FEBRUARY 2017

ECONOMIC DIVERSIFICATION PLAN

EAST KERN COUNTY, CA

ACKNOWLEDGEMENTS

TIP Strategies would like to thank the many individuals who participated in the creation of this Economic Diversification Plan. We are especially grateful to the members of the East Kern Economic Alliance who contributed their time and input throughout this planning process. Their expertise helped us gain a deep understanding of the region's range of assets and opportunities. We are also thankful for the US Department of Defense Office of Economic Adjustment for their visionary investments and support which helped make this project a reality. We also want to thank the leadership and staff of Kern County and the Kern EDC for their essential support, guidance, and feedback during the development of this plan.

EAST KERN ECONOMIC ALLIANCE KEY STAKEHOLDERS

Richard Chapman, President & CEO *Kern Economic Development Corporation*	Jennifer Wood, Mayor *California City*	Gary Parsons, Economic Development Manager *City of Ridgecrest*
Karina Drees, CEO and General Manager *Mojave Air & Spaceport*	Bill Deaver, *Edwards Community Alliance*	Michelle Vance, Economic Development Coordinator *City of Tehachapi*
Kimberly Maevers, President *Greater Antelope Valley Economic Alliance*	Kelly Bearden, Director *CSU-Bakersfield SBDC*	Ryan Rush, Field Representative *Kern County Board of Supervisors, 2nd District*

KERN COUNTY PROJECT TEAM

Supervisor Zach Scrivner, *Chairman of the Kern County Board of Supervisors & 2nd District Supervisor*
Teresa Hitchcock, *Assistant County Administrative Officer for Policy & Economic Development*
Thomas Brown, *Administrative Analyst*

TIP STRATEGIES CONSULTING TEAM

Tom Stellman, *President/CEO*
John Karras, *Senior Consultant*
Alex Cooke, *Senior Consultant*
Karen Beard, *Lead Analyst*
Meredith Eberle, *Project Support*

CHABIN CONCEPTS CONSULTING TEAM

Audrey Taylor, *President & CEO*
Vicki Doll, *Principal*
Fawn McLaughlin, *Principal, FJMcLaughlin & Associates*

CONTENTS

EXECUTIVE SUMMARY

INTRODUCTION

East Kern County, California is a region defined by vast economic opportunities. Kern County is larger than the land area of Delaware, Rhode Island, and Connecticut combined with more than 8,000 square miles of mountains, valleys, desert, and a diverse group of communities. East Kern covers roughly the eastern third of the county and contains three incorporated cities—California City, Ridgecrest, and Tehachapi—and three unincorporated communities—Boron, Mojave, and Rosamond. The region's economy is driven primarily by two military installations—Naval Air Weapons Station-China Lake and Edwards Air Force Base—and a handful of other major employers including Rio Tinto in Boron, the Mojave Air & Spaceport, and large prisons in Tehachapi and California City. East Kern is also closely linked to the greater Los Angeles economy, especially the communities of Lancaster and Palmdale.

This economic diversification plan is a bold, yet comprehensive set of strategies to accelerate economic development in East Kern and its six individual communities. The plan is focused on leveraging the region's most promising opportunities for long-term prosperity and addressing the most significant challenges.

DIVERSIFICATION PLAN SUMMARY

GOALS

1. Business Development
2. Talent Development & Recruitment
3. Innovation & Entrepreneurship
4. Tourism & Visitor Attraction
5. Regional Collaboration

TARGET INDUSTRIES (*FOCUS AREAS IN ITALICS*)

- Aerospace products, services, research & testing (*aerospace components, engineering services, testing & product development*)
- Natural resources & clean energy (*mining, mining equipment suppliers & services, solar & wind energy development*)
- Outdoor recreation & tourism (*off-highway vehicles, outdoor sports, airplane enthusiast tourism, festivals & events, film production*)
- Logistics & distribution (*warehousing & distribution, rail-served multimodal facilities*)
- Health care (*medical specialties, community health & wellness, remote/extreme medicine*)

MEASURES OF SUCCESS

- High-wage job growth
- New business creation
- Capital investment
- Educational attainment

PROJECT APPROACH

Kern County engaged TIP Strategies (TIP), an Austin-based economic development consulting firm, to lead the preparation of an Economic Diversification Plan for East Kern County. This planning process, funded by the Department of Defense's Office of Economic Adjustment, launched in February 2016 with a completion date of February 2017. Chabin Concepts, a California-based economic development consulting firm, has assisted TIP and Kern County throughout the project.

As part of the planning process, the consulting team has worked with regional leaders to gain a deep qualitative and quantitative understanding of East Kern's challenges and opportunities to provide a foundation for strategies to grow the regional economy. Throughout 2016 and early 2017, the team worked with regional and local community leaders to conduct multiple site tours in each of the six communities, hold 16 community meetings, and meet separately with more than 55 employers and regional stakeholders. The process also included an analysis of dozens of demographic and economic variables for East Kern and each of the six communities.

ASSETS & OPPORTUNITIES

East Kern has an abundance of assets, competitive advantages, and opportunities, which can be leveraged for economic development.

- World-class employers, industries, and innovative workers.
- Naval Air Weapons Station-China Lake and Edwards Air Force Base (including the NASA Armstrong Flight Research Center).
- The R-2508 Complex of restricted air space centered on NAWS China Lake, Edwards AFB, and Fort Irwin.
- The Mojave Air & Spaceport, which anchors the region's strong aerospace sector.
- Large mining sector led by Rio Tinto and also including two cement plants, Golden Queen Mine, and upcoming Road Machinery construction and mining equipment dealer in Mojave.
- Health care sector with growth potential, especially with new Tehachapi Hospital under development.
- Large clean energy sector with major new wind and solar energy production facilities.
- Wide range of outdoor recreation assets (e.g., OHV areas in California City, Pacific Crest Trail) and other tourist attractions, including the planned new casino/entertainment complex in Ridgecrest and the major expansion of the Edwards Flight Test Museum planned for Rosamond.
- Numerous events and festivals that draw thousands of visitors into the region including the Petroglyph Festival in Ridgecrest, Wasteland Weekend in California City, the Tehachapi Gran Fondo, and Plane Crazy Saturdays at the Mojave Air & Spaceport.
- Other major employers (e.g., prisons in California City and Tehachapi).
- Numerous motor vehicle R&D and testing facilities (e.g., Honda, Hyundai/Kia, Willow Springs Raceway).
- Untapped potential for startups and entrepreneurship, supported by nascent "maker space" efforts in Mojave and Ridgecrest, the upcoming CSU-Bakersfield SBDC (Small Business Development Center) in Ridgecrest, and regional schools providing extensive STEM education programs.
- Existing regional collaboration efforts through East Kern Economic Alliance (EKEA) and other partnerships between individual communities.
- Strong regional partner organizations (Kern County, Kern EDC, GAVEA, Cerro Coso Community College).
- Proximity to the Greater Los Angeles region, including strong economic linkages to Lancaster and Palmdale.
- Potential to capitalize on Northrop Grumman B-21 long-range bomber expansion in Palmdale.
- Available land for development and relatively low-cost communities.
- A uniquely pro-business and development-friendly business climate at the local and county levels in a state known for its strict environmental regulations and development restrictions.

CHALLENGES & RISKS

East Kern also has significant barriers to growth that could limit the area's growth potential. The region's greatest strength—the existing world-class employers—is also its biggest challenge. The East Kern economy depends almost entirely on the military installations and a few other large employers whose long-term success is not guaranteed. Addressing this challenge and others (summarized below) will be important for the region's future growth.

- A regional economy that is not diversified.
- The sheer physical size of Kern County, which creates challenges for coordination and deployment of resources to support economic development, workforce training, and other services.
- Limited control of land uses/development in unincorporated communities (Mojave, Boron, and Rosamond).
- Relatively low levels of educational attainment.
- Workforce shortages in key occupations.
- Loss of talent to larger urban areas and difficulties associated with recruiting talent.
- Relatively large share of low-income residents driven to the region by high housing costs in Southern California (negatively impacts poverty rates, educational outcomes, crime, and other factors).
- Limited "deal ready" real estate options for business expansion projects.
- No existing commercial air service in the region (but Inyokern Airport is working to re-instate flights to LAX).
- Water availability to accommodate current and future demands.
- Land use encroachment and incompatible uses adjacent to major employers.

THE POTENTIAL OF THIS PLAN

This plan focuses on the areas where leaders in East Kern have the greatest potential to affect positive change, beginning with the core functions of industry-specific business retention, expansion, and recruitment. A set of five new target industries for the region are profiled in Appendix C of this document. The plan also details new initiatives centered on talent development and recruitment; innovation and entrepreneurship; and tourism as priorities for East Kern. Lastly, this body of work lays a foundation for expanded regional collaboration led by the East Kern Economic Alliance and with involvement from partner organizations across the region. If the region embraces the opportunities presented in this plan, it can place itself on a path for long-term economic prosperity.

For the purposes of this plan, success is defined by accomplishing the following objectives:

- Increase the number of high-wage jobs
- Strengthen the tax base of local municipalities
- Raise income levels for area households
- Support the growth of existing employers
- Grow the region's population and housing stock
- Expand regional amenities and entertainment offerings
- Attract new business investment into the region
- Raise the educational attainment levels of the area workforce

EAST KERN ECONOMIC DIVERSIFICATION PLAN

This strategic plan will guide the economic development efforts in East Kern County, California over the next five years and beyond. The East Kern region includes three cities—California City, Ridgecrest, and Tehachapi—and three unincorporated communities—Boron, Mojave, and Rosamond. This document provides a roadmap for East Kern's economic development program, but the ultimate success of the recommendations will depend on the level of commitment from the region's business and community leaders in executing the strategies laid out in this plan.

The initiatives outlined below begin with the acknowledgement that East Kern's existing employers form the foundation of the region's economy. Supporting the growth and ongoing success of Naval Air Weapons Station (NAWS)-China Lake, Edwards Air Force Base (AFB) and the NASA Armstrong Flight Research Center, Mojave Air & Spaceport, Rio Tinto, and other existing employers is a "must do" baseline activity for the region's leadership. Yet this is not enough. This plan stretches regional leaders and lays the groundwork for a set of ambitious new strategies to expand and diversify the regional economy. The plan is structured around a single vision and five goals.

VISION

East Kern will emerge as a leading center for business development, innovation, and high-wage job growth by leveraging its globally recognized military and aerospace assets, as well as the region's existing businesses, entertainment and recreation assets, and its diverse communities.

GOALS

The following five goals form the framework for the strategic plan.

GOAL 1. BUSINESS DEVELOPMENT: *Grow the East Kern economy through the retention and expansion of existing employers and the recruitment of new businesses and high-wage jobs.*

GOAL 2. TALENT DEVELOPMENT & RECRUITMENT: *Develop a strong pipeline of local talent and recruit skilled workers from outside of the region to support current and future employers.*

GOAL 3. INNOVATION & ENTREPRENEURSHIP: *Cultivate a robust environment for innovation to fuel R&D, technology commercialization, and entrepreneurship.*

GOAL 4. TOURISM & VISITOR ATTRACTION: *Enhance and connect East Kern's tourism assets to generate more spending in the regional economy and to raise the profile of the area for talent attraction.*

GOAL 5. REGIONAL COLLABORATION: *Formalize the East Kern Economic Alliance as the primary vehicle to promote economic development in East Kern and to support economic opportunities related to NAWS China Lake and Edwards AFB.*

GOAL 1. BUSINESS DEVELOPMENT

Grow the East Kern economy through the retention and expansion of existing employers and the recruitment of new businesses and high-wage jobs.

FOCUS AREAS

- Business retention & expansion
- Business recruitment
- Marketing (internal & external)
- Sites & infrastructure

KEY CONSIDERATIONS

- Leverage existing networks & resources of Kern EDC & GAVEA
- Adopt "Permission to Risk | Succeed | Fail | Challenge | Innovate" as East Kern's marketing approach
- Focus business development efforts on East Kern's target industries

The US Small Business Administration estimates that roughly 60 percent of new jobs in a community are created through the expansion of existing businesses. Existing employers form the backbone of the East Kern economy and are its most valuable asset. A strong business retention and expansion program is more important than a recruitment program, not only because of job creation, but because it is extremely difficult to recruit a new company if existing businesses are not thriving, especially if they have a negative attitude about the local business climate.

In addition to supporting the growth of existing employers, the region needs to attract new investment and job growth through business recruitment efforts. Since the Great Recession ended, competition has heated up for business expansion and relocation projects between communities nationwide. Communities and states with aggressive recruitment programs are reaping the rewards. New initiatives geared toward a focused set of target industries will be required for the region to "up its game" and compete successfully for business expansions and relocations. This will require expanded partnerships between local economic business recruitment efforts and regional organizations, primarily Kern EDC and the Greater Antelope Valley Economic Alliance (GAVEA).

STRATEGIES & ACTIONS

1.1. BUSINESS RETENTION & EXPANSION. Establish an East Kern business visitation program to respond to the needs of existing employers and industries.

1.1.1. Work with Kern EDC and GAVEA to create, maintain, and grow a database of existing businesses in East Kern.

- Update and evaluate the database continually.
- Include all large employers and also focus on high-growth firms, companies that serve external markets, and firms that are suppliers or service providers for the area's major employers.

1.1.2. Use the business visitation program to meet with all major employers, high-growth firms, and other key businesses on an annual basis.

- Prioritize business visits by employer size and growth rates (employment and revenue), target industries, and lease expiration dates.
- Structure visits to gauge the abilities and needs of local businesses in order to operate successfully and possibly expand in East Kern.

1.1.3. Host regular CEO breakfasts and other networking events in different East Kern communities on a rotating schedule (similar to EKEA meetings) to encourage relationship-building and informal connections among the regional business community.

1.2. BUSINESS RECRUITMENT. Recruit new business investments and companies into East Kern.

1.2.1. TARGET INDUSTRIES. Focus East Kern's business recruitment and marketing efforts on five target industries. *(For a detailed explanation of these target industries, see Appendix C: Target Industry Analysis)*

- **AEROSPACE PRODUCTS, SERVICES, RESEARCH, & TESTING:** aerospace component manufacturing; aerospace & engineering services; research, testing, & product development.
- **NATURAL RESOURCES & CLEAN ENERGY:** mining (minerals & metals); mining equipment, suppliers & services; clean energy development (wind & solar).
- **OUTDOOR RECREATION & TOURISM:** off-highway vehicle tourism, testing & product development; outdoor sports (hiking, biking, extreme/adventure sports); airplane & experimental aircraft enthusiast events & services; festivals & events.
- **LOGISTICS & DISTRIBUTION:** warehousing and distribution facilities; rail-served intermodal facilities.
- **HEALTH CARE:** medical specialties; community health & wellness services; remote/extreme medicine.

1.2.2. Strengthen East Kern's business recruitment efforts by cultivating relationships with business decision makers including corporate executives, commercial real estate brokers, and site location consultants. Make connections with corporate leaders and real estate brokers in the greater Los Angeles area.

1.2.3. Work with local economic and workforce development organizations to develop a set of actions aimed at capitalizing on the major Northrup Grumman expansion in Palmdale. With an estimated 5,000 new direct jobs associated with the B-21 long-range stealth bomber production, this is an opportunity that East Kern should not overlook.

1.2.4. Work with local economic development organizations to identify and attract new defense sector companies, investments, and employment tied to NAWS China Lake and Edwards AFB (including the NASA Armstrong Flight Research Center) as well as the broader defense sector.

1.2.5. Leverage East Kern's proximity to greater Los Angeles and Las Vegas to promote the region as an investment opportunity for high net worth individuals, including Chinese nationals and other foreign investors and business executives.

1.2.6. Conduct a regional "fam tour" for site consultants and commercial real estate brokers to generate awareness of East Kern as a destination for business expansions and investment among executives.

- Ensure that the tour is focused on business opportunities. Ideally, the tour would involve two to three pre-defined projects that site consultants and brokers can evaluate and weigh in on.
- A significant benefit conducting such an event is to showcase the region's amenities and assets. The end goal, however, is to develop relationships with key business decision makers that can lead to new investments and business expansions/relocations.

1.3. MARKETING. Adopt and promote an East Kern marketing approach centered on the "Permission to Risk | Succeed | Fail | Challenge | Innovate" advertising campaign originally developed for the Mojave Air & Spaceport.

1.3.1. Promote the region for testing, prototyping, and R&D activities.

1.3.2. Highlight the large-scale innovation, testing, and technology development taking place at the Mojave Air & Spaceport, NAWS China Lake, and Edwards AFB (including the NASA Armstrong Flight Research Center).

1.3.3. Promote other businesses in the region that are also involved in product & technology testing, including the Hyundai and Honda test tracks in California City, the Willow Springs Raceway complex in Rosamond, the Arc Housing Project developed by Shelter Dynamics in Ridgecrest, other Ridgecrest firms (Firequick, Monarch, and Pertexa), and other creative businesses. This could be expanded to autonomous vehicle testing.

> "The best ideas come from the collaborative efforts of small, closely-knit project teams and an environment unlimited by aversion to risk."
>
> -Burt Rutan, Founder of Scaled Composites

1.3.4. Create fresh marketing materials that reflect the "Permission to Risk | Succeed | Fail | Challenge | Innovate" ethos of innovation and highlight East Kern's advantages related to each of the five target industries.

1.4. SITES & INFRASTRUCTURE. Ensure that the appropriate sites and infrastructure are available in East Kern to support business growth.

1.4.1. Work with existing employers, local governments, utility providers, and the area real estate community to identify gaps in the region's infrastructure that act as a barrier to the growth of existing employers and recruitment of new businesses. Work together to identify and implement solutions to the most critical infrastructure and real estate challenges.

1.4.2. Work closely with large employers and landowners (e.g., Rio Tinto, Mojave Air & Spaceport) to explore options to reposition vacant or underutilized real estate for redevelopment and business recruitment purposes.

GOAL 2. TALENT DEVELOPMENT & RECRUITMENT

Develop a strong pipeline of local talent and attract skilled workers from outside of the region to support current and future employers.

Access to a skilled workforce is *the* critical factor affecting the success of businesses in today's economy. According to *Area Development's* "30th Annual Survey of Corporate Executives (Q1 2016)", access to a skilled workforce ranked at the top of the list among 36 site selection factors. National demographic trends will lead to shrinkage of the working-age population in the next of couple of decades. If job growth continues, even at a minimal rate, employers will continue to have difficulties finding skilled workers. Thus, one of the most urgent priorities for communities is to attract, retain, and develop a pipeline of talent to support the growth of existing and future employers. Regions with a skilled population have a dramatic advantage over other areas. Addressing this issue is critical for the region's future growth.

FOCUS AREAS

- STEM education & workforce training
- Aerospace & defense
- Talent recruitment

KEY CONSIDERATIONS

- Align workforce development efforts with key industries, starting with aerospace
- "Prove yourself in East Kern" talent recruitment effort for regional employers
- Fully capitalize on Cerro Coso Community College as an economic engine

Workforce development is only one-half of the talent equation. The other, equally important, component of having an available skilled workforce is a region's ability to attract and retain talented workers. East Kern is fortunate to have several large, relatively stable employers with thousands of high-wage jobs. But these employers will continue to face intense competition for talent regionally, statewide, and nationally. This is especially true in the aerospace and defense sectors thanks to the major expansion of Northrup Grumman in Palmdale. The communities in East Kern, individually and collectively, need to rise above their competition and offer a compelling reason for young, educated workers to choose the area.

STRATEGIES & ACTIONS

2.1. STEM EDUCATION & WORKFORCE TRAINING. Launch new STEM-focused workforce development initiatives that build a pipeline of talent to fuel the region's target industries, beginning with aerospace and defense.

- **2.1.1.** Coordinate new and existing STEM programs in partnership with the military installations and major STEM-focused employers (aerospace firms at Mojave Air & Spaceport, Rio Tinto).
- **2.1.2.** Support efforts led by the East Kern/Antelope Valley STEM Network.
- **2.1.3.** Create a program similar to the Endeavour Institute & Endeavour Center at Vandenberg AFB to regularly engage and inspire K-12 students from East Kern as well as Bakersfield and Los Angeles County about careers in science and technology.

2.2. CERRO COSO COMMUNITY COLLEGE. Fully capitalize on the role of Cerro Coso Community College as an economic engine and strengthen linkages between the college and regional employers.

- **2.2.1.** Organize and host an annual East Kern Workforce Summit to provide employers and training providers an opportunity to make connections with each other and share information.

- Use this forum to disseminate ideas and increase industry and education alignment.
- Include presentations from subject matter experts that showcase best practice examples from inside and outside the region.
- Set aside time during the summit for breakout sessions where participants can work on tackling workforce challenges together.

2.2.2. Work with Cerro Coso Community College, the region's K-12 schools, and employers to implement more internships, create greater awareness of job opportunities among students and parents, and place more educators in "externships" with local employers.

2.3. TALENT RECRUITMENT. Launch a "Prove yourself in East Kern" talent recruitment campaign to coordinate regional efforts to attract talent from outside of the region.

2.3.1. Highlight and promote the multitude of challenging and rewarding career options available within East Kern's primary employers and key industries.

- Host joint job fairs and talent recruitment events that involve multiple employers seeking to fill similar key occupations such as engineers and other hard-to-fill technical occupations.
- Travel to nearby markets with a high concentration of engineering talent (Los Angeles, San Diego, San Francisco, Phoenix) to participate in talent recruitment events such as university career days/job fairs.

2.3.2. Work with regional employers to identify the hardest-to-find skills and hardest-to-fill occupations and develop a regional talent recruitment initiative to fill these needs.

2.4. YOUNG PROFESSIONALS. Promote civic leadership and engage young professionals across the region.

2.4.1. Create an East Kern Leadership program to encourage civic engagement and professional development among the region's existing and emerging leaders.

2.4.2. Work with area employers and existing young professionals groups to regularly survey young adults to gain a better understanding of the desires and needs of this key segment of the workforce.

GOAL 3. INNOVATION & ENTREPRENEURSHIP

Cultivate a robust environment for innovation to fuel R&D, technology commercialization, and entrepreneurship.

Innovation. Product testing. Prototyping. "Permission to risk, succeed, fail, challenge, innovate." These are the hallmarks of East Kern. The role of innovation as an economic engine can be seen throughout the region. The private sector comes to East Kern to push the limits of existing technologies and develop new innovations, from the Honda and Hyundai test tracks in California City, to the flight testing and aerospace engineering at the Mojave Air & Spaceport. The region is home to world-class engineering talent and leading-edge companies that advance the boundaries of what is considered possible on a daily basis. With a coordinated regional approach to nurture the environment for innovation and entrepreneurship, East Kern can fuel additional business creation and high-wage job growth across multiple industries.

FOCUS AREAS

- Aerospace research & testing
- Defense-related tech transfer
- Linkages to Silicon Valley

KEY CONSIDERATIONS

- Technology commercialization from NAWS China Lake and Edwards AFB
- Create regional networks & support structures for entrepreneurship
- Link innovation/entrepreneurship support with workforce training

The public sector in East Kern is also driven by innovation. The core missions of both NAWS China Lake and Edwards AFB (including the NASA Armstrong Flight Research Center) are focused on the research, development, testing, and deployment of new technologies and innovations. Supporting the workforce needs of the military installations is a clear priority for regional leadership, but opportunities also exist to link the innovation taking place "inside the gate" to broader commercial application and technology transfer that can generate private sector business growth in East Kern.

STRATEGIES & ACTIONS

3.1. SUPPORT STRUCTURES. Create a robust regional network of support systems for entrepreneurs, technology workers, and innovators.

3.1.1. Leverage the new CSU-Bakersfield SBDC (Small Business Development Center) office in Ridgecrest to support the growth of startups and small businesses.

3.1.2. Explore the potential to establish a PTAC (Procurement Technical Assistance Center) in Ridgecrest to serve businesses in East Kern and Kern County (there is no PTAC that serves Kern County) that are seeking to compete for government contracts.

- Partner with the CSU-Bakersfield SBDC and Cerro Coso Community College to create the PTAC.
- Use the PTAC to encourage business creation and expansion associated with contracting opportunities at China Lake and Edwards AFB.

3.1.3. Launch an East Kern "1 Million Cups" chapter to encourage greater communication and networking among entrepreneurs, investors, and startups across the region.

3.1.4. Expand access to capital across East Kern, including the potential creation of an angel investment network to provide a source of equity investment for existing and new startups in the region.

3.2. MAKER SPACES. Create new regional "maker spaces" that offer physical space for startups and entrepreneurs, workforce training facilities, and collaboration opportunities for creative workers.

3.2.1. Work with the Mojave Air & Spaceport and Cerro Coso Community College to establish a combined maker space in Mojave that serves as a hub for aerospace innovation, training, networking, and talent retention (through mentoring programs and other activities).

Best Practice: Greentown Labs clean tech incubator in Somerville, MA.

3.2.2. Establish a maker space in Ridgecrest that provides opportunities for training, networking, and business development for entrepreneurs, China Lake employees, and emerging talent. Include representatives from China Lake, Cerro Coso Community College, and the City of Ridgecrest.

3.2.3. Seek opportunities to create similar maker spaces (in addition to the recommended locations in Mojave and Ridgecrest) and link all of these locations and programs together.

3.3. RESEARCH & DEVELOPMENT. Establish a working group of regional government, business, and academic leaders to pursue new R&D opportunities.

3.3.1. Lobby Congress for a new national lab or similar federal research facility that leverages the restricted air space and existing world-class R&D, testing, and aerospace talent and innovation.

Best Practice: National Bio and Agro-Defense Facility (NBAF) in Manhattan, KS

3.3.2. Explore the potential to create a center of excellence that links regional industry and academic expertise to pursue new innovations and technologies. Potential focus areas include aerospace product testing & design; mining technology; and off-road vehicle technology.

CENTERS OF EXCELLENCE

Centers of excellence are defined by 3 factors:

1. A consortium among multiple higher education institutions and/or research organizations
2. Partnerships with higher education and industry
3. A focus on a specific industry, a single research topic, or a particular training program

Examples of successful centers of excellence include:

- The UT Center for Identity in Austin, TX
- The Collider (climate science) in Asheville, NC
- The Cyber Center of Excellence in San Diego, CA

3.4. CONNECTIONS TO INNOVATION HUBS. Cultivate stronger linkages between East Kern and the vibrant innovation ecosystems in Silicon Valley, Greater Los Angeles, San Diego, and other national innovation hubs.

3.4.1. Build linkages between East Kern's defense sector and the Department of Defense's new Defense Innovation Unit Experimental (DIUx), an innovative military and industry partnership with locations in Silicon Valley, Boston, and a virtual location in Austin.

3.4.2. Strengthen ties to San Diego's innovation ecosystem, through existing relationships between NAWS China Lake and Naval Base San Diego and new connections to the Center for Commercialization of Advanced Technology (CCAT), a collaborative partnership between the defense industry, higher education, and federal government.

3.4.3. Connect East Kern entrepreneurs and tech workers to the greater Los Angeles area startup scene.

GOAL 4. TOURISM & VISITOR ATTRACTION

Enhance and connect East Kern's tourism assets to generate more spending in the regional economy and to raise the profile of the area for talent attraction.

Tourism is not considered "economic development" by everyone in the economic development profession. Thankfully, this narrow thinking has given way in recent years to a more expansive view of what constitutes economic development. The benefits of tourism to a local economy can be measured through a range of outcomes:

1. visitor spending and the positive impact on existing businesses;
2. development of new businesses and destinations; and
3. attracting talent and enhancing the image of a region through greater awareness.

FOCUS AREAS

- Outdoor recreation
- Linked regional destinations
- Festivals & events

KEY CONSIDERATIONS

- Support existing successful events
- Connect tourism promotion with economic development
- Leverage proximity to major markets (Los Angeles, Las Vegas, San Francisco)

The tourism potential in East Kern is largely underdeveloped but could lead to significant economic growth. Tens of thousands of visitors come to California City and other parts of East Kern on weekend visits for OHV (off-highway vehicle) recreation, but much of their potential spending takes place elsewhere. All of East Kern's communities are located within a half-day drive (4 hours) of a population of more than 25 million. Highway 58—the primary route between Las Vegas and San Francisco—runs through the heart of East Kern. The region is blessed with unique tourism assets that have flown "under the radar" ranging from the Pacific Crest Trail and Red Rock Canyons State Park to the downtown district in Tehachapi and the unrivaled collection of military aircraft at Edwards AFB. East Kern also has a series of regular events that draw in thousands of visitors, including the Petroglyph Festival in Ridgecrest, the Tehachapi Gran Fondo, and Wasteland Weekend in California City.

STRATEGIES & ACTIONS

4.1. PACKAGE & PROMOTE REGIONAL DESTINATIONS. Create and launch an East Kern linked destinations program to holistically package and promote the region's tourism opportunities.

4.1.1. Create an East Kern Outdoor Recreation & Visitor Guide that packages all of the region's trails, natural amenities, and other tourist attractions and present them as a menu of entertainment options. Highlight all of the region's unique amenities (including well-known and lesser-known destinations) ranging from the Pacific Crest Trail to the Exotic Feline Breeding Compound in Rosamond.

Best Practices: Communities that have successfully leveraged outdoor recreation for economic development include Bend, OR; Asheville, NC; and Grand Junction, CO.

4.1.2. Design a one-stop website that consolidates information on all of East Kern's tourism destinations onto a single web presence, with subsections providing detailed information on specific segments of the region's visitor amenities including: OHV (off-highway vehicles) courses and racing; hiking, mountain biking, and camping; airplane and experimental aircraft enthusiasts; birding and wildlife viewing; museums and historical sites; and local restaurants, hotels, and other attractions.

4.1.3. Promote Tehachapi's Main Street and downtown area as the premier entertainment and recreation node along the Las Vegas to San Francisco corridor. Tehachapi sits at roughly the midpoint along the eight-hour, 550-mile drive between the two destinations.

4.1.4. Enhance awareness of existing tourism destinations through wayfinding signage throughout East Kern that brings visitors to the region's many attractions.

4.1.5. Periodically conduct visitor surveys and use this information to enhance marketing efforts, identify product enhancement opportunities, and gain a better understanding of who is visiting the region to inform talent recruitment and business attraction efforts.

4.2. DEVELOP NEW AMENITIES & DESTINATIONS. Create new destinations and amenities that draw additional visitors into East Kern and make the region more attractive for skilled workers.

4.2.1. Support the efforts of the Flight Test Foundation to build a new museum in Rosamond to replace the existing Edwards Air Force Flight Test Museum.

4.2.2. Pursue new visitor destinations that bring in tourists and generate new spending in the regional economy. Examples of new attractions that could lead to significant new economic activity include destination restaurants, resort-style lodges, and new extreme sports facilities (like the Cal City MX Park).

4.2.3. Develop new hiking trails and mountain biking trails/courses throughout East Kern. Work with the Tehachapi Mountain Trails Association to develop a year-round, lift-assisted mountain bike course in the Greater Tehachapi area.

4.2.4. Explore the potential to create new skyparks at the region's airports, similar to the Rosamond Skypark. Airports that could support a skypark include California City Municipal Airport, Tehachapi Municipal Airport, and Inyokern Airport.

4.3. FESTIVALS & EVENTS. Support the ongoing success and growth of existing events across East Kern that draw in thousands of visitors and develop new events that could lead to additional visitor spending and greater awareness of East Kern among business executives and skilled workers.

4.3.1. Existing major events include The Petroglyph Festival in Ridgecrest, Wasteland Weekend in California City, and the Tehachapi Gran Fondo.

4.3.2. Work with the EAA (Experimental Aircraft Association) to launch a winter event in East Kern smaller in scale, but similar to the weeklong AirVenture event, which takes place each July in Oshkosh, WI.

4.3.3. Establish a new Off-Highway Vehicle Expo event that draws in not only enthusiasts, but also product and service providers.

Best Practice: Overland Expo WEST in Flagstaff, AZ and Overland Expo EAST in Asheville, NC.

4.4. LINK TOURISM TO ECONOMIC DEVELOPMENT. Connect tourism promotion to other economic development efforts, especially talent attraction and business recruitment.

4.4.1. Work with local chambers of commerce, convention & visitors bureaus (CVBs), and other groups to engage the region's service industry—particularly restaurant and hotel staff—to develop training sessions for service industry workers so that they can become better salespeople for East Kern, projecting a positive image of the area to residents and visitors alike.

4.4.2. Work with local CVBs and other groups to target events and trade shows that bring in business decision makers from target industries. Given the limited amount of available meeting space and hotels rooms in East Kern, focus on smaller events.

4.4.3. Leverage East Kern's unique natural geography, its diverse communities, and its proximity to Los Angeles to promote the region as a prime location for film production.

- Package and promote the region's unique locations for potential film sets (the Tehachapi Main Street district, Red Rock Canyons State Park, the Mojave Air & Spaceport, Rio Tinto's mining operations, California City's vast "second city", and many other one-of-a-kind sites).
- Cultivate relationships and build networks with key stakeholders in the film industry from the Greater Los Angeles area to raise the profile of East Kern as a potential filming location.
- Work with the California Film Commission and Kern County Film Commission to pursue film production projects in East Kern.

GOAL 5. REGIONAL COLLABORATION

Formalize the East Kern Economic Alliance as the primary vehicle to promote economic development in East Kern and to support economic opportunities related to NAWS China Lake and Edwards AFB.

East Kern is served by numerous organizations that support economic development through different programs. Kern County, the Kern EDC, the Greater Antelope Valley Economic Alliance (GAVEA), local municipalities, local chambers of commerce and economic development organizations, the China Lake Alliance, the Edwards Community Alliance, Cerro Coso Community College, and other groups play a role in enhancing the economic potential of East Kern. The EKEA has played a critical role in encouraging greater collaboration among the region's six communities and its two military installations. However, East Kern lacks a full-time professional dedicated to advocating for both NAWS China Lake and Edwards AFB, maximizing the economic potential of the two installations, and pursuing additional opportunities for economic development across the six-community area of East Kern.

FOCUS AREAS

- Strengthen regional partnerships
- Support of military installations
- Pursue funding sources

KEY CONSIDERATIONS

- Secure a full-time staff person for the EKEA
- Establish clear roles & responsibilities for the EKEA and partner organizations
- Coordinate economic development activities across East Kern

A broad group of stakeholders involved in the planning process for the East Kern Economic Diversification Strategy have galvanized support around the concept of formalizing a new regional defense alliance to fill the unmet needs of regional collaboration. While NAWS China Lake and Edwards AFB both have their own advocacy and support efforts in their surrounding communities, a strong case can be made for new partnerships and cooperation among organizations in East Kern to support both installations and the regional economy anchored by their presence. This is especially important given the current atmosphere of uncertainty related to federal defense procurement and milcon budgets, Navy and Air Force downsizing, and the real prospect of a future BRAC round. The R-2508 restricted airspace shared by NAWS China Lake and Edwards AFB is a unique asset, but East Kern cannot afford to assume that it is immune to the threats facing military communities across the country. A stronger, more formal, better-resourced EKEA should play a lead role in strengthening the East Kern economy to better weather these challenges.

STRATEGIES & ACTIONS

5.1. STRENGTHEN THE EAST KERN ECONOMIC ALLIANCE (EKEA). Expand the scope, resources, and funding for the EKEA to serve as the region's primary entity responsible for economic development.

5.1.1. Continue to convene the EKEA through the Kern EDC and support from local partner organizations across East Kern.

5.1.2. Pursue startup funding (two to three years) for a full-time staff person from the US Department of Defense, Office of Economic Adjustment.

5.1.3. Adopt a long-term formal funding program that will support the ongoing operations, overhead, and staffing requirements of the EKEA.

5.1.4. Expand the EKEA's role as a regional defense alliance, supporting the ongoing roles of the Edwards Community Alliance and the China Lake Alliance.

Best Practice: South Sound Militaries and Communities Partnership in Seattle-Tacoma, WA.

5.1.5. Serve as the focal point of regional data and information through an EKEA website (potentially through a section of Kern EDC's existing website), including the regional workforce and economic data being compiled as part of the East Kern Economic Diversification Strategy.

5.2. COORDINATE ECONOMIC DEVELOPMENT & WORKFORCE TRAINING. Work with key partners to coordinate economic development and workforce development activities across East Kern.

5.2.1. Work with Kern EDC and GAVEA to represent the region at national events and meetings.

5.2.2. Work with Cerro Coso Community College and other educational institutions to support regional talent initiatives to provide a skilled workforce for public and private sector employers.

5.2.3. Continue to connect and support the region's local economic development organizations and chambers of commerce. This could involve regular meetings for collaboration among the various chambers of commerce in East Kern.

5.3. NEW FUNDING SOURCES. Work with local and regional partners to pursue funding sources for economic development projects.

5.3.1. Compile an inventory of available federal grant/loan programs available to communities and organizations in East Kern.

5.3.2. Assist East Kern communities in pursuing funding from the US Economic Development Administration, USDA Rural Development, and other federal/state agencies that provide funding for local economic development and infrastructure projects.

5.3.3. Identify and seek non-governmental funding sources such as philanthropic organizations.

5.4. LOBBYING & ADVOCACY. Conduct state and federal lobbying, advocacy, and policy work to support the region's major employers and industries.

5.4.1. Support existing advocacy efforts on behalf of missions and facilities at NAWS China Lake and Edwards AFB (local, state, and federal).

5.4.2. Increase awareness of economic impact of China Lake and Edwards (state & local).

5.4.3. Support efforts to retain, attract, and enhance military missions and personnel in East Kern.

5.4.4. Work with NAWS China Lake and Edwards AFB to set up a veterans inventory survey to collect, analyze, and disseminate data about the veterans separating from service at the two installations.

5.4.5. Work with regional partners to support the infrastructure and program needs surrounding the two installations.

5.4.6. Capitalize on the new US "Spaceport Bill" introduced by Congressman McCarthy and signed by President Obama to gives the USDOT (FAA division) the authority to conduct aeronautical studies at spaceports.

PERFORMANCE METRICS

An important component of any successful strategic plan is the set of metrics by which the plans implementation will be tracked. The following metrics will serve to track progress toward achieving the desired outcomes of this plan:

- **HIGH-WAGE JOB GROWTH.** Increase the number of jobs that pay above the region's median wage and that pay above the median wage within the industry.
- **NEW BUSINESS CREATION.** Increase the number of new business created in the region and attracted from other areas.
- **CAPITAL INVESTMENT.** Attract new investments from existing and new businesses, real estate developers, and other sources of investment.
- **EDUCATIONAL ATTAINMENT.** Increase the share of adult population with a bachelor's degree or higher and decrease the share of adults that lack a high school diploma.

APPENDIX A: ECONOMIC ASSESSMENT & SWOT ANALYSIS

EAST KERN SWOT ANALYSIS

Beyond our general findings and observations, TIP conducted an extensive analysis of East Kern's economic strengths, weaknesses, opportunities, and threats. This SWOT analysis is based on qualitative input and quantitative data analysis and can be defined as follows:

- **STRENGTHS.** Advantages that can be built on to grow, strengthen, and diversify the regional economy.
- **WEAKNESSES.** Liabilities and barriers to economic development that could limit the region's growth potential.
- **OPPORTUNITIES.** Assets and competitive advantages that hold significant potential for the attraction of new businesses, investments, and skilled workers.
- **THREATS.** Unfavorable factors and trends (often external) that could negatively impact the regional economy.

STRENGTHS

- Edwards Air Force Base, Air Force Test Center, and NASA Armstrong Flight Research Center
- NAWS (Naval Air Weapons Station) China Lake and NAWC-WD (Naval Air Warfare Center-Weapons Division)
- Mojave Air & Spaceport
- High level of technical expertise thanks to workforce at China Lake, Edwards AFB, and Mojave Air & Spaceport
- Large R-2508 restricted airspace complex covering all of East Kern and serving Edwards AFB, China Lake, and Fort Irwin
- Other major employers outside of defense & aerospace sector (Rio Tinto, California City Correctional Facility, California Correctional Institution in Tehachapi)
- Strong partner organizations involved in economic development: Kern EDC, Greater Antelope Valley Economic Alliance, Southern California Edison, Antelope Valley Board of Trade
- Proximity to major population & business base in Greater Los Angeles area
- Two freight rail lines in East Kern (both are in Mojave)
- Numerous general aviation airports in East Kern (Mojave Air & Spaceport, Inyokern Airport, California City Municipal Airport, Tehachapi Municipal Airport, Mountain Valley Airport, Rosamond Skypark)
- Outdoor recreation assets (Red Rock Canyon State Park, Tehachapi Mountains, desert wildlife & wildflower viewing)
- RENEWBIZ (Renewable Energy Neighborhood Enhancement Wind and Solar Business Investment Zone) grant program
- Community vision plans (Old Town Tehachapi, Boron, Mojave, and Rosamond) are a good starting point for community development activities
- Kern County is generally perceived as business-friendly by employers in the region and other stakeholders across the state
- Kern County offers businesses a significantly lower cost structure (taxes, wages, real estate) than Los Angeles County
- FAA-certified Airframe and Powerplant (A&P) Technician Program at Antelope Valley College

WEAKNESSES

- Basic infrastructure (highways, freight rail, water/wastewater, electric utilities) is not consistently available throughout East Kern, limiting opportunities for development
- No commercial airline service in East Kern (nearest commercial airports are in Bakersfield and Burbank)
- Lack of available commercial office space and industrial space

OPPORTUNITIES

- East Kern Economic Alliance stakeholder group is a strong partnership platform that can be formalized and/or expanded to support regional economic development initiatives
- Build stronger ties between Dept. of Defense installations (Edwards AFB and China Lake) and the East Kern communities
- Encourage military retirees to stay in East Kern after separating from service
- Potential target industries include: aerospace manufacturing, defense-related services & contractors, testing & R&D activities suitable for a remote environment, clean energy, tourism, agriculture, health care, professional services & IT, filming, suppliers and service providers for mining
- Potential for Kern County incentive policies to support key industries in East Kern, especially aerospace
- Rapidly expanding aerospace industry in Lancaster/Palmdale area (Northrop Grumman expansion adding 1,000s of new jobs), with potential positive spillover impacts in East Kern
- New large manufacturers in Lancaster/Palmdale (BYD electric bus and Kinkisharyo light rail vehicles) offer opportunities for East Kern to attract suppliers
- Pursue "active transportation funding" and other funding sources for transportation infrastructure from CalTrans and USDOT
- Pursue funding sources for infrastructure to support economic development, including: US Economic Development Administration, USDA Rural Development, CDBG (Community Development Block Grants) and other sources
- Pursue funding for programs that support the region's economy, such as workforce development (Dept. of Defense Office of Economic Adjustment is one potential source)
- Potential to attract additional passenger transportation into the region (e.g., commercial air service at Inyokern Airport and Mojave Air & Spaceport, extension of Metrolink commuter rail from Lancaster northward into Rosamond, Mojave, California City, and Tehachapi, and potential for high speed rail in the future with connections to Los Angeles, the Central Valley, and the Bay Area)
- Cerro Coso Community College is positioned to serve East Kern employers with workforce training programs, especially with upcoming increases in funding geared toward workforce training from the State of California
- Potential for an inland port, connected to the Ports of Los Angeles and Long Beach, or at least a rail trans-loading facility

THREATS

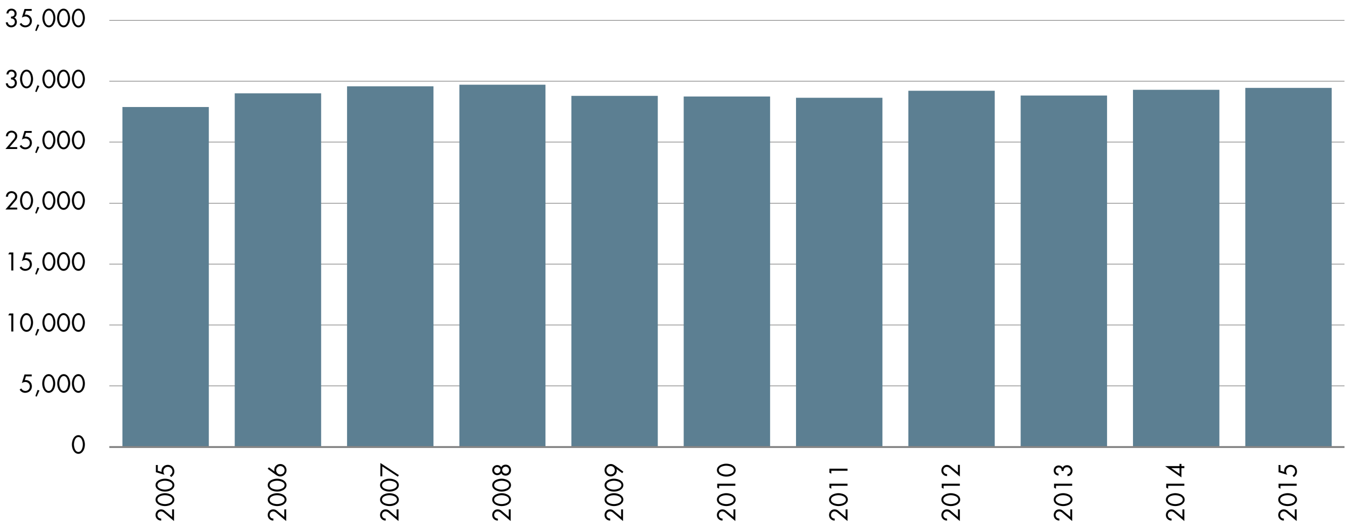
- Workforce retention and attraction challenges impact the success of regional employers
- Large portion of skilled workforce at Edwards AFB and China Lake is approaching retirement age
- Water availability to support current/future demands is a barrier across the region and state, though it varies by community
- Pre-kindergarten and kindergarten are optional in California, causing many children (especially from lower socioeconomic backgrounds) to start school unprepared relative to their peers
- Encroachment of incompatible uses (e.g., residential development, solar and wind power) surrounding Edwards AFB, China Lake, and Mojave Air & Spaceport could negatively impact operations "inside the fence"
- Loss of RDAs (redevelopment agencies) in California limits tools available for local economic development

BUSINESS, INDUSTRY, & EMPLOYMENT TRENDS

EMPLOYMENT

Total employment in East Kern has remained relatively stable over the last decade. There are nearly 30,000 total jobs in East Kern as of 2015, about the same number of jobs as the pre-recession peak in 2008.

FIGURE 1. EMPLOYMENT TRENDS, 2005-2015
TOTAL ANNUAL EMPLOYMENT IN EAST KERN



Source: EMSI, 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

Employment growth in East Kern has lagged Kern County, the Greater Antelope Valley, as well as the state and US. However, East Kern's median hourly wage of $24.17 is significantly higher than the comparison geographies.

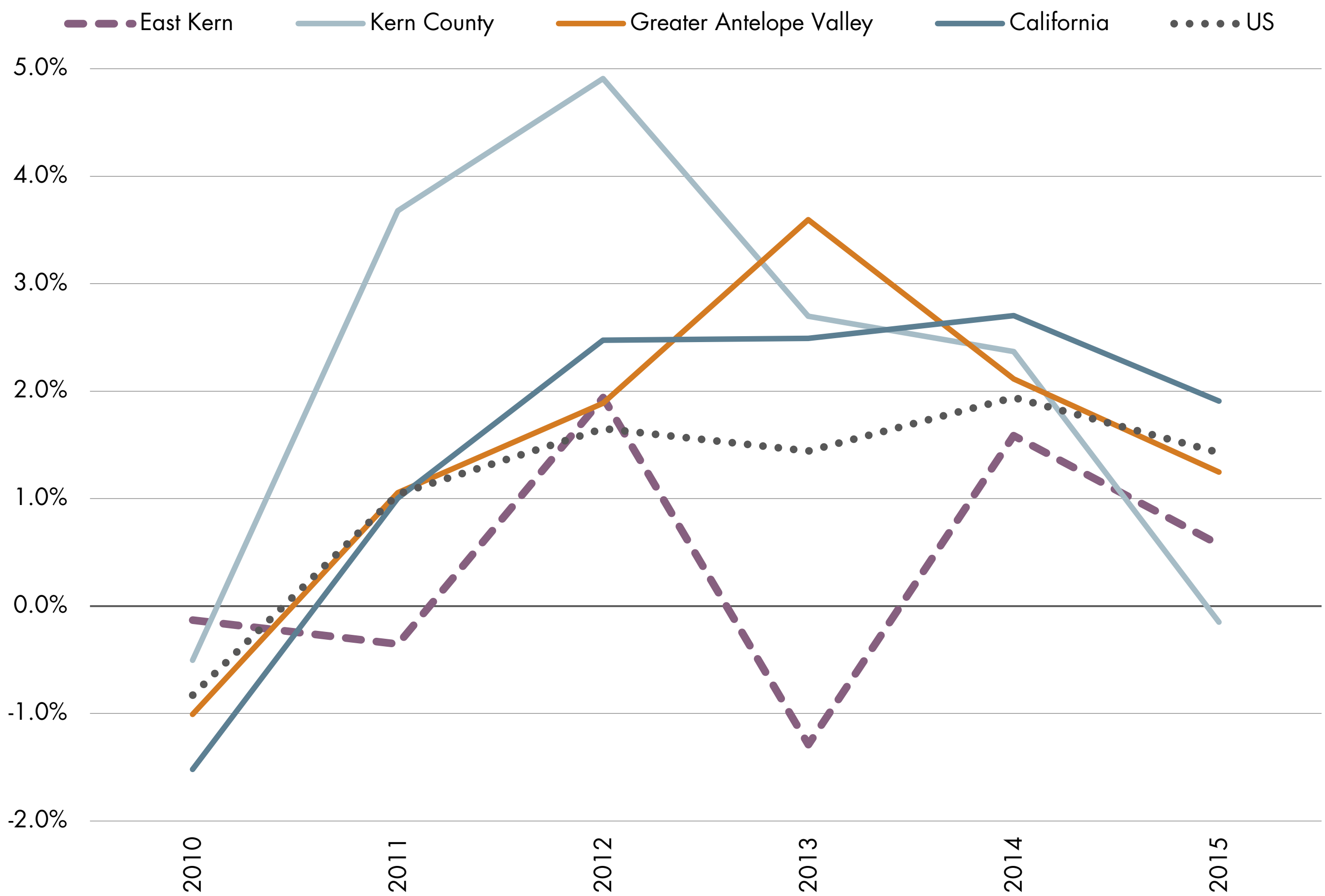
FIGURE 2. EMPLOYMENT & WAGES
EMPLOYMENT CHANGE, 2010-2015 & MEDIAN HOURLY WAGE, 2015

			2010 to 2015		Median
Geography	**2010**	**2015**	**Net Chg.**	**% Chg.**	**Hourly Wage**
Boron (93516)	1,047	1,268	+221	+21.1%	$21.86
Kern County	304,055	347,169	+43,114	+14.2%	$19.81
California	16,565,942	18,392,737	+1,826,795	+11.0%	$23.28
Greater Antelope Valley	106,645	117,602	+10,957	+10.3%	$22.17
US	**144.2 M**	**155.3 M**	**+11.2 M**	**+7.7%**	**$20.82**
Tehachapi (93531 & 93561)	5,741	6,013	+272	+4.7%	$21.01
East Kern	28,754	29,456	+702	+2.4%	$24.17
Rosamond (93560)	2,477	2,532	+55	+2.2%	$23.55
Ridgecrest (93527 & 93555)	11,586	11,772	+186	+1.6%	$24.48
Mojave (93501)	2,828	2,812	-16	-0.6%	$23.64
California City (93505)	2,414	2,384	-30	-1.2%	$27.82

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed. Median hourly wages above the US average are shaded.

Annual job growth in East Kern has not been as strong as Kern County and the Greater Antelope Valley for most of the last several years. However, the most recent data indicate a downward trend for employment in Kern County from 2014 to 2015, most likely due to the decline in oil prices and the impact this is having on the county's economy. Because of this, East Kern is the one relative "bright spot", still showing year-over-year job growth, albeit at a slower pace. California's job creation has remained above the US job growth rate since 2011.

FIGURE 3. EMPLOYMENT TRENDS, 2010-2015
ANNUAL JOB GROWTH RATE (PERCENT CHANGE FROM PRIOR YEAR)



Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

East Kern's economy is highly dependent on federal government civilian jobs, which make up more than 21 percent of the region's total employment, compared with only about 2 percent of all jobs in the US. The Greater Antelope Valley functions as a regional service center, with 46 percent of the area's total employment in retail trade, health care, and lodging, restaurants, & bars (compared with only 28 percent for East Kern). A large portion of Kern County's economy is driven by agriculture, which accounts for 18 percent of all jobs in the county, compared with just over 1 percent for the US.

FIGURE 4. INDUSTRY DISTRIBUTION (% OF TOTAL), 2015
COMPARISON OF EAST KERN WITH SELECTED GEOGRAPHIES AND US

NAICS Code & Description	East Kern	Kern County	Greater Antelope Valley	California	US
9011 Federal govt. (civilian)	**21.1%**	2.9%	7.5%	1.4%	1.9%
44-45 Retail trade	**10.4%**	**9.7%**	**15.9%**	**9.7%**	**10.6%**
62 Healthcare & social assistance	**9.3%**	**10.5%**	**19.2%**	**13.1%**	**13.3%**
72 Lodging, restaurants, & bars	8.3%	6.6%	**10.5%**	8.6%	8.5%
54 Professional services	8.2%	3.6%	5.9%	7.9%	6.4%
61 Education	8.0%	8.8%	8.0%	**8.8%**	**9.4%**
56 Administrative & support services	5.3%	4.6%	5.5%	6.7%	6.3%
81 Personal & other services	4.7%	3.6%	5.7%	5.0%	4.9%
31-33 Manufacturing	4.6%	4.3%	3.0%	7.3%	8.2%
23 Construction	3.0%	6.2%	4.6%	5.3%	5.4%
9039 Local govt.	2.9%	3.8%	2.8%	3.9%	3.6%
21 Mining (incl. oil & gas)	2.4%	3.4%	0.6%	0.2%	0.5%
48-49 Transportation & warehousing	2.3%	2.9%	2.7%	2.9%	3.4%
53 Property sales & leasing	1.7%	1.2%	1.8%	2.0%	1.7%
9029 State govt.	1.7%	2.2%	0.6%	1.2%	1.5%
42 Wholesale trade	1.5%	2.8%	1.5%	4.1%	3.9%
52 Finance & insurance	1.5%	1.7%	2.0%	3.1%	3.9%
71 Arts, entertainment, & recreation	1.2%	0.9%	0.8%	2.1%	1.7%
22 Utilities	0.8%	0.3%	0.3%	0.3%	0.4%
51 Information	0.5%	0.8%	0.9%	2.8%	1.9%
55 Corporate & regional offices	0.3%	1.0%	0.1%	1.3%	1.4%
11 Agriculture & forestry	0.0%	**18.0%**	0.1%	2.5%	1.3%

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed
Note: Figures exclude military and unclassified employment. Education includes public schools, colleges, and universities. Healthcare & social assistance includes public hospitals. The three largest industries in each geography are highlighted.

Location quotient (LQ) analysis can provide an understanding of an area's relative strengths. A review of LQs reveals significant differences between East Kern and the comparison geographies. As would be expected due to the influence of Edwards AFB and NAWS China Lake, federal civilian employment is highly concentrated in East Kern relative to the US. Employment in mining and utilities are also more prevalent in East Kern thanks to the presence of Rio Tinto and the region's clean energy employment. Among the comparison geographies, the Greater Antelope Valley (which includes East Kern, but is dominated by Lancaster and Palmdale) has a significantly higher concentration of jobs in retail trade, lodging, restaurants, & bars, and health care, reflecting the area's role as a center for regional services.

LOCATION QUOTIENT (LQ) ANALYSIS is a statistical technique used to suggest areas of relative advantage based on a region's employment base. LQs are calculated as an industry's share of total local employment divided by the same industry's share of employment at the national level. If the local industry and national industry are perfectly proportional, the LQ will be 1.00. LQs greater than 1.25 are presumed to indicate a comparative advantage; those below 0.75 suggest areas of weakness but may also point to opportunities for expansion or attraction.

FIGURE 5. CONCENTRATION OF EMPLOYMENT BY SECTOR, 2015
LOCATION QUOTIENT (LQ) ANALYSIS BY SECTOR, US=1.00

NAICS Code	Description	East Kern	Kern County	Greater Antelope Valley	California	US
9011	Federal govt. (civilian)	**11.23**	1.55	**4.03**	0.73	1.00
21	Mining (incl. oil & gas)	**4.93**	**6.15**	**1.31**	0.30	1.00
22	Utilities	**2.23**	0.87	0.81	0.87	1.00
54	Professional services	1.20	0.53	0.90	1.23	1.00
9029	State govt.	1.19	**1.58**	0.38	0.80	1.00
44-45	Retail trade	1.05	0.96	**1.51**	0.91	1.00
53	Property sales & leasing	1.03	0.72	1.07	1.16	1.00
72	Lodging, restaurants, & bars	1.02	0.82	**1.26**	1.01	1.00
81	Personal & other services	0.90	0.70	1.15	1.00	1.00
61	Education	0.85	0.94	0.85	0.94	1.00
9039	Local govt.	0.81	1.08	0.77	1.07	1.00
56	Administrative & support services	0.81	0.71	0.85	1.05	1.00
71	Arts, entertainment, & recreation	0.72	0.58	0.53	1.22	1.00
48-49	Transportation & warehousing	0.70	0.89	0.78	0.88	1.00
62	Healthcare & social assistance	0.70	0.79	**1.44**	**1.39**	1.00
31-33	Manufacturing	0.52	0.51	0.35	0.88	1.00
23	Construction	0.50	1.05	0.86	1.00	1.00
42	Wholesale trade	0.38	0.70	0.37	1.04	1.00
52	Finance & insurance	0.37	0.42	0.51	0.78	1.00
51	Information	0.30	0.50	0.49	**1.52**	1.00
55	Corporate & regional offices	0.20	0.67	0.07	0.88	1.00
11	Agriculture & forestry	0.02	**14.89**	0.07	**1.99**	1.00

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed
Note: Figures exclude military and unclassified employment. Education includes public schools, colleges, and universities. Healthcare & social assistance includes public hospitals. LQs greater than 1.25 are presumed to show competitive advantage and are highlighted

The East Kern economy has diversified somewhat since 2010. Federal government civilian employment in East Kern declined by more than 600 jobs, but this loss was counter-balanced by growth across a wide range of sectors. Between 2010 and 2015, significant job growth occurred in restaurants, bars, & hotels, health care, and other sectors.

FIGURE 6. EMPLOYMENT TRENDS BY SECTOR, 2010-2015
NET CHANGE IN JOBS BY SECTOR IN EAST KERN

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed
Note: Figures exclude military and unclassified employment. Education includes public schools, colleges, and universities. Healthcare & social assistance includes public hospitals.

MILITARY INSTALLATIONS

NAWS China Lake and Edwards AFB form the foundation of East Kern's economy. This can be seen in both the real estate assets controlled by the two military installations and by the personnel employed at each facility. East Kern's military installations contain nearly 12.7 million square feet of building space valued at more than $10 billion, in an area covering more than 914,000 acres of land. The two installations also contain a combined total of nearly 11,000 full-time employees including active duty military personnel, reserve personnel, and civilian workers. This total does not include related suppliers and service providers located "outside the gate".

FIGURE 7. EAST KERN MILITARY REAL ESTATE ASSETS

INSTALLATION	TOTAL NUMBER OF BUILDINGS	TOTAL BUILDING SQ FT	TOTAL ACRES	PRV ($M)
NAWS China Lake	1,527	5,459,679	606,926	$3,901.5
Edwards AFB	740	7,228,276	307,517	$6,174.1
TOTAL	**2,267**	**12,687,955**	**914,443**	**$10,075.6**

Source: FY 2015 Department of Defense Base Structure Report
Notes: PRV ($M): Indicates the total Plant Replacement Value for all facilities (buildings, structures, and linear structures). This value represents the calculated cost to replace the current physical plant (facilities and supporting infrastructure) using today's construction costs (labor and materials) and standards (methodologies and codes). Total buildings includes leased, owned, and other.

FIGURE 8. EAST KERN MILITARY PERSONNEL

INSTALLATION	ACTIVE DUTY					RESERVE TOTAL	CIVILIAN TOTAL	COMBINED TOTAL
	ARMY	NAVY	MARINE CORPS	AIR FORCE	TOTAL			
NAWS China Lake	1	537	58	1	597	2	4,074	4,673
Edwards AFB	4	2	71	1,915	1,992	146	4,141	6,279
TOTAL	**5**	**539**	**129**	**1,916**	**2,589**	**148**	**8,215**	**10,952**

Source: FY 2015 Department of Defense Base Structure Report

RETAIL LEAKAGE

East Kern loses an estimated $400 million in annual retail sales to surrounding areas. Local stores (the supply) account for an estimated $1.1 billion in annual sales, compared to an estimated demand from local residents of $1.5 billion. The largest categories of retail leakage include general merchandise stores ($96 million), clothing stores ($80 million), electronics stores ($58 million), food and beverage stores ($57 million), and restaurants ($49 million).

FIGURE 9. RETAIL GAP ANALYSIS, 2016

EAST KERN

Retail Sector	NAICS	Estimated Retail Sales of Area Stores (Supply)	Estimated Retail Purchases of Area Residents (Demand)	Retail Leakage/ Surplus	Leakage/ Surplus Percent
Total Retail Sales Incl. Food & Drink		**$1,114,260,052**	**$1,514,218,965**	**-$399,958,913**	**26.4%**
Motor Vehicle & Parts Dealers	441	$235,333,775	$309,252,271	-$73,918,496	23.9%
Automobile Dealers	4411	$58,993,055	$256,028,838	-$197,035,783	77.0%
Other Motor Vehicle Dealers	4412	$161,574,094	$34,984,523	$126,589,571	361.8%
Auto Parts, Accessories & Tire Stores	4413	$14,766,626	$18,238,910	-$3,472,284	19.0%
Furniture & Home Furnishings Stores	442	$13,846,120	$46,143,682	-$32,297,562	70.0%
Furniture Stores	4421	$10,672,361	$25,580,928	-$14,908,567	58.3%
Home Furnishings Stores	4422	$3,173,759	$20,562,754	-$17,388,995	84.6%
Electronics & Appliance Stores	443	$14,606,780	$72,125,662	-$57,518,882	79.7%
Bldg Materials, Garden Equip. & Supply Stores	444	$207,328,649	$63,967,269	$143,361,380	224.1%
Bldg Material & Supplies Dealers	4441	$206,002,536	$56,924,499	$149,078,037	261.9%
Lawn & Garden Equip & Supply Stores	4442	$1,326,113	$7,042,770	-$5,716,657	81.2%
Food & Beverage Stores	445	$202,696,823	$259,579,111	-$56,882,288	21.9%
Grocery Stores	4451	$183,015,947	$222,907,634	-$39,891,687	17.9%
Specialty Food Stores	4452	$15,673,723	$23,775,911	-$8,102,188	34.1%
Beer, Wine & Liquor Stores	4453	$4,007,153	$12,895,566	-$8,888,413	68.9%
Health & Personal Care Stores	446	$46,786,764	$92,463,130	-$45,676,366	49.4%
Gasoline Stations	447	$106,519,482	$84,548,245	$21,971,237	26.0%
Clothing & Clothing Accessories Stores	448	$10,732,604	$90,391,749	-$79,659,145	88.1%
Clothing Stores	4481	$5,506,066	$65,368,921	-$59,862,855	91.6%
Shoe Stores	4482	$1,553,453	$9,619,512	-$8,066,059	83.9%
Jewelry, Luggage & Leather Goods Stores	4483	$3,673,085	$15,403,316	-$11,730,231	76.2%
Sporting Goods, Hobby, Book & Music Stores	451	$23,371,308	$39,510,255	-$16,138,947	40.8%
Sport. Goods/Hobby/Musical Instr. Stores	4511	$19,561,676	$34,182,461	-$14,620,785	42.8%
Book, Periodical & Music Stores	4512	$3,809,632	$5,327,794	-$1,518,162	28.5%
General Merchandise Stores	452	$114,334,240	$209,870,551	-$95,536,311	45.5%
Dept. Stores Excluding Leased Depts.	4521	$100,909,539	$139,572,748	-$38,663,209	27.7%
Other General Merchandise Stores	4529	$13,424,701	$70,297,803	-$56,873,102	80.9%

continued on next page

FIGURE 9. RETAIL GAP ANALYSIS, 2016 (continued)

Retail Sector	NAICS	Estimated Retail Sales of Area Stores (Supply)	Estimated Retail Purchases of Area Residents (Demand)	Retail Leakage/ Surplus	Leakage/ Surplus Percent
Miscellaneous Store Retailers	453	$36,494,640	$71,267,304	-$34,772,664	48.8%
Florists	4531	$1,980,637	$2,824,348	-$843,711	29.9%
Office Supplies, Stationery & Gift Stores	4532	$8,578,769	$10,136,054	-$1,557,285	15.4%
Used Merchandise Stores	4533	$14,574,056	$4,725,518	$9,848,538	208.4%
Other Miscellaneous Store Retailers	4539	$11,361,178	$53,581,384	-$42,220,206	78.8%
Nonstore Retailers	454	$10,054,378	$33,575,763	-$23,521,385	70.1%
Electronic Shopping & Mail-Order Houses	4541	$4,598,761	$26,743,420	-$22,144,659	82.8%
Vending Machine Operators	4542	$1,757,832	$764,466	$993,366	129.9%
Direct Selling Establishments	4543	$3,697,785	$6,067,877	-$2,370,092	39.1%
Food Services & Drinking Places	722	$92,154,489	$141,523,973	-$49,369,484	34.9%
Full-Service Restaurants	7221	$44,907,633	$79,154,879	-$34,247,246	43.3%
Limited-Service Eating Places	7222	$45,189,807	$56,917,979	-$11,728,172	20.6%
Special Food Services	7223	$77,310	$3,041,895	-$2,964,585	97.5%
Drinking Places - Alcoholic Beverages	7224	$1,979,739	$2,409,220	-$429,481	17.8%

Source: ESRI Community Analyst

HOUSING INDICATORS

Housing prices in East Kern are significantly lower than California but vacancy levels in the region are about twice as high as the state. Within the region, the housing stock varies by community. Boron has the oldest and least costly housing, compared with Rosamond, which has the newest and most expensive housing in East Kern.

FIGURE 10. HOUSING CHARACTERISTICS

SELECTED INDICATORS, RANKED BY % VACANT

Geography	Total Housing Units	% Owner Occupied	% Renter Occupied	% Vacant	Median Contract Rent	Median Yr. Structure Built
Boron (93516)	1,259	39.2%	27.8%	33.0%	$561	1959
California City (93505)	6,117	48.1%	28.7%	23.3%	$638	1991
Mojave (93501)	2,360	42.8%	39.0%	18.2%	$571	1975
East Kern	48,191	53.2%	29.4%	17.4%	$725	1984
Rosamond (93560)	7,307	53.0%	30.5%	16.5%	$842	1992
Tehachapi (93531 & 93561)	13,334	59.5%	24.6%	15.9%	$774	1987
Ridgecrest (93527 & 93555)	15,985	56.2%	29.8%	14.0%	$701	1980
US	**132.7 M**	**56.3%**	**31.2%**	**12.5%**	**$767**	**1976**
Greater Antelope Valley	172,738	56.2%	32.0%	11.9%	$896	1986
Kern County	287,775	51.2%	38.4%	10.4%	$746	1981
California	13,781,929	50.1%	41.4%	8.5%	$1,138	1974

Source: US Census Bureau, 2010-2014 American Community Survey 5-Year Estimates (accessed via ESRI Community Analyst). Shaded figures are above the US average (median rent) or more recent than US (median year built).

MARKET ACCESS

Proximity to nearby markets, as measured by the population living in ZIP Codes within one-, two-, and four-hour drive times from each community, varies across East Kern. Tehachapi has the largest number of residents living within a one-hour drive (930,000) and Ridgecrest has the least (48,000). Rosamond, being the closest East Kern community to Los Angeles, has the largest population within a two-hour drive (more than 13.5 million residents) and Ridgecrest has the smallest (1.25 million). However, the population living within a four-hour drive of each community is almost identical, ranging from 26.2 million for Tehachapi to 27.5 million for Rosamond.

FIGURE 11. MARKET ACCESS
POPULATION LIVING IN ZIP CODES WITHIN 1-, 2-, & 4-HOUR DRIVE TIMES OF EACH COMMUNITY

1-HOUR DRIVE TIME

			2010 to 2016	
Geography	**2010**	**2016**	**Net Chg.**	**% Chg.**
Tehachapi	874,066	929,606	+55,540	+6.4%
Rosamond	607,199	638,756	+31,557	+5.2%
Mojave	544,491	569,639	+25,148	+4.6%
California City	414,164	431,520	+17,356	+4.2%
Boron	372,399	391,943	+19,544	+5.2%
Ridgecrest	46,832	48,136	+1,304	+2.8%

2-HOUR DRIVE TIME

			2010 to 2016	
Geography	**2010**	**2016**	**Net Chg.**	**% Chg.**
Rosamond	13,059,979	13,559,907	+499,928	+3.8%
Mojave	9,373,018	9,736,283	+363,265	+3.9%
Boron	6,908,695	7,224,771	+316,076	+4.6%
California City	5,252,195	5,478,493	+226,298	+4.3%
Tehachapi	4,654,457	4,858,354	+203,897	+4.4%
Ridgecrest	1,198,858	1,253,281	+54,423	+4.5%

4-HOUR DRIVE TIME

			2010 to 2016	
Geography	**2010**	**2016**	**Net Chg.**	**% Chg.**
Rosamond	26,280,775	27,518,233	+1,237,458	+4.7%
Boron	26,216,513	27,476,390	+1,259,877	+4.8%
Mojave	25,936,745	27,170,207	+1,233,462	+4.8%
California City	25,856,592	27,084,228	+1,227,636	+4.7%
Ridgecrest	25,365,524	26,586,529	+1,221,005	+4.8%
Tehachapi	25,049,873	26,203,551	+1,153,678	+4.6%

Source: ESRI Community Analyst

WORKFORCE TRENDS & CHARACTERISTICS

East Kern's total population is estimated by ESRI at nearly 117,000 as of 2016, an increase of about 2 percent from 2010. East Kern accounts for more than 22 percent of the 517,000 residents in the Greater Antelope Valley (which includes all of East Kern, plus the Lancaster and Palmdale area of north Los Angeles County) and represents 13 percent of Kern County's total population of nearly 890,000. The ZIP Codes covering the greater Ridgecrest area (93527 & 93555) and greater Tehachapi area (93531 & 93561) both have more than 35,000 residents and, together, represent over 60 percent of East Kern's total population. The median age of 36.9 in East Kern is comparable to the California (35.8) and US (38) median ages, but is much higher than Kern County's median age of 31.3 years.

FIGURE 12. POPULATION & MEDIAN AGE

POPULATION CHANGE, 2010-2016 & MEDIAN AGE, 2016

Geography	2010	2016	2010 to 2016 Net Chg.	2010 to 2016 % Chg.	Median Age
Mojave (93501)	5,408	5,753	+345	6.4%	34.9
Kern County	839,631	888,823	+49,192	5.9%	31.3
US	**308.7 M**	**323.6 M**	**+14.8 M**	**4.8%**	**38.0**
California	37,253,956	38,986,171	+1,732,215	4.6%	35.8
Greater Antelope Valley	495,354	517,023	+21,669	4.4%	33.0
Rosamond (93560)	18,850	19,548	+698	3.7%	33.4
Ridgecrest (93527 & 93555)	35,023	35,899	+876	2.5%	37.9
California City (93505)	14,054	14,361	307	2.2%	35.2
East Kern	114,449	116,749	+2,300	2.0%	36.9
Tehachapi (93531 & 93561)	35,149	35,260	+111	0.3%	40.6
Boron (93516)	2,295	2,200	-95	-4.1%	40.1

Source: ESRI Community Analyst (2016 forecast); US Census Bureau, Census 2010 (2010 figures). Median age higher than US is shaded.

East Kern's median household income is nearly $55,000, slightly higher than the US and significantly higher than Kern County ($49,000). Poverty rates vary widely across East Kern, with rates below the US rate of 15.6 percent in Tehachapi and Ridgecrest, but rates more than twice the US in Mojave and Boron.

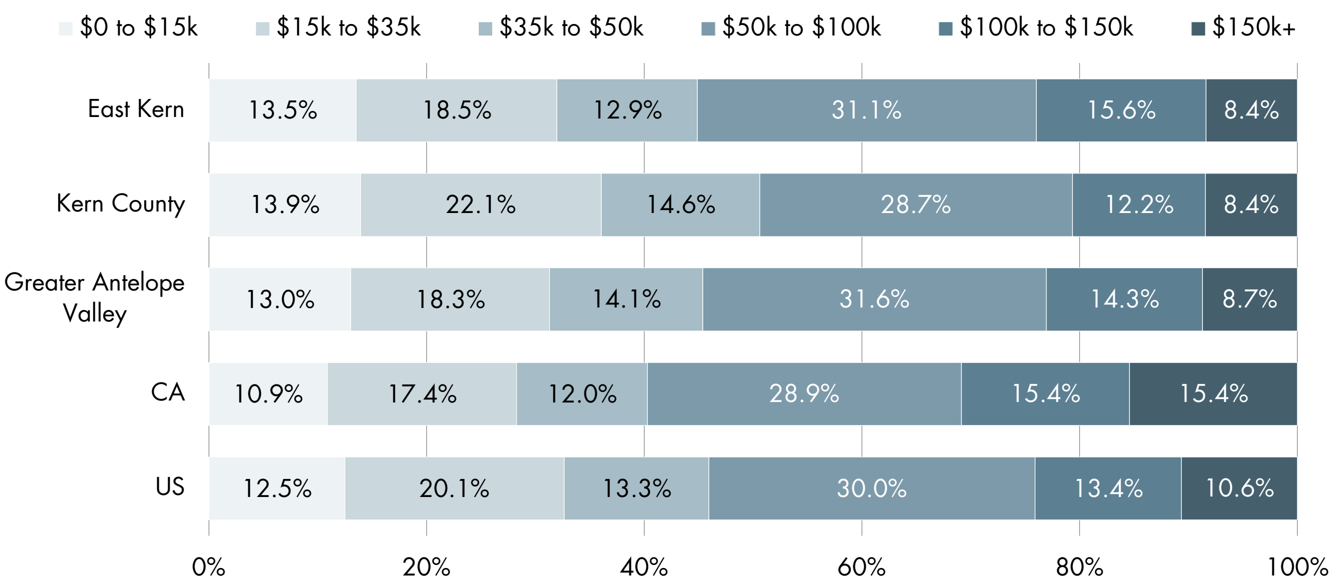
FIGURE 13. INCOME LEVELS
INCOME LEVELS, 2016 & POVERTY RATE, 2014

Geography	Median Household Income	Average Household Income	Per Capita Income	Poverty Rate
California	$62,554	$90,812	$30,905	16.4%
Ridgecrest (93527 & 93555)	$57,957	$74,855	$29,488	14.7%
US	**$54,149**	**$77,008**	**$29,472**	**15.6%**
Tehachapi (93531 & 93561)	$58,847	$82,949	$28,002	12.2%
East Kern	$54,987	$72,580	$26,109	17.0%
Rosamond (93560)	$53,125	$67,216	$22,677	18.0%
California City (93505)	$51,824	$63,378	$22,322	23.9%
Greater Antelope Valley	$54,580	$71,887	$22,318	20.4%
Kern County	$49,123	$68,628	$21,178	23.4%
Boron (93516)	$36,567	$49,015	$19,183	36.8%
Mojave (93501)	$36,564	$50,250	$18,733	35.6%

Source: ESRI Community Analyst (2016 forecast); US Census Bureau, 2010-2014 American Community Survey 5-Year Estimates (poverty rate).

Similar to the US, East Kern has 31 percent of households with annual incomes of $50,000 to $100,000 and 24 percent above $100,000. However, California has nearly twice the share of households earning above $150,000.

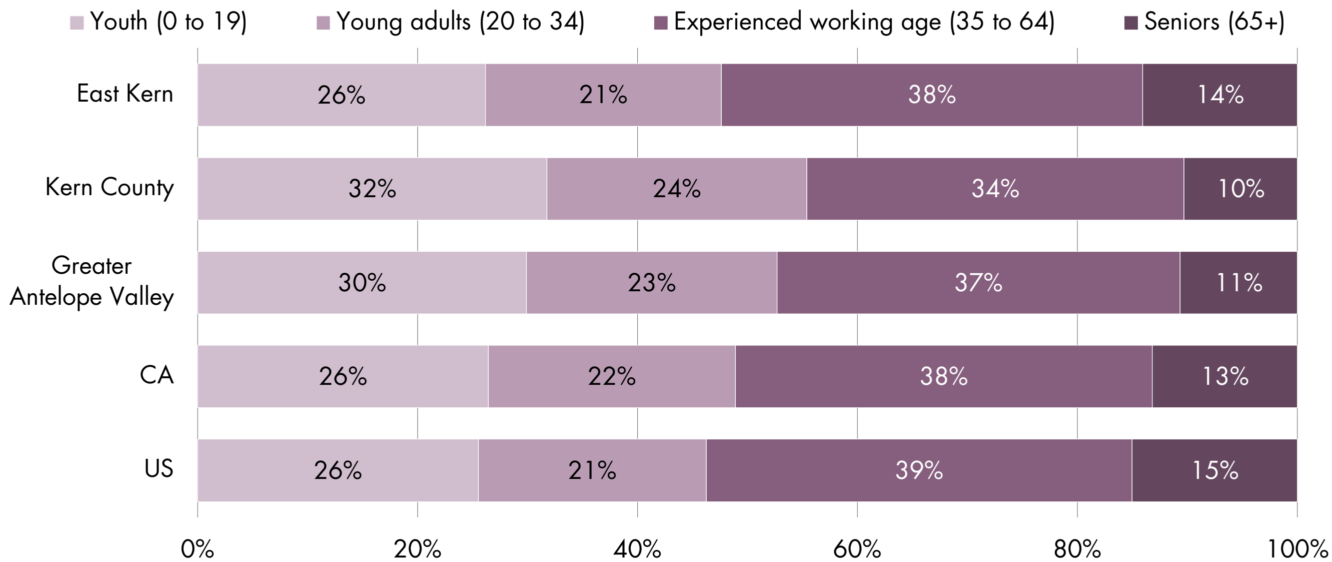
FIGURE 14. HOUSEHOLD INCOME DISTRIBUTION
SHARE OF HOUSEHOLDS BY SELECTED INCOME CATEGORIES



Source: 2010-2014 American Community Survey 5-Year Estimates (DP-02).

East Kern's age structure is similar to California and the US as a whole. The region has a significantly lower share of youth (0 to 19) and higher share of seniors (65+) than Kern County and the Greater Antelope Valley.

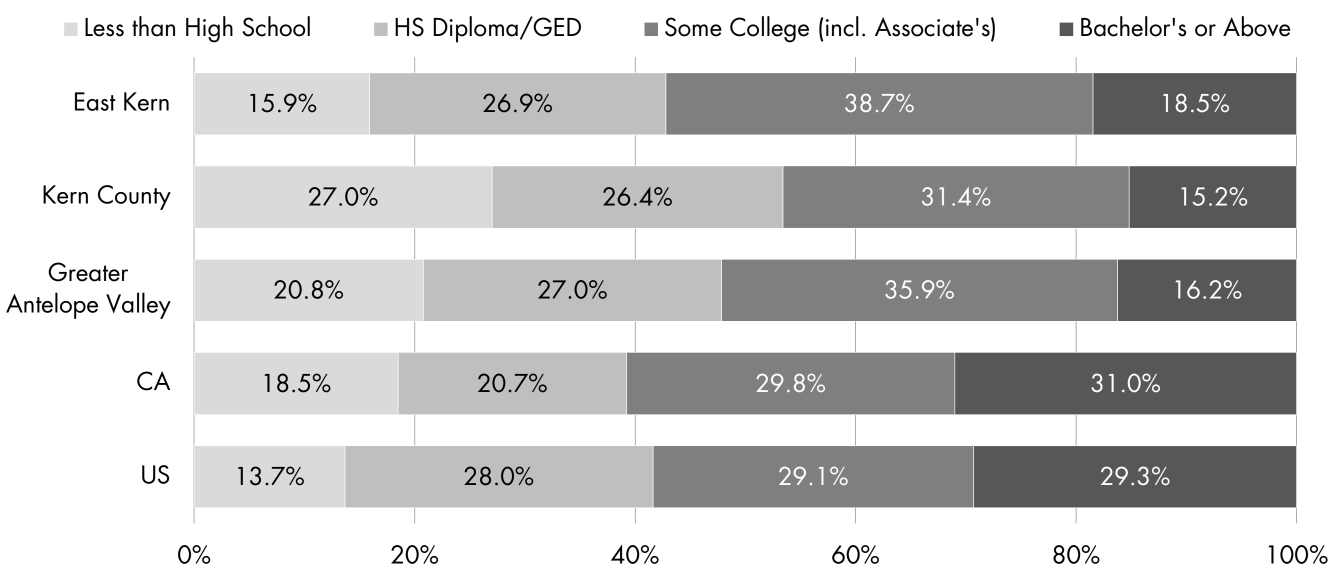
FIGURE 15. AGE STRUCTURE
SHARE OF POPULATION BY SELECTED AGE GROUPS



Source: ESRI Community Analyst

Only 18.5 percent of East Kern residents (age 25+) hold a bachelor's degree or higher, compared with 31 percent in California and 29.3 percent in the US. However, East Kern has a larger share of college-educated residents than Kern County and the Greater Antelope Valley, and a lower proportion of residents without a high school diploma.

FIGURE 16. EDUCATIONAL ATTAINMENT
HIGHEST LEVEL OF ATTAINMENT, POPULATION AGE 25+



Source: 2010-2014 American Community Survey 5-Year Estimates (DP-02).

Labor force statistics from the US Bureau of Labor Statistics are reported only for municipalities with a population of at least 25,000. A less precise, but still useful, method of comparing labor market data at the local level is through the US Census Bureau's American Community Survey 5-Year Estimates program. Based on this data, East Kern's unemployment levels are slightly higher than California, but vary widely by community. Ridgecrest and Tehachapi have lower unemployment rates than California. At the other extreme, Boron, California City, and Mojave have unemployment levels more than twice as high as the state.

Labor force participation rates compare the portion of the workforce that is employed or looking for work with the population that is labor force eligible (defined here as those 16 years or older). East Kern's labor force participation rates are well below the US average, but comparable to the Greater Antelope Valley as a whole. Participation often reflects an area's demographics. For example, an area with an above average share of retirees would have below average rates (since these individuals would still be considered labor-force eligible). High levels of unemployment can also influence this statistic, as chronic unemployment can result in the growth in the number of discouraged workers, (those who are labor force eligible but who have stopped actively looking for work).

FIGURE 17. LABOR FORCE & UNEMPLOYMENT

LABOR FORCE, UNEMPLOYMENT & LABOR FORCE PARTICIPATION RATES

Geography	Population Age 16+	Labor Force	Unemployment	Unemployment Rate	Labor Force Participation Rate
Boron (93516)	1,664	627	165	26.3%	37.7%
California City (93505)	10,595	5,751	1,345	23.4%	54.3%
Mojave (93501)	3,928	2,210	497	22.5%	56.3%
Greater Antelope Valley	373,976	209,844	27,778	13.2%	56.1%
Kern County	630,972	372,092	49,041	13.2%	59.0%
Rosamond (93560)	14,843	8,401	1,085	12.9%	56.6%
East Kern	88,971	49,097	6,020	12.3%	55.2%
California	29,934,838	19,108,876	2,084,564	10.9%	63.8%
Ridgecrest (93527 & 93555)	27,036	16,835	1,668	9.9%	62.3%
US	**248.8 M**	**159.0 M**	**14.5 M**	**9.1%**	**63.9%**
Tehachapi (93531 & 93561)	28,197	13,570	1,118	8.2%	48.1%

Source: US Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

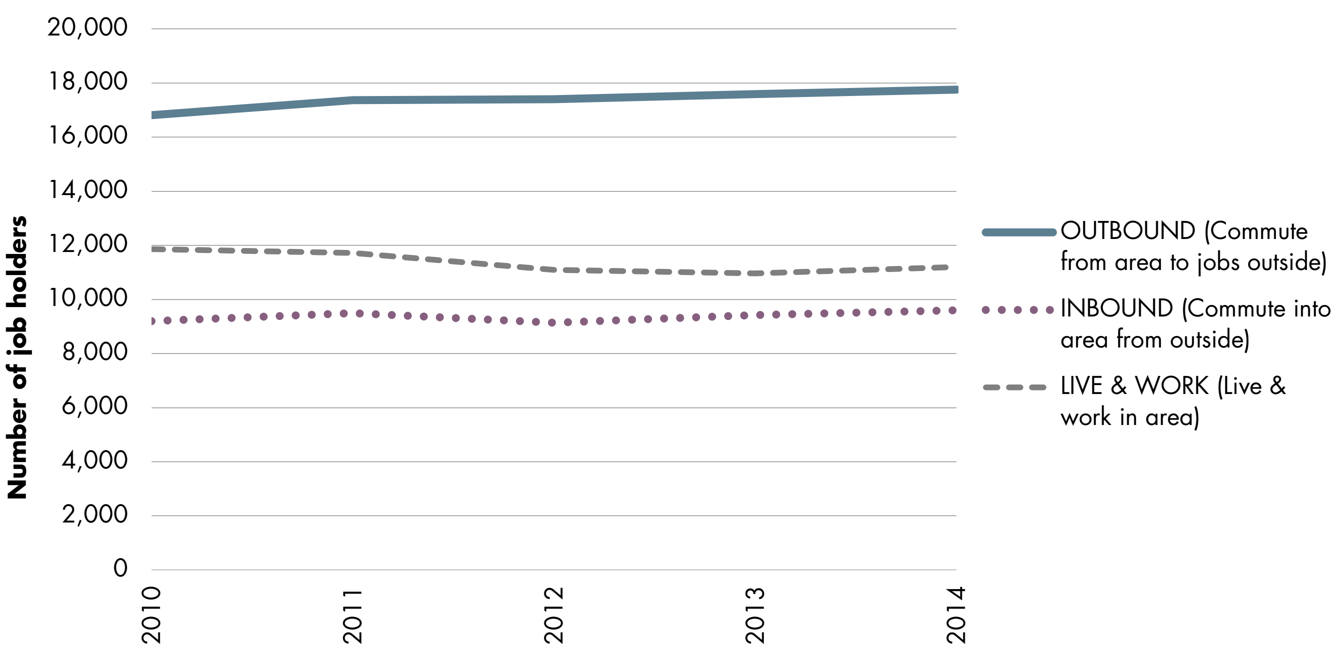
COMMUTING PATTERNS

East Kern's labor market is closely linked to the region's surrounding communities. According to data compiled as part of a state-federal partnership, more than 60 percent of East Kern's employed residents commuted to jobs outside of the area. This figure has increased slightly in recent years, with a comparable decline in the number of people living and working in East Kern (Figure 19, bottom).

FIGURE 18. INFLOW/OUTFLOW FOR EAST KERN, 2014
FLOW OF WORKERS TO/FROM THE AREA

Source: US Census Bureau, Local Employment Dynamics.
Notes: Overlay arrows are for illustrative purposes and do not indicate directionality of worker flow between home and employment locations.

FIGURE 19. COMMUTING FLOWS, 2010–2014

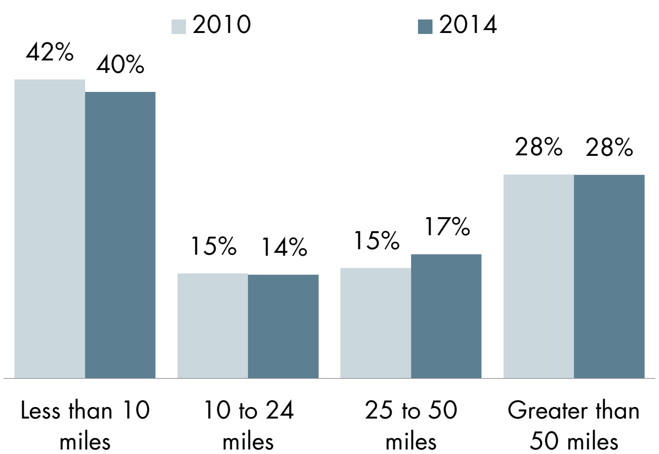


Source: US Census Bureau, Local Employment Dynamics.

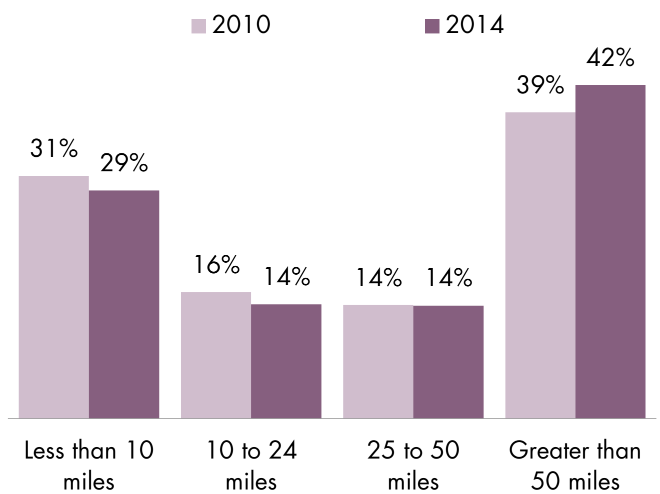
Similar to most areas of the country, workers in East Kern are driving longer distances between home and work. Between 2010 and 2014, the share of commuters that traveled fewer than 10 miles to their place of employment declined. However, East Kern's employed residents (people who live in East Kern) are still much more likely to travel more than 50 miles to their place of employment than East Kern's workforce (people who work in East Kern). Only 28 percent of the region's workforce commutes more than 50 miles, compared with 42 percent of the region's employed residents.

FIGURE 20. COMMUTING FLOWS, 2010 TO 2014
SHARE OF JOBHOLDERS

PEOPLE WHO WORK IN EAST KERN

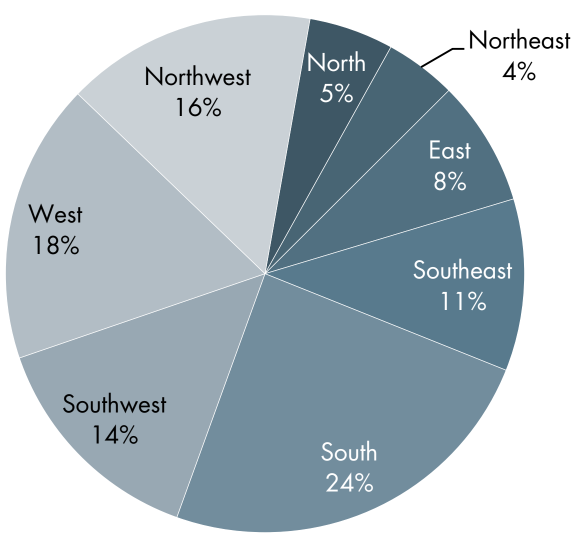


EMPLOYED PEOPLE WHO LIVE IN EAST KERN



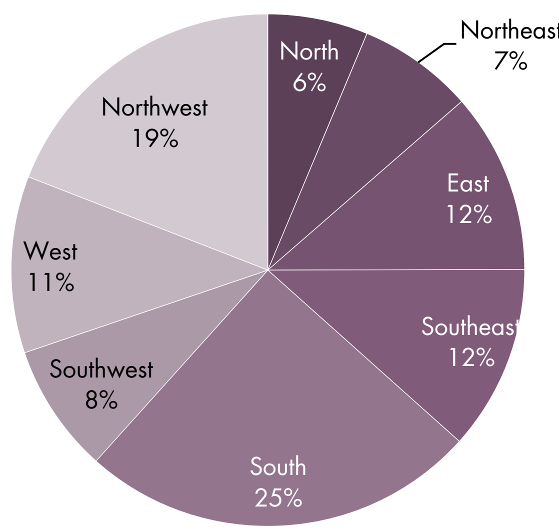
Source: US Census Bureau, Local Employment Dynamics.

FIGURE 21. DIRECTION TRAVELED FROM WORK TO HOME, 2014
SHARE OF PEOPLE THAT WORK IN EAST KERN



Source: US Census Bureau, Local Employment Dynamics.

FIGURE 22. DIRECTION TRAVELED FROM HOME TO WORK, 2014
SHARE OF PEOPLE THAT LIVE IN EAST KERN

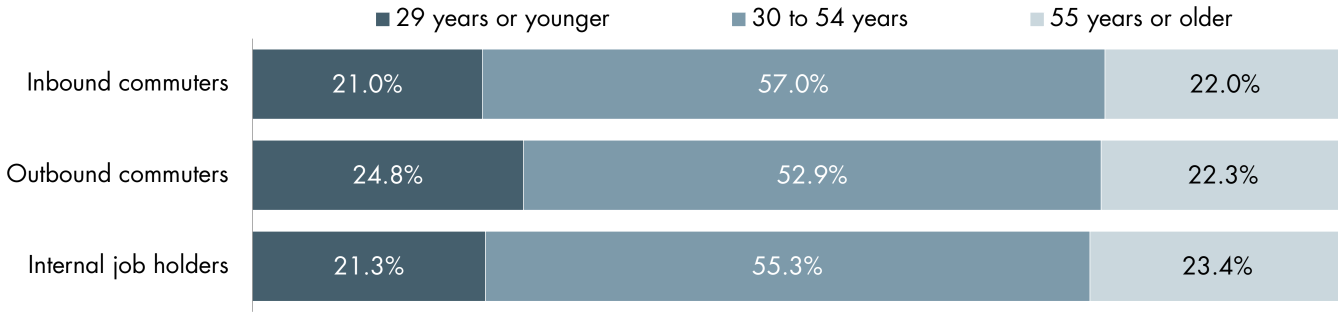


Source: US Census Bureau, Local Employment Dynamics.

SELECTED JOBHOLDER CHARACTERISTICS, 2014
SHARE OF WORKERS BY TYPE OF COMMUTING FLOW

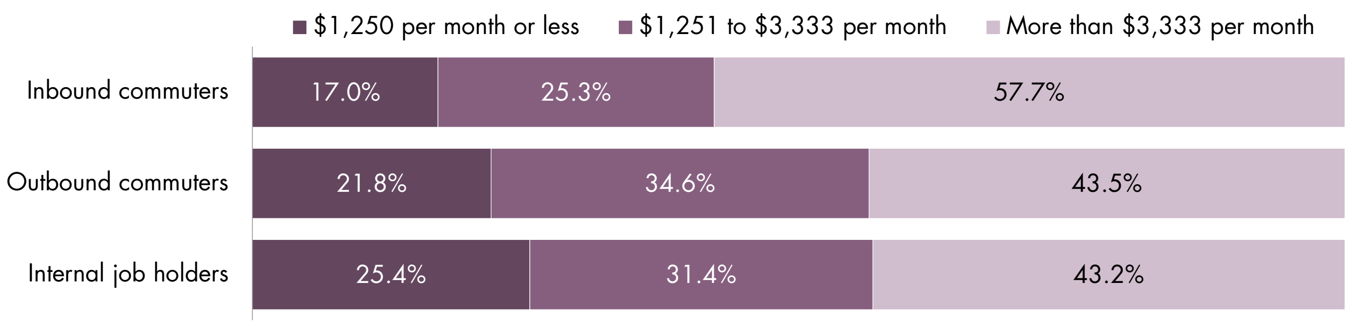
AGE

The majority of jobs held by internal, outbound, and inbound commuters are held by people age 30 to 54. Young jobholders in East Kern (29 and younger) are more likely to commute outbound than to stay in the region for employment. People age 55 and older make up nearly 25 percent of jobholders for internal, outbound, and inbound jobs.



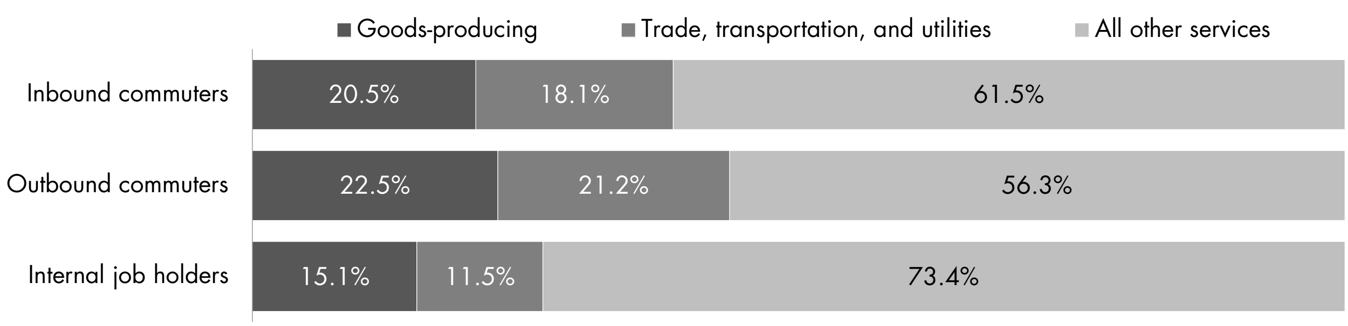
EARNINGS

Inbound commuters are much more likely to hold jobs with high earnings (more than $3,333 per month) than internal and outbound commuters are. Nearly 58 percent of inbound commuters work in high -wage positions, compared with only about 43 percent for internal and outbound commuters. This figure illustrates the high quality of employment options available in East Kern, especially at major employers such as Edwards Air Force Base, Naval Air Weapons Station China Lake, Mojave Air & Spaceport, Rio Tinto, and others.



INDUSTRY CLASS

Nearly 75 percent of internal jobholders work in service sector positions, compared with 56 percent for outbound commuters and 62 percent for inbound commuters. Outbound commuters and inbound commuters are more likely to work in trade, transportation, and utilities or goods-producing sectors than internal jobholders are.



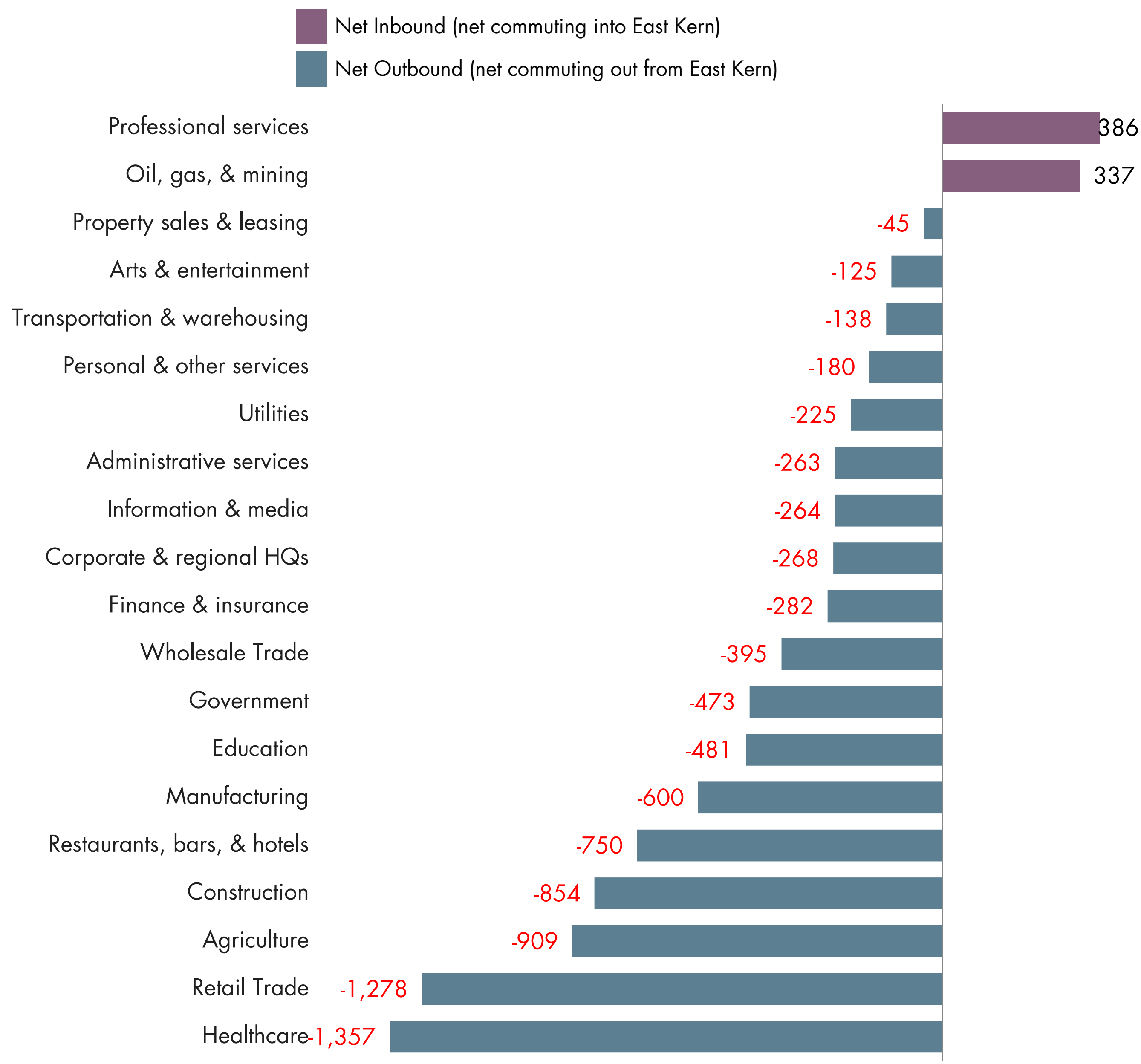
Source: (all of above) US Census Bureau, Local Employment Dynamics

Across most sectors, East Kern experiences a net outflow of workers on a daily basis. The largest outflows are in health care and retail trade, with more than 1,000 net outbound commuters in each of those sectors. Commuters also leave the region to work in agriculture, construction, restaurants, bars, & hotels, and manufacturing. This is a significant untapped opportunity. Many of these workers currently living in East Kern and commuting outside the region might prefer to work closer to home instead of in Bakersfield, Lancaster/Palmdale, or the Los Angeles area.

East Kern imports a substantial amount of workers in the professional services and mining sectors. This is largely driven by the presence of Mojave Air & Spaceport and Rio Tinto.

FIGURE 23. DAILY NET INFLOW/OUTFLOW OF WORKERS BY SECTOR, 2014

NET INBOUND/OUTBOUND COMMUTING FLOWS BY SECTOR



Source: US Census Bureau, Local Employment Dynamics.

The figures below indicate the top 10 places in East Kern's laborshed and commute shed. In both cases, East Kern's economy is defined by strong connections to outside areas including Lancaster, Palmdale, Bakersfield, and Los Angeles.

Slightly more than half of East Kern's labor force (the people that work in East Kern) lives in East Kern communities, but a large number of workers commute into East Kern from outside the area. About one-third of East Kern's workforce resides in Ridgecrest and the greater Tehachapi area (Golden Hills CDP, Tehachapi, and Bear Valley Springs CDP). Nearly 10 percent of East Kern's workforce commutes in from Lancaster and Palmdale.

More than 60 percent of East Kern's commute shed (the employed residents living in East Kern) consists of East Kern residents that commute outside the area to their place of employment. The top destinations for outbound commuters include Lancaster and Palmdale (9 percent combined), Bakersfield (more than 7 percent), Los Angeles (about 5 percent), and Searles Valley CDP (2 percent).

FIGURE 24. LABORSHED & COMMUTE SHED DESTINATIONS, 2014

TOP 10 PLACES IN EAST KERN'S LABORSHED (WHERE WORKERS LIVE) & COMMUTE SHED (WHERE EMPLOYED RESIDENTS WORK)

WHERE EAST KERN WORKERS LIVE

	City (Place)	Count	Share
1	Ridgecrest city, CA	3,506	16.9%
2	Golden Hills CDP, CA	1,338	6.4%
3	Lancaster city, CA	1,291	6.2%
4	Tehachapi city, CA	1,198	5.8%
5	Rosamond CDP, CA	1,048	5.0%
6	California City city, CA	998	4.8%
7	Bakersfield city, CA	738	3.5%
8	Palmdale city, CA	660	3.2%
9	Bear Valley Springs CDP, CA	603	2.9%
10	Mojave CDP, CA	428	2.1%
	All Other Locations	8,984	43.2%
	Total	**20,792**	**100.0%**

WHERE EMPLOYED EAST KERN RESIDENTS WORK

	City (Place)	Count	Share
1	Ridgecrest city, CA	3,990	13.8%
2	Bakersfield city, CA	2,101	7.3%
3	Lancaster city, CA	1,747	6.0%
4	Tehachapi city, CA	1,545	5.3%
5	Los Angeles city, CA	1,409	4.9%
6	Mojave CDP, CA	1,151	4.0%
7	Golden Hills CDP, CA	1,033	3.6%
8	Palmdale city, CA	860	3.0%
9	Rosamond CDP, CA	695	2.4%
10	Searles Valley CDP, CA	577	2.0%
	All Other Locations	10,657	36.8%
	Total	**28,956**	**100.0%**

Source: US Census Bureau, Local Employment Dynamics

APPENDIX B: OCCUPATIONAL ANALYSIS

This section examines the occupational composition of the region at the major group and detailed occupation level. The analysis highlights regional occupational strengths (concentrations) as well as occupations currently in demand by regional employers based a range of labor market data.

MAJOR OCCUPATIONAL GROUPS (2-DIGIT SOC)

FIGURE 25. OCCUPATIONAL DISTRIBUTION (% OF TOTAL)

COMPARISON OF EAST KERN WITH SELECTED GEOGRAPHIES AND US

SOC Code & Description		2015 Jobs	Projected Openings (2016-2020)	Location Quotient (US = 1.00)	Median Hourly Wages
	TOTAL	**29,456**	**+5,847**	–	**$24.17**
43	Office & Administrative Support	3,718	+584	0.84	$16.65
41	Sales & Related	2,439	+713	0.82	$14.40
35	Food Preparation & Serving Related	2,246	+820	0.93	$10.37
13	Business & Financial Operations	2,177	+247	1.51	$33.26
53	Transportation & Material Moving	1,791	+371	0.94	$18.79
17	Architecture & Engineering	1,772	+259	3.66	$44.50
25	Education, Training, & Library	1,740	+334	1.04	$22.90
49	Installation, Maintenance, & Repair	1,590	+272	1.43	$25.30
11	Management	1,459	+252	0.92	$44.26
29	Healthcare Practitioners & Technical	1,379	+320	0.88	$38.77
33	Protective Service	1,154	+208	1.76	$32.64
15	Computer & Mathematical	1,080	+137	1.36	$40.11
39	Personal Care & Service	1,054	+229	0.90	$8.90
51	Production	1,048	+234	0.59	$19.76
47	Construction & Extraction	996	+140	0.76	$21.49
37	Building/Grounds Cleaning & Maintenance	877	+142	0.78	$11.87
21	Community & Social Service	611	+139	1.29	$21.71
19	Life, Physical, & Social Science	584	+106	2.45	$36.05
31	Healthcare Support	526	+128	0.65	$13.19
27	Arts, Design, Entertainment, Sports, & Media	423	+87	0.83	$18.15
45	Farming, Fishing, & Forestry	137	+30	0.62	$13.53
23	Legal	127	+15	0.52	$45.17

East Kern's top three occupational groups are office & administrative support, sales, and food preparation occupations, matching the top three groups for the Greater Antelope Valley, California, and the US. However, East Kern has a lower share of jobs in these top three occupations than the state and US. Farming occupations are the largest occupational group in Kern County. East Kern has a significantly larger share of workers in business & finance, architecture & engineering, computer & math, installation & repair, and protective service occupations than the state and US. East Kern has a relatively low share of employment in production and health care support occupations.

FIGURE 26. OCCUPATIONAL DISTRIBUTION (% OF TOTAL), 2015
COMPARISON OF EAST KERN WITH SELECTED GEOGRAPHIES AND US

SOC Code & Description		East Kern	Kern County	Greater Antelope Valley	California	US
43	Office & Administrative Support	**12.9%**	**11.2%**	**15.4%**	**14.9%**	**15.4%**
41	Sales & Related	**8.4%**	**8.1%**	**12.1%**	**10.2%**	**10.3%**
35	Food Preparation & Serving Related	**7.8%**	6.5%	**10.2%**	**8.4%**	**8.4%**
13	Business & Financial Operations	7.5%	3.5%	4.9%	5.5%	5.0%
53	Transportation & Material Moving	6.2%	7.5%	5.8%	6.2%	6.6%
17	Architecture & Engineering	6.1%	2.2%	2.3%	1.9%	1.7%
25	Education, Training, & Library	6.0%	6.2%	5.6%	5.5%	5.8%
49	Installation, Maintenance, & Repair	5.5%	4.2%	3.6%	3.2%	3.8%
11	Management	5.0%	4.9%	5.0%	6.1%	5.5%
29	Healthcare Practitioners & Technical	4.8%	3.9%	6.6%	4.6%	5.4%
33	Protective Service	4.0%	3.0%	2.2%	2.2%	2.3%
15	Computer & Mathematical	3.7%	1.4%	2.5%	3.2%	2.7%
39	Personal Care & Service	3.6%	3.0%	4.5%	4.2%	4.0%
51	Production	3.6%	3.6%	3.1%	5.1%	6.1%
47	Construction & Extraction	3.4%	6.0%	3.8%	4.2%	4.5%
37	Building/Grounds Clean. & Maint.	3.0%	3.1%	3.7%	4.0%	3.9%
21	Community & Social Service	2.1%	1.9%	2.4%	1.6%	1.6%
19	Life, Physical, & Social Science	2.0%	0.9%	1.1%	1.1%	0.8%
31	Healthcare Support	1.8%	2.0%	3.0%	2.3%	2.8%
27	Arts, Design, Entertain., & Media	1.5%	1.1%	1.3%	2.5%	1.8%
45	Farming, Fishing, & Forestry	0.5%	**15.4%**	0.2%	1.9%	0.8%
23	Legal	0.4%	0.4%	0.6%	0.9%	0.8%

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed
Note: Figures exclude military and unclassified employment. The three largest occupations in each geography are highlighted.

From an occupational standpoint, East Kern has a highly skilled workforce. The region has a high concentration of jobs in several STEM-related occupations including architecture & engineering (an LQ of 3.66), life, physical, & social science (2.45), business & finance (1.51), and computer & math fields (1.36). Occupations that are less concentrated relative to the nation include healthcare support (0.65), farming (0.62), production (0.59), and legal (0.52).

FIGURE 27. OCCUPATIONAL CONCENTRATION (LQ), 2015

COMPARISON OF EAST KERN WITH SELECTED GEOGRAPHIES AND US

SOC Code	Description	East Kern	Kern County	Greater Antelope Valley	California	US
17	Architecture & Engineering	**3.66**	**1.32**	**1.35**	1.16	1.00
19	Life, Physical, & Social Science	**2.45**	1.07	**1.31**	**1.35**	1.00
33	Protective Service	**1.76**	**1.32**	0.98	0.97	1.00
13	Business & Financial Operations	**1.51**	0.70	0.98	1.10	1.00
49	Installation, Maintenance, & Repair	**1.43**	1.10	0.93	0.83	1.00
15	Computer & Mathematical	**1.36**	0.51	0.92	1.16	1.00
21	Community & Social Service	**1.29**	1.18	**1.46**	0.99	1.00
25	Education, Training, & Library	1.04	1.06	0.97	0.95	1.00
53	Transportation & Material Moving	0.94	1.13	0.89	0.95	1.00
35	Food Preparation & Serving Related	0.93	0.78	1.22	1.01	1.00
11	Management	0.92	0.90	0.92	1.12	1.00
39	Personal Care & Service	0.90	0.74	1.11	1.04	1.00
29	Healthcare Practitioners & Technical	0.88	0.73	1.22	0.84	1.00
43	Office & Administrative Support	0.84	0.73	1.00	0.97	1.00
27	Arts, Design, Entertain., & Media	0.83	0.60	0.72	**1.43**	1.00
41	Sales & Related	0.82	0.78	1.17	0.99	1.00
37	Building/Grounds Clean. & Maint.	0.78	0.81	0.95	1.04	1.00
47	Construction & Extraction	0.76	**1.33**	0.84	0.93	1.00
31	Healthcare Support	0.65	0.72	1.08	0.82	1.00
45	Farming, Fishing, & Forestry	0.62	**20.11**	0.27	**2.53**	1.00
51	Production	0.59	0.58	0.51	0.84	1.00
23	Legal	0.52	0.43	0.67	1.11	1.00

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

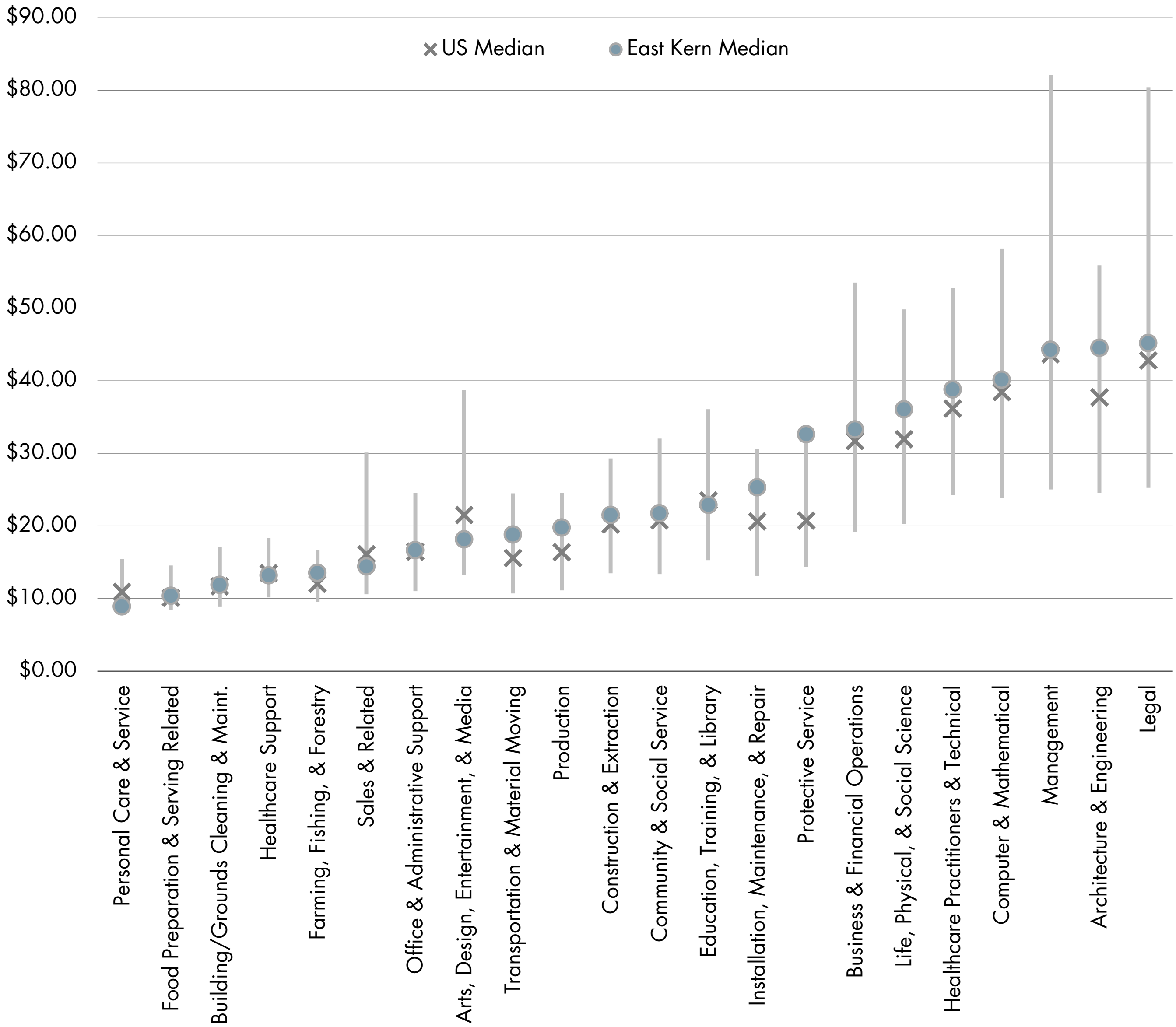
Note: Figures exclude military and unclassified employment. LQs greater than 1.25 are presumed to show competitive advantage and are highlighted.

Among the 22 major occupational groups, East Kern's median wages are higher than US median wages for 17 groups. For the most part, wages in East Kern are slightly higher than the US as a whole. However, there are several significant wage differences. East Kern has substantially higher wages for the following occupational categories: transportation & material moving; production; installation, maintenance, & repair; protective service; and architecture & engineering. Wages in East Kern are significantly lower than the US for personal care & service and arts, design, entertainment, & media occupations.

FIGURE 28. EAST KERN WAGES BY MAJOR OCCUPATIONAL GROUP, 2015

EAST KERN WAGES PRESENTED IN THE CONTEXT OF US WAGE RATES

Line = US wage range from the 10th to the 90th percentile   Markers = Median hourly wage rates for US (x) and East Kern (dot)



Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

DETAILED OCCUPATIONS (5-DIGIT SOC)

The prior figures gave an overview of the regional workforce at the major occupational group level. The remainder of this section presents data on individual occupations. To understand regional strengths, occupations were evaluated based on a range of factors, beginning with LQs. In addition, "top" occupations were identified based on size (number of jobs in 2015), rate of net job change (growing and declining occupations in both numeric and percentage terms), and wages. The occupations with the highest LQs are presented below. Additional occupations are presented on the next two pages based on other factors (largest, highest paying, fastest growing by absolute number and percent, and fastest declining by absolute number and percent).

FIGURE 29. EAST KERN, TOP 25 MOST CONCENTRATED OCCUPATIONS
RANKED BY 2015 LQ (US = 1.00)

SOC CODE	DESCRIPTION	2015 Jobs	2015 LQ (US=1.00)	% Chg Since 2010	Median Hourly Earnings	Wage Premium (US = 1.00)
17-2011	Aerospace Engineers	312	22.43	-9%	$48.87	0.95
47-5041	Continuous Mining Machine Operators	39	18.53	22%	$20.93	0.89
53-2021	Air Traffic Controllers	79	16.50	-7%	$62.43	1.04
45-2011	Agricultural Inspectors	43	14.22	-6%	$21.15	0.95
19-4093	Forest & Conservation Technicians	78	12.69	-8%	$15.92	0.94
49-3011	Aircraft Mechanics & Service Technicians	289	12.33	19%	$31.06	1.11
15-1111	Computer & Info. Research Scientists	63	11.89	-4%	$48.87	0.95
49-2091	Avionics Technicians	38	11.11	23%	$28.18	1.00
17-3029	Engineering Techs., Except Drafters, All Other	151	11.03	-7%	$36.70	1.23
17-2072	Electronics Engineers, Except Computer	274	10.33	-4%	$50.13	1.07
19-2012	Physicists	35	10.24	-1%	$51.65	0.97
19-1029	Biological Scientists, All Other	62	9.43	-8%	$43.15	1.19
43-9022	Word Processors & Typists	150	7.88	-7%	$17.52	1.00
33-1011	First-Line Supvsr., Correctional Officers	66	7.49	2%	$42.93	1.43
39-5011	Barbers	96	7.39	-8%	$8.44	0.78
33-3012	Correctional Officers & Jailers	590	6.96	2%	$37.24	1.69
15-2041	Statisticians	37	6.25	8%	$41.38	1.06
17-2199	Engineers, All Other	171	6.16	-7%	$54.75	1.22
15-1199	Computer Occupations, All Other	266	5.86	-8%	$39.27	0.98
17-3023	Electrical & Electronics Eng. Technicians	147	5.39	-4%	$38.00	1.32
51-8013	Power Plant Operators	40	5.15	-14%	$30.92	0.90
21-1029	Social Workers, All Other	64	4.97	-5%	$16.98	0.60
25-9099	Educ., Training, & Library Workers, All Other	103	4.86	-1%	$13.26	0.70
19-3099	Social Scientists & Related Workers, All Other	33	4.85	-11%	$35.58	0.94
13-2099	Financial Specialists, All Other	133	4.75	-6%	$32.51	1.02

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed
Note: Occupations with at least 25 jobs in East Kern

FIGURE 30. TOP 10 OCCUPATIONS, BASED ON VARIOUS INDICATORS

Employment in 2015	LARGEST	Median hourly earnings
880	Cashiers	$9.88
687	Combined Food Prep. & Servers, Incl. Fast Food	$9.65
634	Business Operations Specialists, All Other	$35.17
590	Correctional Officers & Jailers	$37.24
543	Retail Salespersons	$11.20
530	Military occupations	$16.42
457	Registered Nurses	$38.79
425	Office Clerks, General	$13.51
411	Laborers/Freight, Stock, & Material Movers, Hand	$11.96
406	Childcare Workers	$7.49

Employment in 2015	HIGHEST-PAYING ($)	Median hourly earnings
44	Physicians & Surgeons, All Other	$104.77
31	Dentists, General	$76.71
25	Natural Sciences Managers	$70.91
82	Architectural & Engineering Mgrs.	$67.87
88	Pharmacists	$67.22
46	Chief Executives	$66.27
79	Air Traffic Controllers	$62.43
74	Lawyers	$59.31
54	Computer & Info. Systems Managers	$57.06
171	Engineers, All Other	$54.75

Net change	FASTEST-GROWING, 2015-20 (#)	Median hourly earnings
+125	Combined Food Prep. & Servers, Incl. Fast Food	$9.65
+101	Cashiers	$9.88
+98	Retail Salespersons	$11.20
+63	Waiters & Waitresses	$9.87
+54	Registered Nurses	$38.79
+44	Stock Clerks & Order Fillers	$11.07
+38	Cooks, Restaurant	$11.56
+32	Personal Care Aides	$9.65
+32	Laborers/Freight, Stock, & Material Movers, Hand	$11.96
+27	First-Line Supvsr., Food Prep. & Servers	$14.22

continued on following page

FIGURE 30. TOP 10 OCCUPATIONS, BASED ON VARIOUS INDICATORS – CONTINUED

% change	FASTEST-GROWING, 2015-20 (%)	Median hourly earnings
+44%	Hazardous Materials Removal Workers	$32.56
+32%	Home Health Aides	$10.49
+28%	Refuse & Recyclable Material Collectors	$20.27
+26%	Clinical, Counseling, & School Psychologists	$40.90
+25%	Coating, Painting, & Spraying Machine Workers	$12.36
+25%	Personal Care Aides	$9.65
+24%	Emergency Medical Techs. & Paramedics	$17.96
+24%	Bartenders	$10.83
+24%	Counter Attendants, Cafeteria, & Concession	$10.86
+24%	Telecomm. Equip. Install./Repair, Exc. Line Install.	$27.87

Net change	FASTEST-DECLINING, 2015-20 (#)	Median hourly earnings
-41	Childcare Workers	$7.49
-18	Maids & Housekeepers	$9.74
-16	Carpenters	$17.72
-16	Aerospace Engineers	$48.87
-14	Electrical Power-Line Installers & Repairers	$50.56
-12	Word Processors & Typists	$17.52
-10	Labor Relations Specialists	$38.58
-10	First-Line Supvsr., Constr. Trades & Extraction	$29.32
-10	Construction Managers	$31.47
-9	Computer Programmers	$36.14

% change	FASTEST-DECLINING, 2015-20 (%)	Median hourly earnings
-29%	Labor Relations Specialists	$38.58
-22%	Continuous Mining Machine Operators	$20.93
-19%	Electrical Power-Line Installers & Repairers	$50.56
-19%	Carpenters	$17.72
-18%	Construction Managers	$31.47
-14%	Power Plant Operators	$30.92
-14%	Weighers, Measurers, & Samplers, Recordkeeping	$11.24
-13%	Computer Programmers	$36.14
-11%	Telecomm. Line Installers & Repairers	$24.81
-10%	Childcare Workers	$7.49

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed
Notes: Excludes military (East Kern). Includes only those occupations with >25 jobs.

Most of the projected demand for job openings in East Kern from 2016 to 2020 will be due to replacement, not from new job growth. This is true for occupations across all skill levels.

FIGURE 31. DEMAND FACTORS BY SKILL LEVEL FOR EAST KERN

ESTIMATED ANNUAL OPENINGS (THROUGH 2020) WITH ESTIMATE OF NET CHANGE & REPLACEMENT DEMAND

			DEMAND FACTORS			
SOC CODE	DESCRIPTION	2015 Jobs	Projected Openings (2016-20)	New jobs	Replacement	Wage Premium over US
LOW-SKILL *(High school or less)*						
45-2092	Farmworkers & Laborers, Crop & Greenhouse	54	19	61%	39%	0.93
41-2011	Cashiers	880	307	4%	96%	1.05
41-2031	Retail Salespersons	543	207	4%	96%	1.07
35-3021	Combined Food Prep. & Servers, Incl. Fast Food	687	251	7%	93%	1.07
35-3031	Waiters & Waitresses	356	160	5%	95%	1.05
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	411	100	6%	94%	0.99
43-5081	Stock Clerks & Order Fillers	339	104	6%	94%	1.00
39-9021	Personal Care Aides	131	44	14%	86%	0.96
43-9061	Office Clerks, General	425	68	6%	94%	0.96
47-2061	Construction Laborers	163	23	-	100%	0.99
MIDDLE-SKILL *(More than high school, less than four years)*						
29-1141	Registered Nurses	457	113	2%	98%	1.17
53-3032	Heavy & Tractor-Trailer Truck Drivers	327	47	5%	95%	1.02
33-3012	Correctional Officers & Jailers	590	102	4%	96%	1.69
41-1011	First-Line Supvsr., Retail Sales Workers	252	61	3%	97%	1.00
25-9041	Teacher Assistants	240	49	7%	93%	1.04
49-9071	Maintenance & Repair Workers, General	312	57	5%	95%	1.02
35-1012	First-Line Supvsr., Food Prep. & Servers	133	50	8%	92%	0.99
31-1014	Nursing Assistants	101	28	9%	91%	0.92
51-4121	Welders, Cutters, Solderers, & Brazers	93	18	4%	96%	1.38
43-1011	First-Line Supvsr., Office & Admin. Support	217	34	9%	91%	0.94
HIGH SKILL *(Four-year degree or above)*						
11-1021	General & Operations Managers	384	72	5%	95%	0.94
25-2021	Teachers, Elementary (Except Special Ed.)	264	50	8%	92%	1.12
25-3098	Substitute Teachers	258	39	7%	93%	1.24
13-2011	Accountants & Auditors	203	44	8%	92%	0.90
25-2031	Teachers, Secondary (Exc. Special Ed. & CTE)	127	27	8%	92%	1.17
25-1099	Teachers, Postsecondary	181	36	10%	90%	1.08
25-2022	Teachers, Middle School (Exc. Special Ed. & CTE)	73	16	9%	91%	1.12
21-1021	Child, Family, & School Social Workers	69	17	8%	92%	1.22
29-1051	Pharmacists	88	20	5%	95%	1.15
17-2112	Industrial Engineers	77	16	2%	98%	1.35

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, and Self-Employed

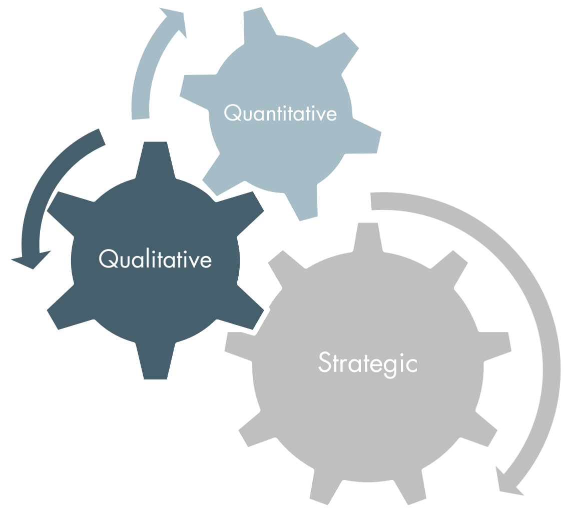
APPENDIX C: TARGET INDUSTRY ANALYSIS

INTRODUCTION & BACKGROUND

The selection of target industries is traditionally based on a defined set of quantitative factors such as workforce access, available industrial sites, and industry concentration. The Kern County Economic Roadmap took this approach and examined several "key industries" in light of their economic importance to the county:

- Energy and natural resources
- Agriculture and value-added agriculture
- Distribution and logistics
- Health care services
- Tourism, recreation, and entertainment
- Aerospace and defense

FIGURE 32: TARGETING APPROACH



Source: TIP Strategies

While the Kern County targets are a good starting point for discussion, our target industry recommendations for East Kern are not based solely on these factors. This target industry analysis provides an in-depth understanding of East Kern's best opportunities for business growth and recruitment using a three-pronged quantitative, qualitative, and strategic approach.

First, we performed a quantitative analysis to provide a foundation of knowledge to help identify potential target industries. This analysis included the following:

- **Business, industry, & employment trends**. We calculated location quotients (LQs) to identify industries in which East Kern's employment is more concentrated than the national average, which suggests a competitive advantage. We also analyzed other trends affecting business growth in East Kern to shed light on the issues and opportunities facing business retention, expansion, and recruitment in the region.
- **Workforce trends & characteristics**. We calculated LQs for occupational categories to identify competitive advantages in East Kern's workforce. We also analyzed other variables to better understand the region's workforce including age structure, educational attainment, and wages by occupational group.
- **Commuting patterns**. We mapped East Kern's laborshed (where East Kern workers live) and commute shed (where employed East Kern residents work) to examine the economic linkages with surrounding areas.

Second, a qualitative analysis was conducted through community meetings, interviews with key stakeholders, and meetings with local business leaders. During the Discovery phase, we met with more than 200 business and community leaders across East Kern during 16 community engagement meetings and more than 60 employer/stakeholder meetings. These discussions provided us insights into the barriers holding back the region's economic potential. Perhaps most importantly, our candid conversations with regional leaders (especially employers) gave us a deeper appreciation of the unique opportunities for business growth in East Kern.

Lastly, we applied a strategic lens to evaluate potential target industries for East Kern based on: 1) a review of relevant economic and workforce development initiatives and planned infrastructure investments already in progress locally, regionally, and at the state level; 2) an understanding of state, national, and global economic trends, including disruptive technologies; and 3) the experience of the consulting team gained from prior work.

RECOMMENDED TARGET INDUSTRIES FOR EAST KERN

Based on the quantitative/qualitative/strategic targeting approach, we recommend that East Kern focus its business retention, expansion, and recruitment activities around the following target industries and niche segments:

AEROSPACE PRODUCTS, SERVICES, RESEARCH & TESTING

- Aerospace component manufacturing
- Aerospace & engineering services
- Research, testing & product development

NATURAL RESOURCES & CLEAN ENERGY

- Mining (minerals & metals)
- Mining equipment, suppliers & services
- Clean energy development (wind & solar)

OUTDOOR RECREATION & TOURISM

- Off-highway vehicle tourism, testing & product development
- Outdoor sports (hiking, biking, extreme/adventure sports)
- Airplane & experimental aircraft enthusiast events & services
- Festivals & events
- Film production

LOGISTICS & DISTRIBUTION

- Warehousing & distribution facilities
- Rail-served intermodal facilities

HEALTH CARE

- Medical specialties
- Community health & wellness services
- Remote/extreme medicine

For each target, we have prepared a profile, which contains the following information:

- A definition of the industry, (including NAICS codes and estimated employment where possible)
- A description of the rationale behind the target selection (why the industry is a good fit for East Kern) and identification of niche segments that are growing quickly or which align well with East Kern's assets
- A summary of the staffing patterns for the industry (top 20 occupations ranked by share of jobs)
- Additional information (if applicable) describing the competitive landscape for the industry across the US
- A list of resources (trade associations, events, and publications) to help stakeholders stay informed of industry trends and provide opportunities for networking and relationship-building with decision makers

AEROSPACE PRODUCTS, SERVICES, RESEARCH, & TESTING

DEFINITION

The aerospace industry consists of companies involved in the production of civilian and military aircraft (including engines, aircraft parts, and equipment), as well as spacecraft and guided missile systems. For this analysis, the standard definition has been extended to include closely related industries, such as the production of instrumentation and measurement equipment, the manufacture of aircraft seats and interiors, and aerospace R&D. The figure below lists the primary NAICS codes associated with this target, as defined, and provides an overview of employment trends in the region, state, and the US.

FIGURE 33. EMPLOYMENT OVERVIEW: AEROSPACE, SERVICES, RESEARCH, & TESTING
COMPARISON OF EAST KERN WITH SELECTED GEOGRAPHIES, 2015 JOBS & PERCENT CHANGE SINCE 2005

NAICS Code	Description	East Kern		Kern County		Greater Antelope Valley		California		US	
		2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05
325211	Plastics Material & Resin Mfg.	0	-	0	-	<10	-	2,741	-8%	57,550	-4%
325510	Paint & Coating Mfg.	0	-	55	52%	<10	-	2,617	-32%	39,694	-11%
325520	Adhesive Mfg.	175	17%	175	17%	175	17%	2,131	-19%	20,988	-8%
327120	Clay Building Material & Refractories Mfg.	0	-	<10	-	0	-	1,360	-56%	23,929	-34%
332812	Metal Coating, Engraving (except Jewelry & Silverware), & Allied Services to Manufacturers	205	788%	207	788%	212	573%	5,391	2%	57,912	9%
334511	Search, Detection, Navigation, Guidance, Aeronautical, & Nautical Sys. & Instrument Mfg.	84	-	648	2740%	84	-	29,890	-39%	124,430	-20%
334513	Instruments & Related Products Mfg. for Measuring, Displaying, & Controlling Industrial Process Variables	0	-	<10	-	0	-	8,915	-6%	63,951	7%
334515	Instrument Mfg. for Measuring & Testing Electricity & Electrical Signals	0	-100%	<10	-	0	-100%	10,763	-41%	37,784	-23%
334519	Other Measuring & Controlling Device Mfg.	0	-	<10	-	<10	-	7,391	81%	37,095	3%
336411	Aircraft Mfg.	66	-87%	66	-87%	66	-87%	19,235	-24%	232,321	10%
336412	Aircraft Engine & Engine Parts Mfg.	29	-66%	29	-66%	29	-66%	2,401	-47%	78,301	-4%
336413	Other Aircraft Parts & Auxiliary Equipment Mfg.	69	310%	536	284%	97	144%	29,548	28%	107,770	24%
336414	Guided Missile & Space Vehicle Mfg.	29	-82%	29	-82%	29	-82%	20,244	24%	55,565	4%
336415	Guided Missile & Space Vehicle Propulsion Unit & Propulsion Unit Parts Mfg.	0	-	<10	-	0	-	2,028	8%	9,804	-26%
336419	Other Guided Missile & Space Vehicle Parts & Auxiliary Equipment Mfg.	<10	-	<10	-	<10	-	1,643	-19%	5,722	-27%
488190	Other Support Activities for Air Transportation	352	82%	385	82%	374	76%	10,095	53%	105,808	21%
541330	Engineering Services	869	5%	2,518	5%	1,468	6%	117,715	5%	969,125	11%
541712	Research & Development in the Physical, Engineering, & Life Sciences (except Biotech.)	178	62%	249	62%	291	16%	98,378	31%	446,313	14%
611512	Flight Training	23	-33%	46	-33%	38	-40%	1,355	-29%	17,076	1%

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

☑ RATIONALE & NICHE SEGMENTS

East Kern is one of the nation's leading centers of aerospace innovation, flight testing, and space exploration technologies. This industry represents one of the most promising opportunities for business recruitment and expansion in East Kern thanks to the region's unique assets. The R-2508 restricted airspace— spanning millions of acres from Edwards AFB to NAWS China Lake to Fort Irwin—is a huge competitive advantage.

The Mojave Air & Spaceport is one of only 10 commercially licensed spaceports in the US and is the chosen location where billionaires are making big bets on the future of commercial space travel. Paul Allen's Stratolaunch Systems (currently building the world's largest airplane to launch rockets into space) and Richard Branson's Virgin Galactic are two firms with major product development/testing operations based in Mojave. Another innovative firm at the Mojave Air & Spaceport is Scaled Composites, founded by Burt Rutan, the legendary aerospace engineer that built the first airplane to fly nonstop around the world.

East Kern's aerospace acumen goes beyond the high-impact innovation and engineering activities taking place "inside the gates" at Mojave Air & Spaceport, Edwards AFB, and NAWS China Lake. The region is home to an unusually high number of aircraft enthusiasts spanning from the Rosamond Skypark to Norm Hill Aviation in California City to Vintage V12s in Tehachapi.

The Northrup Grumman expansion in Palmdale is yet another opportunity that East Kern can capitalize on for additional aerospace investment. With an estimated 5,000 new direct jobs associated with the B-21 long-range stealth bomber production, this is an opportunity that East Kern should not overlook.

East Kern's advantages for growing the aerospace sector include the following:

- The Mojave Air & Spaceport is a world-class facility with world-class companies and workers.
- The R-2508 restricted airspace is a national asset and provides East Kern with a unique advantage for flight testing and experimental aircraft.
- East Kern has a long history and culture of aerospace innovation.
- The region is within close proximity to the Greater Los Angeles aerospace cluster, including Northrop Grumman's major ongoing expansion in Palmdale.

Niche segments that align well with East Kern's assets include the following focus areas:

- **AEROSPACE COMPONENT MANUFACTURING.** This industry segment comprises establishments primarily engaged in manufacturing complete aircraft, making aircraft components, and manufacturing guided missiles and space vehicles, and developing and making prototypes of guided missiles or space vehicles. This also includes manufacturers of plastic composite materials, ceramic matrix composites, metal coating/painting services, and related suppliers to the aircraft component manufacturers.
- **AEROSPACE & ENGINEERING SERVICES.** This includes flight training, specialized services for air transportation, and aerospace engineering and related services.
- **RESEARCH, TESTING & PRODUCT DEVELOPMENT.** This segment includes research and development establishments primarily engaged in making prototypes of aircraft and space vehicles, testing experimental aircraft, guided missiles and space vehicles, and related R&D services.

STAFFING PATTERNS

The figure below lists the 25 leading occupations in this industry ranked by their share of the industry's total employment. East Kern a large pool of engineering talent, thanks to its large employers that are fueled by skilled engineers (NAWS China Lake, Edwards AFB, and the Mojave Air & Space Port). Not surprisingly, East Kern has a very high concentration of workers in occupations tied to aerospace engineering: aircraft mechanics & service technicians (LQ of 12.33), aerospace engineers (LQ of 22.43), avionics technicians (LQ of 11.11), and aerospace engineering & operations technicians. The vast majority of key occupations in this sector pay wages above the median hourly earnings for East Kern's economy as a whole.

FIGURE 34. KEY OCCUPATIONS

BASED ON STAFFING PATTERNS IN EAST KERN

SOC Code	Description	Share of Industry Employment	Jobs	LQ (US= 1.00)	Median Hourly Earnings	Relative to US (US=1.00)	
49-3011	Aircraft Mechanics & Service Technicians	9.2%	289	12.33	31.06	1.07	
17-2011	Aerospace Engineers	5.5%	312	22.43	48.87	0.92	
17-2051	Civil Engineers	4.6%	126	2.20	46.46	1.16	●
17-3023	Electrical & Electronics Eng. Technicians	3.3%	147	5.39	38.00	1.29	●
17-2141	Mechanical Engineers	3.2%	127	2.28	43.40	1.07	
17-2072	Electronics Engineers, Except Computer	2.6%	274	10.33	50.13	1.05	
11-9040	Architectural & Engineering Mgrs.	2.5%	82	2.23	67.87	1.05	
17-2071	Electrical Engineers	2.3%	59	1.66	41.85	0.92	
17-2112	Industrial Engineers	1.9%	77	1.55	53.63	1.32	●
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	1.8%	411	0.85	11.96	0.96	
17-2171	Petroleum Engineers	1.7%	<10	1.41	Insf. Data	Insf. Data	
11-1021	General & Operations Managers	1.6%	384	0.92	44.70	0.93	
17-3011	Architectural & Civil Drafters	1.6%	27	1.33	21.55	0.87	
51-9011	Chemical Equipment Workers	1.5%	11	0.78	15.99	0.68	×
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	1.5%	101	0.99	19.64	1.10	
49-2091	Avionics Technicians	1.4%	38	11.11	28.18	0.97	
43-9061	Office Clerks, General	1.3%	425	0.67	13.51	0.93	
19-4041	Geological & Petroleum Technicians	1.2%	<10	3.22	Insf. Data	Insf. Data	
17-3021	Aerospace Eng. & Operations Techs.	1.1%	23	10.02	31.28	0.98	
43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exe	1.1%	372	0.72	16.25	0.98	
17-2199	Engineers, All Other	1.1%	171	6.16	54.75	1.20	●
15-1133	Software Developers, Systems Software	1.1%	134	1.64	53.70	1.05	
51-4193	Plating & Coating Machine, Metal/Plastic	1.0%	21	3.09	15.69	1.06	
43-3031	Bookkeeping, Accounting, & Auditing Clerks	1.0%	302	0.89	18.03	0.99	
13-1199	Business Operations Specialists, All Other	0.9%	634	3.34	35.17	1.06	

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

The figure below presents wage ranges (10th and 90th percentiles) and typical education requirements for the 25 leading occupations in this industry.

EDUCATION AND TRAINING REQUIREMENTS
WITH HOURLY EARNINGS FOR SELECTED PERCENTILES

SOC Code	Description	Hourly Earnings (percentiles) 10th	90th	Typical education required for entry into occupation
49-3011	Aircraft Mechanics & Service Technicians	$22.47	$34.65	Postsecondary non-degree award
17-2011	Aerospace Engineers	$32.14	$71.79	Bachelor's degree
17-2051	Civil Engineers	$27.62	$69.84	Bachelor's degree
17-3023	Electrical & Electronics Eng. Technicians	$25.61	$50.78	Associate's degree
17-2141	Mechanical Engineers	$30.63	$60.84	Bachelor's degree
17-2072	Electronics Engineers, Except Computer	$36.47	$68.11	Bachelor's degree
11-9040	Architectural & Engineering Mgrs.	$46.71	$143.32	Bachelor's degree
17-2071	Electrical Engineers	$30.62	$60.66	Bachelor's degree
17-2112	Industrial Engineers	$30.84	$82.58	Bachelor's degree
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	$9.17	$18.67	Less than high school
17-2171	Petroleum Engineers	Insf. Data	Insf. Data	Bachelor's degree
11-1021	General & Operations Managers	$24.03	$106.98	Bachelor's degree
17-3011	Architectural & Civil Drafters	$12.88	$31.87	Associate's degree
51-9011	Chemical Equipment Workers	$12.25	$31.33	High school diploma or equivalent
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	$9.79	$32.00	High school diploma or equivalent
49-2091	Avionics Technicians	$11.35	$38.51	Associate's degree
43-9061	Office Clerks, General	$9.45	$19.95	High school diploma or equivalent
19-4041	Geological & Petroleum Technicians	Insf. Data	Insf. Data	Associate's degree
17-3021	Aerospace Eng. & Operations Techs.	$19.82	$43.99	Associate's degree
43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	$10.54	$23.02	High school diploma or equivalent
17-2199	Engineers, All Other	$14.36	$73.08	Bachelor's degree
15-1133	Software Developers, Systems Software	$32.25	$78.20	Bachelor's degree
51-4193	Plating & Coating Machine, Metal/Plastic	$9.03	$24.97	High school diploma or equivalent
43-3031	Bookkeeping, Accounting, & Auditing Clerks	$12.38	$26.22	High school diploma or equivalent
13-1199	Business Operations Specialists, All Other	$19.58	$56.27	High school diploma or equivalent

Source: TIP Strategies, Inc.

COMPETITIVE LANDSCAPE

The commercial aviation industry has experienced record growth in recent years due to demand for fleet replacement, passenger growth in emerging markets, and the introduction of new products and manufacturers to the market. According to the most recent data available from the Aerospace Industries Association (AIA), sales of aerospace products started to rebound in 2015 after stalling out at the end of the last decade. Over the past decade, aircraft manufacturing has made up an increasingly larger share of all aerospace sales, rising from 51 percent of the total in 2004 to an estimated 56 percent in 2015, according to the AIA's analysis.

However, when aircraft sales are considered by type (civilian versus military) there are substantial differences in performance during the same time period (Figure 36). Civilian (commercial) aircraft sales reached record highs in 2014 and 2015, doubling from 2004. By contrast, military-related sales declined after climbing to just over $60 billion (constant 2009 dollars) as the US entered the recession.

Major factors affecting the global outlook for the Aerospace Vehicle and Defense cluster include:

- **CONTINUED HIGH LEVELS OF DEMAND FOR AIRCRAFT.** The global aerospace and defense industry saw a decline in profits and revenues in 2015 for the first time in five years, due in large part to the impact of the strong US dollar and restructuring charges taken by two major companies (Bombardier and UTC). Despite the declines, prospects for commercial aircraft remain strong, driven by the replacement of aging fleet in mature markets, new passenger growth in emerging markets (driving fleet expansion), and increasing fuel efficiency standards in North America and Europe.

FIGURE 35: AEROSPACE SALES

BY PRODUCT GROUP

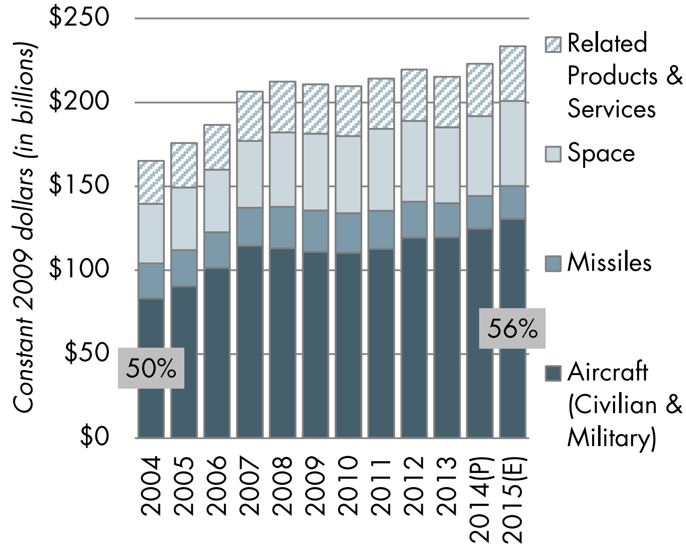
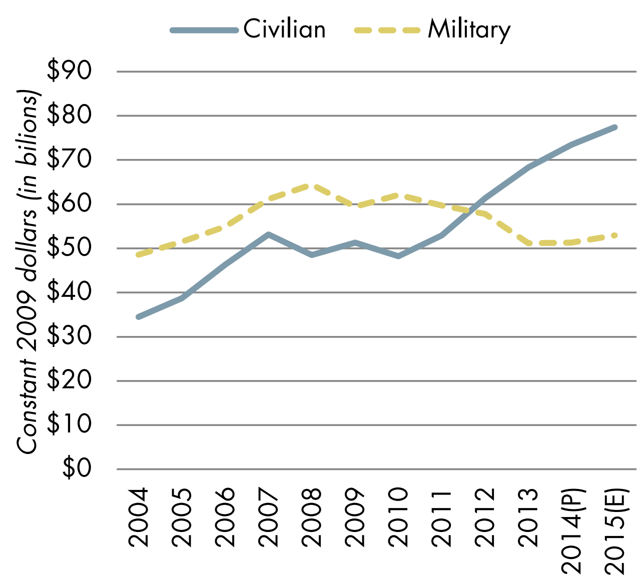


FIGURE 36: AIRCRAFT SALES BY TYPE



Source: Aerospace Industries Association (based on company reports; *The Budget of the United States Government,* National Aeronautics and Space Administration, US Department of Commerce, and Department of Defense); TIP Strategies. Note: Government purchases reflected as appropriated funding. P = preliminary, E = estimate

Net orders for Boeing and Airbus flattened slightly in 2015, dropping below 2,000 aircraft for the first time in four years. However, the firms continue to have record-breaking backlogs, calculated at 12,626 units as of December 31, 2015. At current production rates, PwC estimated the backlog of orders is sufficient to keep manufacturers busy for the next nine years (*Aerospace & Defense: 2015 Year in Review and 2016 Forecast*).

Long-term reauthorization of the US Export-Import Bank (Ex-Im) through 2019 was good news for domestic producers, who often rely on the bank to supplement traditional funding sources. The program is opposed by US carriers who view the program as a subsidy provided to foreign firms purchasing US aircraft, an option not available to domestic airlines.

The future is less bright for defense contractors. Although passage of the Bipartisan Budget Act of 2015 extends relief from the full impacts of sequestration through 2017, uncertainty about the federal budget continues. However, PwC cites "rapidly changing US defense priorities" (including global threats from ISIS, the Russia-Ukraine conflict, and growing modernization of the militaries of North Korea and China) as a force that is likely to help drive comprise in future budget deals.

- **DEPARTMENT OF DEFENSE PRIORITIES.** In addition to continued uncertainty over global military spending, the cluster has experienced a shift towards vendors that "aren't part of the core defense industry" according to PwC's review of trends affecting aerospace and defense in 2016. The analysis highlights the unusual position traditional defense contractors find themselves in, stating that the "combination of unexpected competitive pressures and a more frugal customer base is a one-two punch that the defense industry has never quite faced before." (PwC, *2016 Aerospace and Defense Industry Trends: Battling Against Technology Firms, Tight Budgets, and Uncertain Military Needs*, p. 3).

  This shift towards technology-oriented vendors can be seen in the Defense Innovation Initiative announced in November 2014 by former Secretary of Defense, Chuck Hagel. This initiative is commonly referred to as the "third offset strategy" because it marks the third evolution of DoD thinking on how the US can maintain strategic advantage over potential adversaries into the future. Priority areas outlined in the Defense Innovation Initiative are designed to accelerate innovation and emphasize the application of breakthrough technologies. These priority areas include the following:

  - *Robotics & Autonomous Systems:* unmanned machines that assess situations and make decisions on their own
  - *Miniaturization:* making components of weapons systems smaller, including warheads, sensors, and electronics
  - *Big Data:* utilizing commercial techniques for analyzing large volumes of intelligence data
  - *Advanced Manufacturing:* using technologies such as 3-D printing that allow for ongoing, rapid changes to test new technologies and customize existing tech for particular situations

- **ROBOTICS AND AUTONOMOUS SYSTEMS.** A growing number of systems are being designed to operate autonomously, including aerial, ground, and underwater vehicles. Interest in unmanned aerial vehicles (UAVs) for civilian use and among foreign militaries is expected to help push the market to $93 billion in sales over the next decade, according to the Teal Group (www.tealgroup.com). The group's 2015 study estimates that military uses will account for nearly three quarters (72 percent) of the market, with consumer and civil uses capturing 23 percent and 5 percent, respectively. Though a much smaller market, growth in unmanned underwater vehicles (UUVs) is also expected to climb, driven primarily by DoD investments. Increasingly sophisticated sensors will be an important element to the growth of both aerial and underwater systems. Likewise, artificial intelligence (AI) also plays a key role in autonomous systems by allowing machines to place feedback generated by the sensors into context and learn to respond.

- **TALENT PIPELINE.** The aerospace and defense industry faces a significant brain drain, the result of an aging workforce and stiff competition to attract and retain young talent. According to Aviation Week's 2016 Workforce Study, just over one in four workers (26.8 percent) qualified for retirement in 2015. However, the industry's actual retirement rate is "staggeringly low" at roughly 3 percent of the total workforce (or just 10 percent of those eligible). As in prior years, the study highlights the need to increase the pipeline of STEM talent and increase "work-readiness" skills among younger workers. Increasing diversity in the workforce was also cited as an issue.

The private sector-driven space exploration sector is a major bright spot within the broader aerospace industry. East Kern's advantages in this space are unique, thanks in large part to the R-2508 restricted airspace and the Mojave Air & Spaceport, but the region does face stiff competition from nine other commercially licensed spaceports across the US (figure below).

FIGURE 37. COMMERCIAL SPACEPORTS
ACTIVE LAUNCH SITE OPERATOR LICENSES

LICENSE	OPERATOR	SITE	LOCATION	EXPIRATION
LSO 01-005	Harris Corporation	California Spaceport	California	Sep 18, 2021
LSO 06-010 (Rev. 2)	Oklahoma Space Industry Development Authority	Burns Flat, Oklahoma	Oklahoma	Jun 11, 2021
LSO 10-014	Space Florida	Cape Canaveral Air Force Station	Florida	Jun 30, 2020
LSO 15-016	Houston Airport System	Ellington Airport	Texas	Jun 25, 2020
LSO 09-012 (Rev 1)	Jacksonville Aviation Authority	Cecil Field	Florida	Jan 10, 2020
LSO 14-015	Midland International Airport	Midland International Airport	Texas	Sep 14, 2019
LSO 04-009 (rev.1)	Mojave Air & Space Port	Mojave Air & Space Port	CA	Jun 16, 2019
LSO 08-011	New Mexico Spaceflight Authority	Spaceport America	New Mexico	Dec 14, 2018
LSO 03-008 (Rev.3)	Alaska Aerospace Development Corporation	Pacific Spaceport Complex Alaska	Alaska	Sep 23, 2018
LSO 02-007A (rev2)	Virginia Commercial Space Flight Authority	Wallops Flight Facility	Virginia	Dec 18, 2017

Source: Federal Aviation Administration, www.faa.gov/data_research/commercial_space_data/licenses/#operatorLicenses, accessed 01-06-2017

FIGURE 38. TOP 25 METRO AREAS TABLE RANKED BY 2016 JOBS

INCLUDES MSAs RANKED BY TOTAL NUMBER OF JOBS IN THE CLUSTER AS DEFINED

METROPOLITAN AREA	LOCATION QUOTIENT (US = 1.00)	2016 JOBS	5-YEAR CHANGE (2011-2016)	ESTABLISH-MENTS	EARNINGS PER JOB
Los Angeles-Long Beach-Anaheim, CA	1.43	153,555	999	4,068	$128,499
Seattle-Tacoma-Bellevue, WA	3.50	119,498	4,839	1,728	$124,291
New York-Newark-Jersey City, NY-NJ-PA	0.59	94,101	(4,078)	3,838	$115,964
Detroit-Warren-Dearborn, MI	2.33	75,749	25,533	1,386	$109,984
Dallas-Fort Worth-Arlington, TX	1.26	74,801	(2,018)	2,114	$117,984
Washington-Arlington-Alexandria, DC-VA-MD-WV	1.28	70,276	(7,219)	3,010	$128,599
Houston-The Woodlands-Sugar Land, TX	1.35	68,892	51	2,649	$127,794
Boston-Cambridge-Newton, MA-NH	1.41	64,923	(506)	2,346	$133,227
San Diego-Carlsbad, CA	2.27	60,498	11,551	1,673	$145,308
Chicago-Naperville-Elgin, IL-IN-WI	0.71	54,107	1,267	2,445	$109,160
San Francisco-Oakland-Hayward, CA	1.25	51,608	6,641	1,810	$170,062
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1.07	51,419	(906)	1,876	$123,550
San Jose-Sunnyvale-Santa Clara, CA	2.60	48,745	4,500	1,118	$182,533
Baltimore-Columbia-Towson, MD	1.72	40,726	1,230	1,145	$121,121
Phoenix-Mesa-Scottsdale, AZ	1.15	38,863	(3,072)	1,467	$111,181
Denver-Aurora-Lakewood, CO	1.51	37,809	3,516	1,923	$125,366
Atlanta-Sandy Springs-Roswell, GA	0.85	37,492	1,764	2,147	$97,261
Wichita, KS	6.49	33,467	(738)	402	$92,890
St. Louis, MO-IL	1.28	29,586	(1,166)	761	$114,766
Miami-Fort Lauderdale-West Palm Beach, FL	0.66	29,414	4,417	2,257	$90,365
Minneapolis-St. Paul-Bloomington, MN-WI	0.87	28,448	2,210	941	$109,679
Hartford-West Hartford-East Hartford, CT	2.50	26,800	(483)	504	$121,175
Pittsburgh, PA	1.35	25,994	2,500	796	$100,910
Cincinnati, OH-KY-IN	1.38	24,394	3,870	687	$117,314
Huntsville, AL	5.77	21,285	1,208	572	$118,157

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

FIGURE 39. TOP 25 METRO AREAS RANKED BY LQ
INCLUDES MSAs WITH MORE THAN 500 JOBS IN THE CLUSTER AS DEFINED

METROPOLITAN AREA	LOCATION QUOTIENT (US = 1.00)	2016 JOBS	5-YEAR CHANGE (2011-2016)	ESTABLISH-MENTS	EARNINGS PER JOB
Los Alamos, NM	37.39	9,817	(1,018)	27	$116,159
Ozark, AL	12.36	4,244	(1,070)	35	$100,517
Port Lavaca, TX	10.03	2,074	56	11	$122,061
California-Lexington Park, MD	8.00	6,262	887	137	$100,218
St. Marys, GA	7.95	2,645	1,263	22	$86,976
Wichita, KS	6.49	33,467	(738)	402	$92,890
Midland, MI	6.44	4,151	(200)	16	$137,846
Idaho Falls, ID	6.22	6,876	(859)	81	$103,528
Huntsville, AL	5.77	21,285	1,208	572	$118,157
Pahrump, NV	5.66	1,104	(86)	11	$123,185
Corning, NY	4.70	2,980	463	23	$128,319
Savannah, GA	3.89	11,729	3,261	125	$115,382
Kennewick-Richland, WA	3.82	7,853	(1,738)	129	$116,659
Wilmington, OH	3.82	1,082	323	10	$61,551
Fallon, NV	3.57	520	(104)	21	$94,096
Cedar Rapids, IA	3.51	8,740	(1,196)	92	$125,559
Seattle-Tacoma-Bellevue, WA	3.50	119,498	4,839	1,728	$124,291
Boulder, CO	3.15	10,131	899	459	$126,188
Marshall, TX	3.09	1,313	1,075	15	$108,875
Gardnerville Ranchos, NV	3.03	1,030	22	48	$96,429
Palm Bay-Melbourne-Titusville, FL	2.98	10,375	898	374	$111,396
Arkansas City-Winfield, KS	2.91	730	(116)	9	$104,997
Binghamton, NY	2.91	4,879	(900)	49	$105,636
Troy, AL	2.88	700	11	8	$98,942
Milledgeville, GA	2.79	837	291	3	$72,727

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

RESOURCES

AEROSPACE PRODUCTS, SERVICES, RESEARCH & TESTING		
TRADE ASSOCIATIONS		
Aerospace Industries Association		www.aia-aerospace.org/
National Aeronautic Association		naa.aero/
Aeronautical Repair Station Association		arsa.org/
General Aviation Manufacturers Association		www.gama.aero/
Universities Space Research Association		www.usra.edu/
Space Foundation		www.spacefoundation.org/
Aviation Suppliers Association		www.aviationsuppliers.org/
Aviation Technician Education Council		www.atec-amt.org/
RELEVANT CONFERENCES/EVENTS		
Aero-Engines Americas		
2-3 February 2017	*San Antonio, TX*	aeroenginesusa.com/aea17/Public/Enter.aspx
Additive Manufacturing for Aerospace, Defence & Space 2017		
21-23 February 2017	*London, UK*	additivemanufacturing.iqpc.co.uk/
7th Annual Aerospace Raw Materials & Manufacturers Supply Chain Conference		
13 March 2017	*Beverly Hills, CA*	speednews.com/aerospace-raw-materials-and-manufacturers-supply-chain-conference
2017 Legislative Day and Annual Repair Symposium		
15-17 March 2017	*Arlington, VA*	arsa.org/news-media/events/arsa-symposium/
2017 ATEC Annual Conference		
1-3 April 2017	*Seattle, WA*	www.atec-amt.org/annual-conference.html
33rd Space Symposium		
3-6 April 2017	*Colorado Springs, CO*	www.spacefoundation.org/events/space-symposium
5th Annual Aerospace Manufacturing Conference		
2-3 May 2017	*Dearborn, MI*	speednews.com/aerospace-manufacturing-conference
MRO Americas		
25-27 April 2017	*Orlando, FL*	mroamericas.aviationweek.com/am17/Public/Enter.aspx
Space Technology & Investment Forum		
30-31 August 2017	*San Francisco, CA*	www.spacefoundation.org/events/space-technology-and-investment-forum
TRADE PUBLICATIONS		
Aviation Week & Space Technology		aviationweek.com/aviation-week-space-technology
SpeedNews Newsletter		speednews.com/speednews-newsletter
Inside MRO Magazine		mro-network.com/inside-mro
Aerospace Testing International Magazine		www.aerospacetestinginternational.com/
Aerospace Manufacturing Magazine		www.aero-mag.com/

NATURAL RESOURCES & CLEAN ENERGY

DEFINITION

The natural resources & clean energy industry as defined consists of mining, support activities for mining (including related equipment wholesalers), solar electric power generation, and wind electric power generation. The figure below lists the primary NAICS codes associated with this target, as defined, and provides an overview of employment trends in the region, state, and the US.

FIGURE 40. EMPLOYMENT OVERVIEW: AEROSPACE, SERVICES, RESEARCH, & TESTING
COMPARISON OF EAST KERN WITH SELECTED GEOGRAPHIES, 2015 JOBS & PERCENT CHANGE SINCE 2005

NAICS Code	Description	East Kern		Kern County		Greater Antelope Valley		California		US	
		2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05
2122	Metal Ore Mining	0	-	<10	-	0	-	692	423%	42,851	46%
2123	Nonmetallic Mineral Mining & Quarrying	700	-5%	934	-4%	751	-6%	4,669	-26%	92,617	-15%
213114	Support Activities for Metal Mining	0	-	<10	-	0	-	11	-80%	3,764	54%
213115	Support Activities for Nonmetallic Minerals (except Fuels) Mining	0	-	<10	-	0	-	152	108%	2,819	43%
221114	Solar Electric Power Generation	52	62%	52	62%	52	62%	956	169%	2,018	53%
221115	Wind Electric Power Generation	130	-30%	130	-30%	130	-31%	537	-26%	4,163	6%
221121	Electric Bulk Power Transmission & Control	0	-100%	<10	-	0	-100%	1,085	525%	25,890	-1%
221122	Electric Power Distribution	0	-	<10	-	12	-	2,093	7%	207,911	55%
237130	Power & Communication Line & Related Structures Construction	63	-35%	724	-35%	88	-21%	13,274	22%	178,088	33%
423810	Construction & Mining (except Oil Well) Machinery & Equipment Merchant Wholesalers	0	-	137	152%	14	-45%	2,970	-28%	86,652	2%

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

☑ RATIONALE & NICHE SEGMENTS

Natural resources and clean energy are an important part of East Kern's economy. The mining sector in East Kern is driven primarily by Rio Tinto and its massive Boron operations, which employ more than 700 workers. Rio Tinto Borates mines approximately three million tons of borate ore every year from the Boron mine. It produces nearly half of the world's supply of refined borate products. The mine measures 2.8km wide, 3.2km long, and is up to 230m deep. More than 80 different minerals are found at this geologically unique site, including the four boron-based minerals in greatest demand by industry: tincal, kernite, ulexite, and colemanite.

Rio Tinto is more than just a major employer for East Kern. With their estimated 30–40 year horizon of operating the Boron mine and the thousands of acres they control, they are wholly invested in the community and dedicated to supporting local economic growth in Boron and the surrounding region. However, the region's mining sector also includes Golden Queen Mine (150+ workers) and two cement mines, as well as a mining and construction equipment supplier opening soon in Mojave (Road Supply).

Clean energy has emerged as a substantial source of capital investment and employment for East Kern in recent years, thanks to large-scale solar and wind power generation facilities. East Kern leads the state of California in wind energy production. In fact, the Tehachapi Pass cluster of wind turbines totals 3,236 megawatts (MW) of capacity, representing 57 percent of the state's total 5,662 MW of wind energy.

East Kern's advantages for growing the natural resources & clean energy sector include the following:

- Rio Tinto is one of the world's largest mining companies and its Boron mine is one of only two major borate-mining facilities in the world.
- East Kern also has other major mining facilities (Golden Queen Mine, cement mines) and supporting businesses (Road Supply coming to Mojave).
- Tehachapi Pass is the largest wind power cluster in the state of California, providing 57 percent of the state's total wind energy capacity.
- Numerous large-scale solar energy facilities have been developed in recent years.
- East Kern has an ideal climate (sunny, windy, and dry) for additional solar and wind power projects.
- The region has a large land area with potential for additional clean energy or mining projects.

Niche segments that align well with East Kern's assets include the following focus areas:

- **MINING (MINERALS & METALS).** This industry segment includes establishments engaged in metal ore mining, non-metallic mineral mining, and quarrying activities.
- **MINING EQUIPMENT, SUPPLIERS & SERVICES.** This segment comprises establishments involved in providing support activities for mining and quarrying of metallic and non-metallic minerals and for the extraction of metal ores. This also includes mining machinery and equipment wholesalers.
- **CLEAN ENERGY DEVELOPMENT (WIND & SOLAR).** This niche includes solar electric and wind electric power generation facilities.

STAFFING PATTERNS

The figure below lists the 25 leading occupations in this industry ranked by their share of the industry's total employment. East Kern's natural resources & clean energy sector depends on a mix of highly specialized occupations and more general occupational groups. The region has a high concentration of specialized occupations such as: continuous mining machine operators (LQ of 18.53); mine cutting & channeling machine operators (LQ of 9.48); power plant operators (LQ of 5.15); wind turbine service technicians (LQ of 4.80); crushing, grinding, & polishing machine operators (LQ of 3.61); electrical power-line installers & repairers (LQ of 3.09); and excavating/loading & dragline operators (LQ of 3.08). The region has a lower concentration of workers in general occupations that support this sector and others, including: heavy & tractor-trailer truck drivers (LQ of 0.88); first-line supervisors, construction trades & extraction (LQ of 1.00); general & operations managers (LQ of 0.92); construction laborers (LQ of 0.63); and office clerks (0.67).

FIGURE 41. KEY OCCUPATIONS

BASED ON STAFFING PATTERNS IN EAST KERN

SOC Code	Description	Share of Industry Employment	Jobs	LQ (US= 1.00)	Median Hourly Earnings	Relative to US (US=1.00)	
47-2073	Operating Eng. & Other Constr. Equip. Operators	6.8%	122	1.62	23.74	1.05	
53-3032	Heavy & Tractor-Trailer Truck Drivers	6.6%	327	0.88	19.20	1.00	
53-7032	Excavating/Loading & Dragline Operators	5.2%	33	3.08	32.00	1.57	●
47-5041	Continuous Mining Machine Operators	4.7%	39	18.53	20.93	0.87	
49-9081	Wind Turbine Service Technicians	4.5%	<10	4.80	Insf. Data	Insf. Data	
49-9051	Electrical Power-Line Installers & Repairers	3.8%	73	3.09	50.56	1.58	●
47-1011	First-Line Supvsr., Constr. Trades & Extraction	3.6%	126	1.00	29.32	1.04	
51-9021	Crushing, Grinding, & Polishing Machine	2.8%	22	3.61	22.15	1.34	●
51-8013	Power Plant Operators	2.8%	40	5.15	30.92	0.89	
49-3042	Mobile Heavy Equip. Mechanics, Except Engines	2.7%	68	2.62	23.15	0.99	
11-1021	General & Operations Managers	2.6%	384	0.92	44.70	0.93	
47-2061	Construction Laborers	2.4%	163	0.63	15.13	0.98	
43-9061	Office Clerks, General	2.3%	425	0.67	13.51	0.93	
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	2.1%	411	0.85	11.96	0.96	
43-5111	Weighers, Measurers, & Samplers, Recordkeeping	2.0%	40	2.66	11.24	0.80	×
49-9071	Maintenance & Repair Workers, General	2.0%	312	1.12	18.03	1.01	
49-2095	Elec./Electronics Repair, Station, Sub., & Relay	2.0%	<10	2.32	42.10	1.21	●
17-2071	Electrical Engineers	1.4%	59	1.66	41.85	0.92	
43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	1.3%	372	0.72	16.25	0.98	
47-5042	Mine Cutting & Channeling Machine Operators	1.3%	11	9.48	22.53	0.90	
49-1011	First-Line Supvsr., Mechanics, Install, & Repair	1.3%	122	1.40	35.19	1.16	●
43-3031	Bookkeeping, Accounting, & Auditing Clerks	1.2%	302	0.89	18.03	0.99	
49-9041	Industrial Machinery Mechanics	1.2%	79	1.20	25.16	1.05	
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	1.2%	101	0.99	19.64	1.10	
43-4051	Customer Service Representatives	0.3%	173	0.35	14.73	0.95	

Source: EMSI 2016.1 – QCEW Employees, Non-QCEW Employees, and Self-Employed

The figure below presents wage ranges (10th and 90th percentiles) and typical education requirements for the 25 leading occupations in this industry.

FIGURE 42. EDUCATION REQUIREMENTS
WITH HOURLY EARNINGS FOR SELECTED PERCENTILES

SOC Code	Description	Hourly Earnings (percentiles) 10th	90th	Typical education required for entry into occupation
47-2073	Operating Eng. & Other Constr. Equip. Operators	$16.41	$37.77	High school diploma or equivalent
53-3032	Heavy & Tractor-Trailer Truck Drivers	$13.75	$29.15	Postsecondary non-degree award
53-7032	Excavating/Loading & Dragline Operators	$18.86	$47.10	High school diploma or equivalent
47-5041	Continuous Mining Machine Operators	$13.13	$27.40	High school diploma or equivalent
49-9081	Wind Turbine Service Technicians	Insf. Data	Insf. Data	Some college, no degree
49-9051	Electrical Power-Line Installers & Repairers	$28.97	$58.07	High school diploma or equivalent
47-1011	First-Line Supvsr., Constr. Trades & Extraction	$21.58	$50.88	Bachelor's degree
51-9021	Crushing, Grinding, & Polishing Machine	$14.01	$31.87	High school diploma or equivalent
51-8013	Power Plant Operators	$19.42	$50.91	High school diploma or equivalent
49-3042	Mobile Heavy Equip. Mechanics, Except Engines	$16.25	$31.90	High school diploma or equivalent
11-1021	General & Operations Managers	$24.03	$106.98	Bachelor's degree
47-2061	Construction Laborers	$11.33	$20.80	Less than high school
43-9061	Office Clerks, General	$9.45	$19.95	High school diploma or equivalent
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	$9.17	$18.67	Less than high school
43-5111	Weighers, Measurers, & Samplers, Recordkeeping	$9.00	$18.92	High school diploma or equivalent
49-9071	Maintenance & Repair Workers, General	$11.04	$28.77	High school diploma or equivalent
49-2095	Elec./Electronics Repair, Station, Sub., & Relay	$23.41	$47.08	Postsecondary non-degree award
17-2071	Electrical Engineers	$30.62	$60.66	Bachelor's degree
43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	$10.54	$23.02	High school diploma or equivalent
47-5042	Mine Cutting & Channeling Machine Operators	$13.75	$28.35	High school diploma or equivalent
49-1011	First-Line Supvsr., Mechanics, Install, & Repair	$20.41	$53.12	High school diploma or equivalent
43-3031	Bookkeeping, Accounting, & Auditing Clerks	$12.38	$26.22	High school diploma or equivalent
49-9041	Industrial Machinery Mechanics	$12.23	$36.08	High school diploma or equivalent
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	$9.79	$32.00	High school diploma or equivalent
43-4051	Customer Service Representatives	$10.53	$23.10	High school diploma or equivalent

Source: TIP Strategies, Inc.

COMPETITIVE LANDSCAPE

FIGURE 43. TOP 25 METRO AREAS TABLE RANKED BY 2016 JOBS

INCLUDES MSAs RANKED BY TOTAL NUMBER OF JOBS IN THE CLUSTER AS DEFINED

METROPOLITAN AREA	LOCATION QUOTIENT (US = 1.00)	2016 JOBS	5-YEAR CHANGE (2011-2016)	ESTABLISH-MENTS	EARNINGS PER JOB
New York-Newark-Jersey City, NY-NJ-PA	0.68	27,678	1,702	532	$149,805
Houston-The Woodlands-Sugar Land, TX	1.51	19,592	2,707	457	$120,648
Atlanta-Sandy Springs-Roswell, GA	1.45	16,279	2,914	434	$95,557
Dallas-Fort Worth-Arlington, TX	1.01	15,215	2,468	361	$97,974
Chicago-Naperville-Elgin, IL-IN-WI	0.70	13,754	1,805	374	$143,404
Phoenix-Mesa-Scottsdale, AZ	1.37	11,823	326	206	$130,217
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	0.82	10,056	1,643	256	$143,298
Washington-Arlington-Alexandria, DC-VA-MD-WV	0.61	8,503	919	275	$113,120
Denver-Aurora-Lakewood, CO	1.29	8,234	1,289	284	$115,824
Minneapolis-St. Paul-Bloomington, MN-WI	0.87	7,195	(41)	204	$126,818
Birmingham-Hoover, AL	3.15	6,947	879	146	$127,115
Baltimore-Columbia-Towson, MD	1.07	6,452	9	132	$116,546
Miami-Fort Lauderdale-West Palm Beach, FL	0.57	6,413	(180)	332	$116,128
Elko, NV	57.50	6,334	(745)	98	$115,889
St. Louis, MO-IL	1.04	6,144	475	212	$102,831
Boston-Cambridge-Newton, MA-NH	0.51	5,988	1,581	186	$135,926
Indianapolis-Carmel-Anderson, IN	1.33	5,808	1,915	150	$108,682
Riverside-San Bernardino-Ontario, CA	0.83	5,378	1,642	158	$95,588
Austin-Round Rock, TX	1.22	5,218	2,037	153	$91,758
Seattle-Tacoma-Bellevue, WA	0.58	5,017	273	238	$104,049
Los Angeles-Long Beach-Anaheim, CA	0.18	4,889	328	182	$118,380
Pittsburgh, PA	0.99	4,888	(310)	162	$96,476
Detroit-Warren-Dearborn, MI	0.59	4,878	706	137	$126,835
Charlotte-Concord-Gastonia, NC-SC	0.92	4,598	1,951	177	$81,130
Kansas City, MO-KS	0.92	4,146	996	188	$92,132

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

FIGURE 44. TOP 25 METRO AREAS RANKED BY LQ
INCLUDES MSAs WITH MORE THAN 100 JOBS IN THE CLUSTER AS DEFINED

METROPOLITAN AREA	LOCATION QUOTIENT (US = 1.00)	2016 JOBS	5-YEAR CHANGE (2011-2016)	ESTABLISH-MENTS	EARNINGS PER JOB
Elko, NV	57.50	6,334	(745)	98	$115,889
Winnemucca, NV	55.95	1,865	(70)	37	$119,844
Silver City, NM	31.63	1,338	9	14	$83,467
Pahrump, NV	24.27	1,206	48	26	$109,481
Safford, AZ	19.50	764	78	6	$87,418
Rock Springs, WY	18.81	1,842	113	23	$124,967
Payson, AZ	15.00	998	(10)	12	$83,682
Butte-Silver Bow, MT	12.76	917	(11)	10	$95,702
Elk City, OK	12.32	564	334	16	$76,531
Carlsbad-Artesia, NM	11.95	1,400	(177)	18	$90,247
Marquette, MI	11.12	1,310	(387)	14	$110,330
Grand Rapids, MN	10.65	777	115	14	$82,058
Jackson, MI	10.00	2,446	335	11	$144,170
Juneau, AK	9.87	770	106	12	$123,363
Mount Airy, NC	8.74	1,123	(366)	11	$68,975
Gillette, WY	7.32	835	152	27	$94,589
Beaver Dam, WI	7.09	1,108	235	19	$87,275
Heber, UT	6.95	252	219	2	$122,769
Eufaula, AL-GA	6.82	261	72	13	$84,174
Iron Mountain, MI-WI	6.75	430	27	8	$83,960
Craig, CO	6.69	140	(47)	10	$98,997
Duluth, MN-WI	6.32	3,579	(730)	64	$93,999
Price, UT	6.18	224	(94)	12	$80,395
Wauchula, FL	6.17	210	(2)	6	$138,411
Vernal, UT	6.04	343	(21)	11	$98,009

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

RESOURCES

NATURAL RESOURCES & CLEAN ENERGY		
TRADE ASSOCIATIONS		
American Wind Energy Association		www.awea.org/
California Wind Energy Association		www.calwea.org/
American Solar Energy Society		www.ases.org/
California Solar Energy Industries Association		calseia.org/
International Minerals & Mining Association		www.iom3.org/international-mining-minerals-association
International Council on Mining & Metals		www.icmm.com/en-gb
California Construction and Industrial Materials Association		www.calcima.org/
Western Mining Alliance		theminingalliance.com/
American Exploration & Mining Association		www.miningamerica.org/
RELEVANT CONFERENCES/EVENTS		
2017 SME Annual Conference & Expo and CMA 119th National Western Mining Conference		
19-22 February 2017	*Denver, CO*	www.smeannualconference.com/
California Solar Power Expo		
1-2 May 2017	*San Diego, CA*	events.solar/expo/
WINDPOWER 2017		
22-15 May 2017	*Anaheim, CA*	www.windpowerexpo.org/
Intersolar North America		
11-13 July 2017	*San Francisco, CA*	www.intersolar.us/en/home.html
AEMA's 123rd Annual Meeting, Exposition & Short Courses		
3-9 December 2017	*Reno, NV*	www.miningamerica.org/annual-meeting-dates/
TRADE PUBLICATIONS		
Prospecting and Mining Journal		www.icmj.com/
Mining Journal		www.mining-journal.com/
The Northern Miner		www.northernminer.com/
Renewable Energy World Magazine		www.renewableenergyworld.com/magazine/renewable-energy-world.html
Power Magazine		www.powermag.com/

OUTDOOR RECREATION & TOURISM

DEFINITION

The outdoor recreation & tourism industry as defined here consists of sporting goods stores, scenic & sightseeing transportation, arts & entertainment, traveler accommodation, and restaurants & bars. The figure below lists the primary NAICS codes associated with this target, as defined, and provides an overview of employment trends in the region, state, and the US.

FIGURE 45. EMPLOYMENT OVERVIEW: AEROSPACE, SERVICES, RESEARCH, & TESTING
COMPARISON OF EAST KERN WITH SELECTED GEOGRAPHIES, 2015 JOBS & PERCENT CHANGE SINCE 2005

NAICS Code	Description	East Kern		Kern County		Greater Antelope Valley		California		US	
		2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05
451110	Sporting Goods Stores	81	16%	487	16%	281	5%	34,703	12%	315,237	32%
487	Scenic & Sightseeing Transportation	<10	-	28	-	<10	-	4,629	28%	35,140	15%
71	Arts, Entertainment, & Recreation	332	23%	3,100	14%	979	21%	371,327	16%	2,581,686	13%
721	Accommodation	253	0%	1,775	-7%	1,009	9%	216,972	6%	1,925,546	4%
722410	Drinking Places (Alcoholic Beverages)	73	18%	413	18%	213	16%	30,538	21%	380,032	1%
722511	Full-Service Restaurants	828	39%	8,159	39%	4,336	32%	621,528	25%	5,180,858	20%
722513	Limited-Service Restaurants	1,105	18%	10,271	18%	5,644	23%	478,973	22%	4,072,028	21%
722515	Snack & Nonalcoholic Beverage Bars	86	60%	1,145	60%	561	71%	103,188	57%	593,116	43%

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

☑ RATIONALE & NICHE SEGMENTS

East Kern has a large menu of tourism assets and outdoor recreation opportunities. The diversity of destinations, events, and amenities available in the region is not immediately apparent to many outsiders, but is quite impressive after scratching below the surface. Outdoor recreation is already a significant activity in East Kern. The OHV (off-highway vehicle) trails in California City, along with the Cal City MX Park, are a major draw for thousands of visitors who come from the Greater Los Angeles area on weekend visits throughout the year. The Pacific Crest Trail spans the entire length of East Kern from north to south. Other hiking trails abound in the Tehachapi Mountains, Red Rock Canyons State Park, and other portions of the region.

Other unique destinations across East Kern include the Willow Springs Raceway complex in Rosamond, the Exotic Feline Breeding Compound in Rosamond, downtown Tehachapi's main street district, the Flight Test Museum at Edwards AFB, the Twenty Mule Team Museum and Saxon Aerospace Museum in Boron, and the Silver Saddle Resort in California City. In addition to East Kern's permanent outdoor recreation attractions and other tourist destinations, the region plays host to numerous events that draw in visitors by the thousands. The Petroglyph Festival in Ridgecrest, the Tehachapi Gran Fondo, Wasteland Weekend in California City, and Plane Crazy Saturdays in Mojave are a few of the most notable events. There is also an abundance of airplane enthusiasts in East Kern, including a large number of aerospace engineers and entrepreneurs that own and operate personal aircraft. This represents a unique opportunity to build a tourism strategy around aircraft enthusiasts. All of East Kern's unique assets, destinations, and events lend themselves to exploration, not only by the 27.5 million residents within a 4-hour drive, but also by way of the film industry. East Kern's unique natural geography, its diverse communities, and its proximity to Los Angeles make the region a logical choice for film production.

East Kern's advantages for growing the outdoor recreation & tourism sector include the following:

- East Kern has an abundance of mountains, hiking trails, and other natural amenities, most notably a 150-mile segment of the Pacific Crest Trail, which spans the length of Kern County from north to south.
- California City has some of the nation's most visited OHV trails.
- The region is home to numerous existing festivals and events that attract visitors by the thousands.
- East Kern has immediate access to a population of more than 27.5 million within a 4-hour drive.
- The region benefits from close proximity to the film industry in Greater Los Angeles.

Niche segments that align well with East Kern's assets include the following focus areas:

- **OFF-HIGHWAY VEHICLE TOURISM, TESTING & PRODUCT DEVELOPMENT.** This industry segment includes businesses involved in providing OHV recreational venues/trails, product development & testing, and related services.
- **OUTDOOR SPORTS (HIKING, BIKING, EXTREME/ADVENTURE SPORTS).** This segment is comprised of sporting goods stores, outdoor sports venues, and related service providers.
- **AIRPLANE & EXPERIMENTAL AIRCRAFT ENTHUSIAST EVENTS & SERVICES.** This includes the promotion of events and support services for personal/recreational aircraft owners.
- **FESTIVALS & EVENTS.** This segment includes establishments engaged in the promotion of major festivals, outdoor events, and other gatherings that draw in visitors.
- **FILM PRODUCTION.** This involves movie, television, and other filming activities, photography services, and related services.

STAFFING PATTERNS

The figure below lists the 25 leading occupations in this industry ranked by their share of the industry's total employment. Occupations in this sector typically pay much lower wages than the regional average. Food preparation and serving, for example, is an entryway into the workforce for many younger workers. It makes sense that these younger and first-time workers earn lower wages than other groups of workers. East Kern has a relatively high concentration of workers in a handful of key occupations for this sector: fast food cooks (LQ of 2.38); cashiers (LQ of 1.40); attendants & bartender helpers (LQ of 1.30); hotel, motel & resort desk clerks (LQ of 1.26); and food service managers (LQ of 1.32).

FIGURE 46. KEY OCCUPATIONS

BASED ON STAFFING PATTERNS IN EAST KERN

SOC Code	Description	Share of Industry Employment	Jobs	LQ (US= 1.00)	Median Hourly Earnings	Relative to US (US=1.00)	
35-3021	Combined Food Prep. & Servers, Incl. Fast Food	21.5%	687	1.17	9.65	1.02	
35-3031	Waiters & Waitresses	13.2%	356	0.79	9.87	0.99	
35-2011	Cooks, Fast Food	7.0%	236	2.38	9.59	1.01	
35-2014	Cooks, Restaurant	6.0%	158	0.76	11.56	1.01	
35-1012	First-Line Supvsr., Food Prep. & Servers	4.9%	133	0.82	14.22	0.96	
35-2021	Food Preparation Workers	3.8%	161	0.98	9.90	0.97	
41-2011	Cashiers	3.7%	880	1.40	9.88	1.02	
35-9021	Dishwashers	3.5%	91	0.97	9.71	0.99	
37-2012	Maids & Housekeepers	3.0%	216	0.71	9.74	0.93	
35-9011	Attendants & Bartender Helpers	2.8%	101	1.30	9.69	1.00	
35-9031	Hosts & Hostesses	2.6%	60	0.87	9.69	0.99	
35-3011	Bartenders	2.5%	83	0.81	10.83	1.05	
43-4081	Hotel, Motel, & Resort Desk Clerks	2.3%	56	1.26	10.53	0.97	
11-9050	Food Service Managers	1.8%	68	1.32	17.27	0.87	
53-3031	Driver/Sales Workers	1.7%	85	1.07	11.67	1.01	
35-3022	Counter Attendants, Cafeteria, & Concession	1.1%	39	0.45	10.86	1.12	●
41-2031	Retail Salespersons	1.1%	543	0.67	11.20	1.04	
11-1021	General & Operations Managers	0.9%	384	0.92	44.70	0.93	
49-9071	Maintenance & Repair Workers, General	0.8%	312	1.12	18.03	1.01	
37-2011	Janitors & Cleaners, Exc. Maids & Housekeepers	0.7%	364	0.73	11.98	1.00	
39-9031	Fitness Trainers & Aerobics Instructors	0.6%	27	0.50	10.70	0.59	×
35-2015	Cooks, Short Order	0.6%	30	0.91	10.61	1.02	
35-1011	Chefs & Head Cooks	0.5%	24	0.98	16.19	0.84	
27-2042	Musicians & Singers	0.5%	40	1.14	16.40	0.78	×
51-3011	Bakers	0.4%	19	0.54	11.75	0.99	

Source: EMSI 2016.1 – QCEW Employees, Non-QCEW Employees, and Self-Employed

The figure below presents wage ranges (10th and 90th percentiles) and typical education requirements for the 25 leading occupations in this industry.

FIGURE 47. EDUCATION REQUIREMENTS
WITH HOURLY EARNINGS FOR SELECTED PERCENTILES

SOC Code	Description	Hourly Earnings (percentiles) 10th	90th	Typical education required for entry into occupation
35-3021	Combined Food Prep. & Servers, Incl. Fast Food	$9.00	$12.39	Less than high school
35-3031	Waiters & Waitresses	$8.98	$15.36	Less than high school
35-2011	Cooks, Fast Food	$8.96	$11.71	Less than high school
35-2014	Cooks, Restaurant	$8.93	$16.41	Less than high school
35-1012	First-Line Supvsr., Food Prep. & Servers	$9.94	$23.22	High school diploma or equivalent
35-2021	Food Preparation Workers	$8.98	$12.38	Less than high school
41-2011	Cashiers	$9.02	$18.31	Bachelor's degree
35-9021	Dishwashers	$9.00	$11.82	Less than high school
37-2012	Maids & Housekeepers	$8.76	$12.34	Less than high school
35-9011	Attendants & Bartender Helpers	$9.00	$15.21	Less than high school
35-9031	Hosts & Hostesses	$9.02	$12.04	Less than high school
35-3011	Bartenders	$9.00	$18.92	Less than high school
43-4081	Hotel, Motel, & Resort Desk Clerks	$9.00	$13.44	High school diploma or equivalent
11-9050	Food Service Managers	$12.94	$25.31	
53-3031	Driver/Sales Workers	$9.00	$36.02	High school diploma or equivalent
35-3022	Counter Attendants, Cafeteria, & Concession	$8.97	$14.89	Less than high school
41-2031	Retail Salespersons	$9.06	$22.05	Less than high school
11-1021	General & Operations Managers	$24.03	$106.98	Bachelor's degree
49-9071	Maintenance & Repair Workers, General	$11.04	$28.77	High school diploma or equivalent
37-2011	Janitors & Cleaners, Exc. Maids & Housekeepers	$9.21	$18.46	Less than high school
39-9031	Fitness Trainers & Aerobics Instructors	$9.32	$24.65	High school diploma or equivalent
35-2015	Cooks, Short Order	$8.93	$14.01	Less than high school
35-1011	Chefs & Head Cooks	$9.78	$27.18	High school diploma or equivalent
27-2042	Musicians & Singers	$9.35	$35.96	High school diploma or equivalent
51-3011	Bakers	$9.00	$17.45	Less than high school

Source: TIP Strategies, Inc.

COMPETITIVE LANDSCAPE

FIGURE 48. TOP 25 METRO AREAS TABLE RANKED BY 2016 JOBS

INCLUDES MSAs RANKED BY TOTAL NUMBER OF JOBS IN THE CLUSTER AS DEFINED

METROPOLITAN AREA	LOCATION QUOTIENT (US = 1.00)	2016 JOBS	5-YEAR CHANGE (2011-2016)	ESTABLISH-MENTS	EARNINGS PER JOB
New York-Newark-Jersey City, NY-NJ-PA	0.90	888,370	156,619	56,389	$37,024
Los Angeles-Long Beach-Anaheim, CA	1.12	744,383	142,222	39,197	$37,029
Chicago-Naperville-Elgin, IL-IN-WI	0.95	451,237	60,514	23,215	$28,025
Dallas-Fort Worth-Arlington, TX	1.00	365,667	73,468	14,470	$25,491
Miami-Fort Lauderdale-West Palm Beach, FL	1.15	316,416	52,871	15,667	$30,878
Washington-Arlington-Alexandria, DC-VA-MD-WV	0.93	315,171	47,409	13,907	$29,197
Houston-The Woodlands-Sugar Land, TX	0.99	312,940	73,902	12,431	$24,570
Las Vegas-Henderson-Paradise, NV	2.89	289,638	26,565	5,699	$38,630
Atlanta-Sandy Springs-Roswell, GA	1.03	280,963	57,336	13,118	$23,592
San Francisco-Oakland-Hayward, CA	1.05	268,493	43,962	13,340	$35,536
Boston-Cambridge-Newton, MA-NH	0.91	259,572	33,746	13,420	$29,627
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	0.84	251,163	29,612	14,050	$26,811
Orlando-Kissimmee-Sanford, FL	1.99	247,325	44,724	6,145	$30,202
Phoenix-Mesa-Scottsdale, AZ	1.01	212,248	32,464	7,523	$26,599
San Diego-Carlsbad, CA	1.18	193,489	34,113	7,765	$28,451
Seattle-Tacoma-Bellevue, WA	0.91	192,971	32,165	10,436	$29,182
Detroit-Warren-Dearborn, MI	0.94	188,826	24,855	8,140	$25,248
Minneapolis-St. Paul-Bloomington, MN-WI	0.90	181,936	20,899	7,790	$25,410
Denver-Aurora-Lakewood, CO	1.07	166,377	32,155	7,262	$28,438
Riverside-San Bernardino-Ontario, CA	1.00	157,569	27,508	7,184	$22,495
Tampa-St. Petersburg-Clearwater, FL	1.13	150,717	28,184	7,328	$25,565
St. Louis, MO-IL	1.05	150,442	17,552	6,599	$22,424
Baltimore-Columbia-Towson, MD	0.94	138,111	25,046	6,673	$26,769
Charlotte-Concord-Gastonia, NC-SC	1.07	128,924	27,240	5,685	$26,546
San Antonio-New Braunfels, TX	1.17	126,502	21,152	4,859	$22,965

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

FIGURE 49. TOP 25 METRO AREAS RANKED BY LQ
INCLUDES MSAs WITH MORE THAN 1,000 JOBS IN THE CLUSTER AS DEFINED

METROPOLITAN AREA	LOCATION QUOTIENT (US = 1.00)	2016 JOBS	5-YEAR CHANGE (2011-2016)	ESTABLISH-MENTS	EARNINGS PER JOB
Sevierville, TN	4.19	19,931	3,617	692	$24,679
Breckenridge, CO	3.88	8,751	1,082	319	$31,291
Summit Park, UT	3.44	9,563	898	270	$34,934
Jackson, WY-ID	3.38	8,523	1,146	373	$33,046
Key West, FL	3.37	15,525	3,117	825	$34,319
Branson, MO	3.34	12,242	8	552	$25,824
Edwards, CO	3.33	11,445	602	394	$38,584
Kahului-Wailuku-Lahaina, HI	3.05	26,079	3,555	787	$41,645
Gardnerville Ranchos, NV	3.04	6,390	262	191	$33,806
Kapaa, HI	2.90	10,005	877	389	$37,596
Las Vegas-Henderson-Paradise, NV	2.89	289,638	26,565	5,699	$38,630
Atlantic City-Hammonton, NJ	2.87	37,848	(8,347)	917	$33,840
Spearfish, SD	2.73	3,546	(63)	179	$25,291
Ruidoso, NM	2.62	1,976	181	122	$20,884
Taos, NM	2.54	3,200	504	195	$22,057
Steamboat Springs, CO	2.49	3,887	303	203	$29,743
Myrtle Beach-Conway-North Myrtle Beach, SC-NC	2.41	40,205	2,591	1,856	$21,747
Kill Devil Hills, NC	2.39	5,531	440	428	$25,601
Ocean City, NJ	2.32	10,730	354	1,024	$27,675
Elko, NV	2.23	5,974	(43)	186	$27,957
Astoria, OR	2.23	4,462	699	287	$24,247
Newport, OR	2.20	4,398	293	318	$23,229
Glenwood Springs, CO	2.18	10,153	1,045	472	$35,634
Hailey, ID	2.13	3,533	123	174	$26,002
Sandusky, OH	2.10	8,290	(313)	347	$23,524

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

RESOURCES

OUTDOOR RECREATION & TOURISM		
TRADE ASSOCIATIONS		
Tread Lightly!		www.treadlightly.org/
The Explorers Club		explorers.org/
Outdoor Industry Association		outdoorindustry.org/
United Four Wheel Drive Associations		www.ufwda.org/
California Travel Association		caltravel.org/
Pacific Crest Trail Association		www.pcta.org/
Experimental Aircraft Association		www.eaa.org/
RELEVANT CONFERENCES/EVENTS		
Visit California's Outlook Forum		
27 February-1 March 2017	*Santa Barbara, CA*	industry.visitcalifornia.com/Travel-Industry/Upcoming-Industry-Events/Event/?id=107780
Travel & Adventure Show		
4-5 March 2017	*San Diego, CA*	travelshows.com/shows/san-diego/
Overland Expo West		
12-14 May 2017	*Flagstaff, AZ*	www.overlandexpo.com/west/
2017 California Travel Summit		
26-29 June 2017	*Newport Beach, CA*	www.ustravel.org/events/2017-california-travel-summit
AirVenture 2017		
24-30 July 2017	*Oshkosh, WI*	www.eaa.org/en/airventure
Outdoor Retailer Summer Market		
26-29 July 2017	*Salt Lake City, UT*	www.outdoorretailer.com/summer-market/index.shtml
TRADE PUBLICATIONS		
Overland Journal		overlandjournal.com/
OutdoorX4 Magazine		outdoorx4.com/
The Explorers Journal		explorers.org//about/the_explorers_journal
The UFWDA Voice		www.ufwda.org/who-we-are/the-voice/
Outside Magazine		www.outsideonline.com/
Insights		eepurl.com/coC4Y9

LOGISTICS & DISTRIBUTION

DEFINITION

The logistics & distribution industry consists of firms involved in rail transportation, truck transportation, related support activities, freight transportation arrangement, and warehousing & storage. The figure below lists the primary NAICS codes associated with this target, as defined, and provides an overview of employment trends in the region, state, and the US.

FIGURE 50. EMPLOYMENT OVERVIEW: AEROSPACE, SERVICES, RESEARCH, & TESTING
COMPARISON OF EAST KERN WITH SELECTED GEOGRAPHIES, 2015 JOBS & PERCENT CHANGE SINCE 2005

NAICS Code	Description	East Kern		Kern County		Greater Antelope Valley		California		US	
		2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05
482	Rail Transportation	58	-32%	450	-31%	98	-29%	11,996	-15%	231,277	-1%
484	Truck Transportation	98	0%	5,224	14%	621	-5%	146,224	3%	1,651,120	1%
4882	Support Activities for Rail Transportation	31	162%	93	163%	31	162%	2,804	218%	34,556	54%
4884	Support Activities for Road Transportation	<10	-	212	-27%	74	12%	16,097	4%	107,560	19%
4885	Freight Transportation Arrangement	11	-	256	261%	17	-	31,260	10%	221,636	15%
4889	Other Support Activities for Transportation	34	-	282	698%	34	-	4,542	16%	32,917	4%
493	Warehousing & Storage	0	-	1,627	-19%	994	-18%	90,531	42%	801,728	36%

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

☑ RATIONALE & NICHE SEGMENTS

East Kern has the potential to grow its logistics & distribution sector. The western portion of Kern County has successfully attracted a number of major warehousing and distribution center facilities in recent years (IKEA, Ross Dress for Less, American Tire Distributors, Target, Caterpillar, and Dollar General) thanks to its strategic location along the major highway corridor connecting Southern California and Northern California. East Kern offers similar geographic advantages and could offer an alternate location for distribution facilities seeking access to the large, high-growth Southern California market and the rapidly growing Las Vegas region.

East Kern benefits from two major freight rail lines (both in Mojave) that could spur the growth of a rail transloading facility. Over the long term, the potential for an inland port in East Kern should be on the table given the growing congestion and operating costs for freight transportation in and around the Ports of Los Angeles and Long Beach. While it would be unrealistic for East Kern to "overtake" Los Angeles or even Bakersfield as a major logistics hub, the region could play an important supporting role in Southern California's logistics & distribution network. A similar situation has arisen in Rockford, Illinois—a region 90 miles northwest of Chicago—where UPS placed its second largest air cargo hub (outside of its global air cargo hub in Memphis, Tennessee) in order to avoid the high levels of congestion and onerous operating costs at Chicago-O'Hare International Airport. Chicago will continue to dominate air cargo and freight modes in the Midwest, but the Rockford economy is benefitting from hundreds of jobs associated with its goods movement facilities. Similar opportunities could be realized in East Kern, not with air cargo, but highway and rail-served freight transport.

East Kern's advantages for growing the logistics & distribution sector include the following:

- Highway 58 is the primary route for truck traffic between Las Vegas and San Francisco.
- East Kern has two existing major freight rail lines, both running through Mojave.
- The region has numerous low cost land options available for large-scale development.
- East Kern enjoys close proximity to Greater Los Angeles and access to a population of more than 27.5 million within a 4-hour drive.

Niche segments that align well with East Kern's assets include the following focus areas:

- **WAREHOUSING & DISTRIBUTION FACILITIES.** This industry segment comprises establishments engaged in truck transportation, warehousing and storage facilities, freight transportation arrangement activities, and other support activities for goods movement.
- **RAIL-SERVED INTERMODAL FACILITIES.** This segment includes rail transportation and support activities for rail transportation.

STAFFING PATTERNS

The figure below lists the 25 leading occupations in this industry ranked by their share of the industry's total employment. Heavy & tractor-trailer truck drivers are by far the largest single occupational category within the logistics & distribution industry, representing more than 30 percent of jobs within this sector. East Kern has a lower concentration of workers in most occupations in this sector compared to the national average. The small group of occupations in which East Kern has a higher concentration of jobs include locomotive engineers (LQ of 1.28); payroll & timekeeping clerks (LQ of 1.62); and health & safety engineers (LQ of 3.69).

FIGURE 51. KEY OCCUPATIONS

BASED ON STAFFING PATTERNS IN EAST KERN

SOC Code	Description	Share of Industry Employment	Jobs	LQ (US= 1.00)	Median Hourly Earnings	Relative to US (US=1.00)
53-3032	Heavy & Tractor-Trailer Truck Drivers	30.5%	327	0.88	19.20	1.00
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	8.4%	411	0.85	11.96	0.96
53-4031	Railroad Conductors & Yardmasters	3.6%	10	1.22	28.85	1.07
53-7064	Packers & Packagers, Hand	3.5%	124	0.89	9.83	0.93
53-4011	Locomotive Engineers	3.4%	<10	1.28	Insf. Data	Insf. Data
43-3031	Bookkeeping, Accounting, & Auditing Clerks	1.2%	302	0.89	18.03	0.99
43-3021	Billing & Posting Clerks	0.5%	71	0.72	15.84	0.93
43-3011	Bill & Account Collectors	0.1%	34	0.50	15.12	0.91
51-9111	Packaging & Filling Machine Workers	0.2%	31	0.39	13.44	1.01
43-3051	Payroll & Timekeeping Clerks	0.3%	56	1.62	17.95	0.90
49-9071	Maintenance & Repair Workers, General	0.6%	312	1.12	18.03	1.01
43-4051	Customer Service Representatives	0.9%	173	0.35	14.73	0.95
17-2111	Health & Safety Eng., Except Mine Safety	0.1%	18	3.69	28.18	0.69
47-2211	Sheet Metal Workers	0.1%	19	0.64	22.70	0.98
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	0.2%	101	0.99	19.64	1.10
33-9032	Security Guards	0.1%	120	0.54	11.29	0.90
51-9122	Painters, Transportation Equipment	0.1%	11	0.95	17.98	0.88
43-1011	First-Line Supvsr., Office & Admin. Support	1.1%	217	0.78	23.06	0.91
47-4061	Rail-Track Laying & Maint. Equip. Operators	0.7%	<10	0.86	Insf. Data	Insf. Data
53-1031	First-Line Supvsr., Transp. & Material-Moving Ops.	1.4%	31	0.79	31.48	1.17
41-3099	Sales Reps., Services, All Other	1.4%	115	0.65	21.68	0.87
37-2011	Janitors & Cleaners, Exc. Maids & Housekeepers	0.3%	364	0.73	11.98	1.00
47-4099	Construction & Related Workers, All Other	0.1%	<10	0.55	Insf. Data	Insf. Data
53-1021	First-Line Supvsr., Helpers & Material Movers, Hand	1.1%	36	1.03	23.66	1.04
41-4012	Sales Reps., Whls. & Mfg., Exc. Tech. & Scientific	0.2%	102	0.36	27.94	1.05

Source: EMSI 2016.1 – QCEW Employees, Non-QCEW Employees, and Self-Employed

The figure below presents wage ranges (10th and 90th percentiles) and typical education requirements for the 25 leading occupations in this industry.

FIGURE 52. EDUCATION REQUIREMENTS
WITH HOURLY EARNINGS FOR SELECTED PERCENTILES

SOC Code	Description	Hourly Earnings (percentiles) 10th	90th	Typical education required for entry into occupation
53-3032	Heavy & Tractor-Trailer Truck Drivers	$13.75	$29.15	Postsecondary non-degree award
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	$9.17	$18.67	Less than high school
53-4031	Railroad Conductors & Yardmasters	$19.10	$40.98	High school diploma or equivalent
53-7064	Packers & Packagers, Hand	$9.04	$15.94	Less than high school
53-4011	Locomotive Engineers	Insf. Data	Insf. Data	High school diploma or equivalent
43-3031	Bookkeeping, Accounting, & Auditing Clerks	$12.38	$26.22	High school diploma or equivalent
43-3021	Billing & Posting Clerks	$11.97	$22.48	Bachelor's degree
43-3011	Bill & Account Collectors	$11.73	$23.50	High school diploma or equivalent
51-9111	Packaging & Filling Machine Workers	$9.00	$22.99	High school diploma or equivalent
43-3051	Payroll & Timekeeping Clerks	$12.14	$26.12	High school diploma or equivalent
49-9071	Maintenance & Repair Workers, General	$11.04	$28.77	High school diploma or equivalent
43-4051	Customer Service Representatives	$10.53	$23.10	High school diploma or equivalent
17-2111	Health & Safety Eng., Except Mine Safety	$19.26	$49.72	Bachelor's degree
47-2211	Sheet Metal Workers	$13.82	$34.18	High school diploma or equivalent
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	$9.79	$32.00	High school diploma or equivalent
33-9032	Security Guards	$9.05	$21.62	High school diploma or equivalent
51-9122	Painters, Transportation Equipment	$13.64	$33.09	High school diploma or equivalent
43-1011	First-Line Supvsr., Office & Admin. Support	$15.21	$36.33	High school diploma or equivalent
47-4061	Rail-Track Laying & Maint. Equip. Operators	Insf. Data	Insf. Data	High school diploma or equivalent
53-1031	First-Line Supvsr., Transp. & Material-Moving Ops.	$16.18	$45.11	High school diploma or equivalent
41-3099	Sales Reps., Services, All Other	$12.24	$40.03	High school diploma or equivalent
37-2011	Janitors & Cleaners, Exc. Maids & Housekeepers	$9.21	$18.46	Less than high school
47-4099	Construction & Related Workers, All Other	Insf. Data	Insf. Data	High school diploma or equivalent
53-1021	First-Line Supvsr., Helpers & Material Movers, Hand	$16.89	$36.31	High school diploma or equivalent
41-4012	Sales Reps., Whls. & Mfg., Exc. Tech. & Scientific	$15.63	$56.49	High school diploma or equivalent

Source: TIP Strategies, Inc.

COMPETITIVE LANDSCAPE

FIGURE 53. TOP 25 METRO AREAS TABLE RANKED BY 2016 JOBS
INCLUDES MSAs RANKED BY TOTAL NUMBER OF JOBS IN THE CLUSTER AS DEFINED

METROPOLITAN AREA	LOCATION QUOTIENT (US = 1.00)	2016 JOBS	5-YEAR CHANGE (2011-2016)	ESTABLISH-MENTS	EARNINGS PER JOB
New York-Newark-Jersey City, NY-NJ-PA	0.66	132,735	14,698	8,214	$66,083
Chicago-Naperville-Elgin, IL-IN-WI	1.38	132,517	16,526	10,788	$63,448
Los Angeles-Long Beach-Anaheim, CA	0.71	96,027	7,246	5,072	$57,991
Dallas-Fort Worth-Arlington, TX	1.22	90,895	16,003	3,200	$58,811
Riverside-San Bernardino-Ontario, CA	2.65	84,401	29,371	1,978	$50,861
Atlanta-Sandy Springs-Roswell, GA	1.26	69,737	11,087	3,121	$56,818
Houston-The Woodlands-Sugar Land, TX	1.00	63,830	7,958	2,945	$70,876
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	0.85	51,026	7,839	2,297	$60,278
Indianapolis-Carmel-Anderson, IN	2.03	43,408	10,135	1,141	$53,085
Miami-Fort Lauderdale-West Palm Beach, FL	0.68	38,052	4,435	3,575	$51,945
Columbus, OH	1.65	36,281	5,551	1,024	$53,047
Detroit-Warren-Dearborn, MI	0.89	36,250	6,534	2,055	$62,399
Memphis, TN-MS-AR	2.55	34,475	4,343	871	$56,304
Kansas City, MO-KS	1.50	33,353	4,726	1,233	$61,089
Phoenix-Mesa-Scottsdale, AZ	0.78	33,161	5,586	1,293	$54,519
Seattle-Tacoma-Bellevue, WA	0.74	31,791	3,942	1,628	$64,583
Minneapolis-St. Paul-Bloomington, MN-WI	0.77	31,489	3,471	1,497	$62,569
St. Louis, MO-IL	1.04	30,211	3,409	1,602	$57,448
Charlotte-Concord-Gastonia, NC-SC	1.20	29,465	5,467	1,473	$55,332
Nashville-Davidson–Murfreesboro–Franklin, TN	1.36	27,109	5,549	876	$56,951
Baltimore-Columbia-Towson, MD	0.89	26,318	6,490	1,185	$63,575
Louisville/Jefferson County, KY-IN	1.85	25,390	5,804	771	$52,681
Boston-Cambridge-Newton, MA-NH	0.43	24,707	3,298	1,560	$67,556
San Francisco-Oakland-Hayward, CA	0.46	23,747	2,294	1,376	$63,529
Cincinnati, OH-KY-IN	1.05	23,368	2,234	1,031	$55,679

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

FIGURE 54. TOP 25 METRO AREAS RANKED BY LQ

INCLUDES MSAs WITH MORE THAN 500 JOBS IN THE CLUSTER AS DEFINED

METROPOLITAN AREA	LOCATION QUOTIENT (US = 1.00)	2016 JOBS	5-YEAR CHANGE (2011-2016)	ESTABLISH-MENTS	EARNINGS PER JOB
Ottawa, KS	8.72	1,927	84	32	$52,227
Campbellsville, KY	8.27	2,074	719	10	$44,932
North Platte, NE	7.17	2,732	(347)	40	$83,271
Laredo, TX	6.82	15,184	2,908	1,031	$44,604
Arcadia, FL	5.86	1,136	1,033	17	$44,790
Troy, AL	5.84	1,779	95	38	$51,567
Indianola, MS	5.46	1,025	129	34	$39,649
North Vernon, IN	5.44	882	(68)	16	$43,250
Murray, KY	5.35	1,987	416	21	$32,483
Washington Court House, OH	5.33	1,344	274	21	$44,313
Palestine, TX	5.01	2,177	(67)	36	$58,300
Nogales, AZ	4.97	1,619	329	144	$43,853
Brookhaven, MS	4.87	1,299	230	26	$51,971
Wilmington, OH	4.85	1,720	186	29	$64,299
Plainview, TX	4.83	1,316	(58)	38	$52,977
Wisconsin Rapids-Marshfield, WI	4.66	3,838	321	75	$54,806
Pottsville, PA	4.62	4,994	476	108	$46,733
Bellefontaine, OH	4.60	1,946	463	25	$49,590
Coldwater, MI	4.43	1,247	(42)	26	$60,224
Chambersburg-Waynesboro, PA	4.41	5,831	1,641	85	$52,880
Henderson, NC	4.39	1,461	860	29	$44,690
Moberly, MO	4.38	927	21	19	$46,239
Mount Vernon, IL	4.34	1,757	8	30	$45,104
Menomonie, WI	4.23	1,655	429	42	$57,738
Harrison, AR	3.94	1,336	(90)	31	$75,437

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

RESOURCES

LOGISTICS & DISTRIBUTION		
TRADE ASSOCIATIONS		
Intermodal Association of North America		www.intermodal.org/
International Warehouse Logistics Association		www.iwla.com/
American Trucking Associations		www.trucking.org/
National Association of Wholesaler-Distributors		www.naw.org/
Association of American Railroads		www.aar.org/
California Distributors Association		www.californiadistributorsassociation.com/
RELEVANT CONFERENCES/EVENTS		
2017 TMC Annual Meeting & Transportation Technology Exhibition Information		
27 February-2 March 2017	*Nashville, TN*	www.trucking.org/event/12039/
2017 IWLA Convention & Expo		
19-21 March 2017	*Palm Springs, CA*	www.iwla.com/events-site/iwla-convention-expo/
2017 Rail Conference		
11-14 June 2017	*Baltimore, MD*	www.apta.com/mc/rail/Pages/default.aspx
Intermodal EXPO		
17-19 September 2017	*Long Beach, CA*	http://intermodalexpo.com/
2017 Annual CDA Convention		
18-20 September 2017	*Napa, California*	www.californiadistributorsassociation.com/upcoming-events/
TRADE PUBLICATIONS		
Logistics Management		www.logisticsmgmt.com/
American Trucking Trends		www.atabusinesssolutions.com/ATAStore/ProductDetails.aspx?productId=3276652
American Shipper Magazine		www.americanshipper.com/
Transport Intelligence Magazine		www.ti-insight.com/
3PL Americas		www.iwla.com/library/publications/

HEALTH CARE

DEFINITION

The health care industry includes ambulatory health care services (offices of physicians and other health practitioners, outpatient care centers, medical and diagnostic laboratories, and other health services), public and private hospitals, and nursing and residential care facilities. The figure below lists the primary NAICS codes associated with this target, as defined, and provides an overview of employment trends in the region, state, and the US.

FIGURE 55. EMPLOYMENT OVERVIEW: AEROSPACE, SERVICES, RESEARCH, & TESTING
COMPARISON OF EAST KERN WITH SELECTED GEOGRAPHIES, 2015 JOBS & PERCENT CHANGE SINCE 2005

NAICS Code	Description	East Kern		Kern County		Greater Antelope Valley		California		US	
		2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05	2015 Jobs	% chg since '05
6211	Offices of Physicians	196	17%	5,929	17%	2,281	19%	290,162	26%	2,570,554	18%
6212	Offices of Dentists	180	-3%	1,860	-3%	1,063	4%	131,390	11%	947,325	14%
6213	Offices of Other Health Practitioners	242	55%	1,637	48%	895	31%	104,312	30%	931,943	39%
6214	Outpatient Care Centers	37	-	938	238%	1,362	71%	124,750	143%	770,856	57%
6215	Medical & Diagnostic Labs.	0	-	705	24%	140	6%	36,054	33%	271,960	29%
6216	Home Health Care Services	120	53%	1,456	53%	524	43%	87,532	54%	1,376,300	56%
6219	Other Ambulatory Health Care Services	92	13%	443	26%	369	34%	32,497	21%	319,322	31%
622	Hospitals	609	54%	7,273	52%	5,064	10%	373,980	0%	4,797,604	12%
623	Nursing & Residential Care Facilities	105	24%	4,055	23%	1,295	32%	284,764	29%	3,300,664	15%
902622	Hospitals (State Government)	0	-	0	-	141	4%	43,944	9%	343,110	2%
903622	Hospitals (Local Government)	124	5%	1,942	6%	376	12%	85,594	12%	644,892	0%

Source: EMSI 2016.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

☑ RATIONALE & NICHE SEGMENTS

East Kern is has a relatively low concentration of health care employment (LQ of 0.70). At first glance, this might seem like a strike against the region's potential for growing the health care sector. However, in some cases, a low LQ can indicate a gap that needs to be filled. In East Kern's case, there is a significant amount of growth potential in the health care sector. In fact, between 2010 and 2015, the region's health care industry grew its employment levels by 20 percent, compared to only 2 percent for the region as a whole. This is a reflection of the gaps in the region's health care sector, which are starting to be filled. There are needs for medical specialties (potentially in Ridgecrest and Tehachapi, the region's two largest population centers) and for basic clinics in the less populated areas (Boron, Mojave, California City, Rosamond).

The new Tehachapi Hospital currently being developed will be an economic engine for the region and will fuel growth in the health care sector. The new facility has the potential to serve as a catalyst for additional medical services located adjacent to the hospital or within close proximity. The existing Ridgecrest Regional Hospital is also a major driver of the region's health care sector. It is already one of the largest employers in the Ridgecrest area and could be leveraged to attract additional medical services into the region.

Medical technology represents another area of opportunity for East Kern. Pertexa Healthcare Technologies Inc. in Ridgecrest is a leading innovator in the field of remote medicine. Additional med-tech firms that focus on remote and "extreme medicine" (medical services provided in harsh climates/environments) could be recruited into East Kern.

East Kern's advantages for growing the health care sector include the following:

- There is a significant level of unmet demand for health care services in the region, which indicates growth potential.
- The new hospital under development in Tehachapi will drive additional growth in the region's health care sector.
- The growing population and employment base in and around East Kern will fuel demand for more health care services.
- East Kern's remote geography is well suited for the growth of firms specializing in remote/extreme medicine.
- Pertexa Healthcare Technologies Inc. in Ridgecrest is a great example of new technologies the medical field that respond to the needs of remote/extreme medicine.

Niche segments that align well with East Kern's assets include the following focus areas:

- **MEDICAL SPECIALTIES.** This industry segment is comprised of establishments providing specialized medical services, such as independent health practitioners (beyond family physicians and dentists), diagnostic clinics, and other medical service providers.
- **COMMUNITY HEALTH & WELLNESS SERVICES.** This includes community health clinics, home health services, and nursing/residential care facilities.
- **REMOTE/EXTREME MEDICINE.** This segment consists of establishments focused on rural health, remote medicine, and medical services/technologies designed for environments with challenging conditions (e.g., harsh climates, extremely remote areas, regions with difficult transportation access).

STAFFING PATTERNS

The figure below lists the 25 leading occupations in this industry ranked by their share of the industry's total employment. Registered nurses and nursing assistants account for more than 20 percent of total employment in East Kern's health care sector. The region has a relatively low concentration of workers in this sector overall. Only 8 of the 25 key occupations have LQs above 1.00. However, East Kern has a relatively high concentration of workers in several occupations: dental assistants (LQ of 1.46); ambulance drivers & attendants (LQ of 1.66); health technologists & technicians (LQ of 2.00); pharmacists (LQ of 1.62); and physical therapist aides (LQ of 1.68).

FIGURE 56. KEY OCCUPATIONS
BASED ON STAFFING PATTERNS IN EAST KERN

SOC Code	Description	Share of Industry Employment	Jobs	LQ (US= 1.00)	Median Hourly Earnings	Relative to US (US=1.00)	
29-1141	Registered Nurses	16.8%	457	0.88	38.79	1.15	●
31-1014	Nursing Assistants	4.1%	101	0.37	11.38	0.90	
31-9091	Dental Assistants	4.1%	91	1.46	14.32	0.81	
31-9092	Medical Assistants	3.9%	91	0.81	13.25	0.88	
43-6013	Medical Secretaries	3.8%	69	0.69	15.63	0.97	
43-4171	Receptionists & Information Clerks	3.0%	138	0.69	11.89	0.89	
29-2061	Licensed Practical/Vocational Nurses	3.0%	99	0.72	23.57	1.12	●
43-9061	Office Clerks, General	2.5%	425	0.67	13.51	0.93	
37-2012	Maids & Housekeepers	2.0%	216	0.71	9.74	0.93	
29-1021	Dentists, General	1.9%	31	1.22	76.71	1.04	
43-3021	Billing & Posting Clerks	1.7%	71	0.72	15.84	0.93	
29-2041	Emergency Medical Techs. & Paramedics	1.7%	51	1.17	17.96	1.12	●
43-1011	First-Line Supvsr., Office & Admin. Support	1.5%	217	0.78	23.06	0.91	
43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	1.5%	372	0.72	16.25	0.98	
11-9110	Medical & Health Services Managers	1.4%	53	0.87	53.32	1.17	●
53-3011	Ambulance Drivers & Attendants, Except EMTs	1.3%	<10	1.66	Insf. Data	Insf. Data	
19-3031	Clinical, Counseling, & School Psychologists	1.3%	29	1.06	40.90	1.22	●
29-2021	Dental Hygienists	1.2%	35	0.91	35.19	0.98	
29-1123	Physical Therapists	1.1%	26	0.67	47.08	1.16	●
29-2099	Health Technologists & Technicians, All Other	1.0%	40	2.00	19.83	0.94	
29-1126	Respiratory Therapists	1.0%	20	0.88	33.75	1.18	●
29-2034	Radiologic Technologists	1.0%	27	0.75	31.22	1.11	●
31-1011	Home Health Aides	1.0%	47	0.27	10.49	0.97	
29-1051	Pharmacists	0.9%	88	1.62	67.22	1.14	●
31-2022	Physical Therapist Aides	0.9%	16	1.68	11.64	0.92	

Source: EMSI 2016.1 – QCEW Employees, Non-QCEW Employees, and Self-Employed

The figure below presents wage ranges (10th and 90th percentiles) and typical education requirements for the 25 leading occupations in this industry.

FIGURE 57. EDUCATION REQUIREMENTS
WITH HOURLY EARNINGS FOR SELECTED PERCENTILES

SOC Code	Description	Hourly Earnings (percentiles) 10th	90th	Typical education required for entry into occupation
29-1141	Registered Nurses	$30.56	$54.00	Associate's degree
31-1014	Nursing Assistants	$8.99	$16.59	Postsecondary non-degree award
31-9091	Dental Assistants	$10.00	$23.92	Postsecondary non-degree award
31-9092	Medical Assistants	$9.84	$18.55	Postsecondary non-degree award
43-6013	Medical Secretaries	$10.71	$21.91	High school diploma or equivalent
43-4171	Receptionists & Information Clerks	$9.24	$16.28	High school diploma or equivalent
29-2061	Licensed Practical/Vocational Nurses	$17.59	$28.50	Bachelor's degree
43-9061	Office Clerks, General	$9.45	$19.95	High school diploma or equivalent
37-2012	Maids & Housekeepers	$8.76	$12.34	Less than high school
29-1021	Dentists, General	$37.69	$118.45	Doctoral or professional degree
43-3021	Billing & Posting Clerks	$11.97	$22.48	High school diploma or equivalent
29-2041	Emergency Medical Techs. & Paramedics	$10.73	$26.95	Postsecondary non-degree award
43-1011	First-Line Supvsr., Office & Admin. Support	$15.21	$36.33	High school diploma or equivalent
43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	$10.54	$23.02	High school diploma or equivalent
11-9110	Medical & Health Services Managers	$33.48	$73.11	Bachelor's degree
53-3011	Ambulance Drivers & Attendants, Except EMTs	Insf. Data	Insf. Data	High school diploma or equivalent
19-3031	Clinical, Counseling, & School Psychologists	$19.72	$51.48	Doctoral or professional degree
29-2021	Dental Hygienists	$17.12	$54.28	Associate's degree
29-1123	Physical Therapists	$34.03	$57.46	Doctoral or professional degree
29-2099	Health Technologists & Technicians, All Other	$14.24	$31.81	High school diploma or equivalent
29-1126	Respiratory Therapists	$24.18	$45.12	Associate's degree
29-2034	Radiologic Technologists	$19.52	$41.11	Associate's degree
31-1011	Home Health Aides	$8.74	$15.95	Less than high school
29-1051	Pharmacists	$52.04	$82.57	Doctoral or professional degree
31-2022	Physical Therapist Aides	$9.30	$14.67	High school diploma or equivalent

Source: TIP Strategies, Inc.

COMPETITIVE LANDSCAPE

FIGURE 58. TOP 25 METRO AREAS TABLE RANKED BY 2016 JOBS

INCLUDES MSAs RANKED BY TOTAL NUMBER OF JOBS IN THE CLUSTER AS DEFINED

METROPOLITAN AREA	LOCATION QUOTIENT (US = 1.00)	2016 JOBS	5-YEAR CHANGE (2011-2016)	ESTABLISH-MENTS	EARNINGS PER JOB
New York-Newark-Jersey City, NY-NJ-PA	1.15	1,227,115	128,715	48,130	$72,531
Los Angeles-Long Beach-Anaheim, CA	0.86	615,117	70,865	35,431	$73,139
Chicago-Naperville-Elgin, IL-IN-WI	0.96	491,475	37,320	20,342	$66,784
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1.26	404,065	35,341	13,118	$68,609
Boston-Cambridge-Newton, MA-NH	1.17	361,240	35,953	9,343	$77,512
Dallas-Fort Worth-Arlington, TX	0.88	350,715	59,599	15,726	$69,249
Houston-The Woodlands-Sugar Land, TX	0.91	310,234	47,463	13,079	$69,413
Miami-Fort Lauderdale-West Palm Beach, FL	1.04	307,217	27,055	18,461	$65,650
Washington-Arlington-Alexandria, DC-VA-MD-WV	0.70	255,974	24,677	12,745	$72,037
Detroit-Warren-Dearborn, MI	1.16	253,359	14,981	8,840	$63,470
Atlanta-Sandy Springs-Roswell, GA	0.78	228,954	38,528	11,335	$67,899
Minneapolis-St. Paul-Bloomington, MN-WI	1.01	220,528	30,225	6,284	$65,816
San Francisco-Oakland-Hayward, CA	0.78	216,498	24,317	10,378	$96,562
Phoenix-Mesa-Scottsdale, AZ	0.95	215,716	28,357	8,453	$68,409
Seattle-Tacoma-Bellevue, WA	0.81	185,796	19,975	7,649	$76,611
Baltimore-Columbia-Towson, MD	1.17	185,129	18,410	6,259	$67,517
St. Louis, MO-IL	1.08	166,971	5,939	5,705	$61,692
Pittsburgh, PA	1.26	162,148	4,140	5,858	$65,668
Cleveland-Elyria, OH	1.35	159,838	14,424	4,606	$65,636
Tampa-St. Petersburg-Clearwater, FL	1.10	159,214	15,693	7,596	$62,742
Riverside-San Bernardino-Ontario, CA	0.87	148,483	22,841	6,896	$70,228
San Diego-Carlsbad, CA	0.82	146,622	22,367	7,220	$75,926
Denver-Aurora-Lakewood, CO	0.85	143,130	26,840	6,342	$71,406
Cincinnati, OH-KY-IN	1.08	128,565	10,308	4,041	$65,691
Indianapolis-Carmel-Anderson, IN	1.10	126,136	11,769	3,121	$68,358

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

FIGURE 59. TOP 25 METRO AREAS RANKED BY LQ

INCLUDES MSAs WITH MORE THAN 1,000 JOBS IN THE CLUSTER AS DEFINED

METROPOLITAN AREA	LOCATION QUOTIENT (US = 1.00)	2016 JOBS	5-YEAR CHANGE (2011-2016)	ESTABLISH-MENTS	EARNINGS PER JOB
Rochester, MN	3.14	41,935	3,774	276	$91,725
Rio Grande City, TX	2.54	5,100	253	58	$20,193
Portsmouth, OH	2.50	7,106	899	183	$48,726
Bloomsburg-Berwick, PA	2.29	10,690	1,229	179	$84,581
Point Pleasant, WV-OH	2.09	4,223	206	104	$44,363
Alice, TX	2.09	4,231	338	70	$24,801
Las Vegas, NM	2.08	2,176	233	66	$46,813
Dixon, IL	1.93	2,852	366	70	$62,678
Pinehurst-Southern Pines, NC	1.90	7,646	664	221	$68,309
Tyler, TX	1.84	22,405	2,825	510	$65,211
Bastrop, LA	1.84	1,496	(114)	52	$34,340
Oneonta, NY	1.82	5,083	451	121	$74,273
Homosassa Springs, FL	1.81	6,875	(444)	305	$51,352
Opelousas, LA	1.80	5,199	864	227	$46,761
New Castle, IN	1.80	2,794	346	51	$38,462
Brownsville-Harlingen, TX	1.80	30,127	2,946	709	$36,920
Eagle Pass, TX	1.80	3,824	(131)	74	$30,683
Mountain Home, AR	1.77	3,102	(20)	151	$53,859
Duluth, MN-WI	1.77	26,237	839	560	$60,092
Amsterdam, NY	1.75	3,667	94	107	$54,202
Johnstown, PA	1.74	10,755	(67)	423	$55,802
Sayre, PA	1.71	4,675	501	92	$69,075
Cape Girardeau, MO-IL	1.70	8,657	481	254	$63,420
Wisconsin Rapids-Marshfield, WI	1.70	7,455	(5,177)	135	$61,243
Morgantown, WV	1.69	12,466	968	248	$67,427

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

RESOURCES

HEALTH CARE		
TRADE ASSOCIATIONS		
American Medical Association		www.ama-assn.org/
American Hospital Association		www.aha.org/
International Society of Remote Medical Practitioners		www.isrmp.org/
Wilderness Medical Society		www.wms.org/
Society for Human Performance in Extreme Environments		www.hpee.org/
Wilderness Medical Associates International		www.wildmed.com/
RELEVANT CONFERENCES/EVENTS		
Rural Health Care Leadership Conference		
5-8 February 2017	*Phoenix, AZ*	www.healthforum-edu.com/rural/index.dhtml
MGMA/AMA Collaborate in Practice Conference 2017		
9-11 April 2017	*Chicago, IL*	www.ama-assn.org/events/mgmaama-collaborate-practice-conference-2017
18th Annual Summit on Improving Patient Care in the Office Practice and the Community		
20-22 April 2017	*Orlando, FL*	www.ihi.org/education/Conferences/Summit-2017/
34th Annual Summer Meeting of the Wilderness Medical Society		
28 July-August 2 2017	*Breckenridge, CO*	www.wms.org/conferences/Breck17/
World Extreme Medicine		
TBD November 2017	*Edinburgh, UK*	www.extrememedicineexpo.com/
TRADE PUBLICATIONS		
The American Journal of Medicine		http://www.amjmed.com/
Adventure Medic Magazine		www.theadventuremedic.com/
Wilderness Medical Magazine		www.wms.org/#
Wilderness & Environmental Medicine		www.wemjournal.org/
Hospitals & Health Networks		www.hhnmag.com/

APPENDIX D: IMPLEMENTATION MATRIX

	RESPONSIBLE PARTIES/ POTENTIAL PARTNERS	TIMEFRAME			
		Ongoing	Next 12 mos	1 to 3 years	3 to 5 years
GOAL 1: BUSINESS DEVELOPMENT					
Strategy 1.1. BUSINESS RETENTION & EXPANSION: Establish an East Kern business visitation program.					
1.1.1. Create, maintain, and grow a database of existing businesses in East Kern.	Kern EDC, GAVEA, Local Partners	◆			
1.1.2. Use the business visitation program to meet with all major employers, high-growth firms, and other key businesses on an annual basis.	Kern EDC, GAVEA, Local Partners	◆			
1.1.3. Host regular CEO breakfasts and other networking events in different East Kern communities on a rotating schedule.	Local chambers of commerce	◆			
Strategy 1.2. BUSINESS RECRUITMENT: Recruit new business investments and companies into East Kern.					
1.2.1. Focus business recruitment and marketing efforts on five target industries.	Kern EDC, GAVEA, Local Partners	◆			
1.2.2. Strengthen business recruitment efforts by cultivating relationships with business decision makers.	Kern EDC, GAVEA, Local Partners	◆			
1.2.3. Work with local economic and workforce development organizations to develop a set of actions aimed at capitalizing on the major Northrup Grumman expansion in Palmdale.	Kern EDC, GAVEA, Mojave Air & Spaceport, Cerro Coso	◆	◆		
1.2.4. Work with local economic development organizations to identify and attract new defense sector companies, investments, and employment.	Kern EDC, GAVEA, Mojave Air & Spaceport	◆			
1.2.5. Leverage East Kern's proximity to Greater Los Angeles and Las Vegas to promote the region as an investment opportunity for high net worth individuals.	Kern EDC, GAVEA	◆		◆	◆
1.2.6. Conduct a regional "fam tour" for site consultants and commercial real estate brokers to generate awareness of East Kern as a destination for business expansions and investment among executives.	Kern EDC, GAVEA, Local Partners		◆		

	RESPONSIBLE PARTIES/ POTENTIAL PARTNERS	TIMEFRAME			
		Ongoing	Next 12 mos	1 to 3 years	3 to 5 years
Strategy 1.3. MARKETING: Adopt and promote a marketing approach centered on the "Permission to Risk | Succeed | Fail | Challenge | Innovate" advertising campaign.					
1.3.1. Promote the region for testing, prototyping, and R&D activities.	Kern EDC, GAVEA, Local Partners	◆			
1.3.2. Highlight the large-scale innovation, testing and technology development taking place at the Mojave Air & Spaceport, NAWS China Lake, and Edwards AFB.	Kern EDC, GAVEA, Local Partners, Mojave Air & Spaceport, NAWS China Lake, Edwards AFB	◆			
1.3.3. Promote other businesses in the region that are also involved in product & technology testing.	Kern EDC, GAVEA, Local Partners	◆			
1.3.4. Create fresh marketing materials that reflect the "Permission to Risk | Succeed | Fail | Challenge | Innovate" ethos of innovation and highlight advantages within target industries.	Mojave Air & Spaceport, Kern EDC, GAVEA, Local Partners		◆		
Strategy 1.4. SITES & INFRASTRUCTURE: Ensure that the appropriate sites and infrastructure are available to support business growth.					
1.4.1. Identify gaps in the region's infrastructure that act as a barrier to the growth of existing employers and recruitment of new businesses. Identify and implement solutions to the most critical challenges.	Employers, Local Governments, Utility Providers, Real Estate Community	◆			
1.4.2. Explore options to reposition vacant or underutilized real estate for redevelopment and business recruitment purposes.	Large Employers (Rio Tinto, Mojave Air & Spaceport), Landowners	◆			
GOAL 2: TALENT DEVELOPMENT & RECRUITMENT					
Strategy 2.1. STEM EDUCATION & WORKFORCE TRAINING: Launch new STEM-focused workforce development initiatives that build a pipeline of talent to fuel the region's target industries, beginning with aerospace and defense.					
2.1.1. Coordinate new and existing STEM programs in partnership with the military installations and major STEM-focused employers.	Cerro Coso, K-12 Schools, East Kern/Antelope Valley STEM Network, Large Employers	◆	◆		
2.1.2. Support efforts led by the East Kern/Antelope Valley STEM Network.	K-12 Schools, Large Employers	◆	◆		

	RESPONSIBLE PARTIES/ POTENTIAL PARTNERS	TIMEFRAME			
		Ongoing	Next 12 mos	1 to 3 years	3 to 5 years
2.1.3. .Create a program to regularly engage and inspire K-12 students about careers in science and technology.	K-12 Schools, Mojave Air & Spaceport, NAWS China Lake, Edwards AFB		◆		
Strategy 2.2. CERRO COSO COMMUNITY COLLEGE: Fully capitalize on the role of Cerro Coso Community College as an economic engine and strengthen linkages between the college and regional employers.					
2.2.1. Organize and host and East Kern Workforce Summit.	Kern EDC, GAVEA, Cerro Coso, Large Employers		◆		
2.2.2. Implement more internships, create greater awareness of job opportunities among students and parents, and place more educators in "externships" with local employers.	Cerro Coso, Regional K-12 Schools, Local Employers	◆			
Strategy 2.3. TALENT RECRUITMENT: Launch a "Prove yourself in East Kern" campaign to attract talent from outside of the region.					
2.3.1. Highlight and promote the multitude of career options available within East Kern's primary employers and key industries.	Kern EDC, GAVEA, Regional Employers	◆			
2.3.2. Identify the most needed skills/jobs and develop a talent recruitment initiative to fill them.	Regional Employers	◆			
Strategy 2.4. YOUNG PROFESSIONALS: Promote civic leadership and engage young professionals across the region.					
2.4.1. Create an East Kern Leadership program to encourage civic engagement and professional development among existing and emerging local leaders.		◆			
2.4.2. Regularly survey young adults to better understand their desires/needs.	Regional Employers, Young professionals	◆			
GOAL 3: INNOVATION & ENTREPRENEURSHIP					
Strategy 3.1. SUPPORT STRUCTURES: Create a robust regional network of support systems for entrepreneurs, technology workers, and innovators.					
3.1.1. Leverage the new CSU-Bakersfield SBDC to support the growth of startups and small businesses.	CSU-Bakersfield SBDC	◆			

	RESPONSIBLE PARTIES/ POTENTIAL PARTNERS	TIMEFRAME			
		Ongoing	Next 12 mos	1 to 3 years	3 to 5 years
3.1.2. Explore the potential to establish a PTAC in Ridgecrest to serve businesses in East Kern and Kern County seeking to compete for government contracts.	CSU-Bakersfield SBDC, Cerro Coso		◆		
3.1.3. Launch an East Kern "1 Million Cups" chapter to encourage greater communication and networking among entrepreneurs, investors, and startups.	CSU-Bakersfield SBDC, Regional Entrepreneurs			◆	
3.1.4. Expand access to capital across East Kern, including the potential creation of an angel investment network to provide a source of equity investment for existing and new startups in the region.	CSU-Bakersfield SBDC, Regional Banks, Regional Entrepreneurs	◆			
Strategy 3.2. MAKER SPACES: Create new regional "maker spaces" that offer physical space for startups and entrepreneurs, workforce training facilities, and collaboration opportunities for creative workers.					
3.2.1. Establish a combined maker space in Mojave that serves as a hub for aerospace innovation, training, networking, and talent retention.	Mojave Air & Spaceport, Cerro Coso		◆		
3.2.2. Establish a maker space in Ridgecrest that provides opportunities for training, networking, and business development for entrepreneurs, China Lake employees, and emerging talent.	China Lake, Cerro Coso, City of Ridgecrest		◆		
3.2.3. Seek opportunities to create similar maker spaces and link all of these locations and programs together.	Kern County, Kern EDC, GAVEA, Cerro Coso			◆	◆
Strategy 3.3. RESEARCH & DEVELOPMENT: Establish a working group of regional government, business, and academic leaders to pursue new R&D opportunities.					
3.3.1. Lobby Congress for a new national lab or similar federal research facility that leverages the restricted air space and existing world-class R&D, testing, and aerospace talent and innovation.	Kern EDC, GAVEA			◆	◆
3.3.2. Explore the potential to create a center of excellence that links regional industry and academic expertise to pursue new innovations and technologies.	Kern EDC, GAVEA			◆	◆
Strategy 3.4. CONNECTIONS TO INNOVATION HUBS: Cultivate stronger linkages between East Kern and the vibrant innovation ecosystems in Silicon Valley, Greater Los Angeles, San Diego, and other national innovation hubs.					
3.4.1. Build linkages between East Kern's defense sector and the DoD's new Defense Innovation Unit Experimental (DIUx).	NAWS China Lake, Edwards AFB, Mojave Air & Spaceport	◆			
3.4.2. Strengthen ties to San Diego's innovation ecosystem through new and existing relationships.	NAWS China Lake, Naval Base San Diego, CCAT	◆			

	RESPONSIBLE PARTIES/ POTENTIAL PARTNERS	TIMEFRAME			
		Ongoing	Next 12 mos	1 to 3 years	3 to 5 years
3.4.3. Connect East Kern entrepreneurs and tech workers to the greater Los Angeles area startup scene.	Kern EDC, GAVEA, Regional Entrepreneurs	◆			
GOAL 4: TOURISM & VISITOR ATTRACTION					
Strategy 4.1. PACKAGE & PROMOTE REGIONAL DESTINATIONS: Create and launch an East Kern linked destinations program to holistically package and promote the region's tourism opportunities.					
4.1.1. Create an East Kern Outdoor Recreation & Visitor Guide that packages all of the region's trails, natural amenities, and other tourist attractions.	Kern EDC		◆		
4.1.2. Design a one-stop website that consolidates information on all of East Kern's tourism destinations with subsections on specific segments.	Kern EDC			◆	
4.1.3. Promote Tehachapi's Main Street and downtown area as the premier entertainment and recreation node along the Las Vegas-San Francisco corridor.	City of Tehachapi	◆			
4.1.4. Enhance awareness of existing tourism destinations through signage.	Kern County, Local Partners			◆	
4.1.5. Periodically conduct visitor surveys and use this information to enhance marketing efforts, identify product enhancement opportunities, and gain a better understanding of who is visiting the region.	Kern EDC, Local Partners	◆			
Strategy 4.2. DEVELOP NEW AMENITIES & DESTINATIONS: Create new destinations and amenities that draw additional visitors into East Kern and make the region more attractive for skilled workers.					
4.2.1. Support the efforts of the Flight Test Foundation to build a new museum in Rosamond to replace the existing Edwards Air Force Flight Test Museum.	Kern County, Edwards AFB, Flight Test Foundation		◆		
4.2.2. Pursue new visitor destinations that bring in tourists and generate new spending in the regional economy.	Kern EDC, Local Partners	◆			
4.2.3. Develop new hiking trails and mountain biking trails/courses throughout East Kern and a year-round, lift-assisted mountain bike course in the Greater Tehachapi area.	Tehachapi Mountain Trails Association	◆			
4.2.4. Explore the potential to create new skyparks at the region's airports.	Rosamond Skypark, Mojave Air & Spaceport, California City Municipal Airport, Inyokern Airport, Tehachapi Municipal Airport			◆	

	RESPONSIBLE PARTIES/ POTENTIAL PARTNERS	TIMEFRAME			
		Ongoing	Next 12 mos	1 to 3 years	3 to 5 years
Strategy 4.3. FESTIVALS & EVENTS: Support the ongoing success and growth of existing events across East Kern that draw in thousands of visitors and develop new events that could lead to additional visitor spending and greater awareness of East Kern among business executives and skilled workers.					
4.3.1. Support the success of existing major events like The Petroglyph Festival, Wasteland Weekend, and the Tehachapi Gran Fondo.	Kern EDC, Local Partners	◆			
4.3.2. Launch a winter event in East Kern similar to AirVenture.	Experimental Aircraft Association, Mojave Air & Spaceport			◆	
4.3.3. Establish a new Off-Highway Vehicle Expo hobby/industry event.	Kern EDC, City of California City			◆	
Strategy 4.4. LINK TOURISM TO ECONOMIC DEVELOPMENT: Connect tourism promotion to other economic development efforts, especially talent attraction and business recruitment.					
4.4.1. Engage the region's service industry to develop training sessions for service industry workers to improve skills and promote the area.	Local Chambers of Commerce, Local Convention & Visitors Bureaus	◆			
4.4.2. Target events and trade shows that bring in business decision makers from target industries.	Kern EDC, GAVEA, Local Convention & Visitors Bureaus			◆	◆
4.4.3. Leverage East Kern's unique natural geography, its diverse community, and its proximity to Los Angeles to promote it as a prime location for films.	Kern County Film Commission	◆			
GOAL 5: REGIONAL COLLABORATION					
Strategy 5.1. STRENGTHEN THE EAST KERN ECONOMIC ALLIANCE: Expand the scope, resources, and funding for the EKEA to serve as the region's primary entity responsible for economic development.					
5.1.1. Continue to convene the EKEA through the Kern EDC and support from local partner organizations across East Kern.	Kern EDC, Local Partners	◆			
5.1.2. Pursue startup funding from the OEA for a full-time staff person.	Kern County, OEA		◆		
5.1.3. Adopt a long-term formal funding program that will support the ongoing operations, overhead, and staffing requirements of the EKEA.	Kern County, Kern EDC			◆	◆

	RESPONSIBLE PARTIES/ POTENTIAL PARTNERS	TIMEFRAME			
		Ongoing	Next 12 mos	1 to 3 years	3 to 5 years
5.1.4. Expand the EKEA's role as a regional defense alliance, supporting the ongoing roles of the Edwards Community Alliance and the China Lake Alliance.	Edwards Community Alliance, China Lake Alliance	◆			
5.1.5. Serve as the focal point of regional data and information through an EKEA website, including the regional workforce and economic data being compiled as part of the East Kern Economic Diversification Strategy.	Kern EDC			◆	
Strategy 5.2. COORDINATE ECONOMIC DEVELOPMENT & WORKFORCE TRAINING: Work with key partners to coordinate economic development and workforce development activities across East Kern.					
5.2.1. Represent the region at national events and meetings.	Kern EDC, GAVEA	◆			
5.2.2. Support regional talent initiatives to provide a skilled workforce for public and private sector employers.	Cerro Coso, local educational institutions	◆			
5.2.3. Continue to connect and support the region's local economic development organizations and chambers of commerce.	Local Partners, Chambers of Commerce	◆			
Strategy 5.3. NEW FUNDING SOURCES: Work with local and regional partners to pursue funding sources for economic development projects.					
5.3.1. Compile an inventory of available federal grant/loan programs available to communities and organizations in East Kern.	Kern County, Kern EDC		◆		
5.3.2. Assist East Kern communities in pursuing funding from the EDA, USDA Rural Development, and other federal/state agencies for local economic development and infrastructure projects.	Kern County	◆			
5.3.3. Identify and seek non-governmental funding sources such as philanthropic organizations.	Kern County, Local Partners	◆			
Strategy 5.4. LOBBYING & ADVOCACY: Conduct state and federal lobbying, advocacy, and policy work to support the region's major employers and industries.					
5.4.1. Support existing advocacy efforts on behalf of missions and facilities at NAWS China Lake and Edwards AFB (local, state, and federal).	China Lake Alliance, Edwards Community Alliance	◆			
5.4.2. Increase awareness of economic impact of NAWS China Lake and Edwards AFB.	China Lake Alliance, Edwards Community Alliance, NAWS China Lake, Edwards AFB	◆			

	RESPONSIBLE PARTIES/ POTENTIAL PARTNERS	TIMEFRAME			
		Ongoing	Next 12 mos	1 to 3 years	3 to 5 years
5.4.3. Support efforts to retain, attract, and enhance military missions and personnel in East Kern.	China Lake Alliance, Edwards Community Alliance	◆			
5.4.4. Set up a veterans inventory survey to collect, analyze, and disseminate data about the veterans separating from service at China Lake and Edwards.	NAWS China Lake, Edwards AFB		◆		
5.4.5. Work with regional partners to support the infrastructure and program needs surrounding the two installations.	China Lake Alliance, Edwards Community Alliance	◆			
5.4.6. Capitalize on the new US "Spaceport Bill".	Mojave Air & Spaceport, Kern EDC, GAVEA		◆		

TIP strategies
AUSTIN • SEATTLE

Chabin