at 3,714 and 2,812 fewer people, respectively.

Table 3: Population by Age

Age	2016 Population	2021 Population	Total Change
Under 5 years	98,009	94,295	-3,714
5 to 14 years	194,155	198,868	4,713
15 to 24 years	197,439	205,861	8,422
25 to 34 years	212,293	212,906	613
35 to 44 years	178,346	197,734	19,388
45 to 54 years	167,915	165,103	-2,812
55 to 64 years	167,565	169,686	2,121
65 to 74 years	110,992	134,088	23,096
75 to 84 years	54,100	64,083	9,983
85 years and over	22,093	24,374	2,281
Total	**1,402,907**	**1,467,000**	**64,093**

Source: Lightcast - economicmodeling.com- 2022.3

Table 4 provides the population change by age group from 2021 to 2026. During this period, nearly all age groups are projected to increase in population. In particular, those 75- to 84-years of age will grow the most at 19,348 while 65- to 74-year-olds will be next at 15,235 more people. Those under 5 will grow the least at 1,548 more people added in the next 5 years. Alternatively, those 5 to 14 and 55 to 64 were the only age groups projected to decline in population during this period at 383 and 6,504 fewer people, respectively.

Table 4: Projected Population by Age

Demographic	2021 Population	2026 Population	Total Change
Under 5 years	94,295	95,843	1,548
5 to 14 years	198,868	198,485	-383
15 to 24 years	205,861	215,454	9,593
25 to 34 years	212,906	217,374	4,468
35 to 44 years	197,734	210,710	12,976
45 to 54 years	165,103	177,066	11,963
55 to 64 years	169,686	163,182	-6,504
65 to 74 years	134,088	149,323	15,235
75 to 84 years	64,083	83,431	19,348
85 years and over	24,374	28,377	4,003
Total	**1,467,000**	**1,539,245**	**64,093**

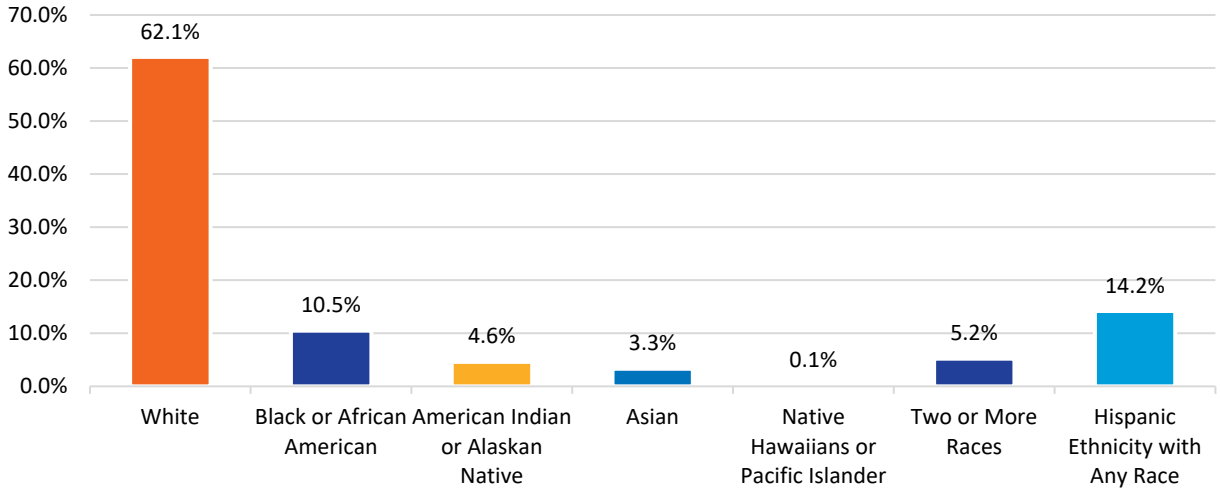
Source: Lightcast – economicmodeling.com – 2022.3

Population by Race and Ethnicity

The following analyses used the racial and ethnicity categories designated by the U.S. Census Bureau which categorizes “Hispanic” as an ethnicity rather than a race. As such, Hispanic is always reported in conjunction with another racial designator, i.e., “Black or African American, Hispanic.” Unless otherwise noted, individual races included in this briefing section were reported as Non-Hispanic.

Figure 3 shows the Central WFDA population percentage by race and ethnicity in 2021. This figure shows that Whites made up the largest percentage of the population at 62.1%. Hispanic Ethnicity with Any Race made up the second largest percentage of the population at 14.2%. Native Hawaiians or Pacific Islanders were the smallest percentage of the population at 0.1%.

Figure 3: Population by Race and Ethnicity



Source: Lightcast- economicmodeling.com- 2022.3

Table 5 provides the population change by demographic group from 2016 to 2021. During this period, all demographic groups increased in population. Hispanic and Whites added the most population during this period at 27,200 and 13,657 additional people by 2021, respectively. Alternatively, Native Hawaiians or Pacific Islanders and American Indian or Alaskan Natives added the least in total population during this period at 369 and 2,215 additional people, respectively.

Table 5: Population by Race and Ethnicity

Demographic	2016 Population	2021 Population	Total Change
White	897,932	911,589	13,657
Black or African American	145,905	153,617	7,712
American Indian or Alaskan Native	65,918	68,133	2,215
Asian	45,449	48,878	3,429
Native Hawaiian or Pacific Islander	1,068	1,437	369
Two or More Races	67,286	76,797	9,511
Hispanic	179,349	206,549	27,200
Total	**1,402,907**	**1,467,000**	**64,093**

Source: Lightcast - economicmodeling.com- 2022.3

Table 6 provides the population change by demographic group from 2021 to 2026. During this period, all demographic groups are projected to increase in population. Hispanic and Whites will continue to add the most population at 27,200 and 13,657 additional people by 2021, respectively. Alternatively, Native Hawaiians or Pacific Islanders and American Indian or Alaskan Natives will continue to add the least in total population at 501 and 2,404 additional people, respectively.

Table 6: Projected Population by Race and Ethnicity

Demographic	2021 Population	2026 Population	Total Change
White	911,589	925,283	13,694
Black or African American	153,617	161,410	7,793
American Indian or Alaskan Native	68,133	70,537	2,404
Asian	48,878	53,548	4,670
Native Hawaiian or Pacific Islander	1,437	1,938	501
Two or More Races	76,797	91,117	14,320
Hispanic	206,549	235,412	28,863
Total	**1,467,000**	**1,467,000**	**64,093**

Source: Lightcast – economicmodeling.com – 2022.3

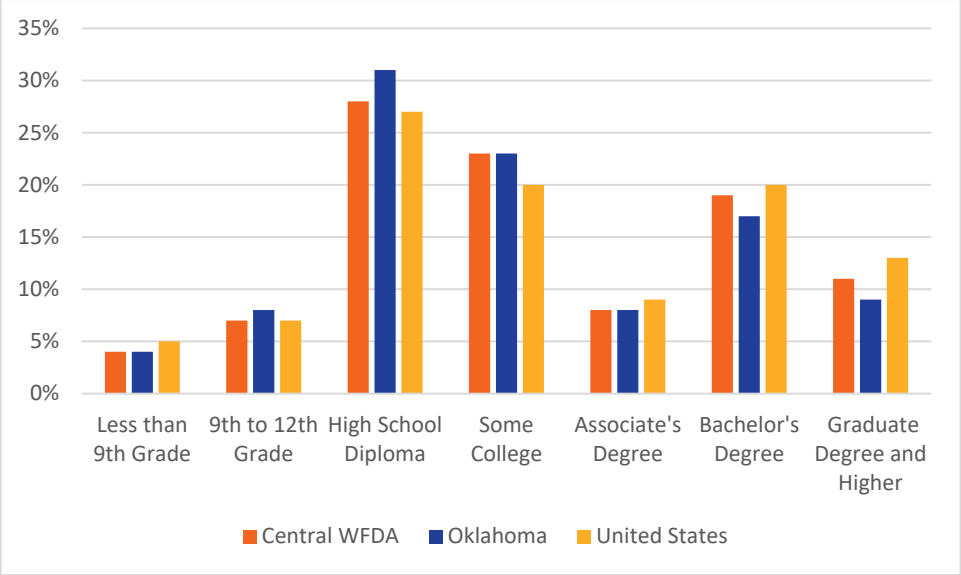
Education

Colleges, universities, career technology centers, and K-12 schools are instrumental in developing the workforce. Educational institutions help supply local businesses and organizations with a workforce with the necessary labor and skills to be competitive in today's economy. The following section reviews the Central WFDA's educational attainment, provides an educational attainment mismatch analysis, and details the area's educational assets.

Educational Attainment

Figure 4 compares the Central WFDA educational attainment levels with State of Oklahoma and United States in 2021. In Central, High School Diploma made up the largest share of the population at 28%. This was three percentage points lower than the State average of 31%. The second largest share of the population was Some College at 23%. Those with less than 9th grade educational attainment represented the smallest group at 4%, matching the State average.

Figure 4: Educational Attainment



Source: Lightcast- economicmodeling.com- 2022.3

Table 7 shows the change in educational attainment levels in the Central WFDA from 2016 to 2021. By 2021, fewer people had an education below the High School Diploma level while more people achieved higher levels of education than in 2016. In particular, those with a Bachelor's Degree grew the most during this period at 18,257 more people. Those with a Graduate Degree and Higher were next at an additional 17,945 people. Alternatively, a combined 7,028 fewer people had an education below High School Diploma level by 2021. Those with a High School Diploma also grew during this period at 16,257 more people.

Table 7: Educational Attainment

Education Level	2016 Population	2021 Population	Total Change
Less Than 9th Grade	41,079	39,091	-1,988
9th Grade to 12th Grade	72,691	67,650	-5,040
High School Diploma	250,380	266,636	16,257
Some College	224,065	223,694	-370
Associate's Degree	66,164	75,776	9,611
Bachelor's Degree	168,880	187,137	18,257
Graduate Degree and Higher	90,046	107,991	17,945
Total	**913,304**	**967,975**	**54,671**

Source: Lightcast - economicmodeling.com- 2022.3

Table 8 provides the change in educational attainment levels in Central from 2021 to 2026. By 2026, more people will continue to achieve higher levels of education in the area. In particular, those with a High School Diploma will grow the most out of all groups at 16,681 more people. Those with a Bachelor's Degree will be next at an additional 15,942 more people. Alternatively, a combined 988 more people will have an education below the High School Diploma level by 2026. Those with a Graduate Degree and Higher will grow by 13,345 people during this period.

Table 8: Projected Educational Attainment

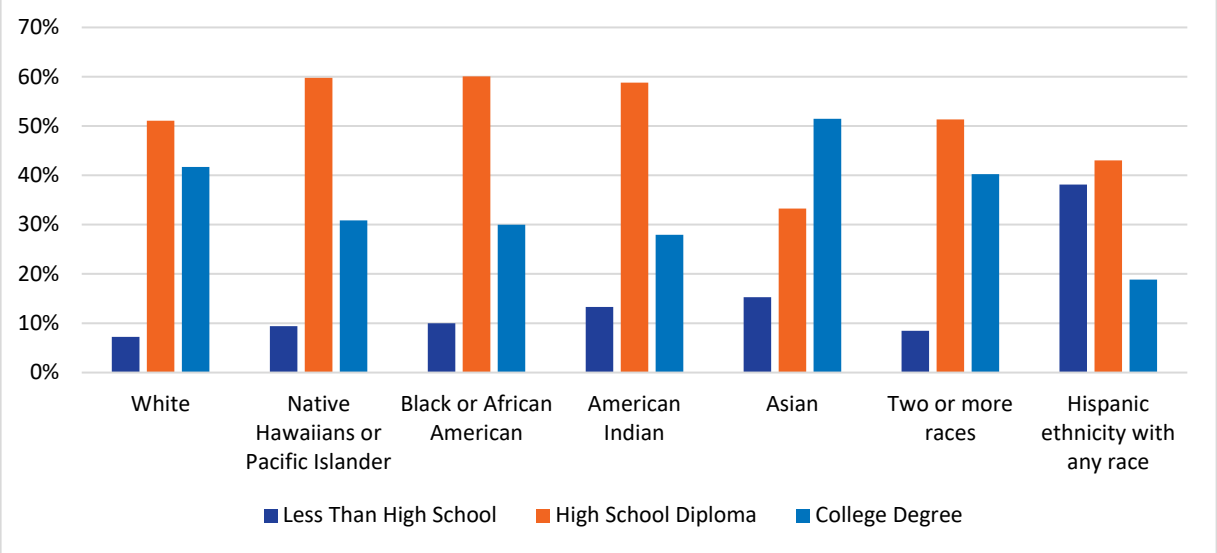
Education Level	2021 Population	2026 Population	Total Change
Less Than 9th Grade	39,091	39,814	723
9th Grade to 12th Grade	67,650	67,915	265
High School Diploma	266,636	283,317	16,681
Some College	223,694	229,966	6,272
Associate's Degree	75,776	84,035	8,259
Bachelor's Degree	187,137	203,079	15,942
Graduate Degree and Higher	107,991	121,336	13,345
Total	**967,975**	**1,029,463**	**61,488**

Source: Lightcast – economicmodeling.com – 2022.3

Educational Attainment by Race and Ethnicity

Figure 5 shows the breakdown of education by race and ethnicity. Across all racial and ethnic groups besides Asian, High School Diploma was the most common educational attainment level. Hispanic Ethnicity with Any Race had the largest population percentage at the Less than High School level at 38%. Native Hawaiians or Pacific Islanders and Black or African Americans had the highest attainment at the High School Diploma level, both at 60%. Lastly, Asian Americans had the highest population percentage at the College Degree level at 51%.

Figure 5: Education Attainment by Race and Ethnicity



Source: Lightcast- economicmodeling.com- 2022.3

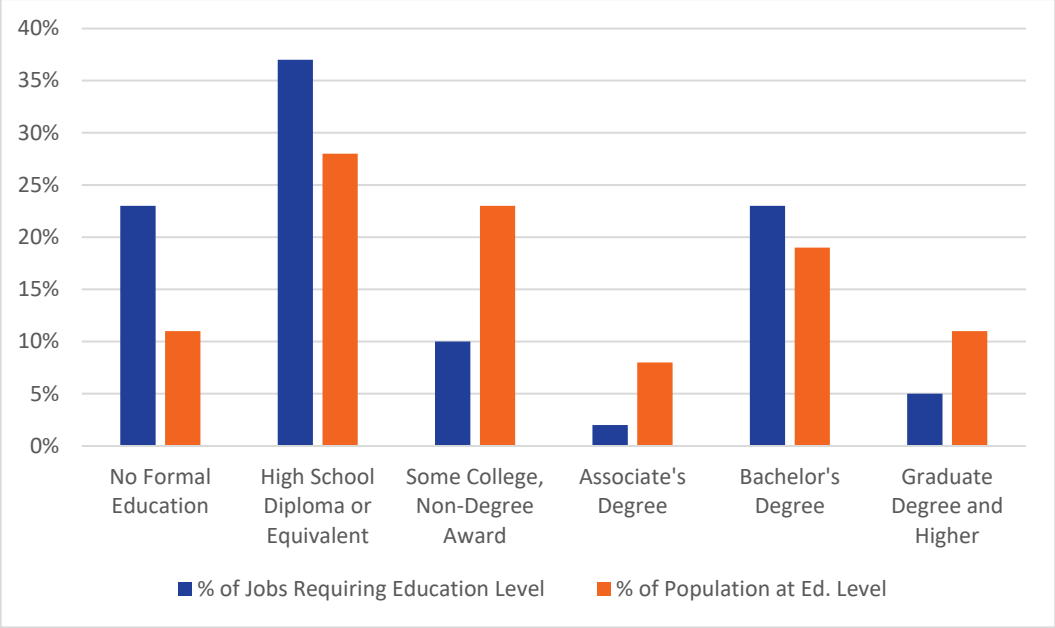
Education Mismatch

Figure 6 below shows an educational attainment mismatch analysis for the Central WFDA.[1] This compares the typical education required for jobs to the educational attainment of the population in 2021. 23% of jobs in Central require no formal education while just 11% of the population have an education at this level. This suggests that many of these jobs may be filled by those with an education level beyond what is required. At the High School Diploma level, 37% of jobs in Central require this level of education while 28% of the population hold this level of education. 31% of the population had Some College or an Associate's Degree, while just 12% of jobs required these levels of education, suggesting underemployment. This is similar for those with a Graduate Degree or Higher, where 11% of the population is

[1] The educational attainment mismatch analysis, formerly known as skills gaps analysis, is attained by comparing the working age (25 years and older) population's educational attainment and typical entry level education for the total number of jobs. This analysis was obtained from Lightcast's underemployment data. The analysis does not account for individuals' actual educational attainment and their current employment. The analysis compares American Community Survey data from the Census Bureau with occupation data from the Bureau of Labor Statistics.

prepared for 5% of the jobs in the market. At the Bachelor's Degree level, 19% of the population have the degree while 23% of jobs require it.

Figure 3: Educational Attainment Mismatch



Source: Lightcast- economicmodeling.com- 2022.3

Educational Assets

Central has 29 distinct post-secondary educational institutions, ranging from universities, technical colleges, community colleges, and specialty training schools. These institutions are important educational and professional assets as they help connect students of all backgrounds and circumstances with resources, degrees, certifications, and higher knowledge. Table 9 in the appendix details accredited institutions and their degree types.

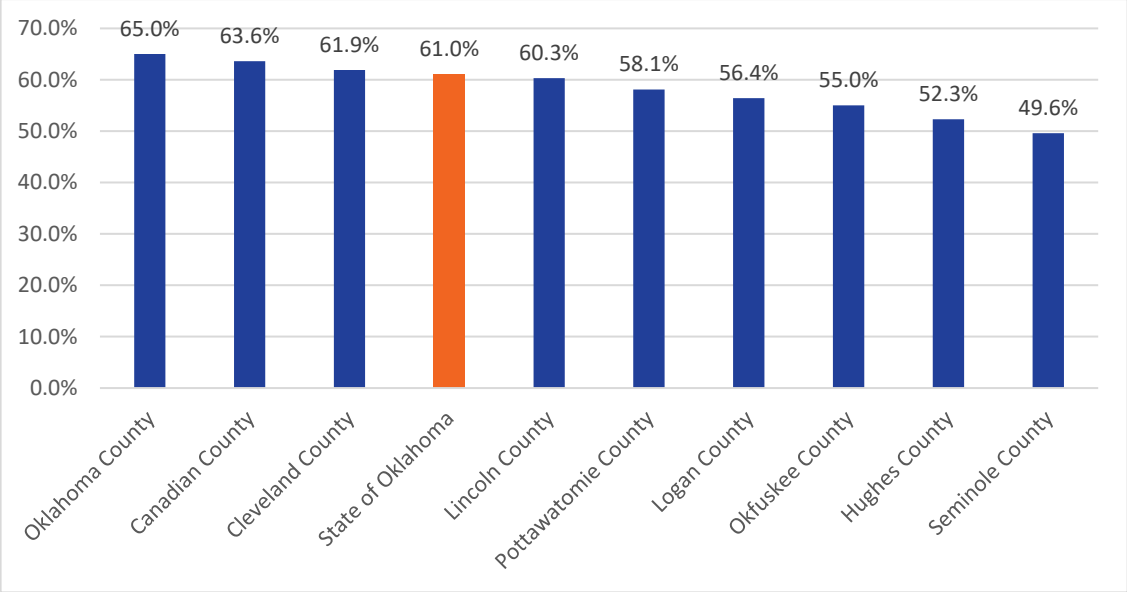
Labor Force

The labor force may be considered one of the foremost assets of a particular region, providing key goods and services, collaborating across industries, and participating in economic and skills development. The following section reviews Central's labor force participation rates broken down by county, median earnings, as well as commuter data detailing inflow, outflow, and circulation in the Central WFDA.

Labor Force Participation by County

Figure 7 shows the Central WFDA labor force participation rate by county in June 2022. Currently, three of nine counties in the Central WFDA meet or exceed the Oklahoma state average labor force participation rate of 61%. The highest percentage is in Oklahoma County at 65%. The second highest is in Canadian County at 63.6%. The third highest is in Mayes County at 61.9%. The lowest percentage is in Seminole County at 49.6%.

Figure 7: Labor Force Participation by County, June 2022



Source: Lightcast- economicmodeling.com- 2022.3

Table 10 below shows the labor force participation rate by county from June 2021 to June 2022. During this period, more than half of Central's county labor force participation rates decreased. This follows the general decline of the state's rate at -0.4% since June 2021. Cleveland County's labor force participation rate grew during this period at an additional 0.4%. Hughes County's rate decreased by the most at -2.7%.

Table 10: Labor Force Participation by County

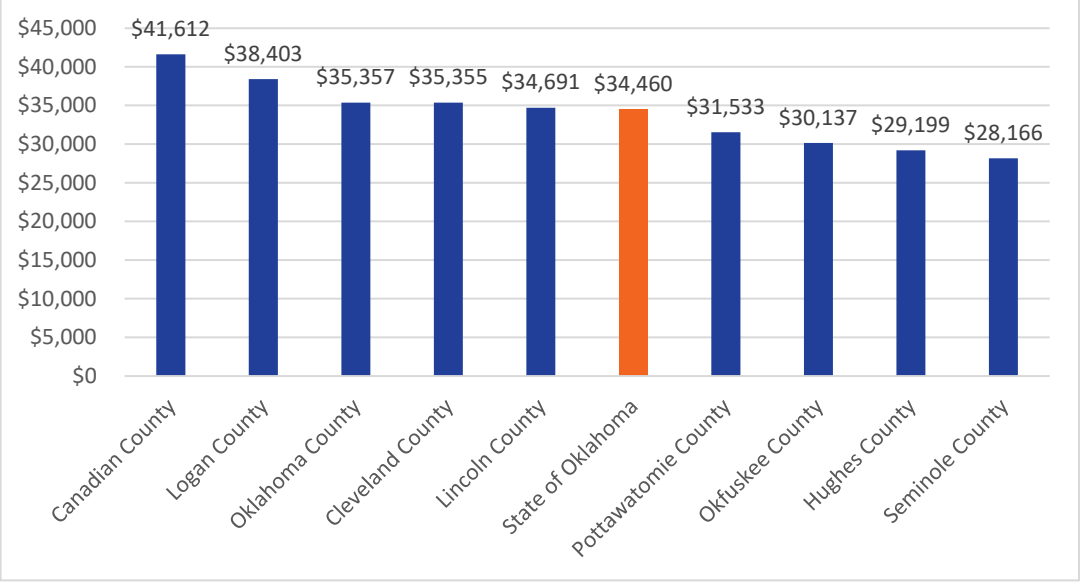
Area	June 2021	June 2022	Total Change
State of Oklahoma	61.4%	61.0%	-0.4%
Canadian County	64.3%	63.6%	-0.7%
Cleveland County	61.4%	61.9%	0.4%
Hughes County	55.0%	52.3%	-2.7%
Lincoln County	60.0%	60.3%	0.3%
Logan County	56.3%	56.4%	0.1%
Okfuskee County	55.6%	55.0%	-0.6%
Oklahoma County	65.1%	65.0%	-0.1%
Okmulgee County	55.3%	55.6%	0.3%
Pottawatomie County	58.6%	58.1%	-0.5%
Seminole County	49.9%	49.6%	-0.4%

Source: Lightcast- economicmodeling.com- 2022.3

Median Earnings

Figure 8 provides the median earnings of those that are over the age of 16 in each of Central's counties and the State of Oklahoma as a whole. The highest earnings were found in Canadian County at $41,612. The second highest were Logan County at $38,403. The third highest were in Oklahoma County at $35,357. The lowest median earnings were in Seminole County at $28,166. Overall, more than half of Central's counties boasted median earnings beyond those found at the state level, while the rest fell below this level.

Figure 8: Median Earnings by County

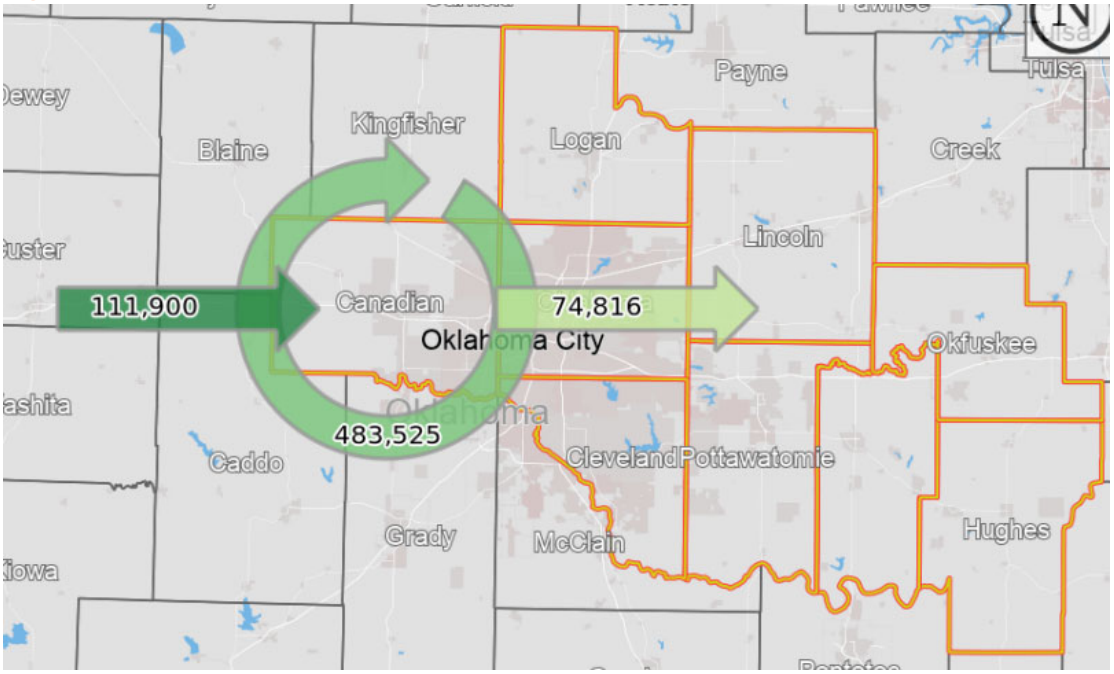


Source: American Community Survey (ACS) 2021 5-Year Estimates

Commuter Data

The U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD) program uses data from a variety of sources including the unemployment insurance program, Quarterly Census of Employment and Wages (QCEW), and administrative data from censuses and surveys to create models estimating worker commutes for primary employment. In the Central WFDA 111,900 work in the area but did not live there. 483,525 people lived in the Central WFDA and worked there. 74,816 people lived in Central WFDA and worked outside the area (see Figure 9).

Figure 9: Local Area Commuter Patterns



Source: Center of Economic Studies (CES), OnTheMap, 2019

Top Industries by Total Jobs

The North American Industry Classification System (NAICS) is the standard utilized by federal agencies to classify businesses to collect, analyze, and publish statistical data related to the United States business economy. Several of the analyses that follow are based upon data using NAICS employment sector codes. The following information is provided to enhance understanding of the framework of these analyses.

NAICS uses a 6-digit coding system which is structured hierarchically, beginning with 20 broad economic sectors. Over 1,000 industries are then sub-categorized within these 20 sectors. Each industry within a sector shares distinguishing economic activities. The most recent version of the classification system was implemented in 2017. Additional information is available at www.census.gov/eos/www/naics.

Table 11 below shows the top ten industries in the Central WFDA by the total number of jobs in 2021. There was an estimated 620,936 number of total jobs in the Central WFDA in 2021. The largest sector was Government with 118,910 jobs. The second largest sector was Health Care and Social Assistance with 81,115 jobs. The tenth largest sector was Finance and Insurance with 24,626 jobs. Together, these industries made up 85% of the total jobs in the area.

Table 11: Top Industries by Total Jobs

NAICS	Description	2021 Jobs	Percentage of Total Employment
90	Government	118,910	19.2%
62	Health Care and Social Assistance	81,115	13.1%
44	Retail Trade	69,284	11.2%
72	Accommodation and Food Services	63,703	10.3%
56	Administrative and Support and Waste Management and Remediation Services	39,850	6.4%
54	Professional, Scientific, and Technical Services	36,183	5.8%
31	Manufacturing	34,595	5.6%
23	Construction	29,843	4.8%
48	Transportation and Warehousing	29,673	4.8%
52	Finance and Insurance	24,626	4.0%

Source: Lightcast- economicmodeling.com- 2022.3

Target Sectors

Oklahoma Department of Commerce has identified Key Industry Sectors for the state of Oklahoma. The Key Industry Sectors provide a competitive advantage in a global economy. They exhibit significant potential for employment growth and provide wealth generating employment opportunities. These Target Sectors include Aerospace and Defense, Agribusiness and Bioscience, Renewable and Traditional Energy, Transportation and Logistics, Automotive, and Manufacturing. Growth in these areas lead to workforce needs in complementary sectors. These complementary sectors include Construction, Health Care, Education, and Creative Industries. Figure 10 shows both target and complementary sectors. For a complete list of industries that are included in each of the sectors, the 5-digit NAICS codes are included in the appendix.

Figure 10: Target and Complementary Sectors

Table 12 shows the estimated number of new jobs for each of the target sectors in 2026, along with the growth rate and average earnings per job in the target sector. All target sectors are projected to grow with the exception of the energy sector.

Table 12: Target Sector Projected Growth

Target Sector	2021 Jobs	2026 Jobs	Estimated Net Job Growth (2021-2026)	Growth Rate (2021-2026)	Average Earnings Per Job
Aerospace and Defense	26,605	28,696	2,091	8%	$97,833
Agribusiness and Bioscience	20,082	21,790	1,708	9%	$72,256
Energy (Renewable and Traditional)	20,883	15,701	-5,182	-25%	$123,774
Information and Financial Services	48,119	48,868	749	2%	$100,701
Manufacturing	34,595	35,406	811	2%	$78,208
Transportation and Logistics (Includes Automotive)	48,932	52,377	3,445	7%	$69,073

Source: Lightcast- economicmodeling.com- 2022.3

Target Sector Staffing Patterns

Staffing patterns were generated for each of the target sectors using Lightcast 2022.3 datarun. The staffing pattern analysis computes the occupational makeup of the target sectors by percentages. The appendix includes two tables for each target sector. The first table shows the top ten occupations by number of current jobs. The second table shows the top 10 occupations by number of new jobs projected for 2026.

Summary

This local briefing reviewed the Central WFDA's population, educational attainment and assets, labor force information, top industry data, and target and complementary sectors. The Central WFDA is one of six Workforce Development Areas (WFDAs) in Oklahoma. The Oklahoma Office of Workforce Development prepares briefings for each of the Workforce Development Areas, including a state-level briefing. Briefings are available at oklahomaworks.gov/workforce-briefings.

Appendix

Educational Assets

Table 9: Educational Assets

Institution	Institution Type	City	County	Degree Types
Langston University	Public	Langston	Logan	Associate, Bachelor, Master, Ph.D.
Langston University	Public	Oklahoma City	Oklahoma	Associate, Bachelor, Master, Ph.D.
Oklahoma City Community College	Public	Oklahoma City	Oklahoma	Associate, Certificate
Oklahoma State University	Public	Oklahoma City	Oklahoma	Bachelor, Master, Ph.D.
Oklahoma State University Oklahoma City	Public	Oklahoma City	Oklahoma	Associate, Certificate
Redlands Community College	Public	El Reno	Canadian	Associate
Rose State College	Public	Midwest City	Oklahoma	Associate
Seminole State College	Public	Seminole	Seminole	Certificate, Associate
University of Central Oklahoma	Public	Edmond	Oklahoma	Bachelor, Master, Ph.D., Graduate Certificate
University of Oklahoma	Public	Norman	Cleveland	Bachelor, Master, Ph.D., Graduate Certificate
University of Oklahoma Health Sciences Center	Public	Oklahoma City	Oklahoma	Residency
Central Oklahoma College	For Profit	Oklahoma City	Oklahoma	Certificate
Mid-America Christian University	Private Non-Profit	Oklahoma City	Oklahoma	Associate, Bachelor, Master, Certificate
Oklahoma Baptist University	Private Non-Profit	Shawnee	Pottawatomie	Bachelor, Master
Oklahoma Christian University	Private Non-Profit	Oklahoma City	Oklahoma	Bachelor, Master, Certificate
Oklahoma City University	Private Non-Profit	Oklahoma City	Oklahoma	Bachelor, Master, Ph.D., JD
Platt College	Private For Profit	Oklahoma City	Oklahoma	Certificates
Randall University	Private Non-Profit	Moore	Cleveland	Associate, Bachelor, Master
Southern Nazarene University	Private Non-Profit	Bethany	Oklahoma	Bachelor, Master, Ph.D.

Institution	Institution Type	City	County	Degree Types
Southwestern Christian University	Private Non-Profit	Bethany	Oklahoma	Bachelor, Master
University of Phoenix	Private For Profit	Oklahoma City	Oklahoma	Bachelor, Master
Eastern Oklahoma County	Technical School	Choctaw	Oklahoma	Certificate
Canadian Valley Technology Center	Technical School	El Reno	Canadian	Certificate
Canadian Valley Technology Center	Technical School	Yukon	Canadian	Certificate
Francis Tuttle	Technical School	3 Campuses in Oklahoma City	Oklahoma	Certificate
Gordon Cooper	Technical School	Shawnee	Pottawatomie	Certificate
Metro Tech	Technical School	4 Campuses in Oklahoma City	Oklahoma	Certificate
Mid-Del	Technical School	Midwest City	Oklahoma	Certificate
Moore Norman	Technical School	Norman	Cleveland	Certificate
Moore Norman	Technical School	Oklahoma City	Oklahoma	Certificate
Wes Watkins	Technical School	Wetumka	Hughes	Certificate

Source: Oklahoma State Regents of Higher Education, CareerTech.org

Target and Complementary NAICS Codes

Aerospace and Defense Industries

NAICS	Industry Description
32521	Resin and Synthetic Rubber Manufacturing
32551	Paint and Coating Manufacturing
32592	Explosives Manufacturing
32629	Other Rubber Product Manufacturing
33231	Plate Work and Fabricated Structural Product Manufacturing
33271	Machine Shops
33281	Coating, Engraving, Heat Treating, and Allied Activities
33299	All Other Fabricated Metal Product Manufacturing
33351	Metalworking Machinery Manufacturing
33361	Engine, Turbine, and Power Transmission Equipment Manufacturing
33411	Computer and Peripheral Equipment Manufacturing
33441	Semiconductor and Other Electronic Component Manufacturing
33451	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
33531	Electrical Equipment Manufacturing
33599	All Other Electrical Equipment and Component Manufacturing
33641	Aerospace Product and Parts Manufacturing
42386	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers
48111	Scheduled Air Transportation
48121	Nonscheduled Air Transportation
48811	Airport Operations
48819	Other Support Activities for Air Transportation
54133	Engineering Services
54138	Testing Laboratories
54151	Computer Systems Design and Related Services
54161	Management Consulting Services
54169	Other Scientific and Technical Consulting Services
54171	Research and Development in the Physical, Engineering, and Life Sciences
61151	Technical and Trade Schools
	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic)
81131	Repair and Maintenance
90120	Federal Government, Military

Energy Industries

NAICS	Industry Description
21112	Crude Petroleum Extraction
21113	Natural Gas Extraction
21211	Coal Mining
21311	Support Activities for Mining
22111	Electric Power Generation
22112	Electric Power Transmission, Control, and Distribution

NAICS	Industry Description
22121	Natural Gas Distribution
23712	Oil and Gas Pipeline and Related Structures Construction
23713	Power and Communication Line and Related Structures Construction
32411	Petroleum Refineries
32412	Asphalt Paving, Roofing, and Saturated Materials Manufacturing
32419	Other Petroleum and Coal Products Manufacturing
32511	Petrochemical Manufacturing
32512	Industrial Gas Manufacturing
33121	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel
33241	Power Boiler and Heat Exchanger Manufacturing
33242	Metal Tank (Heavy Gauge) Manufacturing
33291	Metal Valve Manufacturing
33313	Mining and Oil and Gas Field Machinery Manufacturing
33341	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing
33361	Engine, Turbine, and Power Transmission Equipment Manufacturing
33391	Pump and Compressor Manufacturing
33531	Electrical Equipment Manufacturing
33591	Battery Manufacturing
42352	Coal and Other Mineral and Ore Merchant Wholesalers
42471	Petroleum Bulk Stations and Terminals
42472	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)
48611	Pipeline Transportation of Crude Oil
48621	Pipeline Transportation of Natural Gas
48691	Pipeline Transportation of Refined Petroleum Products
48699	All Other Pipeline Transportation
54136	Geophysical Surveying and Mapping Services
54138	Testing Laboratories

Agribusiness and Biosciences Industries

NAICS	Industry Description
11100	Crop Production
11200	Animal Production
11311	Timber Tract Operations
11321	Forest Nurseries and Gathering of Forest Products
11331	Logging
11411	Fishing
11421	Hunting and Trapping
11511	Support Activities for Crop Production
11521	Support Activities for Animal Production
11531	Support Activities for Forestry
31111	Animal Food Manufacturing

NAICS	Industry Description
31121	Flour Milling and Malt Manufacturing
31122	Starch and Vegetable Fats and Oils Manufacturing
31123	Breakfast Cereal Manufacturing
31131	Sugar Manufacturing
31134	Nonchocolate Confectionery Manufacturing
31135	Chocolate and Confectionery Manufacturing
31141	Frozen Food Manufacturing
31142	Fruit and Vegetable Canning, Pickling, and Drying
31151	Dairy Product (except Frozen) Manufacturing
31152	Ice Cream and Frozen Dessert Manufacturing
31161	Animal Slaughtering and Processing
31171	Seafood Product Preparation and Packaging
31181	Bread and Bakery Product Manufacturing
31182	Cookie, Cracker, and Pasta Manufacturing
31183	Tortilla Manufacturing
31191	Snack Food Manufacturing
31192	Coffee and Tea Manufacturing
31193	Flavoring Syrup and Concentrate Manufacturing
31194	Seasoning and Dressing Manufacturing
31199	All Other Food Manufacturing
31211	Soft Drink and Ice Manufacturing
31212	Breweries
31213	Wineries
31214	Distilleries
32111	Sawmills and Wood Preservation
32121	Veneer, Plywood, and Engineered Wood Product Manufacturing
32191	Millwork
32192	Wood Container and Pallet Manufacturing
32199	All Other Wood Product Manufacturing
32211	Pulp Mills
32212	Paper Mills
32213	Paperboard Mills
32221	Paperboard Container Manufacturing
32222	Paper Bag and Coated and Treated Paper Manufacturing
32512	Industrial Gas Manufacturing
32519	Other Basic Organic Chemical Manufacturing
32522	Artificial and Synthetic Fibers and Filaments Manufacturing
32531	Fertilizer Manufacturing
32532	Pesticide and Other Agricultural Chemical Manufacturing
32541	Pharmaceutical and Medicine Manufacturing
33311	Agricultural Implement Manufacturing
33451	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
33461	Manufacturing and Reproducing Magnetic and Optical Media

NAICS	Industry Description
33911	Medical Equipment and Supplies Manufacturing
42345	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers
42346	Ophthalmic Goods Merchant Wholesalers
42382	Farm and Garden Machinery and Equipment Merchant Wholesalers
42421	Drugs and Druggists' Sundries Merchant Wholesalers
42443	Dairy Product (except Dried or Canned) Merchant Wholesalers
42444	Poultry and Poultry Product Merchant Wholesalers
42445	Confectionery Merchant Wholesalers
42446	Fish and Seafood Merchant Wholesalers
42447	Meat and Meat Product Merchant Wholesalers
42448	Fresh Fruit and Vegetable Merchant Wholesalers
42449	Other Grocery and Related Products Merchant Wholesalers
42451	Grain and Field Bean Merchant Wholesalers
42452	Livestock Merchant Wholesalers
42459	Other Farm Product Raw Material Merchant Wholesalers
42481	Beer and Ale Merchant Wholesalers
42482	Wine and Distilled Alcoholic Beverage Merchant Wholesalers
42491	Farm Supplies Merchant Wholesalers
49313	Farm Product Warehousing and Storage
54133	Engineering Services
54138	Testing Laboratories
54162	Environmental Consulting Services
54171	Research and Development in the Physical, Engineering, and Life Sciences
54194	Veterinary Services
54199	All Other Professional, Scientific, and Technical Services
62151	Medical and Diagnostic Laboratories

Informational and Financial Services Industries

NAICS	Industry Description
33411	Computer and Peripheral Equipment Manufacturing
51121	Software Publishers
51731	Wired and Wireless Telecommunications Carriers
51741	Satellite Telecommunications
51791	Other Telecommunications
51821	Data Processing, Hosting, and Related Services
51913	Internet Publishing and Broadcasting and Web Search Portals
51919	All Other Information Services
52111	Monetary Authorities-Central Bank
52211	Commercial Banking
52212	Savings Institutions
52213	Credit Unions
52219	Other Depository Credit Intermediation
52221	Credit Card Issuing

NAICS	Industry Description
52222	Sales Financing
52229	Other Nondepository Credit Intermediation
52231	Mortgage and Nonmortgage Loan Brokers
52232	Financial Transactions Processing, Reserve, and Clearinghouse Activities
52239	Other Activities Related to Credit Intermediation
52311	Investment Banking and Securities Dealing
52312	Securities Brokerage
52313	Commodity Contracts Dealing
52314	Commodity Contracts Brokerage
52321	Securities and Commodity Exchanges
52391	Miscellaneous Intermediation
52392	Portfolio Management
52393	Investment Advice
52399	All Other Financial Investment Activities
52411	Direct Life, Health, and Medical Insurance Carriers
52412	Direct Insurance (except Life, Health, and Medical) Carriers
52413	Reinsurance Carriers
52429	Other Insurance Related Activities
52511	Pension Funds
52512	Health and Welfare Funds
52519	Other Insurance Funds
52591	Open-End Investment Funds
52592	Trusts, Estates, and Agency Accounts
52599	Other Financial Vehicles
54121	Accounting, Tax Preparation, Bookkeeping, and Payroll Services
54151	Computer Systems Design and Related Services
55111	Management of Companies and Enterprises

Transportation and Logistics Industries

NAICS	Industry Description
32621	Tire Manufacturing
33361	Engine, Turbine, and Power Transmission Equipment Manufacturing
33451	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
33611	Automobile and Light Duty Motor Vehicle Manufacturing
33612	Heavy Duty Truck Manufacturing
33621	Motor Vehicle Body and Trailer Manufacturing
33631	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing
33632	Motor Vehicle Electrical and Electronic Equipment Manufacturing
33633	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
33634	Motor Vehicle Brake System Manufacturing
33635	Motor Vehicle Transmission and Power Train Parts Manufacturing
33636	Motor Vehicle Seating and Interior Trim Manufacturing
33637	Motor Vehicle Metal Stamping

NAICS	Industry Description
33639	Other Motor Vehicle Parts Manufacturing
33651	Railroad Rolling Stock Manufacturing
33661	Ship and Boat Building
33699	Other Transportation Equipment Manufacturing
42311	Automobile and Other Motor Vehicle Merchant Wholesalers
42312	Motor Vehicle Supplies and New Parts Merchant Wholesalers
42313	Tire and Tube Merchant Wholesalers
42314	Motor Vehicle Parts (Used) Merchant Wholesalers
42321	Furniture Merchant Wholesalers
42322	Home Furnishing Merchant Wholesalers
42331	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers
42332	Brick, Stone, and Related Construction Material Merchant Wholesalers
42333	Roofing, Siding, and Insulation Material Merchant Wholesalers
42339	Other Construction Material Merchant Wholesalers
42341	Photographic Equipment and Supplies Merchant Wholesalers
42342	Office Equipment Merchant Wholesalers
42343	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers
42344	Other Commercial Equipment Merchant Wholesalers
42345	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers
42346	Ophthalmic Goods Merchant Wholesalers
42349	Other Professional Equipment and Supplies Merchant Wholesalers
42351	Metal Service Centers and Other Metal Merchant Wholesalers
42352	Coal and Other Mineral and Ore Merchant Wholesalers
42361	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers
42362	Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers
42369	Other Electronic Parts and Equipment Merchant Wholesalers
42371	Hardware Merchant Wholesalers
42372	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers
42373	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers
42374	Refrigeration Equipment and Supplies Merchant Wholesalers
42381	Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers
42382	Farm and Garden Machinery and Equipment Merchant Wholesalers
42383	Industrial Machinery and Equipment Merchant Wholesalers
42384	Industrial Supplies Merchant Wholesalers
42385	Service Establishment Equipment and Supplies Merchant Wholesalers
42386	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers
42391	Sporting and Recreational Goods and Supplies Merchant Wholesalers
42392	Toy and Hobby Goods and Supplies Merchant Wholesalers
42393	Recyclable Material Merchant Wholesalers
42394	Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers
42399	Other Miscellaneous Durable Goods Merchant Wholesalers

NAICS	Industry Description
42411	Printing and Writing Paper Merchant Wholesalers
42412	Stationery and Office Supplies Merchant Wholesalers
42413	Industrial and Personal Service Paper Merchant Wholesalers
42421	Drugs and Druggists' Sundries Merchant Wholesalers
42431	Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers
42432	Men's and Boys' Clothing and Furnishings Merchant Wholesalers
42433	Women's, Children's, and Infants' Clothing and Accessories Merchant Wholesalers
42434	Footwear Merchant Wholesalers
42441	General Line Grocery Merchant Wholesalers
42442	Packaged Frozen Food Merchant Wholesalers
42443	Dairy Product (except Dried or Canned) Merchant Wholesalers
42444	Poultry and Poultry Product Merchant Wholesalers
42445	Confectionery Merchant Wholesalers
42446	Fish and Seafood Merchant Wholesalers
42447	Meat and Meat Product Merchant Wholesalers
42448	Fresh Fruit and Vegetable Merchant Wholesalers
42449	Other Grocery and Related Products Merchant Wholesalers
42451	Grain and Field Bean Merchant Wholesalers
42452	Livestock Merchant Wholesalers
42459	Other Farm Product Raw Material Merchant Wholesalers
42461	Plastics Materials and Basic Forms and Shapes Merchant Wholesalers
42469	Other Chemical and Allied Products Merchant Wholesalers
42471	Petroleum Bulk Stations and Terminals
42472	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)
42481	Beer and Ale Merchant Wholesalers
42482	Wine and Distilled Alcoholic Beverage Merchant Wholesalers
42491	Farm Supplies Merchant Wholesalers
42492	Book, Periodical, and Newspaper Merchant Wholesalers
42493	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers
42494	Tobacco and Tobacco Product Merchant Wholesalers
42495	Paint, Varnish, and Supplies Merchant Wholesalers
42499	Other Miscellaneous Nondurable Goods Merchant Wholesalers
42511	Business to Business Electronic Markets
42512	Wholesale Trade Agents and Brokers
48111	Scheduled Air Transportation
48121	Nonscheduled Air Transportation
48211	Rail Transportation
48321	Inland Water Transportation
48411	General Freight Trucking, Local
48412	General Freight Trucking, Long-Distance
48422	Specialized Freight (except Used Goods) Trucking, Local
48423	Specialized Freight (except Used Goods) Trucking, Long-Distance

NAICS	Industry Description
48611	Pipeline Transportation of Crude Oil
48621	Pipeline Transportation of Natural Gas
48691	Pipeline Transportation of Refined Petroleum Products
48699	All Other Pipeline Transportation
48811	Airport Operations
48819	Other Support Activities for Air Transportation
48821	Support Activities for Rail Transportation
48839	Other Support Activities for Water Transportation
48841	Motor Vehicle Towing
48849	Other Support Activities for Road Transportation
48851	Freight Transportation Arrangement
48899	Other Support Activities for Transportation
49311	General Warehousing and Storage
49312	Refrigerated Warehousing and Storage
49313	Farm Product Warehousing and Storage
49319	Other Warehousing and Storage

Automotive Industries

NAICS	Industry Description
33611	Automobile and Light Duty Motor Vehicle Manufacturing

Manufacturing Industries

NAICS	Industry Description
31111	Animal Food Manufacturing
31121	Flour Milling and Malt Manufacturing
31122	Starch and Vegetable Fats and Oils Manufacturing
31123	Breakfast Cereal Manufacturing
31131	Sugar Manufacturing
31134	Nonchocolate Confectionery Manufacturing
31135	Chocolate and Confectionery Manufacturing
31141	Frozen Food Manufacturing
31142	Fruit and Vegetable Canning, Pickling, and Drying
31151	Dairy Product (except Frozen) Manufacturing
31152	Ice Cream and Frozen Dessert Manufacturing
31161	Animal Slaughtering and Processing
31171	Seafood Product Preparation and Packaging
31181	Bread and Bakery Product Manufacturing
31182	Cookie, Cracker, and Pasta Manufacturing
31183	Tortilla Manufacturing
31191	Snack Food Manufacturing
31192	Coffee and Tea Manufacturing
31193	Flavoring Syrup and Concentrate Manufacturing
31194	Seasoning and Dressing Manufacturing

NAICS	Industry Description
31199	All Other Food Manufacturing
31211	Soft Drink and Ice Manufacturing
31212	Breweries
31213	Wineries
31214	Distilleries
31223	Tobacco Manufacturing
31311	Fiber, Yarn, and Thread Mills
31321	Broadwoven Fabric Mills
31322	Narrow Fabric Mills and Schiffli Machine Embroidery
31323	Nonwoven Fabric Mills
31324	Knit Fabric Mills
31331	Textile and Fabric Finishing Mills
31332	Fabric Coating Mills
31411	Carpet and Rug Mills
31412	Curtain and Linen Mills
31491	Textile Bag and Canvas Mills
31499	All Other Textile Product Mills
31511	Hosiery and Sock Mills
31519	Other Apparel Knitting Mills
31521	Cut and Sew Apparel Contractors
31522	Men's and Boys' Cut and Sew Apparel Manufacturing
31524	Women's, Girls', and Infants' Cut and Sew Apparel Manufacturing
31528	Other Cut and Sew Apparel Manufacturing
31599	Apparel Accessories and Other Apparel Manufacturing
31611	Leather and Hide Tanning and Finishing
31621	Footwear Manufacturing
31699	Other Leather and Allied Product Manufacturing
32111	Sawmills and Wood Preservation
32121	Veneer, Plywood, and Engineered Wood Product Manufacturing
32191	Millwork
32192	Wood Container and Pallet Manufacturing
32199	All Other Wood Product Manufacturing
32211	Pulp Mills
32212	Paper Mills
32213	Paperboard Mills
32221	Paperboard Container Manufacturing
32222	Paper Bag and Coated and Treated Paper Manufacturing
32223	Stationery Product Manufacturing
32229	Other Converted Paper Product Manufacturing
32311	Printing
32312	Support Activities for Printing
32411	Petroleum Refineries
32412	Asphalt Paving, Roofing, and Saturated Materials Manufacturing

NAICS	Industry Description
32419	Other Petroleum and Coal Products Manufacturing
32511	Petrochemical Manufacturing
32512	Industrial Gas Manufacturing
32513	Synthetic Dye and Pigment Manufacturing
32518	Other Basic Inorganic Chemical Manufacturing
32519	Other Basic Organic Chemical Manufacturing
32521	Resin and Synthetic Rubber Manufacturing
32522	Artificial and Synthetic Fibers and Filaments Manufacturing
32531	Fertilizer Manufacturing
32532	Pesticide and Other Agricultural Chemical Manufacturing
32541	Pharmaceutical and Medicine Manufacturing
32551	Paint and Coating Manufacturing
32552	Adhesive Manufacturing
32561	Soap and Cleaning Compound Manufacturing
32562	Toilet Preparation Manufacturing
32591	Printing Ink Manufacturing
32592	Explosives Manufacturing
32599	All Other Chemical Product and Preparation Manufacturing
32611	Plastics Packaging Materials and Unlaminated Film and Sheet Manufacturing
32612	Plastics Pipe, Pipe Fitting, and Unlaminated Profile Shape Manufacturing
32613	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing
32614	Polystyrene Foam Product Manufacturing
32615	Urethane and Other Foam Product (except Polystyrene) Manufacturing
32616	Plastics Bottle Manufacturing
32619	Other Plastics Product Manufacturing
32621	Tire Manufacturing
32622	Rubber and Plastics Hoses and Belting Manufacturing
32629	Other Rubber Product Manufacturing
32711	Pottery, Ceramics, and Plumbing Fixture Manufacturing
32712	Clay Building Material and Refractories Manufacturing
32721	Glass and Glass Product Manufacturing
32731	Cement Manufacturing
32732	Ready-Mix Concrete Manufacturing
32733	Concrete Pipe, Brick, and Block Manufacturing
32739	Other Concrete Product Manufacturing
32741	Lime Manufacturing
32742	Gypsum Product Manufacturing
32791	Abrasive Product Manufacturing
32799	All Other Nonmetallic Mineral Product Manufacturing
33111	Iron and Steel Mills and Ferroalloy Manufacturing
33121	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel
33122	Rolling and Drawing of Purchased Steel
33131	Alumina and Aluminum Production and Processing

NAICS	Industry Description
33141	Nonferrous Metal (except Aluminum) Smelting and Refining
33142	Copper Rolling, Drawing, Extruding, and Alloying
33149	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, Extruding, and Alloying
33151	Ferrous Metal Foundries
33152	Nonferrous Metal Foundries
33211	Forging and Stamping
33221	Cutlery and Handtool Manufacturing
33231	Plate Work and Fabricated Structural Product Manufacturing
33232	Ornamental and Architectural Metal Products Manufacturing
33241	Power Boiler and Heat Exchanger Manufacturing
33242	Metal Tank (Heavy Gauge) Manufacturing
33243	Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing
33251	Hardware Manufacturing
33261	Spring and Wire Product Manufacturing
33271	Machine Shops
33272	Turned Product and Screw, Nut, and Bolt Manufacturing
33281	Coating, Engraving, Heat Treating, and Allied Activities
33291	Metal Valve Manufacturing
33299	All Other Fabricated Metal Product Manufacturing
33311	Agricultural Implement Manufacturing
33312	Construction Machinery Manufacturing
33313	Mining and Oil and Gas Field Machinery Manufacturing
33324	Industrial Machinery Manufacturing
33331	Commercial and Service Industry Machinery Manufacturing
33341	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing
33351	Metalworking Machinery Manufacturing
33361	Engine, Turbine, and Power Transmission Equipment Manufacturing
33391	Pump and Compressor Manufacturing
33392	Material Handling Equipment Manufacturing
33399	All Other General Purpose Machinery Manufacturing
33411	Computer and Peripheral Equipment Manufacturing
33421	Telephone Apparatus Manufacturing
33422	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
33429	Other Communications Equipment Manufacturing
33431	Audio and Video Equipment Manufacturing
33441	Semiconductor and Other Electronic Component Manufacturing
33451	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
33461	Manufacturing and Reproducing Magnetic and Optical Media
33511	Electric Lamp Bulb and Part Manufacturing
33512	Lighting Fixture Manufacturing
33521	Small Electrical Appliance Manufacturing
33522	Major Household Appliance Manufacturing

NAICS	Industry Description
33531	Electrical Equipment Manufacturing
33591	Battery Manufacturing
33592	Communication and Energy Wire and Cable Manufacturing
33593	Wiring Device Manufacturing
33599	All Other Electrical Equipment and Component Manufacturing
33611	Automobile and Light Duty Motor Vehicle Manufacturing
33612	Heavy Duty Truck Manufacturing
33621	Motor Vehicle Body and Trailer Manufacturing
33631	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing
33632	Motor Vehicle Electrical and Electronic Equipment Manufacturing
33633	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
33634	Motor Vehicle Brake System Manufacturing
33635	Motor Vehicle Transmission and Power Train Parts Manufacturing
33636	Motor Vehicle Seating and Interior Trim Manufacturing
33637	Motor Vehicle Metal Stamping
33639	Other Motor Vehicle Parts Manufacturing
33641	Aerospace Product and Parts Manufacturing
33651	Railroad Rolling Stock Manufacturing
33661	Ship and Boat Building
33699	Other Transportation Equipment Manufacturing
33711	Wood Kitchen Cabinet and Countertop Manufacturing
33712	Household and Institutional Furniture Manufacturing
33721	Office Furniture (including Fixtures) Manufacturing
33791	Mattress Manufacturing
33792	Blind and Shade Manufacturing
33911	Medical Equipment and Supplies Manufacturing
33991	Jewelry and Silverware Manufacturing
33992	Sporting and Athletic Goods Manufacturing
33993	Doll, Toy, and Game Manufacturing
33994	Office Supplies (except Paper) Manufacturing
33995	Sign Manufacturing
33999	All Other Miscellaneous Manufacturing

Construction Industries

NAICS	Industry Description
23611	Residential Building Construction
23621	Industrial Building Construction
23622	Commercial and Institutional Building Construction
23711	Water and Sewer Line and Related Structures Construction
23712	Oil and Gas Pipeline and Related Structures Construction
23713	Power and Communication Line and Related Structures Construction
23721	Land Subdivision
23731	Highway, Street, and Bridge Construction

NAICS	Industry Description
23799	Other Heavy and Civil Engineering Construction
23811	Poured Concrete Foundation and Structure Contractors
23812	Structural Steel and Precast Concrete Contractors
23813	Framing Contractors
23814	Masonry Contractors
23815	Glass and Glazing Contractors
23816	Roofing Contractors
23817	Siding Contractors
23819	Other Foundation, Structure, and Building Exterior Contractors
23821	Electrical Contractors and Other Wiring Installation Contractors
23822	Plumbing, Heating, and Air-Conditioning Contractors
23829	Other Building Equipment Contractors
23831	Drywall and Insulation Contractors
23832	Painting and Wall Covering Contractors
23833	Flooring Contractors
23834	Tile and Terrazzo Contractors
23835	Finish Carpentry Contractors
23839	Other Building Finishing Contractors
23891	Site Preparation Contractors
23899	All Other Specialty Trade Contractors

Healthcare Industries

NAICS	Industry Description
62111	Offices of Physicians
62121	Offices of Dentists
62131	Offices of Chiropractors
62132	Offices of Optometrists
62133	Offices of Mental Health Practitioners (except Physicians)
62134	Offices of Physical, Occupational and Speech Therapists, and Audiologists
62139	Offices of All Other Health Practitioners
62141	Family Planning Centers
62142	Outpatient Mental Health and Substance Abuse Centers
62149	Other Outpatient Care Centers
62151	Medical and Diagnostic Laboratories
62161	Home Health Care Services
62191	Ambulance Services
62199	All Other Ambulatory Health Care Services
62211	General Medical and Surgical Hospitals
62221	Psychiatric and Substance Abuse Hospitals
62231	Specialty (except Psychiatric and Substance Abuse) Hospitals
62311	Nursing Care Facilities (Skilled Nursing Facilities)
62321	Residential Intellectual and Developmental Disability Facilities
62322	Residential Mental Health and Substance Abuse Facilities

NAICS	Industry Description
62331	Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly
62399	Other Residential Care Facilities
62411	Child and Youth Services
62412	Services for the Elderly and Persons with Disabilities
62419	Other Individual and Family Services
62421	Community Food Services
62422	Community Housing Services
62423	Emergency and Other Relief Services
62431	Vocational Rehabilitation Services
62441	Child Day Care Services

Education Industries

NAICS	Industry Description
61111	Elementary and Secondary Schools
61121	Junior Colleges
61131	Colleges, Universities, and Professional Schools
61141	Business and Secretarial Schools
61142	Computer Training
61143	Professional and Management Development Training
61151	Technical and Trade Schools
61161	Fine Arts Schools
61162	Sports and Recreation Instruction
61163	Language Schools
61169	All Other Schools and Instruction
61171	Educational Support Services

Creative Industries

NAICS	Industry Description
23622	Commercial and Institutional Building Construction
51211	Motion Picture and Video Production
51212	Motion Picture and Video Distribution
51213	Motion Picture and Video Exhibition
51219	Postproduction Services and Other Motion Picture and Video Industries
51223	Music Publishers
51224	Sound Recording Studios
51225	Record Production and Distribution
51229	Other Sound Recording Industries
54131	Architectural Services
54132	Landscape Architectural Services
54133	Engineering Services
54134	Drafting Services
54141	Interior Design Services
54142	Industrial Design Services

NAICS	Industry Description
54143	Graphic Design Services
54149	Other Specialized Design Services
54181	Advertising Agencies
54182	Public Relations Agencies
54183	Media Buying Agencies
54184	Media Representatives
54185	Outdoor Advertising
54186	Direct Mail Advertising
54187	Advertising Material Distribution Services
54189	Other Services Related to Advertising
54192	Photographic Services
71111	Theater Companies and Dinner Theaters
71112	Dance Companies
71113	Musical Groups and Artists
71119	Other Performing Arts Companies
71131	Promoters of Performing Arts, Sports, and Similar Events with Facilities
71132	Promoters of Performing Arts, Sports, and Similar Events without Facilities
71141	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures
71151	Independent Artists, Writers, and Performers
71211	Museums
71212	Historical Sites

Target Sectors Staffing Patterns by Current Jobs and Projected New Jobs

Table 13: Top Staffed Aerospace Occupations in 2021

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
49-3011	Aircraft Mechanics and Service Technicians	1,401	1,523	122	9%	5.3%	$28.66	Postsecondary nondegree award	None	None
15-1252	Software Developers	1,137	1,301	164	14%	4.3%	$46.18	Bachelor's degree	None	None
11-1021	General and Operations Managers	929	992	63	7%	3.5%	$38.34	Bachelor's degree	5 years or more	None
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	581	614	33	6%	2.2%	$23.12	High school diploma or equivalent	None	Moderate-term on-the-job training
13-1082	Project Management Specialists	552	577	26	5%	2.1%	$37.11	Bachelor's degree	None	None
15-1232	Computer User Support Specialists	498	525	27	5%	1.9%	$23.07	Some college, no degree	None	None
13-1161	Market Research	463	514	51	11%	1.7%	$28.22	Bachelor's degree	None	None

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
	Analysts and Marketing Specialists									
13-1111	Management Analysts	462	511	49	11%	1.7%	$38.30	Bachelor's degree	Less than 5 years	None
51-4041	Machinists	444	515	71	16%	1.7%	$23.13	High school diploma or equivalent	None	Long-term on-the-job training
43-4051	Customer Service Representatives	428	430	2	0%	1.6%	$14.81	High school diploma or equivalent	None	Short-term on-the-job training

Source: Lightcast- economicmodeling.com- 2022.3

Table 14: Top Growing Aerospace Occupations by 2026

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
15-1252	Software Developers	1,137	1,301	164	14%	4.3%	$46.18	Bachelor's degree	None	None
49-3011	Aircraft Mechanics and Service Technicians	1,401	1,523	122	9%	5.3%	$28.66	Postsecondary nondegree award	None	None
13-1081	Logisticians	361	441	80	22%	1.4%	$37.45	Bachelor's degree	None	None
49-9041	Industrial Machinery Mechanics	201	273	72	36%	0.8%	$24.70	High school diploma or equivalent	None	Long-term on-the-job training
51-4041	Machinists	444	515	71	16%	1.7%	$23.13	High school diploma or equivalent	None	Long-term on-the-job training
17-2112	Industrial Engineers	228	292	64	28%	0.9%	$42.50	Bachelor's degree	None	None
11-1021	General and Operations Managers	929	992	63	7%	3.5%	$38.34	Bachelor's degree	5 years or more	None
17-2011	Aerospace Engineers	256	308	52	20%	1.0%	$51.89	Bachelor's degree	None	None
13-1161	Market Research Analysts and Marketing Specialists	463	514	51	11%	1.7%	$28.22	Bachelor's degree	None	None
13-1111	Management Analysts	462	511	49	11%	1.7%	$38.30	Bachelor's degree	Less than 5 years	None

Source: Lightcast- economicmodeling.com- 2022.3

Table 15: Top Staffed Agribusiness & Bioscience Occupations in 2021

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	776	832	55	7%	3.9%	$14.48	No formal educational credential	None	Short-term on-the-job training
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	650	681	31	5%	3.2%	$29.63	Bachelor's degree	None	Moderate-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	585	633	48	8%	2.9%	$23.56	High school diploma or equivalent	None	Moderate-term on-the-job training
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	579	617	38	7%	2.9%	$13.95	High school diploma or equivalent	None	Short-term on-the-job training
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	552	821	269	49%	2.7%	$12.37	No formal educational credential	None	Short-term on-the-job training

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
53-3032	Heavy and Tractor-Trailer Truck Drivers	525	573	48	9%	2.6%	$23.47	Postsecondary nondegree award	None	Short-term on-the-job training
51-9111	Packaging and Filling Machine Operators and Tenders	508	542	34	7%	2.5%	$14.53	High school diploma or equivalent	None	Moderate-term on-the-job training
11-1021	General and Operations Managers	466	501	35	8%	2.3%	$38.34	Bachelor's degree	5 years or more	None
53-7065	Stockers and Order Fillers	463	478	15	3%	2.3%	$14.29	High school diploma or equivalent	None	Short-term on-the-job training
43-4051	Customer Service Representatives	423	429	6	1%	2.1%	$14.81	High school diploma or equivalent	None	Short-term on-the-job training

Source: Lightcast- economicmodeling.com- 2022.3

Table 16: Top Growing Agribusiness & Bioscience Occupations by 2026

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	552	821	269	49%	2.7%	$12.37	No formal educational credential	None	Short-term on-the-job training
11-9013	Farmers, Ranchers, and Other Agricultural Managers	280	369	89	32%	1.4%	$17.33	High school diploma or equivalent	5 years or more	None
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	776	832	55	7%	3.9%	$14.48	No formal educational credential	None	Short-term on-the-job training
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	220	273	53	24%	1.1%	$11.31	No formal educational credential	None	Short-term on-the-job training
45-2091	Agricultural Equipment Operators	135	187	52	38%	0.7%	$13.16	No formal educational credential	None	Moderate-term on-the-job training
53-3032	Heavy and Tractor-Trailer Truck Drivers	525	573	48	9%	2.6%	$23.47	Postsecondary nondegree award	None	Short-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except	585	633	48	8%	2.9%	$23.56	High school diploma or equivalent	None	Moderate-term on-the-job training

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
	Technical and Scientific Products									
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	579	617	38	7%	2.9%	$13.95	High school diploma or equivalent	None	Short-term on-the-job training
51-3011	Bakers	229	267	38	17%	1.1%	$13.69	No formal educational credential	None	Long-term on-the-job training
11-1021	General and Operations Managers	466	501	35	8%	2.3%	$38.34	Bachelor's degree	5 years or more	None

Source: Lightcast- economicmodeling.com- 2022.3

Table 17: Top Staffed Energy Occupations in 2021

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
47-5071	Roustabouts, Oil and Gas	1,728	1,614	-114	-7%	6.2%	$20.47	No formal educational credential	None	Moderate-term on-the-job training
47-5012	Rotary Drill Operators, Oil and Gas	1,078	1,018	-59	-6%	3.9%	$30.47	No formal educational credential	None	Moderate-term on-the-job training
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	992	955	-37	-4%	3.5%	$31.71	High school diploma or equivalent	5 years or more	None
47-5013	Service Unit Operators, Oil and Gas	973	890	-83	-9%	3.5%	$18.67	No formal educational credential	None	Moderate-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	926	882	-43	-5%	3.3%	$18.90	High school diploma or equivalent	None	Moderate-term on-the-job training
53-3032	Heavy and Tractor-Trailer Truck Drivers	795	780	-16	-2%	2.8%	$20.89	Postsecondary nondegree award	None	Short-term on-the-job training
51-2098	Miscellaneous Assemblers and Fabricators	763	648	-115	-15%	2.8%	$15.09	High school diploma or equivalent	None	Moderate-term on-the-job training
17-2171	Petroleum Engineers	616	494	-122	-20%	2.3%	$62.92	Bachelor's degree	None	None

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
11-1021	General and Operations Managers	569	536	-33	-6%	2.0%	$45.91	Bachelor's degree	5 years or more	None
51-1011	First-Line Supervisors of Production and Operating Workers	562	521	-41	-7%	2.0%	$30.05	High school diploma or equivalent	Less than 5 years	None

Source: Lightcast- economicmodeling.com- 2022.3

Table 18: Top Growing Energy Occupations by 2026

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
49-9081	Wind Turbine Service Technicians	100	140	40	40%	0.5%	$22.92	Postsecondary nondegree award	None	Long-term on-the-job training
49-9052	Telecommunications Line Installers and Repairers	59	68	9	16%	0.3%	$23.67	High school diploma or equivalent	None	Long-term on-the-job training
53-7071	Gas Compressor and Gas Pumping Station Operators	17	22	4	23%	0.1%	$34.76	High school diploma or equivalent	None	Moderate-term on-the-job training
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairers	26	29	3	10%	0.1%	$21.59	Associate's degree	None	Moderate-term on-the-job training
51-8091	Chemical Plant and System Operators	17	18	1	9%	0.1%	$28.94	High school diploma or equivalent	None	Moderate-term on-the-job training
47-2221	Structural Iron and Steel Workers	30	31	1	4%	0.1%	$22.99	High school diploma or equivalent	None	Apprenticeship
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	26	26	0	0%	0.1%	$14.61	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	23	22	-1	-2%	0.1%	$20.76	High school diploma or equivalent	None	Moderate-term on-the-job training

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
19-2031	Chemists	13	12	-1	-4%	0.1%	$31.12	Bachelor's degree	None	None
37-3013	Tree Trimmers and Pruners	16	15	-1	-4%	0.1%	$18.39	High school diploma or equivalent	None	Short-term on-the-job training

Source: Lightcast- economicmodeling.com- 2022.3

Table 19: Top Staffed Information and Financial Services Occupations in 2021

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
13-2011	Accountants and Auditors	3,652	4,177	525	14%	7.6%	$30.75	Bachelor's degree	None	None
43-4051	Customer Service Representatives	2,679	2,535	-145	-5%	5.6%	$14.81	High school diploma or equivalent	None	Short-term on-the-job training
43-3071	Tellers	2,098	1,986	-112	-5%	4.4%	$14.11	High school diploma or equivalent	None	Short-term on-the-job training
43-3031	Bookkeeping, Accounting, and Auditing Clerks	2,013	2,108	96	5%	4.2%	$18.38	Some college, no degree	None	Moderate-term on-the-job training
15-1252	Software Developers	1,690	1,837	147	9%	3.5%	$46.18	Bachelor's degree	None	None
13-2072	Loan Officers	1,576	1,590	15	1%	3.3%	$28.78	Bachelor's degree	Less than 5 years	Moderate-term on-the-job training
11-1021	General and Operations Managers	1,478	1,528	51	3%	3.1%	$38.34	Bachelor's degree	5 years or more	None
43-1011	First-Line Supervisors of Office and Administrative Support Workers	1,467	1,438	-30	-2%	3.0%	$24.48	High school diploma or equivalent	Less than 5 years	None

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
11-3031	Financial Managers	1,424	1,596	172	12%	3.0%	$54.25	Bachelor's degree	5 years or more	None
41-3031	Securities, Commodities, and Financial Services Sales Agents	1,140	1,194	55	5%	2.4%	$23.54	Bachelor's degree	None	Moderate-term on-the-job training

Source: Lightcast- economicmodeling.com- 2022.3

Table 20: Top Growing Information and Financial Services Occupations by 2026

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
13-2011	Accountants and Auditors	3,652	4,177	525	14%	7.6%	$30.75	Bachelor's degree	None	None
11-3031	Financial Managers	1,424	1,596	172	12%	3.0%	$54.25	Bachelor's degree	5 years or more	None
15-1252	Software Developers	1,690	1,837	147	9%	3.5%	$46.18	Bachelor's degree	None	None
13-2082	Tax Preparers	498	603	105	21%	1.0%	$17.98	High school diploma or equivalent	None	Moderate-term on-the-job training
43-3031	Bookkeeping, Accounting, and Auditing Clerks	2,013	2,108	96	5%	4.2%	$18.38	Some college, no degree	None	Moderate-term on-the-job training
41-3031	Securities, Commodities, and Financial Services Sales Agents	1,140	1,194	55	5%	2.4%	$23.54	Bachelor's degree	None	Moderate-term on-the-job training
13-1071	Human Resources Specialists	495	548	53	11%	1.0%	$24.62	Bachelor's degree	None	None
13-1111	Management Analysts	571	623	52	9%	1.2%	$38.30	Bachelor's degree	Less than 5 years	None
11-1021	General and Operations Managers	1,478	1,528	51	3%	3.1%	$38.34	Bachelor's degree	5 years or more	None
13-1161	Market Research	701	745	44	6%	1.5%	$28.22	Bachelor's degree	None	None

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
	Analysts and Marketing Specialists									

Source: Lightcast- economicmodeling.com- 2022.3

Table 21: Top Staffed Manufacturing Occupations in 2021

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
51-2098	Miscellaneous Assemblers and Fabricators	2,147	1,977	-171	-8%	6.2%	$17.48	High school diploma or equivalent	None	Moderate-term on-the-job training
51-1011	First-Line Supervisors of Production and Operating Workers	1,531	1,569	37	2%	4.4%	$29.54	High school diploma or equivalent	Less than 5 years	None
51-4121	Welders, Cutters, Solderers, and Brazers	1,490	1,458	-33	-2%	4.3%	$22.01	High school diploma or equivalent	None	Moderate-term on-the-job training
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	1,032	1,058	26	3%	3.0%	$14.48	No formal educational credential	None	Short-term on-the-job training
51-4041	Machinists	926	967	41	4%	2.7%	$23.13	High school diploma or equivalent	None	Long-term on-the-job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	918	895	-24	-3%	2.7%	$21.18	High school diploma or equivalent	None	Moderate-term on-the-job training
51-9161	Computer Numerically	912	887	-24	-3%	2.6%	$17.89	High school	None	Moderate-term on-the-job training

SOC	Description	Employed in Industry Group (2021)	Employed in Industry Group (2026)	Change (2021 - 2026)	% Change (2021 - 2026)	% of Total Jobs in Industry Group (2021)	Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
	Controlled Tool Operators							diploma or equivalent		
43-5071	Shipping, Receiving, and Inventory Clerks	814	782	-32	-4%	2.4%	$14.79	High school diploma or equivalent	None	Short-term on-the-job training
47-2211	Sheet Metal Workers	692	710	18	3%	2.0%	$27.62			

Attachment III – Partner Organizations & Friends of COWIB

Program/ Agency/ Organization	Contact Last	Contact First	Email	Telephone
WIOA Title I -- WIOA Adult & Dislocated Worker Formula				
Central Oklahoma Workforce Investment Board	Sellers	Ashley	ashleysellers@cowib.org	405-622-2026
Central Oklahoma Workforce Investment Board	Chapman	Kim	kimchapman@cowib.org	405-622-2026
Dynamic Workforce Solutions	Summar	Tom	tsummar@dwfs.us	918-508-9926
Dynamic Workforce Solutions	Rodriguez	Trini	trinirodriguez@cowib.org	405-275-7800
WIOA Title I -- WIOA Youth Formula				
Central Oklahoma Workforce Investment Board	Scott	Yolanda	yolandascott@cowib.org	405-622-2026
Dynamic Workforce Solutions	Summar	Tom	tsummar@dwfs.us	918-508-9926
Dynamic Workforce Solutions	Rodriguez	Trini	trinirodriguez@cowib.org	405-275-7800
WIOA Title I -- Job Corps				
Guthrie Job Corps Center	Davis	Matthew	Matthew.Davis@jobcorps.org	405-282-9930
Talking Leaves Job Corps	McPeek	Julie	McPeek.Julie@jobcorps.org	405-424-1927
WIOA Title I -- YouthBuild				
None at this Time				
WIOA Title I -- Native American				
Absentee Shawnee Tribe	Wilson	Annette	awilson@astribe.com	405-275-4030
Cheyenne & Arapaho Tribes of OK	Erwin	Pahmahmie	epahmahmie@cheyenneandarapaho-nsn.gov	405-262-0345
Citizen Potawatomi Nation	Zientek	Margaret	mzientek@potawatomi.org	405-878-3854
Citizen Potawatomi Nation	*Brown*	*Richard*	rebrown@potawatomi.org	405-275-3121
Muskogee Creek Nation of Oklahoma	Toppah	Allen	altoppah@muscogeenation.com	918-732-7600
Muskogee Creek Nation of Oklahoma	Thomas	Gerrell	gthomas@muscogeenation.com	918-732-7600
Seminole Nation of Oklahoma	Wesley-Harjo	Emma	wesleyharjo.e@sno-nsn.gov	405-257-7200
Seminole Nation of Oklahoma	Keawphalouk	Clara	keawphalouk.c@sno-nsn.gov	405-257-7200
United Urban Indian Council	Harjo	Tracy	tracy.harjo1@uuic.org	405-778-6805
WIOA Title I --National Farmworker Jobs Program				

ORO Development Corporation	*Lamey*	*James*	jlamey@orodevcorp.org	405-840-7077
ORO Development Corporation	Castillo	Herminia (Minnie)	hcastillo@orodevcorp.org	405-840-7077
Wagner-Peyser Act				
Oklahoma Employment Security Commission	*Wilkerson*	*Bradly*	bradly.wilkerson@oesc.ok.gov	405-426-8850
WIOA Title II -- Adult Education & Literacy				
OK Dept. of Career & Technology Education	Allee	Lance	lance.allee@careertech.ok.gov	405-880-5235
Canadian Valley Technology Center	D'Amico	Latricia	ldamico@cvtech.edu	405-345-3333
Meridian Technology Center	Autry	Mona	mautry@meridiantech.edu	405-377-3333
Metro Technology Centers	Collins	Aaron	Aaron.Collins@metrotech.edu	405-424-8324
OIC of Oklahoma County, Inc.	Jones	DesJean	djones@oicokc.org	405-235-2651
Oklahoma City Community College	*Sandoval*	*Doralicia*	dsandoval@occc.edu	405-682-1611
OSU- Institute of Technology (Okmulgee)	Colombin	Fran	frances.colombin@okstate.edu	918-293-4917
Shawnee Public Schools	Morgan	Charles	salc@shawnee.k12.ok.us	405-878-3101
Title I of the Rehabilitation Act				
Department of Rehabilitation Services	*Goza*	*Mike*	mgoza@okdrs.gov	405-522-7985
Department of Rehabilitation Services	Roe	Stephanie	sroe@okdrs.gov	405-951-3400
Title V of the Older American Act (SCSEP)				
OK DHS - Special Units on Aging/ SCSEP	Bartels	Larry	larry.bartels@okdhs.org	405-626-5269
AARP Senior Employment Foundation	Banker	Steve	sbanker@aarp.org	405-873-3899
AARP Senior Employment Foundation	Walker	Eugina (Gina)	ewalker@aarp.org	405-879-3899
National Indian Council on Aging	Maly	Leslie	lmaly@nicoa.org	505-292-2001
National Indian Council on Aging	Irby	Edward	eirby@nicoa.org	505-292-2001
Carl D. Perkins Act				
OK Dept. of Career & Technology Education	Bauter	Letha	letha.bauter@careertech.ok.gov	405-743-5569
OK Dept. of Career & Technology Education	Allee	Lance	lance.allee@careertech.ok.gov	405-880-5235
Canadian Valley Technology Center	D'Amico	Latricia	ldamico@cvtech.edu	405-345-3333
Eastern Oklahoma County Technology Center	Gunn	Kim	kgunn@eoctech.org	405-390-5331
Francis Tuttle Technology Center	Steele	Emily	emily/steele@francistuttle.edu	405-717-7799
Gordon Cooper Technology Center	McCormick	Julie	juliem@gctech.edu	405-273-7493
Metro Technology Centers	Collins	Aaron	Aaron.Collins@metrotech.edu	405-424-8324

Mid-Del Technology Center	McCrabb	Blake	bmccrabb@mid-del.net	405-739-1707
Moore-Norman Technology Center	Fitzgerald	Tina	Tina.Fitzgerald@mntc.edu	405-801-5193
Oklahoma City Community College	Mickey	Jack	mickey.d.jack@occc.edu	405-682-1611
Oklahoma State University - OKC	Rowan	Kristen	klrowan@okstate.edu	405-947-4421
OSU- Institute of Technology (Okmulgee)	Colombin	Fran	frances.colombin@okstate.edu	918-293-4917
Redlands Community College	*Bryant*	*Jack*	bryantj@redlandscc.edu	405-422-1256
Rose State College	Alvis	Whitney	walvis@rose.edu	405-736-0384
Seminole State College	Morgan	Danny	dmorgan@sscok.edu	405-382-9540
Wes Watkins Technology Center	Lindley	Mike	mlindley@wwtech.edu	405-452-5500
Trade Act of 1974				
Oklahoma Employment Security Commission	*Wilkerson*	*Bradly*	bradly.wilkerson@oesc.ok.gov	405-426-8850
Vets Program (Title 38, U.S.C.)				
Oklahoma Employment Security Commission	*Wilkerson*	*Bradly*	bradly.wilkerson@oesc.ok.gov	405-426-8850
Community Services Block Grant				
Community Action Agency of OKC	Thompson	Jessie	execdir@caaofokc.org	405-232-0199
Deep Fork Community Action	Baldridge	Christie	executivedirector@dfcf.org	918-756-2826
Central Oklahoma Community Action Agency	Loudermilk	Barbara	BLoudermilk@cocaa.org	405-274-6060
Housing & Urban Development				
Norman Housing Authority	Canavan	Karen	kcanavan@normanha.org	405-329-0933
Norman Housing Authority	McDonald	Liz	lmcdonald@normanha.org	405-329-0933
Norman Housing Authority	Failing	Allison	afailing@normanha.org	405-329-0933
Oklahoma City Housing Authority	Facello	Alana	afacello@ochanet.org	405-239-7551
Oklahoma City Housing Authority	Gillett	Mark	mgillett@ochanet.org	405-239-7551
State Unemployment Compensation				
Oklahoma Employment Security Commission	*Wilkerson*	*Bradly*	bradly.wilkerson@oesc.ok.gov	405-426-8850
Section 212 of the Second Chance Act				
None at this Time				
TANF (Title IV-A of the Social Security Act)				
OK Department of Human Services	Archer	Rhonda	rhonda.archer@okdhs.org	405-522-5050
OK Department of Human Services	French	Lisa	lisa.french@okdhs.org	405-522-5050
OK Department of Human Services	*Walton*	*Kristal*	Kristal.Walton@okdhs.org	405-522-5050
OK Department of Human Services	Jensen	Andy	andy.jensen@okdhs.org	405-522-5050
One-Stop Center Managers				

OKC Central Oklahoma Works Center	Rollins	Travis	travis.rollins@oesc.ok.gov	405-426-8816
Shawnee Oklahoma Works Center	Moore	Chris	Chirstopher.Moore@oesc.ok.gov	405-275-7800
Seminole Oklahoma Works Center	Moore	Chris	Chirstopher.Moore@oesc.ok.gov	405-275-7800
COWIB Business Services				
Central Oklahoma Workforce Investment Board	Campbell	Dana	danaclark@cowib.org	405-622-2026
Central Oklahoma Workforce Investment Board	Griggs	Kellie	kelliegriggs@cowib.org	405-622-2026
Central Oklahoma Workforce Investment Board	Samuels	Carol	carolsamuels@cowib.org	405-275-7800
Italicized Name = COWIB Board Member				
Friends of Central Oklahoma Workforce Innovation Board				
Canadian Valley Technology Center PIVOT (TANF)	Harroald	Cecila	charroald@cvtech.edu	405-422-2338
Catholic Charities	Flannery	Theresa	tflannery@ccaok.org	405-523-3000
Center for Employment Opportunities	Lewis	Tadd	tlewis@ceoworks.org	405-465-3093
Eastern Oklahoma County Technology Center	Gunn	Kim	kgunn@eoctech.org	405-390-5331
Goodwill Industries of Central Oklahoma	Conyer	Kimberly	kconyer@okgoodwill.org	405-278-7152
Gordon Cooper - Eagle Program (TANF)	Williams	Gloria	gloriaw@gctech.edu	405-214-3214
Greater Oklahoma City Chamber	Williams	Erik	ewilliams@okcchamber.com	405-290-7062
Leah's Hope	Hussain	Brittany	brittany@leahshope.org	405-455-6116
Legacy Parenting Center- Shawnee	Holt	Lacey	director@legacyshawnee.com	405-432-2844
Life Recovery Services	Shoemaker	Cody	cody@okliferecovery.org	405-600-3252
Metro Technology Center - BEST Program (TANF)	Canfield	Alli	allison.canfield@metrotech.edu	405-595-4315
Mid-Del Technology Center - ELITE (TANF)	Spaulding	Rick	rspaulding@mid-del.net	405-739-1707
Moore-Norman Technology Center	Fitzgerald	Tina	Tina.Fitzgerald@mntc.edu	405-801-5193
Moore-Norman Technology Center HIRE Program (TANF)	Fix	Matt	matt.fix@mntc.edu	405-801-5261
NewView Oklahoma	Rairdon	Terry	trairdon@newviewoklahoma.rog	918-933-4117
Office of Juvenile Affairs (Pott. Co. JSU)	Cline	Suzanne	suzanne.cline@oja.ok.gov	405-275-3219

Office of Juvenile Affairs (Central OK Juvenile Ctr)	Wolfe	Teresa	teresa.wolfe@oja.ok.gov	405-598-2135
Oklahoma City Community College	Beecher	Eric	eric.p.beecher@occc.edu	405-682-1611
Oklahoma City Community College	Bernard	Susan	sbernard@occc.edu	405-682-1611
OK Department of CareerTech Education	Nord	Shawna	shawna.Nord@careetech.ok.gov	918-796-1313
Oklahoma Department of Human Services	Hinex	Carol	carol.hinex@okdhs.org	405-878-4000
Oklahoma Department of Insurance	Keeley	Tracy	tracy.keeley@oid.ok.gov	918-295-3712
Oklahoma Dept. of Mental Health & Sub. Abuse	Horn	Lindsay	Lindsay.horn@odmhsas.org	405-248-9200
Oklahoma Employment Security Commission	Braddy	Kim	kim.braddy@oesc.ok.gov	405-590-8638
OK Office of Workforce Development	Arbelaez	Natalia	natalia.arbelaez@okcommerce.gov	405-517-4658
OK Office of Workforce Development	Grant	Brittane	brittane.grant@okcommerce.gov	405-213-4076
OK Office of Workforce Development	Hancock	Bill	william.hancock@okcommerce.gov	405-215-1967
Oklahoma State Regents for Higher Education	Griffith	Brad	bgriffith@osrhe.edu	405-225-9100
OSU- Institute of Technology (Okmulgee) M-POWER (TANF)	Colombin	Fran	frances.colombin@okstate.edu	918-293-4917
OSU-OKC	Barnes	Angela	abarne@osuokc.edu	405-947-4421
OSU-OKC Center for Social Innovation	Moore	Ariel	ariel.moore@okstate.edu	405-889-8770
Pioneer Library System	Kirtley	Kaden	kkirtley@pioneerlibrarysystems.org	405-701-2600
Pivot	Guerrero	Frank	frank.guerrero@pivot.org	405-235-7537
Public Strategies	Charles	Steven	steven.charles@publicstrategies.com	405-848-2171
Reach Forward Foundation	Montgomery	Wyjuana	reachforwardfoundation@gmail.com	405-606-1503
Reaching Our City	Sanchez	Arodi	arodi@reachingourcity.org	405-440-9994
Redlands Community College - GOALS (TANF)	Lamar	Debra	debra.lamar@redlandscc.edu	405-422-6213
ReMerge of Oklahoma County	Morey	Jenna	jmorey@remergeok.org	405-208-7200
Rose State College EmPower	Williams	Keisha	kwilliams@rose.edu	405-736-0358
Seminole State College - MPOWER (TANF)	Fry	Jerry	j.fry@sscok.edu	405-382-9521
U.S Department of Veterans Affairs	Mussett	Lisa	lisa.mussett@odva.ok.gov	405-523-4020
Volunteers of America Oklahoma	Braddy	Sean	okcveteranservices@voaok.org	405-418-8522
Work Ready Oklahoma	Huff	Shenice	shenice.huff@workreadyoklahoma.com	405-418-3919

Work Ready Oklahoma	Green	Robert	robert.green@workreadyoklahoma.com	405-418-3875
YWCA	Chisom	Sherri	schisom@ywcaokc.org	405-948-1770
Italicized Name = COWIB Board Member				

Attachment VI – The Central WDA (Central Region) Lightcast Q1 2023 - Economy Overview

Central WDA (Central Region)

Central Oklahoma Workforce Innovation Board

CENTRAL OKLAHOMA WORKFORCE INNOVATION BOARD
A proud partner of the americanjobcenter network

3813 N. Santa Fe, Suite 135
Oklahoma City, Oklahoma 73118

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In-Demand Skills 31

Report Parameters

9 Counties

40017	Canadian County, OK
40027	Cleveland County, OK
40063	Hughes County, OK
40081	Lincoln County, OK
40083	Logan County, OK
40107	Okfuskee County, OK
40109	Oklahoma County, OK
40125	Pottawatomie County, OK
40133	Seminole County, OK

Class of Worker

QCEW Employees, Non-QCEW Employees, and Self-Employed

The information in this report pertains to the chosen geographical areas.

Economy Overview

1,479,383

Population (2022)

Population **grew by 69,176** over the last 5 years and is projected to **grow by 71,072** over the next 5 years.

744,409

Total Regional Employment

Jobs **grew by 25,174** over the last 5 years and are projected to **grow by 44,023** over the next 5 years.

$64.7K

Avg. Earnings Per Job (2022)

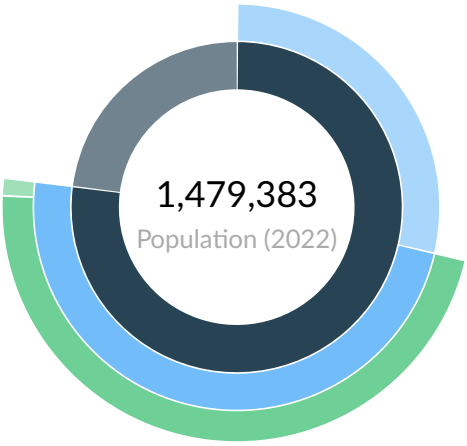
Regional average earnings per job are **$15.1K below** the national average earnings of $79.8K per job.

Takeaways

- As of 2022 the region's population **increased by 4.9%** since 2017, growing by 69,176. Population is expected to **increase by 4.8%** between 2022 and 2027, adding 71,072.
- From 2017 to 2022, jobs **increased by 3.5%** in Central WDA (Central Region) from 719,235 to **744,409**. This change **outpaced the national growth rate of 2.4% by 1.1%**. As the number of jobs increased, the **labor force participation rate increased from 61.8% to 62.8% between 2017 and 2022**.
- Concerning educational attainment, **20.2% of the selected regions' residents possess a Bachelor's Degree** (0.6% below the national average), and **8.3% hold an Associate's Degree** (0.5% below the national average).
- The top three industries in 2022 are Restaurants and Other Eating Places, Education and Hospitals (Local Government), and Federal Government, Civilian.

	Population (2022)	Labor Force (Dec 2022)	Jobs (2022)	Cost of Living	GRP	Imports	Exports
Region	1,479,383	715,030	744,409	91.8	$94.29B	$88.89B	$132.66B
Central WDA (Central Region)	1,479,383	715,030	744,409	91.8	$94.29B	$88.89B	$132.66B

Dec 2022 Labor Force Breakdown



	Population
16+ Civilian Non-Institutionalized Population	1,137,906
Not in Labor Force (16+)	422,876
Labor Force	715,030
Employed	697,090
Unemployed	17,940
Under 16, Military, and institutionalized Population	341,477

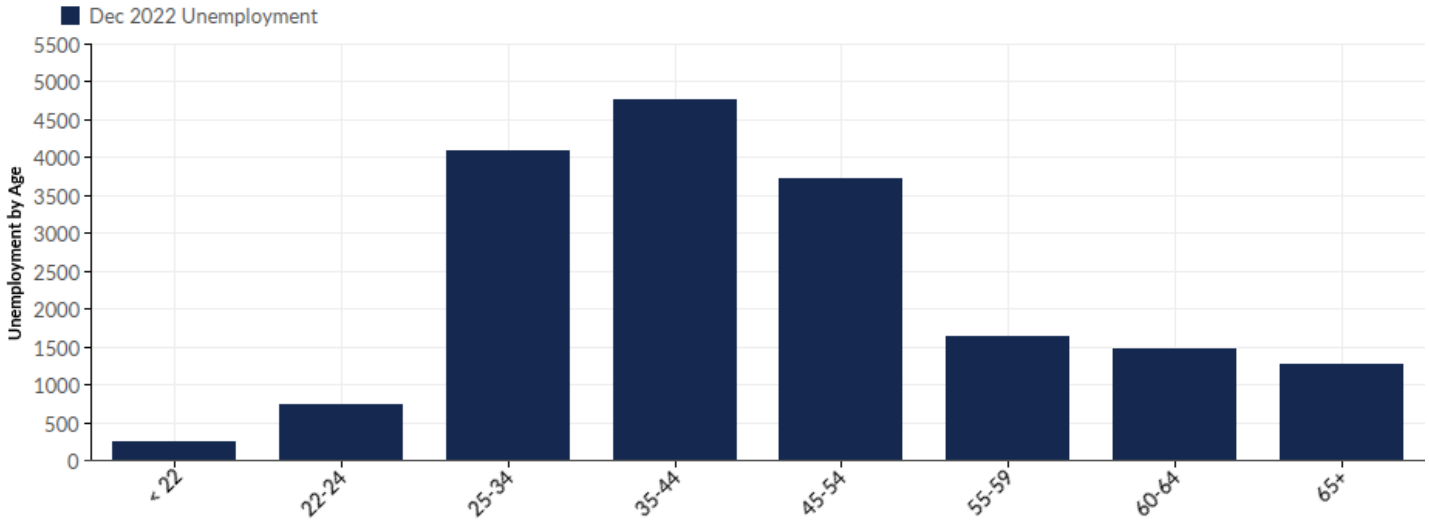
Educational Attainment

Concerning educational attainment, **20.2% of the selected regions' residents possess a Bachelor's Degree** (0.6% below the national average), and **8.3% hold an Associate's Degree** (0.5% below the national average).

	% of Population	Population
Less Than 9th Grade	4.1%	39,804
9th Grade to 12th Grade	6.6%	64,786
High School Diploma	26.5%	258,139
Some College	22.5%	219,745
Associate's Degree	8.3%	81,086
Bachelor's Degree	20.2%	197,138
Graduate Degree and Higher	11.7%	114,056

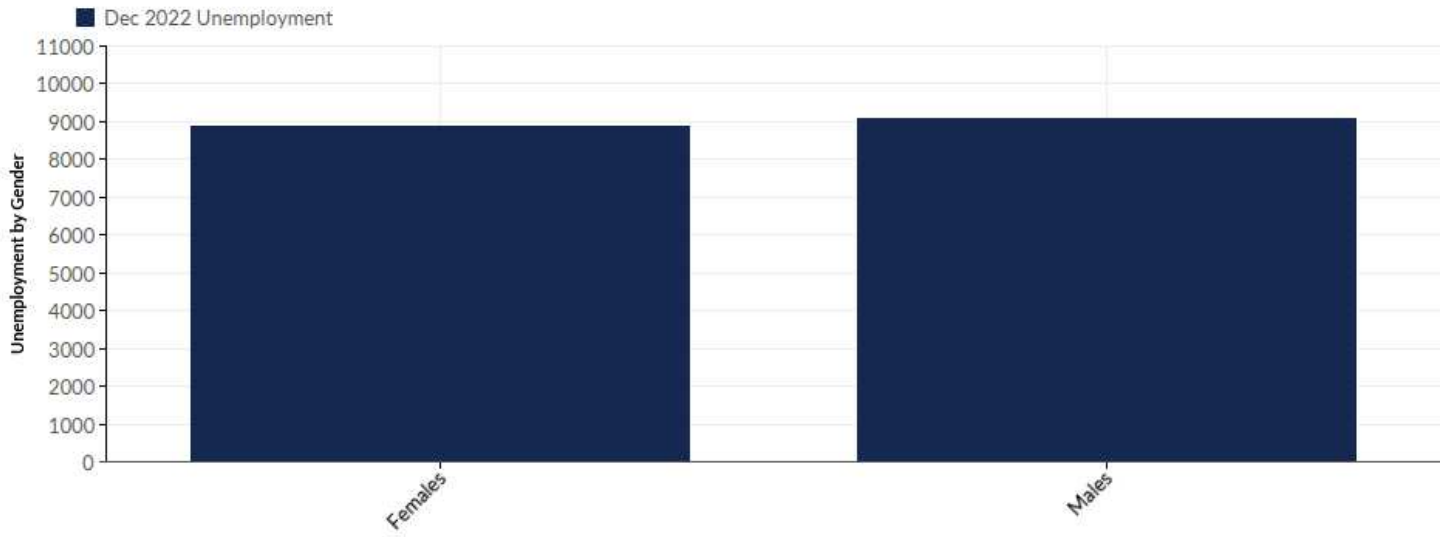
Unemployment by Demographics

Unemployment by Age



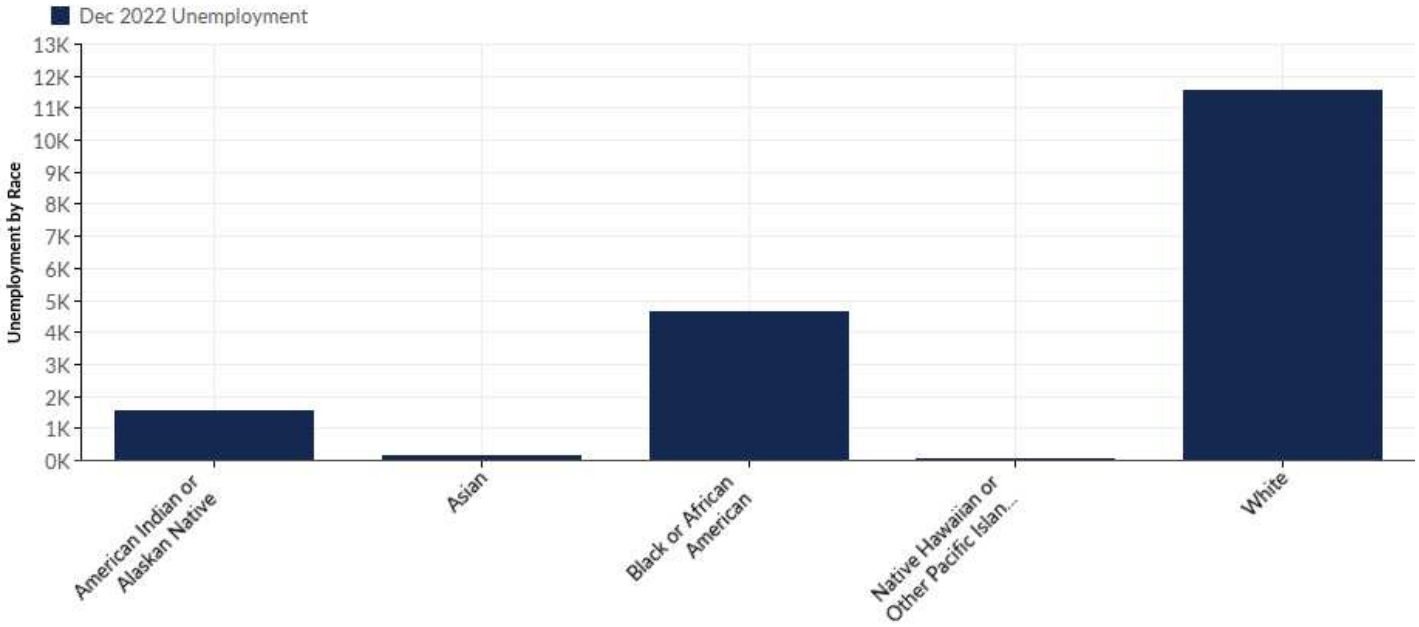
Age		Unemployment (Dec 2022)	% of Unemployed
< 22		235	1.31%
22-24		728	4.06%
25-34		4,097	22.84%
35-44		4,758	26.52%
45-54		3,729	20.79%
55-59		1,640	9.14%
60-64		1,480	8.25%
65+		1,272	7.09%
	Total	17,940	100.00%

Unemployment by Gender



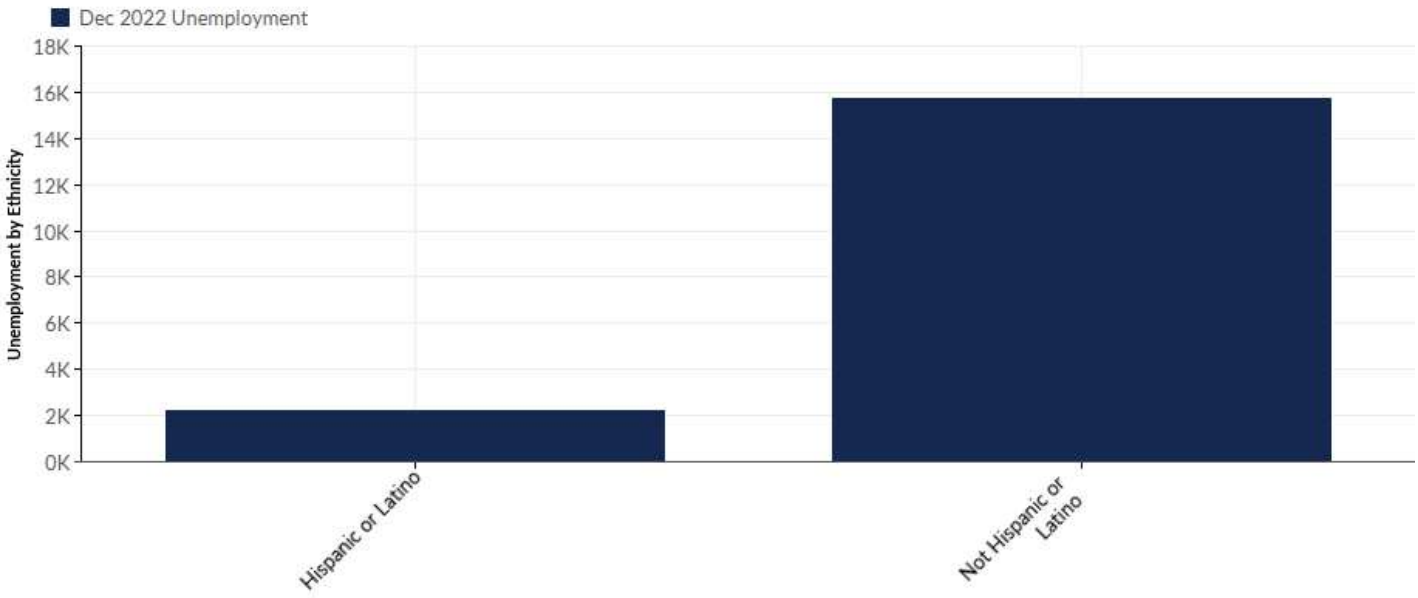
Gender		Unemployment (Dec 2022)	% of Unemployed
Females		8,857	49.37%
Males		9,083	50.63%
	Total	17,940	100.00%

Unemployment by Race



Race	Unemployment (Dec 2022)	% of Unemployed
American Indian or Alaskan Native	1,552	8.65%
Asian	154	0.86%
Black or African American	4,643	25.88%
Native Hawaiian or Other Pacific Islander	61	0.34%
White	11,529	64.26%
Total	17,940	100.00%

Unemployment by Ethnicity

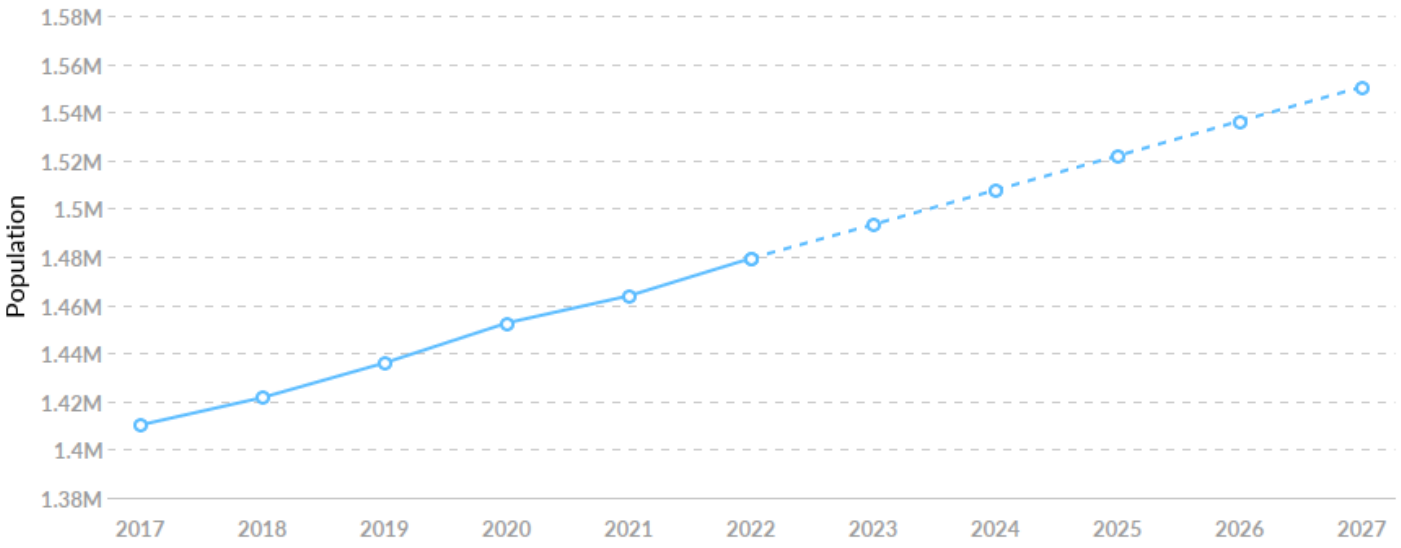


Ethnicity		Unemployment (Dec 2022)	% of Unemployed
Hispanic or Latino		2,199	12.26%
Not Hispanic or Latino		15,741	87.74%
	Total	17,940	100.00%

Historic & Projected Trends

Population Trends

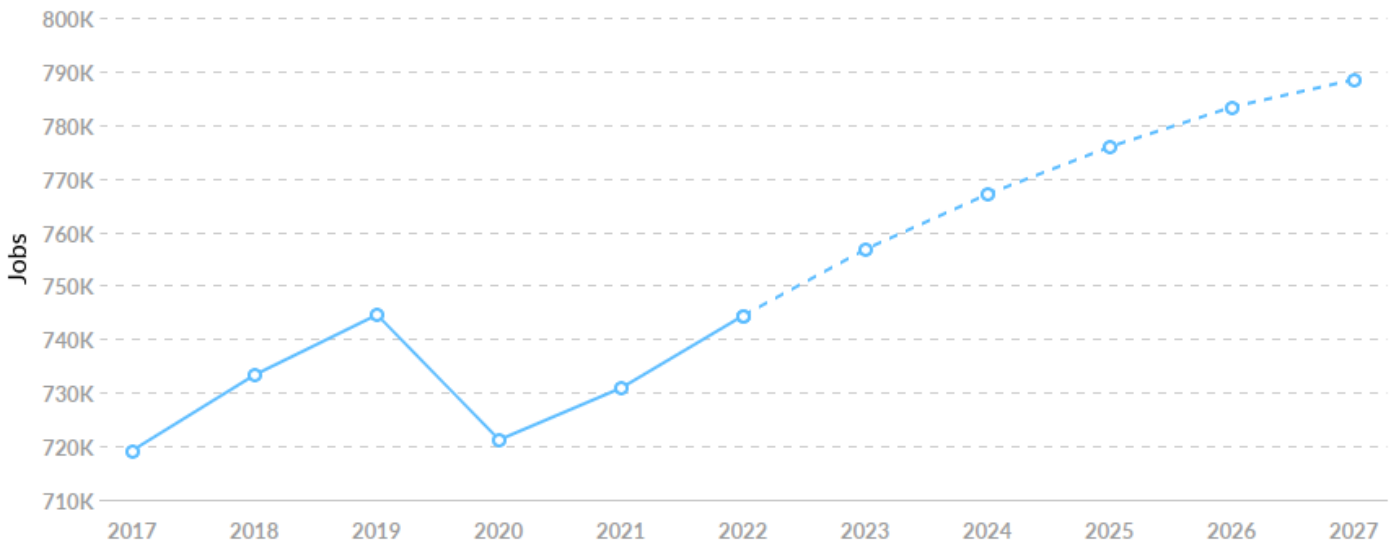
As of 2022 the region's population **increased by 4.9%** since 2017, growing by 69,176. Population is expected to **increase by 4.8%** between 2022 and 2027, adding 71,072.



Timeframe	Population
2017	1,410,207
2018	1,421,603
2019	1,435,978
2020	1,452,538
2021	1,463,811
2022	1,479,383
2023	1,493,396
2024	1,507,674
2025	1,521,890
2026	1,536,353
2027	1,550,456

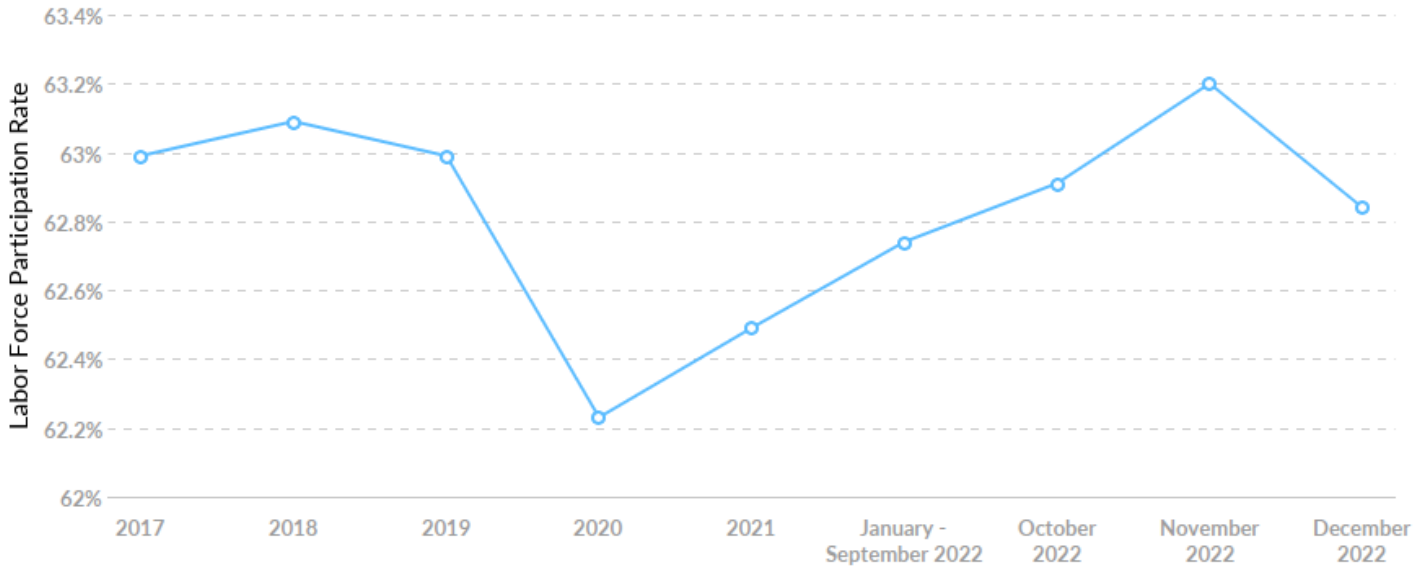
Job Trends

From 2017 to 2022, jobs **increased by 3.5%** in Central WDA (Central Region) from 719,235 to **744,409**. This change **outpaced the national growth rate of 2.4% by 1.1%.**



Timeframe	Jobs
2017	719,235
2018	733,325
2019	744,522
2020	721,179
2021	730,878
2022	744,409
2023	756,778
2024	767,071
2025	775,899
2026	783,329
2027	788,432

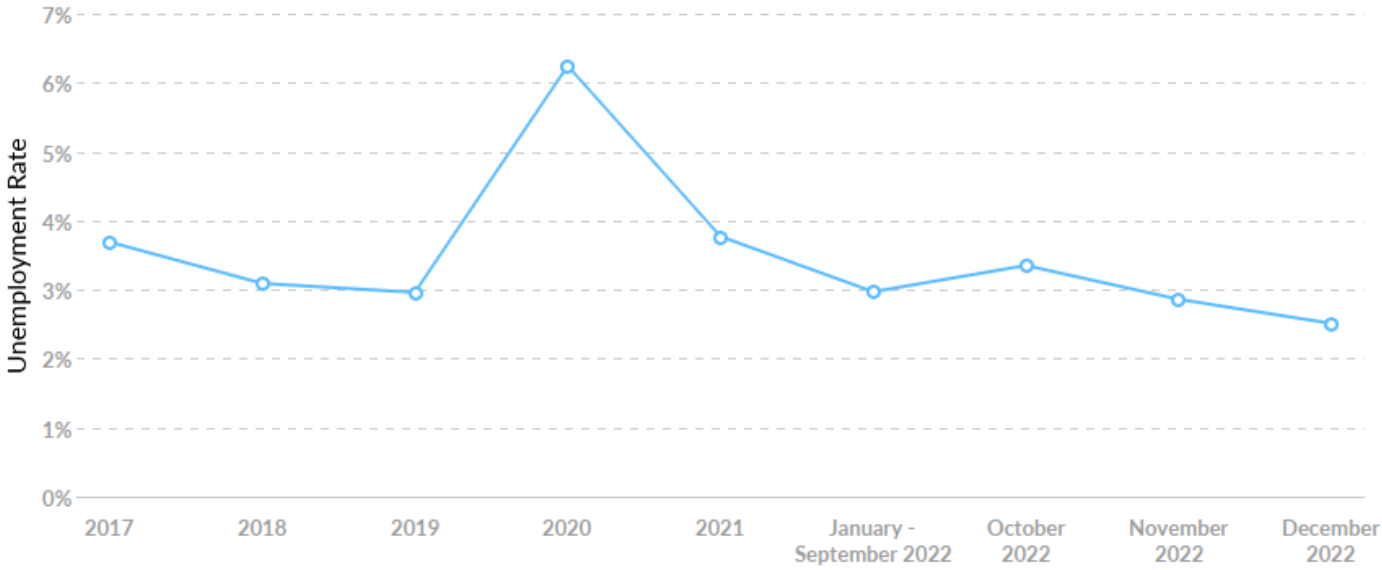
Labor Force Participation Rate Trends



Timeframe	Labor Force Participation Rate
2017	62.99%
2018	63.09%
2019	62.99%
2020	62.23%
2021	62.49%
January - September 2022	62.74%
October 2022	62.91%
November 2022	63.20%
December 2022	62.84%

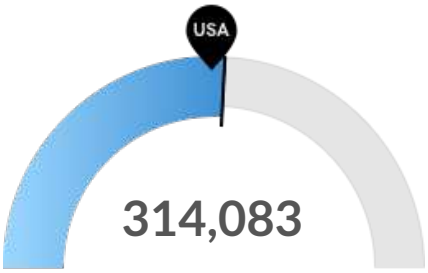
Unemployment Rate Trends

Your areas had a December 2022 unemployment rate of 2.51%, **decreasing from 3.69%** 5 years before.



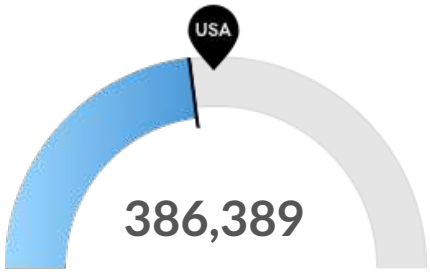
Timeframe	Unemployment Rate
2017	3.69%
2018	3.09%
2019	2.96%
2020	6.24%
2021	3.77%
January - September 2022	2.97%
October 2022	3.35%
November 2022	2.86%
December 2022	2.51%

Population Characteristics



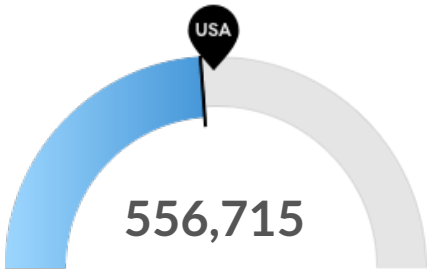
Millennials

Your area has 314,083 millennials (ages 25-39). The national average for an area this size is 299,006.



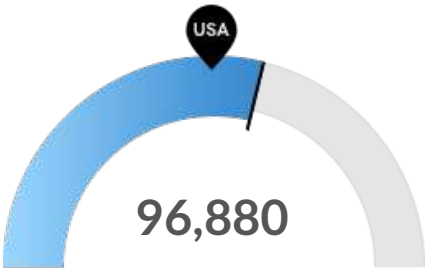
Retiring Soon

Retirement risk is low in your area. The national average for an area this size is 435,098 people 55 or older, while there are 386,389 here.



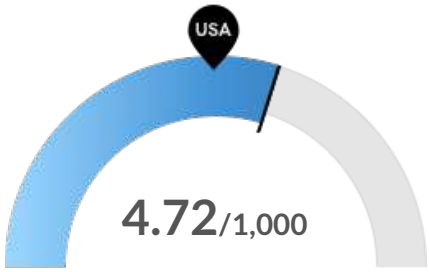
Racial Diversity

Racial diversity is about average in your area. The national average for an area this size is 595,681 racially diverse people, while there are 556,715 here.



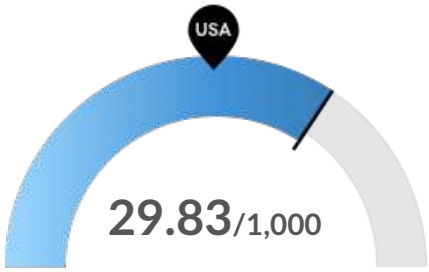
Veterans

Your area has 96,880 veterans. The national average for an area this size is 78,150.



Violent Crime

Your area has 4.72 violent crimes per 1,000 people. The national rate is 3.59 per 1,000 people.

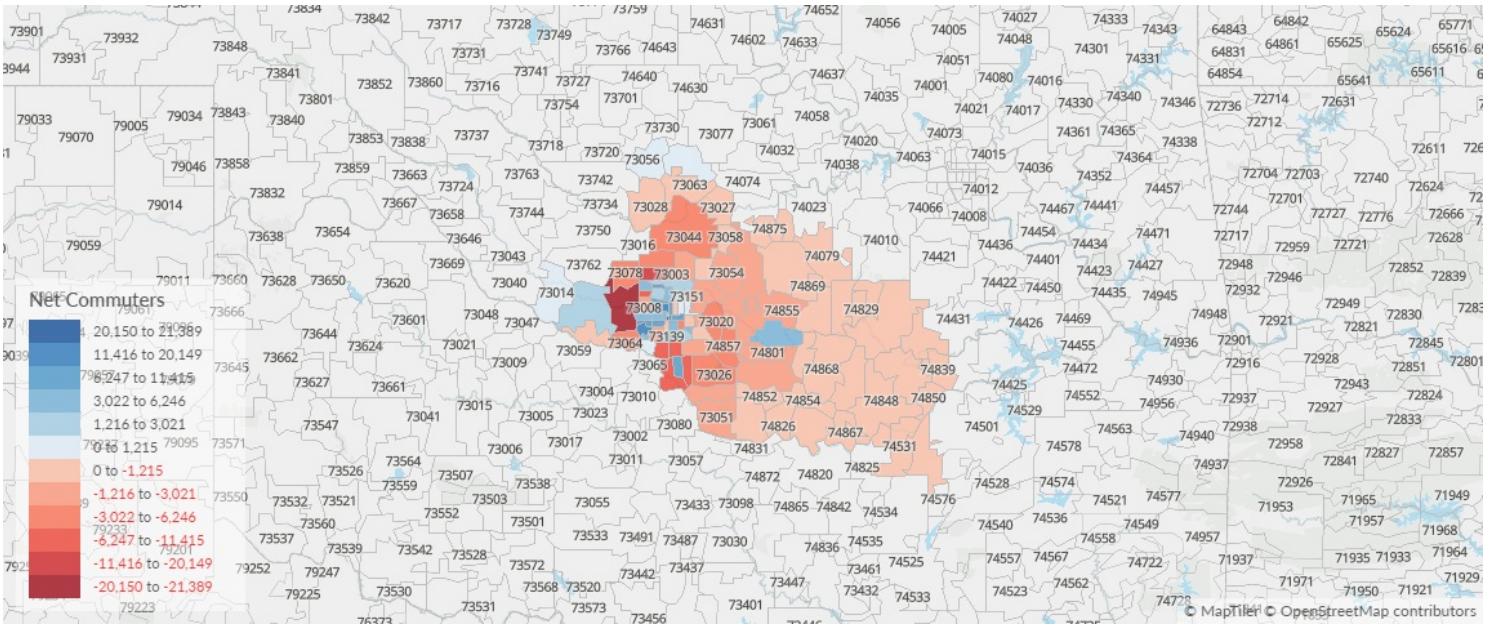


Property Crime

Your area has 29.83 property crimes per 1,000 people. The national rate is 17.8 per 1,000 people.

Place of Work vs Place of Residence

Understanding where talent in the region currently works compared to where talent lives can help you optimize site decisions. For example, the #1 ranked ZIP for employment ranks #3 for resident workers. The top ZIP for resident workers is 73099.



Where Talent Works

ZIP	Name	2022 Employment
73013	Edmond, OK (in Oklaho...	30,446
73102	Oklahoma City, OK (in O...	25,145
73034	Edmond, OK (in Oklaho...	24,803
73112	Oklahoma City, OK (in O...	24,493
73069	Norman, OK (in Clevela...	23,334

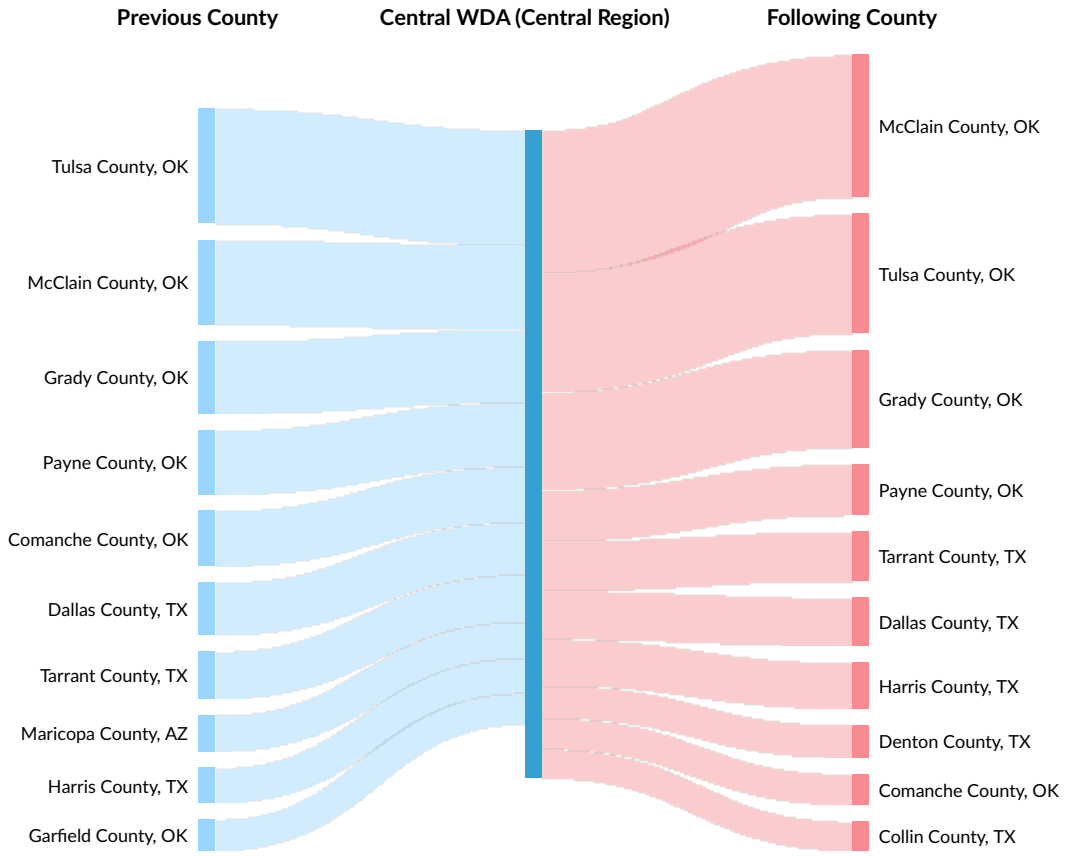
Where Talent Lives

ZIP	Name	2022 Workers
73099	Yukon, OK (in Canadian ...	38,703
73160	Oklahoma City, OK (in C...	30,122
73013	Edmond, OK (in Oklaho...	29,193
73034	Edmond, OK (in Oklaho...	26,431
73072	Norman, OK (in Clevela...	21,774

Inbound and Outbound Migration

The table below analyzes past and current residents of Central WDA (Central Region). The left column shows residents of other counties migrating to Central WDA (Central Region). The right column shows residents migrating from Central WDA (Central Region) to other counties.

As of 2020, 1,821 people have migrated from Tulsa County, OK to Central WDA (Central Region). In the same year, 2,258 people left Central WDA (Central Region) migrating to McClain County, OK. The total Net Migration for Central WDA (Central Region) in 2020 was 3,864.



Top Previous Counties	Migrations
Tulsa County, OK	1,821
McClain County, OK	1,342
Grady County, OK	1,152
Payne County, OK	1,018
Comanche County, OK	878

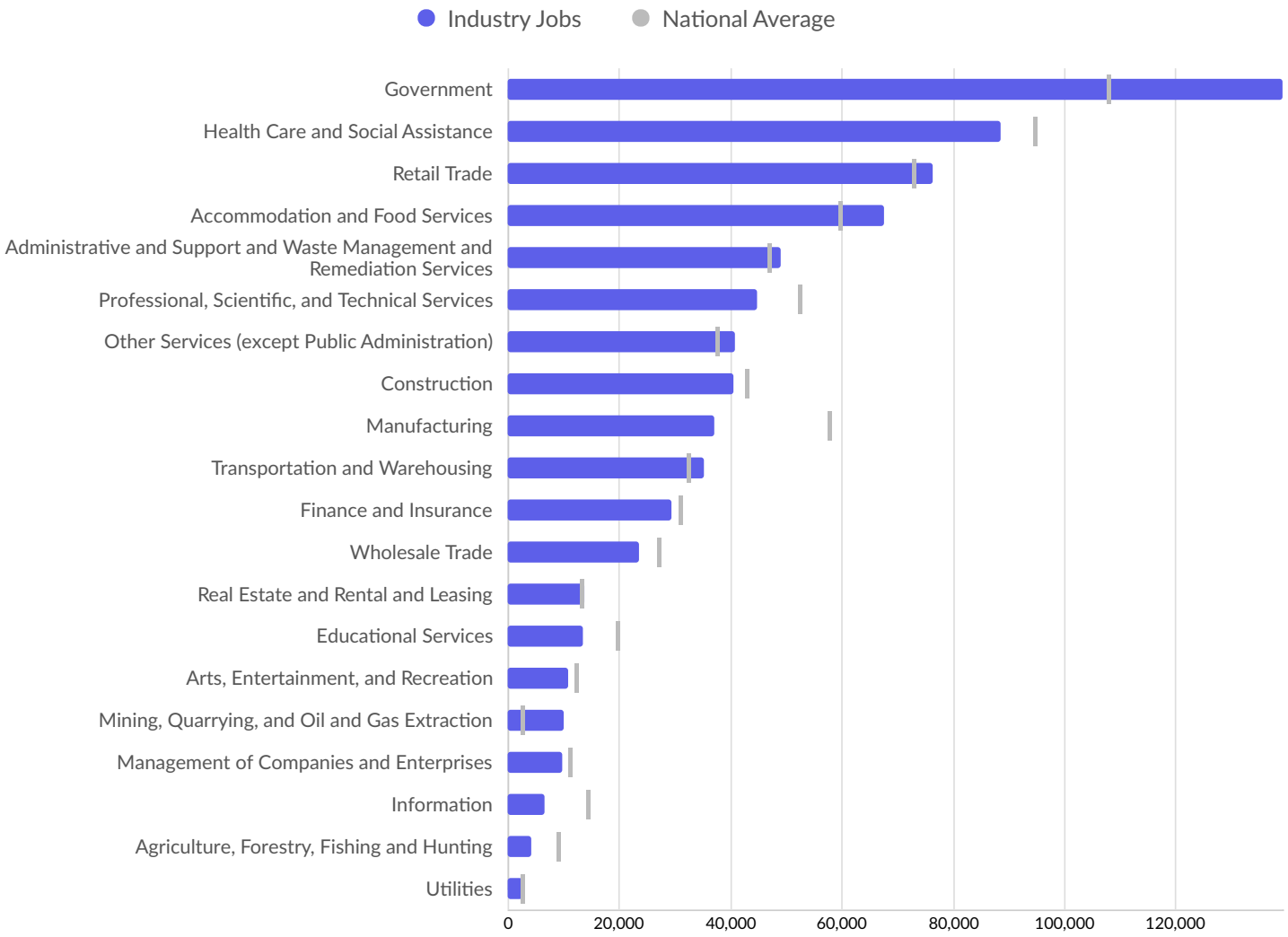
Top Previous Counties	Migrations
Dallas County, TX	832
Tarrant County, TX	747
Maricopa County, AZ	576
Harris County, TX	556
Garfield County, OK	495
Los Angeles County, CA	494
Pontotoc County, OK	483
Custer County, OK	472
Sedgwick County, KS	433
Denton County, TX	426

Top Following Counties	Migrations
McClain County, OK	2,258
Tulsa County, OK	1,895
Grady County, OK	1,553
Payne County, OK	808
Tarrant County, TX	788
Dallas County, TX	764
Harris County, TX	734
Denton County, TX	517
Comanche County, OK	489
Collin County, TX	464
Pontotoc County, OK	415
Maricopa County, AZ	413
Bexar County, TX	372
Kingfisher County, OK	353

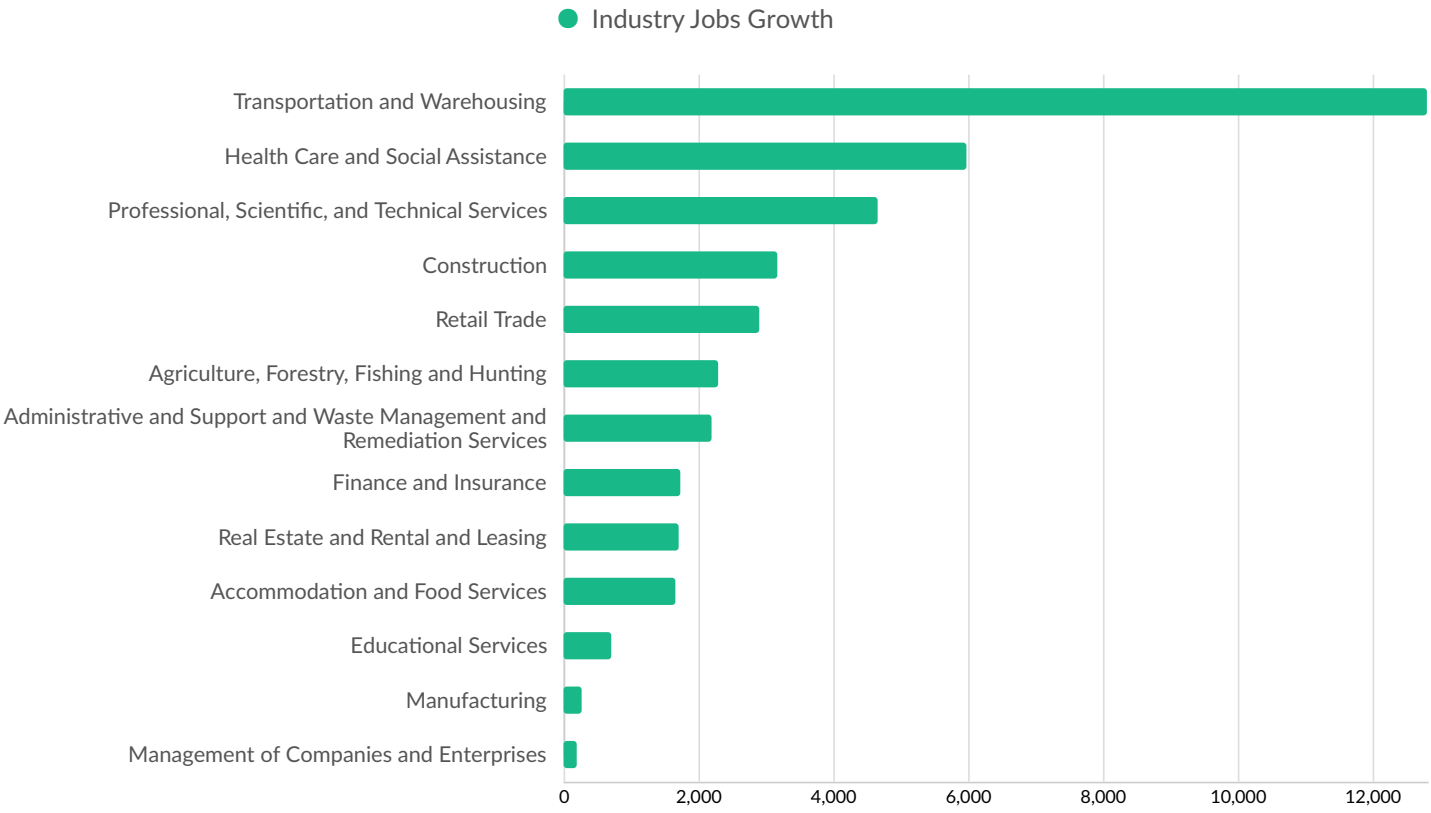
Top Following Counties	Migrations
Stephens County, OK	312

Industry Characteristics

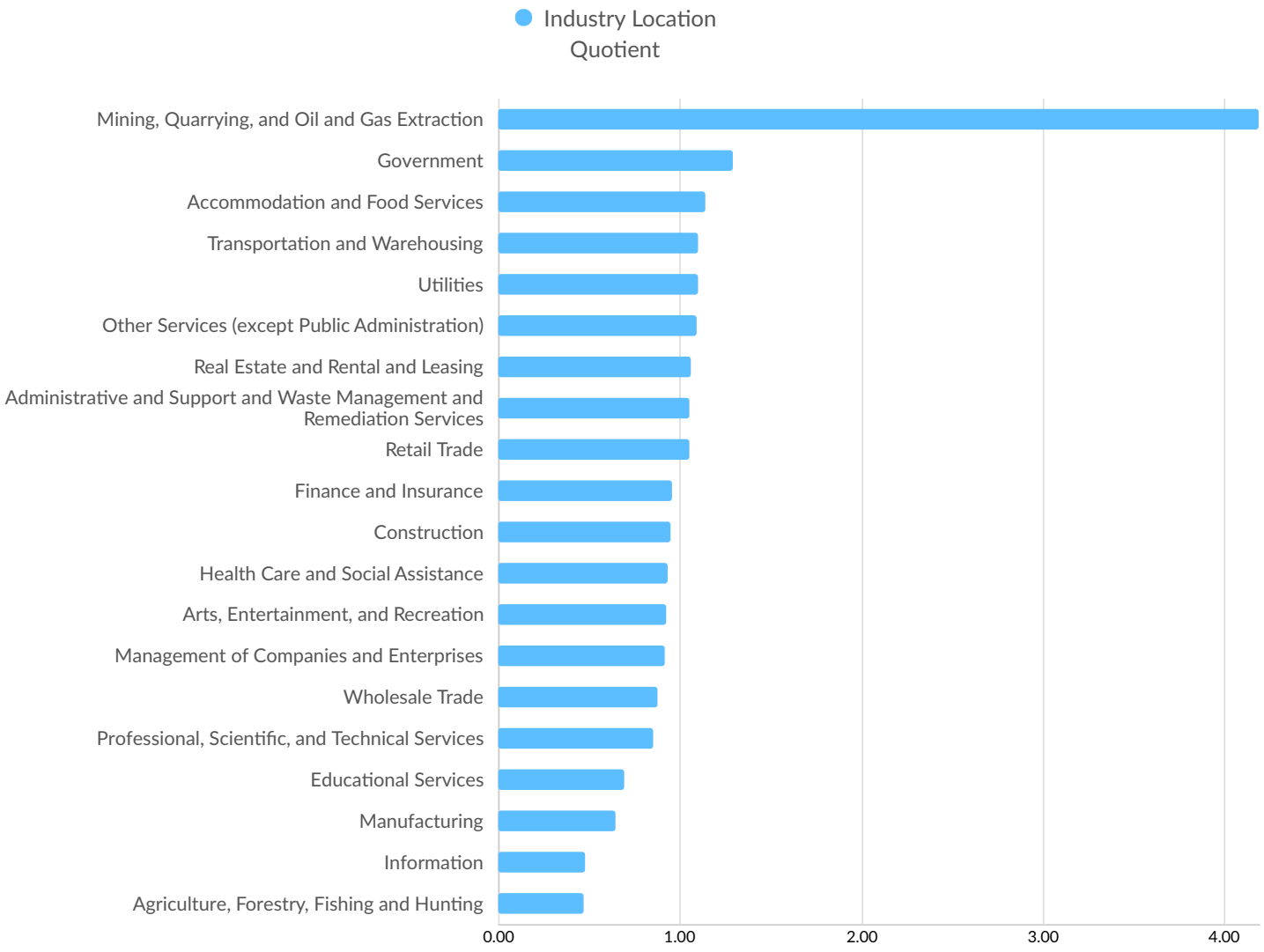
Largest Industries



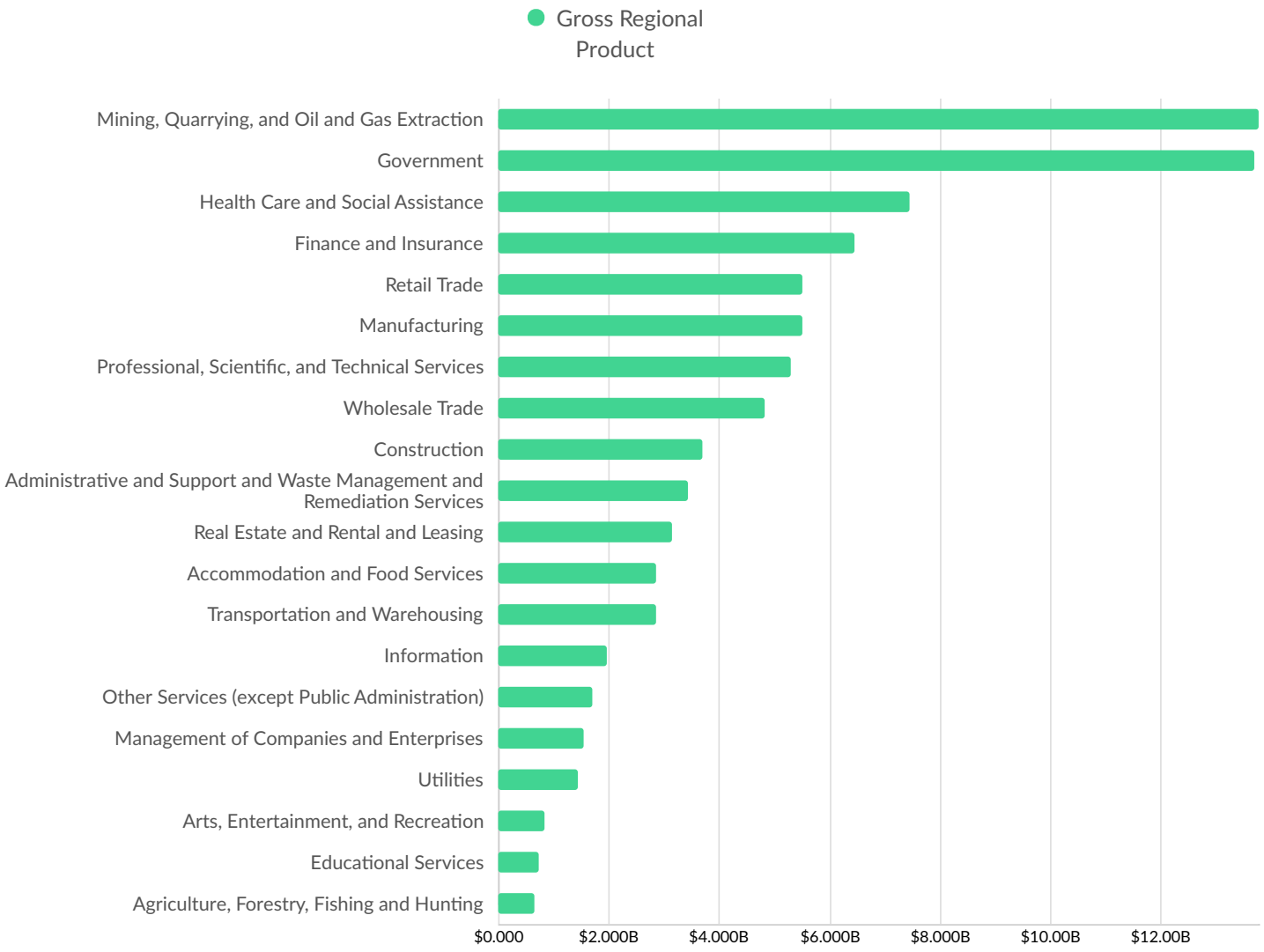
Top Growing Industries



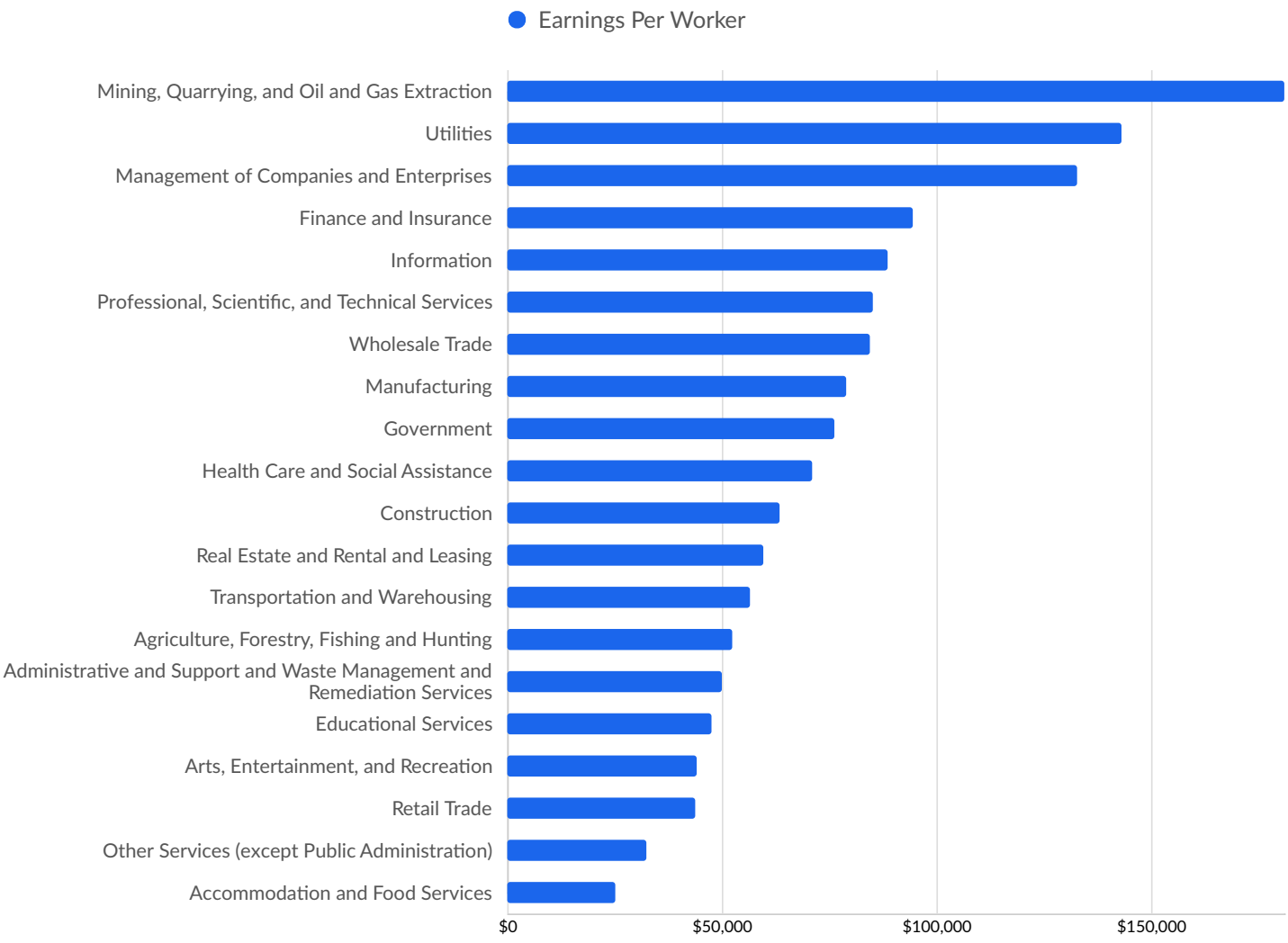
Top Industry Location Quotient



Top Industry GRP



Top Industry Earnings



Business Characteristics

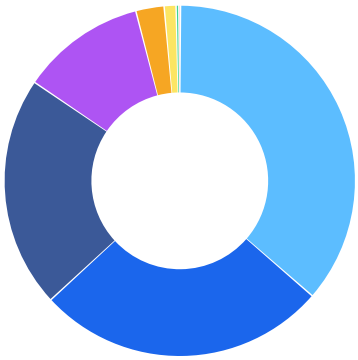
79,305 Companies Employ Your Workers

Online profiles for your workers mention 79,305 companies as employers, with the top 10 appearing below. In the last 12 months, 13,552 companies in your area posted job postings, with the top 10 appearing below.

Top Companies	Profiles
University of Oklahoma	6,397
United States Air Force	5,404
Integris Health	3,677
Paycom	3,405
Walmart	3,041
Boeing	2,412
University of Central Oklahoma	2,106
University Of Oklahoma Health ...	2,094
Oklahoma University Medical C...	2,010
Oklahoma City Public Schools	2,006

Top Companies Posting	Unique Postings
SSM Health Care	5,576
University of Oklahoma	4,452
Integris Health	3,213
Mercy Health	2,831
Oklahoma University Medical C...	2,043
Norman Regional Hospital	1,944
Boeing	1,541
Certified Source	1,473
PricewaterhouseCoopers	1,452
State of Oklahoma	1,360

Business Size

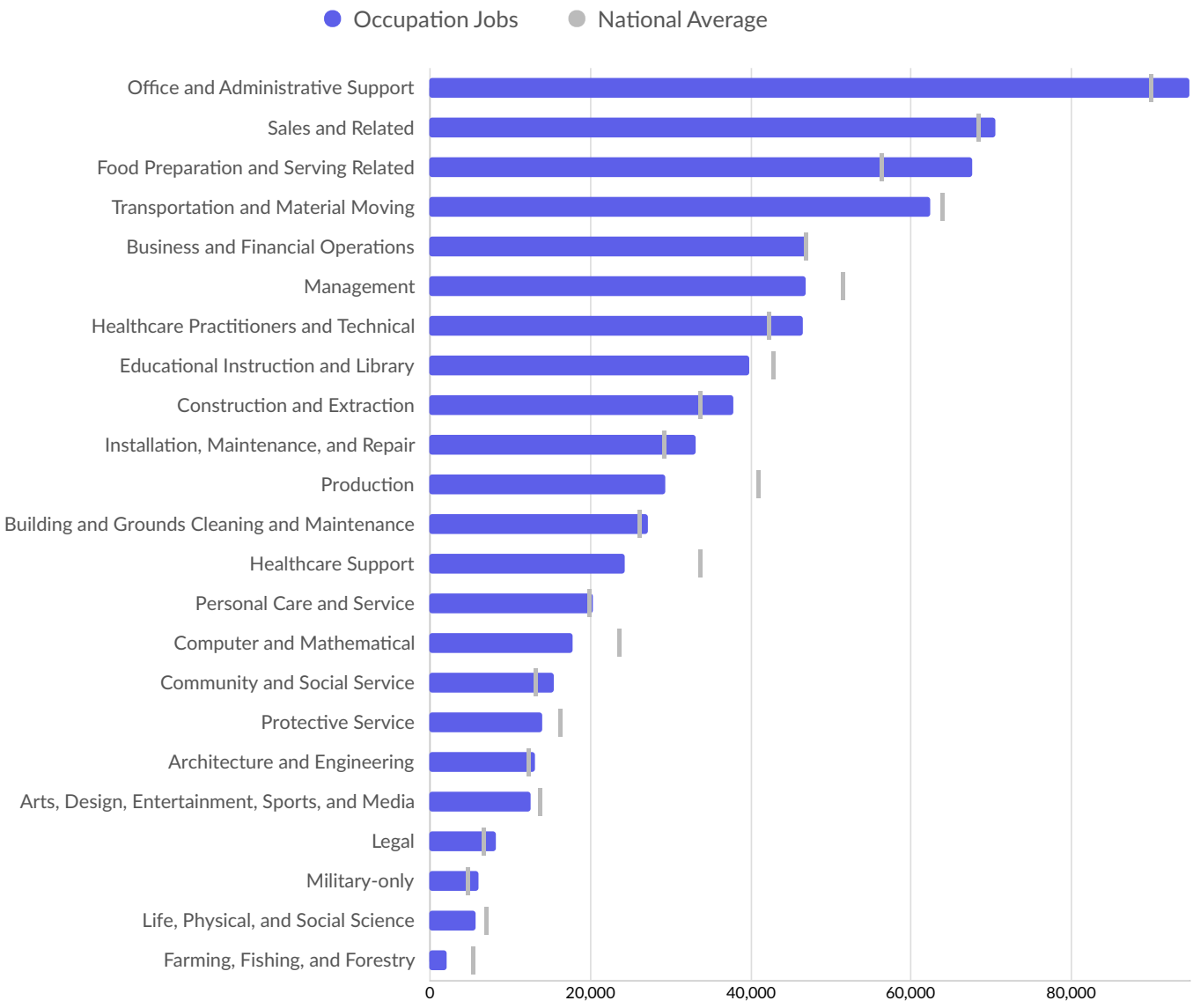


	Percentage	Business Count
1 to 4 employees	36.3%	20,229
5 to 9 employees	26.8%	14,914
10 to 19 employees	21.3%	11,890
20 to 49 employees	11.5%	6,396
50 to 99 employees	2.6%	1,451
100 to 249 employees	1.1%	609
250 to 499 employees	0.3%	141
500+ employees	0.2%	86

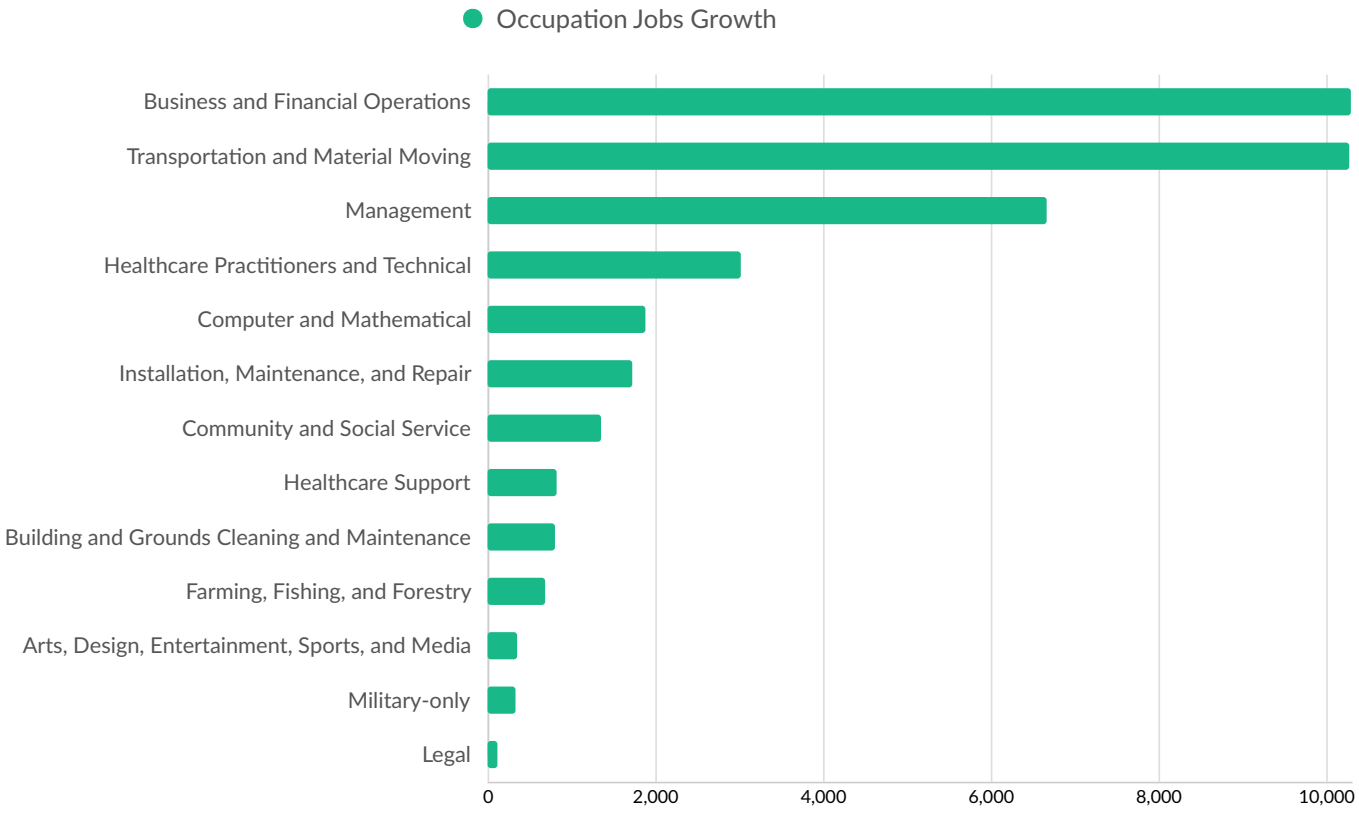
**Business Data by DatabaseUSA.com is third-party data provided by Lightcast to its customers as a convenience, and Lightcast does not endorse or warrant its accuracy or consistency with other published Lightcast data. In most cases, the Business Count will not match total companies with profiles on the summary tab.*

Workforce Characteristics

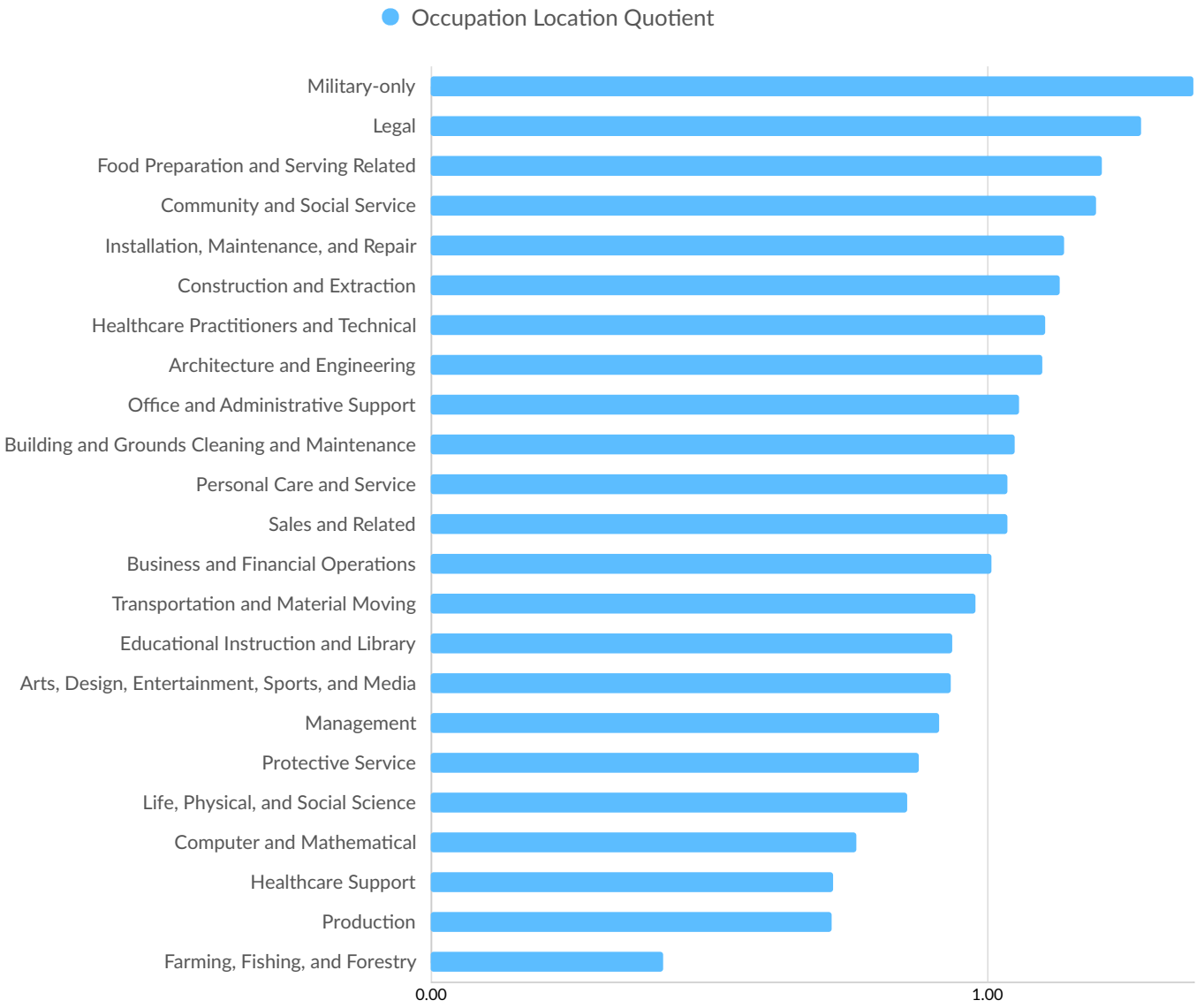
Largest Occupations



Top Growing Occupations

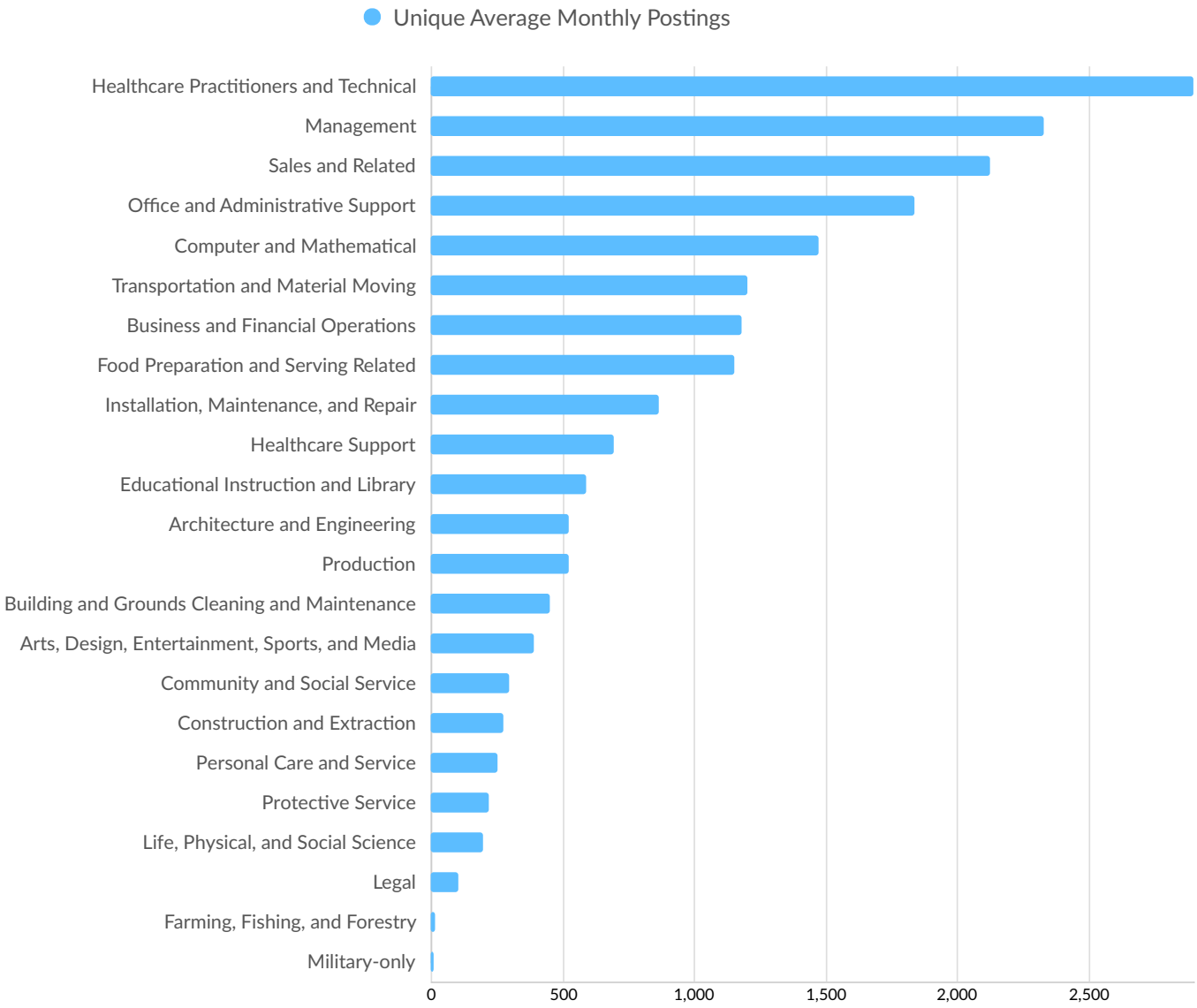


Top Occupation Location Quotient

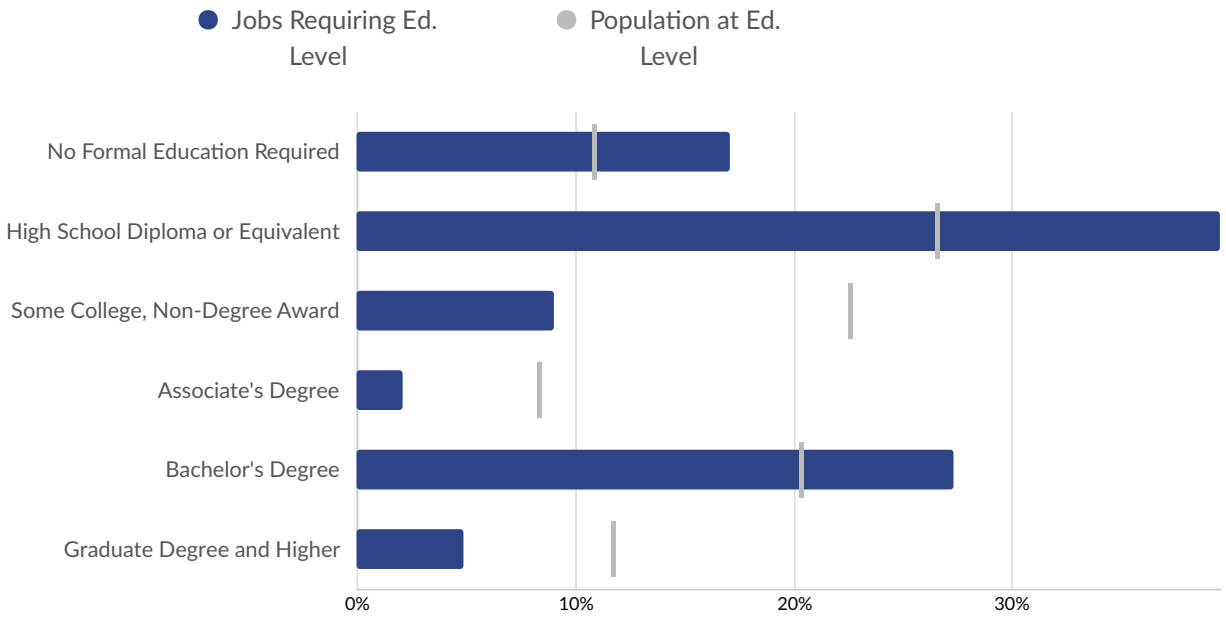


Top Occupation Earnings

Top Posted Occupations

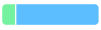


Underemployment



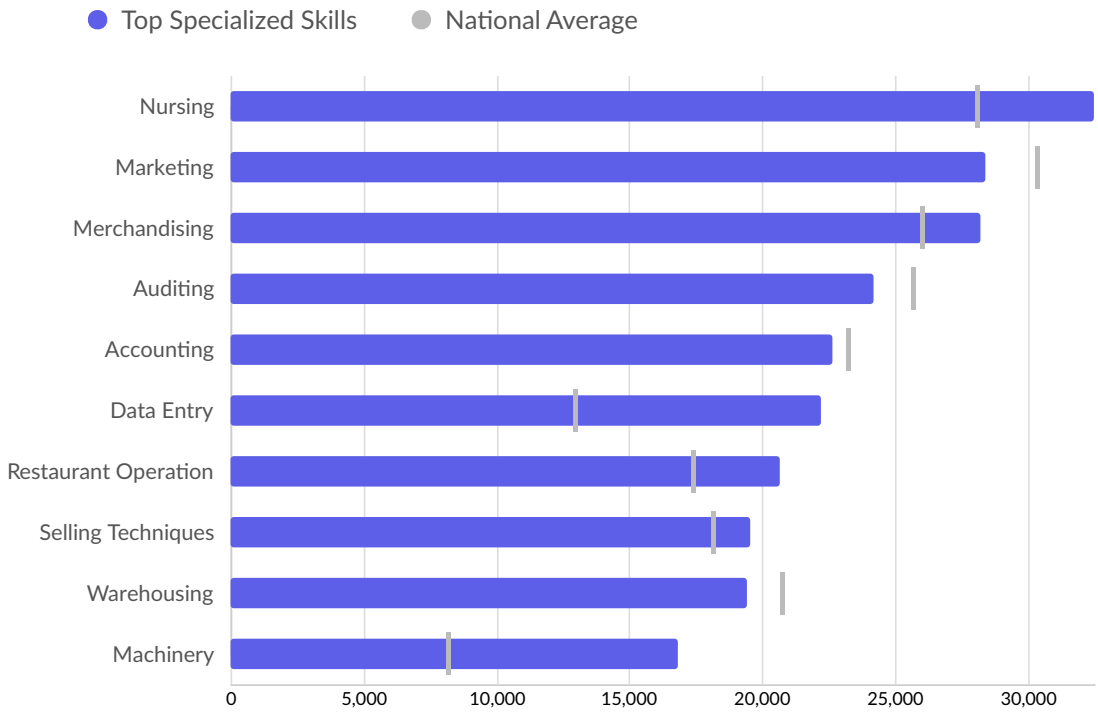
Educational Pipeline

In 2021, there were 23,382 graduates in Central WDA (Central Region). This pipeline has remained stable (neither grown nor shrunk) over the last 5 years. The highest share of these graduates come from "General Studies" (Associate's), "Registered Nursing/Registered Nurse" (Bachelor's), and "Psychology, General" (Bachelor's).

School	Total Graduates (2021)		Graduate Trend (2017 - 2021)
University of Oklahoma-Norman Campus	7,317		
University of Central Oklahoma	2,994		
Oklahoma City Community College	2,158		
University of Oklahoma-Health Sciences Center	1,092		
Rose State College	926		
Oklahoma State University-Oklahoma City	917		
Oklahoma City University	826		
Francis Tuttle Technology Center	786		
Southern Nazarene University	662		
Metro Technology Centers	555		

Certificate Associate's Bachelor's Master's or Higher

In-Demand Skills



Attachment V – Tinker Air Force Base Hiring Forecast FY23-24 (Amended Booklet)

TINKER AIR FORCE BASE

FISCAL YEAR 2023/2024

HIRING FORECAST

(Amended)

Prepared by the Tinker Air Force Base

Civilian Personnel Officer

As of January 2023

Tinker AFB FY 23/24 Hiring Forecast

This document forecasts external hires in Air Force activities at Tinker Air Force Base (AFB) in Fiscal Years (FY) 2023 and 2024 (1 October 2023 through 30 September 2024). It does not include hiring in other federal agencies located at Tinker AFB, i.e., Defense Information Systems Agency, Defense Logistics Agency, Department of the Navy or private sector contractors performing work at Tinker AFB. It also does not project employment for Non-Appropriated Fund Activity (NAF) facilities at Tinker AFB including, bowling centers, golf courses, community centers, and arts and crafts activities.

The forecast was developed in coordination with functional offices/organizations by evaluating past hiring and accounting for future attrition and workload requirements. It will be used to be proactive in identifying future vacancies (i.e., targeted recruitment and advanced advertisement of positions to provide management with an ongoing pool of candidates).

The forecast is available to the public and is distributed to local Chambers of Commerce, local colleges and universities, Central Oklahoma Workforce Investment Board, Career Technology Centers, the Oklahoma Board of Regents and local veteran's associations to make available to potential candidates and provide necessary training/education for positions projected to be filled.

The forecast will be evaluated every 6 months for accuracy and revalidated as needed. Next evaluation will be conducted in July 2023 and a complete new forecast will be published annually.

Equal Opportunity Employer

The United States Government does not discriminate in employment on the basis of race, color, religion, sex, national origin, political affiliation, sexual orientation, gender identity, marital status, disability and genetic information, age, membership in an employee organization, or other non-merit factor.

Employment of People with Disabilities

Tinker Air Force Base offers a variety of jobs for People with Disabilities through the Schedule A appointment authority. More information regarding the program may be obtained by contacting the Affirmative Employment Program Manager at 405-739-9103 or the Schedule A Program Manager at 405-739-2007.

Employment of Veterans

Tinker Air Force Base has a long and outstanding record of employing veterans. There are laws providing Veterans' preference and special appointing authorities for veterans. Federal service provides a means for veterans to continue their noble service to this country.

Hiring Programs

- **Intern Programs (Pathways)**
  - Palace Acquire Program (PAQ) offers participants the opportunity to attain a permanent full-time position during a two-four year formal training plan designed to let participants experience both personal and professional growth while dealing effectively and ethically with change, complexity and problem solving.
  - Copper Cap Program is designed to prepare college graduates for careers as Air Force Civilian Service Contract Specialists.
  - Recent Graduates Program affords developmental experiences in the Federal Government intended to promote possible careers in the civil service to individuals who have recently graduated (within 2 years) from qualifying educational institutions or programs.
  - Student Internship Program provides students currently enrolled in high school, college, trade school or other qualifying educational institutions with paid opportunities to work in civil service agencies and explore Federal careers.

FY23/24 Forecast

- **Direct Hire Authority(DHA)**
  - DHA is an appointing authority that the Office of Personnel Management (OPM) can give to Federal agencies for filling vacancies when a critical hiring need or severe shortage of candidates exists.
- **Forecast includes both white collar (GS) and blue collar (WG) positions.**
  - Some occupations projected may have either a large number of vacancies or are historically hard to fill.
- **Journeyman vs. Developmental positions**
  - Journeyman (JNY) are those positions where an individual would need little to no assistance in carrying out the work being performed.
  - Developmental (DEV) are those positions where individuals need additional training and/or assistance to able to carry out the work being performed.
- **Maintenance Helper positions**
  - Positions are occasionally announced to fill positions where there is a lack of available required skill sets
- **Qualifications required**
  - Positions typically require 1 year or more of specialized (related) experience equivalent to the next lower level or higher of the position being filled
  - For white collar administrative and professional positions, a Bachelor's degree or higher will meet the experience requirements for most Developmental (entry-level) positions
  - In addition, certain occupations have specific education requirements

FY23/24	Qtr 1		Qtr 2		Qtr 3		Qtr 4		Qtr 5		Qtr 6		Qtr 7		Qtr 8		
High Demand Occupation (HDO) Series	DEV	JNY	DEV	JNY	DEV	JNY	DEV	JNY	DEV	JNY	DEV	JNY	DEV	JNY	DEV	JNY	Grand Total
GS-0081 FIREFIGHTER	4	0	3	0	3	0	6	0	4	0	3	0	3	0	6	0	32
GS-0083 POLICE OFFICER	5	0	18	0	18	0	33	0	5	0	18	0	18	0	33	0	148
GS-0301 MISCELLANEOUS ADMIN	3	7	7	8	2	12	5	12	5	7	7	8	3	12	5	13	116
GS-0303 ADMINSTRATIVE ASSISTANTS	15	0	14	0	13	0	16	0	15	0	14	0	13	0	16	0	116
GS-0343 PROGRAM/MGMT ANALYST	6	12	15	12	8	13	9	15	6	14	15	13	8	14	9	15	184
GS-0344 MANAGEMENT ASSISTANT	1	0	1	0	7	0	7	0	2	0	1	0	6	0	7	0	32
GS-0346 LOGISTICS MANAGEMENT	15	15	15	20	10	12	7	14	15	15	15	20	10	12	7	14	216
GS-0399 STUDENT TRAINEE ANALYST	12	0	6	0	8	0	18	0	12	0	6	0	8	0	18	0	88
GS-05XX FINANCIAL	8	8	6	10	6	7	11	4	8	8	6	10	6	7	11	4	120
GS-06XX MEDICAL	1	1	0	0	1	1	0	0	1	1	0	0	1	1	1	1	10
GS-08XX ENGINEERING	13	12	7	15	18	11	76	17	13	12	7	15	18	11	76	17	338
GS-0899 STUDENT TRAINEE ENGINEER	9	0	8	0	8	0	8	0	9	0	8	0	8	0	8	0	66
GS-1101 PROGRAM MANAGER	8	4	5	8	12	8	3	9	8	5	7	7	12	8	3	9	116
GS-1102 CONTRACT SPECIALIST	10	5	9	4	10	7	9	12	10	5	9	4	10	7	9	12	132
GS-1152 PRODUCTION CONTROLLER	13	3	10	4	10	4	13	3	13	3	10	4	10	4	13	3	120
GS-1550 COMPUTER SCIENTIST	3	5	2	5	3	5	2	5	3	5	2	5	3	5	2	6	61
GS-1599 COMPUTER SCIENTIST trainee	2	0	2	0	2	0	3	0	2	0	2	0	2	0	3	0	18
GS-1670 EQUIPMENT SPECIALIST	4	0	3	12	1	7	1	7	4	0	3	12	1	7	1	7	70
GS-1702 EDUCATION AND TRAINING	3	0	4	0	3	1	3	0	3	1	4	0	3	1	3	0	29
GS-2010 INVENTORY MANAGEMENT SPECIALIST	10	1	19	0	11	1	16	2	10	1	19	0	11	1	16	2	120
GS-2210 IT PROGRAM MANAGER	1	31	1	26	4	8	2	26	5	31	1	26	1	7	2	26	198
WG-2892 AIRCRAFT ELECTRICIAN	2	8	2	1	2	5	2	4	2	8	3	1	2	5	5	4	56
WG-3414 MACHINIST	3	2	5	2	3	4	1	7	3	2	5	2	3	4	1	7	54
WG-3705 NONDESTRUCTIVE TESTER	8	1	9	1	1	1	5	0	2	2	9	2	3	1	3	0	48
WG-3806 SHEET METAL MECHANIC	35	9	35	9	35	9	35	8	35	9	35	9	35	9	35	8	350
WG-5378 POWERED SUPPORT SYSTEMS MECHANIC	1	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	30
WG-6904 TOOLS AND PARTS ATTENDANT	4	0	3	0	4	0	3	0	4	0	3	0	4	0	3	0	28
WG-6910 MATERIALS EXPEDITER	4	0	3	0	4	0	3	0	4	0	3	0	4	0	3	0	28
WG-8255 PNEUDRAULIC SYSTEMS MECHANIC	3	3	2	2	3	3	2	2	3	3	2	2	3	3	2	2	40
WG-8602 AIRCRAFT ENGINE WORKER/MECHANIC	11	7	11	7	11	7	11	7	11	7	11	7	11	7	11	7	144
WG-8852 AIRCRAFT MECHANIC	19	19	19	18	19	17	18	21	19	19	19	18	19	17	18	21	300
Total	236	155	245	166	242	145	330	177	238	160	249	167	241	145	332	180	3408

DEV – Developmental
JNY – Journeyman
5XX, 6XX, 8XX – covers multiple positions in Financial, Medical, and Engineering fields, respectively

- **Firefighters**
  - A total of 32 Firefighter positions during FY23/FY24
  - 32 of these positions are projected to be filled at the entry level (GS-05).
  - GS-05 requires one year at the next lower grade level or a Bachelor's degree, or higher
  - At this time we do not anticipate any positions being filled at the journeyman level (GS-11/12)
  - Must be able to pass required medical requirements

- **Police Officers**
  - A total of 148 Police Officers positions during FY23/FY24
  - 148 of these positions are projected to be filled at the entry level (GS-05).
  - GS-05 requires one year at the next lower grade level or a Bachelor's degree, or higher
  - At this time we do not anticipate any positions being filled at the journeyman level (GS-11/12)
  - Must be able to pass required medical requirements

- **Miscellaneous Admin**
  - A total of 116 of the above positions during FY23/FY24
  - 37 of these positions are projected to be filled at the entry level (GS-05/07/09) which require either one year of experience performing similar duties at the next lower level or a Bachelor's degree, or higher (business degrees preferred)
  - 79 positions are projected to be filled at the journeyman level (GS-11/12) which require one year of experience performing similar duties at the next lower level

- **Administrative Assistant**
  - A total of 116 of the above positions during FY23/FY24
  - 116 of these positions are projected to be filled at the entry level (GS-05/07/09) which require either one year of experience performing similar duties at the next lower level or a Bachelor's degree, or higher (business degrees preferred)
  - At this time we do not anticipate any positions being filled at the journeyman level (GS-11/12)

- **Program Management/Analyst**
  - A total of 184 of the above positions during FY23/FY24
  - 76 of these positions are projected to be filled at the entry level (GS-05/07/09) which require either one year of experience performing similar duties at the next lower level or a Bachelor's degree, or higher (business degrees preferred)
  - 108 positions are projected to be filled at the journeyman level (GS-11/12) which require one year of experience performing similar duties at the next lower level

- **Management Assistant**
  - A total of 32 of the above positions during FY23/FY24
  - All of these positions are projected to be filled at the entry level (GS-07/09) which require either one year of experience performing similar duties at the next lower level or a Bachelor's degree, or higher (business degrees preferred)
  - At this time we do not anticipate any positions being filled at the journeyman level (GS-11/12)

- **Logistics Management**
  - A total of 216 of the above positions during FY23/FY24
  - 94 of these positions are projected to be filled at the entry level (GS-07/09) which require either one year of experience performing similar duties at the next lower level or a Bachelor's degree, or higher (business degrees preferred)
  - 122 positions are projected to be filled at the journeyman level (GS-11/12) which require one year of experience performing similar duties at the next lower level

- **Miscellaneous Student Trainees**
  - A total of 88 Miscellaneous Office Student Trainee positions (GS-03/04/05/06/07/09) projected during FY23/FY24
  - All of these positions are projected to be filled at the entry level (GS-03/04/05/06/07/09). These positions may be filled by college students who work in these positions on a part time basis.

- **Finance Positions**
  - A total of 120 Finance positions during FY23/FY24
  - 62 of these positions are projected to be filled at the entry level (GS-05/07/09) which require either one year of experience performing similar duties at the next lower level or a Bachelor's degree, or higher (finance degrees preferred)
  - 58 of these positions are projected to be filled at the journeyman level (GS-11/12) which require one year of experience performing similar duties at the next lower level
  - Accountant positions require a degree in Accounting

- **Medical Positions**
  - A total of 10 Medical positions over FY23/FY24 to include Dental Assistant, Dietitian Environmental Health, Nurses, Medical Officers/Physicians, Medical Records Technicians, Pharmacists, Pharmacy Technicians, Hygienists at both entry and journeyman level. Additional information on qualifications on technical and medical support positions may be found on the OPM website at **http://www.opm.gov/policy-data-oversight/classification-qualifications/general-schedule-qualification-standards/#url=Group-Standards**

- **Engineers (to include General, Mechanical, Materials, Aerospace, Environmental, Electrical, Industrial and Student Trainees)**
  - A total of 338 Engineering positions during FY23/FY24; of these positions, the most challenging to fill have predominately been the Electronics, Aerospace and Materials Engineers
  - 228 of these positions are projected to be filled at the entry level (GS-05/07/09) which require a Bachelor's degree, or higher, from a school of engineering with at least one curriculum accredited by the Accreditation Board for Engineering and Technology (ABET). Curriculum requirements may be found on the Office of Personnel Management (OPM) website at **http://www.opm.gov/qualifications/standards/IORs/GS0800/0800.htm**

  -110 positions are projected to be filled at the journeyman level (GS-11/12) which require one year of experience performing similar duties at the next lower level and a Bachelor's degree, or higher, from an ABET school of engineering. Curriculum requirement may be found on the OPM website at **http://www.opm.gov/qualifications/standards/IORs/GS0800/0800.htm**.

- **Student Trainee Engineers (to include General, Mechanical, Materials, Aerospace, Environmental, Electrical, Industrial and Student Trainees)**
  - A total of 66 Student Engineering positions during FY23/FY24; of these positions, the most challenging to fill have predominately been the Electronics, Aerospace and Materials Engineers

- **Program Manager**
  - A total of 116 of the above positions during FY23/FY24
  - 58 of these positions are projected to be filled at the entry level (GS-05/07) which require either one year of experience performing similar duties at the next lower level, a Bachelor's degree, or higher
  - 58 positions are projected to be filled at the journeyman level (GS-11/12) which require one year of experience performing similar duties at the next lower level

- **Contracting Specialist Positions**
  - A total of 132 Contracting Specialist positions over FY23/FY24
  - 76 of these positions are projected to be filled at the entry level (GS-05/07) which require either one year of experience performing similar duties at the next lower level, a Bachelor's degree, or higher
  - 56 positions are projected to be filled at the journeyman level (GS-11/12) which requires one year of experience performing similar duties at the next lower level
  - Contracting Specialist must possess at least 24 semester hours of Business

- **Production Controller**
  - A total of 120 of the above positions during FY23/FY24
  - 92 positions are projected to be filled at the entry level (GS-05/07) which require either one year of experience performing similar duties at the next lower level, a Bachelor's degree, or higher
  - 28 positions being filled at the journeyman level (GS-11/12)

- **Computer Scientist**
  - A total of 61 Computer Scientist positions projected to be filled during FY23/FY24
  - 20 of these positions are projected to be filled at the entry level (GS-05/07/09) which require a Bachelor's degree, or higher, in computer science or 30 semester hours in a combination of statistics and mathematics that include differential and integral calculus.
  - 41 positions are projected to be filled at the journeyman level (GS-11/12) which require one year of experience performing similar duties at the next lower level

- **Computer Scientist trainee**
  - A total of 18 Computer Scientist trainee positions projected to be filled during FY23/FY24
  - All of these positions are projected to be filled at the entry level (GS-05/07/09) which require a Bachelor's degree, or higher, in computer science or 30 semester hours in a combination of statistics and mathematics that include differential and integral calculus.

- **Equipment Specialist**
  - A total of 70 of the above positions during FY22/FY23
  - 18 of these positions are projected to be filled at the entry level (GS-07/09) which require either one year of experience performing similar duties at the next lower level or a Bachelor's degree, or higher (business degrees preferred)
  - 52 positions are projected to be filled at the journeyman level (GS-11/12) which require one year of experience performing similar duties at the next lower level

- **Education and Training Technician**
  - A total of 29 of the above positions during FY23/FY24
  - All 26 of these positions are projected to be filled at the entry level (GS-05/07/09) which require either one year of experience performing similar duties at the next lower level or a Bachelor's degree
  - 3 positions are projected to be filled at the journeyman level (GS-09/11

- **Inventory Management Specialist**
  - A total of 120 of the above positions during FY23/FY24
  - 112 of these positions are projected to be filled at the entry level (GS-05/07/09) which require either one year of experience performing similar duties at the next lower level or a Bachelor's degree, or higher (business degrees preferred)
  - 8 positions are projected to be filled at the journeyman level (GS-11/12) which require one year of experience performing similar duties at the next lower level

- **IT Program Manager**
  - A total of 198 IT Program Manager's positions projected to be filled during FY23/FY24.
  - 17 of these positions are projected to be filled at the entry level (GS-03/04/05/07/09) which require a Bachelor's degree, or higher, in
  - 181of these positions are projected to be filled at the journeyman level (GS-11/12) which require one year of experience performing similar duties at the next lower level and a Bachelor's degree or higher, in Computer science, engineering, information science, information systems management, mathematics, operations research, statistics, or technology management.

- **Maintenance Positions**
  - A total of 1078 maintenance positions over FY23/FY24 in the following fields:
    - Aircraft Electrician 56
    - Machinists 54
    - Non-Destructive Testers 48
    - Sheet Metal Mechanic 350
    - Powered Support Systems Mechanic 30
    - Tools and Parts Attendant 28
    - Materials Expediter 28
    - Pneudraulic Systems Mechanic 40
    - Aircraft Engine Repair 144
    - Aircraft Mechanic 300
  - 692 of these positions are projected to be filled at the entry levels (WG-05/07/08)
    - WG-05 requires no prior skills or knowledge of the position
    - WG-06/07/08 requires six months or more of experience performing similar duties at the next lower grade level or an Airframe and Powerplant license (A&P) if the position is a Sheet Metal Mechanic, Aircraft Engine Mechanic, Aircraft Mechanical Parts Worker or an Aircraft Mechanic
  - 386 positions are projected to be filled at the journeyman level (WG-09/10) which require six months or more experience performing similar duties at the next lower level
  - In addition to those listed above, it may become necessary to announce externally positions (open to the public) via Pathways (Current Student or Recent Graduate) at the trainee level:
    - Electronics Mechanic
    - Aircraft Electrician
    - Sheet Metal Mechanic (Aircraft)
    - Aircraft Mechanic
    - Machinist

Points of Contact:

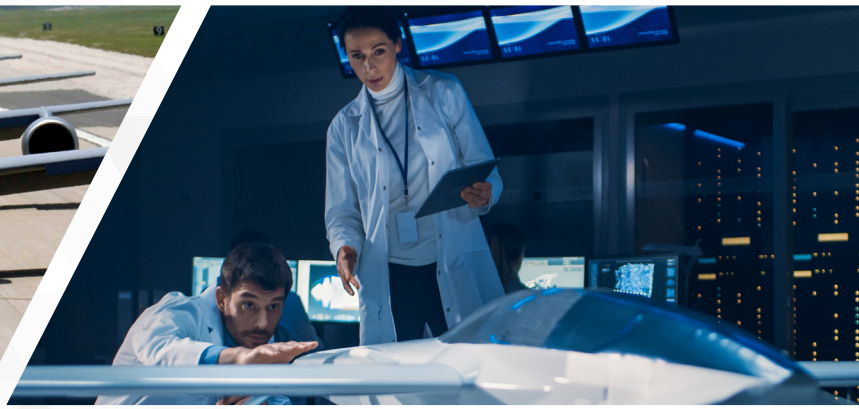
Recruitment and Hiring Forecast

405-739-3875

U.S. AIR FORCE

Attachment VI – Greater Oklahoma City Region Aerospace Industry Survey and Economic Impact Assessment 2020

GREATER **OKLAHOMA CITY**
A BETTER LIVING. A BETTER LIFE.



GREATER OKLAHOMA CITY REGION AEROSPACE INDUSTRY

Industry Survey and Economic Impact Assessment
2020

Greater Oklahoma City Region Aerospace Industry

Industry Survey and Economic Impact Assessment

2020

REGIONTRACK
Regional Economic Forecasting and Analysis

GREATER OKLAHOMA CITY CHAMBER

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RegionTrack, Inc. (regiontrack.com) is an Oklahoma City-based economic research firm specializing in regional economic forecasting and analysis. Principal authors of the report are RegionTrack economists Mark C. Snead, Ph.D. and Amy A. Jones, M.A.

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GREATER OKC REGION AEROSPACE INDUSTRY

I. Introduction and Summary

Continuing the Legacy of Aerospace in the Greater OKC Region

The aerospace industry remains a large and vibrant component of the Greater Oklahoma City regional economy.[1] The region has a long history of aerospace-related defense activity ranging from early aircraft development and manufacturing to pilot training during World War II. Other early efforts included general aviation aircraft design and manufacturing.

Tinker Air Force Base (AFB) is now the hub of the region's aerospace sector and plays a key role in supporting U.S. defense readiness. Similarly, the FAA's Mike Monroney Aeronautical Center (FAA Center) continues to provide critical products and services that touch all aspects of the U.S. commercial and general aviation sectors.

The Greater Oklahoma City region also has a large and growing private aerospace sector with activities ranging from traditional maintenance, repair, and overhaul (MRO) to research and development on unmanned vehicles. Aircraft design and manufacturing has also returned to the region in recent years, particularly unmanned aerial vehicles.

Growing synergies between the region's core public sector aerospace entities and the growing number of private sector firms is creating a large and resilient base of aerospace activity along with a highly skilled and versatile workforce.

Purpose and Structure of the Report

Understanding the past, present and expected future growth patterns of the region's aerospace industry is important for policymakers and economic development officials who are actively working to grow the industry. This report contributes to this ongoing effort by providing a detailed profile of the industry and evaluating the economic contribution of the sector in 2020. The report also continues a long-standing research effort to evaluate the region's aerospace industry at approximately 5-year intervals.[2]

The 2020 report provides a detailed economic evaluation of the Greater Oklahoma City area aerospace industry from several perspectives. The report's key tasks are to:

1. Provide a listing of all aerospace establishments operating in the Greater OKC region;
2. Prepare a detailed economic profile of the firms comprising the region's aerospace sector;
3. Examine growth in the aerospace industry since the release of the 2015 report;
4. Evaluate the major aerospace employers in the region, including both public and private entities;
5. Examine the size and composition of the aerospace labor force in the region;
6. Compare the size and structure of Oklahoma's aerospace industry to competing states;
7. Evaluate federal contracting activity related to aerospace by vendors in the region; and
8. Prepare an assessment of the economic impacts the aerospace industry generates across the Greater Oklahoma City region.

Key Findings

Industry Size. Findings indicate that an estimated 291 public and private sector establishments were directly engaged in aerospace activity in the Greater Oklahoma City region in 2020. These employers produced an estimated $7.2 billion in goods and services and paid $3.4 billion in labor income to 43,250 workers.

Industry Growth. Significant growth has taken place in the Greater Oklahoma City region aerospace sector since the release of the 2015 aerospace report. Current estimates suggest the industry added 55 new aerospace establishments (23% gain) and more than 6,640 new employees (18% gain) between 2015 and 2020. Output within the industry increased $2.3 billion (48% gain) and total labor income increased by $734 million (28% gain) in the period.

Private sector growth managed to outpace the strong gains posted in the public sector. More importantly, the region's aerospace industry continues to find a better balance between public and private sector activity. Since the 2015 report, the private sector employment share increased from 19.7% to 24.7%, the private output share increased from 34.2% to 38.7%, and the private labor income share increased from 20.9% to 29.8%. Based on output and labor income, the private sector share of the aerospace sector in the region has now reached approximately one-third.

Key Industry Characteristics. In 2020, the overall structure of the Greater Oklahoma City Region aerospace sector is best characterized as having:

1. A large public sector presence, primarily federal government;
2. Deep resources in the maintenance, repair and overhaul (MRO) sector;
3. A significant base of public and private sector program management, supply chain and logistics activity;
4. A large, diverse and highly skilled aerospace labor force;
5. A growing presence among major defense and aerospace contractors;
6. A deep concentration of firms engaged in consulting, engineering and R&D;
7. A growing presence of aerospace and aviation-related software development;
8. An emerging presence of aircraft manufacturing, particularly unmanned aerial applications;
9. A large and growing base of federal contracting activity related to aerospace;
10. Healthy commercial and general aviation sectors; and
11. A strong state and local presence in aerospace and aviation education.

Major Employers. Tinker AFB with its more than 26,000 employees remains the centerpiece of the aerospace sector in the OKC region. Base personnel represent a dynamic mix of active-duty and reserve military personnel, permanent federal civilian employees and civilian contract workers. These workers represent the largest single concentration of aerospace-related employment in the region, as well as a large share of total aerospace employment statewide. Projected hiring by the Civilian Personnel Office at the base for fiscal year 2021 and fiscal year 2022 totals more than 2,600 positions (deemed in high demand).

The FAA Center is the second-largest aerospace employer in the region with more than 5,150 workers. The center is home to the highest concentration of FAA civil servants and contractors in one location outside Washington D.C. The large economic role of the facility is traced to its total operating budget of $1.1 billion in fiscal year 2019. The FAA Center is a unique aerospace asset that plays a key role in national aviation policy, airport maintenance, air travel safety and aviation education. The center is also a major provider of shared services to organizations operating under the Department of Transportation as well as other

numerous federal organizations. Additionally, on a typical day, the FAA Academy at the center hosts up to 1,000 students.

Boeing is the second largest aerospace and defense contractor in the U.S. and has greatly expanded its presence in Oklahoma City in recent years. Boeing is the largest private aerospace employer in the region with approximately 3,660 employees and the largest federal contractor in the state.

Other major aerospace employers in the region include the Oklahoma Air National Guard (1,235 employees), Northrop Grumman (807 employees), CACI (400 employees), Southwest Airlines Reservations (360 employees), AAR Airframe Maintenance (322 employees) and Field Aerospace (280 employees).

Aerospace Occupations and Wages. Oklahoma continues to rank highly in the number of employees across key aerospace occupations. Ongoing growth in the sector is adding large numbers of highly skilled workers to the region, particularly engineers. Approximately 1,900 workers in engineering occupations were added to the Greater Oklahoma City region workforce between 2015 and 2020.

Wages for most aerospace occupations in Oklahoma remain highly competitive relative to other aerospace markets and reflect the low overall cost-of-living in the state. Wages in most aerospace occupations generally exceed the overall state average, with median hourly wages generally above $20 per hour. The median hourly wage typically exceeds $40 per hour for engineers, air traffic controllers, pilots and software developers. Median wages are below $20 per hour in only a few key aerospace occupations, primarily air passenger airline services and some entry-level aircraft maintenance positions.

Oklahoma Aerospace Market Rankings. The 2020 report includes a benchmark comparison of state-level aerospace markets that captures both the private and public sides of the industry. The states have a widely varying mix of public and private sector aerospace activity. Public sector entities and jobs are often excluded from state-level comparisons of aerospace markets, an approach that fails to capture the strength of the Greater OKC market. The true extent of the aerospace market in states like Oklahoma with a high share of public sector activity is not well captured in existing industry comparisons.

For example, Oklahoma ranks highly based on private sector activity alone, but generally only receives an upper mid-tier ranking. Based on private sector size, Oklahoma's aerospace sector ranks among the top 20 states – 15th in the number of business establishments, 20th in employment and 20th in total wages paid in 2019. These rankings all exceed the state's rank as the 28th most populous state.

However, Oklahoma rises to the 10th largest aerospace market when both public and private sector aerospace employment are considered. The jump in rankings is driven by the state's position as the 5th largest concentration of public sector aerospace-related employment among the states. Oklahoma ranks 1st among the states in the number of civilian Air Force employees, with nearly all based at Tinker Air Force Base. It is this deep concentration of public sector aerospace jobs in Oklahoma that makes their inclusion so vital in comparative state-level studies of aerospace.

State and Local Policy. State and local policymakers remain committed to fostering growth in the industry and continue to pursue economic development efforts to grow aerospace in the Greater Oklahoma City Region. The Oklahoma Engineer Workforce Tax Credit remains an important incentive in attracting high-wage aerospace jobs to the region. The Oklahoma Legislature also recently approved a tax credit designed to boost the numbers of highly skilled workers in software development and cybersecurity. Large numbers of graduates from the state's public and private universities and completers of CareerTech aerospace programs continue to fill jobs in state aerospace firms.

Federal Procurement Trends. Federal contracting serves as a significant source of economic activity in Oklahoma and the Greater Oklahoma City region and is closely tied to aerospace activity, particularly at Tinker AFB. Total federal contracting by place of performance in the 10-county Greater Oklahoma City region is up 37% since the 2015 aerospace report, from $1.96 billion to $2.69 billion. Approximately 65% of total state contracting activity is traced to the 10-county Greater Oklahoma City region.

Total contracts issued by the Air Force and performed in the Greater OKC region totaled $1.88 billion in fiscal year 2019 and comprised 45% of total contracting in the state from all federal sources. Across the Air Force, FAA, and NASA, or the three federal entities most closely tied to aerospace, vendors located in the 10-county region performed $2 billion in contracts in fiscal year 2019. Some of these contracts only indirectly support aerospace activities. An alternative measure of federal contracts identifying goods and services that are directly aerospace-related, regardless of government agency, totaled $1.62 billion in fiscal year 2019.

Economic Spillover Effects and Tax Impact. In terms of direct employment, approximately 43,250 workers in the region are employed directly in aerospace, with three-fourths (32,554) employed in public sector positions at Tinker AFB and the FAA Center. In total, an estimated 77,105 jobs statewide are provided either directly by the aerospace sector or supported indirectly through multiplier effects generated by the industry.

The $3.4 billion in direct labor income paid to workers in the aerospace sector likewise generates substantial ripple effects as the income is earned and recirculated within the regional economy. An additional $2.4 billion in labor income is earned by workers in other industries statewide, or a total earnings impact of $5.8 billion in the region.

Aerospace establishments in the region generated an estimated $7.23 billion in direct output of goods and services in 2020. Overall, either directly or indirectly through multiplier effects, aerospace activity in the Greater Oklahoma City region supported the production of $11.6 billion in total output of goods and services in 2020.

The total direct and spillover effects traced to the aerospace industry are far larger in 2020 than in the 2015 report. Total employment traced to aerospace in the region increased from 67,583 to 77,105, a 14% increase over the past five years. The total labor income effect increased by more than $1.7 billion, from $4.1 billion to $5.8 billion, or a 43% increase. Total output produced by the aerospace industry increased by an estimated 42% since 2015, from $8.2 billion to $11.6 billion.

Estimates suggest that the activity generated directly by the aerospace industry produced approximately $300 million in tax payments to state and local government in 2020.

Aerospace Growth Trend Intact. Overall, the report finds that the aerospace industry in the 10-county Greater Oklahoma City region remains vibrant and has experienced considerable growth and development since the last evaluation of the sector in 2015. Trends in industry activity, firm relocations and expansions, state-level rankings, labor market development and federal procurement success suggest continued aerospace industry growth in the region going forward.

II. Scope of Research

A key activity underlying the development of the 2020 aerospace report is the compilation of a detailed listing of firms in the Greater Oklahoma City region that are directly and substantially engaged in the provision of aerospace-related goods and services. Key characteristics of each firm are collected or estimated, including output (or revenue), employment and labor income paid to workers. Proprietary and public databases are used in compiling the information along with direct contact with firms and consultation with industry professionals. The database of aerospace firms is then used to prepare an economic profile of the industry as well as estimates of the economic contribution of the industry to the Greater OKC area economy.

Aerospace Industry Analysis Framework. The process for compiling the firm-level database and aerospace industry profile for the OKC region is as follows:

Definition of Aerospace. In broadest terms, the *aerospace* industry comprises various forms of manmade air and space flight, along with the associated areas of manufacturing, maintenance and repair, research and development, engineering, consulting, logistics, other activities underlying air and space travel.[3]

The *aviation* sector is considered a subset of aerospace, referring only to the production, maintenance, development, and application of vehicles capable of atmospheric flight. For convenience, aviation is often divided into civil and military aviation, with civil aviation further subdivided into commercial and general aviation. Throughout the report, *aerospace* is used to denote all aspects of the industry, including the aviation sector.

Study Region. A comprehensive industry profile is developed for the 10-county Greater Oklahoma City region. The region is defined as a contiguous area in central Oklahoma that includes Canadian, Cleveland, Grady, Kingfisher, Lincoln, Logan, McClain, Oklahoma, Payne and Pottawatomie counties.[4]

Oklahoma County is roughly the geographic center of both the region and the state and represents the core of the industry. The region stretches from McClain County in the south to Payne County in the north. The region includes the seven component counties of the Oklahoma City Metropolitan Statistical Area (MSA) plus Kingfisher County to the northwest, Pottawatomie County to the southeast and Payne County to the northeast.

The study area captures both of the state's top-tier research universities (R1: Doctoral Universities), Oklahoma State University in Stillwater (Payne County) and the University of Oklahoma in Norman (Cleveland County).

In compiling economic impact estimates for the industry, direct and spillover economic effects are estimated for the same 10-county region. The economic impact estimates exclude aerospace activities located outside the region such as the private aerospace industry in the Tulsa area and Air Force bases in Enid and Altus.

Data Sources. Aerospace establishments are identified using both public and proprietary databases[5] of employment and revenue for both private businesses and public sector entities operating in the 10-county region. Private firms are initially selected using NAICS industry codes affiliated with aerospace but are also identified using aviation-related keywords within firm names and known addresses for aviation hubs in the area. The initial pool of establishments is supplemented by adding those identified through discussions with aerospace industry officials and recent news reports, including firms newly located in the region. Airports and heliports are identified using online FAA databases and are included in the industry profile only if actively operated for public purposes.

The initial set of aerospace establishments is cleaned manually for duplicate entries, name changes, mergers and relocations and other recognized reporting errors. Each entity is evaluated through a combination of direct phone contact, online search and discussion with industry experts to determine if it is 1) directly and substantially engaged in the provision of aerospace-related goods and services and 2) actively operating within the region. Firms that are only indirectly related to the industry or serve in a minor support capacity are excluded. Some firms excluded from the survey are actively involved in Defense contracting to the Air Force and other federal departments but do not provide goods and services directly related to aerospace. The activity at firms that indirectly support the industry is nonetheless important and is captured in part through estimated economic spillover effects in the final section of the report.

Data Coverage. Both private and public sector employers are included throughout the report. Public sector employees include federal, state and local government employees. Federal employees include active-duty and Reserve/Guard military personnel, federal civilian employees and civilian contract workers. The largest concentrations of federal employees are located at federal installations in the region, particularly at Tinker AFB and the FAA Center. Members of Oklahoma Air National Guard and Air Force Reserve units are likewise tracked. Data are generally collected at the establishment level (e.g., some large aerospace contractors require multiple buildings in which to operate that are combined), but some data are tabulated at the establishment level and represent unique operating locations (e.g., FAA maintains locations at multiple airports in the region that are tracked separately).

Economic Measures. The industry profile and other estimates compiled in the report are based on estimates of the level of employment, labor income and output for each aerospace establishment. Employment covers primarily wage and salary workers but includes some self-employed proprietors reported in the data.

Labor income is a comprehensive measure of household earnings from work and includes both employee compensation (wages and salaries plus other supplements to wages and salaries) and the proprietor's self-employment income.

Output generally represents the market value of all goods and services produced and is closely related to total revenue for most establishments. For most service-providing firms, output is assumed equal to revenue. When output is not available for a firm, an estimate is formed using either output per employee from similar firms in the database (where available), estimates for the industry from federal datasets, or national ratios of output per employee adjusted for differentials between state and national ratios.

Estimates of employment and output are obtained primarily from proprietary firm-level databases used in the initial identification of aerospace firms. The reported employment and output estimates for each firm are evaluated to determine whether 1) total activity accurately reflects the current level of operation at each firm and 2) activity per worker is consistent with similar firms operating in the region. Adjustments are made to the database to reflect information provided by individual firms in phone contacts, feedback from industry officials, information in public reports, news reports of layoffs, mergers and relocations.

Labor income is estimated using either proprietary databases or information provided by individual firms in phone contacts, information in public reports, feedback from industry officials or average labor income per employee for the corresponding industry sector from federal datasets. Labor income and employment for both Tinker AFB and the FAA Center are derived from current and historical reports provided by representatives at each facility.

Custom Industry Groupings. In preparing the economic profile and economic impact estimates, aerospace establishments are classified into eight major groups and 25 subgroups as detailed in Figure 1.

The industry groupings are chosen to reflect the current structure and growth trend of the aerospace industry in the Greater Oklahoma City region. The groupings are similar to the broad industry sectors defined under the NAICS industry classification system but capture far more detailed components of the aerospace sector than possible when using NAICS. The NAICS system is based on a production-oriented concept whereby establishments are grouped into industries according to similarity in the processes used to produce goods or services. This approach tends to obscure many of the specialized activities taking place within the broader aerospace sector. The groupings used in the 2020 industry profile provide a more functional and descriptive view based on a firm's primary product line or service provided.

Government is treated as a unique component of the industry due to the substantial presence of both Tinker AFB and the FAA Center. State and local government are tracked separately from federal government.

The eight major groups in Figure 1 are used throughout the report to develop estimates of the economic contribution of the aerospace sector. The 25 detailed subgroups are used to provide more industry detail in an accompanying digital directory of aerospace and aviation firms operating in the region.

Figure 1. Industry Classifications for Greater OKC Region Aerospace Profile

Group	Subgroups
Air Transportation	Airport Services & Support
	Aircraft Finance, Title, Leasing, and Sales
	Aircraft Fleet Ownership and Rental
	Airports
	Airport Ground Transportation
	Air Passenger Transportation
	Medical Flight
	Air Freight
Education and Training	Aviation Education and Training
	Flight Training
Engineering, Consulting, Program Management, and Logistics	Software and Information Technology
	Engineering, Consulting, and R&D
	General Contracting
	Logistics, Supply Chain, and Customer Support
Government	State and Local Government
	Federal Government
MRO	Maintenance, Repair, and Overhaul
Manufacturing	Aircraft Parts and Components Manufacturing
	Unmanned Aerial Systems
	Aircraft Manufacturing
Supplies and Materials	Parts and Components
	Tools and Supplies
Other	Aerial Services (e.g., Spraying and Photography)
	Museums

Private Aerospace Sectors. A new section of the 2020 report provides a state-level evaluation of the aerospace sector that includes both the public and private sectors. State-level comparisons of aerospace activity often focus solely on private sector activity and overlook a large segment of the industry in the Greater OKC region.

To prepare a framework for valid comparison across states, we first use standard NAICS codes to define the core set of industry sectors that comprise the private aerospace industry. This approach is commonly used in other comparative state-level studies of the aerospace sector.[6] Moreover, this standardized approach using NAICS codes is necessary because the firm-level data collection process used to prepare the industry profile for the Greater Oklahoma City region is not feasible for all states and the nation.

Three NAICS industry sectors – 3364 (Aerospace Product and Parts Manufacturing), 481 (Air Transportation), and 4881 (Support Activities for Air Transportation) – are viewed as comprising the core of the private sector aerospace industry. Two of the components are 4-digit sectors (3364 and 4881) while the third (481) is a more aggregated 3-digit sector. The three core sectors serve as a highly useful proxy for the overall private component of the industry because they are believed to jointly comprise at least 90% of private aerospace activity in the U.S.

Sector 3364 (Aerospace Product and Parts Manufacturing) generally represents the aerospace sector as an aircraft manufacturing and maintenance industry. Sectors 481 (Air Transportation) and 4881 (Support Activities for Air Transportation) capture the broad scope of commercial and general aviation activity including passenger air travel.

The three core sectors can be reduced to their base 6-digit sectors, with the final group comprised of the following 14 6-digit NAICS sectors:

1. **NAICS 3364: Aerospace Product and Parts Manufacturing**
   Includes six 6-digit NAICS sectors covering aircraft and aircraft parts manufacturing and guided missile and space vehicle-related manufacturing.
   336411 Aircraft Manufacturing
   336412 Aircraft Engine and Engine Parts Manufacturing
   336413 Other Aircraft Parts and Auxiliary Equipment Manufacturing
   336414 Guided Missile and Space Vehicle Manufacturing
   336415 Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manu.
   336419 Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manu.

2. **NAICS 481: Air Transportation**
   Includes five 6-digit NAICS sectors covering both scheduled and nonscheduled charter passenger and freight transportation by air.
   481111 Scheduled Passenger Air Transportation
   481112 Scheduled Freight Air Transportation
   481211 Nonscheduled Chartered Passenger Air Transportation
   481212 Nonscheduled Chartered Freight Air Transportation
   481219 Other Nonscheduled Air Transportation

3. **NAICS 4881: Support Activities for Air Transportation**
   Includes three 6-digit NAICS sectors capturing a range of support activities centered around flight control and the ground operation of airports.
   488111 Air Traffic Control
   488119 Other Airport Operations

488190 Other Support Activities for Air Transportation

Data using the 14 core 6-digit NAICS industry sectors is readily available in major federal economic databases, which allows for easy and reliable updates over time.

It is important to note that the three core NAICS sectors (3364, 481 and 4881) are clearly not the only sectors comprising the aerospace sector. Numerous other NAICS sectors are widely recognized as serving a direct role in aerospace and include:

NAICS 333314: Optical Instruments
NAICS 334511: Search and Detection Instrument Manufacturing
NAICS 336360: Seating and Trim
NAICS 423860: Wholesale Trade – Transportation Parts
NAICS 441228: Aircraft Sales
NAICS 532411: Aircraft Rental and Leasing
NAICS 611512: Flight Training
NAICS 611519: Air Traffic Control Schools
NAICS 115112: Aerial Spraying
NAICS 424720: Wholesale Trade – Petroleum

Most of these sectors are included in the comprehensive database and industry profile prepared for the Greater Oklahoma City region. However, they are excluded from the state-level industry comparisons for two reasons: 1) the industries, even when combined, are quite small relative to the core sectors, and 2) state-level data for these sectors are often suppressed in federal economic databases. Because these sectors are typically quite small relative to the three core sectors, they are believed to have little influence on the resulting state-level comparisons and rankings. Combined, the excluded sectors typically account for far less than 10% of direct employment within the broader aerospace and aviation industry. In most states, they account for less than 5% of total employment in the industry. Because of suppression in federal databases, using these industries would require either forming estimates for each sector in each state or using the same firm-level approach used in the Greater Oklahoma City region for each region. The first approach introduces considerable uncertainty into the state-level comparisons while the second is cost prohibitive.

Aerospace and COVID-19

The restrictive effects of COVID-19 on business activity have been highly visible in the U.S. aerospace sector, particularly passenger air travel and aircraft manufacturing. The economic profile of the Greater Oklahoma City region aerospace sector provided in this report does not adjust the results for the expected effects of COVID-19. The results generally capture the most recent operating year of results for most firms that were available in early 2020, a time frame not heavily influenced by the early stages of the pandemic. As a result, the 2020 aerospace report captures the steady state of the industry at the earliest stages of the pandemic and economic downturn.

Several risks and potential long-term effects of COVID-19 on the aerospace sector have surfaced as the pandemic has developed:

1. The ongoing pandemic has had a disproportionately negative impact on the commercial aviation sector, particularly passenger air travel. The volume of commercial air travel remains closely tied to the overall prevalence of COVID-19, with the sector expected to recover much of its lost activity only when a vaccine is widely available. Business travel is believed to have made at least an intermediate-term downshift in volume due to the widespread adoption of teleconferencing. Some reduction in business travel could be long-lived.

2. Federal cash infusions to the airline industry have greatly aided air carriers in surviving the collapse in passenger air travel and maintaining employment levels.
3. Commercial aircraft and parts manufacturing have both been hard-hit by the pandemic. Large numbers of aircraft deliveries have been canceled or delayed and the parts replacement cycle has slowed sharply along with passenger air miles flown.
4. The defense side of aerospace has been better positioned to address the market effects of the COVID outbreak, generally faring far better in the slowdown than commercial aircraft manufacturing and passenger air travel.

Several factors suggest that the Greater Oklahoma City region is well positioned relative to many aerospace hubs to respond to COVID-19:

1. The high share of public sector aerospace activity at both Tinker Air Force Base (AFB) and the Federal Aviation Administration (FAA) Mike Monroney Aeronautical Center (FAA Center) provides substantial stability to the region's aerospace base. These large federal entities are experiencing budget stability despite the pandemic.
2. Oklahoma City has far less dependence on air travel than many other regions of the country that have large hub airport operations, private MRO base operations or significant tourism-related air travel.
3. The presence of large private defense contractors with long-run contract programs in place has provided additional stability during the pandemic.
4. The overall economic rebound in the Oklahoma City metro area has outpaced the state recovery to date and is more national-like in pace.

III. OKC Region Aerospace Industry Profile

Figure 2 summarizes the structure of the 10-county Greater Oklahoma City region aerospace sector by major industry group in 2020.[7] The profile provides key measures of business activity including the number of business establishments, employment, output, and labor income within each group.

The two major government installations in the region (Tinker AFB and the FAA Center) are listed separately in the government section. Figure 3 provides a more detailed economic profile across the 26 subgroups.

Industry Economic Profile

In terms of overall structure, the Greater Oklahoma City region aerospace market can be characterized as having a large public sector presence; a large and growing private maintenance, repair, and overhaul (MRO) sector; a significant concentration of aerospace engineering, consulting, and logistics firms; an air transportation sector consistent with population; and a nascent aircraft manufacturing presence.

An estimated 291 public and private sector establishments in the Greater OKC region were directly engaged in aerospace activity in 2020. These employers produced an estimated $7.23 billion in goods and services and paid $3.4 billion in labor income to approximately 43,250 workers.

A key characteristic of the regional and U.S. aerospace industry remains high average wages. The average labor income in aerospace in the Greater Oklahoma City region is approximately $78,610 per worker in 2020. For comparison, labor income per worker in the industry is 30% higher than the overall average for all industries statewide ($60,730) and 27% higher than the average for all industries in the 10-county region ($61,692).

Figure 2. Greater Oklahoma City Region Aerospace Industry Profile (2020)

Major Group	Establish-ments	Employ-ment	Output ($Mil)	Labor Income ($Mil)
Government	10	32,554	$4,436.0	$2,385.2
Tinker Air Force Base (military, federal civilian, and contractors)	1	26,029	3,229.5	1,755.6
FAA Mike Monroney Aeronautical Center	1	5,159	1,105.7	563.5
All Other Government (federal, state, and local)	8	1,366	100.8	66.1
Maintenance, Repair, and Overhaul (MRO)	34	4,668	1,472.4	509.0
Engineering, Consulting, Program Management, and Logistics	53	2,901	617.9	275.2
Air Transportation (Airports, aircraft sales, and air travel)	105	1,942	443.3	142.1
Supplies and Materials	44	912	221.6	71.1
Education and Training	26	181	21.9	10.7
Manufacturing	5	47	14.4	4.0
Other (spraying, aerial services, and other)	14	47	6.1	2.7
Total	**291**	**43,252**	**$7,233.6**	**$3,400.0**

Notes: Major industry groups sorted by employment.
Source: Data Axel, Salesforce, D&B Hoovers, federal reports, Tinker AFB internal reports, FAA internal reports, direct verification of data, and RegionTrack estimates

Figure 3. Greater Oklahoma City Region Aerospace Detailed Industry Profile (2020)

Major Group	Subsector	Establish-ments	Employ-ment	Output ($Mil)	Labor Income ($Mil)
Air Transportation	Airport Services & Support	18	602	$169.4	$36.8
	Aircraft Finance, Title, Leasing, and Sales	23	199	38.3	12.9
	Aircraft Fleet Ownership and Rental	11	43	10.8	3.9
	Airports	23	94	13.8	4.3
	Airport Ground Transportation	6	38	7.1	1.9
	Air Passenger Transportation	11	698	141.8	62.4
	Medical Flight	3	18	4.3	1.5
	Air Freight	10	250	57.9	18.3
Education and Training	Aviation Education and Training	13	116	15.3	7.7
	Flight Training	13	65	6.6	3.0
Engineering, Consulting, Program Management, and Logistics	Software and Information Technology	11	146	36.3	14.5
	Engineering, Consulting, and R&D	34	2,108	474.3	209.6
	General Contracting	3	17	2.4	1.3
	Logistics, Supply Chain, and Customer Support	5	630	104.9	49.8
Government	State and Local Government	3	1,243	87.7	54.7
	Federal Government	7	31,311	4,348.3	2,330.5
Manufacturing	Aircraft Parts and Components Manufacturing	2	12	2.9	0.8
	Unmanned Aerial Systems	2	25	8.8	2.4
	Aircraft Manufacturing	1	10	2.7	0.8
MRO	Maintenance, Repair, and Overhaul	34	4,668	1,472.4	509.0
Other	Aerial Services	10	34	4.9	2.2
	Museum	3	8	0.7	0.3
	Other	1	5	0.5	0.2
Supplies and Materials	Parts and Components	41	874	209.9	67.8
	Tools and Supplies	3	38	25.5	8.0
Total		**291**	**43,252**	**$7,233.6**	**$3,400.0**

Notes: Major industry groups sorted by alphabetical order.
Source: Data Axel, Salesforce, D&B Hoovers, federal reports, Tinker AFB internal reports, FAA internal reports, direct verification of data, and RegionTrack estimates

The reported 32,554 government workers comprise 75% of the region's aerospace labor force. These workers include federal civilian workers, civilian contract workers, active-duty military and Reserve/Guard members. The activities at Tinker AFB include a large maintenance, repair, and overhaul (MRO) operation and a range of high-skill aerospace-related service occupations, with large numbers of workers engaged in program management and logistics activities.

The large public sector employment base at the FAA Center similarly provides a diverse mix of high-skill aerospace-related jobs, along with a significant number of workers who provide business support services. The labor forces located at the region's two large public sector facilities have an increasing amount of occupational overlap with the private side of the industry in the region.

Industry Growth Trend – 2015 to 2020. Significant growth has taken place in the Greater Oklahoma City region aerospace sector since the release of the region's 2015 aerospace report. Figure 4 compares summary results from the current industry assessment with the 2015 report.

Current estimates suggest the industry added 55 new aerospace establishments (23% increase) and more than 6,600 new employees (18% increase) between 2015 and 2020.

Output within the industry increased $2.34 billion (48% gain) in the period. Average output per firm increased 20% between 2015 and 2020, reaching $24.9 million per establishment.

Total labor income paid by aerospace firms increased by $734 million since 2015, or a 28% increase.

Figure 4. Greater OKC Region Aerospace Sector Growth (2015 to 2020)

Report Year	Establishments	Output ($Mil)	Labor Income ($Mil)	Employ-ment
2015	236	$4,893.1	$2,665.9	36,611
2020	291	$7,233.6	$3,416.4	43,370
Change	**55**	$2,340.5	$734.1	6,641
% Change	**23.3%**	**47.8%**	**27.5%**	**18.1%**

From a productivity viewpoint, output per worker increased to $167,241, an increase of 25% over the past five years. Increased productivity supported an 8% increase in average labor income per worker since 2015, reaching approximately $78,610 in 2020.

Private vs. Public Sector Growth. Growth has been substantial since the 2015 report in both the public and private sectors of the region's aerospace industry.

Public sector aerospace establishments increased their output by $1.2 billion (38% gain) since 2015. Hiring increased by 3,162 workers (11% gain) while labor income increased by $277 million (13% gain) in the period.

Private sector growth managed to outpace the strong gains posted in the public sector. An additional 61 private sector establishments were added since the 2015 report with increased output of $1.1 billion (67% gain). Private sector employment increased by nearly 3,500 (48% gain) since the 2015 report, with increased private labor income of $457 million (82% gain).

More importantly, the region's aerospace industry continues to find a closer balance between public and private sector activity. Since the 2015 report, the private sector employment share increased from 19.7% to 24.7%, the private output share increased from 34.2% to 38.7%, and the private labor income share increased from 20.9% to 29.8%.

The increased private sector shares are noteworthy given strong public sector growth in the period. The private sector now represents one-fourth of the region's aerospace industry based on employment and approximately one-third of the sector based on labor income and output.

Aerospace Employment by County

Figure 5 partitions the aerospace industry profile among the ten counties comprising the Greater Oklahoma City region.

While all ten counties have some aerospace presence, the industry's core remains highly concentrated in Oklahoma County. Oklahoma County is home to nearly 60% of the region's aerospace employers, nearly 98% of the aerospace jobs in the region and more than 97% of the total output produced by the sector.

Most of the region's large public aerospace-related infrastructure is located within Oklahoma County, including Tinker AFB, the FAA Center, Will Rogers Air National Guard Base and Will Rogers World Airport.

Most of the largest private employers in the region, such as Boeing, Northrop Grumman, CACI, Southwest Airlines Reservation Center and AAR, are similarly located in Oklahoma County.

Figure 5. Greater OKC Region Aerospace Industry by County (2020)

County	Establishments		Employment		Output ($Mil)		Total Employment	Aerospace as % of Total Employment
Canadian	20	6.9%	128	0.3%	$25.5	0.4%	61,387	0.21%
Cleveland	28	9.6%	159	0.4%	31.6	0.4%	133,809	0.12%
Grady	3	1.0%	17	0.0%	2.8	0.0%	22,433	0.08%
Kingfisher	2	0.7%	2	0.0%	0.3	0.0%	12,029	0.02%
Lincoln	8	2.7%	48	0.1%	8.6	0.1%	13,490	0.36%
Logan	10	3.4%	72	0.2%	21.6	0.3%	16,950	0.42%
McClain	6	2.1%	12	0.0%	4.4	0.1%	17,771	0.07%
Oklahoma	176	60.5%	42,301	97.8%	7,048.3	97.4%	631,438	6.70%
Payne	27	9.3%	421	1.0%	68.2	0.9%	49,242	0.85%
Pottawatomie	11	3.8%	92	0.2%	22.4	0.3%	33,681	0.27%
10-County Region	**291**	**100.0%**	**43,252**	**100.0%**	**$7,233.6**	**100.0%**	**992,230**	**4.36%**

Notes: Total employment by county is based on BEA's measure of total employment (wage & salary + proprietors) and includes military personnel.
Source: Bureau of Economic Analysis (BEA) and RegionTrack calculations

Most of the jobs located outside Oklahoma County are in aircraft maintenance and air transportation and primarily support local general aviation. These smaller aerospace firms are widely spread among the remaining counties.

Among the other counties, Cleveland County and Payne County have the largest number of aerospace firms, with 28 and 27 establishments, respectively**.** Both counties are home to a Tier 1 research university (University of Oklahoma in Cleveland County and Oklahoma State University in Payne County) which offers flight training and programs in aerospace engineering.

Canadian County is home to 20 aerospace establishments that serve a diverse mix of market segments including training, parts manufacturing and general aviation services.

Employment in aerospace comprised an estimated 4.4% of all employment in the Greater Oklahoma City region in 2020. The employment share is greatest at 6.7% in Oklahoma County but falls below 1% of total employment in the remaining counties. Payne County aerospace workers comprise nearly 1% of total county employment while the remaining counties fall below a 0.5% share.

IV. OKC Region Aerospace Employers and Workforce

Largest Aerospace Employers. The Greater Oklahoma City Region aerospace industry is comprised of approximately 20 large employers with more than 100 employees and approximately 270 small employers with fewer than 100 employees.

Figure 6 highlights the 25 largest aerospace-related employers in the Greater Oklahoma City Region. The region has three very large aerospace employers – Tinker AFB, the FAA Center, and Boeing – that employ a combined 80% of all aerospace workers in the 10-county region. Employment counts are a snapshot in time and subject to change.

Tinker AFB with its more than 26,000 employees remains the centerpiece of the aerospace sector in the Greater OKC region. The FAA Center is the second largest with more than 5,150 workers. These two large public sector facilities have operated in the region for decades and continue to serve as a catalyst for much of the continued private sector aerospace growth in the region. Boeing is the largest private sector aerospace employer in the Greater OKC region with more than 3,600 employees.

Figure 6. 25 Largest Greater OKC Region Aerospace Employers

Rank	Employer	Employment
1	Tinker Air Force Base	26,029
2	FAA Mike Monroney Aeronautical Center	5,159
3	Boeing Company	3,660
4	Oklahoma Air National Guard	1,235
5	Northrop Grumman	807
6	CACI	400
7	Southwest Airlines Reservations	360
8	AAR Airframe Maintenance	322
9	Field Aerospace	280
10	Meta Special Aerospace	225
11	Pratt & Whitney	220
12	Electro Enterprises Inc.	200
12	Serco	200
14	Booz Allen Hamilton	170
15	ASCO Aerospace USA LLC	160
16	Western Flyer Express Inc.	150
17	Long Wave Inc.	149
18	Olympic Security Svc.	145
19	Advancia Corp.	130
20	KBR	103
21	Express Jet	100
22	Aerobraze Engineered Tech	90
23	Aero Components Inc.	80
24	Frontier Electronic Systems	80
25	ABM Parking Svc.	75

The Oklahoma Air National Guard is the fourth largest aerospace-related employer with 1,235 personnel, including more than 800 part-time Guardsmen. Another traditional aerospace contractor, Northrop Grumman, has the fifth largest workforce with more than 800 workers in the region.

Other mid-size private sector firms employing 200 or more aerospace workers include CACI (400) Southwest Airlines Reservation Center (360), AAR Airframe Maintenance (322), Field Aerospace (280), Meta Special Aerospace (225), Pratt & Whitney (220), Electro Enterprises (200) and Serco (200).

Tinker AFB

In fiscal year 2019, Tinker AFB was the largest single-site employer in Oklahoma with a workforce that fluctuated between 26,000 and 27,000 workers. Base personnel represent a unique mix of active duty (~20%) and reserve military personnel (~5%), permanent federal civilian employees (~66%) and civilian contract workers (~9%). The labor force at Tinker AFB represents the largest single concentration of aerospace-related employment in the Greater Oklahoma City region, as well as a large share of total aerospace-related employment statewide.

Tinker AFB is home to over 40 major aerospace-related functions and units, including weapon system sustainment, life cycle management of weapon systems and operational flying activities. The following provides examples of several key units:

Air Force Sustainment Center (AFSC)

Tinker AFB is home to one of three sustainment complexes that are a part of the Air Force Sustainment Center (AFSC). The AFSC is headquartered at Tinker AFB and is tasked with maintaining weapon system readiness for air warfare. AFSC services include weapon depot maintenance, supply chain management and installation support. The AFSC provides critical sustainment for the Air Force's most sophisticated weapons systems, including A-10 Thunderbolt II, AC-130, B-1 Lancer, B-52 Stratofortress, C-5 Galaxy, C-17 Globemaster III, C-130 Hercules, E-3 Sentry, E-6 Mercury, E-8 Joint STARS, EC-130, F-15 Eagle, F-16 Falcon, F-22 Raptor, HC-130, HH-60 Pave Hawk, ICBM, KC-135 Stratotanker, MC-130, MH-53 Pave Low, RQ-4 Global Hawk, U-2 Dragon Lady and UH-1 Iroquois aircraft as well as a wide range of aircraft engines and component parts.

OC-ALC. The Oklahoma City Air Logistics Complex (OC-ALC) is the largest operating component of the base.[8] The Complex performs programmed depot maintenance and modifications on KC-46, KC-135, B-1B, B-52, E-3 and Navy E-6 aircraft as well as maintenance, repair and overhaul for F100, F101, F108, F110, F117, F118, F119, F135 and TF33 engines and a wide variety of commodities for the Air Force, Navy, Marine Corps and foreign military sales. The Complex is also responsible for the development and sustainment of a diverse portfolio of mission-critical software for the Air Force and other customers, as well as worldwide aircraft battle damage repair capability for multiple weapon systems.

The Oklahoma City Air Logistics Complex is comprised of five major operating groups.

1. The *76th Aircraft Maintenance Group* (AMXG) performs depot maintenance on B-1 Lancer, B-52 Stratofortress, KC-135 Stratotanker, E-3 Sentry (AWACS), E-6 Mercury (Navy) and special mission fleet aircraft. The 76th AMXG performs all facets of depot maintenance, including full overhaul maintenance, FAA certified aircraft repairs, engineering services, aircraft modifications, depaint and paint services, flight testing and expeditionary depot repair teams. The group is currently preparing for the Air Force's next-generation tanker, the KC-46 Pegasus.

2. The *76th Commodities Maintenance Group* directs, manages and operates depot-level maintenance facilities in the repair and overhaul of Air Force, Navy and Foreign Military Sales aircraft and engine parts to serviceable condition. The group's portfolio includes the A-10, B-1, B-2, B-52, C-5, C-17, C-130, C-135, C-141, E-3, F-4, F-5, F-15, F-16, F-22, MQ-1, MQ-9 and T-38 weapons systems. The group also serves as the Air Force Technology Repair Center for air and fuel accessories, constant speed drives and oxygen-related components.
3. The *76th Maintenance Support Group* is responsible for maintaining one of DoD's largest industrial complexes on a 24/7 basis. It keeps the buildings, hangars, machines and equipment running so the depot can meet the warfighters' requirements. Structures range from World War II era buildings and hangars to state-of-the-art software and engine maintenance facilities and equipment. The group services include physical plant management, metrology, physical science laboratories, tools management, environmental oversight and long-range facility planning.
4. The *76th Propulsion Maintenance Group* is the DoD's foremost engine repair and overhaul center. It sustains most of the bomber, tanker, fighter and special mission aircraft engines in the Air Force, as well as some Navy and Foreign Military Sales engines. The group performs repairs on engines and major engine assemblies for the F100, F101, F107, F108, F110, F117, F118, F119, F137 and TF33.
5. The 76th *Software Engineering Group* provides a range of software and systems engineering solutions. As part of the Air Force Sustainment Center Software Enterprise, the group provides the DoD with capabilities in operational flight programs, mission planning systems, space systems, ground-based radar, weapons support, mission support, jet engine testing, training and simulation systems and diagnostics and repair.

448th SCMW. The 448th Supply Chain Management Wing (SCMW) is headquartered at Tinker AFB and provides the planning and execution of depot-level repairable and consumable spare parts to sustain Air Force depot operations and more than 5,000 operational aircraft and 16,000 engines across the globe. The wing also provides spare parts to sustain the Intercontinental Ballistic Missile capability, a wide range of support equipment and Space and C3I systems. The 448th SCMW is a 'virtual' wing that operates remotely within three different time zones. The wing consists of civilian and military personnel dispersed at Tinker AFB (Oklahoma), Robins AFB (Georgia) and Hill AFB (Utah).

72nd Air Base Wing. The 72nd Air Base Wing provides mission support, civil engineering, medical, airfield operations, command post, explosive ordnance disposal, public affairs, equal opportunity and alternate dispute resolution and financial management services to active-duty military personnel, Guard and Reserve components, civilians, retirees and dependents.

The Air Force Life Cycle Management Center (AFLCMC)

Propulsion Directorate

The AFLCMC manages more than 22,000 engines installed on over 30 different weapon systems in support of the U.S. Air Force and 50 international partners. It provides life cycle management for engines to include system development, acquisition, fielding, sustainment and modernization to ensure warfighter readiness, affordability, safety and effectiveness needs are met.

Other AFLCMC

Other Tinker AFB AFLCMC organizations provide life cycle management for the E-3 AWACS, B-1 Lancer, B-52 Stratofortress, KC-10 Extender, KC-135 Stratotanker and KC-46 Pegasus aircraft and the Presidential and Executive fleet.

Operational Wings

507th Air Refueling Wing

The 507th is a reserve component flying unit of the Air Force based at Tinker AFB. The wing primarily flies the KC-135 Stratotanker which provides the core refueling capability for the Air Force and aerial refueling support to the Navy, Marine Corps and allied nations.

552nd Air Control Wing (AWACS)

The 552nd files the Boeing E-3C Airborne Warning & Control System (AWACS) aircraft. AWACS are special mission aircraft equipped with a powerful airborne search and track radar system using a rotating dome mounted above the top of the rear fuselage.

Navy Strategic Communications Wing ONE and Task Group 114.2

Strategic Communications Wing ONE consists of three Navy squadrons and a Wing staff that provide maintenance, security, operations, administration, training and logistic support for the E-6B Mercury aircraft fleet. The Wing is comprised of approximately 1,200 military personnel, 65 permanent civilian federal employees and a limited number of civilian contract personnel.

Other

The 38th Cyberspace Engineering Installation Group

The 38th Cyberspace Engineering Installation Group, headquartered at Tinker Air Force Base, is the Air Force's premier engineering and installation group for the cyberspace domain. Tinker AFB is home to several components of the Group including the 38th Engineering Squadron and 38th Operations Support Squadron, along with serving as an operating location for the 38th Contracting Squadron at Joint Base San Antonio-Lackland.

Defense Logistics Agency

The Defense Logistics Agency is responsible for retail order management, planning, material management and storage and distribution of all items ordered through the depot supply account to support the Oklahoma City Air Logistics Complex repair facility for aircraft, engine and commodities.

Defense Information Systems Agency

The Defense Information Systems Agency (DISA) Defense Enterprise Computing Center, Oklahoma City is a combat support agency of the Department of Defense committed to providing enterprise-level information technology support and service capabilities to its mission partners. The agency provides, operates and assures command and control and information-sharing capabilities and a globally accessible enterprise information infrastructure in direct support to joint warfighters, national-level leaders and other mission and coalition partners across the full spectrum of military operations. DISA is focused on providing enterprise services, unified capabilities and mobility

options to support DOD operations anywhere, anytime. Through enterprise security architectures, smart computing options, and other leading-edge IT opportunities, DISA is the premier provider of IT services to meet the nation's defense needs.

Air Force Military Personnel. Of the 6,480 military personnel at Tinker AFB, 5,104 are active duty with the remaining 1,476 either Air Force Reserve or Air National Guard personnel. Military personnel at the base are primarily affiliated with the Air Force, but uniformed personnel from other services are represented on the base.

Only about 12.5% (810) of military personnel are reported as living on base, with most personnel and their families residing in surrounding communities. The 6,480 military personnel stationed at Tinker AFB along with their 4,660 dependents comprise a total of 11,140 military personnel and dependents.

Officers. Approximately 1,100 military personnel at the base are Air Force officers who work at high skill specialties that are largely aerospace related. Of the officers, approximately 250 are Pilots and Navigators, 500 are Air Battle Managers and Field Operations, 10 are Wing Commanders or Commanders and 10 are Aerospace Medicine. The remaining officers perform a range of specialties including engineering, logistics, cyber operations, intelligence, weather and others.

Enlisted. The nearly 3,400 enlisted Air Force personnel stationed at Tinker AFB primarily support the aviation and logistics mission of the base and have numerous high-skill specialties. Approximately 1,200 enlisted personnel are engaged directly in aerospace maintenance and 650 in air crew operations. Other specialties include command control systems (150), mission support (100), flight equipment (40), intelligence (40), material management (60), aerospace medicine (40) and engineering (20).

Civilian Air Force Personnel. The mission of Tinker AFB would not be possible without the numerous highly skilled civilians engaged in aerospace-related work at the base.

Figure 7 provides a detailed breakdown of employment by occupation for permanent, appropriated fund civilian Air Force personnel at the base at five-year intervals from 2005 to 2020.[9] Figure 7 also includes the most recent hiring outlook for high-demand occupations at the base through fiscal years 2021 and 2022.

In fiscal year 2020, a reported 17,438 permanent civilian Air Force jobs were located at Tinker AFB. Slightly more than half (55%) of the civilian jobs are white-collar occupations with the remainder trade and craft positions (45%).

White-Collar Occupations. By major type, there are a reported 9,565 (55%) white-collar workers among permanent civilian Air Force personnel at the base. Numerous high-skill, white-collar occupations directly related to aerospace are held by civilians at the base, including specialties in engineering and architecture (2,250 jobs); information technology (464 jobs); mathematics and statistics (300 jobs); quality assurance, inspection, and grading (228); and physical sciences (55 jobs).

Other more general white collar specialties include business and industry (1,434), accounting and budget (369), and supply (379).

Trade and Craft Occupations. Civilians filled a reported 7,873 trade and craft jobs at Tinker AFB in fiscal year 2020, with a large share of these workers holding traditional aerospace occupations. Approximately 6,000 jobs are in metal work (1,987 jobs), aircraft overhaul (1,584 jobs), engine overhaul (636 jobs), electrical installation and maintenance (464 jobs), metal processing (429 jobs), painting (322), electronic equipment installation and equipment maintenance (403 jobs), machine tool work (357 jobs), fluid systems

maintenance (340 jobs), industrial equipment maintenance (213), pliable materials work (104) and industrial equipment operation (13).

Figure 7. Air Force Permanent Civilian Jobs by Occupation & High Demand – Tinker AFB

	OPM Federal Occupations	Employment by Fiscal Year 2005	2010	2015	2020	High Demand Occupations FY21/FY22
Total Permanent Civilian Employment		**13,562**	**14,200**	**13,888**	**17,438**	**2,614**
White Collar Occupations		**7,533**	**7,454**	**7,492**	**9,565**	**1,510**
0	Miscellaneous Occupations	170	218	213	266	74
1	Social Science, Psychology, & Welfare	59	65	46	79	32
2	Human Resources Management	156	150	128	172	
3	General Admin, Clerical, & Office Services	1,952	2,073	1,945	2,410	255
4	Biological Sciences	2	2	2	4	
5	Accounting and Budget	250	278	278	369	44
6	Medical, Hosp., Dental, & Public Health	86	118	119	175	24
8	Engineering and Architecture	1,740	1,776	1,963	2,249	518
9	Legal and Kindred	26	22	22	28	6
10	Information and Arts	51	45	36	46	
11	Business and Industry	953	964	1,202	1,434	167
13	Physical Sciences	42	36	35	55	
14	Library and Archives	1	1	0	0	
15	Mathematics and Statistics	70	99	132	300	154
16	Equipment, Facilities, and Services	392	417	403	491	22
17	Education	86	78	88	161	22
18	Investigation	7	3	7	7	
19	Quality Assur., Inspection, & Grading	163	171	183	228	
20	Supply	910	562	334	379	36
21	Transportation	117	112	89	248	
22	Information Technology	300	264	267	464	156
Trade, Craft, or Labor Occupations		**6,029**	**6,746**	**6,396**	**7,873**	**1,104**
26	Electronic Equip Installation & Maintenance	369	364	352	403	28
28	Electrical Installation and Maintenance	314	445	393	464	32
31	Fabric and Leather Work	26	29	38	35	
33	Instrument Work	46	43	32	39	
34	Machine Tool Work	380	365	324	357	52
35	General Services and Support Work	106	205	132	12	
37	Metal Processing	599	463	380	429	37
38	Metal Work	1,102	1,546	1,539	1,987	520
41	Painting and Paperhanging	292	371	369	322	20
42	Plumbing and Pipefitting	19	22	21	27	
43	Pliable Materials Work	98	96	84	104	
46	Wood Work	12	11	12	25	
47	General Maintenance & Operations Work	1	1	2	14	
48	General Equipment Maintenance	27	32	26	44	
52	Miscellaneous Occupations	5	7	9	11	
53	Industrial Equipment Maintenance	138	140	135	213	25
54	Industrial Equipment Operation	27	22	12	13	
57	Transportation/Mobile Equip Operations	66	61	62	74	
58	Transportation/Mobile Equip Maintenance	3	0	0	24	
66	Armament Work	25	39	28	53	
69	Warehousing and Stock Handling	178	237	268	456	87
70	Packing and Processing	143	184	166	207	16
82	Fluid Systems Maintenance	441	377	301	340	30
86	Engine Overhaul	631	659	529	636	14
88	Aircraft Overhaul	981	1,027	1,182	1,584	243

Source: U.S. Office of Personnel Management - FedScope (pom.gov) and Tinker AFB FY2021/2022 Hiring Forecast

Related trade and craft occupations include warehousing and stock handling (456 jobs), industrial equipment maintenance (213) and packing and processing (207 jobs).

Civilian Employment Growth. Significant growth occurred in the number of civilian personnel at Tinker AFB the past five years. The number of permanent civilian personnel increased by 3,550 (26%) between 2015 and 2020. The number of both white collar and trade and craft occupations increased sharply since 2015. An estimated 2,073 white collar (27.7% gain) and 1,477 trade and craft (22.5% gain) civilian positions were added in the past five years.

The largest job gains among white-collar occupations include general administrative and clerical (465 jobs), engineering and architecture (286 jobs) and information technology (197 jobs).

Large job gains among trade and craft specialties since 2015 are directly tied to the aircraft maintenance, repair and overhaul mission of the base – metalwork (448 jobs), aircraft overhaul (402 jobs), engine overhaul (107 jobs), industrial equipment maintenance (78 jobs), electrical installation and maintenance (71 jobs), electronic equipment installation and maintenance (51 jobs), metal processing (49 jobs) and fluid systems maintenance (39 jobs).

Tinker AFB Hiring Outlook and High Demand Occupations.[10]

Future job expansion is anticipated at Tinker AFB in both the near- and long-term. Sources of expected new hires at the base include normal turnover, expanded MRO activities at the base and other factors.

KC-46 Pegasus. The recently added maintenance program for the new Boeing KC-46 Pegasus air refueling tanker is expected to contribute to future new hiring.[11] The construction of a new 156-acre campus on land acquired from Burlington Northern Santa Fe will eventually house 14 hangars for maintenance, repair and modification operations on the new tanker. The first hangar was completed in October 2019, and a second hanger is largely complete and scheduled to be turned over to the Air Force in late 2020. The planes will be based primarily at McConnell Air Force Base in Wichita, Kan. Training for pilots and fuel boom operators is underway at Altus Air Force Base in Oklahoma.

High Demand Occupations. Projected hiring by the Civilian Personnel Office at the base for fiscal years 2021 and 2022 totals more than 2,600 positions in high-demand occupations (1,510 white collar and 1,104 blue collar). A breakdown of the high-demand jobs by occupation is detailed along with current employment levels in Figure 7. The pace of new hiring for high-demand positions at the base is projected to remain steady at approximately 325 new workers per quarter over the next two fiscal years.

Approximately two-thirds (1,627) of the high-demand positions are classified as journeyman and the remaining one-third as developmental. Journeyman positions assume an individual would be work-ready and need little to no assistance in carrying out the work being performed. Developmental (DEV) positions assume individuals need additional training and/or assistance to be able to carry out the work being performed.

FAA – Mike Monroney Aeronautical Center

The FAA Center in Oklahoma City serves as the centralized service and support facility for the FAA and Department of Transportation (DOT). The FAA Center is a unique aerospace asset that plays a key role in national aviation policy, airport maintenance, air travel safety and aviation education.

FAA Activities. The center is a combination of diverse business units with operations ranging across most areas of the federal aviation transportation system. Several non-appropriated fund FAA lines of business have operations located at the center providing logistics functions, including maintenance, repair and

overhaul of FAA equipment; registry of aircraft; medical certification for pilots; navigational charting for flight paths; as well as aviation medical and human factors research.

Major groups of services provided at the FAA Center include technical training for air traffic controllers, technicians and engineers; financial, information systems security, technology and business services solutions for customers across the DOT and federal government; and facility management services to all tenants.

The FAA Center provides several unique services within the FAA, including:

1. FAA Academy – serves as the primary provider of technical training for the agency and the largest training facility within the DOT (76,000 total students attended the Academy in fiscal year 2019);
2. FAA Logistics Center (FAALC) – provides consulting, engineering, repair, distribution, and technical support for U.S. air traffic control systems;
3. Enterprise Services Center (ESC) – serves as one of four OMB-designated Shared Service Providers for financial services within the federal sector; and
4. Civil Aerospace Medical Institute (CAMI) – the medical certification, research, education, and occupational health wing of the FAA's Office of Aerospace Medicine. The Institute studies the factors that influence human performance and safety in the aerospace environment.

A small number of non-FAA tenants are also located at the center, including the Air Force, Coast Guard, Transportation Safety Institute, Office of Inspector General and National Aeronautics and Space Administration (NASA).

Figure 8. Permanent Civilian Jobs – FAA Center

OPM Federal Occupational Classification		Positions
White Collar Occupations		**3,006**
0	Miscellaneous Occupations Group	11
1	Social Science, Psychology, and Welfare Group	23
2	Human Resources Management Group	58
3	General Admin, Clerical, & Office Serv Group	629
4	Biological Sciences Group	7
5	Accounting and Budget Group	350
6	Medical, Hospital, Dental, & Public Health Group	31
7	Engineering and Architecture Group	626
8	Legal and Kindred Group	120
10	Information and Arts Group	10
11	Business and Industry Group	64
13	Physical Sciences Group	157
14	Library and Archives Group	2
15	Mathematics and Statistics Group	25
16	Equipment, Facilities, and Services Group	14
17	Education Group	43
18	Investigation Group	86
19	Quality Assur., Inspection, & Grading Group	23
20	Supply Group	11
21	Transportation Group	356
22	Information Technology	358
Trade, Craft, or Labor Jobs		**58**
31	Fabric and Leather Work	2
35	General Services & Support Work Family	3
41	Painting and Paperhanging Family	4
43	Pliable Materials Work Family	2
46	Wood Work Family	3
69	Warehousing & Stock Handling Family	40
70	Packing and Processing Family	5
	All Occupations	**3,064**

Notes: Includes only appropriated fund permanent civilian employees in FY2019
Source: FAA Mike Monroney Center and Office of Personnel Management

Budget and Operations. The large economic role of the FAA Center is traced to its total operating budget of $1.1 billion in fiscal year 2019. The expansive campus is located on 1,057 acres on the grounds of Will Rogers World Airport and is comprised of 134 buildings with over 3.3 million square feet of space. FAA has a long-term lease with the City of Oklahoma City valued at approximately $20 million annually for use of the airport property.[12]

FAA Center Employment. The FAA Center was home to a reported 5,159 federal civilian employees and contractors in fiscal year 2019. The workforce consists of 3,064 appropriated fund federal civilian employees, 2,062 contract workers and 33 employees at tenant organizations.

The FAA continues to maintain a very highly skilled workforce in Oklahoma City. The mix of occupations among permanent civilian employees at the center is detailed in Figure 8.[13] Approximately 98% of the jobs are white collar and most require professional or other specialized training.

Employment is highly concentrated in three key occupational groups. The largest includes 629 jobs in general administrative, clerical and office services occupations. These jobs reflect the administrative nature of much of the activity at the center but have decreased substantially in number since the 2015 aerospace report. The second largest specialty area includes 626 engineering and architecture positions. The large pool of FAA engineers based in Oklahoma City provides scheduled and emergency technical support services to FAA customers nationwide. The 358 workers in the information technology group comprise the third largest specialty area.

Other large specialty occupation groups include transportation (356), accounting and budget (350), legal (120), physical sciences (157), investigation (86) and business and industry (64).

The Boeing Company

The ongoing expansion of Boeing in Oklahoma City is possibly the most important development in the region's aerospace sector in recent years. Boeing is the second largest aerospace and defense contractor in the U.S. and is the largest federal contractor in the state. Boeing is also now the largest private aerospace employer in the region with over 3,660 employees.

Employees at Boeing in Oklahoma City are industry leaders in large aircraft sustainment and modernization, providing products and services for government customers, both U.S. and international, including engineering, software, logistics services and aircraft maintenance support.

Boeing's history in Oklahoma dates to 1953 when the company opened an office with 10 employees adjacent to Tinker Air Force Base.[14] By 2010, Boeing had built a substantial presence with a reported 700 workers in Oklahoma City.

Boeing announced in 2010 that it planned to relocate its B-1 program and C-130 avionics modernization program from Long Beach, Calif., to Oklahoma City. The move involved 550 workers providing engineering, contractor-logistics services and field support for military customers.

Boeing's expansion in Oklahoma City has continued over the past decade. The firm now operates an engineering center of excellence out of three buildings constructed in 2007, 2011 and 2012 near Tinker AFB with a total of more than 530,000 square feet.[15]

Oklahoma is now the 8th largest operating hub by employment for Boeing in the U.S.[16] Washington remains the dominant hub, with Missouri and California the second and third largest locations. Oklahoma trails key aerospace hubs in South Carolina, Texas, Arizona and Pennsylvania. However, Oklahoma has now amassed greater Boeing employment than several leading aerospace hubs including Alabama, Colorado, Virginia, Florida, Oregon, Illinois and Georgia.

Oklahoma Air National Guard

Oklahoma's National Guard – composed of the Army National Guard and the Air National Guard – traces its roots to 1890 before to statehood. Oklahoma Army and Air National Guard units have a unique dual mission that consists of both Federal and State responsibilities.[17]

The Oklahoma Air National Guard (OKANG) serves as the air component for the State's militia and remains a key component of the Greater Oklahoma City aerospace sector. The OKANG consists of two Wings across the state – the 137th Special Operations Wing (SOW) in Oklahoma City and the 138th Fighter Wing in Tulsa, both headquartered with the Oklahoma National Guard Joint Force Headquarters, also in Oklahoma City. The 137th SOW is located at Will Rogers Air National Guard Base (ANGB) just west of Will Rogers World Airport.

The OKANG in Oklahoma City operated with a budget of approximately $118 million in fiscal year 2020. Payroll comprises the largest portion of the budget, reaching $54 million in fiscal year 2020. Additional operational expenses totaled $26 million along with three formal training units that accounted for $10.3 million annually.

The 137th SOW specifically attracts substantial federal funding to the region. In addition to operational expenditures, contract funding of approximately $28 million supports aircraft maintenance, flight evaluations, Battlefield Airmen simulator management, flying and ground support. These activities facilitate diverse special operations training requirements locally, as well as for DoD special operators throughout U.S. Special Operations Command.

The highly skilled workforce at Will Rogers ANGB comprises a broad range of occupational skills including flight operations, intelligence, aeromedical evacuation, logistics, engineering, aircraft maintenance, communications, as well as many other support agencies. The OKANG reports total employment of 1,235 members for fiscal year 2020, consisting of 174 full-time active Guard and Reserve personnel, 176 full-time, dual-status federal employees with required ANG membership, 22 state employees and 863 part-time drill status Guardsman. Additional personnel are associated with a wide range of supporting contracts. Most full-time personnel reside in the Greater Oklahoma City region while part-time Guardsmen reside across the state – with some even residing regionally in nearby states.

Multiple permanent and tenant organizations are based at OKANG facilities in Oklahoma City, including:

- The **137th Special Operations Wing** (137th SOW) is a U.S. Air Force flying unit aligned under Air Force Special Operations Command and the Air National Guard. The wing supports worldwide missions, global special operations, and deployments through Air Force Special Operations Command, Air Combat Command (ACC), Air Mobility Command (AMC), U.S. Special Operations Command, and the 45th Infantry Brigade Combat Team (IBCT). The 137th SOW is also an internationally recognized and accredited training facility with formal in-house training units that produce highly trained Airmen to support manned intelligence, surveillance and reconnaissance (ISR), close air support, agile combat support, cyber and aeromedical evacuation. The 137th SOW is the home of the MC-12W, a manned airborne ISR platform with a 4-person crew that includes a pilot, co-pilot, combat systems officer and a tactical systems operator.

- The **137th Special Operations Group** (137th SOG) directs the training and deployment of the MC-12W ISR aircraft and crews, two intelligence squadrons, aeromedical evacuation, air support operations and advanced Battlefield Airmen training courses. The 137th SOG is home to both the

146th Air Support Operations Squadron (146th ASOS) and the **137th Aeromedical Evacuation Squadron** (137th AES). The 146th ASOS provides highly trained Tactical Air Control Party (TACP) specialists and air liaison officers who advise battlefield commanders on the best use of airpower, establishes and maintains command and control communications and provides controlled attack guidance for U.S. and coalition fixed-wing and rotary-wing aircraft. The 146th ASOS maintains a long-standing partnership with the 45th IBCT, which has a large footprint across the state of Oklahoma. The 137th AES provides time sensitive, mission critical en route care to patients to and between medical treatment facilities. The 137th AES is one of nine AES squadrons in the ANG and, along with the Air Force Reserves aeromedical evacuation (AE) squadrons, account for 70% of global AE missions. The 137th SOG has implemented and continues to develop international training courses as part of a broader national strategy to support NATO alliances. The 137th Combat Training Flight (137th CTF) leads courses in Initial Combat Skills Training for TACP specialists and the Joint Terminal Attack Controller Qualification Course (JTAC-QC), one of only two locations to host this training across the entire Air Force enterprise. In 2021, the 137th CTF welcomed its first international student from a partner NATO nation.

- The **137th Special Operations Medical Group** (137th SOMDG) provides personnel support for pre-deployment, post-deployment and in-garrison medical requirements at the 137th SOW. The Medical Group provides services in Flight Medicine, Dental, Optometry, Bio-environmental, Nursing Services, and Laboratory Services. The 137th SOMDG made significant contributions to the state at the beginning of the COVID-19 pandemic.

- The **137th Special Operations Mission Support Group** (137th SOMSG) provides vital day-to-day support for the personnel and infrastructure at Will Rogers ANGB. The 137th SOMSG maintains and improves base infrastructure through civil engineering, provides installation defense through security forces, communications, logistics and readiness and personnel force support services. The **205th Engineering Installation Squadron** was a former tenant at Will Rogers ANGB and is now a part of the SOMSG. The 205th is one of 16 engineering and installation squadrons in the Air Force, 15 of which are part of the Air National Guard. The 205th mobilizes to deploy resources to design, engineer and install cyber and C4I systems infrastructure throughout the world.

- The **306th Intelligence Squadron** (306th IS) is an ACC active-duty tenant unit at Will Rogers ANGB. The 306th IS trains and qualifies Airborne Cryptologic Operators to execute special operations missions worldwide. The colocation of the 306th with the 137th SOW puts intelligence operators in-training at the same location as a special operations ISR platform. When added to the 137th SOW's other capabilities, Will Rogers ANGB Airmen and others trained at the base provide battlefield commanders with a full-spectrum toolkit ranging from intelligence gathering to strike capabilities.

Along with supporting the nation's domestic and international defense missions, and assisting during times of disaster and civil unrest, 137th SOW Airmen also cooperate with federal, state and local governments in a range of activities including, but not limited to, security operations, border patrol, construction efforts, drug interdiction and firefighting. Guardsmen also regularly engage in specialized training missions overseas and with civilian authorities domestically.

Tinker Business and Industrial Park

A unique asset serving the region's aerospace firms is the Tinker Business and Industrial Park (TBIP), a sector-specific business park located in Midwest City adjacent to Tinker Air Force Base. The Park was established in 1989 with Boeing as its anchor tenant and now represents the largest concentration of private aerospace firms and technology companies in the region.

The park spans two campuses and is located within minutes of the Oklahoma City Air Logistics Complex at the Base. Tenants represent a cluster of more than 40 firms ranging from private companies, public agencies, tribal entities, universities, laboratories and education and training providers. Top aerospace and defense contractors such as Pratt & Whitney, Lockheed Martin, Rockwell Collins, GE Aviation, Choctaw Defense, Rolls-Royce and others utilize space at TBIP.

TBIP is also home to the Aerospace Collaboration & Partnership Center (ACPC), offering uniquely structured office space to aerospace start-ups, small businesses or companies with a small Oklahoma footprint. Space is structured for small numbers of employees on a short, medium or long-term basis at a flat rate per person.

TBIP is currently certified as a U.S. Small Business Administration (SBA) HUBZone due to its location within a qualified Census tract.[18] HUBZone status allows limited competition for certain contracts to businesses in these historically underutilized business zones. It also provides preferential consideration to HUBZone businesses in contracts with full and open competition.

V. Greater OKC Area Aerospace Occupation Profile

Future growth in the Greater Oklahoma City aerospace industry depends upon the continued availability of a highly-skilled workforce. The wage cost in the region relative to competing aerospace markets similarly plays a key role in the relative competitiveness of the region in capturing future industry growth.

This section of the report provides a detailed view of the existing aerospace workforce in the region. Data are provided on employment levels and average annual wage rates by detailed occupation covering both private sector and federal civilian government workers in aerospace-related jobs. Figures 9 and 10 provide a state-level comparison of employment levels and wage rates across several key aerospace occupations.

Aerospace Employment Comparison. Figure 9 examines employment levels and wage rates for four key aerospace occupations with varying skill requirements. The large, top-tier aerospace states of California, Texas, Washington, Georgia and Florida continue to lead in the number of employees in these categories as well as in most other aerospace-related occupations. These states tend to have both significant private aerospace manufacturing infrastructure and large-scale federal and military installations.

Nevertheless, Oklahoma continues to rank highly in the number of employees in these four key aerospace occupations. The state currently ranks 13th among the states with 1,660 aerospace engineers. This is roughly double the number reported in the 2015 report, pushing the state up from 18th to 13th. The number of aerospace engineers in a state is closely related to the level of research and development, manufacturing and space-related activity taking place. The Oklahoma City metropolitan area is home to a reported 790 of the state's 1,660 aerospace engineers, with recent gains led by Boeing's ongoing expansion in the region.

Oklahoma's 90 aerospace engineering and operations technicians rank 20th among the states. Aerospace engineering and operations technicians are most prevalent among states with large private aerospace manufacturing sites.

Figure 9. Rankings of Key Aerospace Industry Employment by Occupation & State (2019)

Aerospace Engineers (SOC 17-2011)			Aerospace Engineering & Operations Technicians (SOC 17-3021)			Aircraft Mechanics and Service Technicians (SOC 49-3011)			Avionics Technicians (SOC 49-2091)		
State	Jobs	Annual Wages	State	Jobs	Annual Wages	State	Jobs	Annual Wages	State	Jobs	Annual Wages
1 California	11,440	125,000	1 California	2,220	68,750	1 Texas	16,480	66,870	1 Washington	3,180	83,940
2 Washington*	6,680	137,550	2 Florida	1,520	58,830	2 California	13,800	71,890	2 Texas	2,970	64,110
3 Texas	6,140	126,740	3 Texas	1,380	66,350	3 Florida	13,490	65,350	3 Florida	2,260	58,000
4 Alabama	4,070	119,890	4 Ohio	960	67,420	4 Georgia*	7,490	66,540	4 California	1,620	75,740
5 Ohio	3,810	116,540	5 Arizona	920	64,100	5 Washington	6,070	69,430	5 Georgia	1,490	63,830
6 Florida	3,070	107,990	6 Georgia*	850	53,010	6 Arizona	4,740	65,700	6 Kansas	970	62,590
7 Maryland	2,810	135,400	7 Kansas	490	68,610	7 Oklahoma*	4,730	56,520	7 Alabama*	960	64,320
8 Kansas	2,450	106,300	8 Alabama	460	63,520	**8** Illinois	4,610	68,700	8 Arizona	610	60,610
9 Georgia	2,430	112,670	9 Washington	430	97,130	9 North Carolina	4,400	62,740	9 Maryland	610	74,100
10 Colorado	2,230	125,070	10 Colorado	280	92,600	10 Ohio	4,150	63,580	**10** Oklahoma*	540	55,760
11 New Jersey	2,100	116,740	11 New York	280	67,190	11 Michigan	3,520	57,410	11 Illinois	440	50,020
12 Virginia	1,830	123,290	12 New Jersey*	270	71,320	12 New York	3,410	71,360	12 New Jersey	430	70,230
13 Oklahoma	1,660	98,450	13 Maryland	230	76,670	13 Alabama*	3,150	64,230	13 North Carolina	370	55,130
14 Arizona	1,580	112,140	14 Indiana	220	72,410	14 Pennsylvania	2,650	72,340	14 Colorado	360	59,110
15 Connecticut	1,450	109,630	**15** Virginia	200	76,650	15 Virginia	2,440	68,260	15 Nevada	310	64,790
16 Missouri	1,190	110,560	16 New Mexico	180	68,650	16 Maryland	2,370	74,060	16 Virginia	300	63,690
17 Utah	710	103,930	17 Tennessee	160	69,850	17 Kentucky	2,260	69,690	17 Louisiana	290	65,370
18 Pennsylvania	680	112,840	18 Utah	130	64,000	18 New Jersey	2,150	75,120	18 Missouri	280	73,780
19 New Mexico	610	102,430	19 Pennsylvania*	110	67,370	19 Nevada	2,010	79,010	19 Oregon	220	70,740
20 North Carolina	530	93,110	20 Oklahoma	90	70,630	20 Colorado	1,920	74,280	20 Pennsylvania	210	69,540

* Values are estimates of data suppressed by BLS.
Source: Bureau of Labor Statistics (BLS) Occupational Employment Statistics

Oklahoma ranks 7th in the employment of aircraft mechanics and service technicians with 3,570 workers, and 10th in avionics technicians with 540 workers. The higher rankings for Oklahoma on both occupations reflect the relatively larger role they play in aircraft MRO activity, one of the state's and region's strengths in aerospace. The Oklahoma City metro area is home to 2,350 aircraft mechanics and service technicians, approximately half the state total, and 360 avionics technicians, approximately two-thirds of the state total. These two occupations better reflect the overall presence of military and civilian aviation across the state and in the Greater Oklahoma City region.

Aerospace Wage Comparison. In general, wages in Oklahoma for most aerospace occupations are among the lowest in the major aerospace states and reflect the relatively low overall cost-of-living in the state. Figure 10 provides an additional comparison of the overall wage structure for an expanded set of aerospace-related occupations in Oklahoma and eight other traditional aerospace states.

Oklahoma's aerospace wages are well below the western states of California and Washington for all reported occupations and below the neighboring states of Texas and Kansas across most occupations. Oklahoma's aerospace wages are basically on par with Arizona and Florida, both of which are lower-cost-of-living Sun Belt states with more highly-developed aerospace sectors.

The average wage of $98,450 for aerospace engineers in Oklahoma remains below the largest aerospace states. In the Oklahoma City metro area, aerospace engineers earned a reported average of $97,970 per year in 2019.[19]

The labor market for aircraft mechanics and service technicians is highly developed in Oklahoma but still has the lowest average annual wage ($56,520) among the comparison group. This was the case in the 2015 report as well. The average in the Oklahoma City metro area is slightly lower than the state at $52,880 annually. This reflects in part the military wages paid to active-duty military personnel included in the wage comparison.

Oklahoma's wages for support occupations such as electricians, machinists, engine assemblers and welders are more reflective of a national market for these occupations. Wages in Oklahoma are highly comparable to those paid in the eight comparison states. Wages in the Oklahoma City metro area for most of the occupations in Figure 10 are generally 5-15% above the respective statewide average for each occupation.

Figure 10. Average Annual Earnings by Aerospace-Related Occupation by State (2019)

Occupation	AL	AZ	CA	CO	FL	KS	OK	TX	WA
Aerospace Engineer. & Operations Tech.	$63,520	$64,100	$68,750	$92,600	$58,830	$68,610	$70,630	$66,350	$97,130
Aerospace Engineers	119,890	112,140	125,000	125,070	107,990	106,300	98,450	126,740	*138,770
Avionics Technicians	*63,830	60,610	75,740	59,110	58,000	62,590	*54,190	64,110	83,940
Aircraft Mechanics & Service Tech.	64,230	65,700	71,890	74,280	65,350	59,110	56,520	66,870	69,430
Electricians	47,490	49,350	70,460	55,050	45,720	54,750	51,950	52,230	71,160
Machinists	45,350	48,180	48,360	47,880	42,800	42,690	43,840	46,420	53,830
Engine & Other Machine Assemblers	45,990	41,260	40,080	39,750	32,670	38,310	36,570	41,100	45,740
Welders, Cutters, Solderers, & Brazers	40,910	44,070	47,910	49,870	41,650	43,710	43,600	46,940	53,960

* Values are estimates of data suppressed by BLS.
Source: Bureau of Labor Statistics (BLS) Occupational Employment Statistics

Profile of Greater OKC Region Key Aerospace Occupations

Figure 11 provides a more detailed profile of several key occupations in the aerospace sector in the Greater Oklahoma City region. The employment estimates in this section reflect total employment in each key aerospace-related occupation, whether workers are employed directly in aerospace or other industries. This provides an overall assessment of the depth of the labor market for each key occupation needed by aerospace employers.

The aerospace industry requires a diverse mix of workers with education requirements ranging from high school completion to a bachelor's degree. Most aerospace occupations require little work experience in the industry. However, most occupations require significant on-the-job training, often over multiple years.

Wages in most aerospace occupations in Oklahoma generally exceed the overall state average, with median hourly wages in aerospace generally above $20 per hour. The median hourly wage typically exceeds $40 per hour for engineers, air traffic controllers, pilots and software developers. Median wages are below $20 per hour in only a few key aerospace occupations, primarily air passenger airline services and some entry-level aircraft maintenance positions.

Sixteen key aerospace occupations in Figure 11 have a current employment base in the Greater OKC region of more than 1,000 workers. All sixteen have added workers the past five years except machinists. Several of the sectors have added more than 500 workers the past five years including logisticians (+854 jobs); engineers–all others (+595 jobs); miscellaneous assemblers and fabricators (+583 jobs); software developers and software quality assurance (+574 jobs); welders, cutters, solderers, and brazers (+549 jobs); and inspectors, testers, sorters, samplers and weighers (+515 jobs).

Other occupations with a significant expansion of workers the past five years include maintenance workers–machinery (+401 jobs); coating, painting and spraying machine operators (+350 jobs); and electrical, electronic and electromechanical assemblers (+204 jobs).

The Greater Oklahoma City region has also greatly expanded the available supply of engineers since 2015. Additional engineering jobs by occupation include aerospace engineers (+260 jobs); electrical engineers (+214 jobs); industrial engineers (+124 jobs); mechanical engineers (+81 jobs); materials engineers (+36 jobs); and engineers–all others (+595 jobs). Approximately 1,900 workers in engineering occupations were added to the Greater Oklahoma City workforce between 2015 and 2020.

The amount of annual hiring is generally related to the size of the existing workforce within each occupation. The seven largest aerospace occupations have very active labor markets, with all adding approximately 1,000 new hires or more in 2020.

The industry faces the task of filling numerous openings and the replacement of a considerable number of existing workers in the near term. The seven largest aerospace occupations all had more than 250 job openings annually over the past five years. More than 500 job openings annually are found in miscellaneous assemblers and fabricators (598 jobs), welders, cutters, solderers, and brazers (519 jobs). These numbers do not necessarily account for the full demand or job openings associated with Tinker AFB.

Figure 11. Labor Force Key Aerospace Sector Occupations – Greater OKC Region

SOC Code	Standard Occupational Classification (SOC)	Employment				Median Hourly Earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
		2015	2020	Change	%Chg.				
15-1256	Software Developers & Software Quality Assurance	3,826	4,383	574	16.1%	$42.98	Bachelor's degree	None	None
51-2098	Miscellaneous Assemblers and Fabricators	3,634	4,177	583	16.5%	$15.21	High school	None	Moderate-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	3,062	3,669	549	17.5%	$20.75	High school	None	Moderate-term on-the-job training
49-3011	Aircraft Mechanics and Service Technicians	2,685	2,726	66	2.6%	$25.66	Postsec. nondegree	None	None
13-1081	Logisticians	1,752	2,651	854	52.9%	$37.05	Bachelor's degree	None	None
47-2211	Sheet Metal Workers	2,485	2,588	86	3.8%	$25.84	High school	None	Apprenticeship
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	1,539	2,056	515	32.7%	$22.03	High school	None	Moderate-term on-the-job training
49-9041	Industrial Machinery Mechanics	1,686	1,808	146	9.0%	$24.61	High school	None	Long-term on-the-job training
17-2072	Electronics Engineers, Except Computer	1,368	1,382	13	1.0%	$44.88	Bachelor's degree	None	None
17-2199	Engineers, All Other	741	1,357	595	86.9%	$45.46	Bachelor's degree	None	None
51-4041	Machinists	1,768	1,278	-418	-24.1%	$23.39	High school	None	Long-term on-the-job training
51-2028	Electrical, Electronic, and Electromech. Assemblers	1,024	1,243	204	20.4%	$18.27	High school	None	Moderate-term on-the-job training
49-9043	Maintenance Workers, Machinery	819	1,212	401	46.9%	$22.23	High school	None	Long-term on-the-job training
11-9041	Architectural and Engineering Managers	978	1,133	160	17.4%	$67.83	Bachelor's degree	5+ years	None
51-9124	Coating, Painting, & Spraying Machine Operators	730	1,096	350	47.9%	$17.85	High school	None	Moderate-term on-the-job training
17-2141	Mechanical Engineers	995	1,077	81	8.4%	$41.96	Bachelor's degree	None	None
17-2011	Aerospace Engineers	577	833	260	47.7%	$47.62	Bachelor's degree	None	None
51-9161	Computer Numerically Controlled Tool Operators	835	824	17	2.1%	$20.44	High school	None	Moderate-term on-the-job training
17-3023	Electrical & Elect. Eng. Technologists/Technicians	858	781	-68	-8.5%	$32.89	Associate's degree	None	None
17-2071	Electrical Engineers	509	735	214	44.1%	$45.16	Bachelor's degree	None	None
17-2112	Industrial Engineers	552	662	124	23.5%	$42.26	Bachelor's degree	None	None
17-3026	Industrial Engineering Technologists & Technicians	490	587	85	19.1%	$32.57	Associate's degree	None	None
51-4081	Multiple Mach. Tool Setters, Operators, & Tenders	761	572	-111	-15.0%	$16.42	High school	None	Moderate-term on-the-job training
49-2091	Avionics Technicians	471	455	-29	-6.0%	$26.30	Associate's degree	None	None
53-2011	Airline Pilots, Copilots, and Flight Engineers	289	388	84	26.0%	$67.46	Bachelor's degree	<5 years	Moderate-term on-the-job training
51-2031	Engine and Other Machine Assemblers	378	327	-68	-18.6%	$16.50	High school	None	Moderate-term on-the-job training
43-4181	Reserv. & Transport. Ticket Agents & Travel Clerks	395	326	-49	-13.0%	$21.54	High school	None	Short-term on-the-job training
43-5011	Cargo and Freight Agents	216	290	59	30.3%	$20.07	High school	None	Short-term on-the-job training
53-2021	Air Traffic Controllers	242	275	26	10.4%	$50.74	Associate's degree	None	Long-term on-the-job training
53-2012	Commercial Pilots	284	221	-47	-16.9%	$41.53	High school	None	Moderate-term on-the-job training
51-4111	Tool and Die Makers	176	167	-13	-8.1%	$26.01	Postsec. nondegree	None	Long-term on-the-job training
17-2131	Materials Engineers	99	131	36	41.2%	$44.20	Bachelor's degree	None	None
51-2011	Aircraft Struct., Surfaces, Rigging, & Systems	76	65	-17	-13.1%	$19.34	High school	None	Moderate-term on-the-job training
53-6098	Aircraft Svc. Attendants & Transportation Workers	50	51	1	1.5%	$15.67	High school	None	Short-term on-the-job training
17-3021	Aerospace Eng. & Oper. Technologists/Technicians	23	51	28	214.3%	$38.76	Associate's degree	None	None
53-2022	Airfield Operations Specialists	34	47	14	62.0%	$21.27	High school	None	Long-term on-the-job training
53-1041	Aircraft Cargo Handling Supervisors	27	36	6	32.6%	$23.92	High school	<5 years	None

Source: EMSI Staffing Patterns 2020.4 (QCEW+Non-QCEW+Self-Employed)
Notes: These are key occupations for the six-digit NAICS codes in the core aerospace sectors. Includes both private and federal sector employers. However, employment counts are across all industries.

Figure 11. (Cont.) Labor Force in Key Aerospace Occupations – Greater OKC Region

SOC Code	Standard Occupational Classification (SOC)	Employment				Net Commu-ters	Hires (2020)	Separa-Tions (2020)	Avg Annual Openings (2015-20)	Total Regional Completions (2015-19)
		2015	2020	Change	%Chg.					
15-1256	Software Developers & Software Quality Assurance	3,826	4,383	574	16.1%	255	1,877	1,620	442	2,139
51-2098	Miscellaneous Assemblers and Fabricators	3,634	4,177	583	16.5%	59	3,575	3,610	598	0
51-4121	Welders, Cutters, Solderers, and Brazers	3,062	3,669	549	17.5%	-19	2,201	1,997	519	761
49-3011	Aircraft Mechanics and Service Technicians	2,685	2,726	66	2.6%	110	978	945	260	560
13-1081	Logisticians	1,752	2,651	854	52.9%	182	997	960	378	76
47-2211	Sheet Metal Workers	2,485	2,588	86	3.8%	231	1,760	1,669	315	0
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	1,539	2,056	515	32.7%	-33	1,483	1,574	326	0
49-9041	Industrial Machinery Mechanics	1,686	1,808	146	9.0%	51	822	724	208	0
17-2072	Electronics Engineers, Except Computer	1,368	1,382	13	1.0%	118	329	344	102	1,473
17-2199	Engineers, All Other	741	1,357	595	86.9%	77	355	330	178	1,071
51-4041	Machinists	1,768	1,278	-418	-24.1%	-36	666	597	164	325
51-2028	Electrical, Electronic, and Electromech. Assemblers	1,024	1,243	204	20.4%	34	683	653	192	0
49-9043	Maintenance Workers, Machinery	819	1,212	401	46.9%	-44	624	596	187	0
11-9041	Architectural and Engineering Managers	978	1,133	160	17.4%	55	329	313	107	9,558
51-9124	Coating, Painting, & Spraying Machine Operators	730	1,096	350	47.9%	16	729	681	171	470
17-2141	Mechanical Engineers	995	1,077	81	8.4%	23	353	301	100	2,174
17-2011	Aerospace Engineers	577	833	260	47.7%	28	195	177	93	434
51-9161	Computer Numerically Controlled Tool Operators	835	824	17	2.1%	-15	359	352	115	264
17-3023	Electrical & Elect. Eng. Technologists/Technicians	858	781	-68	-8.5%	49	313	306	88	363
17-2071	Electrical Engineers	509	735	214	44.1%	34	217	180	83	1,456
17-2112	Industrial Engineers	552	662	124	23.5%	9	238	176	69	271
17-3026	Industrial Engineering Technologists & Technicians	490	587	85	19.1%	60	237	223	75	803
51-4081	Multiple Mach. Tool Setters, Operators, & Tenders	761	572	-111	-15.0%	-60	311	282	95	193
49-2091	Avionics Technicians	471	455	-29	-6.0%	5	138	127	42	325
53-2011	Airline Pilots, Copilots, and Flight Engineers	289	388	84	26.0%	-16	134	116	63	0
51-2031	Engine and Other Machine Assemblers	378	327	-68	-18.6%	31	178	196	61	2
43-4181	Reserv. & Transport. Ticket Agents & Travel Clerks	395	326	-49	-13.0%	-2	169	151	74	72
43-5011	Cargo and Freight Agents	216	290	59	30.3%	35	271	279	49	53
53-2021	Air Traffic Controllers	242	275	26	10.4%	2	79	75	35	0
53-2012	Commercial Pilots	284	221	-47	-16.9%	-10	100	84	36	0
51-4111	Tool and Die Makers	176	167	-13	-8.1%	19	70	64	21	0
17-2131	Materials Engineers	99	131	36	41.2%	6	32	29	15	14
51-2011	Aircraft Struct., Surfaces, Rigging, & Systems	76	65	-17	-13.1%	-45	39	18	12	594
53-6098	Aircraft Svc. Attendants & Transportation Workers	50	51	1	1.5%	3	39	25	9	0
17-3021	Aerospace Eng. & Oper. Technologists/Technicians	23	51	28	214.3%	9	20	14	10	822
53-2022	Airfield Operations Specialists	34	47	14	62.0%	9	18	15	8	0
53-1041	Aircraft Cargo Handling Supervisors	27	36	6	32.6%	11	22	19	7	76

Source: EMSI Staffing Patterns 2020.4 (QCEW+Non-QCEW+Self-Employed)
Notes: These are key occupations for the six-digit NAICS codes in the core aerospace sectors. Includes both private and federal sector employers. However, employment counts are across all industries.

VI. State-Level Aerospace Markets

Making state level comparisons of aerospace markets is challenging due to the widely varying mix of private and public sector aerospace-related establishments in each state. Many comparative studies of state aerospace markets focus primarily on private sector aerospace activity and exclude the public sector component of the market.

For Oklahoma, this practice ignores large public sector aerospace assets and tends to rank the state as only an upper middle-tier aerospace state. This section of the report addresses this gap by providing a more comprehensive measure of the combined private and public sector components of the aerospace industry in each state. This approach provides for a more holistic comparison that captures the widely varying mix of both private and public sector aerospace activity across the states.

There is also little consensus on which components of the private side of the aerospace industry should be included in comparative state-level studies. We identify a standardized group of core private aerospace sectors that capture the bulk of the private industry in each state. The private aerospace sectors are identified using both widely available federal datasets and standard NAICS sectors. This approach provides ample historical data for measuring trends over time, and the data can be easily maintained going forward.

Examining both the private and public sides of the aerospace sector demonstrates the critical importance of examining public sector aerospace activity in Oklahoma and many other states. For Oklahoma, the state rises to among the ranks of the ten largest aerospace states measured by employment when the state's full private and public sector employment base is considered. The state's aerospace industry also showed considerable stability during the COVID-19 slowdown relative to the performance of the industry in states with a far higher share of private aircraft manufacturing and maintenance and commercial air carriers.

Profile of the Core Private Aerospace Industry by State

As described in the scope section of the report, a comparative view of the core private aerospace industry is prepared using NAICS sectors 3464 (aerospace product and parts manufacturing), 481 (air transportation), and 4881 (support activities for air transportation). These three sectors are believed to capture at least 90% of the private sector aerospace activity across the states.[20] Again, other far smaller components of the aerospace industry are excluded because of their small relative size but do not affect the state rankings in a meaningful way.

Economic activity in each of the three core private sectors is detailed in Figure 12 for each state and the nation. Economic measures include the number of business establishments, wage and salary employment and total annual wages. State rankings by total establishments, employment and annual wages are provided in Figure 13.

Nation. Based on the standardized definition of private aerospace, there were approximately 17,250 business establishments operating in the three core private aerospace sectors in the U.S. in 2019. These firms employed 1.27 million workers earning a total of $113 billion in annual wages. Average annual wages in the sector reached $89,258 per worker in 2019. The average private aerospace firm is relatively small with only about 75 employees.

Oklahoma. Oklahoma reported 317 private aerospace establishments with 19,038 employees earning $1.56 billion in annual wages in 2019. Average wages within the core aerospace sectors reached $82,172 in Oklahoma in 2019, about 8% below the national average. The average private aerospace firm in the state employed about 60 workers, slightly below national estimates. For comparison, estimates from the

aerospace industry profile detailed earlier in the report for the Greater Oklahoma City region found an estimated 10,840 private sector aerospace workers earning $1.0 billion in annual labor income.

Other States by Industry Concentration. Measured by NAICS 3364 (manufacturing and maintenance activity), the largest manufacturing-intensive aerospace markets are generally Washington, California, Texas, Connecticut, Arizona, Florida, Kansas, Ohio and Georgia. These are the traditional leading private aerospace markets for aircraft engineering and assembly, supplying both the defense and commercial aviation markets.

NAICS 3364 (manufacturing and maintenance activity) is a far more important factor in determining the total size of the industry than either NAICS 481 (air transportation) or 4881 (support activities for air transportation). Activity captured by NAICS 481 and 4881 is highly correlated with population, with larger states typically having larger commercial and general aviation sectors. There is some added concentration of employment in air transportation (NAICS 481) in states having either large commercial airline hubs or extensive tourism activity such as Georgia, California, Texas, Illinois, Florida and New York.

Similarly, states with extensive airline maintenance and service facilities (or large shares in sector 4881) include California, Florida, Texas, Illinois, Nevada and Arizona.

Figure 12. Core Private Aerospace Industry Sectors by State (2019)

State	Establishments				Wage & Salary Employment				Annual Wages ($Mil.)			
	NAICS Sector				NAICS Sector				NAICS Sector			
	3364	481	4881	Total	3364	481	4881	Total	3364	481	4881	Total
Alabama	79	66	142	287	13,010	686	3,536	17,232	$1,215.9	$50.2	$250.6	$1,516.7
Alaska	10	199	83	292	121	6,222	1,381	7,723	4.4	402.5	55.3	462.1
Arizona	134	123	246	502	30,682	14,196	7,572	52,450	3,322.6	1,107.1	429.2	4,858.9
Arkansas	27	45	110	181	4,045	744	1,138	5,926	259.0	31.9	48.0	338.9
California	629	584	787	2,000	77,956	58,577	33,331	169,864	8,653.4	5,686.3	1,625.7	15,965.4
Colorado	40	109	200	348	8,117	16,739	5,625	30,481	1,126.4	1,596.8	231.3	2,954.5
Connecticut	142	63	83	288	31,917	1,099	1,211	34,226	3,766.5	102.2	77.8	3,946.5
Delaware	6	28	39	72	654	185	581	1,419	50.1	21.4	49.0	120.6
Dist. of Columbia	1	23	9	33	6	70	62	139	0.7	8.8	5.1	14.7
Florida	386	678	947	2,011	25,814	45,888	28,389	100,091	2,597.6	3,777.8	1,319.7	7,695.0
Georgia	113	164	219	496	21,011	30,681	4,876	56,569	1,997.1	3,381.8	226.1	5,605.0
Hawaii	2	74	79	155	13	10,115	2,536	12,663	1.2	744.0	83.1	828.2
Idaho	27	66	69	162	507	1,455	892	2,854	26.1	73.0	51.9	150.9
Illinois	52	266	205	522	3,739	39,740	8,155	51,634	275.4	3,709.7	358.6	4,343.7
Indiana	49	89	143	281	6,309	3,316	2,987	12,612	601.8	199.4	157.3	958.4
Iowa	9	37	70	115	2,025	380	808	3,214	102.7	17.7	24.9	145.3
Kansas	156	38	120	314	33,182	337	1,469	34,988	2,607.5	18.9	78.6	2,704.9
Kentucky	27	62	103	193	3,314	2,843	3,750	9,906	236.6	215.7	269.2	721.5
Louisiana	19	103	98	220	1,298	2,576	1,809	5,682	116.0	173.8	79.6	369.5
Maine	6	29	42	77	1,687	260	697	2,644	166.6	10.3	24.7	201.6
Maryland	39	63	107	209	2,400	5,900	3,553	11,854	221.3	580.9	224.8	1,027.1
Massachusetts	29	139	90	258	11,003	9,689	3,335	24,026	1,490.6	764.7	135.9	2,391.2
Michigan	64	165	127	355	5,789	15,192	4,457	25,437	434.2	1,459.4	235.8	2,129.5
Minnesota	38	97	99	234	1,296	14,240	1,461	16,996	93.2	1,258.2	71.6	1,423.0
Mississippi	15	38	91	144	1,313	195	1,870	3,378	97.0	10.5	131.7	239.2
Missouri	50	83	144	277	17,406	4,518	2,917	24,842	2,014.5	273.9	137.6	2,426.1
Montana	9	55	68	132	288	820	808	1,915	20.5	31.8	35.1	87.3
Nebraska	11	33	60	104	579	481	2,301	3,360	30.5	26.0	120.9	177.4
Nevada	17	72	151	240	513	8,076	6,166	14,755	34.8	736.1	364.1	1,135.0
New Hampshire	11	37	40	88	1,486	503	470	2,460	117.1	41.2	29.7	188.0
New Jersey	24	138	124	285	1,594	18,327	6,419	26,340	122.9	1,802.3	276.2	2,201.4
New Mexico	19	46	71	135	696	1,208	1,138	3,043	66.4	55.8	73.0	195.3
New York	81	321	235	637	5,188	35,031	13,376	53,595	419.5	3,204.3	556.8	4,180.7
North Carolina	42	122	213	377	6,746	15,820	6,949	29,515	596.1	1,208.7	356.4	2,161.3
North Dakota	5	18	50	72	695	126	660	1,481	52.0	4.6	25.8	82.4
Ohio	152	150	216	518	20,078	10,183	5,778	36,038	2,135.1	1,169.0	317.7	3,621.8
Oklahoma	**69**	**62**	**186**	**317**	**13,545**	**1,441**	**4,052**	**19,038**	**1,183.7**	**102.3**	**278.4**	**1,564.4**
Oregon	47	88	100	235	3,628	5,404	2,224	11,257	324.8	396.6	82.8	804.2
Pennsylvania	63	169	155	387	10,375	13,310	4,168	27,852	1,111.3	1,122.2	157.8	2,391.3
Rhode Island	1	26	23	50	4	387	255	645	1.0	20.3	3.8	25.1
South Carolina	49	95	105	248	7,381	1,097	1,944	10,422	738.3	44.6	97.6	880.6
South Dakota	3	27	42	71	49	246	439	734	8.9	11.8	20.1	40.7
Tennessee	35	105	134	274	2,348	2,732	2,924	8,003	158.0	159.4	172.5	490.0
Texas	235	501	814	1,549	49,412	64,237	26,344	139,992	5,521.1	6,277.4	1,725.9	13,524.4
Utah	73	75	80	227	7,795	7,415	1,556	16,767	634.0	722.9	57.3	1,414.3
Vermont	7	13	28	48	1,441	119	242	1,801	110.5	5.4	10.9	126.8
Virginia	51	165	184	399	1,942	14,060	6,934	22,936	175.5	1,190.6	293.2	1,659.3
Washington	198	129	183	510	88,483	15,933	6,434	110,849	10,529.0	1,473.5	341.2	12,343.7
West Virginia	10	20	35	65	2,282	96	563	2,940	184.1	4.1	32.2	220.4
Wisconsin	25	60	114	199	1,395	1,995	2,093	5,483	100.6	110.3	81.2	292.1
Wyoming	4	29	33	66	55	457	208	720	2.2	19.5	6.4	28.1
United States	**3,382**	**5,980**	**7,891**	**17,252**	**532,609**	**505,340**	**232,839**	**1,270,788**	**55,856.3**	**45,617.5**	**11,916.0**	**113,389.8**

Source: Bureau of Labor Statistics (QCEW Survey) and Census Bureau (County Business Patterns)

Figure 13. State Rankings of Core Private Aerospace Industry Activity (2019)

State	Employ-ment	Rank	Estab-lishments	Rank	Annual Wages	Rank	Average Wage	Rank
Alabama	17,232	*21*	287	*19*	$1,516,749,781	*21*	$88,019	*12*
Alaska	7,723	*32*	292	*17*	462,139,290	*32*	59,838	*41*
Arizona	52,450	*7*	502	*8*	4,858,909,444	*6*	92,639	*11*
Arkansas	5,926	*33*	181	*34*	338,892,749	*34*	57,191	*42*
California	169,864	*1*	2,000	*2*	15,965,382,140	*1*	93,989	*10*
Colorado	30,481	*12*	348	*14*	2,954,517,440	*11*	96,930	*8*
Connecticut	34,226	*11*	288	*18*	3,946,486,591	*9*	115,306	*1*
Delaware	1,419	*47*	72	*45*	120,625,189	*45*	85,022	*15*
Dist. of Columbia	139	*51*	33	*51*	14,663,206	*51*	105,872	*3*
Florida	100,091	*4*	2,011	*1*	7,695,028,943	*4*	76,880	*26*
Georgia	56,569	*5*	496	*9*	5,605,029,321	*5*	99,083	*6*
Hawaii	12,663	*25*	155	*36*	828,213,293	*28*	65,403	*37*
Idaho	2,854	*41*	162	*35*	150,930,282	*42*	52,890	*46*
Illinois	51,634	*8*	522	*5*	4,343,743,207	*7*	84,125	*18*
Indiana	12,612	*26*	281	*21*	958,367,286	*26*	75,991	*29*
Iowa	3,214	*38*	115	*40*	145,261,288	*43*	45,203	*49*
Kansas	34,988	*10*	314	*16*	2,704,925,220	*12*	77,311	*24*
Kentucky	9,906	*30*	193	*33*	721,455,856	*30*	72,830	*32*
Louisiana	5,682	*34*	220	*30*	369,463,466	*33*	65,020	*38*
Maine	2,644	*42*	77	*43*	201,631,232	*38*	76,255	*28*
Maryland	11,854	*27*	209	*31*	1,027,064,203	*25*	86,646	*13*
Massachusetts	24,026	*18*	258	*24*	2,391,161,509	*15*	99,523	*5*
Michigan	25,437	*16*	355	*13*	2,129,487,159	*18*	83,715	*20*
Minnesota	16,996	*22*	234	*28*	1,422,975,954	*22*	83,722	*19*
Mississippi	3,378	*36*	144	*37*	239,243,846	*36*	70,829	*35*
Missouri	24,842	*17*	277	*22*	2,426,053,347	*13*	97,661	*7*
Montana	1,915	*44*	132	*39*	87,338,263	*46*	45,601	*48*
Nebraska	3,360	*37*	104	*41*	177,441,097	*41*	52,803	*47*
Nevada	14,755	*24*	240	*26*	1,134,991,063	*24*	76,921	*25*
New Hampshire	2,460	*43*	88	*42*	188,036,752	*40*	76,445	*27*
New Jersey	26,340	*15*	285	*20*	2,201,382,743	*16*	83,576	*21*
New Mexico	3,043	*39*	135	*38*	195,291,619	*39*	64,181	*39*
New York	53,595	*6*	637	*4*	4,180,651,807	*8*	78,004	*23*
North Carolina	29,515	*13*	377	*12*	2,161,306,447	*17*	73,227	*31*
North Dakota	1,481	*46*	72	*44*	82,401,481	*47*	55,658	*43*
Ohio	36,038	*9*	518	*6*	3,621,822,136	*10*	100,499	*4*
Oklahoma	**19,038**	***20***	**317**	***15***	**1,564,407,314**	***20***	**82,172**	***22***
Oregon	11,257	*28*	235	*27*	804,213,844	*29*	71,444	*34*
Pennsylvania	27,852	*14*	387	*11*	2,391,266,591	*14*	85,857	*14*
Rhode Island	645	*50*	50	*49*	25,100,709	*50*	38,891	*51*
South Carolina	10,422	*29*	248	*25*	880,552,584	*27*	84,489	*16*
South Dakota	734	*48*	71	*46*	40,701,853	*48*	55,490	*44*
Tennessee	8,003	*31*	274	*23*	489,958,025	*31*	61,225	*40*
Texas	139,992	*2*	1,549	*3*	13,524,371,164	*2*	96,608	*9*
Utah	16,767	*23*	227	*29*	1,414,268,865	*23*	84,351	*17*
Vermont	1,801	*45*	48	*50*	126,834,643	*44*	70,418	*36*
Virginia	22,936	*19*	399	*10*	1,659,304,299	*19*	72,345	*33*
Washington	110,849	*3*	510	*7*	12,343,652,844	*3*	111,356	*2*
West Virginia	2,940	*40*	65	*48*	220,403,734	*37*	74,957	*30*
Wisconsin	5,483	*35*	199	*32*	292,098,324	*35*	53,277	*45*
Wyoming	720	*49*	66	*47*	28,138,294	*49*	39,099	*50*
United States	**1,270,788**		**17,252**		**$113,389,808,244**		**$89,228**	

Source: Bureau of Labor Statistics (QCEW Survey) and Census Bureau (County Business Patterns)

Core Private Sector Rankings. Figure 13 ranks the states by the number of establishments, employment and wages paid across the core private aerospace sectors.

Across all three core private sectors, Oklahoma's ranks among the top 20 states. The state is 15th in the number of establishments, 20th in employment and 20th in total wages paid in 2019. Average annual wages paid rank 22nd. The state's core private aerospace rankings on all measures exceed the state's rank as the 28th most populous state.

Across the three core sectors, Oklahoma has a relatively higher concentration of NAICS 3364 (aerospace product and parts manufacturing), a lower concentration of NAICS 481 (air transportation) and a higher concentration of NAICS 4881(support activities for air transportation). More than 70% of Oklahoma's private sector aerospace employment is in NAICS 3364. The state's 13,545 employees in NAICS 3364 rank a competitive 11th among the states. The state ranks only 31st based on the 1,441 air transportation employees working in NAICS 481 but ranks 17th based on 4,052 employees in NAICS 4881.

In other words, the state's private sector aerospace mix reflects a relatively high level of manufacturing- and maintenance-related activity, far less commercial air traffic, and more air transportation services in Oklahoma than in states of comparable size.

The five largest private sector aerospace markets by employment are California, Texas, Washington, Florida and Georgia. All five states have diversified markets with a large share of all three core private sectors. High concentrations within NAICS 3364 (aerospace product and parts manufacturing) are evident among the leaders, all with large aerospace-related manufacturing sectors. Washington and California have a far larger share of NAICS 3364 than the other states.

Among the top five states, Texas, Florida and Georgia also have relatively high concentrations of NAICS 481 (air transportation), which reflects major airports, airline hubs and substantial air passenger travel.

Core Private Sector Growth. Figure 14 provides an overview of growth in the core private aerospace sectors for both Oklahoma and the nation in the two decades from 2000 to 2019. Activity is measured for the number of establishments, employment and total annual wages.

Both the U.S. and Oklahoma core private aerospace sectors have experienced volatility over time but remain in a general long-run uptrend. The trend and pace of growth in Oklahoma are both highly consistent with overall long-run trends at the national level. The core private aerospace sectors nationally and in Oklahoma can be characterized as having a steadily growing number of establishments, moderate growth in employment, and strong growth in total annual wages. Average annual wages per worker are growing rapidly as a result.

The number of establishments at both the state and U.S. levels remains in a relatively slow uptrend for the past two decades. Establishment growth in Oklahoma has slightly outpaced growth at the national level since 2014. The state added a reported 47 new private establishments between 2015 and 2019, a 16% increase.

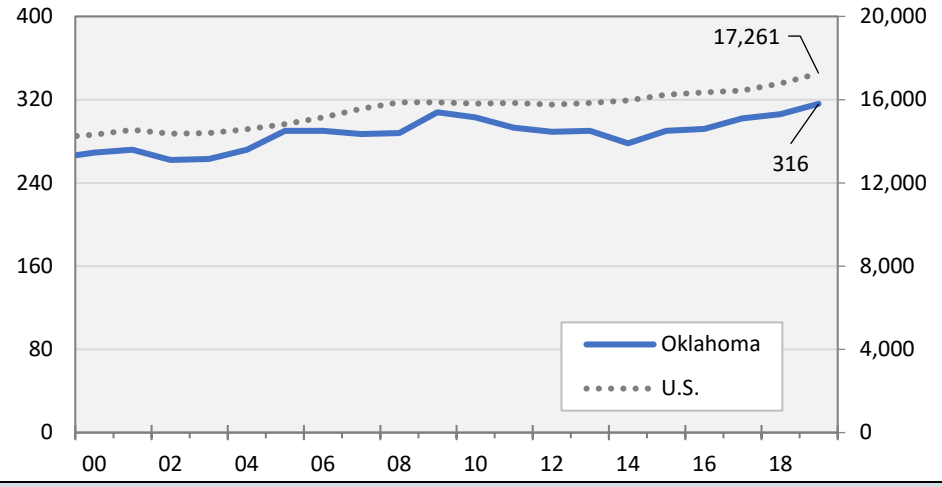
Employment is down slightly at the state and national levels over the full period but is up steadily since 2004 after experiencing a sharp drop in the early 2000s. Both the state and nation have posted strong core private sector job growth since 2015, with the nation adding nearly 63,000 core private sector aerospace jobs and the state adding almost 2,500.

Growth is most evident in wages paid to core private sector aerospace workers. The state and nation have enjoyed a significant long-run uptrend since 2000 with slowing only in recessionary periods. Total wages

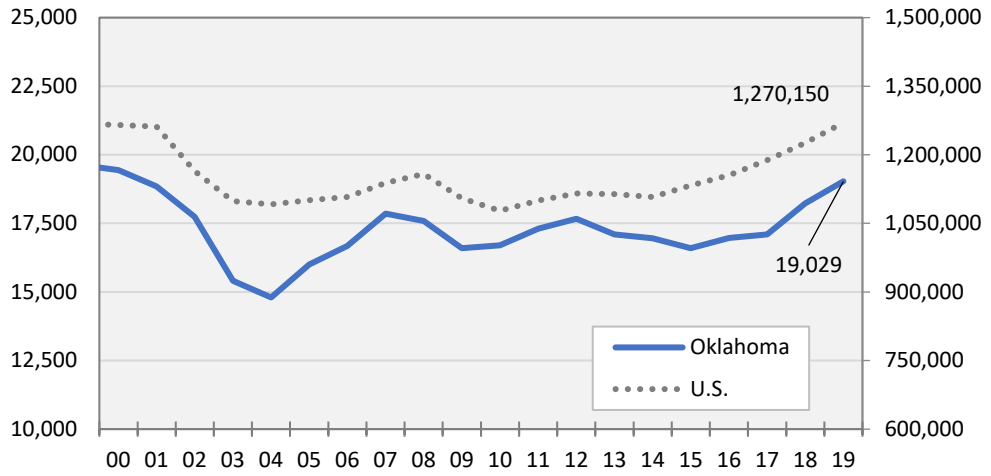
paid by core private sector aerospace employers nearly doubled between 2000 and 2019 at both the state and national levels.

Figure 14. U.S. & Oklahoma Core Private Aerospace Sectors (2000-2019)

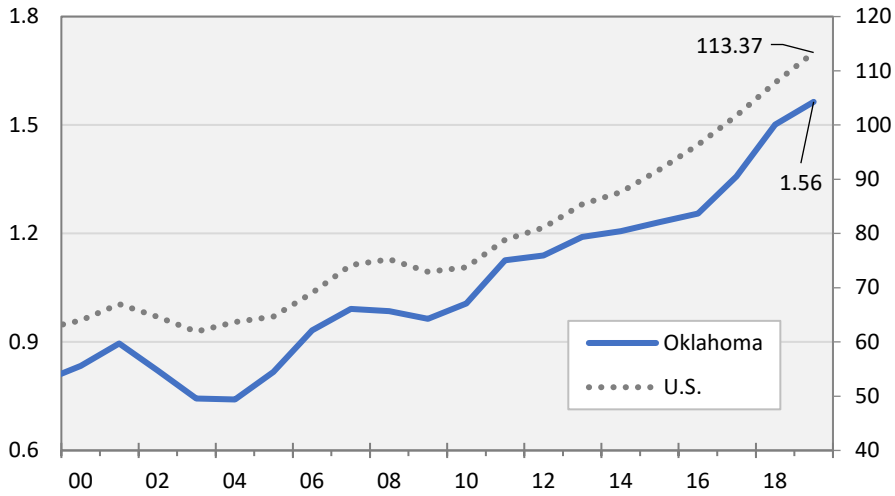
a) Number of Establishments



b) Wage & Salary Employment



c) Total Annual Wages ($Billions)



Notes: Employment data are annual averages of monthly data on a calendar year basis
Source: Bureau of Labor Statistics and RegionTrack tabulations

Public Sector Aerospace Employment. The state rankings developed in the prior section confirm an upper middle-tier placement of Oklahoma's aerospace market when viewed solely by its private sector component. Oklahoma generally ranks among the top 20 states and exceeds its expected rank based on population.

Again, the concern with examining only private sector aerospace activity in Oklahoma is that it overlooks the state's strong competitive position in public sector aerospace. In the Greater Oklahoma City region, public sector workers comprise the backbone of the aerospace sector. Using only the private sector also fails to capture the natural synergies between the private and public sectors of the industry. Many firms in the region are engaged in both private and public sector aerospace activities. The activities underway at public sector aerospace entities are often functionally equivalent to those in the private sector. This includes transferable labor market skills, common infrastructure and equipment and similar maintenance and repair activities.

The role of public sector aerospace activity is often overlooked in other states as well. As in Oklahoma, this activity is most often tied to the mission of the Air Force and other entities including the Air National Guard and Air Force Reserve units. However, in Oklahoma and a few other states, it extends beyond military applications to the FAA and other federal aerospace-related entities.

Defining Public Sector Aerospace

In this section of the report, we prepare state-level rankings that capture public sector aerospace activity in Oklahoma and the other states. The public sector estimates are then combined with the core private sector rankings developed in the prior section to evaluate the size and overall composition of the combined aerospace sector in Oklahoma relative to other states.

Public sector aerospace activity is measured using five distinct segments of the public sector workforce:

1. active-duty Air Force personnel
2. permanent civilian Air Force employees
3. Air Force reserve personnel
4. Air National Guard personnel, and
5. permanent civilian FAA employees

These five groups of public sector employees are directly and deeply involved in aerospace activities but are frequently excluded from state-level reviews of aerospace markets.

Figure 15 summarizes state-level employment in each of the five aerospace-related segments in fiscal year 2020. The five public sector components are listed in order from largest to smallest by national employment, with active-duty Air Force personnel the largest and permanent civilian FAA employees the smallest. The categories exclude some small amounts of aerospace employment in other branches of the Armed Forces.

Across all five sectors, approximately 660,000 workers were employed nationally by public sector aerospace entities. That equates to roughly half the 1.27 million workers in the core private aerospace sectors.

Approximately 275,000 public sector aerospace workers were active-duty Air Force personnel and 168,200 permanent Air Force civilian workers.

The smaller segments include 105,000 Air National Guard personnel and 68,500 Air Force Reserve members. Finally, 43,200 public sector aerospace-related workers are permanent FAA civilian employees.

Figure 15. Public Sector Aerospace Employment by State (FY2020)

Duty State	Air Force				Air Guard/Reserve				FAA Permanent Civilians		Total Public Sector	
	Active Duty		Permanent Civilian		Air National Guard		Air Force Reserve					
Alabama	2,858	33	2,399	18	2,424	11	1,406	21	223	35	9,310	27
Alaska	7,922	12	2,421	17	2,176	19	378	31	1,094	12	13,991	15
Arizona	11,242	6	3,375	11	2,566	10	2,527	7	523	24	20,233	10
Arkansas	3,656	26	1,055	29	1,943	26	389	30	162	38	7,205	33
California	19,088	3	9,940	7	4,809	3	7,603	1	3,421	3	44,861	3
Colorado	9,183	10	5,811	9	1,775	30	3,234	5	1,002	14	21,005	8
Connecticut	35	47	179	50	1,169	41	1	44	141	40	1,525	48
Delaware	3,582	27	1,014	31	1,049	46	1,546	16	25	51	7,216	32
District of Columbia	1,769	34	334	44	1,314	36	233	33	3,676	2	7,326	30
Florida	23,571	2	12,847	5	2,107	23	6,804	2	2,513	5	47,842	2
Georgia	9,499	8	15,272	4	2,819	8	3,155	6	2,335	6	33,080	4
Hawaii	5,569	19	1,336	25	2,314	15	758	29	352	29	10,329	22
Idaho	3,545	28	587	40	1,339	35	28	38	117	46	5,616	34
Illinois	4,469	23	2,837	14	2,905	7	1,541	17	1,627	9	13,379	17
Indiana	75	43	735	38	1,915	28	1,510	19	812	17	5,047	40
Iowa	27	49	331	45	1,921	27	0	46	178	37	2,457	45
Kansas	3,150	32	952	33	2,158	21	769	28	722	18	7,751	29
Kentucky	243	37	240	47	1,252	37	4	42	299	32	2,038	47
Louisiana	5,296	21	1,611	23	1,529	31	1,300	24	308	30	10,044	23
Maine	11	51	206	49	1,071	45	0	46	131	44	1,419	49
Maryland	8,629	11	3,052	13	1,870	29	1,894	12	399	28	15,844	12
Massachusetts	1,213	35	3,282	12	2,077	24	2,031	10	444	27	9,047	28
Michigan	100	42	669	39	2,393	12	1	44	650	20	3,813	41
Minnesota	56	46	822	34	2,262	17	1,442	20	853	16	5,435	36
Mississippi	6,503	17	2,478	16	2,598	9	1,553	15	123	45	13,255	18
Missouri	4,316	25	1,193	27	2,229	18	1,046	27	658	19	9,442	26
Montana	3,410	30	749	37	922	51	21	40	156	39	5,258	39
Nebraska	5,785	18	2,578	15	986	49	323	32	140	41	9,812	25
Nevada	10,544	7	1,687	22	1,195	40	1,254	26	305	31	14,985	13
New Hampshire	31	48	294	46	1,092	44	0	46	649	21	2,066	46
New Jersey	4,969	22	1,979	20	2,368	14	2,322	8	1,604	10	13,242	19
New Mexico	12,278	5	3,649	10	984	50	230	34	494	26	17,635	11
New York	419	36	1,967	21	5,579	1	1,286	25	1,842	7	11,093	21
North Carolina	6,653	16	1,194	26	1,456	32	1,521	18	509	25	11,333	20
North Dakota	7,598	13	1,089	28	1,156	42	37	37	135	42	10,015	24
Ohio	5,509	20	15,527	3	5,052	2	3,544	4	1,035	13	30,667	6
Oklahoma	**7,519**	**14**	**17,837**	**1**	**2,171**	**20**	**1,823**	**13**	**3,260**	**4**	**32,610**	**5**
Oregon	143	40	464	41	2,381	13	115	35	262	33	3,365	42
Pennsylvania	226	38	1,044	30	4,087	4	1,313	23	620	22	7,290	31
Rhode Island	61	45	166	51	1,008	47	2	43	65	47	1,302	51
South Carolina	9,262	9	2,047	19	1,227	39	2,181	9	257	34	14,974	14
South Dakota	3,431	29	751	36	1,108	43	22	39	64	48	5,376	38
Tennessee	163	39	1,005	32	3,423	5	8	41	889	15	5,488	35
Texas	34,294	1	17,051	2	3,390	6	6,096	3	3,889	1	64,720	1
Utah	4,370	24	12,749	6	1,449	34	1,350	22	560	23	20,478	9
Vermont	62	44	236	48	987	48	0	46	44	50	1,329	50
Virginia	12,418	4	6,191	8	1,456	32	2,004	11	1,438	11	23,507	7
Washington	6,805	15	1,404	24	1,973	25	1,797	14	1,832	8	13,811	16
West Virginia	18	50	377	43	2,112	22	0	46	132	43	2,639	44
Wisconsin	127	41	417	42	2,287	16	0	46	189	36	3,020	43
Wyoming	3,249	31	783	35	1,243	38	54	36	53	49	5,382	37
United States	**274,951**		**168,213**		**105,076**		**68,456**		**43,211**		**659,907**	

Source: Department of Defense Manpower Center and Office of Personnel Management

Oklahoma Public Sector Aerospace. The results in Figure 15 indicate that Oklahoma is home to 32,610 public sector aerospace-related employees, the 5th largest concentration among the states. It is this deep concentration of public sector aerospace jobs in Oklahoma that makes their inclusion so vital in comparative state-level studies of aerospace. The breadth and depth of the Oklahoma aerospace market simply cannot be captured otherwise.

Remarkably, only Texas (64,720), Florida (47,842), California (44,861) and Georgia (33,080) have a larger pool of public sector aerospace-related employment. These four states are all traditional aerospace and defense industry leaders. Oklahoma along with these four states and Ohio form a top tier of six states measured by public sector aerospace jobs. Each of the six states has between 30,000 and 65,000 public sector aerospace workers, far outpacing the remaining states.

A second tier of four states have between 20,000 and 24,000 public sector aerospace workers – Virginia (23,507), Colorado (21,005), Utah (20,478) and Arizona (20,233).

Among the top 10 states based on public sector jobs, Oklahoma, Virginia and Utah all have more public sector aerospace employment than core private sector jobs. It is especially critical to evaluate the role of public sector aerospace activity in these three states.

Air Force – Active Duty and Civilian. Air Force personnel have long played a key role in aerospace activity in Oklahoma and the Greater Oklahoma City region. Measured by the number of active-duty Air Force personnel, the state ranks 14th with 7,519 in fiscal year 2020. A reported 5,104 of the active-duty Air Force personnel in the state are stationed at Tinker AFB.

More importantly, Oklahoma ranks 1st among the states in the number of permanent civilian Air Force employees, with nearly all based at Tinker Air Force Base. Much of the strength of the overall state aerospace labor force is traced to 17,837 highly skilled permanent civilian Air Force employees working in Oklahoma. Oklahoma has consistently ranked at or near the top among the states the past two decades, currently rivaled only by 2nd-ranked Texas.[21]

Permanent civilian Air Force workers are highly concentrated around the nation's Air Force bases and located in only a handful of states in addition to Oklahoma. These include Texas (17,051), Ohio (15,527), Georgia (15,272), Florida (12,847), Utah (12,749) and California (9,940). Far smaller concentrations are found in Virginia (6,191) and Colorado (5,811).

Civilian Air Force workers employed at Tinker AFB have a range of occupational specialties. The presence of these civilian workers greatly enhances the competitive labor market for aerospace workers statewide and in the Greater Oklahoma City region. These workers possess technical skills and industry knowledge that transition easily between both public and private sector aerospace employers.

Air National Guard/Air Force Reserve. Air Guard and Air Force Reserve personnel are no less important a component of the aviation market across the states. State-level Air National Guard units typically maintain active air wings in support of the defense mission of the Air Force. This personnel includes flight crew, flight operations and management, aircraft maintenance specialists, intelligence, medical and many other specialties.

Concentrations of Air Guard personnel tend to be greater in larger states, but also reflect proximity to large Air Force bases. Every state has an active Air National Guard with total personnel typically ranging from 1,000 to 3,000. Oklahoma ranks 20th with 2,171 Air National Guard members and 13th among the states with 1,823 Air Force Reserve personnel in fiscal year 2020. States with large numbers of active-duty Air

Force personnel tend to have higher numbers of Reserve personnel. Approximately 20 states have very small numbers of Air Force Reserve personnel.

Civilian FAA Personnel. The significant size of the FAA Center in Oklahoma City elevates Oklahoma to 4th among the states and the District of Columbia with 3,260 permanent civilian FAA workers in fiscal year 2020. Oklahoma trails only Texas (3,889), the District of Columbia (3,676) and California (3,421) in permanent FAA employees.

It is important to note that the state comparison of FAA employment in this section does not include the nearly 2,000 additional non-appropriated fund contract employees working at the FAA Center or similar contract workers at other FAA facilities in other states.[22] When contract workers and long-term FAA students are included, the FAA Center in Oklahoma City ranks as the largest single-site concentration of FAA workers outside of the District of Columbia.

Private and Public Sector Aerospace Employment. The aerospace market in many states, including Oklahoma, takes on a far different profile when both core private and public sector activities are considered. Figure 16 provides rankings of combined private and public sector aerospace employment across the states.

The change in rankings is evident in Oklahoma where a combined 51,600 workers comprise the private and public sector aerospace labor market. Oklahoma rises from the 20th largest market when measured by core private sector employment to the 10th largest when public sector aerospace workers are added to the labor pool.

The top tier of the combined market is dominated by the four largest traditional aerospace states of California (214,725), Texas (204,712), Florida (147,933) and Washington (124,660). Of these four, California, Texas and Florida have very large numbers of both private and public sector aerospace employees. However, Washington's high ranking is traced primarily to private sector employment largely related to Boeing commercial jet production. Washington has the 3rd highest number of private aerospace employees but only the 16th highest number of public sector personnel, roughly opposite the rankings of Oklahoma.

Seven additional states (including Oklahoma) comprise a second tier, with each having between 50,000 and 100,000 combined core private and public sector aerospace personnel. The group includes Georgia (89,649), Arizona (72,683), Ohio (66,705), Illinois (65,013), New York (64,688), Oklahoma (51,648) and Colorado (51,486).

Three additional states have more than 40,000 private and public sector aerospace workers – Virginia (46,443), Kansas (42,739) and North Carolina (40,808).

The rankings in Figure 16 highlight the vital role of public sector employment in the structure of the Oklahoma aerospace industry. As Oklahoma moves from 20th to 10th when public sector employment is added, it supplants the large commercial aircraft producing state of Kansas in the top 10.

Among all states, Oklahoma and New Mexico enjoy the largest improvement in rank when public sector workers are included in aerospace employment. Oklahoma's move from 20th to 10th and New Mexico's improvement from 39th to 29th are traced primarily to large Air Force installations. Both states are home to major Air Force bases employing large numbers of federal civilian workers.

However, the role of public sector employment is important in other states as well. For example, Delaware, Utah and Virginia also have a large Air Force presence and similarly advance in the rankings when public

sector employment is considered. When public sector jobs are considered, Virginia moves up from 19th to 12th, Utah advances from 23rd to 16th and Delaware rises from 47th to 39th.

Conversely, when public sector aerospace jobs are included, New York drops from 6th to 9th, Kansas drops from 10th to 13th, and Connecticut drops from 11th to 17th. These traditional leading aerospace states have substantial core private sector employment but are home to relatively few public sector aerospace jobs.

Figure 16. Core Private and Public Sector Aerospace Employment

State	Core Private Sector (2019)		Public Sector (FY2020)		Core Private + Public	
	Employment	Rank	Employment	Rank	Employment	Rank
California	169,864	*1*	44,861	*3*	214,725	*1*
Texas	139,992	*2*	64,720	*1*	204,712	*2*
Florida	100,091	*4*	47,842	*2*	147,933	*3*
Washington	110,849	*3*	13,811	*16*	124,660	*4*
Georgia	56,569	*5*	33,080	*4*	89,649	*5*
Arizona	52,450	*7*	20,233	*10*	72,683	*6*
Ohio	36,038	*9*	30,667	*6*	66,705	*7*
Illinois	51,634	*8*	13,379	*17*	65,013	*8*
New York	53,595	*6*	11,093	*21*	64,688	*9*
Oklahoma	**19,038**	***20***	**32,610**	***5***	**51,648**	***10***
Colorado	30,481	*12*	21,005	*8*	51,486	*11*
Virginia	22,936	*19*	23,507	*7*	46,443	*12*
Kansas	34,988	*10*	7,751	*29*	42,739	*13*
North Carolina	29,515	*13*	11,333	*20*	40,848	*14*
New Jersey	26,340	*15*	13,242	*19*	39,582	*15*
Utah	16,767	*23*	20,478	*9*	37,245	*16*
Connecticut	34,226	*11*	1,525	*48*	35,751	*17*
Pennsylvania	27,852	*14*	7,290	*31*	35,142	*18*
Missouri	24,842	*17*	9,442	*26*	34,284	*19*
Massachusetts	24,026	*18*	9,047	*28*	33,073	*20*
Nevada	14,755	*24*	14,985	*13*	29,740	*21*
Michigan	25,437	*16*	3,813	*41*	29,250	*22*
Maryland	11,854	*27*	15,844	*12*	27,698	*23*
Alabama	17,232	*21*	9,310	*27*	26,542	*24*
South Carolina	10,422	*29*	14,974	*14*	25,396	*25*
Hawaii	12,663	*25*	10,329	*22*	22,992	*26*
Minnesota	16,996	*22*	5,435	*36*	22,431	*27*
Alaska	7,723	*32*	13,991	*15*	21,714	*28*
New Mexico	3,043	*39*	17,635	*11*	20,678	*29*
Indiana	12,612	*26*	5,047	*40*	17,659	*30*
Mississippi	3,378	*36*	13,255	*18*	16,633	*31*
Louisiana	5,682	*34*	10,044	*23*	15,726	*32*
Oregon	11,257	*28*	3,365	*42*	14,622	*33*
Tennessee	8,003	*31*	5,488	*35*	13,491	*34*
Nebraska	3,360	*37*	9,812	*25*	13,172	*35*
Arkansas	5,926	*33*	7,205	*33*	13,131	*36*
Kentucky	9,906	*30*	2,038	*47*	11,944	*37*
North Dakota	1,481	*46*	10,015	*24*	11,496	*38*
Delaware	1,419	*47*	7,216	*32*	8,635	*39*
Wisconsin	5,483	*35*	3,020	*43*	8,503	*40*
Idaho	2,854	*41*	5,616	*34*	8,470	*41*
Dist. of Columbia	139	*51*	7,326	*30*	7,465	*42*
Montana	1,915	*44*	5,258	*39*	7,173	*43*
South Dakota	734	*48*	5,376	*38*	6,110	*44*
Wyoming	720	*49*	5,382	*37*	6,102	*45*
Iowa	3,214	*38*	2,457	*45*	5,671	*46*
West Virginia	2,940	*40*	2,639	*44*	5,579	*47*
New Hampshire	2,460	*43*	2,066	*46*	4,526	*48*
Maine	2,644	*42*	1,419	*49*	4,063	*49*
Vermont	1,801	*45*	1,329	*50*	3,130	*50*
Rhode Island	645	*50*	1,302	*51*	1,947	*51*
United States	**1,270,788**		**659,907**		**1,930,695**	

Source: Bureau of Labor Statistics (QCEW Survey), Census Bureau (County Business Patterns), Department of Defense Manpower Center, and Office of Personnel Management

Similarly, Connecticut, Michigan, Minnesota, Indiana, Oregon, Iowa, Kentucky, West Virginia, Wisconsin, New Hampshire, Maine and Vermont all experience large declines in rank when public sector employment is considered. These states generally have little public sector aerospace employment.

Both Connecticut and Michigan, two traditional aerospace states, are frequently ranked well ahead of Oklahoma based only on private sector employment but trail far behind based on combined employment.

VII. Aerospace Economic Development Policy

Aerospace Economic Development Incentives

Along with the state, the Greater Oklahoma City area local government and economic development entities are committed to providing a highly supportive landscape for the aerospace sector. Aerospace has been identified in many policy studies as a targeted growth sector for the state and the Greater Oklahoma City region. The sector is viewed as highly compatible with current industry and labor force assets as well as the overall growth strategy of the region.

The state most recently enacted the Oklahoma Aerospace Commerce Economic Services (ACES) program in 2018 to establish a common statewide goal for the growth of the state's aerospace industry.[23] The purpose of ACES is to create a partnership of service providers to respond more effectively to the needs of the aviation, aerospace, and defense industries in the areas of education, training, research, and economic development.

The Greater Oklahoma City Chamber, in partnership with the City of Oklahoma City, Oklahoma County, member counties of the Greater Oklahoma City Partnership and The Alliance for Economic Development of Oklahoma City, actively recruits and supports the growth of existing aerospace firms. The organizations also partner to support the development and promotion of properties that provide runway access and resources for aerospace companies, as well as legislative issues that could positively impact the industry. Additionally, the Chamber maintains a team of business recruiters that focus on aerospace, as well as a specific on-staff liaison to federal, military and private sector aerospace organizations in the industry.

The state of Oklahoma offers a range of financial incentives for aerospace firms choosing to relocate to or expand in Oklahoma.[24] These include general programs available to employers in all industry sectors as well as targeted incentives designed specifically for the aerospace sector.

Oklahoma Engineer Workforce Tax Credits

The state currently offers an engineer tax credit that benefits both employees and employers in the aerospace sector (*see Figure 17*). Aerospace companies hiring engineers in a variety of fields can receive a tax credit

Figure 17. Oklahoma Engineer Workforce Tax Credit

Employer Benefits:

- **New Engineer Graduates:**
  - 50% Tax Credit for Reimbursed Tuition Costs
  - For First 4 Years of Employment
- **Hire Oklahoma Graduates:**
  - Up to 10% of Wages Paid During First 5 Years of Employment
  - Maximum of $12,500 per Employee Annually
- **Hire Non-Oklahoma Graduates:**
  - Up to 5% of Wages Paid During First 5 Years of Employment
  - Maximum of $12,500 per Employee Annually

Employee Benefits:

- Eligibility: Current Employed Aerospace Engineers
- Eligible to Receive Individual Tax Credit
- Up to $5,000 per Year for 5 Years

equal to 5% of the compensation paid to an engineer and 10% if the engineer graduated from an Oklahoma college or university, plus another credit of up to 50% of the tuition reimbursed to an employee. Additionally, the engineer hired can receive a personal income tax credit of $5,000 per year.

Software/Cybersecurity Workforce Tax Credit

The state offers a tax credit targeted at growing the number of software development and cybersecurity jobs in the state. The aerospace industry is increasingly dependent upon workers with skills in software design, cybersecurity, and other areas of information technology. Information technology-related occupations are numerous at Tinker AFB, the FAA Center and private sector employers.

The tax credit provides up to $2,200 annually for qualifying employees who receive a degree from an accredited institution, or $1,800 annually for qualifying employees who are awarded a certificate from a technology center. To receive the credit, employees must meet strict educational requirements and obtain employment in a qualified industry for a qualified employer. The credit can be claimed for no more than seven years and cannot be claimed simultaneously by an individual claiming the tax credit for aerospace engineers.

Aerospace and Aviation Education Programs

Educational entities across the state and in the Greater Oklahoma City region are committed to supporting the development of the extensive range of skilled workers needed by the aerospace sector.

A broad mix of aerospace-related education and training has long been provided by the state's public and private universities and CareerTech system. These students receive general and specialized aerospace training for both blue- and white-collar occupations.

As a result of these ongoing efforts, large numbers of graduates from the state's universities and CareerTech technology centers continue to fill jobs in state aerospace firms.

University of Oklahoma

The University of Oklahoma (OU) remains at the forefront of aerospace and aviation education and is a key educational component of the aerospace and aviation industry in the Greater Oklahoma City region. Located just 30 minutes from downtown Oklahoma City, Tinker Air Force Base, Will Rogers World Airport and the FAA's Monroney Aeronautical Center, OU is accessible for most aerospace workers and employers in the region.

OU Aviation Studies. The OU Extended Campus School of Aviation Studies offers a bachelor's degree with a major in aviation with four aviation concentrations – professional pilot, aviation management-flying, aviation management-nonflying and aviation management-air traffic control. The program is designed for students who plan to pursue a range of careers in aviation. The aviation curriculum is closely mapped to the needs and demands of the aviation industry and follows OU's general education guidelines.

Destination 225° University Pathway. The Destination 225° University pathway is designed for collegiate aviators who attend a Southwest Airlines partner university or complete a Southwest Airlines Campus Reach Internship. The program provides a pathway for equipping participants with the skills to become a First Officer at Southwest Airlines.

FAA Center of Excellence. In 2016, the FAA awarded a new Center of Excellence co-led by the University of Oklahoma, Wichita State University and Embry-Riddle Aeronautical University. The center's academic members and its industry partners are responsible for conducting research and development on technical

training for air traffic controllers, aviation safety inspectors, engineers, pilot, and technicians. The center represents a long-term cost-sharing partnership between academia, industry, and government. The project enables the FAA to work with center members to conduct research in airspace and airport planning and design, environment and aviation safety, as well as to engage in other efforts to assure a safe and efficient air transportation system.

Aerospace Engineering. The School of Aerospace and Mechanical Engineering is one of seven schools within the Gallogly College of Engineering at the University of Oklahoma. The School offers both a Bachelor of Science (BS) and Master of Science (MS) in Aerospace Engineering, as well as a combined 5-year BS/MS in Aerospace Engineering. The School's graduate division offers a Ph.D. degree in Aerospace Engineering. OU's aerospace engineering program is the first in the nation with an emphasis on multidisciplinary Intelligent Aerospace Systems.

OU has enrolled approximately 200 students in its undergraduate aerospace engineering program the past five years and an additional 650 mechanical engineering students. Approximately 35 students were enrolled in the master's programs and approximately 30 students in the Ph.D. programs in Aerospace and Mechanical Engineering in the past five years.

Other Aerospace-Related Engineering Fields. The Gallogly College of Engineering also offers both a Bachelor of Science (BS) and Master of Science (MS) degree in electrical and computer engineering. A Ph.D. degree in electrical and computer engineering is offered through the graduate division of the School of Electrical and Computer Engineering. The College provides both undergraduate and graduate degrees in several additional engineering fields with direct application in aerospace. These fields include Materials Engineering, Computer Science, Engineering Physics, Industrial Engineering and Telecommunications Engineering.

Executive MBA in Aerospace and Defense. The Gene Rainbolt Graduate School of Business at the University of Oklahoma recently launched a new executive MBA program designed to develop the managerial and leadership skills of the aerospace and defense workforce. The program is based in Oklahoma City and allows students to complete the program in one year while working.

Oklahoma State University

Oklahoma State University (OSU) prepares both undergraduate and graduate students for a range of careers in aerospace-related industries.

Aerospace Engineering. The OSU College of Engineering, Architecture and Technology offers undergraduate degrees in aerospace engineering. A dual degree option is offered with mechanical engineering with the possibility of graduating in four years. OSU also offers Master of Science and Ph.D. degrees in Aerospace Engineering.

Other Aerospace-Related Engineering Fields. The School of Electrical and Computer Engineering at Oklahoma State University offers a Bachelor of Science in Electrical Engineering, a Bachelor of Science in Computer Engineering and a dual degree in both electrical and computer engineering. At the graduate level, the Master of Science in Electrical Engineering and Master of Engineering in Electrical Engineering are offered. The School also offers a robust Ph.D. program in Electrical Engineering to research-oriented graduate students.

Other aerospace-related engineering at OSU offerings include undergraduate and graduate degrees in Materials Science and Engineering, Computer Science, Industrial Engineering and Mechanical Engineering.

Aerospace Administration and Operations. OSU offers undergraduate students the Bachelor of Science in Aerospace Administration and Operations with four concentrations:

1. Aviation management - prepares students for management positions in the aerospace industry;
2. Aerospace security - prepares students for careers in aviation/aerospace security management fields;
3. Professional pilot - prepares students for careers in flight operations in both the general aviation and the air carrier segments of the aviation industry; and
4. Technical service management - builds on an individual's technical experience in aircraft maintenance or avionics to prepare students for management positions in all segments of the industry.

Unmanned Systems Research Institute. The OSU College of Engineering, Architecture, and Technology is home to the Unmanned System Research Institute (USRI). USRI is a multidisciplinary and multi-institution research entity collaborating on developing future unmanned technologies, including land-based and underwater solutions. The FAA recently granted USRI the first approval in the U.S. to fly an unmanned fixed-wing aircraft swarm within national airspace.[25]

The Institute is fully integrated with the student learning experience at OSU. A student team recently designed and built a turbo-electric drone engine as part of a program sponsored by the U.S. Army.[26] Defense contractor Navatek recently awarded a research grant to USRI to fund internships that will focus on the development and testing of new technologies for unmanned aircraft systems and related technology.[27]

OSU Discovery. Baker Hughes recently donated its research and innovation center in the Oklahoma City Innovation District to Oklahoma State University to foster a learning environment to benefit both students and industry professionals. The location of the facility in the Innovation District will unite higher education, research, energy, aerospace and advanced manufacturing in one location. OSU will collaborate with industry experts to grow its mechanical, industrial and aerospace engineering programs. The center will house hands-on learning opportunities in mechanical, aerospace, electrical, chemical and petroleum engineering that allow students to tackle real-world problems in a state-of-the-art facility.

Oklahoma CareerTech

CareerTech technology centers in the Greater Oklahoma City region offering aerospace programs include Canadian Valley, Francis Tuttle, Metro Tech, Gordon Cooper, Mid Del and Moore-Norman.[28] These programs include an Aerospace Maintenance pathway with majors in aircraft electronics, aerospace technician, general aviation, airframe mechanic, power plant mechanic, aviation sheet metal technician and aviation composites technician.

CareerTech recently introduced a STEM pathway for the Applied Engineer. Students are immersed in both engineering concepts and aerospace and aviation related applications. CareerTech also offers programs in Computer Science, Pre-Engineering and Robotics Engineering, with pathways to higher education.

Other Aerospace Degree and Certificate Completion Options

A range of additional aerospace related degree and certificate programs are currently offered at other public and private universities in the region. Many of these specialized degree options are targeted at aerospace firms and their employees.

Oklahoma Christian University prepares workers for careers in aerospace through both undergraduate and graduate degree programs in electrical engineering and computer engineering. Emphasis options are available in software engineering along with minor fields in computer science, mathematics and software engineering.

Many aerospace programs are joint offerings through Oklahoma education institutions. For example, through the Aviation Alliance at Tinker AFB, Langston University and the University of Oklahoma offer a baccalaureate degree program.

The Oklahoma Department of Commerce recently established a Center of Excellence for Workforce Development for Aerospace and Cybersecurity with one of the sites designated at Rose State College in Midwest City near Tinker AFB.

Metro Technology Centers and Rose State College recently announced a partnership to create life-long learning opportunities for students pursuing careers in the aerospace industry. Students who earn their FAA A&P Certificate through Metro Tech will qualify for credit hours toward an associate degree at Rose State College. Students have two aerospace options to choose from – an Associate in Applied Science (A.A.S.) degree or an Associate in Arts (A.A.) degree.

Embry-Riddle Aeronautical University operates a branch campus near Tinker AFB where it offers a range of undergraduate and graduate degree and certification programs across multiple aerospace fields.

VIII. Federal Procurement in Oklahoma Aerospace

Federal contracting serves as a significant source of economic activity in Oklahoma, and a large portion of this activity is closely tied to aerospace. Much of the state's aerospace contracting activity is concentrated in the Greater Oklahoma City region and primarily traced to Tinker Air Force Base and the U.S. Air Force.

Measuring Procurement Activity

Federal aerospace-related contracting is evaluated in this section from two distinct perspectives.

The first focuses on contracting by those federal agencies whose mission is most closely tied to aerospace activity. Three federal agencies operating in the region are believed to have aerospace activity as its primary mission – Air Force, FAA and NASA.

While this approach captures all the contracting activity related to these three major federal government entities with deep aerospace roots, there are two concerns with using this agency level approach. First, many purchases by the three agencies are unrelated, or only indirectly related, to the aerospace mission of each group. Second, many other agencies make smaller amounts of aerospace-related purchases of goods and services that are excluded using this approach.

The second approach addresses this concern by examining only federal contracts for goods and services that have a direct tie to aerospace, regardless of the agency responsible for the contract. This approach is far more labor intensive but provides a more refined view of the amount of federal contracting directly related to aerospace activity. This approach, however, ignores the broader range of contract purchases made by these key aerospace-driven agencies and can understate their overall economic impact within the region.

Contracting data in this section of the report primarily reflects contracts with a place of performance in the state of Oklahoma, or the Greater Oklahoma City region when noted. Contract values are based on annual action obligation amounts per contract on a fiscal year basis. The data presented highlight recent trends in federal contracting in the state and region, the distribution of funding by agency, the geographic distribution of vendors, and the largest contractors operating in the region.

Total Procurement Activity

Figure 18 illustrates the significant economic role played by federal contracting across the state and in the 10-county Greater Oklahoma City region. In fiscal year 2019, federal procurement contracts totaling $4.18 billion in current obligations were performed within Oklahoma. The state ranks 29th among the states in total federal contracting, roughly equal to the state's rank as 28th in population.

By geography, approximately 65% ($2.69 billion) of total state contracting activity is traced to the 10-county Greater Oklahoma City region. More than 90% ($2.46 billion) of the contracts issued in the 10-county region were performed in Oklahoma County alone.

By major agency, the Department of Defense (DoD) is the largest federal contracting entity within the state. Nearly 80% ($3.31 billion) of the value of all contract work performed statewide in fiscal year 2019 was issued by DoD agencies. Among DoD departments, the Air Force remains the primary source of federal contracts. Air Force contracts totaled $1.88 billion in fiscal year 2019 and comprised 45% of total contracting in the state from all federal sources. Eighty-seven percent of all Air Force contract work in Oklahoma was performed in the 10-county Greater OKC region, with most of the remainder attributable to Vance and Altus Air Force bases.

Figure 18. Federal Procurement in Oklahoma by Major Department (FY2019

Federal Department	State of Oklahoma	10-County OKC Region	Oklahoma County
Department of Defense:			
Air Force	$1,881,359,647	$1,633,405,929	$1,601,158,98
Army	685,019,292	263,331,525	253,070,35
Navy	205,541,640	160,677,816	137,958,48
Defense Logistics Agcy.	125,616,520	59,215,042	49,023,16
Other Dept. of Defense	410,797,088	3,704,981	-1,685,67
Total Dept. of Defense	**$3,308,334,187**	**$2,120,335,293**	**$2,039,525,30**
Non-Department of Defense:			
Agriculture	40,858,247	2,670,148	278,46
Commerce	16,857,379	15,731,393	154,15
General Services Admin.	78,912,046	30,871,668	6,209,69
Health and Human Services	82,701,155	40,722,692	22,072,52
Homeland Security	20,157,514	4,734,185	4,286,34
Housing and Urban Development	9,549,464	8,626,048	8,576,24
Interior	35,022,244	3,056,744	2,306,39
Justice	43,621,242	38,018,144	25,146,28
Labor	30,496,971	11,148,233	19,27
NASA	39,840,212	39,415,038	11,95
Transportation (including FAA)	329,591,799	317,713,463	302,919,23
Veterans	68,354,759	37,170,099	36,115,83
All Other Agencies	72,283,142	17,274,977	16,807,40
Total Non-Dept. of Defense	**$868,246,174**	**$567,152,833**	**$424,903,80**
Total Procurement	**$4,176,580,361**	**$2,687,488,126**	**$2,464,429,10**

Notes: Procurement by place of performance in Oklahoma, regardless of vendor location.
Source: FPDS-NG and SAM.GOV

The DoD share of total contract value equals 79% ($2.12 billion) of total contracting in the 10-county region and 83% ($2.04 billion) of the total in Oklahoma County. Air Force contracts totaled $1.63 billion in the 10-county Greater Oklahoma City region and $1.60 billion in Oklahoma County.

Trends in Greater OKC Region Federal Contracting. Total federal contracting in the 10-county Greater Oklahoma City Region is up substantially since the 2015 aerospace report (*see Figure 19*). The region is also outperforming national trends for federal contracting by key aerospace-related agencies.

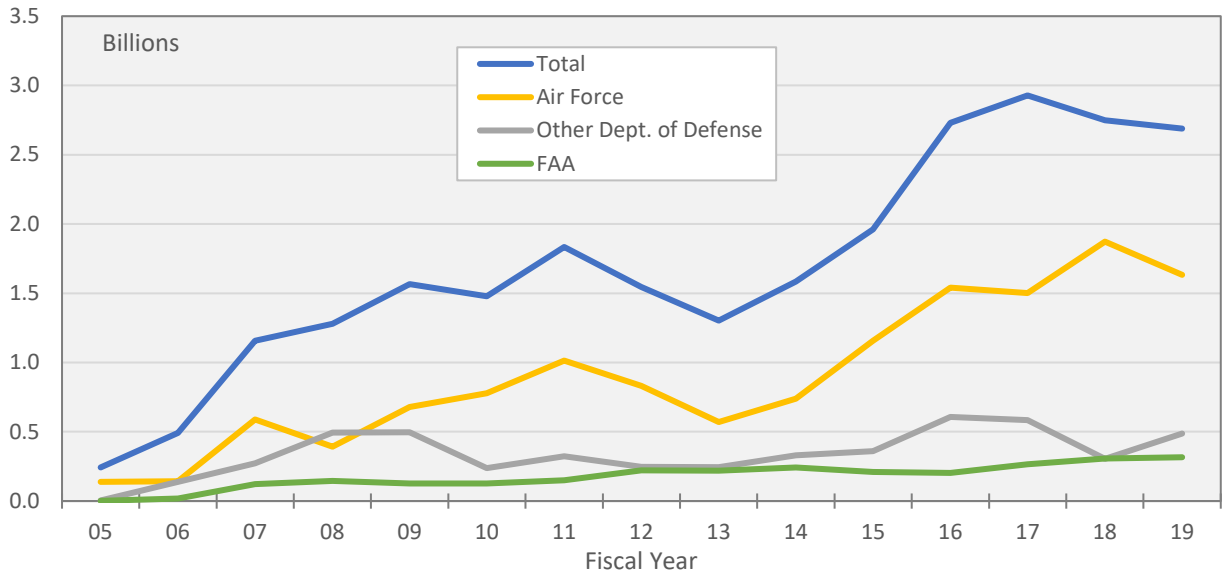
Total contracting in the region increased 37% from $1.96 billion to $2.69 billion in the period. The region's gain slightly exceeded the 34% national gain in the period.

Air Force contracting performed in the Greater OKC region increased 50.1% since the 2015 report, from $1.16 billion to $1.63 billion. This exceeds the 43% gain in Air Force contracting nationally in the period.

FAA contracting in the region increased 50% since the 2015 report, rising from $210.7 million to $316.2 million. For comparison, national FAA contracting declined by 0.6% since the 2015 report.

All other DoD contracting in the Greater Oklahoma City region has remained relatively flat since 2005.

Figure 19. Federal Procurement by Agency in Greater OKC Region (FY2005-FY2019)



Source: FPDS-NG and SAM.GOV

Oklahoma Procurement by Aerospace-Related Agencies

Figure 20 provides a multi-year overview of federal contracting activity by the Air Force, FAA, and NASA performed in the state and the Greater Oklahoma City area. The data provide historical measures in FY2005 and FY2010 as well as annual contracting amounts from FY2015 to FY2019.

It is important to note that the methodology used in Figure 20 measures the total amount of contracting engaged in by the three aerospace-related agencies rather than purchases of goods and services used directly in aerospace applications regardless of the agency making the expenditure. This alternative approach to identifying federal aerospace contracts is evaluated in the following section of the report.

Air Force, FAA, and NASA Procurement. Across the Air Force, FAA, and NASA, vendors in Oklahoma performed $2.24 billion in combined contracts in FY2019. Approximately $2.0 billion were performed in the Greater Oklahoma City region and $1.90 billion performed in Oklahoma County alone.

Air Force. Air Force procurement of $1.88 billion is the dominant component of the FY2019 total. Air Force procurement declined in FY2019 from a recent high of $2.11 billion in FY2018 but remains well above prior trend levels. Air Force procurement doubled between FY2010 and FY2019 and increased 42% between FY2015 and FY2019.

FAA. FAA procurement remains far smaller than Air Force activity but remains a critical component of total federal contracting in Oklahoma and the Greater Oklahoma City region. FAA contracts in Oklahoma reached a record high of $322 million in fiscal year 2019, a 45% increase from fiscal year 2015 and more than double the level from fiscal year 2010. Most of the FAA contracting activity was performed by vendors located in the 10-county region, primarily in Oklahoma County.

NASA. A far smaller but mostly forward-looking dimension of federal procurement activity in the region is NASA contracting. Approximately $40 million in NASA contracts were performed in Oklahoma in fiscal year 2019. These contracts were fulfilled primarily in Cleveland County by the University of Oklahoma providing R&D services on a space observatory project. The issuance of NASA contracts in Oklahoma is

a relatively recent event. Only small amounts of NASA contracts were active in Oklahoma prior to fiscal year 2017.

Figure 20. Oklahoma Procurement from Key Aerospace-Related Agencies

	FY2005	FY2010	FY2015	FY2016	FY2017	FY2018	FY2019
Department	**State of Oklahoma**						
Air Force	811,179,539	927,491,382	1,326,646,483	1,733,069,904	1,726,656,506	2,112,132,545	1,881,359,647
FAA	1,907,246	149,850,661	223,486,669	215,558,578	269,478,009	308,556,766	322,134,018
NASA	1,474,134	2,558,867	2,446,634	1,249,195	10,455,737	21,178,025	39,840,212
Total	814,560,918	1,079,900,911	1,552,579,785	1,949,877,676	2,006,590,252	2,441,867,337	2,243,333,877
Department	**10-County Greater OKC Region**						
Air Force	138,602,843	777,581,218	1,156,785,440	1,541,624,378	1,502,461,708	1,872,696,999	1,633,405,929
FAA	1,623,246	127,112,130	210,740,273	202,387,156	266,011,637	306,609,635	316,233,384
NASA	339,198	61,769	51,966	85,285	9,128,666	21,149,557	39,415,038
Total	140,565,286	904,755,117	1,367,577,679	1,744,096,820	1,777,602,012	2,200,456,191	1,989,054,351
Department	**Oklahoma County**						
Air Force	138,568,503	772,995,384	1,149,877,059	1,517,831,394	1,475,348,144	1,850,200,615	1,601,158,980
FAA	1,623,246	122,926,565	204,563,952	198,235,741	244,003,195	256,027,930	301,584,067
NASA	26,018	44,259	18,226	13,984	6,810	55,455	11,950
Total	140,217,766	895,966,208	1,354,459,237	1,716,081,119	1,719,358,149	2,106,284,000	1,902,754,998

Source: FPDS-NG and SAM.GOV

Notes: Includes purchases from each aerospace-related federal agency, regardless of the use of the good or service in direct aerospace activity.

State Rankings for Air Force, FAA, and NASA Procurement. Figure 21 provides comparative state rankings for contracting with each of the three key agencies and the combined total amount of contracting in FY2019. Oklahoma's combined $2.24 billion in contracting for the Air Force, FAA, and NASA ranks the state 14th in FY2019.

Oklahoma ranks 12th in Air Force contracting with $1.88 billion in FY2019. This primarily reflects the large size of the aerospace operation at Tinker AFB. The leading states in Air Force contracting are all large traditional defense industry states and home to major Air Force installations. California and Texas are the two largest Air Force contracting states by a substantial margin. Air Force contracting is concentrated primarily in 18 states, each with $1 billion or more in Air Force contracts in FY2019.

Oklahoma ranks 4th in FAA contracting with $322 million in FY2019, traced largely to the presence of the FAA Center in Oklahoma City. Only the District of Columbia, Virginia, and Florida are home to more FAA contracting than Oklahoma. New Jersey, Massachusetts, Maryland and Kansas are the only other states to have approximately $100 million or more in FAA contracts in FY2019.

Oklahoma ranks 19th in NASA contracting with $39.8 million in FY2019. This ranks well above the state's relative position as the 28th most populous state. NASA contracting is dominated by California which is home to nearly one-third of the agency's total contracting dollars in FY2019. Other large NASA contracting states include Alabama, Maryland, Colorado, Texas, Florida and Virginia. These states are all home to major NASA installations.

Figure 21. Federal Procurement for Key Aerospace-Related Agencies by State (FY2019)

State	Air Force		FAA		NASA		Total	
	Obligations	Rank	Obligations	Rank	Obligations	Rank	Obligations	Rank
California	$11,233,345,397	*1*	$73,021,300	*9*	$4,515,617,816	*1*	$15,821,984,523	*1*
Texas	8,509,411,196	*2*	36,601,421	*15*	1,268,921,194	*5*	9,814,933,828	*2*
Virginia	5,639,817,935	*3*	575,933,912	*2*	952,284,211	*7*	7,168,036,064	*3*
Florida	4,687,439,685	*5*	424,908,753	*3*	1,187,305,410	*6*	6,299,653,856	*4*
Colorado	4,090,074,728	*6*	43,194,418	*11*	1,336,219,687	*4*	5,469,488,850	*5*
Missouri	4,800,736,893	*4*	7,469,036	*27*	29,434,615	*21*	4,837,640,575	*6*
Massachusetts	3,788,457,488	*8*	227,423,710	*6*	115,265,986	*14*	4,131,147,198	*7*
Washington	3,930,703,339	*7*	15,063,535	*23*	54,029,806	*17*	3,999,796,710	*8*
Maryland	1,693,951,978	*13*	189,579,048	*7*	1,515,047,142	*3*	3,398,578,188	*9*
Georgia	2,870,516,091	*9*	17,112,063	*21*	6,638,634	*32*	2,894,266,817	*10*
Alabama	1,204,996,729	*16*	2,611,258	*35*	1,554,633,208	*2*	2,762,241,246	*11*
Ohio	2,337,119,287	*10*	3,525,401	*33*	255,827,782	*10*	2,596,472,514	*12*
Connecticut	2,308,909,835	*11*	1,638,595	*41*	27,564,284	*23*	2,338,112,766	*13*
Oklahoma	**1,881,359,647**	***12***	**322,134,018**	***4***	**39,840,212**	***19***	**2,243,333,893**	***14***
Arizona	1,589,046,136	*14*	37,626,071	*14*	199,742,757	*11*	1,826,414,992	*15*
District of Columbia	322,627,588	*30*	1,032,927,029	*1*	126,794,943	*13*	1,482,349,591	*16*
Nevada	1,353,334,651	*15*	2,454,498	*36*	-23,708,437	*51*	1,332,080,763	*17*
Utah	1,015,405,092	*18*	7,147,370	*28*	300,658,494	*9*	1,323,211,003	*18*
Illinois	1,167,121,247	*17*	59,910,732	*10*	10,490,352	*27*	1,237,522,358	*19*
New York	857,491,698	*19*	38,745,872	*13*	132,032,409	*12*	1,028,270,010	*20*
Mississippi	576,874,637	*24*	1,858,969	*40*	421,364,733	*8*	1,000,098,403	*21*
New Jersey	571,593,663	*25*	319,136,539	*5*	17,484,808	*25*	908,215,040	*22*
Pennsylvania	809,819,224	*20*	20,799,474	*18*	63,282,310	*16*	893,901,046	*23*
Indiana	683,127,575	*21*	14,308,829	*24*	105,219,762	*15*	802,656,210	*24*
New Mexico	671,170,710	*22*	18,250,659	*20*	30,902,895	*20*	720,324,307	*25*
Alaska	585,658,432	*23*	36,475,510	*16*	10,165,345	*28*	632,299,326	*26*
New Hampshire	566,108,587	*26*	24,278,571	*17*	25,243,651	*24*	615,630,853	*27*
Nebraska	519,076,268	*27*	1,491,609	*42*	2,884,768	*38*	523,452,714	*28*
South Carolina	427,856,739	*28*	11,138,196	*25*	1,127,313	*43*	440,122,301	*29*
Tennessee	396,862,917	*29*	3,054,887	*34*	7,162,205	*31*	407,080,072	*30*
Kansas	193,316,124	*35*	93,465,310	*8*	10,066,295	*29*	296,847,772	*31*
Minnesota	241,192,785	*32*	20,422,424	*19*	4,322,534	*35*	265,937,794	*32*
Iowa	257,215,016	*31*	2,251,917	*39*	1,024,184	*44*	260,491,186	*33*
Michigan	230,612,407	*33*	15,488,192	*22*	14,311,845	*26*	260,412,499	*34*
Montana	199,151,156	*34*	4,122,176	*31*	2,398,002	*40*	205,671,398	*35*
North Carolina	132,859,941	*37*	38,881,429	*12*	5,324,114	*34*	177,065,533	*36*
West Virginia	131,622,957	*38*	-639,708	*51*	40,416,797	*18*	171,400,135	*37*
Hawaii	141,757,520	*36*	5,077,542	*30*	1,720,436	*41*	148,555,564	*38*
Louisiana	105,118,255	*40*	6,960,474	*29*	27,903,401	*22*	139,982,198	*39*
South Dakota	108,809,476	*39*	567,685	*47*	2,502,015	*39*	111,879,262	*40*
North Dakota	67,053,550	*41*	1,456,762	*43*	1,206,783	*42*	69,717,179	*41*
Idaho	56,788,112	*42*	1,453,523	*44*	433,751	*50*	58,675,472	*42*
Kentucky	48,354,999	*44*	3,558,895	*32*	3,907,798	*36*	55,821,767	*43*
Wyoming	52,053,353	*43*	337,588	*48*	916,520	*47*	53,307,552	*44*
Delaware	45,370,043	*45*	282,859	*49*	3,195,587	*37*	48,848,584	*45*
Arkansas	35,344,007	*46*	1,333,437	*45*	1,002,584	*45*	37,680,119	*46*
Oregon	25,589,866	*47*	2,409,108	*37*	6,484,830	*33*	34,483,888	*47*
Wisconsin	15,562,553	*48*	9,256,338	*26*	8,229,815	*30*	33,048,780	*48*
Vermont	8,618,120	*49*	79,720	*50*	869,438	*48*	9,567,377	*49*
Rhode Island	6,428,417	*50*	763,434	*46*	974,317	*46*	8,166,264	*50*
Maine	992,930	*51*	2,384,001	*38*	464,130	*49*	3,841,151	*51*
United States	$73,171,895,131		$3,779,734,389		$14,427,153,470		$91,378,782,990	

Source: SAM.GOV

Oklahoma Procurement of Aerospace-Specific Goods and Services

A second approach to measuring aerospace related federal contracting is to identify purchases of goods and services that are used directly in aerospace-related activities, regardless of the agency making the purchase.

Again, this approach overcomes two concerns with the procurement data as tabulated in the prior section and provides a more direct measure of federal procurement for aerospace-related goods and services rather than aerospace-related agencies.

Determining the exact amount of federal purchases of aerospace goods and services involves a detailed examination of each federal contract performed within Oklahoma. In fiscal year 2019, this involves 45,416 individual action obligation orders.[29]

The task is simplified by using readily identifiable NAICS codes and product or service descriptions specifically related to aerospace. All NAICS codes and descriptions believed to be only loosely related to aerospace are excluded.

Aerospace-related codes and descriptions are used to identify action obligation orders for goods and services valued at $1.92 billion statewide in fiscal year 2019 (*see Figure 22*). This is about 14% less than the $2.24 billion in total expenditures by the Air Force, FAA, and NASA in fiscal year 2019 in the prior section of the report.

Figure 22 summarizes the purchases of aerospace goods and services by contracting agency, share of total contracting, and share of aerospace contracts fulfilled by Oklahoma-based vendors in fiscal year 2019.

Figure 22. Oklahoma Aerospace-Specific Federal Procurement (FY2019)

Federal Agency	State of Oklahoma	10-County Region	Oklahoma County
Air Force	$1,339,615,702	$1,181,492,782	$1,174,370,920
FAA	85,937,004	82,804,018	81,798,188
NASA	39,347,596	39,163,494	11,950
Other Department of Defense	444,128,571	303,194,011	284,703,144
All Other Federal Agencies	13,924,187	9,875,617	7,958,364
Total Aerospace-Related	$1,922,953,060	$1,616,529,923	$1,548,842,565
Total Procurement	$4,176,580,361	$2,687,488,126	$2,464,429,107
Aerospace Share of Total Procurement	46.0%	60.2%	62.8%
Total Aerospace Procurement Performed by Oklahoma-based vendors	$1,411,663,698	$1,227,029,064	$1,162,127,493
Share of Aerospace-Related Procurement Performed by Oklahoma-based vendors	73.4%	75.9%	75.0%

Notes: Aerospace-related procurement is determined by examining NAICS industry codes and product or service descriptions for each contract with an action obligation in fiscal year 2019. Contracts deemed issued to Oklahoma-based vendors specify an operating entity with an address located in Oklahoma.

Source: FPDS-NG and SAM.GOV and RegionTrack calculations

The contracts identified capture a range of goods and services including aircraft maintenance and repair, tools, parts, equipment, machinery, fuel, research and development, and construction projects related directly to aviation. Yet other contracts provide federal funding for municipal airports, aviation training, aviation-related human research, and other non-military applications.

The contracts identified as specifically for aerospace goods and services account for slightly less than half (46.0%) of the total value of procurement activity of $4.18 billion in the state in fiscal year 2019.

Approximately three-fourths of the contracting work was performed by Oklahoma-based vendors. Of the $1.92 billion in total aerospace-related contracting, 73.4 % ($1.41 billion) was performed by vendors with an operating address in Oklahoma.

For the 10-county Greater Oklahoma City region, contracts valued at $1.62 billion were identified as procuring goods and services directly used in aerospace applications. Approximately 60% of the value of all contracts issued in the 10-county region is traced to aerospace; 75.9% of the value of total aerospace contracts is traced to vendors with an operating address in Oklahoma.

For Oklahoma County, contracts for direct aerospace goods and services were valued at $1.14 billion, or 62.8% of the value of total procurement in the county in fiscal year 2019. Seventy-five percent of the aerospace-related contracts in Oklahoma County were performed by vendors located in Oklahoma.

Aerospace-Specific Federal Procurement Across the 10-County Region

Although Oklahoma County dominates aerospace contracting activity within the 10-county region, several smaller yet significant pockets of activity are visible within the federal procurement data.

Figure 23 details the distribution of federal aerospace-related contracting activity by city in each of the 10 counties in the Greater Oklahoma City region. The estimates reflect the $1.62 billion in federal spending on goods and services that are directly related to aerospace activity, regardless of the contracting federal agency.

In Oklahoma County, the city of Oklahoma City accounts for more than 96% ($1.50 billion) of county-wide aerospace-specific federal contracting. An additional $38.9 million is performed in Edmond and $14.2 million at Tinker Air Force Base. Limited aerospace contracting is present in other cities within Oklahoma county.

Cleveland County is home to the largest concentration of aerospace-specific activities in the region outside of Oklahoma County. Contracts awarded to firms in Norman, Moore, and the Oklahoma City portion of Cleveland County totaled nearly $53 million in FY2019. This activity represents half (50.8%) of all federal contracts performed by firms in the county in the period.

Firms located in Shawnee in Pottawatomie County received a total of $6.3 million in federal aerospace- specific contracts in FY2019. Vendors in Stillwater in Payne County were awarded $5.1 million in contracts.

Other cities with aerospace-specific firms securing smaller federal contracts in FY2019 include Stroud in Lincoln County ($1.0 million), Guthrie in Logan County ($2.2 million), and Piedmont in Canadian County ($268,000).

No vendors in Grady, Kingfisher, and McClain counties received any federal aerospace-specific contract awards in FY2019.

Figure 23. Aerospace-Specific Federal Procurement by County (FY2019)

Region	Total Federal Procurement	Aerospace & Aviation-Related	Aerospace & Aviation Share
State of Oklahoma	$4,176,580,361	$1,922,953,060	46.0%
10-County Region	$2,687,488,126	$1,616,529,923	60.2%
Canadian County	20,466,675	292,558	1.4%
Mustang	1,560,772	24,600	1.6%
Piedmont	277,300	267,958	96.6%
Other	18,628,602	0	0.0%
Cleveland County	104,011,246	52,794,752	50.8%
Moore	578,528	578,528	100.0%
Norman	94,987,104	49,637,738	52.3%
Oklahoma City	7,391,158	2,578,486	34.9%
Other	1,054,457	0	0.0%
Grady County	24,851,856	0	0.0%
Kingfisher County	15,073,692	0	0.0%
Lincoln County	1,378,431	1,039,741	75.4%
Stroud	1,041,541	1,039,741	99.8%
Other	336,890	0	0.0%
Logan County	12,471,497	2,176,253	17.4%
Guthrie	12,345,866	2,176,253	17.6%
Other	125,631	0	0.0%
McClain County	291,298	0	0.0%
Oklahoma County	2,464,430,625	1,548,842,565	62.8%
Edmond	51,614,405	38,925,274	75.4%
Moore	212,114	212,114	100.0%
Oklahoma City	2,248,506,404	1,495,553,748	66.5%
Tinker AFB	162,409,787	14,151,429	8.7%
Other	1,687,916	0	0.0%
Payne County	35,165,979	5,057,598	14.4%
Stillwater	34,964,847	5,057,598	14.5%
Other	201,131	0	0.0%
Pottawatomie County	9,348,345	6,326,458	67.7%
Shawnee	8,978,792	6,326,458	70.5%
Other	369,553	0	0.0%

Source: FPDS-NG and SAM.GOV and RegionTrack calculations

Largest Aerospace Vendors in the Greater OKC Region

The Greater Oklahoma City region has a large and diverse group of firms engaged in federal aerospace contracting. Figure 24 lists the top 25 vendors to the Air Force, FAA, and NASA for contracts with a place of performance within the 10-county Greater Oklahoma City region in FY2019.

The top 25 vendors were awarded 83% ($1.65 billion) of the $1.99 billion in total contracts issued by the Air Force, FAA, and NASA in the period. The average contract value for the top 25 vendors is more than $140 million but is heavily influenced by Boeing's dominant share of total contracts.

The remaining 955 aerospace vendors received only 17% of total aerospace contracts with a combined value of $336.0 million in FY2019. The average contract value for these vendors was $351,800.

Boeing is the largest single contracting entity to the three federal agencies in the 10-county region and the largest single federal contractor in the state. Boeing's total obligation value of $1.11 billion in FY2019 is roughly 56% of all contracting performed for the Air Force, FAA, and NASA in the 10-county region in FY2019. It is also more than one-fourth of all contracting performed statewide for all federal agencies.

Much of the overall rise in total federal contracting in the Greater OKC region since FY2015 is traced to the expansion of Boeing's activities at Tinker AFB. Boeing's federal contracting activity for the Air Force, FAA, and NASA has increased 76% since FY2015, rising from $628.7 million to $1.11 billion.

Other traditional aerospace contractors such as Robinson Aviation ($40.8 million) and Northrop Grumman ($16.1 million) largely specialize in aircraft MRO services.

Other firms among the top 25 vendors in the 10-county Greater Oklahoma City region include construction companies, training companies, engineering firms, logistics companies, energy providers, and contracting consultants.

Figure 24. Largest Air Force/FAA/NASA Vendors in the 10-County Greater OKC Region (FY2019)

Rank	Vendor Name	Contract Value
1	The Boeing Company	$1,105,026,446
2	Afognak Native Corporation	57,467,350
3	Bering Straits Native Corporation	44,270,094
4	Robinson Aviation (RVA) Inc.	40,796,906
5	University of Oklahoma	39,551,544
6	Mowa-Barlovento	38,336,388
7	ASRC Federal System Solutions LLC	38,025,483
8	Flintco LLC	36,953,991
9	Indigenous Technologies LLC	26,292,217
10	Strategic Mission Systems LLC	20,340,158
11	Advanced Construction Services Inc.	19,722,664
12	Science Applications International Corp.	18,418,652
13	Delaware Resource Group of OK LLC	17,810,626
14	CDW Corporation	17,267,494
15	Northrop Grumman Corporation	16,123,295
16	Dale Rogers Training Center Inc.	15,098,198
17	Gideon Contracting Limited Liability Co.	14,984,411
18	Unicom Government Inc.	13,719,605
19	OGE Energy Corp.	11,930,280
20	KBR Inc.	11,299,846
21	Tehama LLC and HDR Joint Venture	11,119,536
22	AECOM Technology Corporation	10,314,585
23	Objectstream Inc.	9,630,173
24	Long Wave Inc.	9,624,813
25	Leader Communications Inc.	8,945,125
	Top 25 Vendors	$1,653,069,881
	All Other Vendors	$335,984,471
	All Vendors	$1,989,054,351

Notes: Includes only contracts issued by the Air Force, FAA, and NASA
Source: FPDS-NG and SAM.GOV and RegionTrack calculations

IX. Economic Impact of Aerospace

The direct activity of the 291 aerospace establishments identified as operating in the Greater Oklahoma City region generates substantial economic ripple, or spillover, effects in other industry sectors across the region. High average wages, the capital-intensive nature of the industry, a substantial use of high-skilled labor, extensive training and education requirements, and the natural clustering of aerospace companies in the region all work to create strong economic linkages between the industry and the broader regional economy.

Measuring Economic Spillover Effects from Aerospace

The spillover economic impact these aerospace establishments have on the region can be estimated in terms of additional jobs, labor income, and output of goods and services supported in other industries in the region. Economic impact multipliers are commonly used to estimate the effect of a change in economic activity in a given industry on the broader regional or national economy.[30]

Most economic impact multipliers are derived from a detailed input-output model of a regional economy that maps the various spending flows between firms, households, and governments.[31] It is important to note that economic multipliers in this report represent estimates of gross economic effects and do not account for any public or private costs associated with the aerospace sector.

Employment multipliers provide an estimate of the number of jobs generated in the Greater Oklahoma City regional economy as new jobs are added in the aerospace sector. Similarly, *labor income* multipliers provide an estimate of the amount of additional household earnings generated in the broader economy per new dollar of labor income received by aerospace employees. *Output* multipliers provide an estimate of the change in output in the Greater Oklahoma City area economy per dollar of new output (or revenue) generated within the aerospace industry.

In interpreting multipliers, a given change in economic activity taking place within the aerospace industry is deemed the *direct* effect. Direct effects include the employment, labor income, and output of goods and services generated directly by the 291 aerospace firms and their employees in the Greater Oklahoma City region.

The direct effect, in turn, produces both *indirect* and *induced* spillover effects which are estimated using multipliers. The indirect effects are the employment, income, and goods and services generated as a result of aerospace establishments making purchases from firms in other industries within the region. The induced effects describe the economic activity generated by new household spending resulting from compensation generated from both the direct and indirect effects.

The key mechanisms behind the indirect and induced, or spillover, effects are the purchases made by aerospace establishments from other businesses in the region and the spending of earned income within the region by aerospace workers.

The direct, indirect, and induced effects provide a convenient way of describing the overall multiplier effects that occur as establishments in the aerospace industry produce goods and services (direct effects), then impact those firms that support and supply the sector (indirect effects), and then finally impact the broader regional economy as worker's incomes and spending patterns are affected (induced effects).

Estimated Effects. Figure 25 provides estimates of economic multiplier effects generated in the Greater Oklahoma City economy from direct activity in the aerospace industry in 2020. Again, these are gross

measures of economic spillover and do not account for any public or private costs to the region (including incentives) associated with the aerospace sector.

Figure 25. Greater OKC Region Aerospace Industry Economic Impacts (2020)

Direct Effect

Major Group	Employment	Labor Income ($Mil)	Output ($Mil)
Government	32,554	$2,385.2	$4,436.0
Tinker Air Force Base (military, federal civilian, and contractors)	26,029	$1,755.6	$3,229.5
FAA Mike Monroney Aeronautical Center	5,159	563.5	1,105.7
All Other Government (federal, state, and local)	1,366	66.1	100.8
Maintenance, Repair, and Overhaul (MRO)	4,668	509.0	1,472.4
Engineering, Consulting, Program Management, and Logistics	2,901	275.2	617.9
Air Transportation (Airports, aircraft sales, and air travel)	1,942	142.1	443.3
Supplies and Materials	912	71.1	221.6
Education and Training	181	10.7	21.9
Manufacturing	47	4.0	14.4
Other (spraying, aerial services, and other)	47	2.7	6.1
Total Direct Effects	**43,252**	**$3,400.0**	**$7,233.6**

Multiplier Effects *(Indirect + Induced)*

Major Group	Employment	Labor Income ($Mil)	Output ($Mil)
Government	23,585	$1,405.9	$2,236.5
Tinker Air Force Base (military, federal civilian, and contractors)	18,741	1,035.8	1,711.6
FAA Mike Monroney Aeronautical Center	4,024	332.5	475.5
All Other Government (federal, state, and local)	820	37.7	49.4
Maintenance, Repair, and Overhaul (MRO)	2,474	468.3	1,281.0
Engineering, Consulting, Program Management, and Logistics	4,497	335.8	352.2
Air Transportation (Airports, aircraft sales, and air travel)	2,486	125.1	323.6
Supplies and Materials	629	50.5	146.2
Education and Training	89	5.6	9.0
Manufacturing	80	6.3	11.8
Other (spraying, aerial services, and other)	14	1.0	1.3
Total Indirect and Induced Effect	**33,853**	**$2,398.4**	**$4,361.7**

Total Effects *(Direct + Indirect + Induced)*

Major Group	Employment	Labor Income ($Mil)	Output ($Mil)
Government	56,139	$3,791.2	$6,672.5
Tinker Air Force Base (military, federal civilian, and contractors)	44,770	2,791.4	4,941.1
FAA Mike Monroney Aeronautical Center	9,183	896.0	1,581.2
All Other Government (federal, state, and local)	2,186	103.8	150.2
Maintenance, Repair, and Overhaul (MRO)	7,142	977.3	2,753.5
Engineering, Consulting, Program Management, and Logistics	7,398	611.0	970.1
Air Transportation (Airports, aircraft sales, and air travel)	4,428	267.2	766.9
Supplies and Materials	1,541	121.6	367.8
Education and Training	270	16.3	30.9
Manufacturing	127	10.3	26.2
Other (spraying, aerial services, and other)	61	3.7	7.4
Total Effects (Direct + Indirect + Induced)	**77,105**	**$5,798.4**	**$11,595.2**

Source: IMPLAN Input-Output Model and RegionTrack calculations

In terms of direct employment, 43,252 workers in the region are employed directly in aerospace, with the majority employed in public sector positions at Tinker AFB and the FAA Center. These workers indirectly support an additional 33,853 jobs across the Greater Oklahoma City region (the sum of indirect and induced employment). In total, an estimated 77,105 jobs in the region are provided either directly by the aerospace sector or supported indirectly through multiplier effects generated by the industry. In other words, each direct job in the aerospace sector supports approximately 0.8 additional jobs in the broader regional economy.

The $3.4 billion in direct labor income paid to aerospace workers likewise generates substantial ripple effects as the income is earned and recirculated within the regional economy. The estimates in Figure 25 indicate that an additional $2.4 billion in labor income earned by workers in other industries statewide is supported by direct activity in the aerospace sector, or a total earnings impact of $5.8 billion in the region. Each dollar of labor income earned by workers in aerospace supports an addition $0.70 in labor income in the 10-county region across all industry sectors.

The output of goods and services in the region is similarly stimulated by the presence of the industry. The multiplier effects in Figure 25 indicate that aerospace establishments in the region generate an estimated $7.2 billion in direct output of goods and services, resulting in estimated multiplier effects (both indirect and induced) of $4.4 billion in additional output of goods and services in other industries in the region. Overall, either directly or indirectly through multiplier effects, aerospace activity in the Greater Oklahoma City region supports the production of $11.6 billion in total output of goods and services in 2020. This suggests that each dollar of output produced directly by the aerospace sector generates an additional $0.60 in spillover output across the region.

Growth in Total Impact. The total direct and spillover effects traced to the aerospace industry are far larger than in the 2015 report. The total employment effect of aerospace in the region increased from 67,583 to 77,105, a 14% increase the past five years. The total labor income effect increased by more than $1.5 billion, from $4.06 billion to $5.8 billion, or a 43% increase. Total output traced to the aerospace sector increased by 43% since 2015, from $8.16 billion to $11.6 billion.

Estimated Tax Effects

The activities of the aerospace industry in turn produce significant additional tax revenue for state and local governments in the region. Revenue estimates are detailed in Figure 26 and reflect estimates of tax payments made directly by firms in the aerospace industry and their workers. Estimates include taxes paid on the purchases of taxable goods subject to both sales and use tax, motor vehicles, and real and personal property.

The tax estimates are estimated using an IMPLAN input-output model for the 10-county Greater Oklahoma City region and estimates of tax shares from the Oklahoma Tax Commission. The tax scenario is based on the labor income specified at the IMPLAN industry level for each of the major groups comprising the aerospace industry.[32]

In total, the activity generated directly by the industry produces an estimated $300.3 million in tax payments to state and local government in 2020. This equates to approximately 4.1% of total direct output generated by the industry. Again, it is important to note that the estimated tax effects are gross measures and do not account for public or private costs associated with the aerospace sector such as tax exemptions or incentives.[33]

The largest source of tax revenue is an estimated $159 million in sales and use tax revenue, which comprises a little more than half the total tax revenue generated by the aerospace sector. Sales and use tax revenue

received by the state is 30% ($90 million) of total revenue while sales and use tax received by local taxing jurisdictions ($69 million) is 23% of total taxes generated.

The second largest source of revenue is personal income tax payments to state government of approximately $114 million, or more than one-third of total taxes generated. Personal income taxes represent approximately 3.4% of the estimated $3.42 billion in total annual labor income earned directly by workers in the aerospace industry.

Motor vehicle taxes received by the state total an estimated $8.7 million, or 3% of total taxes generated by the sector. Real and personal property taxes to local government total an estimated $12.2 million in 2020. Corporate income tax is the smallest source of added tax revenue and generates an estimated $4.4 million in 2020.

Figure 26. Estimated State & Local Tax Revenue - Aerospace Activity (2020)

Type of Tax	Tax Revenue ($Mil)	% of Total Tax Revenue
Personal Income Tax	$114.2	38.3%
Corporate Income Tax	4.4	1.5%
Motor Vehicle Tax	8.7	2.9%
Real and Personal Property Tax	12.2	4.1%
Sales and Use Tax:		
State	89.8	30.1%
Local	69.1	23.2%
Total Sales and Use Tax	$158.9	53.2%
Total State and Local Tax Revenue	**$298.4**	**100.0%**

Source: Bureau of Economic Analysis, IMPLAN Input-Output Model, Oklahoma Tax Commission, and RegionTrack estimates

X. Endnotes

1 The Oklahoma Historical Society provides an overview of the history of aerospace and aviation activity in Oklahoma. See: https://www.okhistory.org/publications/enc/entry.php?entry=AV004

2 See: Greater Oklahoma City Region Aerospace Industry - Industry Survey and Economic Impact Assessment. Greater Oklahoma City Chamber and RegionTrack Inc. June 2016.

3 The U.S. Dept. of Defense (DoD) defines aerospace as of, or pertaining to, Earth's envelope of atmosphere and the space above it; two separate entities considered as a single realm for activity in launching, guidance, and control of vehicles that will travel in both entities. See the DoD Dictionary of Military Terms, U.S. Department of Defense: http://www.dtic.mil/doctrine/dod_dictionary/.

4 Kingfisher, Payne, and Pottawatomie Counties are not component counties of the Oklahoma City Metropolitan Statistical Area (MSA) as defined by the Census Bureau.

5 Aerospace establishments are initially identified using the September 2020 version of the DataAxel U.S. Business database for the 10-county Greater Oklahoma City region. Other proprietary databases including SalesForce and D&B Hoovers are used to identify firms and collect contact information. Other industry information was gathered locally by RegionTrack economists, Greater Oklahoma City Chamber staff, and members of the Greater Oklahoma City Partnership.

6 See, for example, state reports for: Kentucky (https://kcma.ky.gov/Documents/2017%20Kentucky%20Aerospace%20-%20Aviation%20Study.pdf); Georgia (https://www.georgia.org/sites/default/files/wp-uploads/2016/11/Economic-Impact-of-aerospace-2015-7.24.17-FINAL.pdf), and Florida (https://commons.erau.edu/edt/51/).

7 The estimates largely reflect activity in place in early 2020 prior to the onset of the pandemic.

8 See: https://www.tinker.af.mil/About-Us/Fact-Sheets/Display/Article/384764/oklahoma-city-air-logistics-complex/

9 The estimates in Figure 7 are derived from the Office of Management Personnel reports while other estimates are provided by Tinker AFB.

10 See: Tinker Air Force Base Fiscal Year 2021/2022 Hiring Forecast. Available from the Tinker Air Force Base Civilian Personnel Office. The forecast covers external hires in Air Force activities at Tinker Air Force Base (AFB) in Fiscal Years (FY) 2021 and 2022 (1 October 2020 through 30 September 2022). It does not include hiring in other federal agencies located at Tinker AFB, i.e., Defense Information Systems Agency, Defense Logistics Agency, Department of the Navy or private sector contractors performing work at Tinker AFB. It also does not project employment for Non-Appropriated Fund Activity (NAF) facilities at Tinker AFB including, bowling centers, golf courses, community centers, and arts and crafts activities.

11 See: http://www.okenergytoday.com/2020/08/more-jobs-expected-as-result-of-kc-46-tanker-expansion-at-tinker-afb/

12 The lease provides for the use of the property and structures and includes some ongoing maintenance and repair of structures. See: https://www.transportation.gov/sites/dot.gov/files/docs/mission/budget/304496/faa-fy2019cj-budgetfinal508compliant.pdf

13 Detailed employment by occupation data is available only for the approximately 3,100 federal civilian employees at the FAA Center.

14 See: https://www.industryweek.com/the-economy/public-policy/article/21956178/oklahoma-in-a-prime-position-for-aerospace-growth

15 See: https://gthokc.com/california-group-buys-boeing-okc-campus-for-125-million/; and https://www.prnewswire.com/news-releases/boeing-okc-campus-sells-to-california-investors-300983183.html

16 See: https://www.boeing.com/company/general-info/#/state. Employment numbers include all full-time and part-time employees, contingent labor, employees on leaves of absence 90 days or less, and the workforce of our subsidiary businesses. Numbers are net of additions and reductions.

17 For the State, Army and Air National Guard forces are commanded by the Governor through the state Adjutant General. State missions may include helping communities deal with floods, tornadoes, hurricanes, wildfires, and security support in times of civil unrest. For federal missions, the Army and Air National Guard can be activated by the President of the United States and are then commanded by the combatant commander for their designated operating theatre.

18 A map of SBA HUBZones is available online at: https://maps.certify.sba.gov/hubzone/map#center=39.828200,-98.579500&zoom=5

19 Metropolitan area wage rates are reported from the 2019 release of the Occupational Employment Statistics by the Bureau of Labor Statistics (BLS).

20 Data are annual averages derived primarily from the Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) program. Where QCEW data is suppressed, estimates are informed by data in the Census County Business Patterns survey and raked to match national totals.

21 Source: Interactive Demographic Analysis System (IDEAS) - Air Force Personnel Center

22 No centralized data source is available to identify non-appropriated federal workers at FAA facilities.

23 See the text of House Bill 2578 online at: http://webserver1.lsb.state.ok.us/cf_pdf/2017-18%20ENR/hB/HB2578%20ENR.PDF

24 See: https://www.okcommerce.gov/doing-business/business-relocation-expansion/incentives/

25 https://news.okstate.edu/articles/engineering-architecture-technology/2019/osus_usri_receives_first_faa_authorization_to_fly_in_swarms.html

26 https://oklahoman.com/article/5672125/osu-students-design-and-build-innovative-engine-for-drones

27 https://news.okstate.edu/articles/communications/2020/osu-partners-with-navatek-to-create-unmanned-systems-research-internship-program.html

28 Moore Norman Technology Center has announced plans to offer an Aviation Maintenance Technician program beginning in 2022.

29 The estimates include all procurement contracts with an action obligation declared in fiscal year 2019 and with place of performance in Oklahoma are included.

30 Caution must be exercised when using input-output multipliers to estimate the total economic activity "supported" by an existing industry or firm. Input-output multipliers are intended to predict the change in region-wide economic activity that results from an incremental change in a given industry within a regional economy.

31 State- and region-level multipliers are typically estimated by adjusting, or regionalizing, national purchasing patterns for a given industry sector such that they better reflect the actual economic flows within the states.

32 Labor income is specified individually for Tinker AFB and the FAA Center in the model using military-federal government and non-military federal government, respectively. Other government providers are assumed to reflect non-military federal government activity. The remaining sectors are specified using the most representative IMPLAN industry sector.

33 For example, the tax estimates are not adjusted for the state Aerospace Industry Engineer Workforce Tax Credit (for either employers or employees) or other state tax credits the firms may be eligible for.

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Attachment VII – Greater Oklahoma City Region Major Employers – December 2020

GREATER OKLAHOMA CITY
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Greater Oklahoma City Region
Major Employers

Company Name	Sector	# Employees
State of Oklahoma	Government	44,400
Tinker Air Force Base	Military	26,000
Oklahoma State University - Stillwater	Higher Education	13,940
University of Oklahoma - Norman	Higher Education	11,085
INTEGRIS Health*	Health Care	11,000
Amazon	Warehouse & Distribution	8,000
Hobby Lobby Stores Inc*	Wholesale & Retail	6,500
Mercy Hospital*	Health Care	5,540
City of Oklahoma City	Government	5,200
FAA Mike Monroney Aeronautical Center	Aerospace	5,140
University of Oklahoma Health Sciences Center	Higher Education	5,000
SSM Health Care of Oklahoma, Inc.*	Health Care	4,000
Paycom*	Technology	3,800
The Boeing Company	Aerospace	3,600
OU Medical Center	Health Care	3,400
Norman Regional Hospital	Health Care	3,000
Midfirst Bank*	Finance	2,800
AT&T	Telecommunications	2,700
Sonic Corp*	Wholesale & Retail	2,460
OGE Energy Corp*	Utility	2,300
Dell	Sales & Business Services	2,100
Oklahoma City Community College	Higher Education	2,100
Love's Travel Stops & Country Stores*	Retail	2,000
American Fidelity*	Finance/Insurance	1,995
Citizen Potawatomi Nation	Government	1,950
UPS	Transportation	1,800
BancFirst*	Finance	1,700
Hertz Corporation	Rental Services	1,700
Chesapeake Energy Corp*	Oil & Gas	1,630
Devon Energy Corp*	Oil & Gas	1,600
University of Central Oklahoma	Higher Education	1,380
Great Plains Coca-Cola Bottling Company	Beverage Distribution	1,300
Johnson Controls	Manufacturing	1,200
The Climate Control Group	Manufacturing	1,200
Farmers Insurance Group	Customer Service	1,160
Costco Member Service Center	Customer Service	1,100
Bank of Oklahoma	Finance	1,100
Continental Resources*	Oil & Gas	1,080
Dolese Bros. Co.*	Manufacturing	1,060
Cox Communications	Telecommunications	1,000
INTEGRIS-Deaconess Hospital*	Health Care	1,000
Rose State College	Higher Education	1,000

Last updated on December 2022. Does not account for COVID-19 layoffs; subject to revision. This list was complied by the Economic Development Division of the Greater Oklahoma City Chamber from a variety of sources. Please notify the Research Department at (405) 297-8976 for any necessary changes or updates.

Attachment VIII – COWIB's Priority of Service Policy

CENTRAL OKLAHOMA
WORKFORCE INNOVATION BOARD
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Priority of Service

Pursuant to WIOA 134(c)(3)(E)

Approved and Published: February 2023

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PURPOSE: To implement local procedures for the oversight, monitoring, and review of participant data entered into the virtual case management system. This policy and procedure are designed to ensure the timely, complete, and accurate entry of participant data. The requirements herein are applicable to the COWIB's service provider(s) using the virtual case management system.

The Central Oklahoma Workforce Innovation Board (COWIB) is the policy and guidance board for the Workforce Oklahoma system in Central Oklahoma. We are business leaders with a goal to establish a highly skilled, productive workforce in our 9-county area.

The Central Oklahoma Workforce Innovation Board (COWIB) complies with WIOA's Equal Opportunity and Nondiscrimination provisions which prohibit discrimination on the basis of race, color, religion, sex (including pregnancy, childbirth, and related medical conditions, transgender status, and gender identity), national origin (including limited English proficiency), age, disability, political affiliation or belief, or, the basis of citizenship status or participation in a WIOA Title-1 financially assisted program or activity.

COWIB is an Equal Opportunity Employer/ Program. Auxiliary aids and services are available upon request to individuals with disabilities. This was financed in whole or in part by fund from the US Dept. of Labor as administered by the Oklahoma Office of Workforce Development.

http://www.cowib.org/

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CENTRAL OKLAHOMA WORKFORCE INNOVATION BOARD

A proud partner of the americanjobcenter network

Priority of Service

Pursuant to WIOA 134(c)(3)(E)

Approved and Published: **February 2023**

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Purpose

This issuance provides guidance and procedures for the administration and oversight of Priority of Services. It is the intention of COWIB that this document conforms to the pertinent legislation, regulation, state issued policies, and the Board's intent to provide quality customer services. Review of this policy and subsequent revisions may be necessitated as a result of changes or additions to current Federal or State guidance.

Authority

The authority for this policy is derived from the following:

- WIOA 134(c)(3)(E)
- CFR 680.600 through .660
- TEGL 07-20
- OWDI #07-2020, Change 1
- #TA-01-2021

Statutory Priority for Adult Funds

Section 134(c)(3)(E) of the Workforce Innovation and Opportunity Act (WIOA) establishes a priority of services requirement with respect to funds allocated to a local area for adult employment and training activities. According to OWDI #07-2020, when using WIOA Adult funds to provide individualized career services and/or training services, Oklahoma Works One-Stop Center staff must give priority to public assistance recipients, other low-income individuals (as defined in WIOA Section 3(36)), and individuals who are basic skills deficient (as defined in WIOA 3(5)). English language learners meet the criteria for "basic skills deficient" and must be included in the priority populations for the title I Adult program. Under WIOA, priority of service must be implemented regardless of the level of funds available to provide services in the local area.

Low-Income Individual (as defined in WIOA Section 3(36))

(A) In General. –The term "low-income individual" means an individual who—

(i) Receives, or in the past 6 months has received, or is a member of a family that is receiving or in the past 6 months has received, assistance through the supplemental nutrition assistance program established under the Food and Nutrition Act of 2008 (7 U.S.C. 2011 et seq.), the program of block grants to States for temporary assistance for needy families program under part A of title IV of the Social Security Act (42 U.S.C. 601 et seq.), or the supplemental security income program established under title XVI of the Social Security Act (42 U.S.C. 1381 et seq.), or State or local income-based public assistance.

(ii) Is in a family with total family income that does not exceed the higher of—

(I) The poverty line; or

(II) 70 percent of the lower living standard income level;

(iii) Is a homeless individual (as defined in section 41403(6) of the Violence Against

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Women Act of 1994 (42 U.S.C. 14043e-2(6))), or a homeless child or youth (as defined under section 425(2) of the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11434a(2)));

(iv) Receives or is eligible to receive a free or reduced-price lunch under the Richard B. Russell National School Lunch Act (42 U.S.C. 1751 et sez.);

(v) Is a foster child on behalf of whom State or local government payments are made; or

(vi) Is an individual with a disability whose own income meets the income requirement of clause (ii), but who is a member of a family whose income does not meet this requirement.

(B) Lower Living Standard Income Level. – The term "lower living standard income level" means that income level (adjusted for regional, metropolitan, urban, and rural differences and family size) determined annually by the Secretary of Labor based on the most recent lower living family budget issued by the Secretary.

Basic Skills Deficient (as defined in WIOA 3(5))

Basic Skills Deficient. –The term "basic skills deficient" means, with respect to an individual—

(A) Who is a youth, that the individual has English reading, writing, or computing skills at or below the 8th grade level on a generally accepted standardized test; or

(B) Who is a youth or adult, that the individual is unable to compute or solve problems, or read, write, or speak English, at a level necessary to function on the job, in the individual's family, or in society.

The priority established in the previous paragraph does not necessarily mean that these services may only be provided to recipients of public assistance, other low-income individuals, and individuals who are basic skills deficient. COWIB has established a written policy and procedures to ensure priority for the populations described in the paragraph above, for participants served in the WIOA Adult program.

Under WIOA, there is no exclusion of payments for unemployment compensation, child support payments, and old-age survivors' insurance benefits from the income calculations for determining if an individual is low-income. These exclusions, which were previously provided under WIA sec. 101(25), no longer apply.

Veterans and Adult Priority

Veterans and eligible spouses continue to receive priority of service for all DOL-funded employment training programs, which include WIOA programs. As for the DLW program, the only priority of service is the veteran's priority of service. A veteran must, however, meet each program's eligibility criteria to receive services under the respective employment and training program. For income-based eligibility determinations and for determining priority of service, military pay or allowances paid while on active

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duty or paid by the Department of Veterans Affairs (VA) for vocational rehabilitation, disability payments, or related VA-funded programs are not to be considered as income, in accordance with 38 U.S.C. 4213 and 20 CFR § 683.230.

When past income is an eligibility determinant for any Federal employment or training program, including the title I Adult and DLW programs, any amounts received as military pay or allowances by any person who served on active duty and certain other specified benefits, must be disregarded in making an eligibility determination. This applies to the veteran and to other individuals for whom those amounts would normally be applied, e.g., the military spouse. Military earnings are not to be included when calculating income for veterans or transitioning service members for priority of service, in accordance with 38 U.S.C. 4213.

To further clarify, VA benefits for education and training services do not constitute "other grant assistance" under WIOA's eligibility requirements. Therefore, eligibility for VA benefits for education or training services do not preclude a veteran or the veteran's eligible spouse from receiving WIOA funded services, including training funds. Similarly, WIOA program operators may not require veterans or spouses to exhaust their entitlement to VA funded training benefits prior to allowing them to enroll in WIOA funded training.

Due to the statutorily required priority for Adult funds, priority must be provided in the following order:

- First, to veterans and eligible spouses who are also included in the groups given statutory priority for WIOA Adult formula funding. This means that veterans and eligible spouses who are also recipients of public assistance, other low-income individuals, or individuals who are basic skills deficient receive first priority for services provided with WIOA Adult formula funds for individualized career services and training services.
- Second, to non-covered persons (i.e., individuals who are not veterans or eligible spouses) who are included in the groups given priority for WIOA Adult formula funds.
- Third, to veterans and eligible spouses who are not included in WIOA's priority groups.
- Fourth, to priority populations established by the LWDB (for example, for non-covered persons who are not included in groups given priority for WIOA Adult formula funds, such as persons living within a designated Promise Zone).
- Last, to non-covered persons outside the groups given priority under WIOA.

(See Attachment 1 for the Priority Ranking Worksheet)

Priority Populations under WIOA

According to OWDI #07-2020, across all titles, WIOA focuses on serving individuals with barriers to employment and seeks to ensure access to quality services for these populations. Priority and special populations for the Adult and DLW programs are addressed at 20 CFR §§ 680.600 through .660.

The term "individual with a barrier to employment" means a member of one or more of the following

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populations:

- Displaced homemakers;
- Low-Income individuals;
- Indians, Alaska Natives, and Native Hawaiians; as such terms defined in WIOA section 166
- Individuals with disabilities, including youth who are individuals with disabilities (as defined in sec. 3. Of the Americans with Disabilities Act of 1990 (42 USC 12102) and individuals who are in receipt of Social Security Disability Insurance);
- Older individuals (age 55 and older);
- Ex-offenders;
- Homeless individuals (as defined in section 41403(6) of the Violence Against Women Act of 1994 (42 U.S.C. 1403e-2(6))), or homeless children and youths (as defined in section 725(2) of the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11434a(2)));
- Youth who are in or have aged out of the foster care system;
- Individuals who are:
    - English language learners (WIOA sec. 203(7));
    - Individuals who have low levels of literacy (for example, an individual who is unable to compute or solve programs, or read, write, or speak English at a level necessary to function on the job, or in the individual's family, or in society); and
    - Individuals facing substantial cultural barriers.
- Eligible migrant and seasonal farmworkers (as defined in WIOA 167(i)(1-3);
- Individuals within two years of exhausting lifetime TANF eligibility;
- Single parents (including single pregnant women); and
- Long-term unemployed individuals (unemployed for 27 or more consecutive weeks).

Each priority or special population to which an individual belongs must be listed in the Individual Employment Plan (IEP) to help ensure the provision of any services for the individual to obtain or retain employment.

Local Policy

Identification of Covered Persons at the Point of Entry

At COWIB, we will identify covered persons at the point of entry to our programs and services. This identification process will be implemented each time a customer accesses our system – whether the contact is made by telephone, email, internet, or in person.

Procedure for Identifying Covered Persons

Before any other service or screening process is implemented, the Career Navigator (or receptionist or other staff person working the Welcome Unit) should ask the customer:

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"Are you a Veteran or the spouse or widow(er) of a veteran?"

If the customer replies positively, then follow-up questions must be asked to confirm that the individual meets the definition of "covered person" as given in the Jobs for Veterans Act.

Confirm that the individual served in the active military, naval, or air service, and was discharged or released under conditions other than dishonorable.

Background Information: There are several types of discharge or release categories that apply to former military service members, including—

- Honorable;
- General;
- Other Than Honorable;
- Bad Conduct;
- Dishonorable;
- Entry Level Separation

In most cases, it is not necessary to determine the exact type of discharge the veteran received. If the customer confirms that s/he received any type of discharge or administrative separation other than a "Dishonorable" discharge, then s/he may be considered a "Veteran" for the purpose of these procedures.

Follow-Up for "Spouse" of a Veteran. If the customer is the spouse or widow(er) of a veteran, the Career Navigator must confirm that the individual:

i. Was the spouse of any veteran who died of a service-connected disability.
ii. Is the spouse of any member of the Armed Forces serving on active duty who, at the time of application for assistance under this section, is listed, pursuant to section 556 or title 37 and regulations issued thereunder, by the Secretary concerned in one or more of the following categories and has been so listed for a total of more than 90 days: (I) missing in action, (II) captured in line of duty by a hostile force, or (III) forcibly detained or interned in line of duty by a foreign government or power.
iii. Is married to any veteran who has a total disability resulting from a service-connected disability.
iv. Is the surviving spouse of any veteran who died while a disability so evaluated was in existence.

Clearly, not every person who is married to a veteran can be considered a "covered" spouse for the purpose of these procedures. So, the Career Navigator must carefully ask the customer if s/he falls within any of the categories listed above.

If the customer confirms that s/he matches any of these four criteria, then the customer may be considered a "covered person" for the purpose of this procedure.

Explaining Priority of Service

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If the customer identifies him/herself as a "covered person," then the staff must promptly advise the individual that they are considered to be a Jobs For Veterans priority customer of the Workforce Oklahoma system.

A brief explanation of the meaning of "Jobs For Veterans priority customer" should be offered. The explanation should include the following points of information:

1. The participant is entitled to priority treatment over non-covered customers in the delivery of Services;
2. This explanation is being offered to the participant so that they may take the fullest advantage of their status as a priority customer;
3. There are additional eligibility requirements that must be met in order to access the full array of services offered by our system.

Delivering Services to Priority Customers

After a Jobs For Veterans Priority Customer has been identified at the point of entry, the staff member may proceed to offer the normal services that are usually available to Workforce Oklahoma customers.

Jobs For Veterans Priority Customers do not receive different services than non-covered customers. However, they are eligible to receive priority treatment in the manner that the services or resources are delivered.

In practical terms, "priority treatment" means:

1. The covered person will receive access to the service or resource earlier in time than non-covered persons; or
2. If the service or resource is limited, covered persons will receive access to the service or resource instead of or before any non-covered customers.

This Priority Treatment system for covered customers is not intended to completely replace the usual rule for delivering services – that is, "first come; first serve." In fact, these Priority of Service Guidelines should not generally be used to "bump" non-covered customers who have been waiting longer than a covered person for a limited resource or service opportunity.

Even so, our local workforce system is committed to giving a meaningful advantage to Priority Customers who are seeking access to services. Our Priority Treatment system is an important acknowledgment of the sacrifices of the men and women who have served in the U.S. armed forces.

Priority of Service Guidelines for Training Services

Before any customer may receive any type of Training Service, there must be a determination of which Priority Group the customer belongs to. To make this determination, a Workforce Oklahoma staff professional must collect and review documentary evidence to verify the customer's unique circumstances. A case file must be opened, and appropriate documentation must be saved in the

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customer's file.

After each customer's Priority group has been determined, Training Services may be offered according to the following guidelines:

A customer must meet a certain threshold of need before s/he may receive Training Services. Training Services may be offered to Adults and Dislocated Workers in accordance with WIOA §134(b)(3)(A)(i)—

(I) Who, after an interview, evaluation, or assessment, and career planning, have been determined by staff as appropriate to—

(aa) Be unlikely or unable to obtain or retain employment, that leads to economic self-sufficiency or wages comparable to or higher than wages from previous employment, through the career services described in paragraph (2)(A)(xii);

(bb) Be in need of training services to obtain or retain employment that leads to economic self-sufficiency or wages comparable to or higher than wages from previous employment; and

(cc) Have the skills and qualification to successfully participate in the selected program of training services.

(II) Who select programs of training services that are directly linked to the employment opportunities in the local area or the planning region, or in another area to which the adults or dislocated workers are willing to commute or relocate;

(III) Who meet the requirements of subparagraph (B); and

(IV) Who are determined to be eligible in accordance with the priority system in effect under subparagraph (E).

According to TEGL 19-16 §11, In addition to providing career and training services to individuals who are unemployed, a significant number of job seekers are underemployed. Examples of underemployed individuals that the policies may include are:

- Individuals employed less than full-time who are seeking full-time employment;
- Individuals who are employed in a position that is inadequate with respect to their skills and training;
- Individuals who are employed who meet the definition of a low-income individual in WIOA sec. 3(36); and
- Individuals who are employed, but whose current job's earnings are not sufficient compared to their previous job's earnings from their previous employment.

Individuals who are underemployed and meet the definition of a low-income individual may receive career and training services under the Adult program on a priority basis per TEGL 19-16 §10. Individuals who meet the definition of an individual with a barrier to employment who are underemployed may

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also be served in the Adult program; however, unless they are a recipient of public assistance, a low-income individual, or are basic skills deficient, they are not eligible for service on a priority basis. (Assignment to Priority 4.)

Procedures for the Delivery of Training Services

- Eligible participants must be ranked in terms of the Priority Group of each participant, with Priority Group "1" participants at the top of the list and Priority Group "4" participants at the bottom of the list.
- All Training Services should be assigned according to priority group. The COWIB Board exception to priority occurs when a participant is enrolled in OJT (On the Job) or Apprenticeship training. In these cases, the employer has interviewed and selected the participant they wish to proceed with. In these cases, the skills and aptitudes desired by the employer will outweigh the priority group ranking. When an individual with a CNA (Certified Nursing Assistant) is willing to increase his or her skillset to become an LPN (Licensed Practical Nurse). The individual will be allowed to have training approved as a Priority Group 4. As long as the individual's employment goal is to meet the threshold to economic self-sufficient or wages comparable to or higher than wages from previous employment. This education and career ladder track must be approved by the COWIB CEO prior to an individual's approval for training. In addition, if an individual with an LPN (Licensed Practical Nurse) is willing to increase his or her skillset to become a RN (Registered Nurse). The individual will be allowed to have training approved as a Priority Group 4. Again, as long as the individual's employment goal is to meet the threshold to economic self-sufficient or wages comparable to or higher than wages from previous employment. This education and career ladder track must be approved by the COWIB CEO prior to an individual's approval for training.
- If two or more equally-ranked participants are available for enrollment into a Training activity, the One-Stop Operator, in conjunction with the Service Provider, may implement a participant selection process consistent with COWIB Policy. At all time, the selection process must be designed to provide an equal opportunity for referral. An unbiased random selection process may be used.

Equal Opportunity and Nondiscrimination Statement

All Recipients, and Sub-recipients / Sub-grantees must comply with WIOA's Equal Opportunity and Nondiscrimination provisions which prohibit discrimination on the basis of race, color, religion, sex (including pregnancy, childbirth, and related medical conditions, transgender status, and gender identity), national origin (including limited English proficiency), age, disability, political affiliation or belief, or, for beneficiaries, applicants, and participants only, on the basis of citizenship status or participation in a WIOA Title-I financially assisted program or activity.

Addenda / Revisions

The COWIB Chief Executive Officer is authorized to issue additional instructions, guidance, approvals,

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and/or forms to further implement the requirements of policy, without making substantive change to the policy, except in situations when a new or updated state and federal guidance is issued.

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Priority Ranking Worksheet

For Adult Customers Seeking Individualized Career Services And/or Training Services

Customer Name: _____

Participant ID Number: _____

Determination Date: _____

Priority Rank (check one):

1. ___ JFV Covered & "WIOA Priority"
2. ___ "WIOA Priority" only
3. ___ "JFV", not in WIOA Priority Group
4. ___ Neither "JFV" nor "WIOA Priority"

DOCUMENTATION:

(1) JFV Covered. To document that this customer is a Veteran or a Covered Spouse under the Jobs for Veterans Act, a Workforce Oklahoma staff professional must validate the following statement with appropriate documentation:

The OSL record for this individual shows that s/he is a Veteran or an "Other Eligible" person. ☐ YES ☐ NO

(2) "WIOA Priority" To verify that this person is a "WIOA Priority" customer, additional documentation must be reviewed and validated. Use the COWIB's Memo on "Priority of Service and Special Populations" to document that the customer meets the definition of:

Public Assistance Recipient
OR **Low-Income Individual**
OR **Basic Skills Deficient** ☐ YES ☐ NO

CERTIFICATION:

I certify that this determination of Priority Rank is true and correct, to the best of my knowledge, based on information provided by the customer named above.

_____ _____

Career Navigator Date

Additional Instructions.

Circle the correct Priority Rank number for this customer. Use this Priority Rank number when referring the customer to an individualized Career Service or a Training Service

For customers in Priority Rank 1 or Priority Rank 2, enter appropriate documentation in the participant record.

		WIOA Priority?	
		Yes	No
JFV Priority?	Yes	**1**	**3**
	No	**2**	**4**

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