



# NAF EL CENTRO JOINT LAND USE STUDY

JUNE 2014



# NAF EL CENTRO JOINT LAND USE STUDY

*This study was prepared under contract with Imperial County, with financial support from the Office of Economic Adjustment, Department of Defense. The content reflects the views of the key JLUS partners involved in the development of this study and does not necessarily reflect the views of the Office of Economic Adjustment.*



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## A

Acq	Acquisition
AE	Alternative Energy Development
AGL	above ground level
AICUZ	Air Installations Compatible Use Zones
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
APZ	Accident Potential Zone
AT	Anti-Terrorism / Force Protection
ATCT	Air Traffic Control Tower
AZ	Arizona

## B

BASH	Bird Aircraft Strike Hazard
BHWG	Bird Hazard Working Group
BIO	Biological Resources
BLM	Bureau of Land Management
BOR	Bureau of Reclamation

## C

CA	California
CALTRANS	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CIP	capital improvement plan
CNEL	Community Noise Equivalent Level
COM	Communication / Coordination
Comm	Communication and Coordination
CUP	Conditional Use Permit
CZ	Clear Zone

## D

dB	decibel
Disc	Real Estate Disclosures
DOD	Department of Defense

## E

EDU	education
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## F

FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FCLP	Field Carrier Landing Practice
FTHL	Flat-tailed Horned Lizard
FY	fiscal year

## G

GIS	Geographic Information System
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## H

HA	Housing Availability
Hab	Habitat Conservation Tools

## I

I	Interstate
IID	Imperial Irrigation District
INF	Infrastructure Extensions

## J

JLUS	Joint Land Use Study
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## ACRONYMS

### L

LAFCO	Local Agency Formation Commission
LDN	Day-Night Level
LED	light-emitting diode
Leg	Legislative Tools
LG	Light and Glare
LI	Legislative Initiatives
LRAD	long-range acoustical device
LU	Land Use
LUO	Land Use Ordinance

### M

MAG-16	Marine Aircraft Group – 16
MCA	Military Compatibility Area
MCAOD	Military Compatibility Area Overlay District
MCAS	Marine Corps Air Station
MCDCA	Military Compatibility Development Coordination Area
MOA	military operating area
MOU	memorandum of understanding
MTR	military training route

### N

NAFEC	Naval Air Facility El Centro
NAS	Naval Air Station
NM	nautical mile
NV	Noise and Vibration

### O

O <sub>3</sub>	Ozone
OEA	Office of Economic Adjustment
OHV	off-highway vehicle
OPR	California's Office of Planning and Research

### P

PG	Policy Group
PL	Public Law
PT	Public Trespassing

### R

RA	Restricted Airspace
RAICUZ	Range Air Installations Compatible Use Zones
RCZ	Range Compatibility Zone
REPI	Readiness and Environmental Protection Initiative
RMP	Resource Management Plan
RYG	Red, Yellow, Green

### S

SAF	Safety Zones
SCORE	SCORE International Off-Road Racing
SOI	Sphere of Influence
SUA	Special Use Airspace

### T

TDR	Transfer of Development Rights
TRN	Roadway Capacity
TWG	Technical Working Group

### U

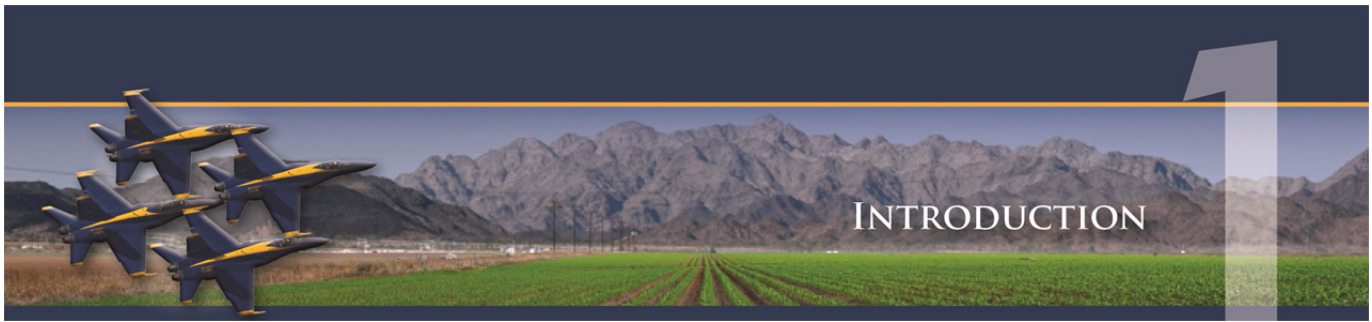
U.S.	United States
U.S. Navy	United States Navy
USFWS	U.S. Fish and Wildlife Service

### V

VO	Vertical Obstructions
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### Z

Zon	zoning
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The NAF El Centro (NAFEC) Joint Land Use Study (JLUS) is a joint effort between the cities of El Centro and Imperial, Imperial County, and NAFEC. The JLUS was developed to guide planning and development in local governments surrounding NAFEC. NAFEC provides training (including practice gunnery, bombing, carrier landings and air combat) to active and reserve military, other U.S. forces and allied units, and its ranges provide primary training for naval student pilots. Allied forces have long recognized the cost efficiencies of training at NAFEC. Because these activities are vital to continuing the military mission in California and the nation's security, the land associated with these activities must be protected. Landowners with property near NAFEC, and residents and business owners in areas surrounding NAFEC and its training ranges must also be protected from adverse impacts that could result from training activities performed at NAFEC. Joint planning efforts on the part of the local governments and NAFEC will establish recommended strategies to equally protect all affected parties.

The JLUS for NAFEC evaluated a set of compatibility factors and resulted in a series of strategy recommendations in the areas of policy, planning and zoning, coordination and communication, and outreach. Strategies were developed to address each NAFEC Compatibility Factor. Each factor was assigned a priority of importance (high, medium, low, and awareness) for implementation. **One of the key recommendations is the formation of a JLUS Coordination Team responsible for overseeing the implementation progress in the months and years after the JLUS is completed.** The recommended strategies are outlined in more detail in Section 5 of this report. Additionally, a Background Report was prepared in conjunction with the JLUS, detailing the compatibility issues and process instrumental to the strategy development.

These recommendations address the need for increased coordination and communication between NAFEC staff, local governments, regional agencies, and the public. They also target public health, safety, and welfare, and protection of quality of life in the areas surrounding NAFEC and its ranges. The collaborative spirit of the JLUS is an

effective starting point for a continued collaborative planning and communication effort between all involved stakeholders.

## 1.1 What Is a JLUS?

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A JLUS is a planning process accomplished through the collaborative efforts of all key stakeholders in a defined study area. These stakeholders include local, county, regional, state, and federal officials, residents, business owners, non-governmental organizations, and military representatives. The purpose of a JLUS is to identify compatible land uses and growth management guidelines for areas within, and adjacent to, active military installations, such as NAFEC. The intent of the process is to establish and nurture a working relationship between a military installation and its proximate local jurisdictions, whose collaborative efforts prevent and / or alleviate encroachment issues associated with existing mission objectives and potential mission expansion (without expanding installation boundaries) while fostering community economic development goals.

The NAFEC JLUS was funded through a grant from the Department of Defense (DOD), Office of Economic Adjustment (OEA), and contributions by Imperial County. Imperial County Planning and Development Services was the administrator for the grant and managed the development of this JLUS.

## 1.2 Why Do a JLUS?

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A JLUS is necessary to ensure the future compatibility between land uses necessary to support the continuation of the military mission at NAFEC and civilian development occurring near the installation, its ranges, and below its airspaces.

NAFEC's mission is to provide base support to Naval Aviation Squadrons and maintain target ranges for their weapons and combat air training. NAFEC also supports

Marine Aviation units, air elements from the U.S. Army, Air Force units, and a Royal Air Force Parachute Training and Testing Unit. NAFEC's primary role is in fleet squadron support by providing an ideal training environment to facilitate initial and refresher aviation training, (including aerial combat maneuvering, air-to-air gunnery and bombing practice, Field Carrier Landing Practice (FCLP), electronic warfare training, and low-level flight training) to visiting aviation units worldwide.

## Economic Benefit to the Region

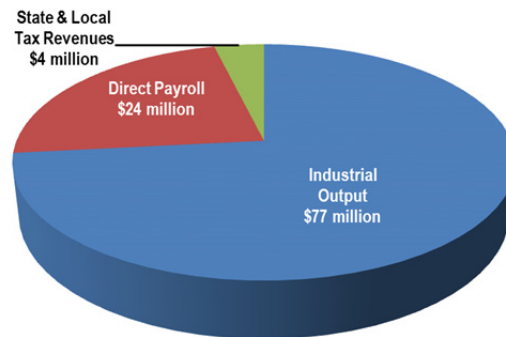
In addition to being a critical U.S. Navy training facility, NAFEC is also an important economic engine contributing to the regional economy through sustained direct employment, indirect spending, and industrial output or construction. The JLUS assists in preserving the continued economic benefit that NAFEC provides. Operations at NAFEC employ both, federal and military personnel. In fiscal year 2010 (FY10), NAFEC employed a total of 597 personnel, 303 of which are non-military. Military and civilian personnel who are not training nor have transient-status must reside off-base; therefore, the revenue associated with housing and the purchase of goods and services is directly distributed into the local economy. In FY10, NAFEC contributed over \$105 million to the local economy: \$77 million in industrial output, \$24 million in direct payroll, and \$4 million in state and local tax revenues from transient personnel (as depicted on the following chart). Industrial output is defined as revenue from the following subcategories: \$54.2 million from operations, \$11.3 million from visitor / transient personnel spending, and \$11.6 million from payroll.

## Community Support

As a community presence, NAFEC's contribution to the region extends beyond economics. The installation is an important asset to the civilian community, serving as a training facility for various federal agencies and community events facility for non-governmental groups. The Facility also provides valuable support for many community services.

Groups who use NAFEC facilities include the Blue Angels (winter home), the Boys and Girls Club, 4-H, Brownies and Girl Scouts, National Guard, Border Patrol, local law enforcement agencies, and several youth groups.

Units at NAFEC participate in local civic activities including coaching various youth teams, serving as scout leaders and classroom tutors, and participating in numerous service and social clubs. NAFEC units are also active in other community initiatives including the Imperial Valley Food Bank, Sea Cadets, Young Marines, and the American Cancer Society Relay for Life.



## 1.3 JLUS Goal and Objectives

The goal of the NAFEC JLUS is to protect the viability of current and future training operations at NAFEC while simultaneously guiding compatible community growth, sustaining the environmental and economic health of the region, and protecting public health, safety, and welfare in the areas surrounding NAFEC and its ranges. The primary objectives of the NAFEC JLUS are:

- **Understanding.** Convene community and military representatives to identify, confirm, and understand the issues in an open forum, taking into consideration both community and NAFEC perspectives and needs. This includes public awareness, education, and input organized in a cohesive outreach program.
- **Collaboration.** Encourage cooperative land use and resource planning among NAFEC, its ranges and surrounding communities so that future community growth and development is compatible with the training and operational missions, while seeking ways to reduce operational impacts on adjacent lands within the study area.



- **Actions.** Provide a set of mutually supported actions (tools, activities, and procedures) to be implemented by the jurisdictions, agencies, and NAFEC including operational measures to mitigate installation impacts on surrounding communities and local government and agency approaches to reduce community impacts on military operations. These tools will assist both civilian and military decision makers to resolve compatibility issues and prioritize projects within their respective annual budgeting cycles.

## 1.4 JLUS Study Area

NAFEC and its ranges are located in California's southeast desert region of Imperial County, California and bordered by unincorporated areas within the Imperial Valley. The installation lies approximately 11 miles due west of the cities of El Centro and Imperial.

The NAFEC JLUS study area encompasses land near NAFEC and its associated ranges that may impact current or future military operations or be impacted by operations. The NAFEC JLUS study area covers southwest and south central Imperial County immediately surrounding the installation and outlying areas.

The Study Area is bounded by the border of Mexico to the south and San Diego County to the west, and extends approximately 35 miles north and approximately 47 miles east of NAFEC. This area includes the majority of the irrigated portion of Imperial Valley (see Figure 1).

## 1.5 JLUS Partners and Public Outreach

The JLUS process is designed to create a locally relevant study that builds consensus and support among various stakeholders. To achieve the JLUS goal and objectives, the planning process included a public outreach program providing a variety of opportunities for interested parties to contribute to the study development.

An early step in any planning process is the identification of stakeholders. Informing and involving them early in the project is instrumental to understanding, addressing and resolving their most important compatibility issues through the development of integrated strategies and

measures. Stakeholders include individuals, groups, organizations, and governmental entities interested in, affected by, or affecting the outcome of the JLUS project. Stakeholders identified for the NAFEC JLUS included, but were not limited to:

- NAFEC.
- Local jurisdictions (towns, cities, counties and Transportation Commissions and Irrigation Districts).
- Other partner agencies and organizations, such as local, regional, and state planning, regulatory, and land management agencies; landholding and regulatory federal agencies; landowner and realty associations; and other special interest groups (including local educational institutions and school districts).
- The general public, including residents, businesses and landowners.

These stakeholder groups played a critical role in the development of the NAFEC JLUS and Background Report. Their input provided comprehensive, technical guidance relative to their jurisdiction's policies, regulations, culture, and values. The NAFEC stakeholder groups helped shape the various strategies identified in this document.

### Local Jurisdictions

This JLUS could not have been possible without the dedicated efforts of the three participating JLUS jurisdictions affected by this study:

- City of El Centro
- City of Imperial
- Imperial County

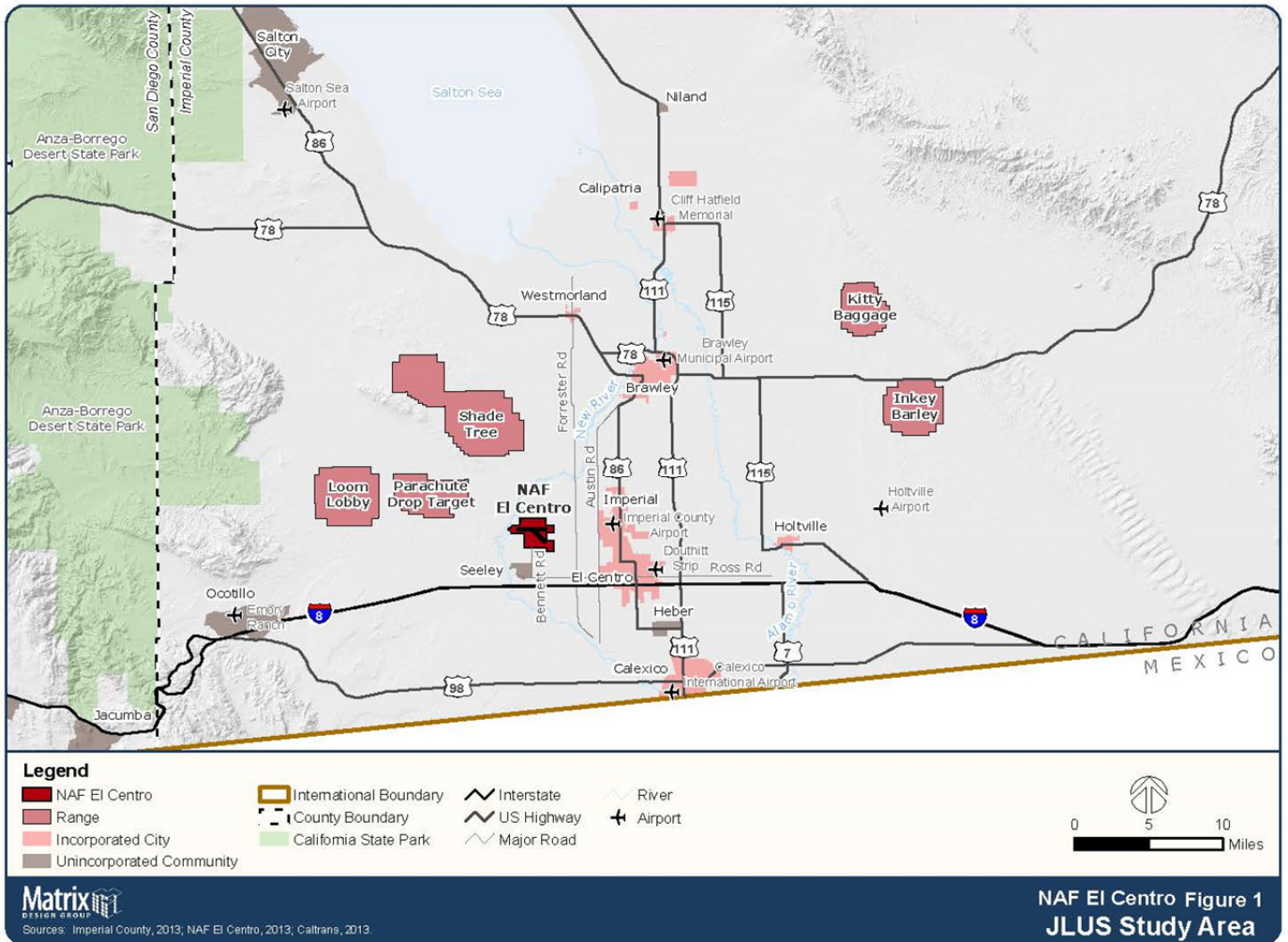
### Other Agency / Organization Partners

The NAFEC JLUS included other agency and organization partners that provided a state, regional and community perspective. These partners brought expert knowledge to the study from varying disciplines, including state and federal land use management practices, regional transportation practices, natural resources management, and local "on-the-ground" perspective relevant to unique land features and ownership patterns. Affiliated stakeholder groups who played a vital role in the study development include:



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- Agricultural Commissioner's Office
- Bureau of Land Management
- California Department of Transportation (CALTRANS)
- Imperial County Air Pollution Control District
- Imperial County Public Works
- Imperial County Transportation Commission
- Imperial Irrigation District
- Imperial County Regional Airport
- U.S. Fish and Wildlife Service





Agriculture in Imperial Valley

### Policy Group and Technical Working Group

The development of the NAFEC JLUS was guided by two committees, comprising city, county, NAFEC, federal and state agencies, resource agencies, local governments, and other stakeholders.

**JLUS Policy Group.** The Policy Group (PG) consisted of officials from participating jurisdictions, military installation leadership, and representatives from other interested and affected agencies. The PG was responsible for the overall direction of the JLUS, preparation and approval of the study design, approval of policy recommendations, and approval of draft and final JLUS documents; membership is provided under Acknowledgments at the beginning of this report.

**JLUS Technical Working Group.** The Technical Working (TWG) identified and addressed technical issues, provided feedback on report development, and assisted in the development and evaluation of implementation strategies. The TWG members are identified under Acknowledgments at the beginning of this report.

### Public Participation

The general public was instrumental in the development of this JLUS and strategies by providing input and feedback, both in public workshops and through the use of the interactive project website ([www.nafelcentrojlus.com](http://www.nafelcentrojlus.com)).

### Public Workshops

In addition to the PG and TWG meetings, a series of public workshops were held throughout the development of the JLUS. These workshops provided an opportunity for the exchange of information with the greater community, assisted in identifying the issues to be addressed in the JLUS, and provided input on the strategies proposed. Each workshop included a conventional presentation and a facilitated exercise providing a “hands on,” interactive opportunity for the public to participate in the development of the plan.

### Public Outreach Materials



**Fact Sheet:** At the beginning of the JLUS project, a Fact Sheet was developed describing the JLUS program, objectives, methods for the public to provide input into the process, an overview of the compatibility factors that would be analyzed throughout the project, and the proposed NAFEC JLUS Study Area. This Fact Sheet was made available at the forums for review by interested members of the public, as well as posted on the website for download.



**Strategy Tools Brochure:** The Strategy Tools Brochure was prepared for the second public workshop. JLUS strategies constitute a variety of actions that local governments, military installations, agencies, and other stakeholders can take to promote compatible land use planning. This brochure provides an overview of the strategy types that could be applied to address compatibility issues around NAFEC.

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**Website:** A project website was developed and maintained to provide stakeholders, the public, and media representatives with access to project information. This website was maintained for the entire duration of the project to ensure information was easily accessible. Information on the website included program points of contact, schedules, documents, maps, public meeting and information. The project website is located at [www.nafelcentrojlus.com](http://www.nafelcentrojlus.com).







The NAF El Centro (NAFEC) Joint Land Use Study (JLUS) is a joint effort between the cities of El Centro and Imperial, Imperial County, and NAFEC. NAFEC is situated in the Imperial Valley of southeast California. The installation and its ranges are surrounded by unincorporated Imperial County approximately 11 miles west of the cities of El Centro and Imperial. Although there are other communities within the study area, the JLUS assessment focused on the cities of El Centro and Imperial and the unincorporated community of Seeley due to the proximity with NAFEC and impacts associated with military operations. These communities have experienced the majority of growth in the last 10 years and high growth rates are likely to continue due to the supply of undeveloped land, renewable energy resources and manufacturing opportunities, and proximity to Mexico and Mexican Free Trade Zone.

An analysis of the population and economic trends in these communities was conducted to gather baseline information on potential areas of conflict or concern between military operations and civilian uses.

## 2.1 JLUS Community Growth Trends

Between the Census conducted in 2000 and 2010, Imperial County grew by 32,167 persons. The growth in the City of Imperial was substantially higher on an annual percentage basis due to its smaller total population in the year 2000. The change from 2000 to 2010 for the city was 95.2 percent. The City of El Centro experienced steady growth during this time period experiencing a change of 12.6 percent. Together, these two cities represented a large percent of the total growth throughout the county.

### Imperial County

Imperial County comprises desert or park lands or in use for agriculture purposes. Approximately fifty percent of Imperial County lands are undeveloped and under federal ownership and jurisdiction. The developed area, where the county's incorporated cities, unincorporated

communities, and supporting facilities are situated, comprises less than one percent of the land. Approximately seven percent of the county is the Salton Sea.

Historically, Imperial County has been largely characterized as a farming community. In recent years, though, this has been changing. The shift away from farming is due to an explosive population growth, which saw a 22.6 percent increase from 2000 to 2010, as shown in Table 1.

**Table 1. Imperial County Population Growth, 2000-2010**

Jurisdiction	2000	2010	Number Change	Percent Change
California	33,871,648	37,253,956	3,382,308	10.0%
❖Imperial County	142,361	174,528	32,167	22.6%
Brawley	22,052	24,953	2,901	13.2%
Calexico	27,109	38,572	11,463	42.3%
Calipatria	7,289	7,705	416	5.7%
❖El Centro	37,835	42,598	4,763	12.6%
Holtville	5,612	5,939	327	5.8%
❖Imperial	7,560	14,758	7,198	95.2%
Westmorland	2,131	2,225	94	4.4%
Remaining County	32,412	37,778	5,005	15.4%

❖ Indicates jurisdiction is a partner in the development of the JLUS.

Source: California Department of Finance: Demographic Research Unit Demographic Profile 2010-2006 and 2000.

### City of El Centro

The City of El Centro was incorporated on April 16, 1908 and is now the county seat for Imperial County with a 2010 population of 42,958. The city covers just over 11 square miles of land. Early growth was rapid with the onset of the City's designation as the county seat; subsequently, the other six cities in the county were established, which would comprise the urban corridor through Imperial County.

Agriculture remained an important part of the City's economic vitality from its incorporation to present day. By the early 1980's, the city had experienced a shift away from agriculture and the two largest employment sectors in the El Centro labor market area were Government and Wholesale/Retail Trade, reflecting El Centro's emerging role as a regional administrative and commercial center. While the economy of El Centro is currently diversifying, the agriculture industry still accounts for a significant portion of the employment in the county, which is evident by the presence of more than 35 growers and shippers still operating in the City.

## City of Imperial

The City of Imperial is located 30 miles north of the US-Mexico border and abuts the City of El Centro on the south. It is located approximately 11 miles east of NAFEC. The City had a 2010 US Census population of 14,758 and comprises approximately 5.9 square miles.

When the plan to bring water to the Imperial Valley was set into motion, two early entrepreneurs planned and organized the Imperial Land Company for the purpose of developing towns and farms. Expecting many settlers, the Imperial Land Company plotted and staked out what was to become the City of Imperial as the first town site. The city was eventually incorporated on July 12, 1904 and became the first incorporated city in the valley.

*Source: City of Imperial General Plan Introduction as revised December 1992.*

## City of Brawley

The City of Brawley is located midway between the City of El Centro and the Salton Sea, approximately 13 miles north-northeast of NAFEC. The town was laid out in 1902 as part of the Imperial Land Company's project to bring water to the valley and settle the area for agriculture. It was incorporated in 1908 and, in 2010, had a population of 24,953. It continues its traditional role as a significant agricultural area within the county and is also home to the Pioneers Memorial Hospital and National Beef Packing Company, who, in addition to agriculture businesses, are major employers in the city.

*Source: City of Brawley General 2008 General Plan.*

## City of Calexico

The City of Calexico was incorporated in 1908 as the Imperial Valley continued to grow into an important agriculture area in Southern California. The city is located 10 miles south of El Centro on the U.S.-Mexico border, which it shares with its sister city Mexicali, Mexico. It is 13 miles south-southeast of NAFEC. The city is very closely tied to Mexicali as an American suburb to the much larger Mexican neighbor, while supporting the local agriculture economy of the valley. Calexico is heavily-involved in the transportation of goods across the border as a major border crossing for the maquiladoras located south of the U.S.-Mexico border. This goods transportation is resulting in the conversion of large amounts of previously agricultural land into industrial and warehousing uses to support this economic growth. The 2010 population of Calexico was 38,572.

*Source: City of Calexico 2007 General Plan.*

## City of Holtville

Holtville is a city of 5,939 people, according to the 2010 U.S. Census, located 21 miles east of NAFEC. It was settled in the 1880's by Swiss-German immigrants and was later incorporated in 1908. Early growth was encouraged by its proximity to U.S. Route 80, now Interstate-8 (I-8), and the All-American Canal. The canal supported the growth of the agriculture-based industry, which still dominates the region. The closure of the railroad line running through the town brought an economic downturn in the latter half of the 20th century and high unemployment rates continue to persist.

*Source: City of Holtville 2008 General Plan.*

## City of Westmorland

The City of Westmorland was incorporated in 1934 after being settled as a farming community at the turn of the century. It had a 2010 population of 2,225 and comprises an area of less than one square mile. State Route 86, a major thoroughfare around the Salton Sea, passes through downtown Westmorland towards Brawley. It is located approximately 20 miles north-northeast of NAFEC. One of the city's main employers is the Westmorland Elementary School District.

*Source: City of Westmorland Homepage:  
<http://www.cityofwestmorland.net/about-us/>.*



**Heber Community**

Heber is an unincorporated community located midway between El Centro and Calexico in Imperial County, approximately 15 miles southeast of NAFEC. In 2010, it had 4,275 people, which was an increase of 40 percent from the 2000 population of 2,566. It was one of the original communities founded by the Imperial Land Company in 1903 as part of an effort to bring agriculture to the desert valley. Agriculture remains a significant part of the local economy. The Heber Public Utility District commissioned a Fiscal Analysis Report in 2009 to study the effects of incorporation for the community. Incorporation has yet to be initiated.

*Source: Initial Fiscal Analysis Incorporation of the City of Heber, CA 2009.*

**Seeley Community**

Seeley is a census-designated place in southern Imperial County approximately 12 miles west of El Centro and approximately two miles south of NAFEC. NAFEC was built proximate to Seeley in 1946 and remains an important training center in the southwest region of the U.S. In 2010, Seeley had a population of 1,739. It was first settled with other communities in the valley in the early 1900’s to bring agriculture to the valley. Although agriculture remains an important part of the local economy, high unemployment rates continue to persist in the area.

*Source: Seeley Urban Area Plan 1994*

**2.2 JLUS Community Economic Trends**

The historic economic engine of Imperial County has been the export of agricultural commodities throughout the U.S., which continues to play a significant role in the local economy. In addition to agriculture, the DOD through NAFEC is a major employer in Imperial County and provides over \$105 million annually in economic benefit; more details about economic benefit can be found in Section Three, Military Profile. While the geography and climate of Imperial County have been ideal for irrigated agriculture, the number of agriculture-based jobs has been in steady decline. The resulting diversification of the economy in recent years has provided alternative sources of employment in the sectors of government, education

services, healthcare, social service, and retail trade, which now comprise 65 percent of all non-farm employment.

*Source: Imperial County Comprehensive Economic Development Strategy 2012-2017.*

**Economy**

In 2010, the median household income for Imperial County was only 57.4 percent of California’s median household income. Table 2 compares the changes in median household incomes for the state of California and the communities in the study area.

**Table 2. Median Household Income Change, 2000-2010**

Jurisdiction	2000	2010-2006	Delta	Percent Change
California	\$47,493	\$60,883	\$13,390	28.2%
❖ Imperial County	\$31,870	\$38,685	\$6,815	21.4%
Brawley	\$31,277	\$39,676	\$8,399	27%
Calexico	\$28,929	\$34,848	\$5,919	20.5%
Calipatria	\$30,962	\$38,586	\$7,624	25%
❖ El Centro	\$33,161	\$38,481	\$5,320	16%
Holtville	\$36,318	\$36,202	(\$116)	-.3%
❖ Imperial	\$49,451	\$54,617	\$5,166	10.4%
Westmorland	\$23,365	\$28,571	\$5,206	22.3%

❖ Indicates jurisdiction is a partner in the development of the JLUS.

*Source: California Department of Finance, Housing Characteristics*

All of the communities within the NAFEC JLUS study area, with the exception of Holtville, experienced significant increases in median household income from 2000 to 2010. The median household incomes for Imperial County are derived through several economic sectors within the communities. Significant industries in Imperial County include the federal, state, and local governments; agriculture; and other services. The four largest employers in Imperial County employing between 1000 to 4,999 employees are:

- Calipatria State Prison
- Centinela State Prison
- Maui Harvesting
- National Beef Packing

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The following businesses each employ between 500 to 999 employees:

- NAFEC
- Imperial County Office of Education
- Imperial Date Gardens
- Paradise Casino
- Pioneer Memorial Hospital

*Source: California Employment Development Department,  
<http://www.labormarketinfo.edd.ca.gov/majorer/countymajorer.asp?CountyCode=000025>*



To appropriately develop and assess compatibility issues for the Naval Air Facility El Centro (NAFEC) Joint Land Use Study (JLUS), it is critical to understand the military operations and activities associated with the missions at NAFEC and how those operations interface with nearby communities, located in the Imperial Valley in Imperial County, California.

This section provides a brief overview of the NAFEC mission operational footprint including its associated ranges.

### 3.1 Naval Air Facility El Centro, California

NAFEC is owned by the Department of Defense (DOD), Navy Military Department. The main base occupies 2,686 acres of land with oversight of an additional 54,000 acres of training ranges in California's extreme southeast desert region in Imperial County, California. It is bordered by unincorporated areas of Imperial County within the Imperial Valley. The installation lies approximately 11 miles due west of the cities of El Centro and Imperial.

The terrain surrounding NAFEC includes irrigated agricultural lands and desert with rolling hills and steep mountainous topography. The New River runs west of the installation. Training and maneuver ranges are located on either side of Imperial Valley and the Salton Sea and consist primarily of mountains, except to the east where sand hills and dunes are located, and to the southeast where the Yuma Desert of Arizona and the Gran Desierto of Sonora, Mexico are located. The area surrounding the NAFEC installation is relatively flat with little vegetation.

#### Military Strategic Importance

NAFEC serves as a premier Naval training installation providing realistic training to active and reserve aviation units and activities of the Navy's operating and training forces, other US forces, and allied units. Surrounded by a vast unobstructed desert terrain and limited non-military air traffic, NAFEC plays a key role in aviation initial and refresher training to aviation units from around the world.

**NAF El Centro is an essential Navy asset providing an unparalleled training environment, including 365 days of optimal weather and terrain similar to Afghanistan for US and international pilots.**

#### Military Operations

NAFEC's mission is to provide base support to Naval Aviation Squadrons and maintain target ranges for their weapons and combat air training. NAFEC also supports training of Marine Aviation units, air elements from the U.S. Army, Air Force units, and a Royal Air Force Parachute Training and Testing Unit. NAFEC's primary role is in fleet squadron support, providing an ideal training environment to facilitate initial and refresher aviation training, (including aerial combat maneuvering, air-to-air gunnery and bombing practice, Field Carrier Landing Practice (FCLP), electronic warfare training, and low-level flight training) to visiting aviation units worldwide.

The year-round ideal flying weather and proximity of several instrumented bombing ranges makes NAFEC a strategic asset within the US Navy for the purposes of shore and land naval aviation training. This reliable training environment affords the facility to host up to 1,600 personnel each month (approximately seven to 12 squadrons) to train at NAFEC and achieve the necessary hours towards skills accomplishment in combat aerial maneuvering and scored target bombing practice.



Although NAFEC has a small footprint in Imperial County, the installation supports its military personnel and dependents, civilian personnel, and retirees with administrative and support services provided by the Commissary, Navy Exchange, Medical and Dental Clinics, Consolidated Officer/Chief Petty Officer and Enlisted Club, and a wide variety of recreational activities.

## **Military Mission Footprints**

Mission and training activities at NAFEC generate a number of impacts that can affect the overall quality of life in the surrounding communities. Mission impacts can include noise and vibration from overflight and / or the risk of an aircraft accident from low-level flight operations. Conversely, the military mission is susceptible to impacts created by certain nearby community activities and land use development. There are community activities that can obstruct air space, noise sensitive uses that locate in heightened noise zones, and activities that encourage large congregations of people in areas ill-suited for habitation such as airfield safety zones or range compatibility zones. Understanding the overlapping spatial patterns of these impacts around the installation and ranges is essential for promoting compatible, coordinated, and informed land use decisions. These overlapping spatial patterns comprise the mission footprint.

The mission profile is defined as the area where military operations occur and extend beyond the installation and range boundaries. The comprehensive NAFEC military profile comprises several smaller footprints associated with different training missions and major installation assets including the airfield, ranges, and the airspace.

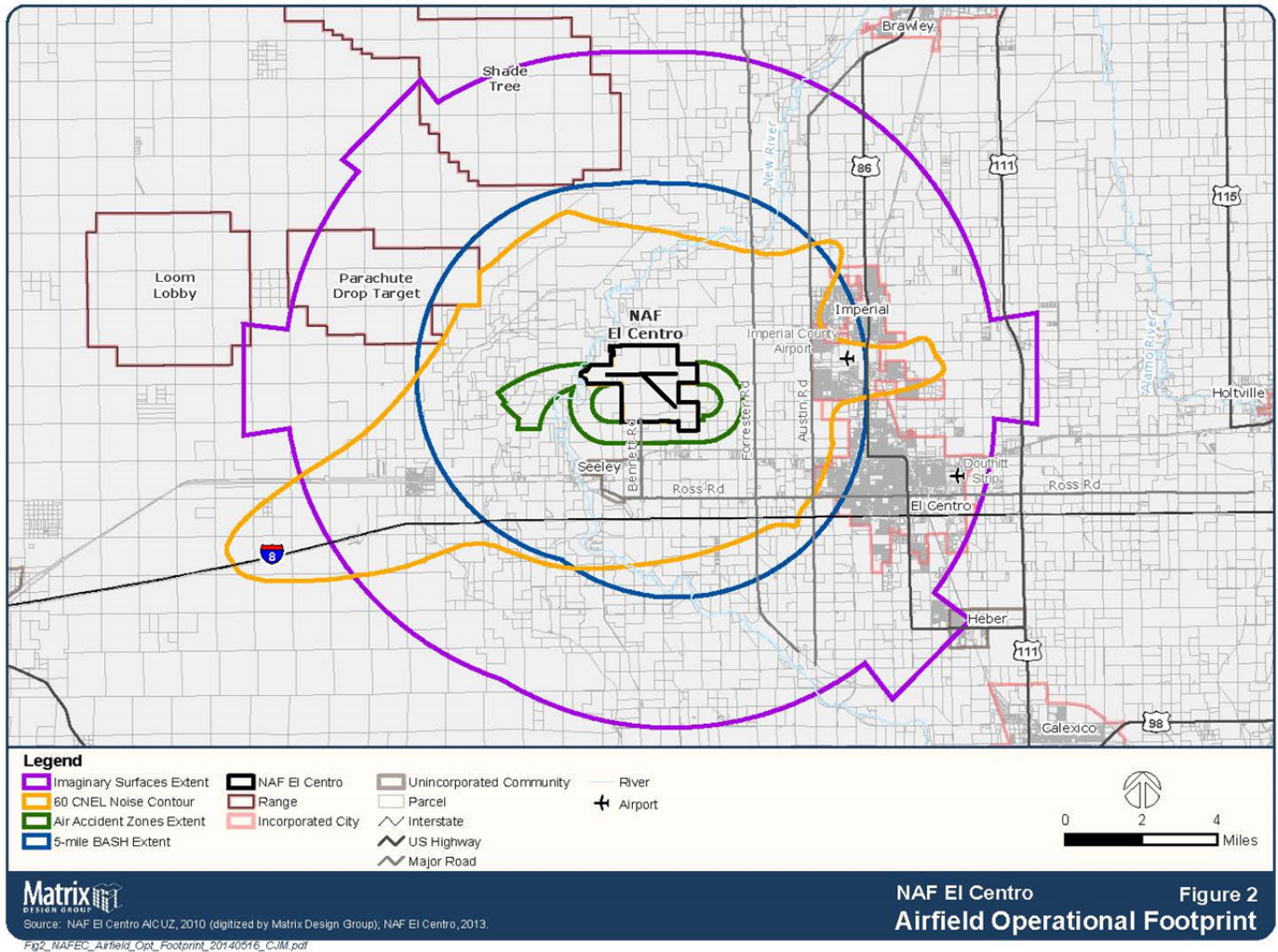
The elements within the footprint are either tangible, meaning that they are either physically seen and / or heard or intangible, meaning that they exist within space without being seen or heard. These elements include imaginary surfaces and noise.

## **3.2 Airfield Operational Footprint**

The NAFEC airfield operational footprint is composed of the mission elements associated with airfield operations including safety zones, noise contours, the Bird Air Strike Hazard (BASH) area, and imaginary surfaces. These elements involve varying levels of land use planning from jurisdictions and the military to enable compatibility with the military mission and activities that occur within these operational footprints. Such planning recommendations include restricting development in the clear zone (CZ) of the airfield and lowering building heights to prevent unnecessary vertical obstructions and promote navigable airspace.

### **Safety Zones**

Safety zones encompass three main components: the Clear Zone (CZ), Accident Potential Zone (APZ) I, and APZ II. These zones extend beyond the ends of the runways and are delineated based upon historical data of aircraft accidents. DOD recommends land uses for these areas to encourage and promote compatibility with military operations and to protect the general welfare. As shown in Figure 2, the CZ extends from the ends of the runways and should be an area restricted from development due to the increased risk of aircraft accidents. The APZ I and APZ II zones extend outward from the CZ respectively, and are less development restrictive since the risk of aircraft accidents are reduced when an aircraft is further away from the runway.



**Aircraft Noise Subzone**

Noise contours were developed as part of the Air Installation Compatible Use Zone (AICUZ) Study prepared for NAFEC. This study was updated in 2010 to consider the introduction of new training missions at the facility. While the loudest noise contours generated by military aircraft operations occur within the NAFEC boundary, a portion of the noise contours extend into the surrounding community. As illustrated in Figure 2, the 60 Community Noise Equivalent Level (CNEL) contour extends approximately 9.5 miles to the west of the airfield boundary, six miles to the east, and four miles to the south. The other contours are inside the 60 CNEL contour indicating louder noise closer to the runways. Therefore,

land uses that may be proposed for areas closer to the runways may be subject to noise impacts generated from aircraft.

**Imaginary Surfaces Subzone**

The Federal Aviation Administration (FAA) has identified certain imaginary surfaces around runways to determine how structures and facilities are evaluated for creating vertical obstructions relative to the surrounding airspace. The imaginary surfaces build upon each other and are designed to eliminate obstructions to air navigation and operations, either natural or man-made. Each type of imaginary surface has different dimensions and planes or slopes in which a structure intruding upon it may be

considered a vertical obstruction as shown in Figure 9 of Section 6, Implementation Plan, of this report. Figure 2 illustrates the outer boundary of NAFEC's imaginary surfaces.

### ***Bird Air Strike Hazard Subzone***

Birds and wildlife can present a hazard to military training and flight operations. Certain types of land uses attract birds and wildlife such as standing water and grasslands. A BASH event can result in damage to an aircraft and land, and cost the federal government in repairs, equipment and lost training. BASH incidents have cost the Navy over \$313 million nationwide in equipment and aircraft damages. NAFEC reported a total of seven bird strikes between 2003 and 2009. Figure 2 illustrates the FAA statistical BASH relevancy area.

### ***NAFEC Ranges and Training Areas***

The vast range and training areas associated with NAFEC allow for training up to 89 squadron detachments totaling over 8,000 personnel with an average stint of 14 days. These squadrons include a variety of national and international defense-related missions, including: Active Army Green Berets, Navy, Air Force parachutists, Marine Corps, Navy SEALs, and British, Canadian, French, German and Italian aviators.

### **Military Operations**

The target areas associated with the NAFEC ranges are sites where the majority of bombing practices and maneuvering activities occur. As illustrated in Figure 3, the ranges comprise various elements that enable tactical training year-round including bull's eye targets, strafe targets, and mobile land targets. These components are contained in the following ranges:

- Target 101 (Shade Tree);
- Target 103 (Loom Lobby);
- Parachute Drop Target;
- Target 68 (Inkey Barley); and,
- Target 95 (Kitty Baggage).

### **Range Operational Footprints**

The NAFEC Range Operation Footprint is composed of mission elements associated with range operations including range compatibility zones (RCZs) and the proposed and existing microwave lines-of-sight.

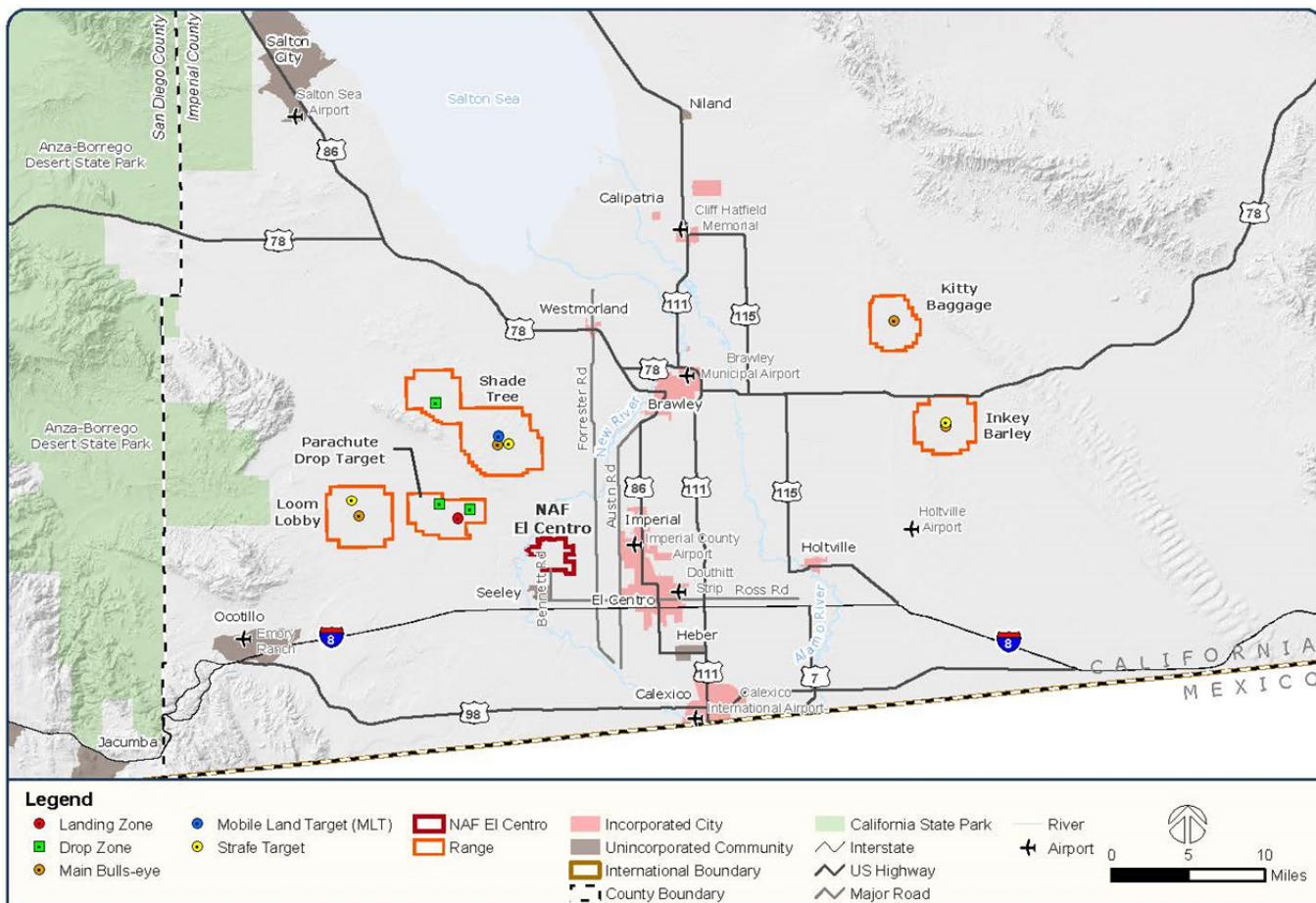
### ***Range Compatibility Zones***

The RCZs for the NAFEC ranges are based on historical data of type of delivery aircraft, the weapon being delivered, and the weapon release components that include the delivery dive angle, altitude, and airspeed at which the weapon is released. The purpose of RCZs is to define areas that provide a level of protection for public health, safety, and welfare relative to ordnance impact areas and recommend compatible land uses to prevent encroachment into range areas.

Figure 4 illustrates the RCZ II and RCZ III footprints that extend beyond the boundaries of Navy-managed land. The RCZ I is contained entirely within the target range and therefore is not mapped as it does not impact off-range land uses. Range Compatibility Zone II is the area of armed overflight. While this area allows for some types of development, it poses safety risks due to the nature of activity that occurs in the area.

Range Compatibility Zone III is the special use airspace (SUA) used by aircraft to perform training missions including access to the range, tactical maneuvering, and separating participating and non-participating aircraft. This zone permits certain types of land uses, but discourages uses that attract large congregations of people.





NAF El Centro Range and Training Facilities **Figure 3**

Matrix DESIGN GROUP  
 Source: NAF El Centro, 2013.  
 Fig3\_NAFEC\_Range\_TF\_20140616\_CJM.pdf

# NAF EL CENTRO JOINT LAND USE STUDY

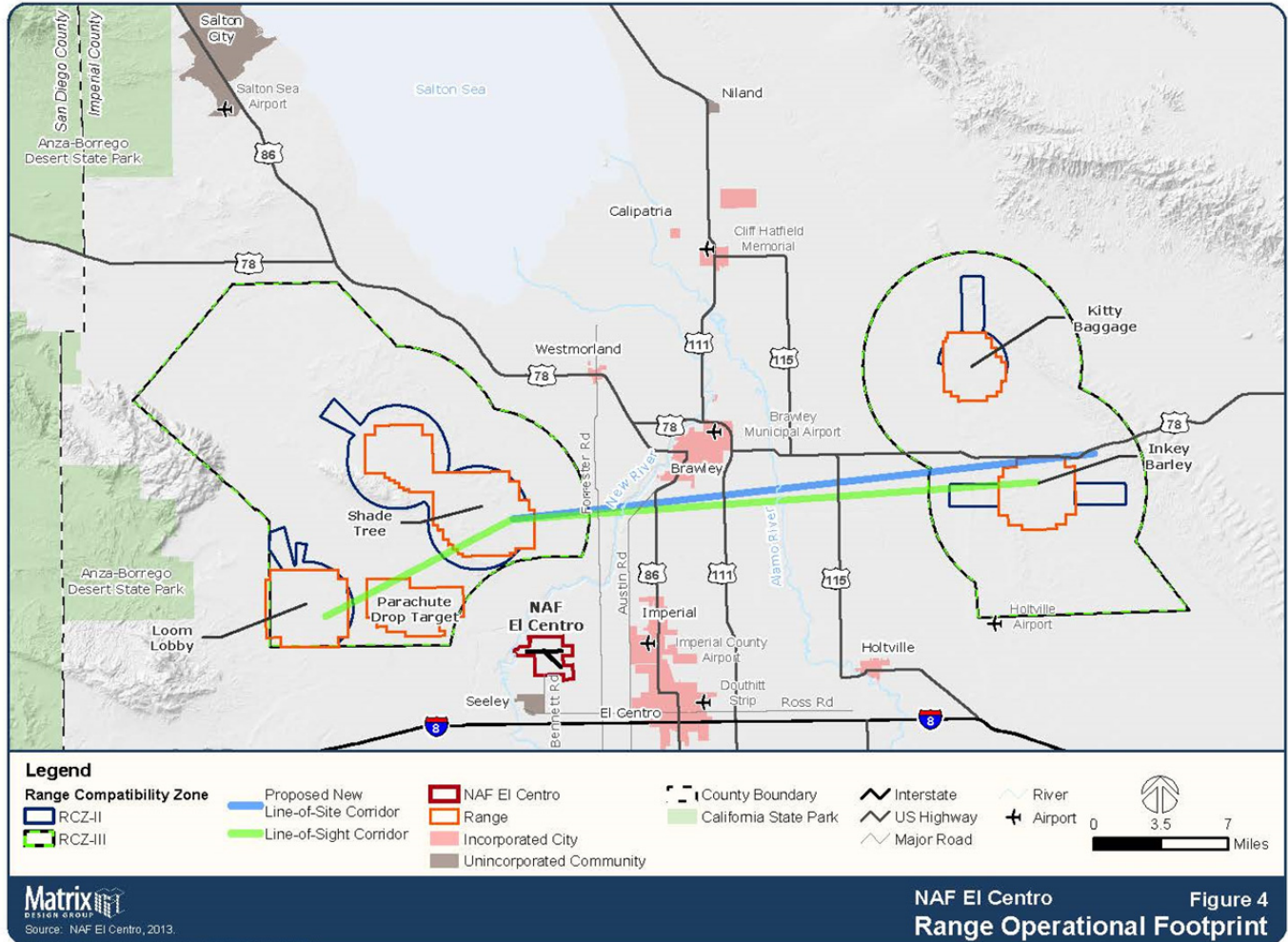


Fig4\_NAFEC\_Range\_Opt\_Footprint\_20140516\_CJM.pdf

## Microwave Line-of-Sight

The Microwave Line-of-Sight footprint is defined as the area in which electromagnetic waves or acoustic waves are transmitted or spread to various communication sites by simple unobstructed horizontal planes at certain elevations. This allows for a clear, unobstructed pathway for the transmission of electromagnetic signals for electronic bombing and target practice scoring.

The height for the existing NAFEC microwave line-of-sight is an elevation of 230 feet. As illustrated in Figure 4, the microwave line-of-sight runs west to east from one communication tower in the Loom Lobby Target to the Shade Tree Target to another communication tower in the Inkey Barley Target. It is important to note that the area in the vicinity of this communication line is free and clear of obstructions that would interfere with communications

during training exercises and evaluation of accuracy of ordnance and maneuvering delivery.

While the existing line-of-sight is clear of vertical obstructions, it experiences occasional interference from meteorological conditions such as extreme variations in temperature. The Navy plans to construct a new replacement tower that will generate a new line-of-sight. This proposed line-of-sight is illustrated in Figure 4 and is based on a preliminary tower location which will be decided as funding becomes available.



### 3.3 NAFEC Operational Airspace

The NAFEC Airspace Footprint is a vast area encompassing a majority of the airspace above Imperial County, California. The airspace in this portion of the state is an asset to the Navy and the DOD since it is mostly unobstructed from development and uncongested by civilian aviation operations. The airspace provides the Navy with the capability to perform a variety of aviation operations, bombing practices, and tactical maneuvering. The different airspaces that allow for the mission-critical aviation training are the military operating areas, restricted airspaces, and the military training routes.

#### ***Military Operating Area***

The Military Operating Area (MOA) for the NAFEC JLUS spans across two states and four counties in the southwestern US:

- Imperial County, CA
- Riverside County, CA
- San Diego County, CA
- Yuma County, AZ

A MOA is the SUA in which military or defense-related aviation occurs for training and / or special operations. This designation of airspace is joint use in that Visual Flight Rules civilian aircraft are not denied access, and Instrument Flight Rules civilian aircraft may be routed through the airspace when approved separation can be provided from the military operations.

MOAs are further defined by usage. For example, special operations or training where target bombing exercises for NAFEC occur is limited to a very small portion of the overall MOA. These special operations are typically performed under restricted airspace (RA) that allows for ordnance and weapon firing. The RA designation is intended to protect the general public from unnecessary impacts associated with these types of exercises. Figure 5 illustrates the footprint of the MOA, including the RAs for the NAFEC training mission.

Understanding this footprint is critical for compatibility planning. While it is not a tangible footprint, it can have tangible impacts due to the altitude at which aviation operations occur. The RAs have a ground-level or ground surface level where aviation operations are authorized to occur. Location, types of development, and other aviation variables should be considered when conducting long-range planning.

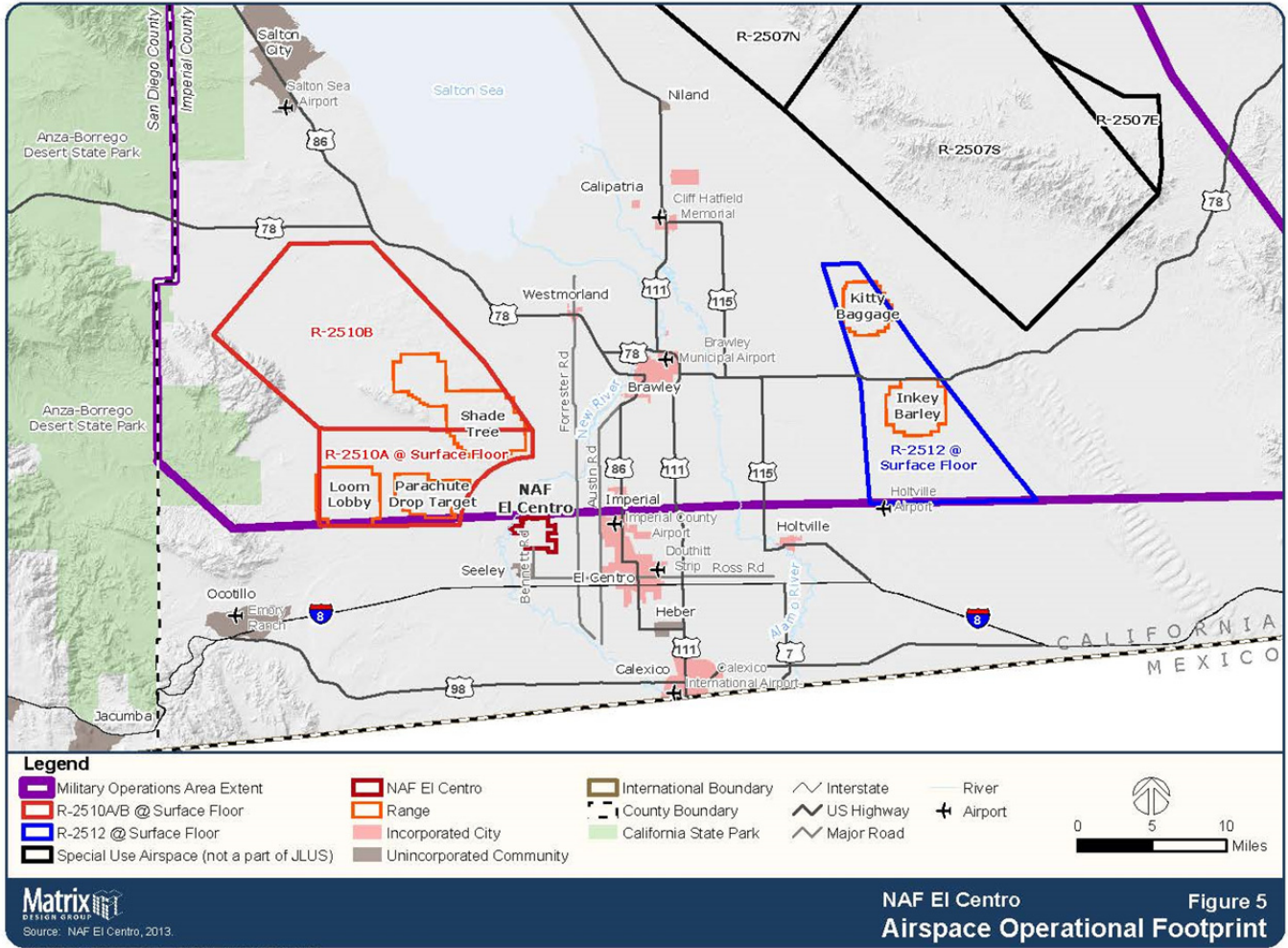
#### ***Military Training Routes***

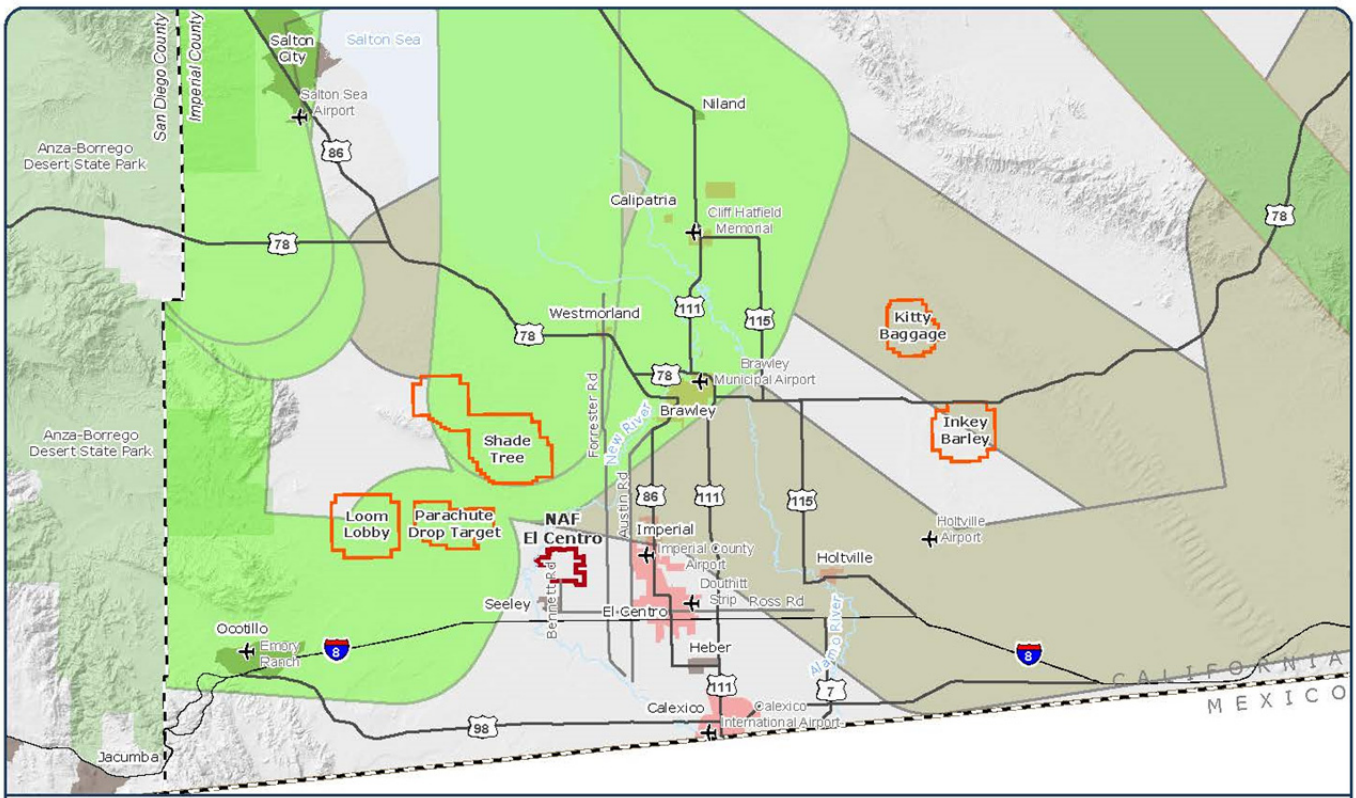
Military Training Routes (MTRs) for NAFEC extend beyond the MOA as illustrated in Figure 6. The operations associated with these MTRs include low-level flight operations and high-speed flyover. These types of operations can generate noise and vibration that can potentially impact proximate land uses. The degree of impact is dependent on variables such as weather, vertical obstructions, and types of aircraft.

For planning purposes, the routes illustrated in Figure 6 represent the MTR corridor – an area from 2.5 to 5 nautical miles (NM) on either side of the centerline, for a total of five to 10 NM wide. This area provides the pilots that train within this area the optimal space to perform operations. This is important to consider as adjacent or proximate land uses may be impacted due to expansive footprint of the MTR corridors. The degree of impacts is dependent on variables such as weather and types of aircraft.



# NAF EL CENTRO JOINT LAND USE STUDY





**Legend**

<span style="display:inline-block; width:15px; height:10px; background-color:lightgreen; border:1px solid black;"></span> Floor Elevation from Ground Level - Surface	<span style="display:inline-block; width:15px; height:10px; background-color:lightcoral; border:2px solid red;"></span> NAF El Centro	<span style="display:inline-block; width:15px; height:10px; background-color:lightpink;"></span> Incorporated City	<span style="display:inline-block; width:15px; height:10px; background-color:lightgreen;"></span> California State Park	<span style="display:inline-block; width:15px; border-bottom:1px solid black;"></span> River
<span style="display:inline-block; width:15px; height:10px; background-color:lightyellow;"></span> Floor Elevation from Ground Level - 200 feet	<span style="display:inline-block; width:15px; height:10px; border:2px solid orange;"></span> Range	<span style="display:inline-block; width:15px; height:10px; background-color:lightgrey;"></span> Unincorporated Community	<span style="display:inline-block; width:15px; border-bottom:1px dashed black;"></span> Interstate	<span style="display:inline-block; width:15px; height:10px; border:1px solid black; border-radius:50%;"></span> Airport
<span style="display:inline-block; width:15px; height:10px; background-color:lightgrey;"></span> Floor Elevation from Ground Level - 300 feet	<span style="display:inline-block; width:15px; border-bottom:1px dashed black;"></span> International Boundary	<span style="display:inline-block; width:15px; height:10px; border:1px solid black;"></span> County Boundary	<span style="display:inline-block; width:15px; border-bottom:1px solid black;"></span> US Highway	<span style="display:inline-block; width:15px; border-bottom:1px solid black;"></span> Major Road



**Matrix** DESIGN GROUP  
 Source: NAF El Centro, 2013.  
 Fig\_ NAFEC\_MTR\_20140516\_CJM.pdf

**NAF El Centro**      **Figure 6**  
**Military Training Routes**

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There are many existing tools that can be used to encourage, promote, and manage compatibility between military installations and their neighboring communities. These tools exist at the federal, installation, state, regional, and local level and are used for compatibility purposes to guide every day land use and operational decisions in communities and on military installations.

The following pages list some of the key tools that are currently, or are recommended to be more efficiently, utilized or enhanced for the compatibility issues identified by the NAFEC JLUS process. The tools listed in this section are not exhaustive, but are meant to provide a brief overview of the primary tools currently utilized in the JLUS Study Area.

## **4.1 Federal Programs and Policies**

The federal programs and policies are provided for by the various arms of the federal government. These tools authorize other federal, state, and local agencies to implement regulatory measures and policies to protect the multiple resources that are involved in land use and military compatibility planning. The intent of these regulatory measures and policies include the protection and preservation of the quality of life and general welfare of the public and the myriad of natural resources including land, water, and airspace.

These tools assist land use decision makers and planners of all levels of government to make informed decisions that enable compatible land use development between the military and the communities that benefit from the military's operations.

Federal programs and policies were evaluated in the NAFEC JLUS to assist in determining where areas of improvement could enable better land use planning at the local level. Some key federal programs that were evaluated in the NAFEC JLUS process include the Air Installations Compatible Use Zones (AICUZ) Program, the Range Air Installations Compatible Use Zones (RAICUZ)

Program, and the Public Law 104-201, the National Defense Authorization Act.

### **Air Installations Compatible Use Zones**

The AICUZ program involves coordinating the efforts of base commanders and local community leaders and other government agencies to encourage compatible development of land adjacent to military airfields. The AICUZ program seeks to protect the health, safety, and welfare of civilians and military personnel by encouraging land development compatible with aircraft operations, while protecting the public investment in the installation. This program recommends compatibility measures for both NAFEC and surrounding communities. The AICUZ program also recommends land uses that are compatible with specific elements of military airfields including elevated sound levels, accident potential zones, and obstruction clearance criteria.

The AICUZ provides recommendations to local government and other entities for actions they can take to further compatibility goals and objectives of their general plans, zoning ordinances, and other land use regulations.

### **Public Law 104-201, House of Representatives 1308; (The National Defense Authorization Act), As Amended and Cooperative Agreement**

Public Law (PL) 104-2001, also known as the El Centro Naval Air Facility Ranges Withdrawal Act, authorized the Secretary of the Navy to notify Bureau of Land Management (BLM) and the Bureau of Reclamation (BOR) under the direction of the Secretary of the Interior, that the Navy intends to withdraw and reserve certain lands located on 46,600 acres (Target Ranges —Shade Tree, Loom Lobby, Inkey Barley, and Kitty Baggage) in Imperial County for military training purposes.



Management of these lands is accomplished through a cooperative agreement or Memorandum of Understanding (MOU) between the BLM, BOR, and the US Navy consistent with the Federal Land Policy and Management Act. This agreement designates the BLM as the management entity with concurrence from NAFEC. This El Centro Naval Air Facility Ranges Withdrawal Act is effective until 2022.

## Range Air Installations Compatible Use Zones

The Range Air Installation Compatible Use Zone (RAICUZ) report is a DOD program that identifies safety zones and noise contours associated with military-related operations and training exercises such as weapons delivery and target bombing practice conducted on a military range. The primary purpose of a RAICUZ is to provide local government and land management agencies with recommended land uses to protect the general welfare of the public from impacts related to military training and operations and preserve the viability of the military mission and readiness. The RAICUZ for the NAFEC training ranges is currently being developed with an expected draft in 2014.

## 4.2 Naval Air Facility El Centro Tools

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The NAFEC installation tools provide guidance for land uses and development activities on the installation. These tools govern land use decisions that occur inside the fence line or within the boundary of the military mission footprint in relation to the military mission or proposed military mission.

These tools provide guidance and establish measures for standard operating procedures during certain events such as a bird air strike hazard condition and / or the parameters for conducting missions within the Range Complex. There are various installation tools that are instrumental in assisting and guiding land use decisions as they interface with the military mission.

## NAF El Centro Bird/Animal Aircraft Strike Hazard Plan

The NAFEC Bird / Animal Aircraft Strike Hazard (BASH) Plan was recently updated in June 2012. The NAFEC BASH plan establishes the Bird Hazard Working Group (BHWG) and identifies several points of contact and their corresponding role and responsibility as the organization monitors and manages the incidence of bird / wildlife strikes. This plan also outlines the concept for BASH awareness through the use of a warning system to include the use of “stop-light” colors to indicate the level of hazard to pilots and aircraft. The NAFEC BASH Plan provides clear guidance about communicating the hazard level through the established warning system to the Air Traffic Control Tower (ATCT) and subsequently to approaching and departing pilots.

## NAF El Centro Range Complex Management Plan

The NAFEC Range Complex Management Plan identifies the key military components of NAFEC ranges and their associated capabilities. These components include restricted airspace, military training routes, and information about the targets and other military training equipment. This plan is the guiding framework for management of the range components in association with aviation and training operations. In addition, this plan identifies the controlling agencies for air traffic communication and use of the ranges and airspace. This plan is essential for understanding the breadth of the NAFEC military mission.

## 4.3 State of California

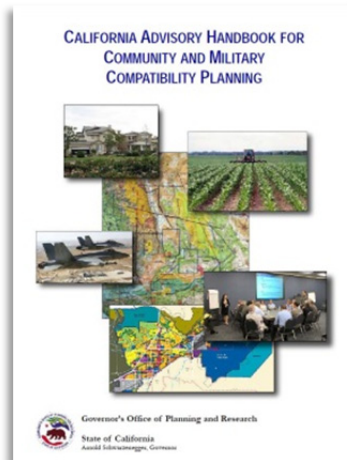
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The state tools provide further assistance and protection of land uses in the State of California. The tools authorize or mandate local counties and cities to provide for the protection of the State’s valuable industries including the DOD and agriculture. In addition, the State’s tools require communities and developers to protect and preserve the State’s natural resources including land and water by establishing further regulatory measures to ensure the natural environment is preserved and protected from over consumptive practices.

Some essential State tools that were analyzed in this JLUS include the Military Compatibility Handbook and the Williamson Act.



### California Advisory Handbook for Community and Military Compatibility Planning



The requirement for a compatibility handbook was reflected in Government Code §65040.9, which stated that the California Governor's Office of Planning and Research (OPR) was to prepare "an advisory planning handbook for use by local officials, planners, and builders that explains how to reduce land use conflicts

between the effects of civilian development and military readiness activities ...".

Completed in 2006, The California Advisory Handbook for Community and Military Compatibility Planning is a milestone toward encouraging local decision-makers, land use planners, developers, and the military to work together to achieve sustainability of military installations. It was designed to serve as a resource to help develop processes and plans that sustain local economies, safeguard military readiness, and protect the health and safety of California's residents. The handbook is a useful tool for development of a JLUS as it details the different compatibility issues that should be evaluated and the types of compatibility tools available to address these issues.

### The California Land Conservation Act / The Williamson Act

The California Land Conservation Act, or the Williamson Act, was enacted in 1965 to protect California's agriculture industry. It enables local governments to enter into contracts with private landowners to designate certain parcels of land exclusively for agriculture use or open space. This protection results in lower property tax assessments for landowners, and a state subsidy to local governments for reduced tax revenues associated with this designation. However, the Imperial County Board of Supervisors voted in 2010 to withdraw the protection of agricultural lands offered by the Williamson Act, which will change the development patterns throughout the county

as these lands become available for development in 2016. The implications of the Act's legacy in the county are important to understand as development moves forward.

## 4.4 California Local Jurisdiction Planning Tools

### General Plans, Zoning, and Subdivision Regulations

The planning tools used by the study area jurisdictions were analyzed and categorized as permanent, semi-permanent, or conditional. In California, as in many other states, cities and counties may exercise land use and development regulatory authority. Cities and counties are legally bound by statute to adopt general plans.

California Government Code also provides cities and counties with the authority to regulate the subdivision of land, including managing roads, streets, drainage, and rights-of-way. In general, land cannot be divided in California without local government approval. Dividing land for sale, lease or financing is regulated by local ordinances based on the State Subdivision Map Act (commencing with Government Code Section 66410). The local general plan, zoning, subdivision, and other ordinances govern the design of the subdivision, the size of lots, and the types of improvements (street construction, sewer lines, drainage facilities, etc.). Applications for land divisions must be submitted to the local government for consideration in accordance with the local subdivision ordinance and the Subdivision Map Act. A public hearing must be held prior to approval of a tentative tract map. Parcel maps may also be subject to a public hearing, depending upon the requirements of the local subdivision ordinance. There are additional requirements for installation of infrastructure. Final approval and recording and specific requirements for the parcel map may vary among jurisdictions.

## **Building Codes**

Building codes are intended to regulate building construction, materials, alteration and occupancy to ensure health, safety and welfare. Building codes can regulate building construction such that it is compatible with military operations, including sound attenuation for residences within applicable noise zones. Building codes, similar to other regulatory tools, are considered semi-permanent.

## **Airport Land Use Compatibility Plan**

The Airport Land Use Compatibility Plan (ALUCP) serves many purposes, including: identifying the various airports in the region, including military airports; explaining the plan's relationship to local jurisdictions relative to their plans, policies, and procedures; outlining the geographical area of concern; identifying types of airport impacts; listing types of actions and development projects requiring review; and supporting compatibility criteria for noise, safety, airspace protection, and overflight. The plan also provides individual airport policies, aircraft accident characteristics, safety compatibility policies, noise characteristics, and compatibility policies and implementation strategies for local jurisdictions.

The ALUCP outlines the airport impacts on surrounding land uses including noise, vibration, odors, and risk of accidents. Conversely, many land uses can cause direct or indirect impacts on airports resulting in growth and safety issues. Incompatible development near an airport can lead to a politically contentious relationship between an airport and surrounding communities, resulting in complaints and demands for restrictions on airport operations that may threaten the airport's viability and functional capability in the local economy.

## **Annexation**

Local annexation policy in California is shaped by the decisions of the Local Agency Formation Commission (LAFCO) which coordinates local boundaries to simplify government structure and organize spheres of influence (SOIs).



## 5.1 Identification of Compatibility Issues

Compatibility, in relation to military readiness, is defined as the balance or compromise between community and military needs and interests. The goal of compatibility planning is to promote an environment where both entities communicate, coordinate, and implement mutually supportive actions that allow them to achieve their respective objectives.

Numerous factors influence whether community and military plans, programs, and activities are compatible or in conflict. For the NAFEC JLUS, 24 compatibility factors were used to confirm the presence of, and establish priorities for, the key Study Area issues.

Of the 24 compatibility factors considered, three were determined to be inapplicable to this JLUS: Frequency Spectrum Capacity, Marine Environments, and Water Quality / Quantity. The remaining factors are:

- Interagency Coordination / Communication
- Land Use
- Safety Zones
- Vertical Obstructions
- Infrastructure Extensions
- Local Housing Availability
- Anti-Terrorism / Force Protection
- Noise
- Vibration
- Dust / Smoke / Steam
- Light and Glare
- Alternative Energy Development
- Air Quality
- Frequency Spectrum Interference / Impedance
- Public Trespassing
- Cultural Resources
- Legislative Initiatives
- Biological Resources
- Scarce Natural Resources
- Land / Air Spaces
- Roadway Capacity

### Issues

At the initial committee workshops and subsequent public workshops, groups were asked to identify the location and type of compatibility issues they thought existed today, or could occur in the future, using the 24 factors as a guide. A number of individual issues were identified for each factor. The Noise and Vibration factors were combined based on commonality of impacts. Additional technical issues were analyzed and added based on available information and similarity with other community JLUS experiences around the country.

### Setting Priorities

The public and committees provided input on establishing priorities for the compatibility factors and issues. Priorities were used to determine the type and timing of associated actions for each issue. Three criteria were utilized to prioritize the compatibility factors:

- **Is it a Current Impact?** Each issue was considered based on its current impact to the compatibility of either NAFEC or the surrounding areas. Issues posing the most extensive operational constraints or community concerns constitute the highest priority.
- **Location.** This criterion assesses the proximity of each issue in relation to activities occurring on NAFEC and its ranges and surrounding areas. Issues occurring near the installation are often more critical than those occurring remotely.
- **Potential Impact.** Although an issue may not present a current threat to the installation or the community, it may possess the ability to become an issue in the future. Should conditions change, adjacent or proximate development increase, or other issues become apparent, new conflicts with existing or future missions and operational activities at NAFEC could arise. Issues were considered based on their future potential using the same criteria that were established for current impact.

With a comprehensive list of issues to address in the JLUS, the public and TWG identified the relative priority of each compatibility factor. The PG finalized the prioritization of issues based on public and TWG input, dividing the factors into four categories:

- **High-Priority.** Due to the nature of these issues, an immediate response is warranted. Issues identified as High Priority are to be initiated during the next 1-2 years beginning in 2014.
- **Medium-Priority.** To be initiated in 3-5 years after completion of the JLUS (initiate by 2017).
- **Low-Priority.** To be initiated within 10 years of completion of the JLUS (initiate by 2024).
- **Awareness Factors.** Awareness factors are those issues that pose a minor threat to NAFEC and/or the surrounding jurisdictions and are documented in this JLUS for the purpose of maintaining operational awareness. These items do not require action at the current time, but should be monitored in the long term.

## 5.2 NAF El Centro Compatibility Issues by Factor

### High Priority Issues

**Interagency Communication / Coordination** is the communication and collaboration between multiple agencies engaged in a common goal. For the NAFEC JLUS, interagency coordination represents several challenges for both NAFEC and surrounding communities. The lack of a coordinated approach when planning activities including proposed development and infrastructure extensions can result in incompatibilities for sustaining the NAFEC mission and growth of the surrounding communities. The lack of information sharing such as important geographic information system data used for planning and mapping can potentially result in incompatible development near the installation and ranges. The following Interagency Communication / Coordination issues were identified:

- There is a lack of military representation on the Airport Land Use Commission (ALUC).
- There is no military representation or technical support to the county or cities' planning commissions.

- A comprehensive set of Geographic Information Systems (GIS) layers for all military operation areas is not available to jurisdictions and agencies.
- No formal procedures are established between the county, communities, and NAF El Centro to ensure appropriate coordination on planning matters.
- There is no special disclosure statement required for properties near NAF El Centro.
- There is a lack of public information available on military operations and associated compatibility issues.
- Rotary-wing noise and low-level helicopter flights associated with Imperial County Airport generate public concerns and complaints.
- There is no formal coordination between the Navy and local, state, federal agencies.

**Land Use** is the impetus for the NAFEC JLUS. The JLUS assesses various components of land use to determine compatibility between unique military missions and the economic vision of the surrounding jurisdictions. This assessment considers accomplishing mutual goals and benefits to facilitate the military's continued training mission for readiness while allowing for economic development in adjacent communities. Certain land uses are sensitive to noise, vibration, and other impacts generated by military training exercises. In contrast, certain land uses employed by communities can limit military training activities by encouraging annexation practices or sphere of influence growth in areas critical to the military mission. The following Land Use issues were identified:

- There is no formal agreement that restricts development west of Austin Road.
- Potential for incompatible development occurring in the areas surrounding NAF El Centro and ranges.
- Imperial County Conditional Use Permit regulations allow for land uses that are incompatible with the NAF El Centro.
- Concern regarding the potential for incompatible land uses around NAFEC ranges and under associated airspace.
- Mobile homes within noise contours.
- Avigation Easements.

- Decommissioning of Agricultural Lands.
- Disposal of Bureau of Land Management (BLM) lands.
- Incompatible General Plan and Zoning Land Use Designations.

**Vertical Obstructions** are structures that impede navigable airspace for both military and civilian aircraft operations. Structures that pose a threat to the airspace for military and civilian aviation include tall wind turbines and wireless communication towers. It is important to ensure the communities adjacent to NAFEC plan accordingly to safeguard against unintended safety concerns relative to structures that obstruct navigable airspace. The following Vertical Obstructions issues were identified:

- Concern about the expansion of large-scale solar energy and wind energy projects in the area.
- Height regulations are not adequate to protect flight operations.
- Communication towers outside scenic corridors.

**Infrastructure Extensions** represent compatibility issues for NAFEC based on their proposed or planned location. Transportation routes and electrical and water infrastructure impact land uses differently based on location, magnitude of the improvements, and the resulting outcome. Infrastructure extensions tend to catalyze development in the surrounding communities. This development can create incompatibilities with NAFEC military operations. The following Infrastructure Extensions issues were identified:

- Potential extension of electrical, wastewater or water services to installation.
- Forrester Road expansion between Worthington Road and Highway 8 could increase development pressure east of the installation.
- Concern about Evan Hewes Road expansion between Silsbee Road and Austin Road.
- Concern about Austin Road expansion from McCabe Road to State Route-78 / 86.

**Public Trespassing** is the unauthorized entry onto lands belonging to other landowners. NAFEC annually experiences several instances of public trespassing due to the absence of adequate perimeter fencing around targets and expansive range areas. The desert location and sand dunes encourage recreationalists and campers to engage in off-highway vehicle (OHV) and other outdoor activities. Trespassing on NAFEC represents safety concerns for both the public and the military since the installation conducts bombing training exercises. Trespassing can pose a threat to human life and impede military training due to unauthorized entry into the training ranges and targets. The following Public Trespassing issues were identified:

- Trespassing on range areas.
- Vandalism on range lands.
- Signage and fencing on ranges.

**Legislative Initiatives** are issues that require legislative action or amendments to ensure compatibility factors are addressed within local jurisdictions. The Withdrawal Act for the BLM land that has been withdrawn for military use in Imperial County will expire in the near future. The following Legislative Initiatives issue was identified:

- BLM withdrawal agreement of the Military Influence Area will expire in 10 years.

**Medium Priority Issues**

**Safety** issues are generated by both military and civilian land uses. Safety concerns relevant to military operations include development (i.e. even the stacking of hay bales and other such commodities) near or adjacent to the runway in areas where development is strongly discouraged such as the Clear Zone. Safety issues are also evaluated based on the land uses located near active runways, such as water features, that can attract birds and wildlife to this critical aviation area where low-speed low-altitude aircraft perform operations. The following Safety issues were identified:

- Restoration projects on the New River could attract birds into critical flight operation areas at end of NAF El Centro runways.
- Portion of Clear Zone lies outside the installation.



**Noise and Vibration** are the result of both military training exercises and construction and development activities. These factors can be incompatible with sensitive land uses. Noise that is loud and extending into night hours can disrupt the lives of the public. Vibration can disrupt daily living activities and in extreme cases cause structural damage. The JLUS strives to balance community quality of life with mission operations and readiness.

The following Noise and Vibration issues were identified:

- Low-level helicopter flights to NAF El Centro.
- Portions of unincorporated Imperial County and cities of El Centro and Imperial are inside 60+ decibel (dB) CNEL noise contour.
- Noise associated with range operations.
- Lack of building code requirements for sound attenuation.

**Light and Glare** can be generated by both military and civilian uses. Light and glare from commercial lighting affects nighttime military operations - both ground and air training exercises. New commercial development can employ un-shielded or non-cutoff lighting producing ambient urban sky glow which degrades the effectiveness of night vision devices used to train in realistic, combat environments. Certain types of alternative energy development can create glare for pilots in training, posing a safety hazard to the pilot and the aircraft. The following Light and Glare issues were identified:

- Concern about light and glare near all ranges.
- Imperial County and the cities of El Centro and Imperial do not have dark sky ordinances.
- Alternative energy projects that create excessive light and/or glare conditions.
- Screening / downward lighting requirements absent in new construction and street lighting.

**Alternative Energy Development** is the likelihood of development of alternative energy conversion units within the NAFEC JLUS Study Area. Alternative energy includes wind, solar, and geothermal energy facilities. There are several geothermal facilities in the study area located in areas where low-altitude aviation operations can occur, creating a vertical obstruction and / or visual impairment for the pilot. The uncoordinated placement of these facilities can lead to incompatibilities with the

NAFEC mission. The following Alternative Energy Development issues were identified:

- Continued solar and other alternative energy development encourages expansion of transmission capabilities.
- BLM permitting process for alternative energy development can promote less than optimal siting decisions.

**Competition for Land and Air Spaces** is defined as multiple uses of both land and air spaces. The NAFEC JLUS evaluated land and air space shared between military and civilian activities relative to commercial / civilian airport operations in the region. The NAFEC JLUS assessed several land areas used for recreational purposes such as OHV activities due to the geography. The following Competition for Land and Air Spaces issues were identified:

- Recreational uses adjacent to NAF El Centro ranges.
- New Airports.

## Low Priority Issues

**Anti-Terrorism / Force Protection** is the protection and security of the nation's defense assets. Issues are created when national defenses can be breached or compromised, such as development close to the fence line where the public can view operational activities. It is important for the U.S. Navy and NAFEC to address these issues to ensure military readiness. The following Anti-Terrorism / Force Protection issues were identified:

- Concern over the location of new development near the fenceline.

**Dust, Smoke, and Steam** is a by-product generated by both military and civilian activities. Dust and smoke is not only a visibility nuisance, but an air quality issue for Imperial County. Steam from geothermal plants located in the county can be incompatible with low-level flight operations and create visual impediments for pilot navigation. Steam, if too dense, can also affect the aircraft's electrical system. The following Dust, Smoke, and Steam issues were identified:

- Steam plume from geothermal plants.
- Concern about dust generated from military training at NAF El Centro ranges.

**Frequency Spectrum Interference / Impedance** is the interruption of electronic signals due to the existence of a structure or object between the source of the signal and its destination (receptor). The NAFEC JLUS analyzed the existing obstructions with the installation’s line-of-sight to determine compatibility, as well as the likelihood of future incompatibilities with these structures. Such obstructions can include wind turbines, cell towers, and tall buildings depending on the ground-level elevation at the site and the numbers of structures within a confined area. The following Frequency Spectrum Interference / Impedance issues were identified:

- Concern about potential impedance with line-of-sight antennas.

**Cultural Resources** are those cultural and historic resources that require management and preservation under the National Historic Preservation Act. NAFEC contains many cultural and historical sites requiring coordination and compliance with state and federal laws. In addition, Fort Romauldo Pacheco was identified as a resource requiring protection from vibrations generated by low-flying aircraft. The following Cultural Resources issue was identified:

- Impacts to Fort Romauldo Pacheco.

**Biological Resources** constitutes a minor threat for NAFEC and the surrounding communities in the JLUS area. NAFEC complies with federal and state laws by mitigating impacts of various species, including the Burrowing Owl and the Flat-tailed Horned Lizard (FTHL). There are several burrowing owl burrows on the installation which NAFEC has mitigated. Competition for the land in this area can lead to issues with preserving the FTHL and delaying military training operations. The following Biological Resources issue was identified:

- Management of sensitive species and habitat can impact NAF El Centro mission.

**Roadway Capacity** can create incompatibilities between military operations and civilian activities due to limited roadway capacity. Roadway Capacity was evaluated for coordination of improved public roadways to meet the needs of both military and civilian uses. The following Roadway Capacity issue was identified:

- Major development or increase in mission at base would require roadway maintenance or enhancement.

**Awareness Issues**

**Local Housing Availability** is the availability of eligible and qualified housing units to U.S. Navy and other allied forces. While military personnel from visiting units reside on-base, mission increases will need to be coordinated with communities so that they can plan and prepare for additional housing to accommodate any growth in personnel. The following Local Housing Availability issue was identified:

- Providing future housing demand information to local jurisdictions in timely manner.

**Air Quality** is an awareness issue for NAFEC due to the dust and smoke generated by bombing training exercises and / or the emitting of debris and particulate matter into the air. Conversely, construction, agricultural, and development activities can also emit airborne debris, compromising the air quality in Imperial County.

Imperial County is currently designated as marginal ground-level Ozone (O<sub>3</sub>) standards (2008); nonattainment for 24-hour Particulate Matter, PM 2.5; moderate nonattainment for 8-hour O<sub>3</sub>; and serious nonattainment for Particulate Matter PM10. The following Air Quality issue was identified:

- Concern about air quality issues associated with potential increased military training operations.

**Scarce Natural Resources** are natural resources, such as water, land, and air that must compete with both military operations and community demand. As development increases and / or changes, or expansions in the NAFEC missions occur, natural resources become increasingly utilized and are not always considered in planning. The following Scarce Natural Resources issue was identified:

- Mining activities.





## 6.1 Implementation Plan

This section identifies and organizes the recommended courses of action (strategies) developed through a collaborative effort between representatives of applicable local jurisdictions, NAFEC, state and federal agencies, local organizations, the general public and other stakeholders that own or manage land or resources in the region. Because the NAFEC JLUS is the result of a collaborative planning process, the recommendations in this section represent a true consensus plan; a realistic and coordinated approach to compatibility planning developed with the support of stakeholders involved throughout the process.

JLUS strategies incorporate a variety of actions that can be taken to promote compatible land use and resource planning. Upon implementation, existing and potential compatibility issues arising from the civilian / military interface can be removed or significantly mitigated. As such, the recommended strategies function as the heart of the JLUS document and are the culmination of the planning process.

*It is important to note that the JLUS is not an adopted plan, but rather a recommended set of strategies which should be implemented by the JLUS participants to address current and potential future compatibility issues.*

The key to the implementation of the strategies is the establishment of the JLUS Coordination Committee to oversee the JLUS execution. Through this Committee, local jurisdictions, NAFEC, and other interested parties can continue their initial work together to establish procedures, recommend or refine specific actions for member agencies, and make adjustments to strategies over time to ensure the JLUS continues to resolve key compatibility issues through realistic strategies and implementation.

### Implementation Plan Guidelines

The key to a successful plan is balancing the different needs of all involved stakeholders. Several guidelines formed the basis upon which the strategies were developed:

- In concert with the California state laws, the Implementation Plan was developed with the understanding that the recommended strategies must not result in a taking of property value. In some cases, the recommended strategies can only be implemented with new enabling legislation.
- In order to minimize regulation, where appropriate, strategies were recommended only for specific geographic areas to resolve the compatibility issue.
- Similar to other planning processes that include numerous stakeholders, the challenge is to create a solution or strategy that meets the needs of all parties. In lieu of eliminating strategies that do not have 100 percent buy-in from all stakeholders, it was determined that the solution / strategy may result in the creation of multiple strategies that address the same issue but tailored to individual circumstances.

### Military Compatibility Areas

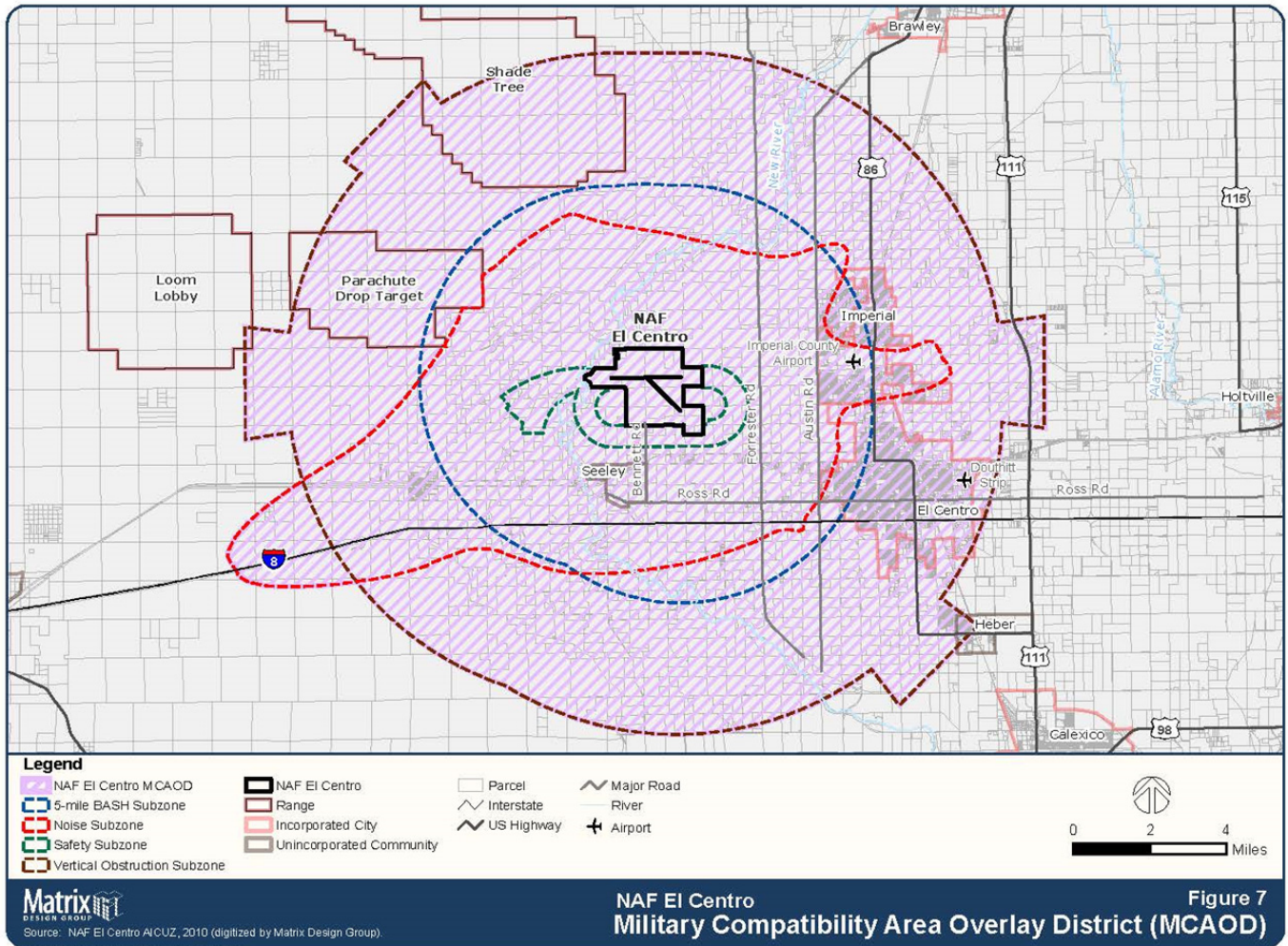
In compatibility planning, the term “Military Compatibility Area” (MCA) is used to formally designate a geographic area where military operations may impact local communities, and conversely, where local activities may affect the military’s ability to conduct its mission. The MCAs are geographic areas where the majority of the recommended strategies apply. The proposed NAFEC Military Compatibility Area Overlay District (MCAOD) is an area that incorporates all MCAs and / or subzones.

The MCAOD and MCAs are used to define the geographic areas where the JLUS strategies are to be applied. This technique ensures the strategies are applied to the appropriate areas, and that locations deemed not subject to a specific compatibility issue are not adversely impacted by regulations inappropriate for their location or circumstance.

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**NAFEC Military Compatibility Area Overlay District**  
An MCAOD is the proposed zoning tool for implementing the policies and regulations associated with each NAFEC

MCA. The MCAOD is designed to reflect the area comprising all combined MCAs (see Figure 7).



## NAF El Centro Military Compatibility Areas

An MCA is a formally designated geographic planning area where military operations may impact local communities and conversely, where local activities may affect the military's ability to carry out its mission. An MCA is designated to accomplish the following:

1. Promote an orderly transition between community and military land uses so that land uses remain compatible.
2. Protect public health, safety, and welfare.
3. Maintain operational capabilities of military installations and areas.

4. Promote an awareness of the size and scope of military training areas to protect areas separate from the actual military installation (i.e., critical air space) used for training purposes.
5. Establish compatibility requirements within the designated area, such as requirements for sound attenuation and aviation easements.

An MCA delineates a geographic area where strategies are recommended to support compatibility planning and JLUS goal and objectives.



To better reflect the area of interest and focus implementation, several MCAs are further divided into subareas.

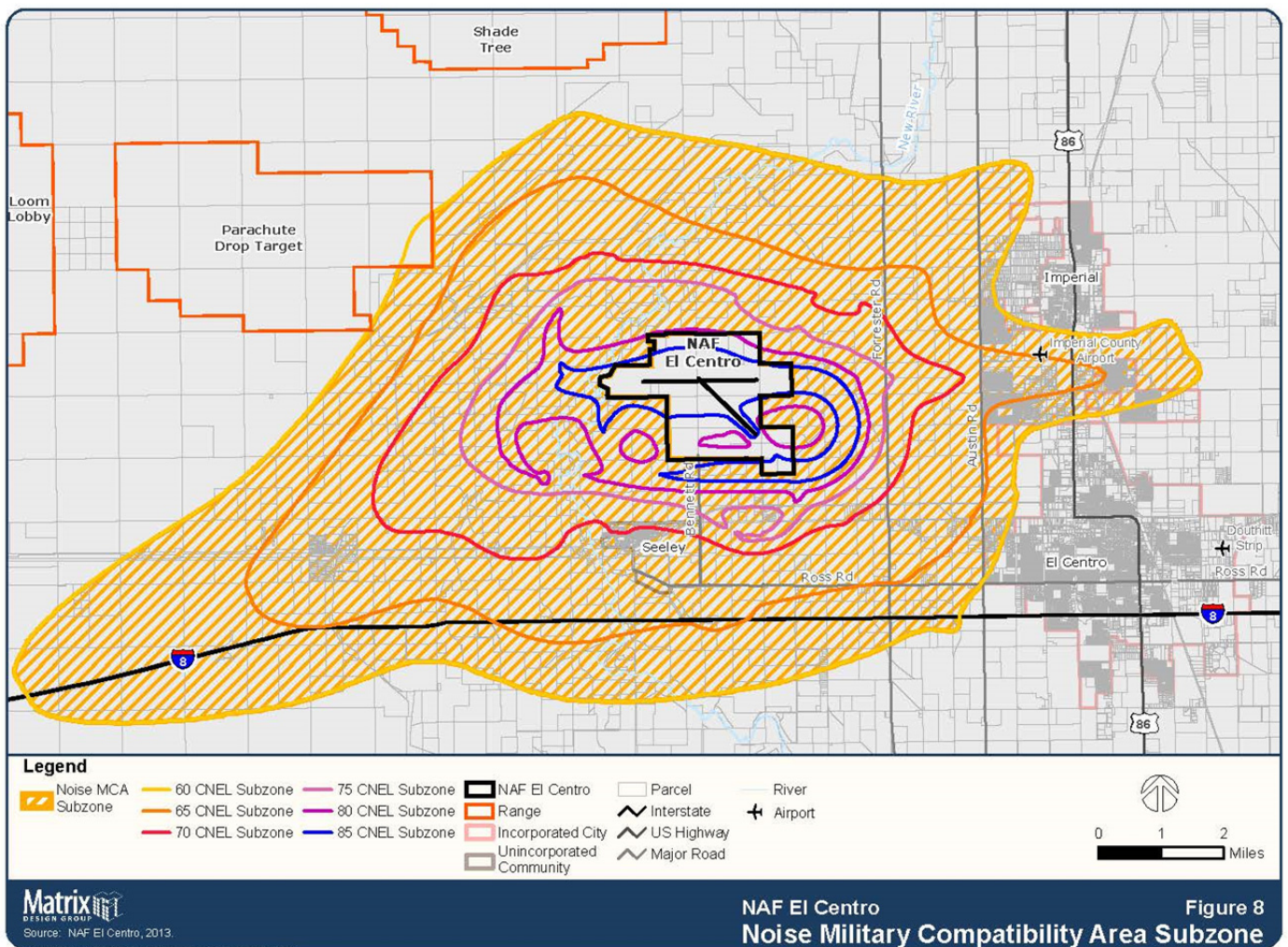
The five MCAs and one military compatibility development coordination area (MCDCA) used in the NAFEC JLUS Implementation Plan are identified below, and shown and described on the following pages:

- Noise MCA and Subzones
- Safety MCA
- Vertical Obstruction MCA and Subzones

- Bird Air Strike Hazard (BASH) MCA Subzone
- Range Compatibility MCA and Subzones
- Military Compatibility Development Coordination Area MCDCA and Subzones

**Noise Military Compatibility Area**

The Noise MCA includes all land located off-installation within the 60 CNEL noise contour for NAFEC Airfield as described in Chapter 3 of the Background Report. Other CNEL noise contours represent subzones for which residential development and other noise sensitive land uses within this MCA and subzones may be subject to sound attenuation measures to reduce noise impacts. Figure 8 illustrates the Noise MCA.



NAF El Centro **Figure 8**  
Noise Military Compatibility Area Subzone

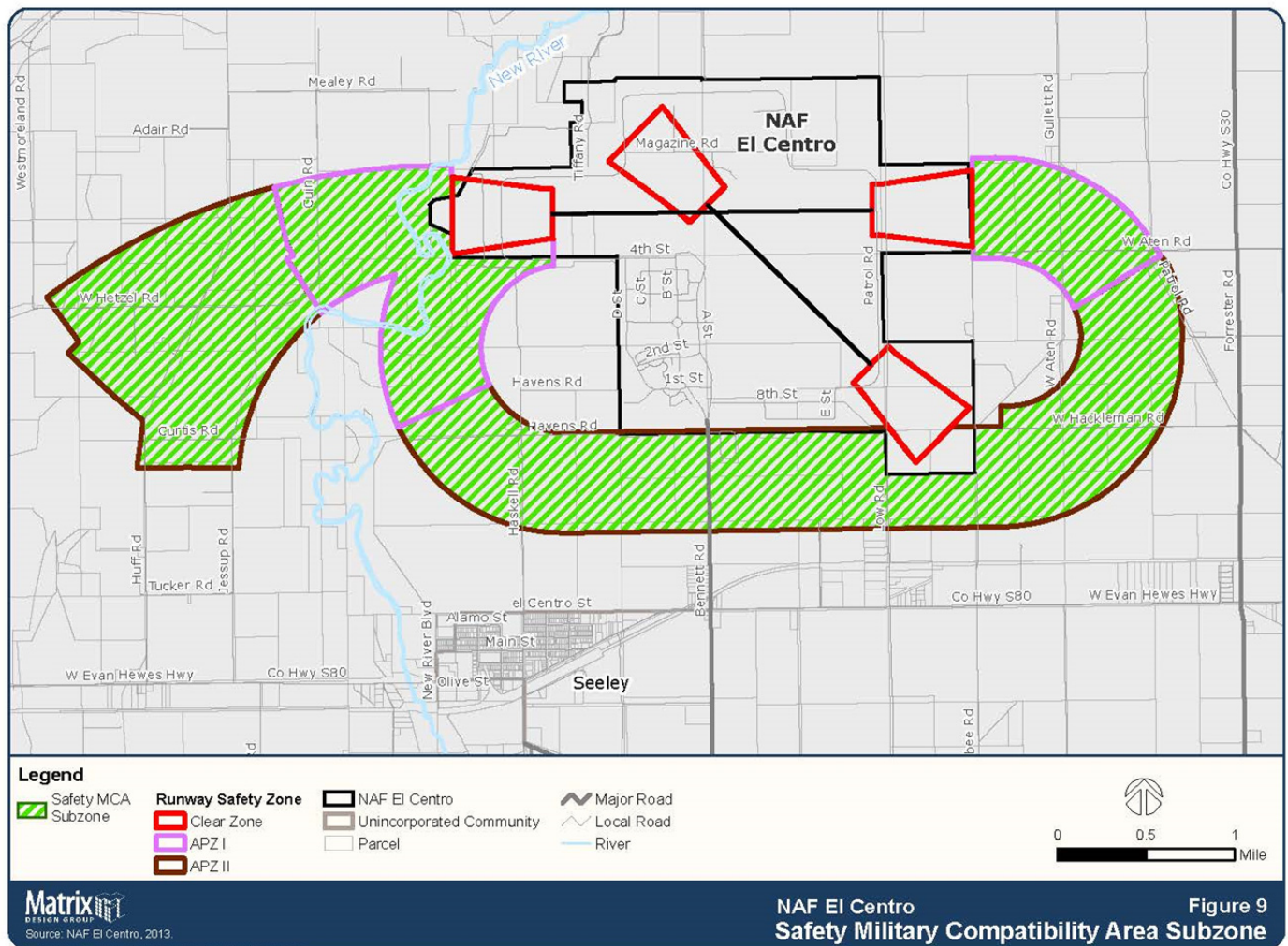
# NAF EL CENTRO JOINT LAND USE STUDY

## Safety Military Compatibility Area

The Safety MCA addresses areas that could be affected by low-speed and low-altitude aircraft associated with military training operations. As described in Chapter 3 of the Background Report, the safety zones include the Clear Zone and Accident Potential Zones I and II. These areas are characterized by a high risk for aircraft collisions due to location and types of aviation operations that occur.

Strategies recommended for this area include lower densities of no more than one dwelling unit per 40 acres consistent with the existing zoning. Prescribed heights of structures would need to be coordinated with NAFEC.

The safety MCA represents the areas where aircraft accident potential is likely to occur off the installation. The width of this area measures a little less than half a mile or 2,284 feet, and is characterized by the flight tracks associated with Field Carrier Landing Practice exercises or touch and go operations—a half oval around the southern portion of the installation as indicated in Figure 9. New development located within this MCA may be subject to lower densities and potentially other regulations to control attractants for birds and other wildlife. Technical background information is provided in Chapter 5 of the Background Report.

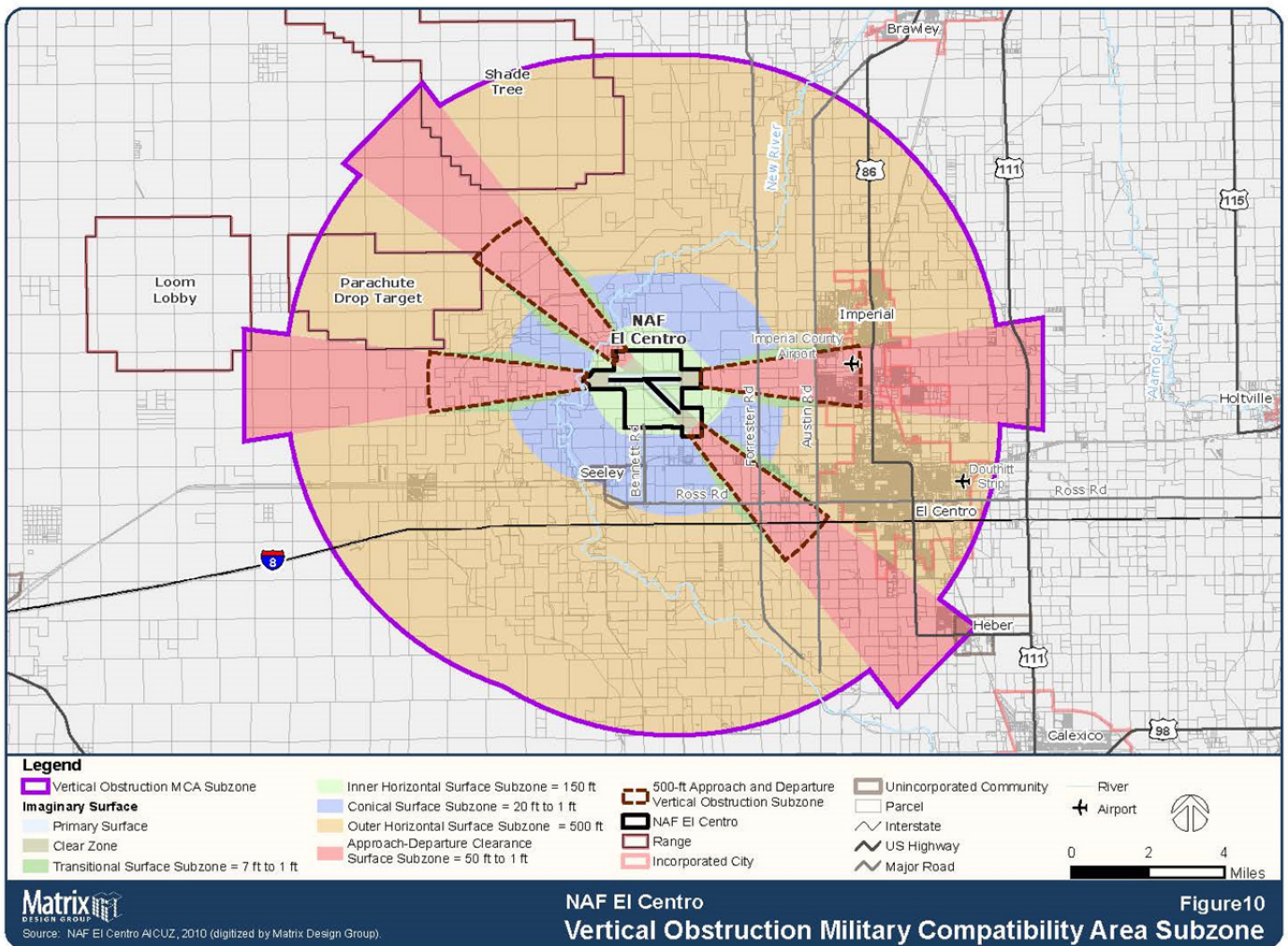




**Vertical Obstruction Military Compatibility Area**

The Vertical Obstruction MCA serves to protect important flight areas for aircraft that operate out of NAFEC. Within this MCA, strategies address height restrictions to avoid

vertical obstructions. The Vertical Obstruction Military Compatibility Area Subzones at NAFEC are depicted in Figure 10.



NAF El Centro  
**Vertical Obstruction Military Compatibility Area Subzone** Figure 10

**500-Foot Vertical Clearance**

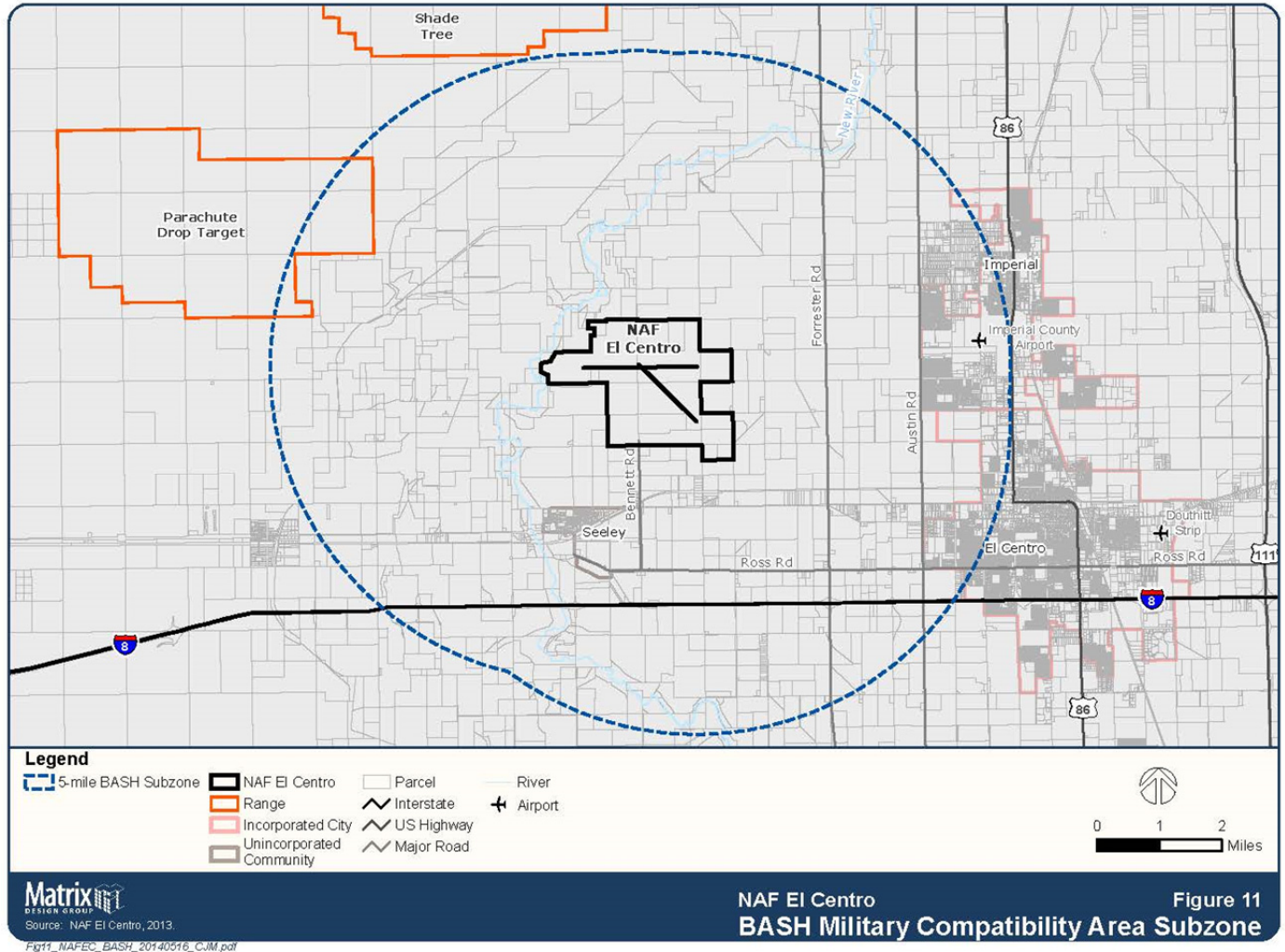
The 500- foot clearance zone is characterized by the vertical limits of the most expansive imaginary surface—the approach and departure clearance surface. In this surface, for every 50 horizontal feet extending from the end of runway, development can extend one vertical foot. This area is approximately 4.75 miles away from the centerline of the runways. Land uses should be coordinated with NAFEC to ensure safety to the public and pilots is of highest priority.

**BASH Military Compatibility Area Subzone**

The BASH MCA subzone is characterized by areas that could be affected by bird and wildlife strikes due to low-level flight operations. These operations can impact community activities and conversely, community activities could adversely affect operations in this area if not coordinated with NAFEC. The BASH MCA subzone is illustrated in Figure 11.



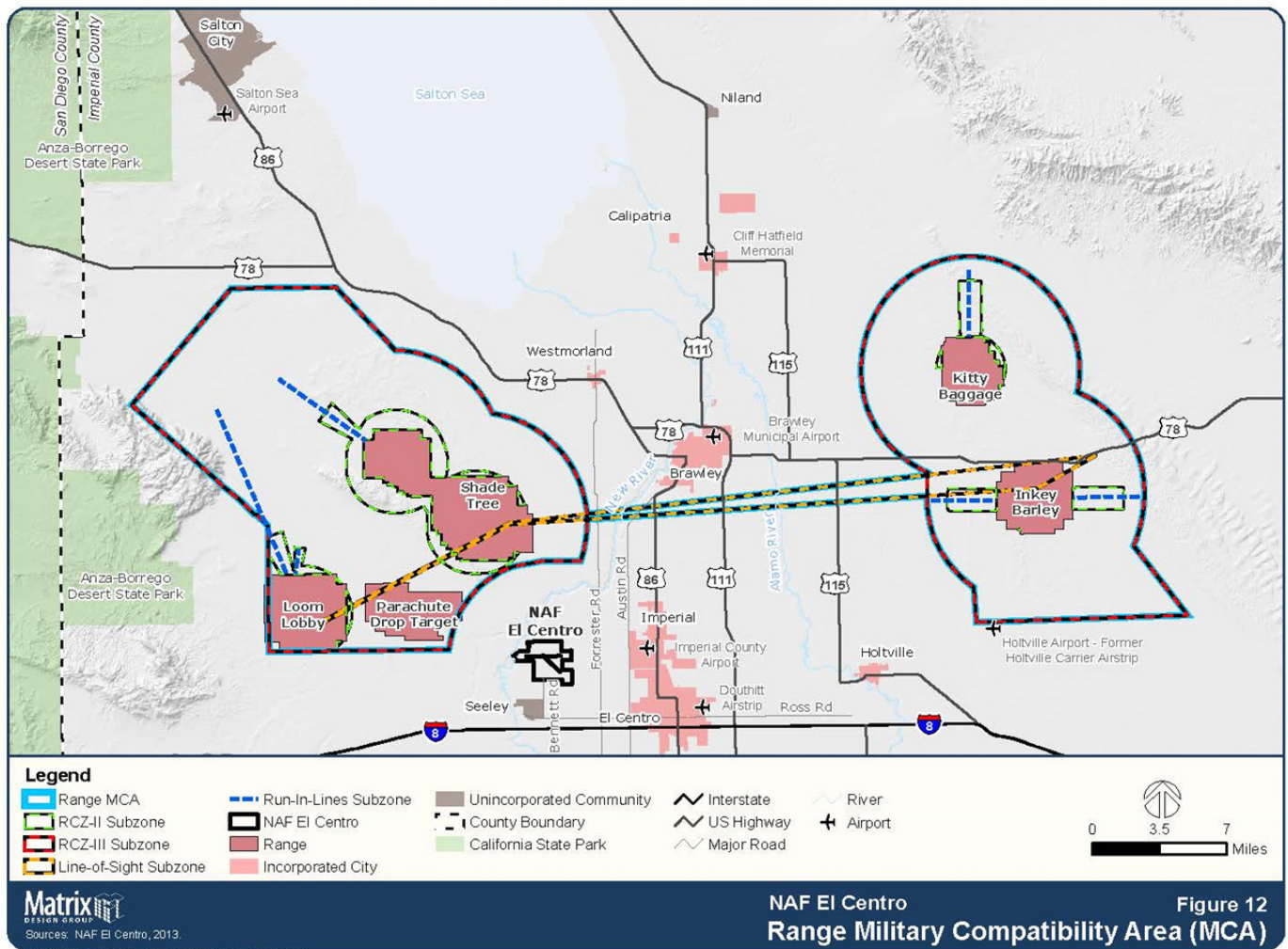
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The BASH subzone represents a 5-mile statistical relevancy area from the center of the runway prescribed by the Federal Aviation Administration. Land uses in this area may be subject to additional regulations to prevent attractants of birds and wildlife that could increase the risk of safety to pilots and aircraft flying at lower speeds and altitudes.

### **Range Military Compatibility Area**

The Range MCA encompasses the land area within RCZs II and III and a half mile buffer on either side of the existing and proposed line-of-sight antenna. The range MCA consists of three subzone areas designed to provide protection relative to density, intensity, and height of land uses proposed for these areas as depicted in Figure 12. Strategies associated with this MCA relate to land use planning, height restrictions, and densities (specifically land uses attracting large gatherings of people).



NAF El Centro Range Military Compatibility Area (MCA) Figure 12

**RCZ II Subzone**

The RCZ II Subzone represents the area of armed overflight. Land uses that attract large groups of people are incompatible with this subzone and development should not occur within 500 feet on either side of the run-in line centerline of this area. Strategies for this area include a recommended development density of one dwelling unit per acre, but no more than two dwelling units per acre.

**RCZ III Subzone**

The RCZ III Subzone represents the restricted airspace and maneuvering area for pilots in training. This subzone area is intended for lower density development to protect the safety of pilots and public. Densities would be limited to 1-2 dwelling units per acre. Land uses where people

congregate are strongly discouraged. Structures of any height should be coordinated with the NAFEC.

**Line-of-Sight Subzone**

The Line-of-Sight Subzone represents a half mile area on both sides of the existing and proposed antenna line-of-sight centerline at an elevation of 230 feet for the existing line-of-sight. This area should be free from interference from tall structures, buildings, and natural objects such as trees. Technical background information is provided in Chapter 5 of the Background Report.

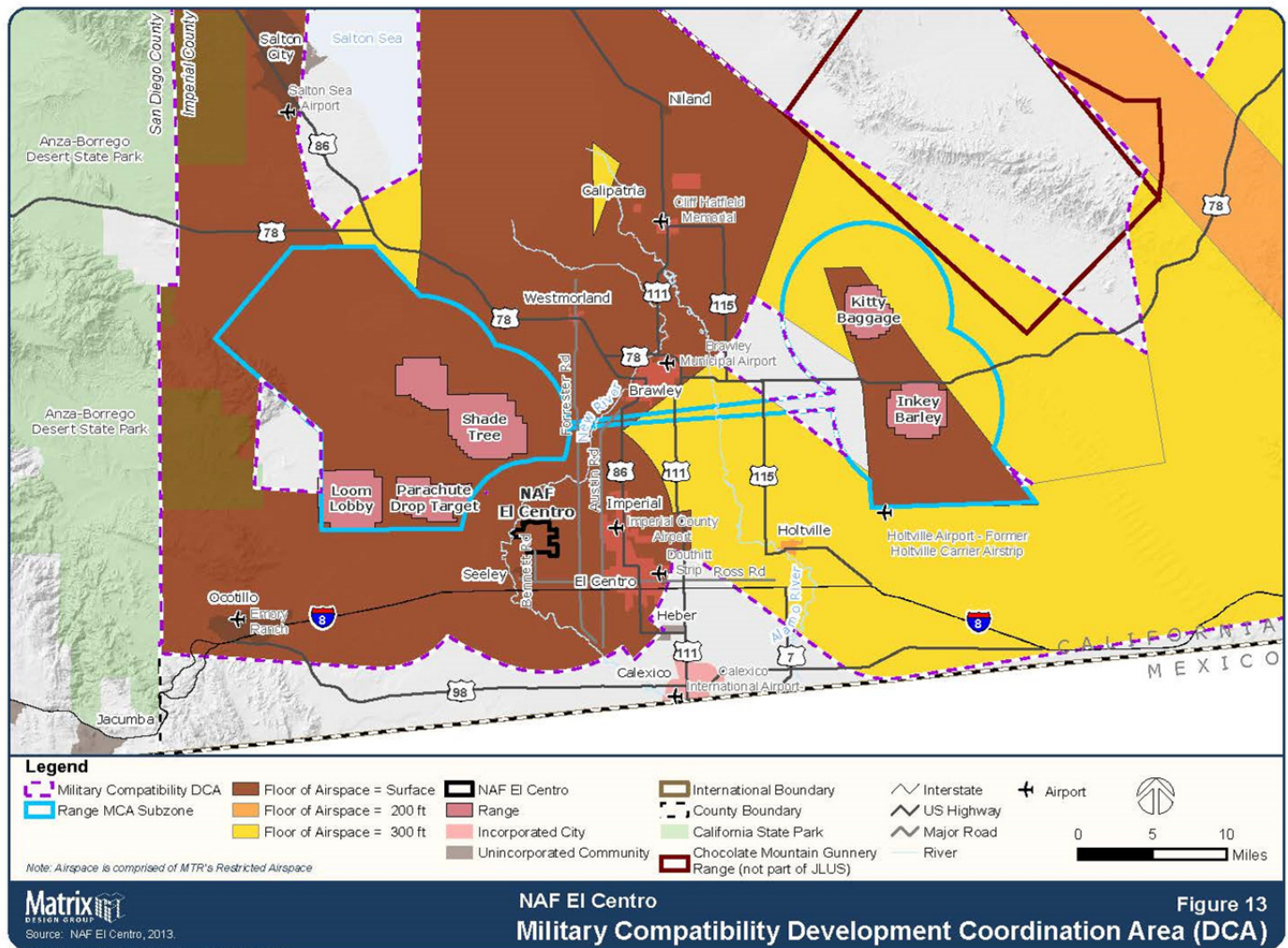


# NAF EL CENTRO JOINT LAND USE STUDY

## Military Compatibility Development Coordination Area

The Military Compatibility Development Coordination Area (MCDCA) is an area characterized by military surface- and low-level flight operations in Imperial County. This area,

illustrated in Figure 13, covers the majority of Imperial County. Land uses in this area should be coordinated with the NAFEC.



Strategies recommended for this area include case-by-case coordination with the U.S. Navy at NAFEC and possible height restrictions, lower densities and intensities, light controls, and coordination with the DOD Clearinghouse for Alternative Energy Development. This MCDCA is characterized by development evaluation criteria. The criteria for local governments to evaluate the potential for incompatibility of proposed projects that may be located in these areas include:

- Navy RCZ land use compatibility guidelines
- Height of buildings and structures
- Density and intensity of land uses
- Land uses that encourage large congregations of people
- Noise sensitive land uses
- Land uses that attract bird and wildlife
- Electromagnetic interference
- Light and glare
- Land uses that generate steam plumes
- Electromagnetic interference (frequency spectrum)
- Land uses that attract birds and wildlife



## 6.2 How to Read the Implementation Plan

The strategies developed were designed to address the issues identified during preparation of the JLUS. The purpose of each strategy is to:

1. Avoid future actions, operations, or approvals that would cause a compatibility issue,
2. Eliminate an existing compatibility issue,
3. Reduce the adversity of an existing issue, or
4. Provide for on-going communications and collaboration.

To make the strategies easier to use, they are presented in a table format that provides the strategy and information on when and how that strategy will be implemented. Figure 14 highlights the format and content of the strategy table, and the following paragraphs provide an overview of how to read the information presented within each strategy.

**Issue #.** The issue # is an alpha-numeric number that provides a unique reference for each specific issue and strategy.

**Type of Strategy.** This column identifies the type of strategy being recommended. The column contains one of the following acronyms to represent the tool type:

- Acq – Acquisition
- CIP – Capital Improvement Program
- Comm – Communication and Coordination
- Disc – Real Estate Disclosures
- Hab – Habitat Conservation Tools
- Leg – Legislative Tools
- MOA – Memorandum of Agreement
- MOU – Memorandum of Understanding
- MCA – Military Compatibility Area
- Plans – General / Comprehensive / Master / Hazard / Airport Plans
- Zon – Zoning Ordinance / Subdivision Regulations

Figure 14. NAFEC Strategy Key

Issue or Strategy #	Type of Strategy	Military Compatibility Area (MCA) or Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	NAF El Centro	BLM	CALTRANS	IID
AE-2A	Plans / Zon	Study Area MC-DCA	<b>Coordinate with DOD Siting Clearinghouse.</b> Amend general plans and land use ordinances to incorporate procedures for coordinating renewable energy development applications with the DOD Siting Clearinghouse.	2017	□	□	■				

**Issue / Strategy Number:** Alpha-numeric identifier used for reference.

**Type of Strategy:** An abbreviated description of the type of strategy used.

**Military Compatibility Area:** Where each strategy applies. For example, if only MCA is indicated, then that strategy only applies to areas within the MCA.

**Strategy:** Description of the strategy.

**Timeframe:** The expected initiation date for strategy implementation.

**Responsible Party:** The primary and partner responsible agencies. For example, the ■ denotes the primary agency who will take the lead in implementation. The □ denotes partner agency who will assist the primary agency in implementation.

**Military Compatibility Area (MCA)** – This column indicates the applicable MCA, if the strategy relates to an area outside NAFEC. Additional details on MCAs are provided under the previous “Compatibility Areas” section.

**Strategy** – In bold type is a title that describes the strategy. This is followed by the complete strategy statement that describes the action needed.

**Timeframe** – This column indicates the projected timeframe of each strategy. The timeframes are described below:

2014	Strategy to be initiated by 2014 (within 1-2 years of JLUS completion)
2017	Strategy to be initiated by 2017 (3 to 5 years from JLUS completion)
2024	Strategy to be initiated by 2024 (10 years from JLUS completion)
On-going	An on-going implementation action

**Responsible Party** – At the right end of the strategy table are a series of columns, one for each jurisdiction, military entity, agency, and organization with responsibility for implementing the JLUS strategies. If an entity has responsibility relative to implementing a strategy, a mark is shown under their name. This mark is one of two symbols that represent their role. A solid square (■) designates that the entity identified is responsible for implementing the strategy. A hollow square (□) designates that the entity plays a key supporting role, but is not directly responsible for implementation.

The responsible parties are identified by their assigned acronym in the heading at the top of each page.

BLM	Bureau of Land Management
CALTRANS	California Department of Transportation
IID	Imperial Irrigation District
NAFEC	Naval Air Facility El Centro

## Strategies Prioritization Description

- **High-Priority.** Due to the nature of these issues, an immediate response is warranted. Issues identified as High Priority are to be addressed during the next 1-2 years with a completion date of 2014.
- **Medium-Priority.** To be addressed 3-5 years after completion of the JLUS (complete by 2017).
- **Low-Priority.** To be addressed within 10 years of completion of the JLUS.
- **Awareness Factors.** Awareness factors are those issues that pose a minor threat to NAFEC and / or the surrounding jurisdictions and are documented in this JLUS for the purpose of maintaining an operational awareness. These items do not require action to address at the current time, but should be monitored long-term.





Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>ALTERNATIVE ENERGY DEVELOPMENT</b>											
AE-A	Zon	MCDCA	<p><b>Require Non-reflective Panels on new Solar Development Projects in the County.</b></p> <p>Land use and zoning ordinances need to require the use of non-reflective construction materials for all new solar energy project within the MCDCA. Ordinances should also be amended to require review and coordination by Navy prior to issuing a permit for all commercial alternative energy developments in the study area.</p>	2017			■				
AE-B	Plans	MCDCA	<p><b>Develop Alternative Energy Directives.</b></p> <p>BLM should develop directives / regulations that establish controls for lighting on energy facilities, both exploratory and permanent, to ensure lighting is downward facing or shielded to minimize off-site light and glare.</p>	2015					■		
AE-C	Plans / Zon	MCDCA	<p><b>Update Geothermal / Alternative Energy &amp; Transmission Element and Amend Geothermal Development Ordinance.</b></p> <p>Imperial County should update its Geothermal / Alternative Energy &amp; Transmission Element and amend the geothermal development ordinance to:</p> <ul style="list-style-type: none"> <li>Restrict siting of alternative energy developments within the MCDCA subzone that has an airspace floor of surface</li> <li>Establish regulations for lighting on energy facilities, both exploratory and permanent, to ensure lighting is downward facing or shielded to minimize off-site light and glare</li> <li>Require measures that mitigate steam plumes from being a visual impairment, including utilizing dry cooling techniques in the winter</li> </ul>	2017			■				
AE-D	Plans / Zon	MCDCA	<p><b>Coordinate with DOD Siting Clearinghouse.</b></p> <p>The DOD Siting Clearinghouse requirements and standards published in Title 32, Code of Federal Regulations, Part 211 shall advise and guide the process to facilitate the early submission of renewable energy project proposals to the Clearinghouse for military mission compatible review.</p> <p>Amend applicable general plans, Resource Management Plans (RMP), Airport Land Use Compatibility Plans (ALUCP), Capital Improvement Plans (CIP), and land use ordinances to incorporate procedures for coordinating alternative energy development applications with the DOD Siting Clearinghouse.</p>	2017	■	■	■		■		■

# NAF EL CENTRO JOINT LAND USE STUDY

Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>ANTI-TERRORISM / FORCE PROTECTION</b>											
AT-A	MOU		<p><b>Coordination with the Navy Regarding Review and Approval of Proposed Discretionary Projects Adjacent to the NAFEC Fence Line.</b></p> <p>As part of the MOU between the County and the Navy, include language stating that the County will coordinate with the Navy regarding any discretionary projects that are proposed adjacent to the NAFEC fence line. The coordination would address heights of nearby development considering ground-level elevation at the site as well as adequate setbacks and barriers to preserve the security of the NAFEC mission.</p>	2014			■				
<b>BIOLOGICAL RESOURCES</b>											
BIO-A	Comm	Study Area	<p><b>Coordination on Sensitive Biological Resources.</b></p> <p>BLM, US Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) should continue to coordinate with the Navy on changes to resource management (including monitoring requirements) for inclusion in the installation's Integrated Natural Resources Management Plan.</p> <p>Other partners: USFWS, CDFW</p>	Awareness				■	■		
<b>INTERAGENCY COMMUNICATION / COORDINATION</b>											
COM-A	MOA	Study Area	<p><b>Planning Board Representative.</b></p> <p>Provide for a Navy representative, when appropriate and available, to the planning commissions, city councils, and Imperial Board of Supervisors (and other advisory boards, as appropriate) within the MCAOD and the MCDCA to review and comment on proposed development projects or plan revisions affecting NAFEC and associated ranges.</p> <p>This support may extend to other planning entities, such as IID and BLM.</p> <p>The Navy representative will provide technical information on items being considered, but shall not directly vote to approve, conditionally approve, or deny a project or development application.</p>	2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>		<input type="checkbox"/>
COM-B	MOA	MCDCA / MCAOD	<p><b>Provide a Navy Representative to Attend Jurisdiction's Planning Commission Meetings on an As-Needed and Applicable Basis and Present Navy's Concerns about Incompatible Development for Proposed Developments within the MCDCA and the MCAOD.</b></p> <p>Each jurisdiction should inform the Navy on all development applications that are proposed within the MCDCA and the MCAOD so the Navy can determine whether a project proposes land uses incompatible with Navy operations.</p>	2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>		<input type="checkbox"/>



Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>INTERAGENCY COMMUNICATION / COORDINATION (continued)</b>											
COM-C	Comm	Study Area	<p><b>Enhanced Outreach Program.</b></p> <p>The Navy should enhance its outreach program to provide additional information to local communities and the public, including:</p> <ul style="list-style-type: none"> <li>Enhanced information website, providing information on upcoming training activities, recreational access, and range safety tips, other appropriate materials</li> <li>Provide enhanced notification of significant new construction projects or changes in mission</li> <li>As part of the outreach program, the Navy should host regularly scheduled open houses for the public to provide an overview of training activities, construction, or other items of public interest. This forum should also allow residents the opportunity to comment on concerns. An open house on an annual basis prior to the start of the summer season would be appropriate</li> <li>Develop an e-mail list that the public can sign up for online and provide notification of significant training exercises or other items of public interest</li> <li>Establish a NAFEC Hot-Line to answer questions or address complaints from the public. It would also provide a single Point of Contact for developers to contact NAFEC to proactively coordinate future development plans proposed within the MCDCA or MCAOD</li> </ul>	On-going				■			
COM-D	Comm	Study Area	<p><b>Create and Maintain a GIS Information Clearinghouse for Collecting and Distributing Updated GIS Layers / Maps Related to Military Operations.</b></p> <p>Imperial County should create a GIS Information Clearinghouse for military operation maps. The Navy would be responsible for providing a comprehensive set of GIS layers for all military operations upon request to Imperial County. Imperial County would be responsible for distributing all updated military operation GIS layers to the partnering jurisdictions and stakeholder agencies to enable enhanced long-range compatibility planning.</p> <p>A protocol for accessing and updating the information should be developed to ensure accuracy and appropriate security measures are established.</p>	2014	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# NAF EL CENTRO JOINT LAND USE STUDY

Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>INTERAGENCY COMMUNICATION / COORDINATION (continued)</b>											
COM-E	MOA	MCAOD / MCDCA	<p><b>Establish Procedures for Plan Review and Comment.</b></p> <p>The local jurisdictions and relevant agencies should work with NAFEC and to establish MOUs covering the procedures for consultation between the base and local jurisdictions relative to planning review and comment. This will include:</p> <ul style="list-style-type: none"> <li>• Providing technical input and assistance to local jurisdictions to support discussion of projects and potential compatibility issues</li> <li>• Definition of project types that require review</li> <li>• Identification of the Points of Contact for all coordination</li> <li>• Identifying opportunities for appropriate Navy personnel to be involved in pre-application meetings for significant projects</li> <li>• Establishing a formal procedure for requesting and receiving comments</li> <li>• Establishing a standard timeline for responses, keeping in mind mandated review time periods as specified by State law and local procedures</li> <li>• Developing an outreach plan</li> <li>• Providing notice to the Navy on all public hearings regarding projects identified for coordination</li> </ul> <p>While consultation is expected to occur primarily on projects in the defined MCAOD and MCDCA, the Navy should establish contacts and procedures for receiving notices and review opportunities on significant regional projects inside of these areas.</p> <p>Procedures should be reviewed annually and updated as appropriate by the JLUS Implementation Task Force.</p>	2014	■	■	■	□	■	■	■
COM-F	Zon	Study Area	<p><b>Develop a Real Estate Disclosure Ordinance.</b></p> <p>Develop a county wide Real Estate Disclosure Ordinance to ensure appropriate information about mission operations are fully disclosed at the earliest possible point in the interaction between realtor / real estate agent and a buyer or renter. The disclosure should specify that said property is located near an active military installation or range and may be subject to aircraft overflight, noise, vibration and other related impacts associated with military training and readiness.</p> <p>Work with State Real Estate Board and local real estate representatives to develop and implement adequate language for inclusion in disclosure notices.</p> <p>Work with State Real Estate Board and local real estate representatives to ensure compliance with notification requirements.</p> <p>The jurisdictions and the Navy should collaborate with the CA Department of Real Estate, the regional real estate professionals, and developers to develop the ordinance.</p>	2015	■	■	■				



Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>INTERAGENCY COMMUNICATION / COORDINATION (continued)</b>											
COM-G	Zon	MCDCA / MCAOD	<p><b>Require Deed Disclosures / Notifications for Properties within the MCDCA / MCAOD.</b></p> <p>All land divisions, building permits, and other discretionary actions within the MCDCA or the MCAOD should require filing a deed notification that states the property's location within this area and that they may be subject to periodic increases in noise and vibration resulting from military missions.</p>	2014	■	■	■				
COM-H	Comm	Study Area	<p><b>Develop and Distribute JLUS Educational Brochure.</b></p> <p>Imperial County, working with NAFEC Public Affairs should create a JLUS educational brochure about military operations that occur on and near NAFEC and its associated ranges and the partnerships between the community and the Navy. This brochure should be used by all local jurisdictions and agencies to educate the public about the benefits that NAFEC provide the community, the key JLUS recommendations, and the potential impacts that may occur associated with the military training operations.</p>	2014	□	□	■	□	□	□	□
COM-I	Comm	Study Area	<p><b>Develop Media Informational and Awareness Packets about Helicopter Operations.</b></p> <p>Imperial County should obtain operational schedules from Marine MAG-16 office and NAS North Island in San Diego and develop media communication packets including website announcements and public service announcements to educate County residents and visitors that the helicopter operations using the Imperial County Airport for refueling purposes are from MCAS Yuma or NAS North Island and not from NAFEC.</p>	2015			■				
COM-J	Plans	Study Area	<p><b>Establish a JLUS Implementation Task Force.</b></p> <p>Appoint a formal body to advance the work of the initial JLUS planning process, monitor the progress of implementation the JLUS recommendation through implementation and to continue to foster partnerships to achieve mutual compatibility. The Task Force could be the same configuration of the JLUS Policy and Technical Working Group Committees.</p>	2014	□	□	■				
COM-K	MOA	Study Area	<p><b>Develop Memorandum of Agreement for Multiple Land Management Agencies.</b></p> <p>The Navy should develop a Memorandum of Agreement with the county, cities, and other land management agencies including BLM and Bureau of Reclamation (BOR) and the School Districts that delineates points-of-contacts and protocols for communication methods of contact, and an action plan for managing the multiple land uses in the Imperial County.</p> <p>Other partners: BOR, School Districts</p>	2014	□	□	□	■	□		□



# NAF EL CENTRO JOINT LAND USE STUDY

Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>INTERAGENCY COMMUNICATION / COORDINATION (continued)</b>											
COM-L	EDU	MCDCA	<p><b>Develop a Range Safety Educational Program.</b></p> <p>The Navy should develop a Range Safety Educational Brochure explaining the types of training operations that occur out in the ranges; the dangers associated with them, and provide a map that illustrates where you should not enter.</p> <p>These brochures should be made available by a number of methods which could include:</p> <ul style="list-style-type: none"> <li>• Make available on the NAFEC, local jurisdictions, and BLM websites</li> <li>• Provide brochures to Imperial County Off-Road Vehicle Association, California Off-Road Vehicle Association and other Off-Highway Vehicles (OHV) recreation organizations, BLM, Imperial County Sheriff's Department, and OHV dealerships for distribution to their membership, clientele as well as tourists</li> <li>• Include in recreational guides, such as the "Imperial County Escape to Adventure"</li> </ul>	2015			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COM-M	MOU	MCAOD / MCDCA	<p><b>Develop an MOU with the School Districts.</b></p> <p>The Navy should develop an MOU with the affected School Districts to coordinate all future school master plans to prevent schools from being planned in noise sensitive areas.</p> <p>Other Partners: Affected Schools Districts</p>	2015				<input checked="" type="checkbox"/>			
COM-N	EDU	Study Area	<p><b>Create Billboards and Other Signage That Announces This Is the Home of NAFEC.</b></p> <p>Design and brand signage that states "We are the Proud Home of Naval Air Facility El Centro."</p> <p>These signs should be located along Interstate 8 and major arterials throughout the county and cities. This serves as an education item as well as a disclosure that a Naval Air Facility is located within the area.</p>	2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input checked="" type="checkbox"/>	
<b>LOCAL HOUSING AVAILABILITY</b>											
HA-A	Plans	Study Area	<p><b>Incorporating Military Housing Needs in Jurisdictional General Plans.</b></p> <p>When a jurisdiction updates its general plan, the plan should include a discussion of military housing needs and programs to address housing needs, both permanent (family and unaccompanied service members) and transient housing.</p> <p>As part of this effort, NAFEC will provide jurisdictions with current information on housing demands, amount of housing provided by the installation, generalized income, by rank, of personnel living off-base, and current distribution data on off-base personnel by ZIP Code.</p>	2020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			



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<b>INFRASTRUCTURE EXTENSIONS</b>											
INF-A	Plans	Study Area	<b>Regional Transportation Planning.</b> Imperial County shall work with Caltrans and regional transportation agencies to prepare an access management plan to limit access points and reduce the development demand along Forrester Road (e.g. two-mile spacing between intersections and limited driveway access on Forrester Road) to the proposed Forrester Road widening and improvement project.	On-going	■	■	■	□		■	
INF-B	Plans	MCAOD	<b>Limit Water and Wastewater District Expansion West of Austin Road.</b> Work with the Local Agency Formation Commission (LAFCO) to prohibit establishment of new water and wastewater districts west of Austin Road and north I-8 within the MCAOD Other partner agency: LAFCO	2015							
INF-C	MOA	Study Area	<b>Formalize Coordination for Infrastructure Planning in the Vicinity of NAFEC.</b> The local and regional transportation agencies should develop a formal agreement with NAFEC to include a technical support member on any infrastructure planning committee, organization or group that occurs in the Study Area.	2015	□	□	□	■		□	□
<b>LIGHT AND GLARE</b>											
LG-A	Zon	Study Area	<b>Develop Dark Sky Lighting Ordinance.</b> Imperial County, the cities of El Centro and Imperial, and BLM should develop a dark sky lighting ordinance / requirements specifying the types of lighting fixtures, lumens, and timers for lights. This shall include requirements for downward directional, shielded, or fully-cutoff lighting in new construction and street lights. This should include: <ul style="list-style-type: none"> <li>• Controls for OHV lighting in recreational areas adjacent or proximate to NAFEC ranges</li> <li>• The siting of exterior lighting structures within the approach and departure zone of the MCAOD Vertical Obstruction Subzone</li> <li>• The use of LED billboards</li> </ul>	2017	■	■	■		■		
<b>LEGISLATIVE INITIATIVES</b>											
LI-A	Base Plans	Study Area	<b>Navy to Monitor and Initiate Appropriate Resources to Enable a Renewal of Public Law 104-201: The Withdrawal Act for the NAFEC Ranges.</b> Navy should determine the need for continued use of the withdrawn lands and initiate the process for renewal of the Withdrawal Act in an appropriate timeframe.	2017				■			

# NAF EL CENTRO JOINT LAND USE STUDY

Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>LEGISLATIVE INITIATIVES (continued)</b>											
LI-B	Zon	MCAOD	<p><b>Establish a NAFEC Military Compatibility Area Overlay District.</b></p> <p>Establish a MCAOD to assist in achieving military compatibility incorporating compatible land use guidelines as identified in the JLUS and Navy AICUZ instructions.</p> <p>The MCAOD is comprised of 4 Subzones to include:</p> <ul style="list-style-type: none"> <li>• <u>Safety MCA Subzone</u> – An area that comprises the clear zone and accident potential zones I and II as established by the NAFEC AICUZ.</li> <li>• <u>Noise MCA Subzone</u> - An area that is defined by the 60 CNEL and larger noise contours as established by the NAFEC AICUZ.</li> <li>• <u>BASH MCA Subzone</u> – 5-mile relevancy area from the NAFEC runway to address bird strike potential.</li> <li>• <u>Vertical Obstruction Subzone</u> – This subzone identifies the areas subject to vertical height controls due to aircraft activity based on the FAA and DOD imaginary Surfaces and FAR Part 77.</li> </ul> <p>The Overlay District should be implemented as follows:</p> <ul style="list-style-type: none"> <li>• Update the ALUCP to include the MCAOD boundary (for the unincorporated area only) as the airport influence area. Note: the Imperial County Airport Influence Area that is already part of the ALUCP addresses the MCAOD compatibility issues within the incorporated area of the City of Imperial and the only portion of the MCAOD that overlays the City of El Centro – the 500 foot Vertical Obstruction Subzone which is addressed in the vertical obstruction strategies (VO-C).</li> <li>• Update the Imperial County General Plan to include the MCAOD and associated Subzone boundaries on the land use diagram and include associated military compatibility policies specific to each MCAOD Subzone.</li> <li>• Amend the Land Use Ordinance (LUO) to add a policy stating that specific area plans are not permitted within the MCDCA.</li> <li>• Consider amending the Imperial County LUO to include the MCAOD and associated Subzone boundaries on the official zoning maps and to include military compatibility regulatory criteria for each of the Subzones.</li> <li>• Make MCAOD map and Subzone maps available on local jurisdiction websites in a downloadable format so citizens could assess which particular parcels are within each subzone.</li> </ul>	2015			■	□	■		



Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>LAND USE</b>											
LU-A	Plans	MCDCA	<p><b>Update General Plans, RMP, and LUO to Include the Military Compatibility Development Coordination Area (MCDCA).</b></p> <p>The MCDCA will assist in achieving military compatibility incorporating compatible land use guidelines as identified in the JLUS and Navy RAICUZ instructions as well as the compatibility guidelines developed as part of the strategy to develop a Military Compatibility Land Use Guidelines Handbook.</p> <p>The MCDCA consists of 4 subzones:</p> <ul style="list-style-type: none"> <li>• <u>Range MCA Subzone</u> – This area is comprised of the RCZ I, RCZ II, and RCZ III areas and the antenna line of site.</li> <li>• <u>Airspace from Surface Subzone</u> – This area is comprised of the restricted airspace and MTRs that have an airspace floor of Surface.</li> <li>• <u>Airspace from 200 foot AGL Subzone</u> – This area is comprised of the restricted airspace and MTRs that have an airspace floor of 200 feet above ground level (AGL).</li> <li>• <u>Airspace from 300 foot AGL Subzone</u> – This area is comprised of the restricted airspace and MTRs that have an airspace floor of 300 feet AGL.</li> </ul> <p>The MCDCA should be applied via the following:</p> <ul style="list-style-type: none"> <li>• Imperial County should amend land use ordinance for height restrictions within a half mile on both sides of the Microwave Line-of-Sight to not exceed 75 feet.</li> <li>• Imperial County and the cities of El Centro and Imperial should update their general plans to incorporate MCDCA on their land use diagrams and incorporate military compatibility guidelines to assist local government in evaluation of proposed projects and their associated compatibility with military operations in the area.</li> <li>• BLM should incorporate the MCDCA within their RMP and associated maps. BLM should update the RMP to include policies stating they will coordinate with Navy for all development applications within the MCDCA, including military compatibility land use guidelines. Imperial County and the cities of El Centro and Imperial should incorporate the RAICUZ Range Air Installation Compatible Use Zones recommended land use guidelines into their planning documents and ordinances. Imperial County shall update General Plan and LUO stating the County will limit urban development and major infrastructure extensions west of Austin Road. Incompatible development will reflect JLUS definition of development that is not compatible with military operations and readiness.</li> </ul>	2015	■	■	■	□			

# NAF EL CENTRO JOINT LAND USE STUDY

Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>LAND USE (continued)</b>											
LU-A cont'd.			<ul style="list-style-type: none"> <li>City of Imperial should finalize their City Council Resolution and General Plan with a policy stating that they will not support urban development west of Austin Road.</li> <li>Imperial County shall process General Plan and Zoning Ordinance amendments to limit incompatible urban development west of Austin Road. Incompatible development will reflect JLUS definition of new development that is not compatible with multi-year operations and readiness.</li> <li>The Imperial County Transportation Element of the General Plan should provide for expansion of Evan Hewes by assisting in the expansion and support of NAFEC and encourage infill opportunities in Seeley, while limiting development along Evan Hewes outside the current township limits and Austin Road.</li> <li>Amend the LUO to add a policy stating that specific area plans are not permitted within the MCDCA.</li> </ul> <p>Military compatibility land use criteria that may be used to assess the potential for incompatible development within the MCDCA using (at a minimum) the following criteria:</p> <ul style="list-style-type: none"> <li>Navy RCZ Land Use Compatibility Guidelines</li> <li>Heights of buildings and structures</li> <li>Density and intensity of land uses</li> <li>Land uses that encourage large congregations of people</li> <li>Noise sensitive land uses</li> <li>Land uses that attract birds and wildlife</li> <li>Electromagnetic interference</li> <li>Light and glare</li> <li>Land uses that generate steam plumes</li> </ul>								
LU-B	Zon	MCAOD / MCDCA	<p><b>Require Developers to Provide Letter Confirming They Coordinated with the Navy.</b></p> <p>In the spirit of proactive collaboration, Imperial County should amend their LUO to require that developers submit a letter from the Navy documenting that they coordinated with Navy regarding compatibility with the military mission associated with their proposed development.</p>	2015			■	□			
LU-C	Plans	Study Area	<p><b>Update General Plans to incorporate Military Compatibility Element.</b></p> <p>Imperial County and the cities of El Centro and Imperial should incorporate a Military Compatibility Element in the General Plan that incorporates military compatibility policies in the next update.</p>	2017	■	■	■				





Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>LAND USE (continued)</b>											
LU-D	Plans	Study Area / MCDCA	<p><b>Amend LUO and Zoning Ordinances and Update General Plans to Include a MCAOD and MCDCA.</b></p> <p>Develop a comprehensive set of compatibility guidelines based on the JLUSs compatibility criteria and guidance to assist decision makers and the public in determining whether new development will be compatible with NAFEC operations.</p>	2015	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
LU-E	Plans	MCDCA / MCAOD	<p><b>Acquire Conservation Easements to Secure Buffer around NAFEC and Associated Ranges.</b></p> <p>Participate in the Readiness and Environmental Protection Integration (REPI) program and other buffering and conservation programs to purchase restrictive use easements or fee title to lands that present threat of encroachment and impact on military operations. The Navy should identify potential REPI and other conservation partners, lands that meet the REPI criteria, and identify willing sellers.</p>	2016				<input checked="" type="checkbox"/>			
LU-F	Zon	MCAOD / MCDCA	<p><b>Amend Conditional Use Process (CUP).</b></p> <p>Imperial County and the cities of El Centro and Imperial should amend their CUP processes to:</p> <ul style="list-style-type: none"> <li>Prohibit noise sensitive land uses within the MCDCA and the Noise MCA Subzone</li> <li>Restrict height limitations, as appropriate, within the Vertical Obstruction MCA Subzone</li> <li>Require all lighting be limited to downward lighting that is shielded within the MCAOD and the MCDCA</li> <li>Not allow non-compatible land uses within the Safety MCA Subzone</li> <li>Coordinate with the Navy on all proposed developments within the MCDCA to achieve land use compatibility</li> </ul> <p>Imperial County should amend the CUP ordinance to cap the heights for telecommunications towers to appropriate heights that do not interfere with aviation operations as defined in the MCDCA.</p>	2014	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
LU-G	Plans	Study Area / MCDCA	<p><b>Develop a Comprehensive MCDCA and MCAOD Land Use Compatibility Guidelines Document.</b></p> <p>Develop a comprehensive set of compatibility guidelines based on the JLUSs compatibility criteria and guidance to assist decision makers and the public in determining whether new development will be compatible with NAFEC operations.</p>	2015	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

# NAF EL CENTRO JOINT LAND USE STUDY

Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>LAND USE (continued)</b>											
LU-H	Plans / Zon	Range MCA / MCDCA	<p><b>Incorporate Military Compatibility Areas and Recommended Land Uses into County General Plan and LUO.</b></p> <p>Imperial County should incorporate the military compatibility areas and recommended land uses for the range compatibility zones into its General Plan and LUO to assist in compatible long-range planning.</p>	2017			■				
LU-I	Plans	MCDCA	<p><b>Assess Transfer of Development Rights (TDR) Program to Preserve Agricultural Lands.</b></p> <p>Imperial County should consider developing a TDR program to protect the agriculture lands and the NAFEC mission due to non-renewal of Williamson Act lands.</p>	2017			■				
LU-J	Plans	MCDCA	<p><b>Update the BLM RMP to Include the MCDCA and Associated Land Use Compatibility Guidelines.</b></p> <p>Update the RMP to include policies that guide compatible development on BLM lands.</p>	2017				☐	■		
LU-K	MOA	Study Area	<p><b>Develop an MOU between BLM and the Navy to Coordinate on Future Land Transfers and Disposals.</b></p> <p>Prior to disposal or transfer of BLM lands, BLM should formally coordinate with the Navy to determine if the proposed disposed lands and transferred lands would be vulnerable to becoming an incompatible use with military operations.</p>	2017				☐	■		
<b>NOISE AND VIBRATION</b>											
NV-A	Plans	Study Area	<p><b>Update Community of Seeley Urban Area Plan.</b></p> <p>Imperial County should update the Seeley Urban Area Plan and Development Standards to add policies that discourage manufactured homes due to the noise and vibration impacts associated with NAFEC operations and that manufactured homes and multi-family homes located in 65 CNEL and higher CNEL zones are not consistent with the county's general plan noise element. Additionally, Imperial County should require a Noise Level Reduction standard of either 25 dB or 30 dB for new residential uses in the community of Seeley.</p>	2017			■				
NV-B	Zon	Noise MCA Subzone	<p><b>Adopt Building Code Requirements Incorporating Sound Attenuation Measures.</b></p> <p>Jurisdictions should adopt building code requirements for new construction within the Noise MCA Subzone that requires attenuation measures to meet the guidelines of the AICUZ and JLUS.</p>	2017	■	■	■				



Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>NOISE AND VIBRATION (continued)</b>											
NV-C	Com	Study Area	<p><b>Educational Materials on Sound Attenuation Methods.</b></p> <p>Develop and provide educational materials, either through inclusion in the adopted building codes or as a supplemental educational document, describing building techniques which can be used to achieve the required 45 dB Day-Night Average Sound Level interior noise maximum threshold. Local jurisdictions should make use of already available technical support materials from the Department of Defense.</p>	2017 / On-going	■	■	■				
NV-D	Plans	Noise MCA Subzone / MCDCA	<p><b>Develop Sound Attenuation Retrofit Program.</b></p> <p>Develop a voluntary sound attenuation retrofit program for residential uses and noise sensitive uses. The program should provide guidance on sound attenuation standards for retrofitting existing residential and commercial facilities. The program could include grant opportunities available to assist property owners in retrofitting structures in noise sensitive areas (Noise MCA Subzone) or the MCDCA. Other funding sources for retrofitting homes should be identified and provided within the program materials.</p>	2017 / On-going	■	■	■				
NV-E	Zon	MCAOD / MCDCA	<p><b>Require a Note to be Recorded on Title to Real Property as Part of Any Discretionary Development Permit or Approval.</b></p> <p>Require that a note be recorded on a title for real property located within the MCAOD / MCDCA as part of any discretionary development permit or approval. The note shall state that the real property is located in close proximity to an active military training facility and ranges that perform day and night time training operations, both ground and air operations. The military operations may produce noise, vibration, and visual issues.</p>	2016	■	■	■				

# NAF EL CENTRO JOINT LAND USE STUDY

Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>PUBLIC TRESPASSING</b>											
PT-A	MOA	Range MCA	<p><b>Increase Security Around Ranges.</b></p> <p>The Navy shall coordinate necessary security requirements with BLM and County Sheriff's Department to provide necessary law enforcement within range areas. Coordination and notification of security actions are especially critical when air operations are active.</p> <p>Increased security may include:</p> <ul style="list-style-type: none"> <li>• Increase security around range access during holiday weekends to prevent trespassers from accessing federal property. Using BLM park rangers and supplementing with Imperial County Sheriff during seasonal events to provided increased security forces and provide for monitoring</li> <li>• Increase the issuance of citations for those trespassing on military range lands, especially during holiday periods</li> <li>• Improve maintenance of perimeter fencing to provide timely replacement or repair of damaged sections</li> <li>• Ensure placement and maintenance of perimeter signage is adequately placed and maintained along the perimeter fence</li> <li>• Work with BLM and Sheriffs' Departments to patrol areas experiencing repeat trespass</li> <li>• Fence major access arterials to the targets to discourage vandalism and trespassing and still allow for motorcycle and SCORE off-road races in this area</li> </ul>	On-going			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
PT-B	Comm	Study Area	<p><b>Self-Policing Brochures.</b></p> <p>Develop and distribute self-policing informational brochures to be available at government offices and park access / entrance areas.</p>	2014			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
PT-C	Base Plans	Range MCA Subzone	<p><b>Assess Viability of Remote Monitoring Camera System at Night.</b></p> <p>NAFEC should assess the viability of maintaining a remote monitoring camera system to be used at night to assist in the prosecution of vandals and recovery of property.</p>	2017			<input checked="" type="checkbox"/>				
PT-D	Base Plans	Range MCA Subzone	<p><b>Continue to Evaluate a Long-Range Acoustical Device (LRAD) for Use to Deter Vandals on the Ranges.</b></p> <p>NAFEC should continue to evaluate the feasibility of implementing a LRAD to deter vandals from the NAFEC ranges.</p>	2014			<input checked="" type="checkbox"/>				
PT-E	Comm	MCAOD / Range MCA Subzone	<p><b>Develop an "Eyes on NAFEC" Program.</b></p> <p>Engage local community groups and jurisdictions to work with law enforcement agencies to create a voluntary vigilance program, whereby citizens and public safety officers that witness trespassing onto NAFEC inform a designated point of contact at the NAFEC.</p>	2017 & On-going			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			





Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>SAFETY ZONES</b>											
SAF-A	Plans	BASH MCA Subzone	<p><b>Update New River Strategic Plan.</b></p> <p>The State and partnering agencies for the New River Wetlands Restoration should coordinate with the Navy in determining the methods to restore wetlands along the New River located at within the 5-mile BASH MCA Subzone. Consider multiple types of wetlands restoration methods, to include but not limited to aeration, dilution with groundwater or treated wastewater, and possible filtration structures that would not attract birds. Discourage wetlands within the 5-mile BASH MCA Subzone.</p> <p>Other Partner: California-Mexico Border Relations Council</p>	2014 & On-going				■			□
SAF-B	Comm	MCAOD Safety MCA	<p><b>Consultation with the Navy.</b></p> <p>The California-Mexico Border Relations Council should consult with the Navy about the locations and types of wetlands restoration projects that are planned for areas near the NAFEC airfield.</p> <p>Other Partners: California-Mexico Border Relations Council</p>	On-going				■			
<b>ROADWAY CAPACITY</b>											
TRN-A	Comm	Study Area	<p><b>Transportation Improvements / Expansions.</b></p> <p>County and cities should monitor capital improvement projects to ensure roadway capacity is sufficient to meet local and regional mobility needs without causing growth inducement to areas near NAFEC.</p>	On-going	■	■	■	□		■	■
<b>VERTICAL OBSTRUCTIONS</b>											
VO-A	Plans / Zon	MCDCA	<p><b>Update General Plan and Amend Zoning Ordinance to include a Red Yellow Green (RYG) Map.</b></p> <p>Develop a RYG Map, which identifies locations throughout MCDCA where alternative energy, cell towers and transmission lines should be prohibited to protect public safety and achieve compatibility (red), where they would be conditionally appropriate (yellow), and where they would not pose any compatibility issue (green).</p>	2017			■	□	■		
VO-B	Plans	MCAOD \ MCDCA	<p><b>Ensure Federal Aviation Regulation (FAR) Part 77 Compliance.</b></p> <p>For all new, redeveloped or rehabilitated transmission, communications, energy generation structures (including electrical transmission towers/lines, cellular and radio transmission towers, wind generation towers, and other similar uses.) or any type of structures that have a proposed height of 99' or higher, ensure compliance with FAR Part 77 height limit requirements to minimize vertical obstructions. In addition, ensure the developments and structures are compatible with, and do not pose a safety hazard to, air operations in the region.</p>	On-going	■	■	■		■		

# NAF EL CENTRO JOINT LAND USE STUDY

Issue or Strategy #	Type of Strategy	Geographic Area	Strategy	Timeframe	City of El Centro	City of Imperial	Imperial County	Navy / NAFEC	BLM	CALTRANS	IID
<b>VERTICAL OBSTRUCTIONS (continued)</b>											
VO-C	Plans / Zon	MCAOD	<p><b>Update the City of Imperial and Imperial County General Plan to Incorporate a Policy Discouraging Structures over 500 Feet.</b></p> <p>To address the MCAOD Vertical Obstruction Subzone height restriction guidance, the City of Imperial and Imperial County should update their General Plan to address the vertical height restrictions of 500 feet for the incorporated area of the city and the unincorporated area to ensure the safety of the citizens and pilots.</p>	2015		■	■				





FOR ADDITIONAL INFORMATION CONTACT:

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