Beale Joint Land Use Study

May 2008

Beale
Joint Land Use Study

State of California
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May 2008

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GOVERNOR ARNOLD SCHWARZENEGGER

May 2008

The State of California and our cities and counties have had a long and productive partnership with the Department of Defense (DoD). This partnership has led to significant investment in active installations, training and test evaluation ranges, expansive military airspace and centers of research and development in the state, all of which contribute daily to the nation's military readiness and cannot be replicated elsewhere. Beale Air Force Base is one of these essential national assets within California. As home to the U-2 high-altitude reconnaissance aircraft and the RQ-4 Global Hawk unmanned aerial vehicle, it fulfills a critical role in the nation's defense.

This *Beale Joint Land Use Study*, a component of the largest and most ambitious study of its kind ever undertaken, provides a powerful framework for supporting our nation's war fighters and protecting one of the most significant components of the state's economy. Building upon existing partnerships, this study brings together counties, cities, state agencies, the military and other agencies in decision-making processes regarding military operations and land use in the surrounding area. This cutting-edge study provides the tools for reducing potential conflicts and sustaining the military mission across a broad range of compatibility issues. At the same time, the study furthers the state's equally important goals of accommodating growth, promoting the economic health of the community and protecting public health and safety.

The study, funded by a grant from the DoD Office of Economic Adjustment, conducted in close collaboration with Yuba County, the City of Marysville, the City of Wheatland and other community agencies and organizations, and published by my Office of Planning and Research, demonstrates the strong commitment of my administration to maintaining and strengthening the partnership among the military, the state and local communities. This Joint Land Use Study builds on the success of the *California Advisory Handbook for Community and Military Compatibility* and continues the longstanding and productive relationship between California, its local communities and the military.

Sincerely,

Arnold Schwarzenegger

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Beale Joint Land Use Study

EXECUTIVE SUMMARY

May 2008

What is a Joint Land Use Study?

A Joint Land Use Study (JLUS) is a collaborative planning effort between active military installations, surrounding counties and cities, and other affected agencies. The JLUS process is funded by a grant from the Department of Defense Office of Economic Adjustment (OEA).

The California JLUS Program

The OEA is funding the preparation of two JLUSs in California. Given the large areas covered by these studies and the number of jurisdictions and agencies involved, the California JLUS program is being managed by the Governor's Office of Planning and Research (OPR). The two geographic study areas included in the California JLUS program are referred to as the Beale JLUS and the R-2508 JLUS.

The Beale JLUS addresses all lands near Beale Air Force Base (AFB) with a current or potential future impact on military operations at the base, and lands upon which military operations at the base have an actual or potential impact. Given the location of the base within Yuba County, the study area includes the western half of Yuba County and portions of Butte, Nevada, Placer, and Sutter counties.

Goals and Objectives

The overall goal of a JLUS is to reduce potential conflicts while accommodating growth, sustaining the economic health of the region, and protecting public health and safety. Like all JLUS programs, the Beale JLUS has three primary objectives.

Understanding

Convene community, agency, and Beale AFB representatives to study the issues in an open forum, taking into consideration both community and military viewpoints and needs. This includes public outreach and input.

Collaboration

Encourage cooperative land use and resource planning between Beale AFB and surrounding communities so that future community growth and development are compatible with the training and operational missions of the installation while at the same time seeking ways to reduce operational impacts on adjacent lands.

Actions

Provide a set of tools, activities, and procedures from which local jurisdictions, agencies, and the installation can select and then use to implement the recommendations developed during the JLUS process. The actions proposed include both operational measures to mitigate installation impacts and local government and agency approaches to reduce impacts on Beale AFB operations.

Beale AFB- Overview

Camp Beale, opened in 1942 as an Army training facility, originally occupied 86,000 acres and was home to over 60,000 military personnel. While Beale today is smaller in acreage (approximately 23,000 acres) and manpower (approximately 4,200 military personnel), its strategic importance to the nation and its economic and social significance to the local region remains strong.

RQ-4 Global Hawk

U-2 Dragon Lady

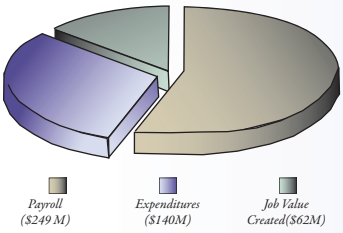
Since converting to an Air Force Base in 1948, Beale AFB has hosted a range of missions, but today it is known as the center for the United States' aerial reconnaissance force. Beale is the home base for all Air

Force U-2 and Global Hawk reconnaissance aircraft. Using these resources, Beale provides worldwide reconnaissance data to national and theater commanders. In addition, the base is one of only three sites in the United States supporting the PAVE (Air Force program name) Phased Array Warning System (PAWS) long-range radar. This system is vital to the defense of the country, providing an early warning system for submarine-launched and intercontinental ballistic missiles. The system also detects and tracks Earth-orbiting satellites.

Beale AFB is located in a rural setting, but as development moves closer to the base, coordinated effort is needed to ensure that growth continues in a manner that allows Beale to maintain its role in the nation's defense, remains a vital member of the local community and a major contributor to the local economy.

Beale AFB-Local Importance

Beale is a significant part of the regional economy. In 2006, Beale employed 5,558 persons, which included 4,291 military personnel and 1,267 civilians. Approximately 32 percent of the active duty military personnel stationed at Beale reside on base, with the remainder living primarily in Yuba and Sutter counties.



Total Annual Economic Impact, Beale AFB FY06

The economic impact of Beale AFB on the region is significant. In 2006, the installation had a payroll of $249 million dollars. When factoring in the creation of other jobs, contract award expenditures, and other purchases in the region, the installation estimates it had a total economic impact of $451 million.

Partnerships

The Beale JLUS builds upon existing partnerships by bringing together local communities, state agencies, federal agencies and Beale AFB in decision-making processes regarding military operations and land use. It will help reduce potential conflicts and sustain the military mission, but this is also balanced with the need to accommodate growth, promote the economic health of the region and protect public health and safety.

Beale and the local communities are also linked through the services each provides. With many military personnel and their families living in nearby communities, local jurisdictions and agencies provide a range of services to these personnel, from public schools and libraries to police and fire protection. Beale AFB also gives back to local communities through the involvement of base personnel in local charities and other civic organizations and by responding with critical services when needed, such as fire response, explosive ordnance disposal, and emergency services to support flood response and relief.

A Growing Region

As growth continues to expand out of the Sacramento metropolitan area, the five counties that make up the region surrounding Beale AFB (Butte, Nevada, Placer, Sutter, and Yuba counties) are projected to have strong residential, commercial, and industrial growth over the next several decades. By the year 2050, these five counties are projected to increase in population from about 795,000 persons in 2006 to almost 1.4 million persons by the year 2050. This 73 percent growth will add over 600,000 new residents to the area, and transform several small rural communities into mid-sized communities.

Downtown Marysville

Beale JLUS

The goal of the Beale JLUS is to protect the viability of current and future missions at Beale while at the same time accommodating growth, sustaining the economic health of the region, and protecting public health and safety.
The Beale JLUS is designed to address lands near Beale AFB that meet the following criteria:

- Land areas that have resources, activities, or land uses (existing or future) that may impact current or future military operations.
- Land areas upon which military operations associated with the base may have an impact on resources, activities, or land uses (existing or future).

The 15-mile oval study area, measured from the centerline of the Beale AFB runway, includes the western half of Yuba County and portions of Butte, Nevada, Placer, and Sutter counties.

Beale JLUS Overview

The Beale JLUS is not an adopted plan. It is a strategy guide that will be used by local jurisdictions, agencies, and organizations in the study area to guide their future compatibility efforts. It is through the future actions of the stakeholders involved that the JLUS strategies will become a reality. For example:

- Local jurisdictions will use the strategies in this JLUS to guide future general plan and zoning updates, as well as assist in the review of development proposals.
- Beale AFB will use the JLUS to guide their interactions with the community on future projects.

1. Introduction

Section 1 provides an introduction and context for the Beale JLUS. This section describes the goals and objectives used to guide development of the JLUS, who was involved in making the JLUS a success, public outreach methods, and the organization of the document.

2. Study Area Profile

In developing a JLUS, a good understanding of the installation and local jurisdictions within the study area is necessary. For the Beale JLUS, this section provides: an overview of the installation's history, a description of the primary activity areas on the base, a look at the current mission and military units located at the base, military family housing assets, the economic impact of the base on the region, and a discussion of future missions. This is followed by an overview of the region's growth potential and a profile of each of the counties and cities within the study area, including population, housing, and employment statistics.

3. Compatibility Issues

Compatibility, in relationship to military readiness, can be defined as the balance or compromise between community needs and interests and military needs and interests. The goal of compatibility planning is to promote an environment where both entities can coexist successfully.

In order to develop potential solutions, it is critical to understand the nature of existing and potential compatibility issues. A number of factors influence whether community and military plans, programs, and activities are compatible or in conflict. In this section, the JLUS presents a list of 24 compatibility factors that were used to characterize local issues. In addition to describing existing and potential compatibility issues currently identified, this list can be used in the future to assist in reviewing plans, programs, or development proposals and related applications.

4. Existing Plans and Programs

This section provides an overview of relevant plans, programs, and studies currently used to address compatibility issues in the study area. This includes technical studies, such as the current Beale Air Installation Compatibility Use Zone (AICUZ), as well as local general plans and zoning ordinances.

5. Recommendations

The final section of the JLUS is a toolbox comprised of strategies that have been developed cooperatively with representatives from local jurisdictions, Beale AFB, state and federal agencies, Native American tribal governments, local organizations, and interested individuals and landowners. The result of a collaborative planning process, the recommendations in this section represent a true consensus plan: a realistic, coordinated approach to compatibility planning developed with the support of the stakeholders involved.

6. Acronyms

A listing, with definitions, of the acronyms used in the JLUS.

Recommended Strategies

The heart of the Beale JLUS is the set of recommended strategies contained in Section 5. The strategies in this section address the range of compatibility issues noted in Section 3. For ease of reference, the strategies are grouped into 21 strategy types. These are described below.

Military Influence Areas (MIA)

A MIA 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. The MIAs proposed are shown on the diagram on the facing page.

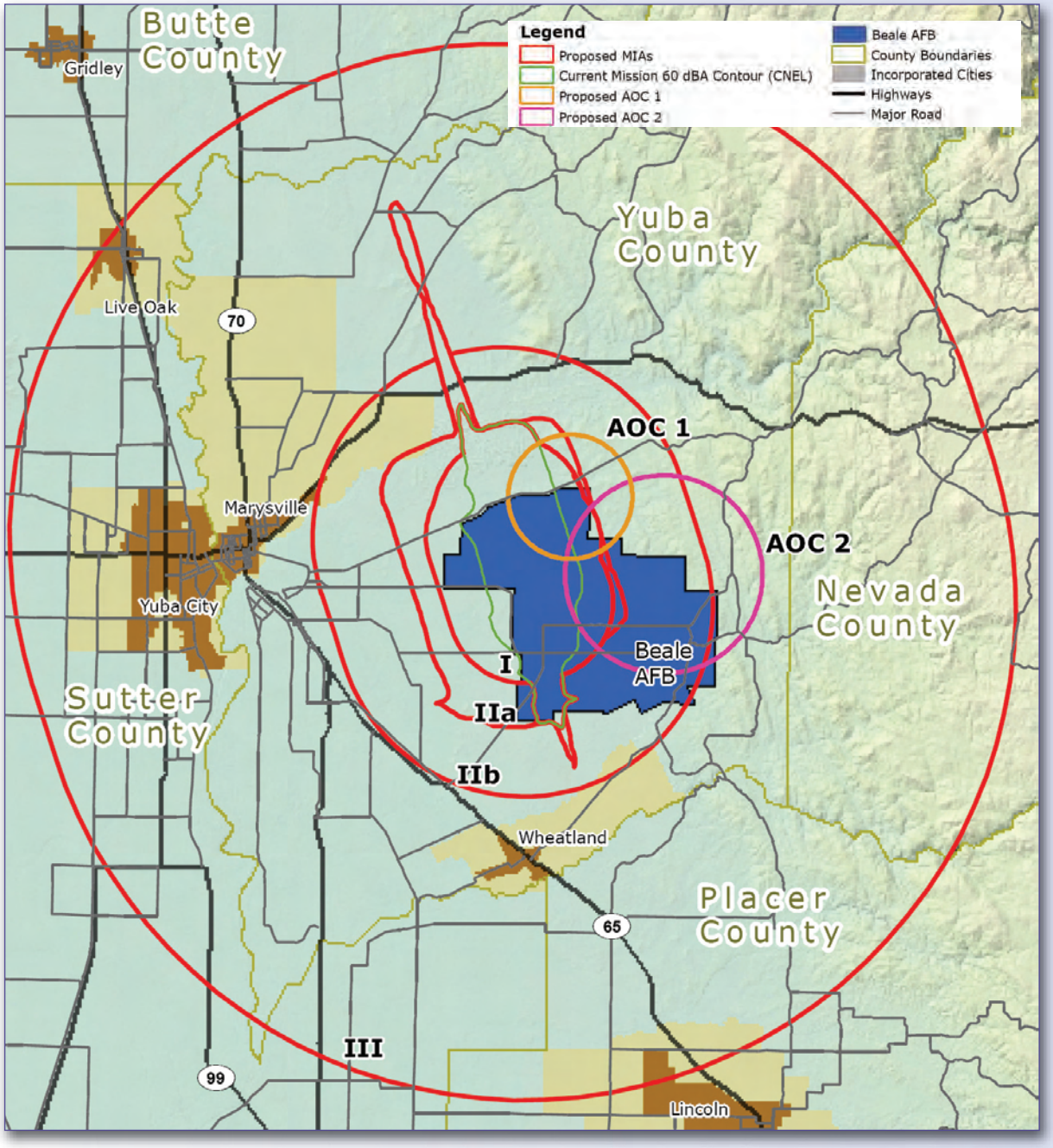
Acquisitions

As a land use planning tool, property rights can be acquired through donation, easement, or the outright purchase of property for public purposes.

AICUZ

The AICUZ program, a Department of Defense (DOD) planning program that was developed in response to incompatible urban development and land use conflicts around military airfields, has two objectives:

- To assist local, regional, state, and federal officials in protecting the public health, safety, and welfare by promoting compatible development within the AICUZ area of influence.
- To protect operational capabilities from the effects of land uses that are incompatible with aircraft operations.



Airport Land Use Compatibility

An Airport Land Use Compatibility Plan (ALUCP) is a plan, usually adopted by a County Airport Land Use Commission (ALUC) or other entity established to accomplish land use compatibility planning, which sets forth policies for promoting compatibility between airports and the land uses which surround them.

Avigation Easements

An easement is a non-possessory right to use land owned by another party. An avigation easement is an easement that grants the holder one or more of the following rights:

- The right of flight;
- The right to cause noise, dust, or other impacts related to aircraft flight;
- The right to restrict or prohibit certain lights, electromagnetic signals, and bird-attracting land uses;
- The right to unobstructed airspace over the property above a specified height.

BASH Coordination

The Bird / Wildlife Strike Hazard (BASH) program is aimed at minimizing collisions between military aircraft and birds or other animals, and to minimize damage

Birds gathering near airfield

Strategy Type	#	Strategy	Geographic Area				Time-frame		
			MIA I	MIA IIA	MIA IIB	MIA III	0-2 Years	3-5 Years	Ongoing
MIAs	1	Define and Establish MIA Zones	✓	✓	✓	✓	✓		✓
Acquisitions	2	Identify Priority Locations for Acquisition	✓	✓			✓		✓
	3	Establish Voluntary Acquisition Program	✓	✓			✓		
	4	Establish Conservation Easement Program	✓	✓	✓		✓		
	5	Develop Transfer of Development Rights Program	✓	✓			✓		✓
	6	Use Land and Water Conservation Fund Grants	✓	✓	✓				✓
	7	Use DOD Easement Partnership Program	✓	✓					✓
	8	Focus Conservation Partnering Opportunities	✓	✓					✓
AICUZ	9	Implement AICUZ Recommendations	✓	✓			✓		✓
ALUCP	10	Update ALUCP to Reflect Current AICUZ	✓				✓		✓
	11	Update ALUCP and Associated Ordinances	✓				✓		✓
	12	Involve Beale AFB Officials in Airport Planning	✓	✓	✓	✓			✓
Avigation	13	Develop or Update Avigation Easement Programs	✓				✓		
BASH	14	Develop and Distribute BASH Educational Materials	✓	✓	✓	✓	✓		✓
	15	Control Bird and Wildlife Attractions Near Base	✓	✓	✓				✓
Beale Planning	16	Flight Operations for Future Missions	✓	✓	✓	✓			✓
	17	Update Beale AFB General Plan	✓	✓	✓	✓		✓	
	18	Develop Public Summary of Beale AFB General Plan	✓	✓	✓	✓		✓	✓
	19	Involve Local Jurisdictions in Defining Data Needs	✓	✓	✓	✓		✓	✓
Codes	20	Require Appropriate Sound Attenuation for Occupied Buildings	✓	✓					✓
	21	Require Appropriate Sound Attenuation for Schools		✓	✓				✓
CIP	22	Incorporate Compatibility Planning Concepts in CIPs	✓	✓	✓				✓
	23	Ensure Adequate Transportation Infrastructure	✓	✓	✓	✓		✓	✓
	24	Incorporate Beale Into Regional Infrastructure Planning	✓	✓	✓	✓			✓
CEQA / NEPA	25	Refer CEQA Documents to Beale AFB	✓	✓	✓	✓			✓
	26	Refer NEPA Documents to Local Jurisdictions	✓	✓	✓	✓			✓

and injuries when collisions occur. The program considers not only wildlife within the confines of the airfield, but also in neighboring areas.

Beale Planning and Operations

Similar to a local jurisdiction, Beale AFB maintains a long-range general plan. The purpose of the Beale AFB General Plan is to provide an assessment of the installation's infrastructure and attributes for the purpose of gauging the installation's development and growth potential.

Building Codes

Construction standards and building codes are ordinances and regulations controlling the design, construction process, materials, alteration, and occupancy of any structure to safeguard human safety and welfare. They include both technical and functional standards and generally address the following:

- Structural Safety
- Fire Safety
- Health Requirements
- Accessibility

Capital Improvement Programs (CIP)

A CIP is a detailed fiscal and planning document used to plan and direct a jurisdiction's or agency's (federal or state) investment in facilities, including infrastructure. The CIP lays out the facility plans and programs of the jurisdiction or agency and provides details on expenditures that can be incorporated into the jurisdiction's or agency's annual budgeting process.

CEQA / NEPA

The California Environmental Quality Act (CEQA) was enacted in 1970 and requires all lead agencies to consider the potential environmental impacts of a project before they approve it.

The National Environmental Policy Act (NEPA) is the federal law, effective on January 1, 1970, that established a national policy for the environment and requires federal agencies:

- To become aware of the environmental ramifications of their proposed actions,
- To fully disclose to the public proposed federal actions and provide a mechanism for public input to federal decision making, and
- To prepare environmental impact statements for every major action that would significantly affect the quality of the human environment.

Code Enforcement / Building Inspection

The purpose of code enforcement programs is to promote and maintain a safe and desirable living and working environment. Related to land use compatibility, code enforcement is a tool used by the community to ensure its rules are enforced.

Communication / Coordination

In any planning effort, plans can only move towards successful implementation if there are ongoing communications between Beale AFB, local jurisdictions, Native American tribal governments, agencies, landowners, and the public. Enhanced communication and coordination is integral to successful compatibility planning in the study area.

Deed Restrictions / Covenants

Deed restrictions, or covenants, are written agreements that restrict or limit some of the rights associated with property ownership. These restrictions are recorded with the deed for the property and stay with the property when it is sold to a new owner (i.e., remain in effect).

General Plans (Counties / Cities)

Every city and county in California is required by state law to prepare and maintain a policy document called a general plan. General plans are designed to serve as the jurisdiction's blueprint for future decisions concerning physical development, including land use, infrastructure, public services, and resource conservation. All specific plans, subdivisions, public works projects, and zoning decisions made by the local government must be consistent with the general plan.

Habitat Conservation Tools

The California Natural Community Conservation Planning Act and the Federal Endangered Species Act allow for the development of Natural Community Conservation Plans (NCCPs) and Habitat Conservation Plans (HCPs). An NCCP identifies and provides for the regional or areawide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

Hazard Mitigation Plans

Hazard mitigation is defined as any sustained, cost-effective action taken to reduce or eliminate long-term risk to people, property, and the environment from natural and man-made hazards and their effects.

Strategy Type	#	Strategy	Geographic Area				Time-frame		
			MIA I	MIA IIA	MIA IIB	MIA III	0-2 Years	3-5 Years	Ongoing
Code	27	Ensure Construction Standards for Noise are Met	✓	✓					✓
	28	Code Enforcement Relative to Compatibility Concerns	✓	✓	✓	✓			✓
Communications/ Coordination	29	Establish a JLUS Coordinating Committee	✓	✓	✓	✓	✓		✓
	30	Establish Procedures for Plan Review and Comment	✓	✓	✓	✓	✓		
	31	Refer Development Applications to Beale for Review /Comment	✓	✓	✓	✓			✓
	32	Refer Local Proposals to Beale for Review and Comment			✓	✓			✓
	33	Coordination on School Site Planning	✓	✓			✓		✓
	34	Educational Outreach on Aviation Planning	✓	✓	✓	✓			✓
	35	Develop and Distribute Public Education Materials	✓	✓	✓	✓	✓		✓
	36	Beale Public Affairs Liaison to JLUS Coordinating Committee	✓	✓	✓	✓	✓		✓
	37	Technical Support for Local Decision Making Process	✓	✓	✓				✓
	38	Actively Seek Local Input on Compatibility Issues	✓	✓	✓	✓			✓
	39	Establish and Maintain Compatibility Clearinghouse	✓	✓	✓		✓		✓
Deed Res.	40	Recommend Deed Restrictions in Impacted Areas		✓	✓				✓
General Plans	41	Updating Local General Plans	✓	✓	✓	✓	✓	✓	✓
	42	Incorporating Military Housing Needs in Local Housing Elements	✓	✓	✓	✓		✓	✓
Habitat Conservation	43	Support Completion of Yuba-Sutter NCCP / HCP	✓	✓	✓	✓			✓
Hazard Mit.	44	Update Plans to Reflect Current and Former Military Operations	✓	✓	✓	✓		✓	✓

Strategy Type	#	Strategy	Geographic Area				Time-frame		
			MIA I	MIA IIA	MIA IIB	MIA III	0-2 Years	3-5 Years	Ongoing
MOU	45	Develop General MOU to Implement JLUS Process	✓	✓	✓		✓		
	46	Develop Specific MOUs to Implement JLUS Recommendations	✓	✓	✓		✓		
Real Estate	47	Develop an Enhanced Real Estate Disclosure Ordinance	✓	✓	✓		✓		✓
Zoning /Subdivision	48	Encourage Area Planning Approach	✓	✓	✓				✓
	49	Incorporate AICUZ Compatibility Guidelines, Part 1	✓	✓	✓			✓	
	50	Incorporate AICUZ Compatibility Guidelines, Part 2	✓	✓				✓	
	51	Ensure FAA Part 77 Compliance	✓	✓	✓	✓			✓
	52	Develop or Update Light and Glare Controls	✓	✓	✓	✓	✓		
	53	Modify Subdivision Regulations, Disclosure	✓	✓	✓				✓
Other	54	Reduce Bird and Wildlife Attraction Near Base	✓	✓	✓	✓			✓
	55	Pursue Additional Missions at Beale AFB	✓	✓	✓	✓			✓
	56	Encourage Research on Noise Attenuation	✓	✓	✓	✓			✓
Strategy Type	**#**	**Strategy**	**AOC 1**	**AOC 2**			**0-2 Years**	**3-5 Years**	**Ongoing**
AOC	57	Define and Establish JLUS Areas of Concern	✓	✓			✓		✓
	58	Enhanced Disclosure Requirements in AOC	✓	✓			✓		✓
	59	Investigate Development of Electrical / Electromagnetic Interference Ordinance		✓					✓

Memorandum of Understanding

A Memorandum of Understanding (MOU) is a contract between two or more government entities. The governing bodies of the participating public agencies must take appropriate legal actions, often adoption of an ordinance or resolution before such agreements become effective. These agreements are also known as Joint Powers Agreements or Interlocal Agreements.

Real Estate Disclosure

Prior to the transfer of real property to a new owner, California law requires sellers and their agents to disclose all actual known facts related to the condition of the property. This disclosure should include noise or other proximity impacts associated with property located near a military installation or operations area.

Zoning / Subdivision / Other Local Regulations

Zoning - Zoning is the division of a jurisdiction into districts (zones) within which permissible uses are prescribed and restrictions on building height, bulk, layout and other requirements are defined.

Subdivisions - 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. Subdivision ordinances set forth the minimum requirements deemed necessary to protect the health, safety, and welfare of the public.

Other Strategies

These are strategies that did not fit specifically under one of the previous tool categories.

JLUS Areas of Concern (AOC)– Strategies

These strategies apply to the JLUS Areas of Concern - AOC1 (Firing Range 10,000 foot radius) and the JLUS AOC2 (PAVE PAWS 3-mile radius). See the diagram on page 5 for locations.

For More Information

The complete JLUS document can be downloaded from the OPR website at: www.opr.ca.gov

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Section 1

Introduction

1

INTRODUCTION

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Opened in 1942 as an Army training facility, Camp Beale originally occupied 86,000 acres and was home to over 60,000 military personnel. While Beale today is smaller in acreage (about 23,000 acres) and manpower (about 4,300 military personnel), its strategic importance to the nation and its economic and social significance to the local region has never been stronger.

Beale Air Force Base (AFB) is located in a rural setting, but as development moves closer to the base, coordinated effort is needed to ensure growth continues in a manner that allows Beale to maintain its role in the nation's defense and remains a vital member of the local community and a major contributor to the local economy.

The Beale Joint Land Use Study (JLUS) is the result of a collaborative planning process between local governments, Beale AFB, Native American tribal governments, land owners, interested individuals, and representatives from agencies serving the area around the base. The goal of the Beale JLUS is to protect the viability of current and future missions at Beale while at the same time accommodating growth, sustaining the economic health of the region, and protecting public health and safety.

Beale AFB – Strategic Importance

The term "PAVE" in PAVE PAWS is an Air Force program name, not an acronym.

Since converting to an Air Force Base in 1948, Beale AFB has hosted a range of missions, but today it is known as the center for the United States aerial reconnaissance force. Beale is the home base for all Air Force U-2 and Global Hawk reconnaissance aircraft. Using these resources, Beale provides worldwide reconnaissance data to national and theater commanders. In addition, the base is one of only three sites in the United States supporting the PAVE Phased Array Warning System (PAWS) long-range radar. This system is vital to the defense of the country, providing an early warning system for submarine-launched and intercontinental ballistic missiles. The system also detects and tracks Earth-orbiting satellites.

Beale AFB – Local Importance

Beale is a significant part of the regional economies. In 2006, Beale employed 5,558 persons, which included 4,291 active duty, Reserve, and National Guard military personnel. Approximately 37 percent of the active duty military personnel stationed at Beale reside on base, with the remainder living primarily in Yuba and Sutter counties.

The economic impact of Beale AFB on the region is significant. In 2006, the installation had a payroll of $249 million dollars. When factoring in the creation of other jobs, contract award expenditures, and other purchases in the region, the installation estimates it had a total economic impact of $451 million (see Section 2 for details).

Beale and Local Communities – Working Together

Beale and the local communities are also linked through the services each provides. With many military personnel and their families living in nearby communities, local jurisdictions and agencies provide a range of services to these personnel, from public schools and libraries to police and fire protection. Beale AFB also gives back to local communities through the involvement of base personnel in local charities and other civic organizations and by responding with critical services when needed, such as fire response, explosive ordnance disposal, and emergency services to support flood response and relief.

A Growing Region

As growth continues to expand out of the Sacramento metropolitan area, the five counties that make up the region surrounding Beale AFB (Butte, Nevada, Placer, Sutter, and Yuba counties) are projected to have strong residential, commercial, and industrial growth over the next several decades. By the year 2050, these five counties are projected to increase in population from about 795,000 persons in 2006 to almost 1.4 million persons by the year 2050. This 73 percent growth will add over 600,000 new residents to the area, and transform several small rural communities into mid-sized communities.

1.1 Why Prepare a Joint Land Use Study?

In addition to the many positive interactions between the local communities and Beale, the activities or actions of one entity can negatively impact the other and result in conflicts. As communities develop and expand in response to growth and market demands, land use decisions can push urban development closer to military installations and operational areas. The result can include land use and other compatibility issues, often referred to as encroachment, which can have negative impacts on community safety, economic development, and sustainment of military activities and readiness. This threat to military readiness activities is currently one of the military's greatest concerns.

What is a compatibility issue?

Section 3 lists 24 factors commonly used to categorize compatibility issues. As shown in Section 3, compatibility issues can cover a wide range of concerns. Sample issues discussed in this JLUS include:

- *Attraction of birds to the Ostrom Landfill that could impact flight operations*
- *Construction of new mining structures in the areas north of the runway that could impact flight operations*
- *Electromagnetic interference from the PAVE PAWS system on future residential uses built near the base*

In past instances, incompatible development has been a factor in the curtailment of military operations or restructuring of mission critical components to other Department of Defense (DOD) installations. Collaboration and joint planning between military installations and local communities should occur to protect the military mission and the health of economies and industries of the communities before incompatibility becomes an issue.

As noted previously, the region surrounding Beale AFB is expected to have significant growth. Given the physical constraints in the region, such as flood potential, identifying adequate sites for new growth while protecting the current and future operations at Beale AFB is the challenge this JLUS sets out to address.

1.2 What is a Joint Land Use Study?

A JLUS is a collaborative planning effort between active military installations, surrounding counties and cities, Native American tribal governments, and affected agencies. The JLUS program is administered by the DOD Office of Economic Adjustment (OEA). Though a JLUS is funded in part through OEA, it is produced by and for local communities.

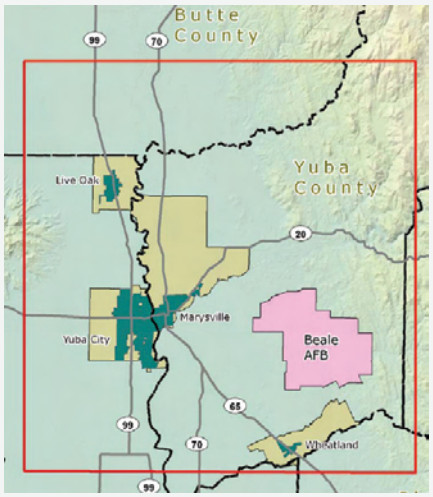
In 2002, the State of California initiated a broad encroachment study to examine the impacts of land use development at a number of military installations in the state. The scope of this study broadened and changed over time. In 2005, the Governor's Office of Planning and Research (OPR) became responsible for the project. In the California JLUS program, as in other state-sponsored JLUS programs, the sponsor's primary role was to partner with local jurisdictions and agencies and facilitate discussion between them and the military.

During the development of the California JLUS program, OPR grouped the participating bases into the current two JLUS study areas. The two studies constituting the California program are the Beale JLUS and the R-2508 JLUS (see Figure 1-1).

Beale JLUS

The Beale JLUS is designed to address all lands near Beale AFB that meet the following criteria.

- Land areas that have resources, activities, or land uses (existing or future) that may impact current or future military operations.
- Land areas upon which military operations associated with the base may have an impact on resources, activities, or land uses (existing or future).

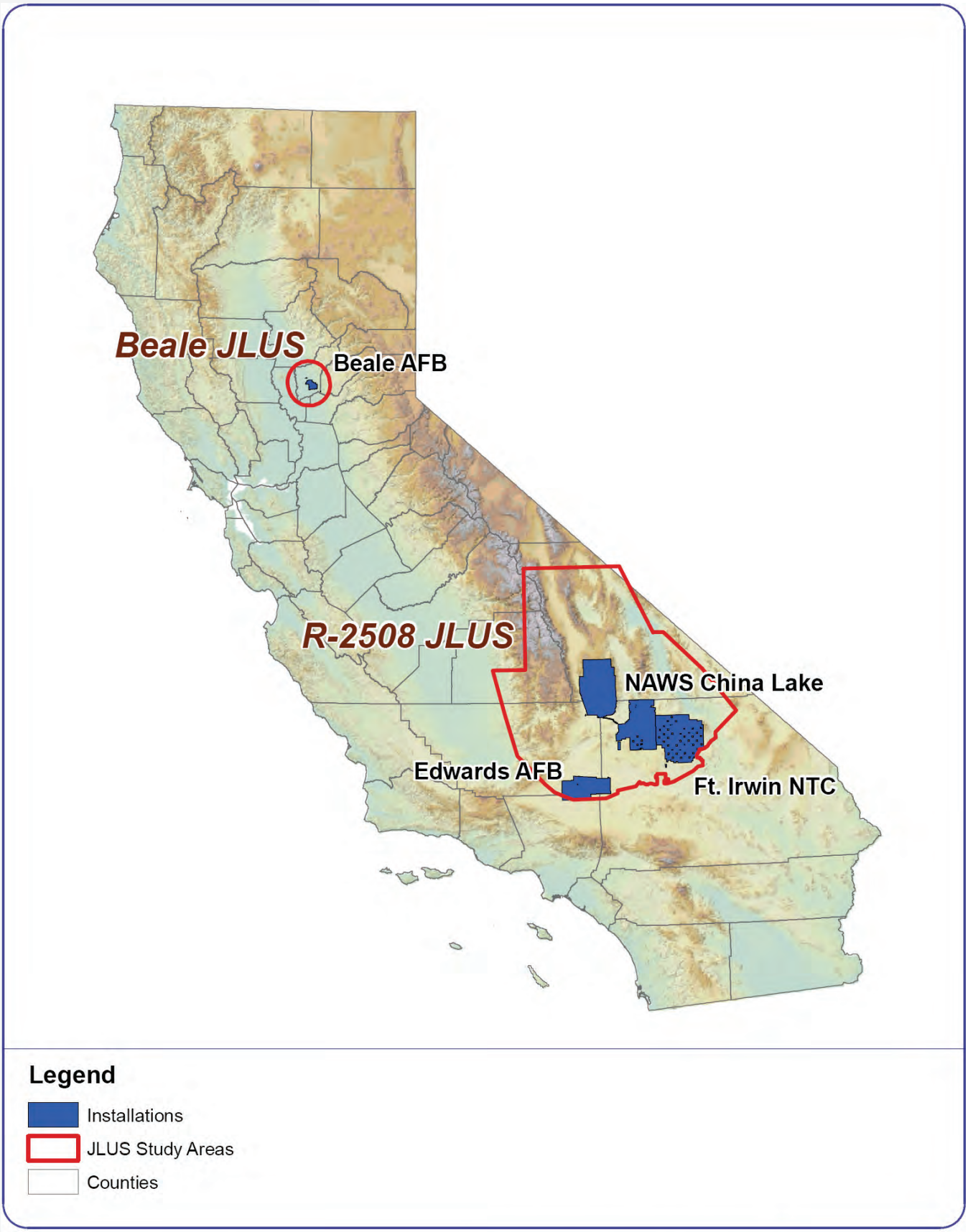


Original Study Area

At the start of the Beale JLUS project, OPR and the project team drew a large preliminary study area in order to start collecting the background information needed for the study. The initial square study area (shown on the left) captured the areas surrounding the installation where overflight activity was concentrated. OPR used this study area to invite jurisdictions, agencies, and organization to nominate members to represent them on the Advisory Committee (AC) and Technical Committee (TC). To ensure the project was inclusive, jurisdictions to the south of this square (City of Lincoln) and east (cities of Grass Valley and Nevada City) were invited to join.

The issues to be addressed in the Beale JLUS and the study area shape and location were the topics of several workshops with the AC and TC. Following release of the updated Air Installation Compatible Use Zone (AICUZ) study for Beale AFB, the study area was refined into its current oval shape, which is smaller in area than the first study area drawn, but does extend further to the south and east.

The study area is currently defined as a 15-mile oval measured from the centerline of the Beale AFB runway (see Figure 1-2). The study area defined contained all of the compatibility issues identified during the JLUS process, included the AICUZ noise contours used to establish project actions listed in Section 5, and contained the area used for lower altitude overflight from the base. As defined, the study area includes the western half of Yuba County and portions of Butte, Nevada, Placer, and Sutter counties.



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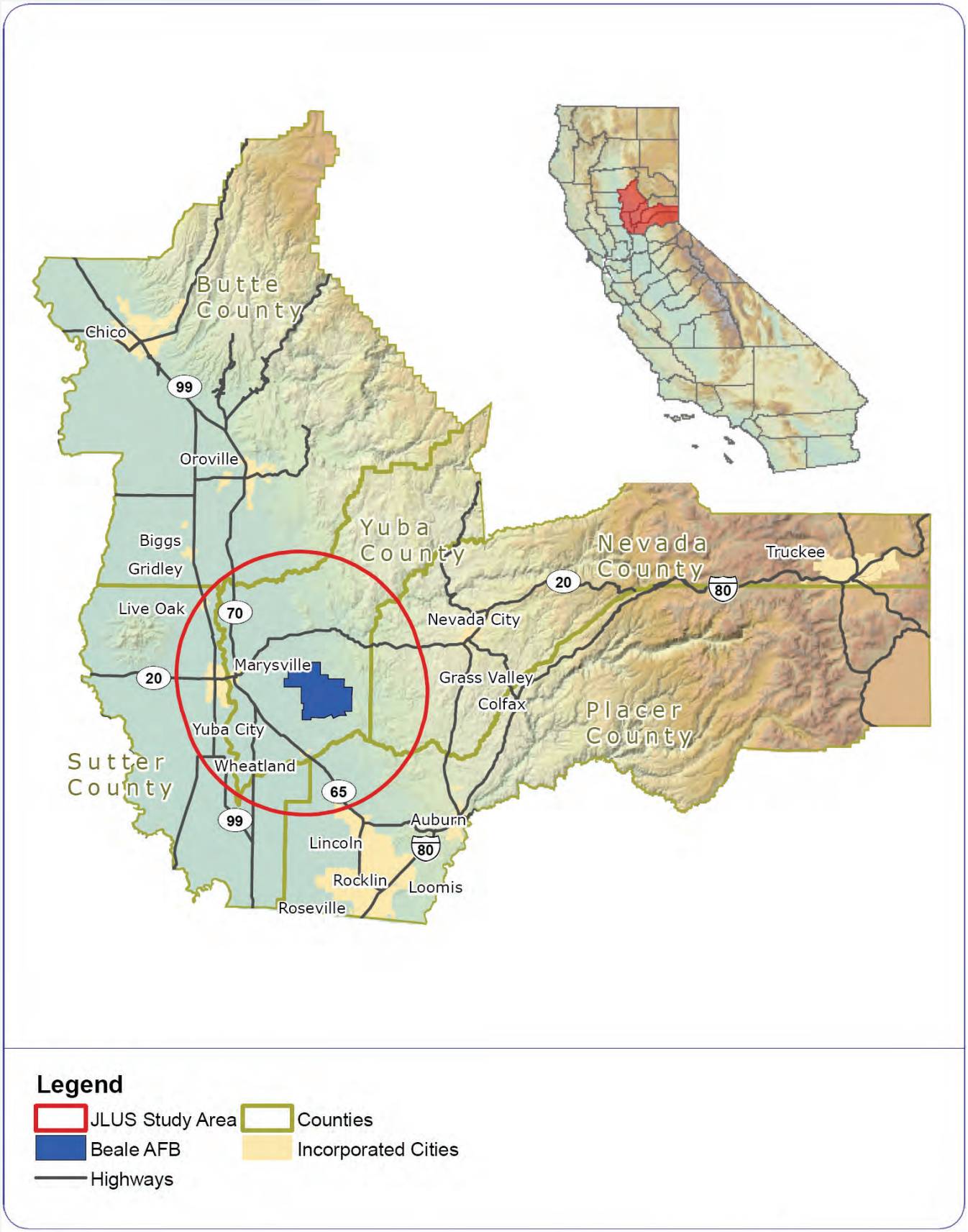
California JLUS Program | Figure 1-1



0 20 40 Miles

Regional Location | Figure 1-2

R-2508

The R-2508 JLUS includes Edwards AFB, Fort Irwin National Training Center (NTC), Naval Air Weapons Station (NAWS) China Lake and the land beneath the Joint Service R-2508 Special Use Airspace Complex and associated military airspace. This 20,000-square-mile area encompasses portions of Fresno, Inyo, Kern, Los Angeles, San Bernardino, and Tulare counties (see Figure 1-1).

1.3 JLUS Objectives

The goal of the Beale JLUS is to protect the viability of current and future missions at Beale AFB while at the same time accommodating growth, sustaining the economic health of the region, and protecting public health and safety. To help meet this goal, three primary objectives were identified.

- **Understanding**. Convene community, agency, and Beale AFB representatives to study the issues in an open forum, taking into consideration both community and military viewpoints and needs. This includes public outreach and input.
- **Collaboration**. Encourage cooperative land use and resource planning between Beale AFB and surrounding communities so that future community growth and development are compatible with the training and operational missions on the installation while at the same time seeking ways to reduce operational impacts on adjacent lands.
- **Actions**. Provide a set of tools, activities, and procedures from which local jurisdictions, agencies, and the installation can select and then use to implement the recommendations developed during the JLUS process. The actions proposed include both operational measures to mitigate installation impacts and local government and agency approaches to reduce impacts on Beale AFB operations.

1.4 Public Outreach

As highlighted in the objectives stated above, the JLUS process was designed to create a community-based plan that builds consensus and obtains support from varied interests, including residents, property owners, local elected officials, business interests, the military and state and federal agency representatives. To achieve the JLUS objectives, the

Beale JLUS public outreach program included a variety of opportunities for interested parties to contribute to the development of the plan.

Stakeholders

An early step in any planning process is the identification of stakeholders. For this project, the term stakeholder refers to individuals, groups, organizations, and local governmental entities interested in, affected by, or affecting the outcome of the JLUS project. Stakeholders identified for the Beale JLUS include, but were not limited to, the following:

- Local jurisdictions (cities and counties)
- Beale AFB
- OPR
- OEA
- Local, regional, and state planning, regulatory, and land management agencies
- Public (including landowners)
- Native American tribal governments
- Environmental advocacy organizations
- Nongovernmental organizations (NGOs)
- Other special interest groups

Advisory and Technical Committee

For the Beale JLUS, an AC was established at the beginning of the project to provide guidance and input on policy issues, provide overall direction to the process, and review study findings. The AC consisted of representatives designated by counties and cities in the study area and adjacent area, Beale AFB, OPR, OEA, and representatives from other stakeholder groups. Meetings were held throughout the process in order to ensure the JLUS identified and appropriately addressed local issues.

The TC was established to provide technical expertise to the AC and the project team. The TC consisted of city and county planners, military planners and technical specialists, natural resource planners, state agency representatives, and others with technical expertise critical to creating a plan that could be implemented. The committee identified issues to be addressed, provided feedback on report development, and evaluated implementation options for the AC.

Table 1-1 provides a listing of the agencies and organizations that were members of the AC and TC.

Table 1-1. Participating Organizations

Committee / Roles	Participating Organization	
Advisory Committee Policy Direction Study Oversight Monitoring Report Adoption	▪ Beale Air Force Base ▪ Butte Tribal Council ▪ California BIA ▪ Caltrans ▪ City of Grass Valley ▪ City of Lincoln ▪ City of Live Oak ▪ City of Marysville ▪ City of Nevada City ▪ City of Wheatland ▪ City of Yuba City ▪ Department of Fish and Game ▪ Maidu Nation ▪ Middle Mountain Foundation	▪ Nevada County ▪ North State BIA ▪ OEA ▪ OPR ▪ SACOG ▪ Sierra Club ▪ Sutter County ▪ Sutter-Yuba Association of Realtors ▪ The Nature Conservancy ▪ Yuba County ▪ Yuba-Sutter Chamber of Commerce ▪ Yuba-Sutter County Farm Bureau ▪ Yuba-Sutter Economic Development Corporation
Technical Committee Subject Matter Expertise Technical Implementation	▪ Beale AFB ▪ Caltrans ▪ City of Marysville ▪ City of Wheatland ▪ City of Yuba City ▪ Dept. of Fish and Game	▪ OPR ▪ SACOG ▪ State Water Board ▪ Sutter County ▪ Yuba County

AC and TC Meetings

- AC / TC #1 4/12/06
  Introduction
- AC / TC #2 5/24/06
  Growth trends and current plans
- AC / TC #3 8/9/06
  Issues
- TC #4 9/13/06
  AC #4 11/2/06
  Issues and strategies
- TC #5 12/18/06
  AC #5 1/17/07
  Strategies
- AC / TC #6 8/20/07
  Strategies
- AC / TC #7 12/17/07
  Draft JLUS
- AC / TC #8 04/21/08
  Review of Public Comments

The AC and TC served as liaisons to their respective stakeholder groups. AC and TC members were charged with conveying committee activities and information to their organizations or constituencies and relaying their organization's comments and suggestions to the full AC and TC for consideration. AC members were encouraged to set up meetings with their organizations or constituencies to facilitate this input.

Public Forums

Public input was a critical component in the development of the Beale JLUS. Public forums provided an opportunity for information exchange with the greater community and were useful in identifying the issues to be addressed in the Beale JLUS.

- **Public Forum #1** August 2006
  This public forum provided participants with an overview of the JLUS project and obtained input on the issues and opportunities that needed to be addressed in the JLUS.
- **Public Forum #2** January 2007
  This public forum was designed to solicit input from landowners adjacent to Beale AFB, but was open to the public at large for their continued input.
- **Public Forum #3** April 2008
  This forum, held during the 30-day public review period, presented the draft Beale JLUS document, discussed the proposed findings and actions, and accepted public comments on the draft document.

Public Outreach Materials

At the beginning of the JLUS program, a Fact Sheet was developed to describe the JLUS program and objectives, identify methods to provide input into the process, and identify the study area proposed for the Beale JLUS. This Fact Sheet was provided at all meetings and to all interested members of the public. A copy of the Fact Sheet is provided in Appendix A.

To assist the public in the review of the draft JLUS, the Executive Summary was widely distributed before and during the public forum on the draft JLUS.

www.cajlus.com

A project website was maintained to provide stakeholders, the public, and media representatives with access to project information. This website was maintained for the entire project to ensure that information was easily accessible. Information contained on the website included: project points of contact, schedules, documents, maps, public meeting information, and downloadable comment forms.

1.5 JLUS Implementation

Once completed, it is important to note that the JLUS is not an adopted plan. It is a strategy guide that will be used by local jurisdictions, agencies, and organizations in the study area to guide their future compatibility efforts. For instance, local jurisdictions will use the strategies in this JLUS to guide future general plan and zoning updates, as well as assist in the review of development proposals. Beale AFB will use the JLUS to guide their interactions with the community on future projects. It is through the future actions of the stakeholders involved that the JLUS strategies will become a reality.

Key to implementation of the strategies presented in this JLUS is the establishment of the JLUS Coordinating Committee (Strategy 29 in Section 5). Through this committee, local jurisdictions, Beale AFB, Native American tribal governments, agencies, and other interested parties will be able to work together to establish procedures, recommend specific actions of member agencies, and make adjustments to strategies over time to ensure the Beale JLUS remains relevant to the planning issues of the area.

1.6 JLUS Organization

The following is a brief overview of the organization of the Beale JLUS, including the contents of each section and materials included in the appendices.

Section 1, Introduction. Section 1 provides an introduction and context for the Beale JLUS. This section describes the goals and objectives used to guide development of the JLUS, who was involved in making the JLUS a success, public outreach methods, and the organization of the document.

Section 2, Study Area Profile. In developing a JLUS, a good understanding of the installation and local jurisdictions within the study area is necessary. For the Beale JLUS, this section provides: an overview of the installation's history, a description of the primary activity areas on the base, a look at the current mission and military units located at the base, military family housing assets, the economic impact of the base on the region, and a discussion of future missions. This is followed by an overview of the region's growth potential and a profile of each of the counties and cities within the study area, including population, housing, and employment statistics.

Section 3, Compatibility Issues. Compatibility, in relationship to military readiness, can be defined as the balance or compromise between community needs and interests and military needs and interests. The goal of compatibility planning is to promote an environment where both entities can coexist successfully.

In order to develop potential solutions, it is critical to understand the nature of existing and potential compatibility issues. In this section, the JLUS presents the compatibility issues identified for the Beale JLUS. These issues were identified based on input from the AC and TC, members of the public, existing plans and technical reports, and evaluation by the project team.

Section 4, Existing Plans and Programs. This section provides an overview of relevant plans, programs, and studies currently used to address compatibility issues in the study area. This includes technical studies, such as the current Beale AICUZ, as well as local general plans and zoning ordinances.

Section 5, Recommendations. The final section of the JLUS is a toolbox comprised of strategies that have been developed cooperatively with representatives from local jurisdictions, Beale AFB, state and federal agencies, local organizations, and interested individuals and landowners. The result of a collaborative planning process, the recommendations in this section represent a true consensus plan: a realistic, coordinated approach to compatibility planning developed with the support of the stakeholders involved.

Section 6, Acronyms. A listing, with definitions, of the acronyms used in this JLUS.

Appendices. The main JLUS document is supported by the following appendices.

A. Beale JLUS Fact Sheet
B. Beale AICUZ Study, Volume I
C. PAVE PAWS Information
D. Firing Range Information
E. Sample Avigation Easement
F. Part 77 Information

Section 2

Study Area Profile

2

STUDY AREA PROFILE

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This chapter provides important information about the military and civilian entities within the Beale Air Force Base (AFB) Joint Land Use Study (JLUS) study area. The following section presents an overview of the history and current operations at Beale AFB. This section also provides profiles and analyses of development trends and growth potential in the jurisdictions within the Beale JLUS study area.

Demystifying the activities performed on the military installation provides valuable insights into the importance of Beale AFB as a national strategic asset. This information will enable stakeholders to make informed decisions about the future development and economic growth of their communities, which ultimately impacts the continued existence and future of Beale AFB.

2.1 Beale AFB

History

Unlike most Air Force installations that are named after aviators, Beale AFB was named for a 19th century pioneer, Edward Fitzgerald Beale. Beale served in the California militia and led the experiment to replace Army mules with camels.

Edward Fitzgerald Beale (circa 1837)

The installation opened as Camp Beale in October 1942 as a training site for the 13th Armored Division and the 81st and 96th Infantry Divisions. During World War II, Camp Beale's 86,000 acres were home to more than 60,000 soldiers, a prisoner-of-war encampment, and a 1,000-bed hospital. In 1948, the camp was transferred from the Army to the Air Force. Between 1949 and 1959, the base went through many changes: It was used by the Navy, the Stanford Research Institute, the Air Base Defense School, and a survival training school. The Strategic Air Command took over the base in 1956 and became the principal user. The 86,000 acres gradually became 22,944 as land was sold to private entities in the late 1950's and early 1960's, and a large area was given to the state (current Spenceville Wildlife Area).

As part of the Air Force, the installation has been under several commands, including the Air Training Command, Continental Air Command, Aviation Engineer Force, and the Strategic Air Command. Since June 1, 1992, Beale AFB has been an Air Combat Command installation.

Since mid-1959, the installation has had a number of major units call it home. These include: the 4126th Strategic Wing with its KC-135 refuelers and B-52 bombers in the early 1960's; the 456th Strategic Aerospace Wing starting in 1963; the 17th Bombardment Wing in 1975; the 100th Air Refueling Wing in 1976; and the 9th Strategic Reconnaissance Wing in 1983.

SR-71 Blackbird

For over 40 years, Beale AFB has played a significant role in reconnaissance and information analysis operations for the Air Force and the Department of Defense (DOD). In October of 1964, the DOD announced that Beale AFB would be the home of the new supersonic reconnaissance aircraft, the SR-71 Blackbird. The 4200th Strategic Reconnaissance Wing was activated on January 1, 1965; however, the first SR-71 did not arrive until January of 1966. In June of 1966, the 9th Strategic Reconnaissance Wing replaced the 4200th.

U-2 Dragon Lady

The role of Beale AFB in reconnaissance continued with the introduction of the U-2 aircraft, the first of which arrived from Davis Monthan AFB on July 12, 1976. While the SR-71 is no longer used by the Air Force, the U-2 is still in service as the primary reconnaissance aircraft for the Air Force. All Air Force U-2 aircraft are based at Beale AFB; although, operations take them to locations around the world.

In 1979, the 7th Missile Warning Squadron brought the PAVE (Air Force program name) Phased Array Warning System (PAWS) radar facility to Beale. This 10-story structure's capabilities include detecting Sea-Launched Ballistic Missiles (SLBM) and Intercontinental Ballistic Missiles (ICBM), as well as tracking manmade objects circling the earth in Low Earth Orbit. The Beale AFB PAVE PAWS is one of only three facilities in the United States to perform these functions.

RQ-4 Global Hawk

Continuing Beale's tradition of reconnaissance support, 2001 brought a new age of equipment and capabilities to the 9th Reconnaissance Wing (9th RW). As part of the 9th RW, the 12th Reconnaissance Squadron was activated at Beale AFB as the parent organization for the RQ-4 Global Hawk Unmanned Aerial Vehicle (UAV), the Air Force's newest high-altitude reconnaissance platform.

Units at Beale AFB

The 9th RW is the host unit at Beale AFB, responsible for the management and operation of the installation. The 9th RW hosts three major associate units at the installation: the 584th Intelligence Group (584th IG), the 7th Space Warning Squadron (7th SWS), and the 940th Air Refueling Wing (940th ARW), as well as several other smaller units. Each unit's mission is defined as an operation that is assigned by its higher headquarters. Figure 2-1 illustrates the organizational structure of these units in relation to the Air Force structure.

9th Reconnaissance Wing

The 9th RW is responsible for providing timely, reliable, high-quality, high-altitude reconnaissance products for the Air Force, and other DOD and federal users. To accomplish this mission, the wing is equipped with the nation's fleet of U-2 reconnaissance aircraft and Global Hawk UAV. The 9th RW is composed of more than 3,000 people in four groups located at Beale AFB and multiple overseas operating locations.

The 9th Munitions Squadron administers the Air Force Combat Ammunition Center (AFCOMAC) training program. This Air Force-level course was developed to provide the Air Force munitions community with advanced training in mass combat ammunition planning and production techniques. It uses a combination of in-depth classroom instruction combined with a four-day intensive practical exercise (IRON FLAG) using live munitions in a realistic, bare-base scenario.

548th Intelligence Group

The 548th IG is part of the 480th Intelligence Wing headquartered at Langley AFB, Virginia. The unit's mission includes evaluation and dissemination of U-2, Global Hawk, and Predator imagery and signals data.

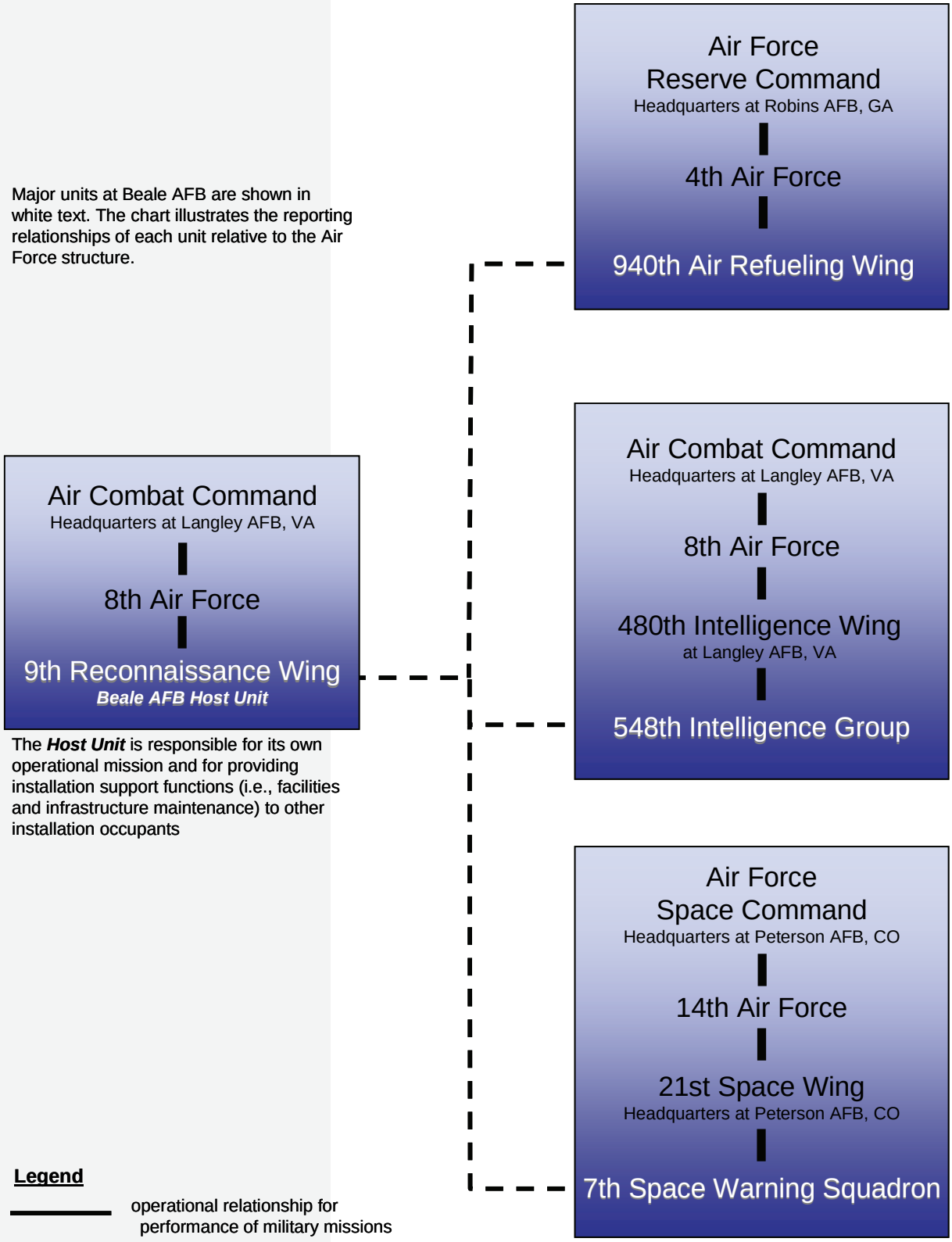
7th Space Warning Squadron

Using the PAVE PAWS radar site at Beale AFB, the 7th SWS is primarily responsible for detecting ICBMs and SLBMs in the Pacific Ocean region. The 7th SWS helps form a layered, worldwide network of missile warning systems.

940th Air Refueling Wing

As part of the Air Force Reserve Command, the 940th ARW provides aerial refueling and airlift capability worldwide. The wing currently performs its mission using the KC-135E tanker aircraft. As part of the 2005 Base Realignment and Closure (BRAC) Commission recommendations, this unit will move from Beale AFB (see BRAC discussion under Future Mission Operations).

Major units at Beale AFB are shown in white text. The chart illustrates the reporting relationships of each unit relative to the Air Force structure.



The ***Host Unit*** is responsible for its own operational mission and for providing installation support functions (i.e., facilities and infrastructure maintenance) to other installation occupants

Legend

operational relationship for performance of military missions

relationship for installation support at Beale AFB

Source: www.af.mil and Matrix Design Group, 2007.

Figure 2-1. Beale AFB Unit Structure

Current Mission Operations

The aircraft based at the installation are the U-2, T-38 (used for training and as chase planes for U-2 operations), KC-135E, and the Global Hawk UAV. According to the Beale AFB Air Installation Compatible Use Zone (AICUZ) study released in June 2006, the average number of daily operations for these aircraft is as follows:

U-2	79
T-38	71
KC-135E	41
Global Hawk . .	10

For the above numbers, an operation is defined as one takeoff, one landing, or half of a closed pattern. A closed pattern consists of both a departure portion and an approach portion (i.e., two operations). For instance, a plane taking off in the morning and returning in the afternoon to land would be counted as two operations.

In addition to these aircraft, which are assigned to Beale AFB, aircraft from other military installations use the airfield at Beale AFB for training and other operational activities.

Future Mission Operations

The 2005 BRAC Commission recommended the realignment of the 940th ARW's KC-135E tanker fleet. Four of Beale's KC-135E aircraft will move to Selfridge Air National Guard Base, Michigan, and another four tankers will relocate to the Air National Guard's 134th ARW at McGhee-Tyson Airport Air Guard Station, Tennessee. The 940th ARW's Expeditionary Combat Support (ECS) staff and equipment will remain in place.

2005 BRAC recommendations call for realignment of Beale's KC-135R fleet to Air National Guard units in Michigan and Tennessee.

With the relocation of the Beale AFB refueling mission to other installations, Beale AFB will focus on providing commanders at the highest levels of the US military with reconnaissance products using the U-2 and the Global Hawk UAV. For the reconnaissance mission, U-2 operations will remain similar to today's operations, with a natural increase and decrease as aircraft are deployed to areas around the world and return to Beale AFB. Global Hawk operations will increase over time as additional aircraft are delivered to the 9th RW.

Other than the planned increase in Global Hawk aircraft, no other missions are currently planned to come to Beale AFB. Local community supporters are working with legislators and the base to support additional mission growth at the installation. This could include missions such as the new headquarters for the Air Force Cyber Command, a command focused on the use of electronics and the electromagnetic

spectrum to store, modify, and exchange data via networked systems and associated physical infrastructure.

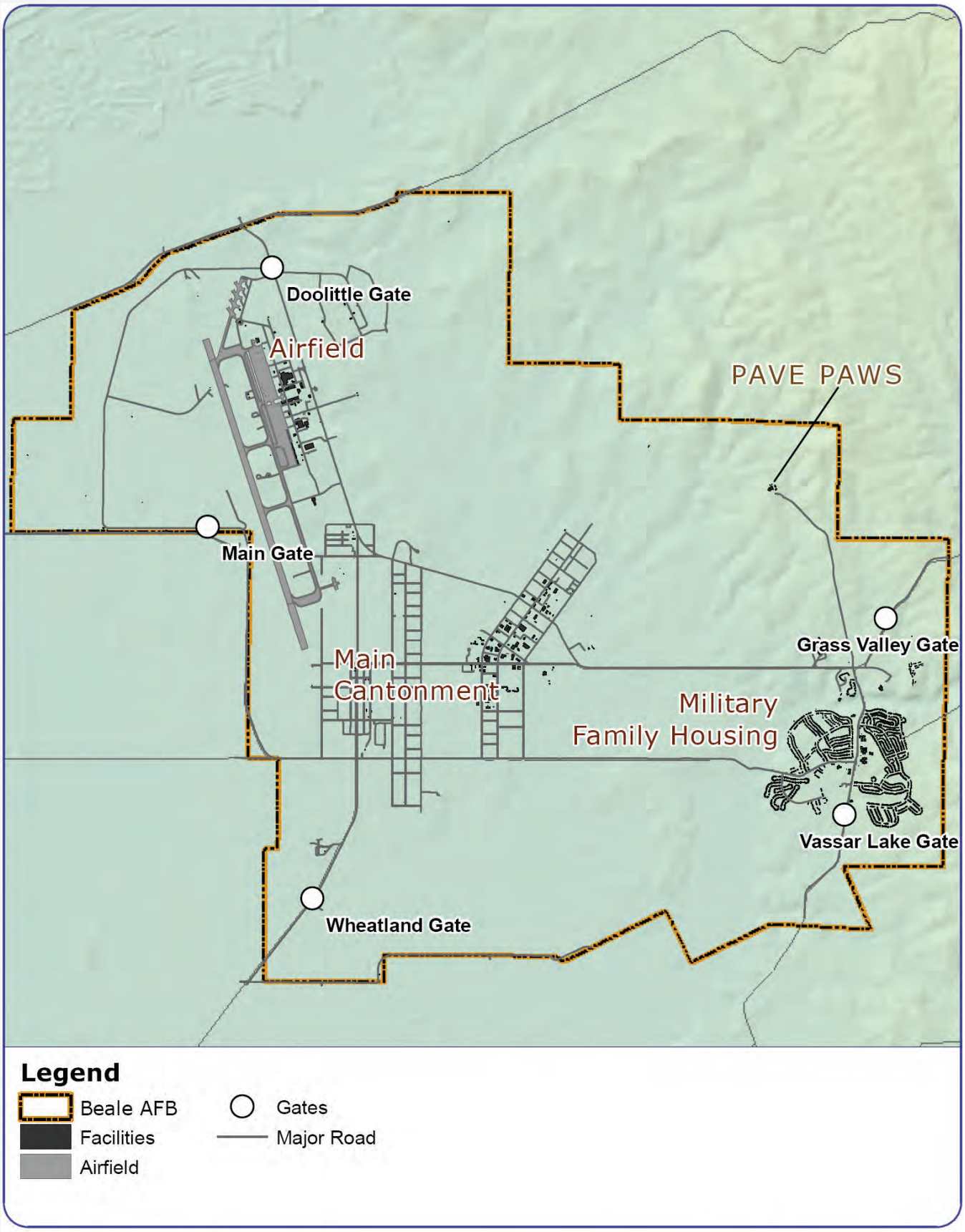
Installation Setting

Beale AFB is located in the upper Sacramento Valley in the western portion of Yuba County, California (see Figure 1-2). The installation is located about 40 miles north of Sacramento. The cities closest to the base are the City of Marysville, just west of the base, and the City of Wheatland, just southwest of the base.

Beale AFB Main Gate

Figure 2-2 shows the primary features of Beale AFB that relate to this study.

- **Airfield**. The airfield is located in the northwest corner of the installation. The close proximity of the runway to the northern and western installation boundaries puts aircraft operations near private land holdings.
- **Main Cantonment Area.** The main cantonment area is located near the center of the installation. This area contains the primary administrative, industrial, commercial, and dormitory housing functions on the installation.
- **PAVE PAWS**. Operation of the PAVE PAWS facility is a source of concern relative to the potential for electromagnetic interference with consumer electronics in the surrounding area.
- **Military Family Housing**. Military family housing is located near the southeast corner of the installation.
- **Gates**. The installation is served by five gates located around the perimeter of the installation.



Beale Air Force Base | **Figure 2-2**

Base Demographics

In Fiscal Year 2006 (FY06), the installation reported a total population (employment plus active duty dependents) of 9,960 people. Table 2-1 provides a breakdown of the direct employment figures.

Table 2-1. Population Breakdown, Beale AFB FY06

Variable	Breakdown	Total
Appropriated Fund Military		4,291
Active Duty	*3,388*	
Air Force Reserve/National Guard	*903*	
Active Duty Military Dependents		4,402
Appropriated Fund Civilians		751
General Schedule (GS)	*423*	
Federal Wage Board	*279*	
Other (Commissary)	*49*	
Non-Appropriated Fund Contract Civilians and Private Business		516
Civilian NAF	*229*	
Civilian BX	*116*	
Contract Civilians	*171*	
Private Businesses On Base (1)	*14*	
TOTAL BASE POPULATION		9,960

Source: Beale AFB FY06 Economic Impact Analysis, 10 October 2006

Note: (1) These staff are not included by Beale AFB in their total personnel count.

Military Housing

Approximately 63 percent of Beale AFB military personnel and their families live off-base in local communities such as Grass Valley, Lincoln, Linda, Live Oak, Marysville, Olivehurst, Plumas Lake, Roseville, Wheatland, and Yuba City.

Family Housing

The last Housing Requirements and Market Analysis for Beale determined that there was a surplus of 755 housing units. Additional information regarding the Beale AFB privatization effort is found in Section 3.

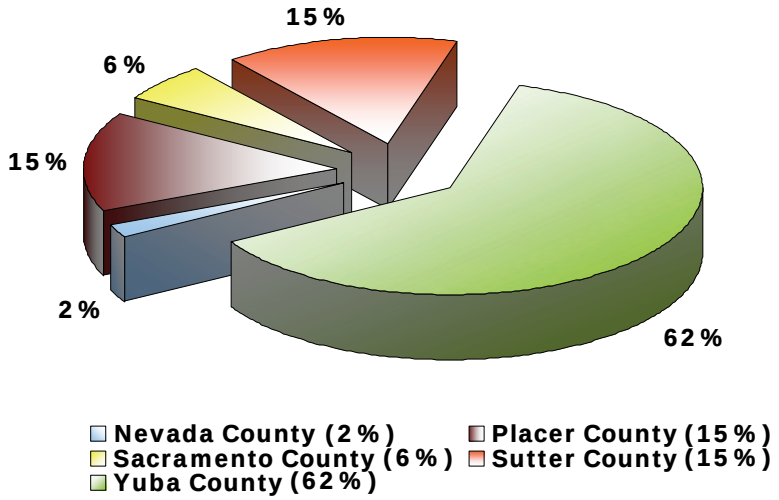
Table 2-2 provides a breakdown of those people living on-base and off-base. About 37 percent of the military personnel stationed at Beale AFB and their dependents reside on base, with the remainder living primarily in Yuba County (Table 2-2).

Table 2-2. Military Housing Status

Class	Living On-Base	Living Off-Base	Total
Active Duty	1,340	2,048	3,388
Air Force Reserve / Air National Guard	9	894	903
Dependents	1,908	2,494	4,402
		TOTAL	8,693

Source: Beale AFB FY06 Economic Impact Analysis, 10 October 2006

Figure 2-3 shows the counties where Beale AFB military personnel and civilians reside when living off-base. The majority of these personnel live in Yuba County.



Source: Harl Sanderson, Beale AFB Installation Support, 9 MSG/CD-1 on 26 December 2007.

Figure 2-3. Locations of Off-Base Personnel

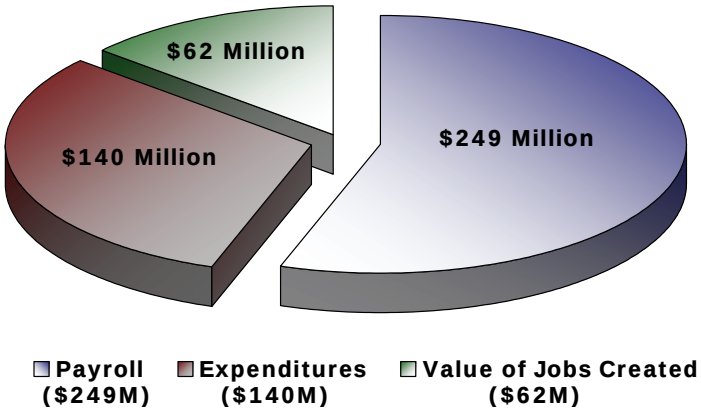
Dormitories

Beale AFB maintains six dormitories consisting of a total of 565 rooms. These dormitories are designated for use by enlisted personnel only. Unaccompanied officers reside in the local communities. Of the six dormitory buildings, 50 percent are considered to be in good condition or better. The most recent addition to the Beale AFB dormitory inventory was opened in June 2007 with 96 rooms. The remaining 50 percent of the installation's dormitories are identified for replacement in the out years (i.e., beyond 2015). The dormitories have an average occupancy rate of 95 percent.

Installation Economic Impact

The total economic impact of Beale AFB on the surrounding region is measured in three categories: annual payroll, annual expenditures, and value of jobs created. Payroll expenditures are payment for direct employment at the installation, such as military and civilian employees. Expenditures included a range of direct purchases at the installation. The major component under expenditures was $54 million spent on construction contracts. The final category relates to the value of jobs created. While the other two categories reflect direct expenses, this value represents secondary impacts in the region. That is, given payroll and expenditures, the value of other jobs generated by this increase in the economy. For FY06, this was estimated at $62 million. All summed, the total economic impact of the installation for FY06 was just over $451 million. The breakdown of the total economic impact by category is shown on Figure 2-4. Further details on payroll are shown on Table 2-3, and details on expenditures are shown on Figure 2-5.

Beale AFB contributed $451 million to local economies in FY06.



Source: Beale AFB FY06 Economic Impact Statement dated 10 October 2006.

Figure 2-4. Total Annual Economic Impact, Beale AFB FY06

Table 2-3. Economic Impact Details, Beale AFB FY06

Variable	Value
Annual Payroll	$249,497,371
Military	173,755,987
Federal Civilian	$59,344,233
Other Civilian	$16,397,151
Annual Expenditures	$139,866,911
Annual Dollar Value of Jobs Created (Estimated)	$61,819,100
Indirect Jobs Created (Estimated)	1,645
Average Annual Pay	$37,580
TOTAL	$451,183,382

Source: Beale AFB FY06 Economic Impact Analysis, 10 October 2006

Values in Figure 2-5 are higher than Table 2-3 due to rounding.

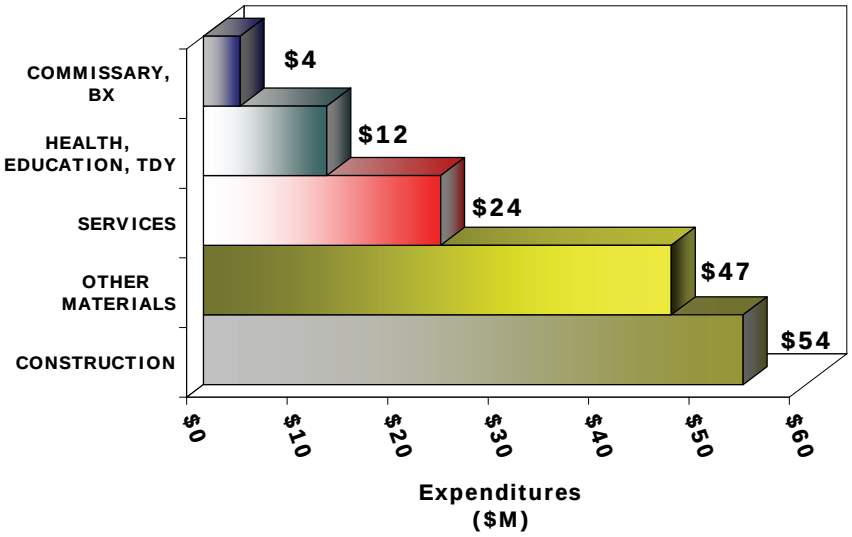


Figure 2-5. Breakdown of Expenditures

2.2 Study Area Profile and Growth Trends

The Beale JLUS study area extends 15 miles in all directions from the centerline of the Beale AFB runway. The study area encompasses nearly 774 square miles and includes portions of Butte County, Nevada County, Placer County, Sutter County, and Yuba County. Within the study area are the cities of Marysville, Live Oak, Lincoln, Wheatland, and Yuba City. Figure 2-6 illustrates the study area boundaries and the local jurisdictions.

Study Area Overview

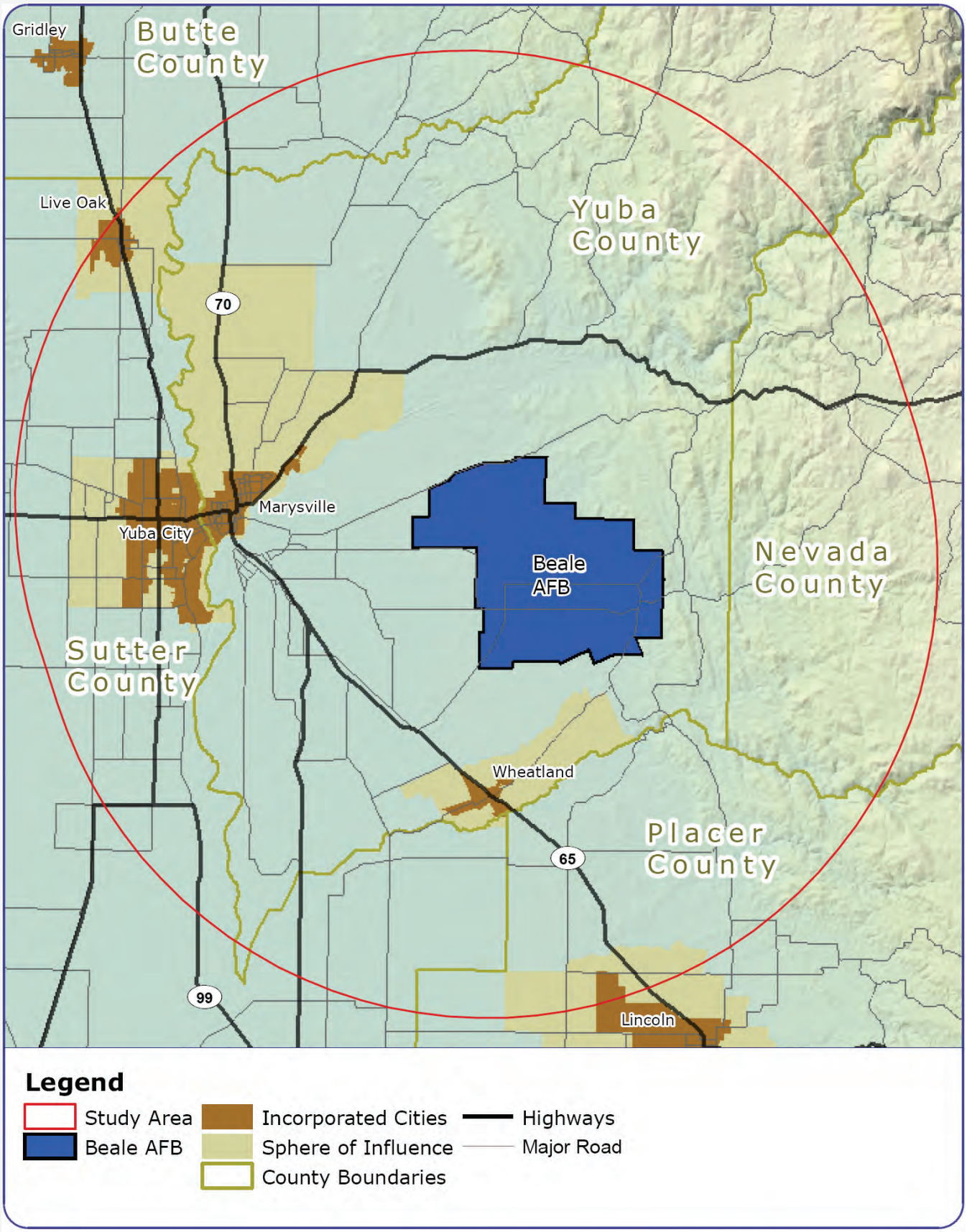
Table 2-4 shows the area (in acres) contained in each of the counties and cities with land inside the study area. The county totals summarize all areas within the study area for that county, including the area within the incorporated city limits, areas within a city's sphere of influence (SOI), and even the area within Beale AFB (included in Yuba County's acreage total).

As seen in the table, more than half of the study area is located in the unincorporated portions of Yuba County.

Table 2-4. Jurisdictional Areas within the Study Area

Jurisdiction	Area (Acres)		
	County	City Limits	SOI
Butte County	19,059		
Nevada County	66,664		
Placer County	51,777		
Lincoln		538	5,481
Sutter County	93,382		
Live Oak		986	4,335
Yuba City		7,166	8,041
Yuba County	264,937		
Marysville		2,316	24,930
Wheatland		893	7,823
TOTAL	495,819	11,899	50,610

Source: Matrix Design Group, 2007



0 5 10 Miles **Jurisdictional Boundaries** | **Figure 2-6**

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento Region. Of its member counties, three are located in the study area (Placer, Sutter, and Yuba). All of the incorporated cities in the Beale JLUS study area (Lincoln, Live Oak, Marysville, Wheatland, and Yuba City) are SACOG member cities. Butte and Nevada counties are outside the SACOG region.

SACOG provides transportation planning and funding for the region and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, SACOG provides the allocation of affordable housing targets for the jurisdictions in the SACOG region and assists in planning for transit, bicycle networks, clean air, and airport land uses.

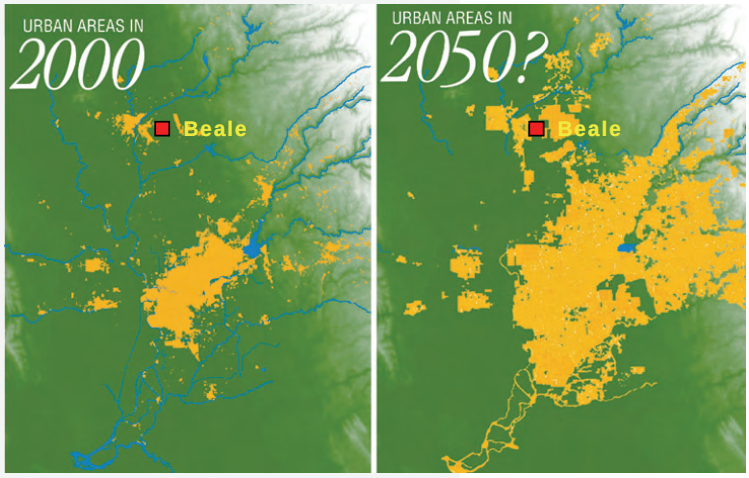
In 2002, SACOG undertook a multi-year planning and public involvement effort to develop the Sacramento Region Blueprint Transportation and Land Use Study. The study evaluated future land use patterns and their potential effects on the region's transportation system, air quality, housing, open space, and other resources. Through a series of Blueprint workshops at the neighborhood, city, county, and regional level, more than 5,000 residents, elected officials, business leaders, and environmental interests helped create a shared vision for the future that integrates smart growth concepts such as higher-density, mixed-use developments, and reinvestment in existing developed areas.

The Blueprint plan is intended to guide land-use and transportation choices over the next 50 years as the region's population grows by an expected 2 million residents.

The scenario adopted as part of the Blueprint process became part of SACOG's 2005 Metropolitan Transportation Plan update, which serves as a long-range transportation plan for the SACOG region. Additional details regarding the Blueprint may be found at: www.sacregionblueprint.org.

Study Area Trends

The following sections provide a profile of the counties and cities within the study area in relation to population growth, housing growth, and housing median home values. This information helps set the context for JLUS.



SACOG's projection of current growth trends

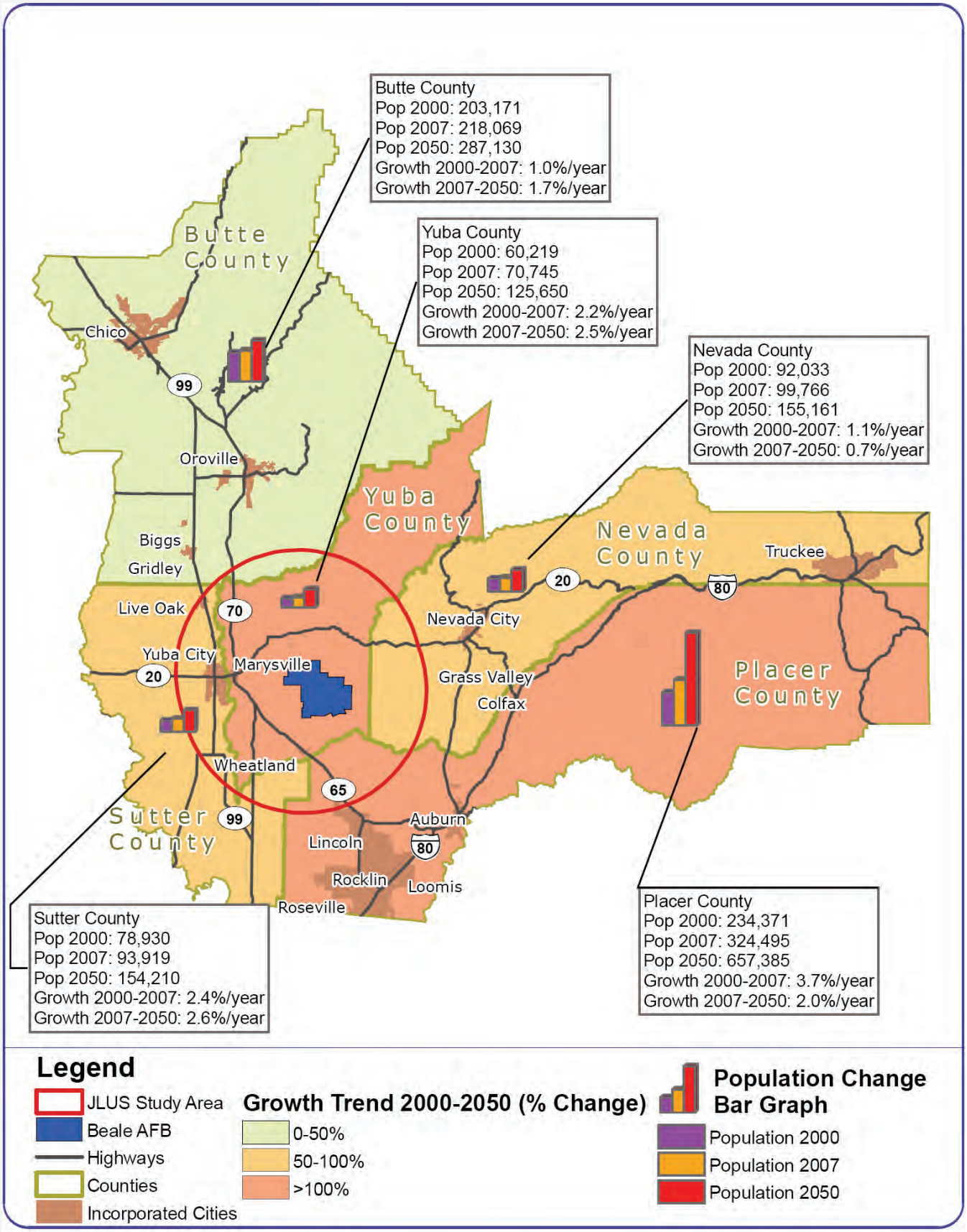
The Central Valley, including the Sacramento Valley region and the Central Valley as a whole, has been experiencing rapid growth over the past several decades as populations move away from the more costly coastal areas of California. In the Sacramento Valley area, flood potential has limited expansion to the west and has driven population increases to the northeast along the Interstate 50 and 80 corridors. In the last decade, growth pressures and land availability have continued up the Highway 65 corridor. This has resulted in several counties and cities in the Beale JLUS study area experiencing significant growth.

From 2006 to 2007, Sutter, Yuba, and Placer counties were in the top 10 for growth rates in California.

In looking just at the change in population from 2006 to 2007, three of the study area counties were in the state's top 10 for growth rates. Sutter County was fourth in the state, growing by 2.45 percent, followed by Yuba County (seventh at 2.24 percent) and Placer County (ninth at 2.20 percent). According to the California Department of Finance, this growth will continue.

County Population Growth Trends

Figure 2-7 and Table 2-5 provide an overview of the current populations (January 2007) for each county in the study area, the 2050 population estimates prepared by the California Department of Finance, and population growth trend information for the years 2000 to 2050. In addition to the population numbers, the table also shows the percent change in population and the percent of the region's growth found in that county. This last factor is derived by taking the total population projected for 2050 in the five-county region (those counties with land in the study area) and calculating the percent share each county's growth has in the overall regional growth. While only a portion of each county is within the study area, the land located within the study area is considered to be in a strong demand area for future growth. Therefore, total growth is a good indicator of growth pressures in the study area itself.



Historical Growth Trends | **Figure 2-7**

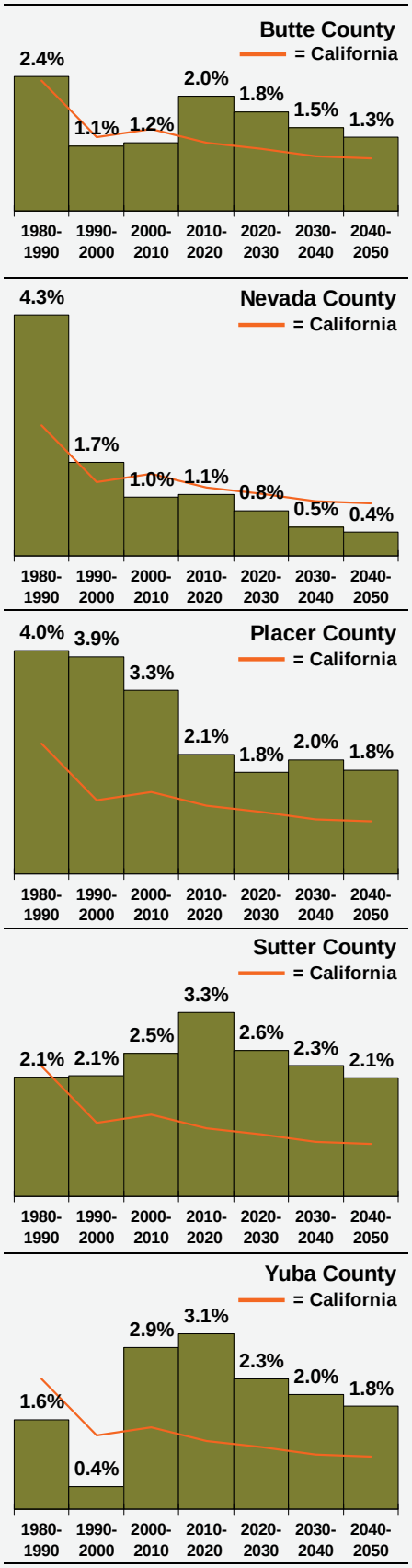


Figure 2-8. County Population Growth (Annual Percent)

In the five counties that comprise the study area, population is expected to increase by more than 124 percent (1,006,144 people) by the year 2050 (see Table 2-5). The charts included as part of Figure 2-8 shown how this population growth will occur in terms of annual growth rates. This information is shown in comparison to the annual growth rate projected for California.

Table 2-5. Study Area Population (Counties)

County	Population		Total Population Change (%)	% of Region's Growth (Over 7 Years)
	2007	2050		
Butte	218,069	441,596	102%	22%
Nevada	99,766	136,113	36%	4%
Placer	324,495	751,208	132%	42%
Sutter	93,919	282,894	201%	19%
Yuba	70,745	201,327	185%	13%
TOTAL	806,994	1,813,138	125%	

Source: California Department of Finance, 2007

Population expansion out of the Sacramento area has impacted growth rates in communities in the adjacent Placer County, which experienced sustained annual growth rates of 4.0 and 3.9 percent per year during the 1980's and 1990's – well above the state growth rate during these decades. Moving towards the year 2050, Placer County's growth rate will decline from its current high levels as its population grows and development moves further out into the study area, but will remain notably above the state's growth rate. Population growth was above the state average in the 1990's for Sutter County and in the 2000's for Yuba County, and it is expected to continue to surpass the state growth rate as expansion moves away from Sacramento. As shown on Table 2-5, both counties are projected to have substantial growth in the coming decades, with each county growing in population by a factor of three.

For Butte County, population growth rates are projected to peak in the next decade and then slowly decline. Growth rates will remain above state growth rates. In Nevada County, population growth rates have been in decline since the 1990's and are projected to continue to fall to the year 2050. Overall, the growth rate trend for Nevada County mirrors that of the state; however, the county rates are below California's.

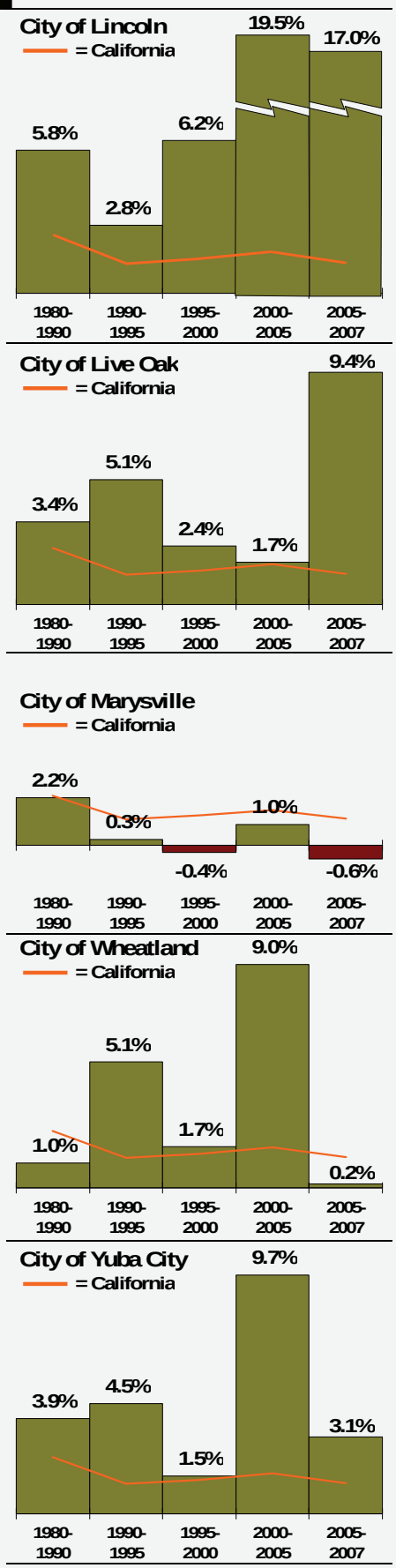


Figure 2-9. City Population Growth (Annual Percent)

City Population Growth Trends

Although population forecasts are not available for the cities within the Beale JLUS study area, growth trends can be seen in the historical and current population data (see Figure 2-9). As a whole, between 1990 and 2007, the five cities in the study area have seen a 70,937-person increase in population, which equates to 134 percent (see Table 2-6).

Table 2-6. Study Area Population (Cities)

City	Population 1990	Population 2007	% Change (Over 17 Years)	County
Lincoln	7,248	37,410	416%	Placer
Live Oak	4,320	8,126	88%	Sutter
Marysville	12,324	12,713	3%	Yuba
Wheatland	1,631	3,513	115%	Yuba
Yuba City	27,385	62,083	127%	Sutter
TOTAL	52,908	123,845	134%	

Source: California Department of Finance, 2007

Due to limits on developable land, the City of Marysville has had very little growth since 1990. The other cities in the study area have all experienced significant growth during the time period reviewed.

In looking at growth percentages, the smaller population size of the study area cities in 1990 make their growth percentages more reactive to population increases. For Wheatland and Live Oak, annual growth rates can be influenced by a few large subdivisions, which likely accounts for the significant variation in the annual growth rates over the last several years.

Regardless of the dramatic variations, these cities have all experienced significant growth. The City of Lincoln is the most apparent in growth, with its population increasing by five-fold over the last 17 years. While not spectacular from a growth rate standpoint, the City of Yuba City had the largest population increase (34,698). Together, Lincoln and Yuba City accounted for 92 percent of the population growth for the cities in the study area.

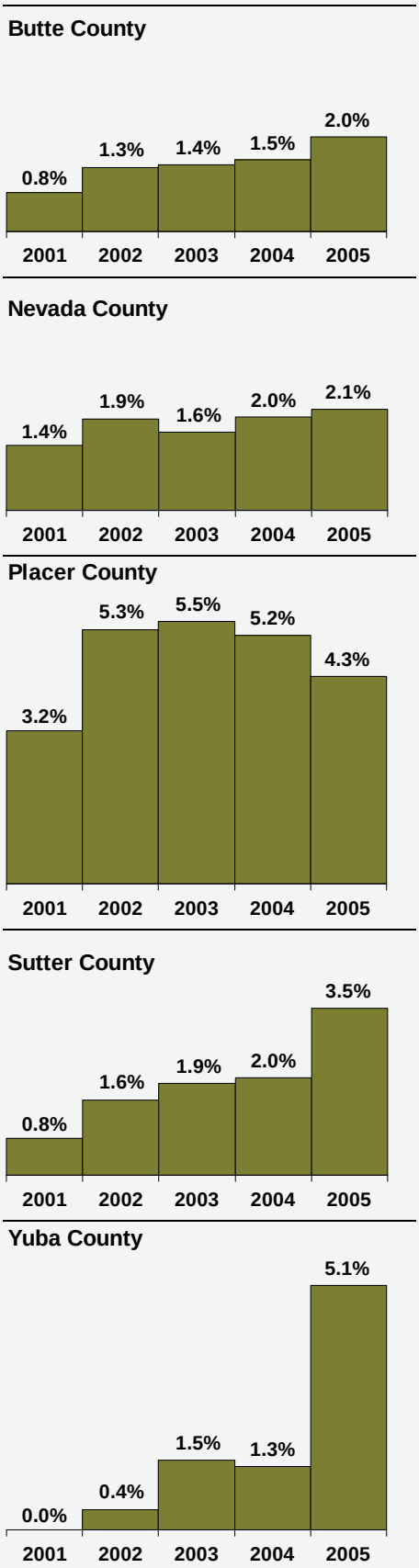


Figure 2-10. County Housing Unit Change

County Housing Growth Trends

Growth of new housing units in the study area counties followed a general upward trend between 2000 and 2005 (see Figure 2-10). Placer County showed the strongest housing growth at between 3.2 and 5.5 percent, as it continues to support the population expansion from the Sacramento area. Sutter and Yuba counties posted the most varied increases of the study area counties, with rates ranging from no growth to 5.1 percent. Housing growth rates in both Butte and Nevada counties trended generally upwards; however, increases in these rates were small. Table 2-7 shows the breakdown of housing units and the five-year change for each of the counties in the JLUS study area.

Table 2-7. Study Area Total Housing Units (Counties)

County	Total Housing Units		% Change	% of Region's Growth
	2000	2005		
Butte	85,523	91,668	7%	14%
Nevada	44,282	48,393	9%	10%
Placer	107,302	134,896	26%	65%
Sutter	28,319	31,175	10%	7%
Yuba	22,636	24,550	8%	4%
TOTAL	288,062	330,682	15%	

Source: California Department of Finance, 2006

In comparison to population growth (Figure 2-8), the housing growth rates from 2001 to 2005 are all above the projected population growth rates during the 2000-2010 period, showing an expansion to respond to future growth. Recent changes in the financial and housing markets have significantly impacted housing, and these growth rates, as well as housing values, are likely to be depressed in the near term. However, the region is considered to have strong long-term growth potential, and overall housing stock is expected to recover and continue to grow.

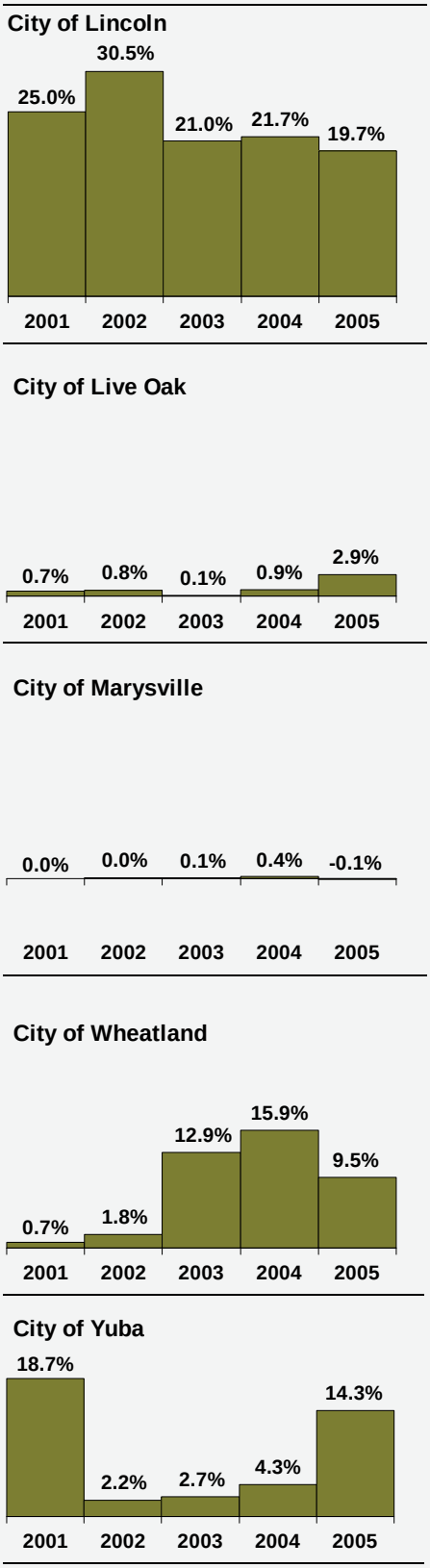


Figure 2-11. City Housing Unit Change

City Housing Growth Trends

The total five-year new housing unit growth in the cities located in the study area between 2000 and 2005 varied greatly (see Table 2-8). Cumulatively, the five cities in the JLUS study area experienced a growth of nearly 59 percent, which reflects 15,042 additional housing units. Following the trend of Placer County, the City of Lincoln had the most significant housing growth; with growth rates between 19.7 and 30.5 percent (see Figure 2-11). The cities of Wheatland and Yuba City have also had increased housing growth, especially between 2003 and 2005. Except for a spike in 2005, housing growth rates in both the cities of Live Oak and Marysville have been negligible, primarily between no growth and less than one percent.

Table 2-8. Study Area Total Housing Units (Cities)

City	Total Housing Units		% Change	County
	2000	2005		
Lincoln	4,146	11,930	188%	Placer
Live Oak	1,818	1,918	6%	Sutter
Marysville	4,999	5,016	0.3%	Yuba
Wheatland	815	1,198	47%	Yuba
Yuba City	13,912	20,670	49%	Sutter
TOTAL	25,690	40,732	59%	

Source: California Department of Finance, 2006

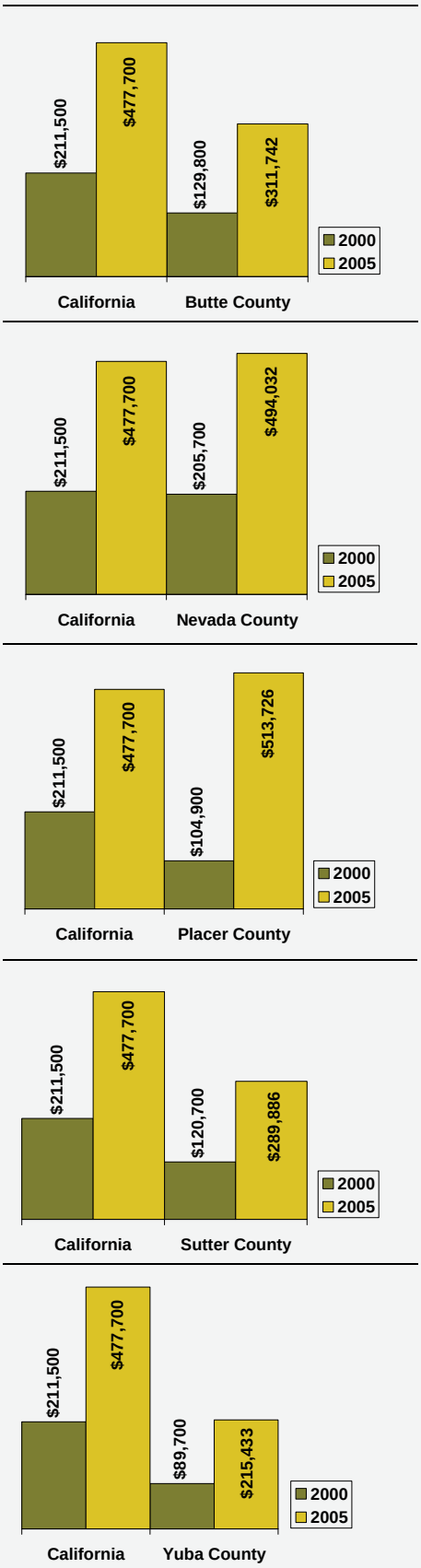


Figure 2-12. County Median Housing Values

County Housing Value Trends

Median housing values throughout the Beale JLUS study area have increased significantly between 2000 and 2005 (see Table 2-9 and Figure 2-12). Over that time, Placer County posted an increase of almost 390 percent (nearly $409,000), which coincides with the county's high growth rates in population and housing. The other four counties experienced median housing value increases of just over 140 percent; however, Yuba County had the lowest overall dollar value increase ($125,733). In comparison, the mean California housing value increased by just under 126 percent ($266,200) in the five-year period.

Table 2-9. Median Housing Values (Counties)

Jurisdiction	Median Housing Values		Value Change	% Change
	2000	2005		
California	$211,500	$477,700	$266,200	126%
Butte	$129,800	$311,742	$181,942	140%
Nevada	$205,700	$494,032	$288,332	140%
Placer	$104,900	$513,726	$408,826	390%
Sutter	$120,700	$289,886	$169,186	140%
Yuba	$89,700	$215,433	$125,733	140%

Source: http://quickfacts.census.gov and www.city-data-com

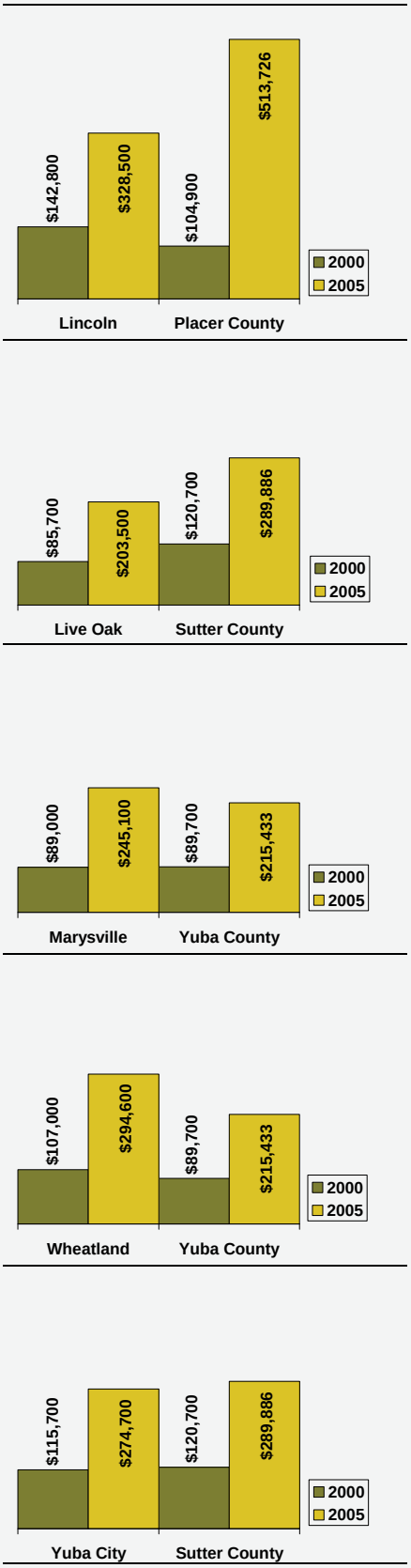


Figure 2-13. City Median Housing Values

City Housing Value Trends

As with median housing values for the counties in the Beale JLUS study area, the cities in this area have experienced impressive housing value increases between 2000 and 2005 (see Table 2-10 and Figure 2-13). With increases over 175 percent, home values in both the City of Marysville and the City of Wheatland reflect the population growth out of Sacramento. Wheatland saw the greatest increase in home value of the five cities in the study area ($187,600), and Yuba City had the third highest value increase ($159,000). Conversely, the City of Live Oak saw the lowest value increase at $117,800, and although it is located in Placer County, the City of Lincoln experienced the lowest percentage increase at 130 percent. In comparison, all of the cities' housing value percent increases surpassed that of California (just under 126 percent), but their dollar value increases were below the state's value increase of $266,200.

Table 2-10. Median Housing Values (Cities)

Jurisdiction	Median Housing Values		Value Change	% Change
	2000	2005		
California	$211,500	$477,700	$266,200	126%
Lincoln	$142,800	$328,500	$185,700	130%
Live Oak	$85,700	$203,500	$117,800	138%
Marysville	$89,000	$245,100	$156,100	175%
Wheatland	$107,000	$294,600	$187,600	175%
Yuba City	$115,700	$274,700	$159,000	137%

Source: http://quickfacts.census.gov and www.city-data-com

2.3 County and City Profiles

Butte County

Butte County encompasses approximately 1,676 square miles, of which 30 square miles are within the study area. The western part of the county is located in the northern Sacramento Valley and the eastern portion extends into the foothills of the Sierra Nevada Mountains. Both Yuba and Sutter counties share portions of Butte County's southern boundary. The county has five incorporated cities that range from small farming communities to regional urban centers. The cities of Biggs and Gridley are located in the valley area in the southwestern portion of the county, while the City of Chico is further north in the western valley area. The City of Oroville is the county seat and is located along the Feather River in the southern portion of the county. The Town of Paradise is on a ridge in the foothills of the Sierra Nevada range near the center of the county. No Butte County cities lie within the Beale JLUS study area.

The county's primary north-south transportation corridor is along State Highways 70 and 99. State Highways 32 and 162 comprise Butte County's main east-west transportation corridors.

Population growth trends from 1980 to 2050 in Butte County generally mirror those of California; however, the county's growth between 2010 and 2050 is projected to exceed the state's. The county has experienced a consistent upward trend in new housing units for 2000 through 2005, while median housing values have increased 140 percent over that period.

Nevada County

Nevada County encompasses 958 square miles, of which 104 square miles are inside the study area. The county is bordered by the State of Nevada to the east, Yuba County to the west, Sierra County to the north and Placer County to the south. Interstate 80 enters Nevada County's southern edge from Placer County and continues in an easterly direction along the southern edge of the county, connecting to the City of Truckee before continuing into the State of Nevada. State Highways 20 and 49 are the other two principal transportation corridors connecting the county to the region. State Highway 20 is the principal east-west corridor between Yuba County and Interstate 80. State Highway 49 is the primary north-south corridor connecting Placer County and Sierra County.

A large portion of the Tahoe National Forest is located in Nevada County as well as the eastern portion of the Spenceville Wildlife Management and Recreation Area (inside the Beale JLUS study area). It occupies

approximately 60 percent of the county's central and eastern acreage. The three largest cities in the county are Truckee, Grass Valley, and Nevada City. Other cities in the county are Penn Valley and Rough and Ready. Nevada County has no cities in the Beale JLUS study area.

Nevada County's population growth has steadily declined since 1980. Projected growth through 2050 is expected to be below the state's growth rates. As with Butte County, Nevada County median housing values have increased 140 percent between 2000 and 2005.

Placer County

Placer County is located along the southern edge of the study area. The county encompasses 1,506 square miles, including 81 square miles within the study area. Placer County is bounded by Nevada County to the north, the State of Nevada to the east, El Dorado and Sacramento counties to the south, and Sutter and Yuba counties to the west. The City of Auburn is the county seat.

The relocation of Hewlett-Packard from the San Francisco Bay Area to Roseville in the early 1980's sparked Placer County's strong growth and development. Continuing employment, commercial, and housing development have contributed to substantial growth in the western portion of the county.

Placer County has been the leader of the five counties in the JLUS study area in terms of population growth, housing unit growth, and median housing value. Reflecting the migration of people away from the Sacramento Metropolitan Area, population growth trends from 1980 to 2050 in the county generally mirror those of California but at much higher rates. With a high of 5.5 percent, housing unit growth rates in Placer County surpass the other four study area counties. Median housing values in the county have increased 390 percent between 2000 and 2005. This is 250 percent higher than any of the other counties in the JLUS study area.

Sutter County

Sutter County lies along the western edge of the study area. Approximately 146 square miles of the study area lie within Sutter County. Extending in a north-south direction through the county, State Highway 99 is the principal transportation corridor connecting the county to the region. State Highway 20 is the principal east-west corridor and provides connectivity between State Highway 99 and I-5.

The county includes two incorporated cities, Live Oak and Yuba City, as well as several unincorporated rural communities. Yuba County shares Sutter County's eastern boundary, and Butte County shares Sutter County's northern boundary.

With rates consistently above those of California, population growth in Sutter County is second only to Placer County. Housing unit growth has shown a steady increase between 2000 and 2005, and median home values have increased 140 percent ($169,186) over that period.

Yuba County

Yuba County contains approximately 631 square miles and is home to Beale AFB and a portion of the Spenceville Wildlife Management and Recreation Area. Approximately 414 square miles of the county are in the study area.

Western Yuba County occupies portions of the Sacramento Valley, while the eastern portion climbs into the Sierra Nevada foothills and mountains. The county is predominantly drained by the Feather, Yuba, and Bear Rivers, which flow to the Sacramento River. State Highways 65 and 70 comprise the county's primary north-south transportation corridors, while Highway 20 acts as the primary east-west transportation corridor.

The City of Marysville, the City of Wheatland, and Beale AFB are located in the valley portion of the county. Major unincorporated communities include Linda and Olivehurst on the valley floor, and Loma Rica, Browns Valley, Challenge, Brownsville, Oregon House, Dobbins, Camptonville, and Smartville in the foothill and mountain region. The valley is dominated by agriculture, Beale AFB, and urbanized areas along the Highway 65 and 99 corridors.

Yuba County has experienced population growth rates lower than those of California; however, projected growth is strong and expected to surpass the state's. Median home values in the county have increased 140 percent ($125,733) between 2000 and 2005.

City of Lincoln

Downtown Lincoln

Highway 65 corridor maintains agricultural roots

The City of Lincoln's original town site was laid out in 1859 and now has a total area of just more than 18 square miles. Lincoln lies halfway between Marysville and Sacramento along State Highway 65. About 538 acres of land within the city limits and an additional 4,943 acres within the city's proposed SOI (as contained is their currently proposed general plan) are within the study area.

The City of Lincoln has experienced substantial growth as population growth has expanded into western Placer County. Over the past few years, Lincoln has consistently been one of the fastest growing cities in the United States. With this continued growth, Lincoln decided to update its General Plan, which is nearing completion. Circulation is a challenge with the increased population in the city and surrounding region. Caltrans has designed a bypass to run from the south edge of Lincoln to a point just north of Wheatland. The Highway 65 Bypass will be aligned around the west side of Lincoln's urbanized area and the east side of Wheatland's developed area.

The City of Lincoln has been the leader of the five cities in the JLUS study area in terms of population growth and housing unit growth. As with Placer County, Lincoln's growth in these areas reflects the migration of people away from the Sacramento Metropolitan Area. Population growth rates for the years 2000 through 2007 were particularly strong at between 17 and 19.5 percent. Housing unit growth between 2000 and 2005 was also strong with rates of between 19.7 and 25 percent. Median home values in Lincoln have increased 130 percent ($185,700) between 2000 and 2005.

City of Live Oak

Highway 99 corridor

The City of Live Oak is located at the northwest edge of the study area. Incorporated in 1947, the City of Live Oak was the second city to be established in Sutter County, following Yuba City. The city was named for its groves of Live Oak trees.

The city is centered along Highway 99, which provides the primary regional transportation link to the city. Live Oak measures over 1,200 acres in total incorporated area. About 986 acres of land within the city limits and an additional 3,349 acres within the city's SOI are within the study area.

Population growth rates for Live Oak from 1980 to 2007 have followed the same general trend as those of California; however, the city's rates have been consistently higher. Between 2001 and 2004, housing growth in Live Oak was less than one percent per year, but 2005 saw an increase

to just under three percent. Median home values in Live Oak have increased 138 percent ($117,800) between 2000 and 2005.

City of Marysville

Downtown Marysville

The City of Marysville is located in the southwest portion of Yuba County on the east bank of the Feather River. Surrounded by flood-control levees, the city has limited land available for growth within the incorporated city limits. Immediately across the river lies Yuba City, and Beale AFB is located approximately eight miles to the east.

The City of Marysville consists of 2,316 acres of land, with an additional 24,930 acres within the city's SOI. All of this area is within the study area.

Of the five cities in the JLUS study area, the City of Marysville has seen the lowest population growth and housing unit growth. Population growth for the years 1995 to 2000 and 2005 to 2007 were negative. Housing unit growth between 2001 and 2004 was less than one-half of one percent and dipped into the negative in 2005. Marysville's median housing values, however, increased the most among the JLUS study area and were tied with Wheatland's housing value percent increase.

City of Wheatland

Wheatland City Hall

Urban-rural transition

The City of Wheatland is located in the far south central portion of Yuba County close to the Yuba-Placer county line. Beale AFB is approximately four miles immediately north of the city, and Marysville is approximately 13 miles northwest. The city is located about one mile north of the Bear River, and it is the gateway city to Camp Far West, a recreation area of regional significance. The City of Wheatland has about 893 acres of land within the city limits, and an additional 7,823 acres within the city's SOI. All of these areas are within the study area. The city is currently evaluating the expansion of their SOI, which will move the city's SOI north towards Beale AFB.

The city is bisected by the city's sole transportation corridor, Highway 65, which traverses Yuba and Placer counties. Caltrans has plans to build the northern portion of the Highway 65 Bypass through Wheatland.

Population growth for Wheatland between 1980 and 2007 has generally followed the growth trends of California. Housing growth showed a general upward trend from 2001 to 2004 when it peaked at 15.9 percent. Wheatland's median housing value increased by $187,600 (175 percent) between 2000 and 2005.

City of Yuba City

Downtown revitalization

Yuba City maintains a strong urban boundary

The City of Yuba City is located in the northeast portion of Sutter County on the west bank of the Feather River. The city is situated opposite the City of Marysville along the border with Yuba County. Yuba City is located approximately 14 miles west of Beale AFB. The city contains about 7,166 acres of land within the city limits, and an additional 8,041 acres within the city's SOI. All of these areas are within the study area.

Lands to the north, west, and south of Yuba City are primarily undeveloped farm lands. The Sutter Buttes are located to the northwest of the city. The primary transportation corridors are Highways 20 and 99. Highway 20 links Yuba City to Colusa and I-5 to the west, and Grass Valley and the Sierra Nevada range to the east. Highway 99 leads due south to Sacramento and north to Oroville and Chico. State Highways 65 and 70 lead south from Marysville, connecting the region to Sacramento, Roseville, and Rocklin.

Yuba City's population growth has been above that of California since 1980, peaking in the 2000-2005 period at 9.7 percent. After a high of 18.7 percent in 2001, the city's housing growth took a sharp decline to only 2.2 percent in 2002. Housing growth has been increasing ever since. Median home values in Yuba City have increased 137 percent ($159,000) between 2000 and 2005.

Section 3

Compatibility

3

COMPATIBILITY

In this section…

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Compatibility, in relationship to military readiness, can be defined as the balance or compromise between community needs and interests and military needs and interests. The goal of compatibility planning is to promote an environment where both entities can coexist successfully.

A number of factors influence whether community and military plans, programs, and activities are compatible or in conflict. For this Joint Land Use Study (JLUS), a list of 24 compatibility factors was used to characterize local issues (see text box at the bottom of this page). In the following discussion, these compatibility factors have been divided into three broad categories: man-made, natural resource, and competition for scarce resources.

In addition to describing existing and potential compatibility issues currently identified, this list can be used in the future to assist in reviewing plans, programs, or development proposals and related applications.

Compatibility Factors

Man-Made

1. Land Use
2. Safety Zones
3. Vertical Obstruction
4. Local Housing Availability
5. Infrastructure Extensions
6. Anti-Terrorism / Force Protection
7. Noise
8. Vibration
9. Dust
10. Light and Glare
11. Alternative Energy Development
12. Air Quality
13. Frequency Spectrum Impedance and Interference
14. Public Trespassing
15. Cultural Sites
16. Legislative Initiatives
17. Interagency Coordination

Natural Resources

18. Water Quality / Quantity
19. Threatened and Endangered Species
20. Marine Environments

Competition for Scarce Resources

21. Scarce Natural Resources
22. Land, Air and Sea Spaces
23. Frequency Spectrum Capacity
24. Ground Transportation Capacity

3.1 Evaluation of Compatibility

For the compatibility issues noted, several projects were called out by name due to their currency in the development review process. These should be viewed as examples of a general concern.

All input was valued and considered, however the study did not quantify, validate, or measure the degree to which these potential conflicts and concerns may or may not have an adverse impact upon the military mission, local communities, or private property owners.

During preparation of the Beale JLUS, the public, the Advisory Committee (AC), and the Technical Committee (TC) assisted in identifying compatibility issues in or near the study area. At various workshops, these groups identified the location and type of compatibility issues they thought existed today or could occur in the future. Other issues were added by the project team based on evaluation of existing information.

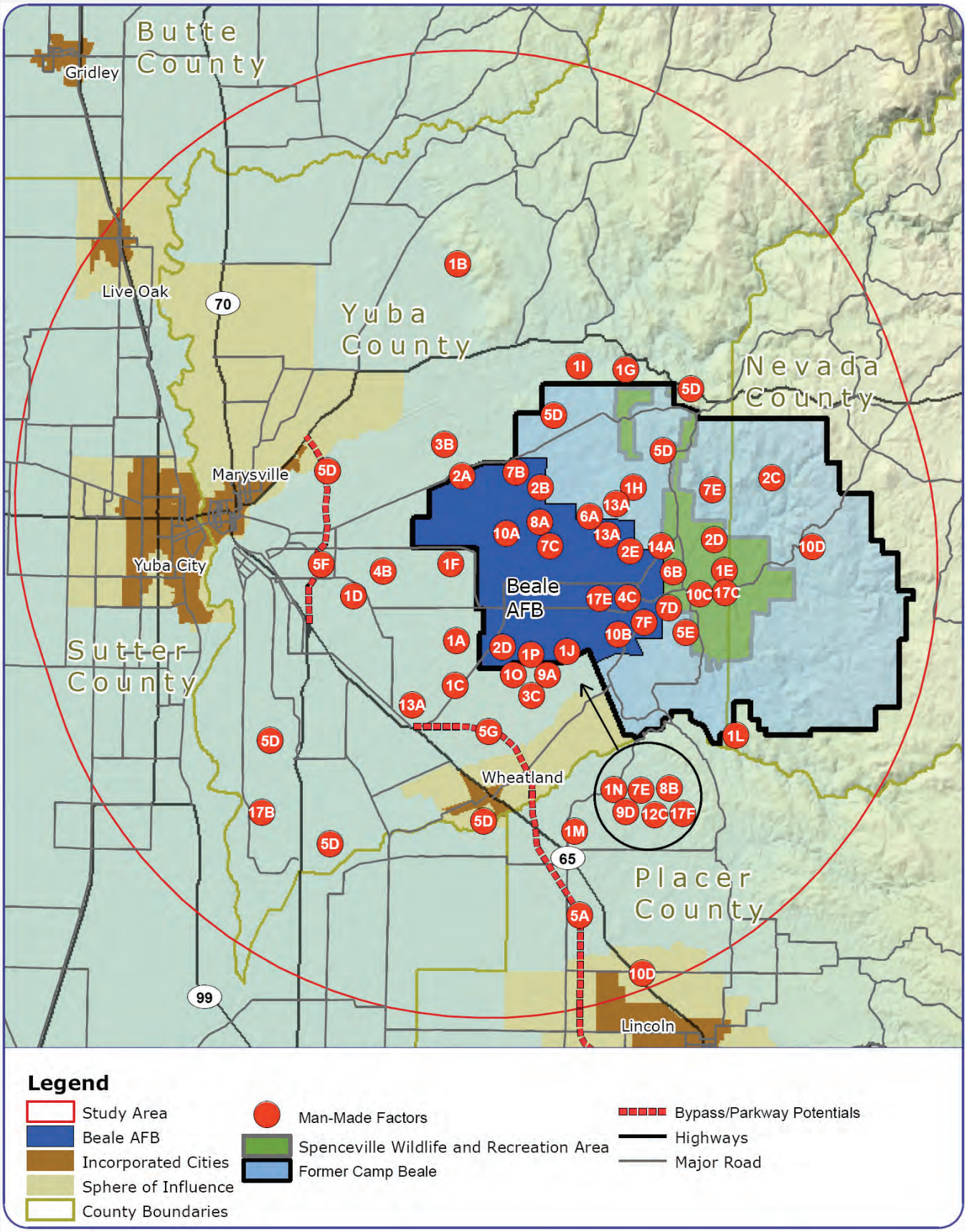
When reviewing this information, it is important to note the following:

- This section provides background on the issues discussed based on available information. The intent is to provide a context for discussion, and is not designed or intended to be an exhaustive technical evaluation of existing conditions.
- The number for each issue matches the number of the corresponding compatibility factor. The letters were added to distinguish each issue. The numbers and letters used to identify each issue are not meant to convey priorities or ranking of issues.
- Of the 24 standard compatibility factors, two factors were determined to not be an issue for this area (#20, Marine Environments and #21 Scarce Resources) and two factors were items that could not be specifically mapped (#16, Legislative Initiatives; and #23, Frequency Spectrum Capacity).

3.2 Man-Made Compatibility Factors

For the Beale JLUS, most of the issues recorded fell under the man-made compatibility factors. Man-made factors can be generated by community development which conflicts with military activities, or can be generated by the military and encroach upon nearby communities. Either way, these factors can impact military readiness or a community's quality of life.

Man-made compatibility issues that apply to specific locations are shown on Figure 3-1 and are noted by a dot symbol (●) in the text. In some cases, issues were found to apply to the whole study area or were not geographically specific. These issues are noted with a square symbol (□) in the text.



Man-Made Factors | **Figure 3-1**

1 Land Use

Definition:
The basis of land use planning relates to the government's role in protecting the public's health, safety, and welfare. Local jurisdictions' general plans and zoning ordinances can be the most effective tools for avoiding or resolving land use compatibility issues. These tools ensure the separation of land uses that differ significantly in character. Land use separation also applies to properties where the use of one property may impact the use of another. For instance, industrial uses are often separated from residential uses to avoid impacts related to noise, odors, lighting, and so forth.

Land use planning around military installations is similar to the process used to evaluate other types of land uses. For instance, local jurisdictions already consider compatibility issues such as noise when locating residential developments near commercial or industrial areas. Local governments also evaluate land use compatibility in relation to airports through criteria presented in adopted Airport Land Use Compatibility Plans (ALUCP).

Evaluating land use compatibility can be seen as the act of integrating all of the compatibility issues described in this section in relation to the range of land uses possible in an area. The Air Force has compatible land use standards for airfields relative to noise and safety issues. The Air Force guidelines are reflected in the Beale Air Installation Compatible Use Zone (AICUZ) (Appendix B).

The issues identified for this compatibility factor by the AC, TC, or public input are listed on Table 3-1 and further described in the following discussion.

Table 3-1. Land Use Issues

ID	Compatibility Issue
1A	This area near the installation is designated for research and development.
1B	Located north of the base, Spring Valley Specific Plan includes residential development.
1C	Commercial potential south of the research and development designated area, southwest of the base.
1D	The area east of the Highway 65 corridor has good potential for commercial and industrial development.
1E	Spenceville Wildlife Area is located adjacent to the eastern side of Beale.

ID	Compatibility Issue
1F	Potential for a second runway to support future missions may alter land uses proximate to its location.
1G	River Highlands is an adopted Community Plan northeast of Beale.
1H	The proposed Yuba Highlands Area Plan lays just northeast of Beale.
1I	The Yuba River offers recreation and other uses that may pose land use compatibility issues with Beale AFB.
1J	Dry Creek runs through Beale AFB, constraining land uses near the creek.
1K	Protection of conservation areas, such as river banks, throughout the region.
1L	Waldo Dam/Garden Bar Reservoir and drainage from South Yuba area acts as a water source and a recreation area.
1M	The unincorporated community of Sheridan lies south of Wheatland and north of Lincoln in the study area.
1N	There is a current proposal for a new surface mine south of Beale referred to as the Ostrom Road Quarry.
1O	Ostrom Road Landfill borders Beale AFB to the south.
1P	Wildlife attractants near the base increase BASH potential.

Many of the issues related to compatibility with landfill and mining areas near the base, existing or proposed development plans near the base, and planning considerations for natural resources were primary concerns raised by the public, the AC, and the TC.

Land uses may be considered incompatible with military installations and their operations for a number of reasons. Among the most common factors causing incompatibility with Air Force installations are the high levels of noise created by aircraft, heights of civilian structures near the installation, force protection/security concerns, and factors that negatively impact pilot performance during flight (i.e., dust, light and glare).

Potential land use compatibility issues could exist with residential and commercial development adjacent to Beale AFB or within the Beale JLUS study area (● Issues 1A, 1B, 1D, 1G, 1H, and 1M).

The location of proposed schools (grades K-12) is frequently noted as a compatibility factor around many military areas. School facilities are governed by school districts and not by the community. Criteria for siting new schools are reviewed by the state, and proposed sites obtain facility siting approval from the California Department of Education.

In many cases, military representatives are not aware of new schools until they are built. If a school site is incompatible with military operations, mitigation of the problem after the fact can be very expensive and may force changes in military operations.

Birds gathering on graded area of new subdivision near Beale

In-flight collisions with birds are dangerous for pilots, people on the ground, and aircraft operations in general. This Bird / Wildlife Aircraft Strike Hazard (BASH) can be increased by incompatible land uses adjacent to the installation and within approach and departure flight tracks. Mining and landfill operations are considered to pose compatibility issues to aircraft operations for several reasons. The potential for these operations to attract wildlife, specifically birds, can be significant (● Issues 1N, 1O, and 1P). Primary BASH concerns for mining operations are associated with the reclamation phase. This traditionally involves water accumulation in previously mined areas, which can attract large numbers of birds and waterfowl. In the near term in the Beale JLUS study area, this issue applies to the aggregate mining operation north of Beale AFB. However, in the long term, this may apply to the proposed sand and gravel quarry to be located south of the installation along Ostrom Road. This quarry proposal includes a reclamation plan that would return the project site to agricultural and grazing land after the mining activities are completed in approximately 20 years.

South of the installation, the Ostrom Road Landfill has worked closely with Beale AFB to limit BASH issues; however, as the landfill expands to meet the demand of the region's growing population, constant coordination will be needed to ensure these issues continue to be addressed.

Another BASH-related activity is the use of straw to mitigate the dust of graded areas during construction, which can serve as an attractant to large numbers of birds.

Although not currently an issue in the Beale JLUS study area, agricultural land uses can cause BASH concerns if they attract a significant number of birds.

2 Safety Zones

Definition:
Safety zones are areas in which development should be more restrictive in terms of use and concentrations of people due to the higher risks to public safety. Issues to consider include aircraft accident potential zones, weapons firing range safety zones, and explosive safety zones.

Military installations often have activities or facilities that require special consideration by local jurisdictions when evaluating compatibility due to public safety concerns. The activities or facilities evaluated relative to this issue were:

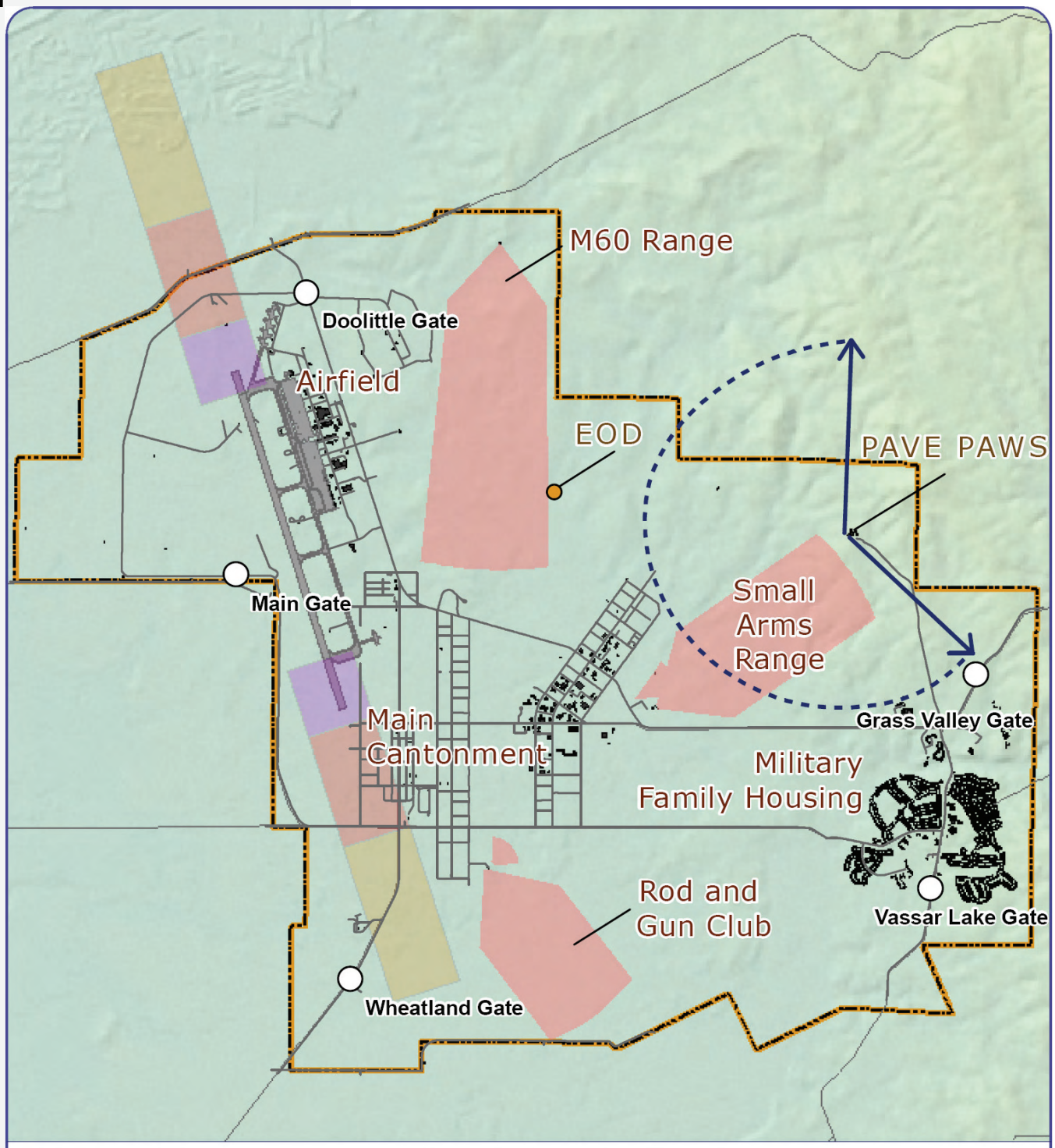
- aircraft accident potential zones;
- firing range usage;
- storage, assembly, and disposal of explosives; and
- operation of PAVE PAWS radar facility.

Another issue identified during preparation of the JLUS was the potential for unexploded ordnance associated with training activities on the former Camp Beale lands.

Issue locations described under this factor are listed on Table 3-2 and illustrated on Figures 3-1 and 3-2.

Table 3-2. Safety Zone Issues

ID	Compatibility Issue
2A	Accident Potential Zones (APZ) for Beale AFB runway extend off the base to the north. South of the runway, all of the APZ areas are located on the installation.
2B	Safety buffers for firing ranges and explosive use areas.
2C	Unexploded ordnance potential within Old Camp Beale borders.
2D	Recreational shooting range (Rod and Gun Club) on the south side of the base and east of the base on the Spenceville Wildlife Management Area.
2E	Operation of PAVE PAWS.



Legend

- Beale AFB
- Facilities
- Gates
- Major Road

Constraints

- EOD
- Firing Range Safety Arcs
- PAVE PAWS Radar Arc

Accident Potential Zones

- Clear Zone
- Accident Potential Zone I
- Accident Potential Zone II

0 1 2 Miles

Safety Zones | Figure 3-2

Aircraft Accident Potential Zones

Beale AFB has one runway that runs in a northwest-southeast direction. While the installation consists of about 23,000 acres of land, the runway is located near the western and northern edges of the installation. The close proximity of the runway to these boundaries raises some compatibility issues relative to designated safety zones.

Every Air Force runway has a set of aircraft safety zones designated at each end of the runway. These zones are referred to as the Clear Zone (CZ), Accident Potential Zone I (APZ I), and Accident Potential Zone II (APZ II). Each zone was developed based on a statistical review of aircraft accidents, and the Air Force provides guidance on land uses considered to be consistent within these zones as part of the AICUZ study.

Historically, the majority of aircraft accidents (62 percent) occurred either on or adjacent to the airfield or within the CZ, while about 8 percent occurred in APZ I and 5 percent in APZ II. It was concluded that the CZ warranted special attention due to the high incidence of accident potential that severely limited acceptable land uses. The percentages of accidents within the two APZs are such that land use controls are essential. The Air Force recommendation for the APZs is to limit the concentration of people exposed to safety hazards through appropriate land use planning.

The CZ and APZs extending from the southern end of the runway are contained completely on Beale AFB property. At the northern end, the CZ and about half of APZ I are on Beale AFB. The remainder of the northern APZ I and all of APZ II extend beyond the installation's boundary. Current land uses in these areas include agriculture and mining activities. These activities are considered appropriate uses by the Air Force. Although there are no current encroachments into any of the existing aircraft safety zones, residential uses or land uses that have high concentrations of people inside the northern APZs could potentially be an issue (● Issue 2A).

Firing Range Usage

Several firing ranges are located on Beale AFB. Figure 3-2 shows the safety arcs for each firing range. The safety arcs shown represent the areas that may be impacted by ordnance fired at the range. The firing position for each range is located at the pointed end of each safety arc.

The firing ranges at Beale AFB are primarily used for small arms training. The range on the north end of the installation is also used for heavy caliber weapons, such as an M-60 machine gun. As shown on Figure 3-2,

the safety arcs for all of the firing ranges on Beale AFB are within the boundaries of the base. Therefore, no safety issues were noted for properties outside the installation (● Issues 2B and 2D).

Storage, Assembly, and Disposal of Explosives

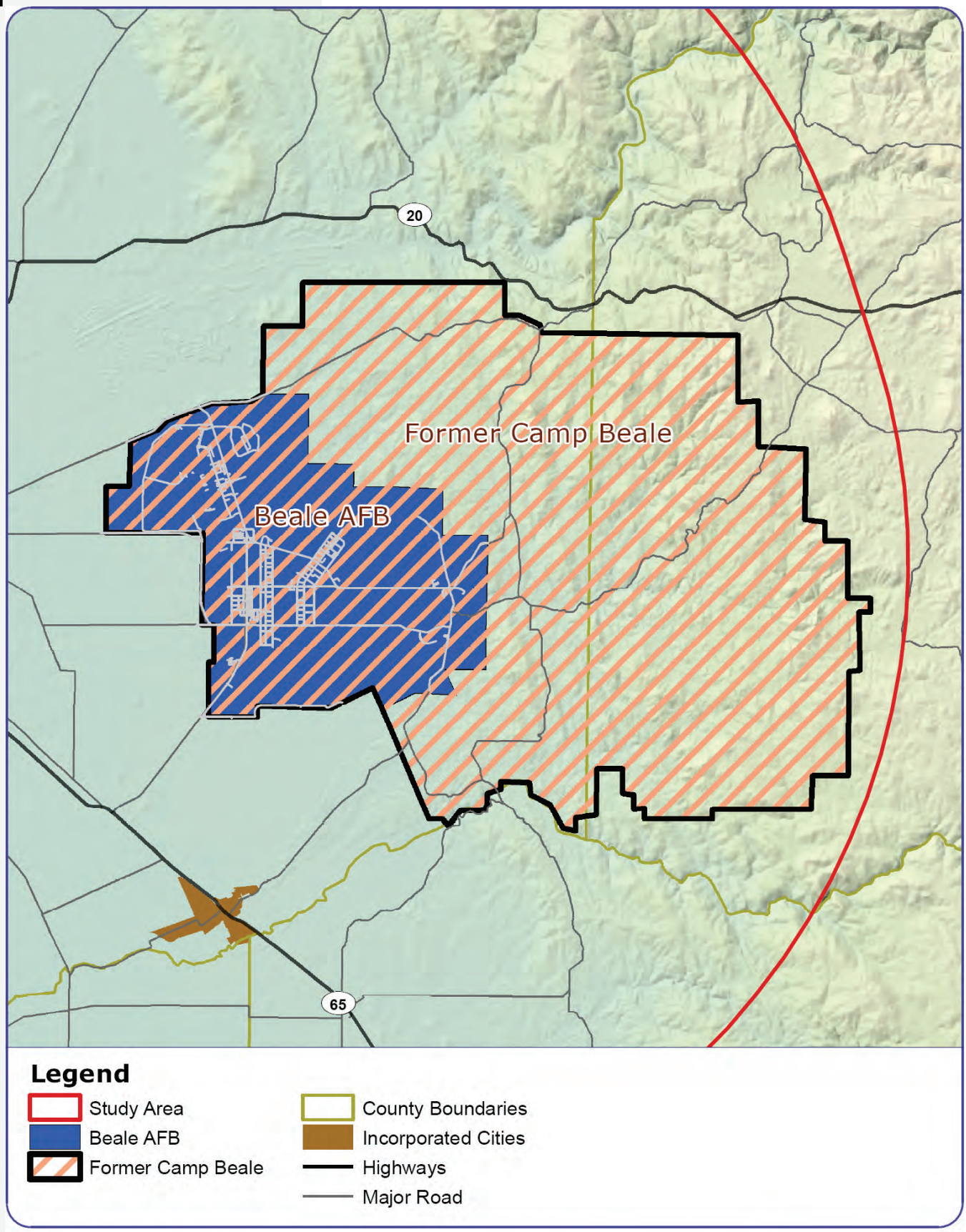
Beale AFB has several locations that are used to store, assemble, or dispose of explosive materials. Air Force regulations provide specifics on how to define a buffer area around these locations based on the type of explosive, the maximum amount of explosive material on site, and the type of structure used to work on or store the materials. This buffer area is described as an explosive safety quantity distance (ESQD).

The areas where explosive materials are used include areas along the northern boundary used for training personnel to assemble weapons and the location of the explosive ordnance disposal (EOD) area used by personnel at Beale to safely dispose of explosives. All of the ESQD arcs for base activities are located within the boundaries of the base. Therefore, no safety issues were noted for properties outside the installation (● Issue 2B).

Unexploded Ordnance Associated with Former Camp Beale

Figure 3-3 shows the location of the former Camp Beale. This area supported a variety of training activities by the Army and other services, including training with live ammunition. In the late 1950s and early 1960s, the 86,000 acres used originally for Camp Beale gradually became the 22,944 acres of land that currently make up Beale AFB. The other 63,000 acres were sold to private entities or provided to the State of California (Spenceville Wildlife Area).

Regarding the cleanup of Camp Beale areas, the California Department of Toxic Substances Control (DTSC) website states the following (http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=58970001):



Beale Air Force Base | Figure 3-3

Cleanup of formerly used defense sites are the responsibility of the U.S. Army Corps of Engineers.

Several ordnance clearances occurred prior to closure of Camp Beale. The United States Army Corps of Engineers (USACE) has been evaluating the extent of residual ordnance and explosives at Camp Beale. In March 2003, an Engineering Evaluation and Cost Analysis (EE/CA) performed by the USACE recommended a Removal Action for two areas identified to pose the highest potential risk due to the significant population present. The recommended removal action should be a subsurface clearance of munitions and explosives of concern to the depth of detection. The primary reason cited for selecting a clearance to depth of detection was the strong evidence of the potential for unexploded ordnance in these developed or developing areas. During the Site Inspection (SI) field activities conducted by USACE in 2005 – 2006, several additional areas were identified as ordnance, munitions, and explosives use areas requiring further investigation through a remedial investigation / feasibility study (RI/FS). During the SI, less than one percent of the total site was physically evaluated and 11 Munition and Explosive of Concern (MEC) items were found. The information gathered identified approximately 1/3 of the site as suspected to contain MEC. The archival evidence, SI work, and incidental MEC finds coupled with the continued pressure to develop areas within Camp Beale warrant remedial response actions prior to the USACE proposed 2016 Remedial Investigation (RI) start. Parts of Camp Beale have been and are being proposed for residential and commercial development. Currently, most of the property is open space.

The potential for finding unexploded ordnance as part of future use of the Camp Beale properties was noted as an issue during preparation of the JLUS (● Issue 2C). This issue was also described in the Yuba Highlands Environmental Impact Report, which described necessary mitigation measures to address this concern in the area proposed for this project.

Operation of PAVE PAWS Facility

PAVE PAWS

"PAVE" is an Air Force program name and "PAWS" stands for Phased Array Warning System.

The PAVE PAWS facility at Beale AFB is one of three such long-range radar facilities in the United States. The other locations are in Massachusetts and Alaska.

During development of the JLUS, concerns were evaluated based on the potential for health effects (● Issue 2E) and interference with consumer electronics. The issue of electromagnetic interference with consumer electronics is discussed later in this section under Issue 13.

The PAVE PAWS facility at Beale AFB emits low-level phased-array radiofrequency energy in a 240-degree fan (see Figure 3-2). The center of the fan is directed in a southwesterly direction (246 degrees) and extends from a compass direction of 126 degrees clockwise to 6 degrees. No measurable energy is emitted to areas outside the fan described above.

Regarding human health effects, most information comes from studies conducted for the PAVE PAWS facility at the Cape Cod Air Force Station in Massachusetts. Based on community concerns, the Air Force conducted extensive research to evaluate the potential for health risks associated with exposure to the radar energy from the facility. No evidence of human health effects was found in the various studies conducted by the National Research Council, American Epidemiological Institute and National Academies of Sciences (NAS). The NAS study indicated that continuing or long-term exposure to PAVE PAWS radiation has not resulted in an increased incidence of cancer in the Cape Cod area, and that the waveform of the radar itself is not unlike various other "dish" radars to which the public is continuously exposed.

3 Vertical Obstructions

Definition:
Vertical obstructions are created by buildings, structures, or other features that may encroach into the navigable airspace used by military operations (aircraft approach, transitional, inner horizontal, outer horizontal, and conical areas, as well as military training routes), presenting a safety hazard to both the public and military personnel and potentially impacting military readiness.

The issues identified for this compatibility factor are listed on Table 3-3 and further described in the following discussion.

Table 3-3. Vertical Obstructions Issues

ID	Compatibility Issue
3A	Tall structures near low level flight paths throughout the region. (☐ not shown on Figure 3-1)
3B	Expansion or changes at mining facilities north of the base that propose new vertical equipment.
3C	Vertical obstruction potential at Ostrom Road Landfill.

Evaluating Vertical Obstruction

Vertical obstruction in relation to flight operations from an airport (military or civilian) are addressed through compliance with Federal Regulation Title 14 Part 77, which establishes standards and notification requirements for objects affecting navigable airspace. Commonly referred to as Part 77 compliance, this regulation provides details on how to evaluate the potential for a vertical obstruction based on the elevation of the airfield, the height and resulting elevation of the new structure or facility, and the location of the structure or facility in relation to the airfield in question. Figure 3-4 illustrates common terms used in the Part 77 regulation, and Figure 3-5 provides a graphic representation of how structures and facilities are evaluated to determine if they pose a vertical obstruction in relation to the airspace around Beale AFB.

More on Part 77

More information on Part 77 can be found in Appendix F and at the following website:

http://www.faa.gov/airports_airtraffic/airports/regional_guidance/central/construction/part77/

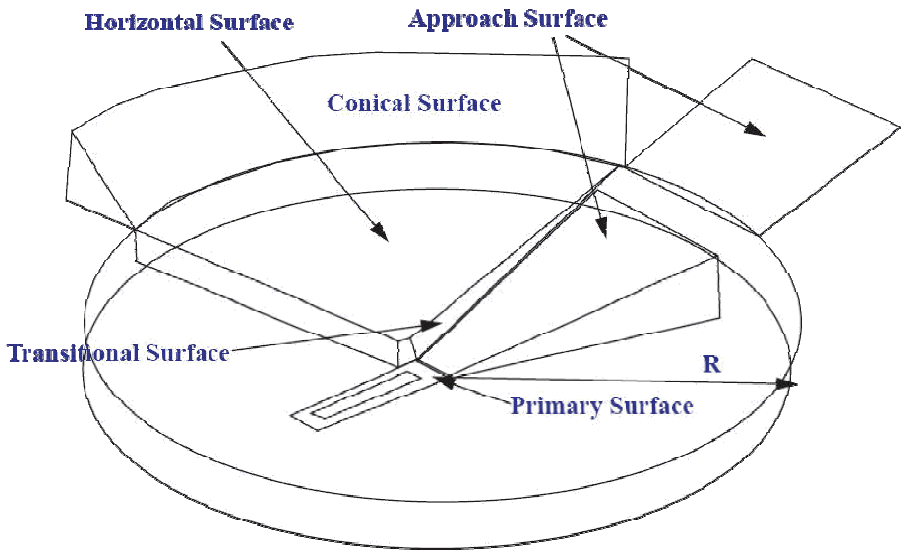


Figure 3-4. Part 77 Terminology

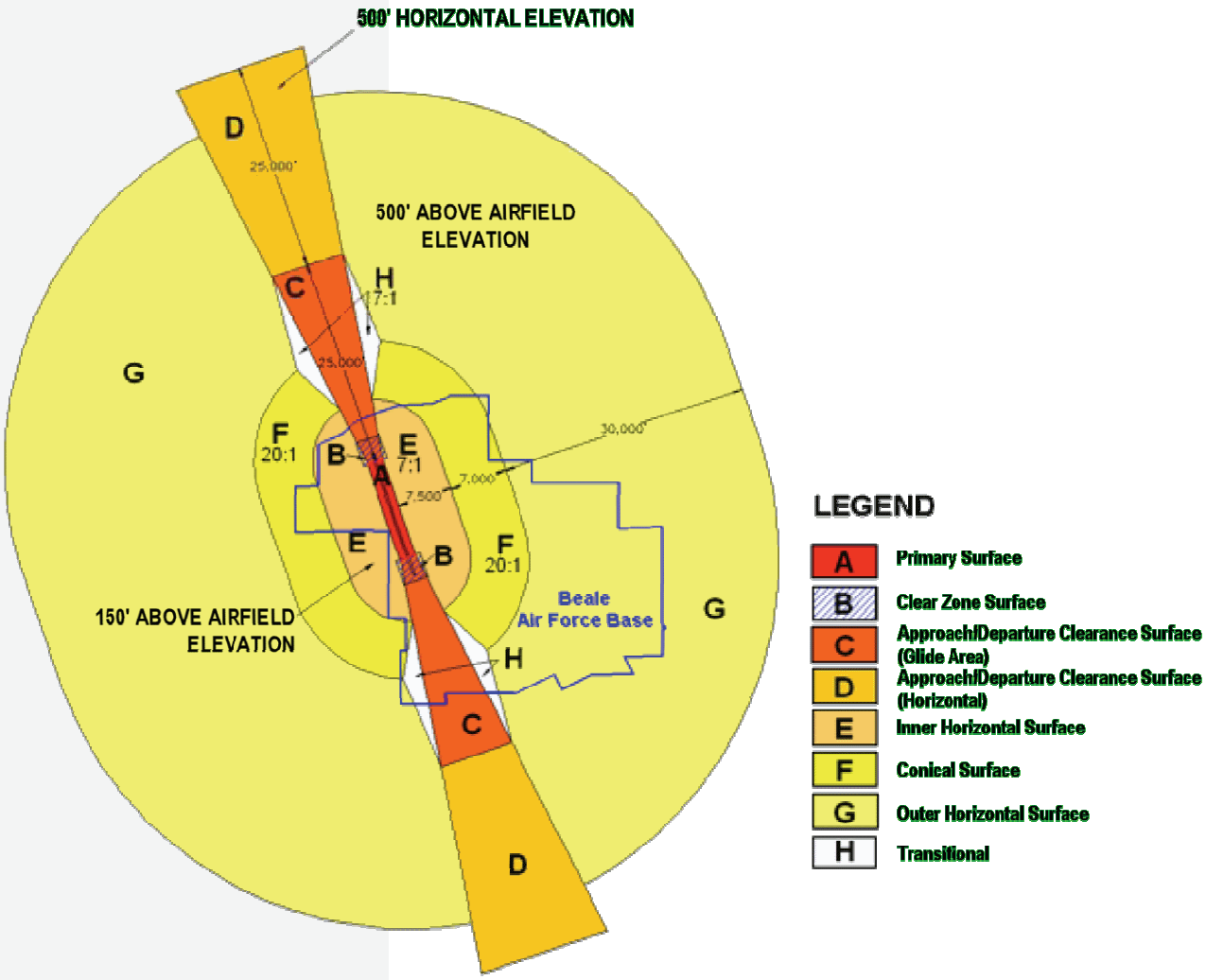
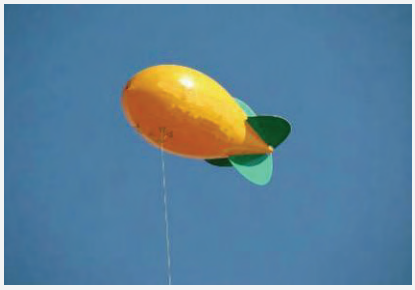


Figure 3-5. Beale Airspace Control Surface Plan

To determine when structures or facilities should be evaluated regarding vertical obstruction, Part 77 states the following requirements.

§ 77.13 - Any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA:

- Any construction or alteration exceeding 200 ft above ground level
- Any construction or alteration
  - within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft.
  - within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft.
  - within 5,000 ft of a public use heliport which exceeds a 25:1 surface
- Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed that above noted standards
- When requested by the FAA
- Any construction or alteration located on a public use airport or heliport regardless of height or location


Advertising balloon

As the area around Beale AFB develops, local jurisdictions will need to review project proposals to ensure compliance with Part 77 requirements (☐ Issue 3A). It is important to note that Part 77 compliance is not limited to stationary or permanent structures or facilities. Advertising with large balloons reaching 100 or more feet into the air occurs in the area surrounding Beale AFB. These and similar items will need to be addressed in the area surrounding the base to ensure aircraft and public safety.

Unique Facilities

In addition to the types of new development typically found in growing areas (such as residential, commercial, or industrial development), two other uses are located near Beale that are of interest regarding vertical obstruction.

The first issue is relative to mining activities occurring adjacent to the north side of Beale AFB. Mining has occurred in this area for a long time, and, in general, this industrial-type use has been a compatible neighbor. A concern would be changes in the future that would introduce significant new structures (such as a dredge boom) that may pose vertical obstructions (● Issue 3B).

The Ostrom Road Landfill (● Issue 3C) is located adjacent to the installation's southern boundary and is near the approach and departure tracks for Beale. As the landfill grows to support regional population increases, landfill height increases pose potential vertical obstruction issues to aircraft operations at the south end of the runway. Future expansion plans should be evaluated against the Part 77 regulations.

4 Local Housing Availability

Definition:
Local housing availability addresses the supply and demand for housing in the region, the competition for housing that may result from changes in the number of military personnel, and the supply of military family housing provided by the base.

The issues identified for this compatibility factor are listed on Table 3-4 and further described in the following discussion.

Table 3-4. Local Housing Availability Issues

ID	Compatibility Issue
4A	Properties outside of flood zones are limited; therefore, these areas will have higher demands for development throughout the region. (☐ not shown on Figure 3-1)
4B	Fees associated with levee protection can impact home prices. (☐ not shown on Figure 3-1)
4C	On-base housing at Beale AFB is limited.

In reviewing local housing availability, the AC and TC noted the limits on land in the region due to the amount of area subject to flooding (☐ Issue 4A). In areas that do have flood protection, these lands often carry higher costs to pay for levee protection (☐ Issue 4B). Concerns from a local level were to ensure an appropriate amount of land outside of flood prone areas would be available for future development.

Family housing unit at Beale AFB

The second major issue identified was in regard to the supply of military family housing (● Issue 4C). Beale AFB has on-base housing for unaccompanied personnel and military families. Military family housing, Transient Lodging Facilities (TLFs), Unaccompanied Officer Quarters (UOQs), and Visiting Officer Quarters (VOQs) are in the southeast corner of the installation. Enlisted dormitories and the Visiting Airmen Quarters (VAQs) are located in the main base area in the central portion of the installation.

The military family housing area (shown on Figure 3-2 and Figure 3-6) is in the process of undergoing privatization. Privatization refers to the process when the installation's housing stock is turned over to a private entity (called the Property Owner) for operation, management, and maintenance. This also includes lease of the land upon which the housing units are located to the Property Owner. The installation's privatization project is a 50-year public-private venture to revitalize the existing housing at Beale AFB. The Department of the Air Force selected

Beale Privatized Housing LLC as the private entity, which is a joint venture comprised of Pinnacle AMS Development Company LLC (Pinnacle) of Irvine, Calif. and Hunt ELP Ltd (Hunt) of El Paso, Texas. The contract is scheduled to begin in Spring 2008.

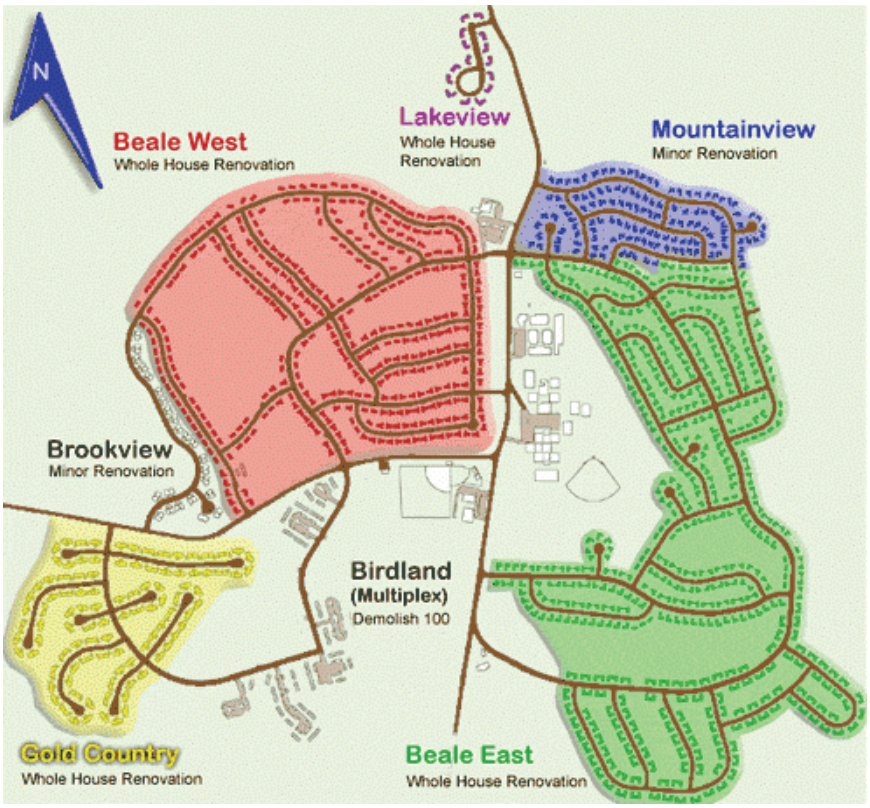


Figure 3-6. Military Family Housing

The last Housing Requirements and Market Analysis for Beale AFB determined that the installation had a surplus of housing units. The end-state requirement is 798 units compared to the 1,553 units in the current inventory. Of the 1,553 units, 338 were to be demolished prior to the start of privatization in Spring 2008. As of January 2008, 80 percent of those units have been demolished. The remaining units are scheduled to be demolished prior to the Property Owner assuming maintenance and management of Beale's housing units. Another 404 units will be required to be demolished to achieve the endstate of 798 total units. Future plans of the privatization contractor may include additional demolition and new construction of another 240 housing units.

Military families are not required to live in military family housing and can obtain housing within the local communities. According to Beale AFB, the amount of base housing provided on the installation is appropriate to meet the current demands of those wishing to live on the base, but changes on the base and in the local communities can impact this supply.

As described in Section 2.1, there are 565 dormitory rooms on Beale AFB. While some enlisted ranks are required to live on base, most enlisted personnel can choose to live in housing in the surrounding communities. Dormitory housing on base runs nearly full, with a typical occupancy rate of 95 percent.

Changes in missions at the installation could increase or decrease the number of Beale military personnel, which translates to a requirement for more or less housing. In the case of an increase in personnel, the increased demand would likely be handled by the local communities, at least in a short-term situation. Depending on the size of the increase, this could impact housing supply in the local region.

As described in Section 2, the region surrounding Beale AFB is experiencing an increase in housing demand. This increase will likely result in pressures to raise home values, which could make local affordability more challenging for military families.

5 Infrastructure Extensions

Definition:
This factor covers the extension or provision of infrastructure (roads, sewer, water, etc.). Infrastructure plays an interesting role in compatibility. On the positive side, infrastructure can enhance the operations of the installation by providing needed services, such as sanitary sewer treatment capacity and transportation systems. Infrastructure can also be an encroachment issue if enhanced or expanded infrastructure could encourage growth into areas near the installation that would not be compatible with current or future missions.

The issues identified for this compatibility factor are listed on Table 3-5 and further described in the following discussion.

Table 3-5. Infrastructure Extensions Issues

ID	Compatibility Issue
5A	Highway 65 Bypass is at various stages of planning and funding. This includes a bypass to the west side of the City of Lincoln and around the east side of the City of Wheatland.
5B	Landfill has reached the maximum height allowed for the first trash pile. See the discussion under Issue 3C. Marked as 3C on Figure 3-1.
5C	Proposed expansion of Ostrom Road Landfill will likely bring more bird attraction issues.
5D	Planned intersection and interchange improvements throughout the study area. (☐ not shown on Figure 3-1)
5E	Proposed Yuba Highlands and River Highlands road improvements and infrastructure extensions east of the Beale AFB. The Yuba Highlands EIR included discussions of a north-south roadway through a portion of the installation.
5F	Proposed Yuba River Parkway west of base.
5G	New interchanges on Highway 65 Bypass in the Wheatland area.
5H	Maintenance of roadways leading to the installation. (☐ not shown on Figure 3-1)
5I	Connection to community infrastructure. (☐ not shown on Figure 3-1)
5J	Extension of infrastructure into new areas near the installation. (☐ not shown on Figure 3-1)

Regional Transportation Improvements

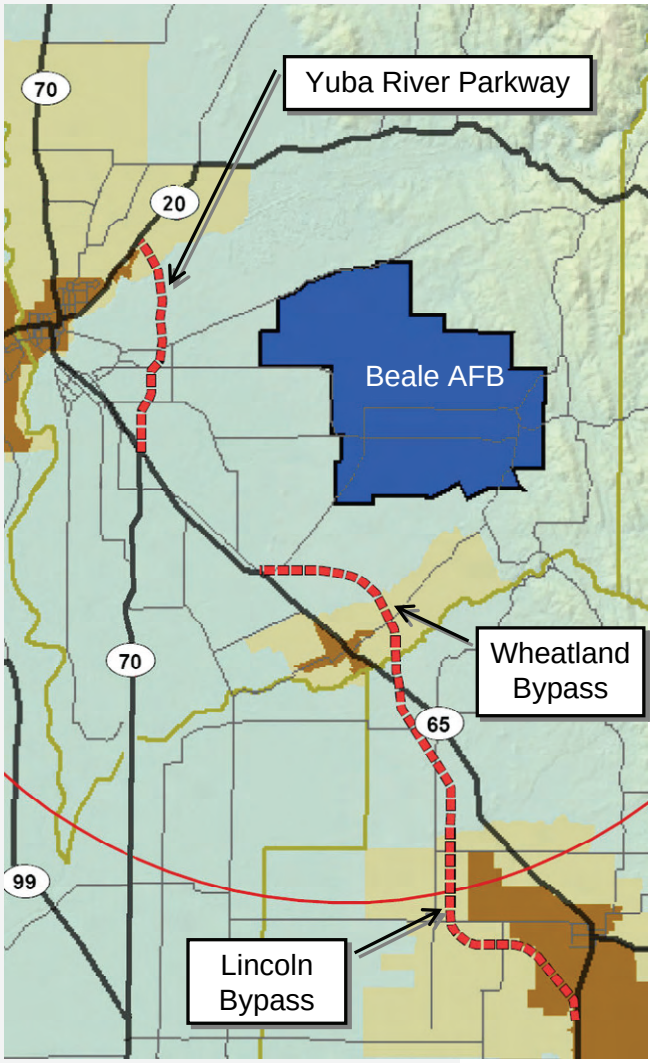


Figure 3-7. Proposed Bypasses

The construction of the State Highway 65 Bypass around Lincoln and Wheatland (● Issue 5A) will reroute traffic out of each city's downtown area and change the highway in these areas from a two-lane arterial to a four-lane grade-separated highway (see Figure 3-7). Highway 65 is a key regional connector into the study area from the south, and the enhancement of the Highway 65 corridor will provide better regional circulation and access to Beale AFB.

Most of the Lincoln Bypass is outside of the study area, and does not pose any compatibility issues with the base. For the Wheatland Bypass, the highway itself does not pose a compatibility issue, but the location of future interchanges should be carefully considered (● Issues 5D and 5G). The Wheatland Bypass is located near Beale's arrival and departure tracks (about six miles south of the runway). Given its close proximity, the interchange locations and the potential land uses need to be planned to ensure compatibility.

The third bypass in the study area is the Yuba River Parkway (● Issues 5D and 5F). There has been long-standing interest in a bypass or other major roadway to relieve traffic flows through the City of Marysville. The Yuba River Parkway provides an expressway around Marysville. Unlike the Marysville Bypass studied in the past by Caltrans (and no longer being considered), the Yuba River Parkway does not extend north of Route 20 and less expensive since it will have signalized intersections at major cross streets instead of elevated freeway sections. Like the other bypasses, this will improve regional circulation, and therefore, access to Beale, but is not seen as having any compatibility issues.

An issue discussed with the AC and TC was the need for a coordinated response to maintenance of local roadways that serve as the primary access roads to the installation (□ Issue 5H).

Timing of infrastructure...

The Wheatland Bypass and 2nd Phase of the Lincoln Bypass are not currently funded. Growth at Beale would add traffic to these regional facilities.

Roadways On or Near the Installation

Due to its close proximity to the installation, future road improvements and infrastructure extensions related to the proposed Yuba Highlands Area Plan or other development near Beal should consider impacts to Beale's military operations (● Issue 5E).

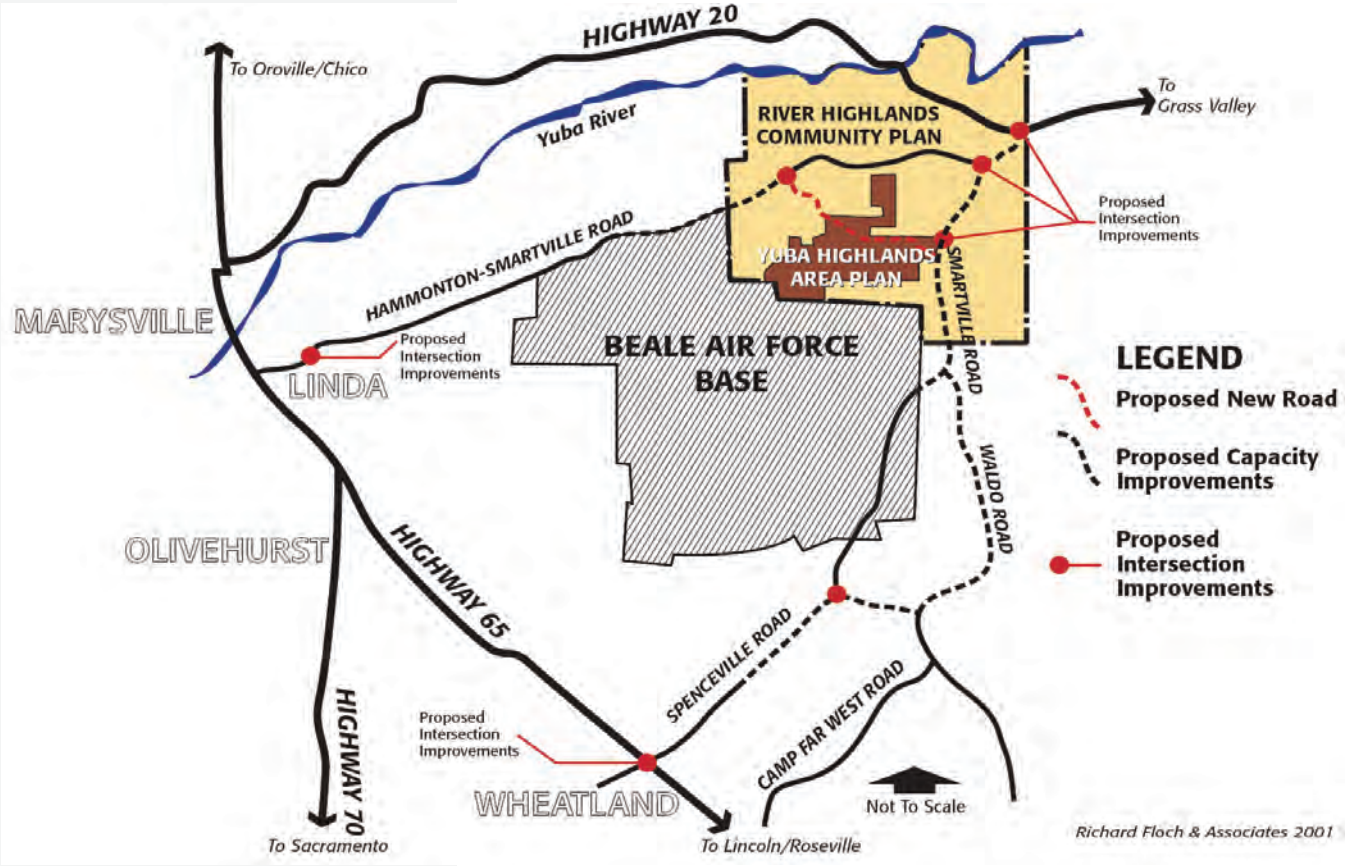


Figure 3-8. Yuba Highlands Circulation Options

As shown on Figure 3-8, a number of roadway improvements were proposed with the Yuba Highlands project, including improvements to Hammonton-Smartville Road, Smartville Road, Waldo Road, and Spenceville Road. The project EIR also included an alternative with a potential new roadway connecting Smartville Road to Spenceville Road that would cut through the southeast corner of Beale AFB. This roadway alignment would be subject to DOD approval.

Sewer and Water Service

In the past, military installations were typically designed to provide sewer and water service through treatment facilities maintained by the military and located on the installation. As infrastructure systems age and treatment requirements become more complex, the DOD is looking at the viability of obtaining infrastructure services from off-installation providers or to turn the system over to a private entity to operate and maintain. For this to be viable at Beale, the installation needs to work with communities, service districts, and other utility providers to ensure that adequate plans are in place to service future demand. (☐ Issue 5I).

According to the Beale AFB General Plan, infrastructure treatment capacity is not an issue. In fact, the installation has substantial excess capacity (see Figure 3-9). While capacity is not an issue, the age of the installation facilities is. The wastewater treatment plant (WWTP) and most of the wastewater collection system was built during World War II. Collection pipes are deteriorated, and during the rainy season, October through April, stormwater runoff infiltrates into the sewer collection system, which significantly increases sewage flows.

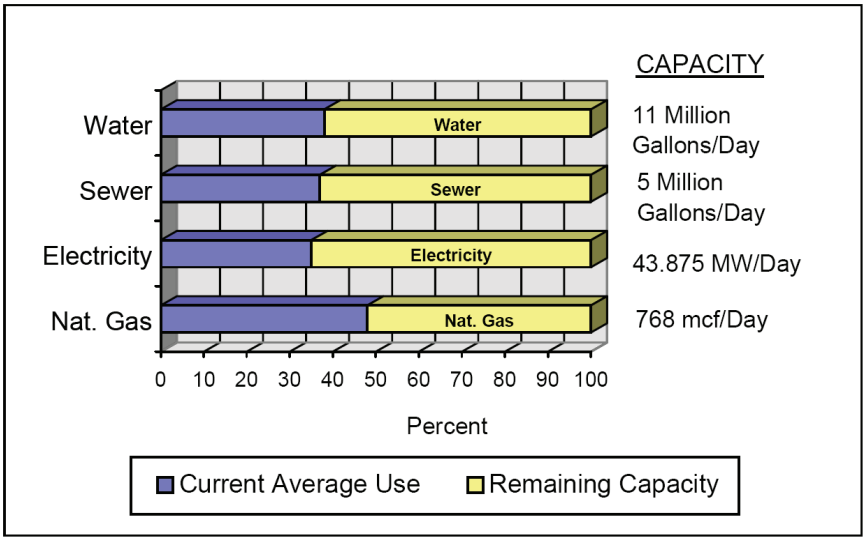


Figure 3-9. Infrastructure Capacity

Beale faces regulatory requirements to upgrade its treatment processes to tertiary levels by April 2009. The upgrade process is complicated by the need to treat byproducts from remediation of groundwater contamination and limits on the ability of discharge fields to handle high flows during the wet months. According to the municipal service review (MSR) completed recently for Yuba County, Beale AFB would consider alternatives that involve sending waste to an off-site facility, but the

installation is not open to receiving waste flows from upstream wastewater collection systems due to liability issues.

The water system at Beale is in better overall condition. Beale obtains all of its water from a system of nine groundwater wells, and the water is treated at the on-base water treatment facility. This facility was upgraded in 2003. The distribution system on the installation was primarily installed in the 1940s in the cantonment area, with newer systems in the military family housing area. According to the MSR, the groundwater basin used by the base is not adjudicated, and the safe annual yield is unknown.

The extension or expansion of infrastructure to the installation or to areas near an installation also raises the issue of growth inducement. If new wastewater collection or water distribution lines are extended to the base, growth may be directed to these areas due to the availability of service, causing a potential conflict with sustaining military readiness (☐ Issue 5J).

6 Antiterrorism / Force Protection

Definition:
Antiterrorism/Force Protection (AT/FP) relates to the safety of personnel, facilities, and information on an installation from outside threats.

The issues identified for this compatibility factor are listed on Table 3-6 and further described in the following discussion.

Table 3-6. AT/FP Issues

ID	Compatibility Issue
6A	Enhancing security fence around Beale AFB.
6B	Trespassing issues from along the northeastern side of the base.

Trespassing…

Also refer to Compatibility Factor 14, Public Trespassing.

If residential development moves into areas adjacent to Beale, protections will need to be built into these developments and into the installation's security to ensure that the security of the installation can be maintained (● Issues 6A and 6B). A critical facility on the northeast side is the PAVE PAWS facility.

7 Noise

Definition:
Defining noise from a technical perspective, sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. More simply stated, sound is what we hear. As sounds reach unwanted levels, this is referred to as noise.

As described in Section 4.1, Beale AFB published an updated AICUZ study in 2006. The AICUZ study provided detailed noise modeling of current and potential aircraft operations at the installation. While aircraft operations are the most noticable noise effect in the surrounding area, the base has other operations that could produce noise levels that need to be addressed as part of the JLUS. These are primarily gunnery range operations and explosives disposal.

In addition to noise from Beale operations, a concern was also noted relative to off-installation noise impacting the military family housing area. Potential sources include proposed mining operations and roadway alternatives included in the Yuba Highlands proposal.

The issues identified for this compatibility factor are listed on Table 3-7 and further described in the following discussion.

Table 3-7. Noise Issues

ID	Compatibility Issue
7A	Aircraft noise occurs to some extent throughout the study area. (☐ not shown on Figure 3-1)
7B	Noise from weapons firing ranges.
7C	Noise from explosives disposal.
7D	Noise from proposed Ostrom Road Quarry impacting Beale housing.
7E	Noise related to roadway alternative Yuba Highlands EIR.
7F	Hunting and firearms use on base present noise issues on Wildlife Area.

Understanding Noise

Due to the technical nature of this resource topic and its importance to the JLUS process, this section provides a discussion of the characteristics of sound and the modeling process used to evaluate noise impacts.

The following key terms are used to describe noise.

- **Ambient Noise**. The total noise associated with an existing environment and usually comprising sounds from many sources, both near and far.
- **Attenuation**. Reduction in the level of sound resulting from absorption by the surrounding topography, the atmosphere, distance from the source, barriers, construction techniques and materials, and other factors.
- **A-weighted decibel (dBA)**. A unit of measurement for noise having a logarithmic scale and measured using the A-weighted sensory network on a noise-measuring device. An increase or decrease of 10 decibels corresponds to a tenfold increase or decrease in sound energy. A doubling or halving of sound energy corresponds to a 3-dBA increase or decrease.
- **Community Noise Equivalent Level (CNEL)**. CNEL is used to characterize average sound levels over a 24-hour period, with weighting factors included for evening and nighttime sound levels. Leq values (equivalent sound levels measured over a 1-hour period - see Leq description below) for the evening period (7:00 p.m. to 10:00 p.m.) are increased by 5 dB, while Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) are increased by 10 dB. For a given set of sound measurements, the CNEL value will usually be about 1 dB higher than the Ldn value (average sound exposure over a 24-hour period – see below). In practice, CNEL and Ldn are often used interchangeably. A CNEL measure is commonly used in California; therefore, the Beale AICUZ results are reported using this weighting method.
- **Day-Night Average Sound Level (Ldn)**. Ldn represents an average sound exposure over a 24-hour period. Ldn values are calculated from hourly Leq values, with the Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises.
- **Equivalent Sound Level (Leq)**. The level of a steady-state sound that, in a stated time period and at a stated location, has the same sound energy as the time-varying sound (approximately equal to the average sound level). The equivalent sound level measured over a 1-hour period is called the hourly Leq or Leq (h).
- **Noise Contours**. Connecting points of equal noise exposure. Typically expressed in 5 dBA increments (60, 65, 70, 75, etc.).

Measuring Noise Impacts…

People have a lower tolerance for noise during evening and nighttime hours. In most noise studies, including the Beale AICUZ, noise occurring during these hours are weighted to reflect this concern. CNEL and Ldn are two weighting methods commonly used.

- **Sensitive Receptors.** Sensitive receptors are defined as locations and uses typically more sensitive to noise, including residential areas, hospitals, convalescent homes and facilities, schools, and other similar land uses.

Characteristics of Sound

Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale (i.e., dB scale) is used to present sound intensity levels in a convenient format.

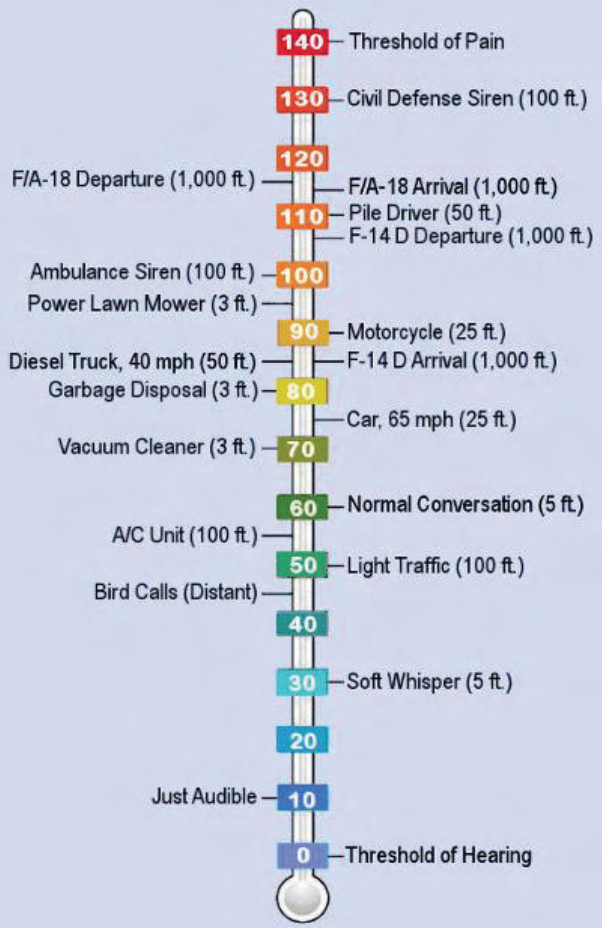


Figure 3-10. Noise Level Comparison

Since the human ear is not equally sensitive to all frequencies within the entire spectrum, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called "A-weighting" written as dBA. The human ear can detect changes in sound levels of approximately 3 dBA under normal conditions. Changes of 1 to 3 dBA are typically noticeable under controlled conditions, while changes of less than 1 dBA are only discernable under controlled, extremely quiet conditions. A change of 5 dBA is typically noticeable to the general public in an outdoor environment. Figure 3-10 summarizes typical A-weighted sound levels for a range of indoor and outdoor activities.

Environmental noise fluctuates over time. While some noise fluctuations are minor, others can be substantial. These fluctuations include regular and random patterns, how fast the noise fluctuates, and the amount of variation. When describing noise impacts, it is common to look at the average noise over an average day.

Aircraft Noise

The Air Force adopted the NOISEMAP computer model to analyze and describe noise impacts created by aircraft operations. NOISEMAP is one of two Environmental Protection Agency (EPA) approved models. The other is the Integrated Noise Model (INM), which is used by the Federal Aviation Administration (FAA) for civilian airports.

In 1974, EPA designated the noise descriptor Ldn, or Day-Night Average Sound Level (DNL), as the standard measurement for noise impacts. Ldn is an average sound level exposure, measured in decibels, over a 24-hour period (see the definition earlier in this section for details). On a national level, Ldn measurements are projected down to 65 decibels.

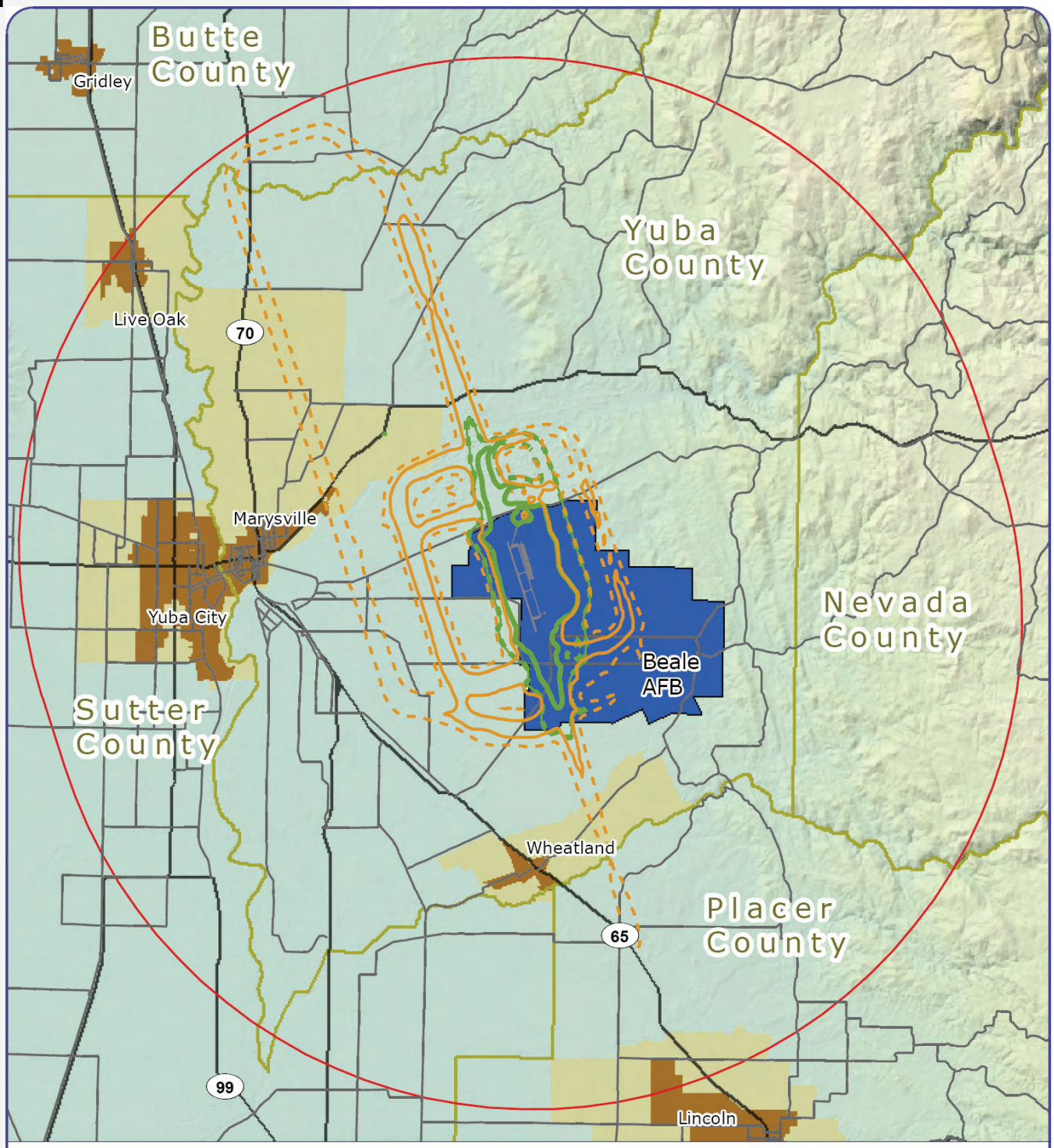
California uses a measurement technique similar to Ldn called the Community Noise Equivalent Level (CNEL). Ldn and CNEL both apply a 10 dB penalty for noise occurring during the nighttime hours of 7:00 p.m. to 10:00 p.m. The CNEL measurement goes further by adding a 5 dB penalty for events occurring in the evening between 7:00 p.m. and 10:00 p.m. Typically, the numerical difference between Ldn and CNEL are not significant. California airport planning also calculates noise contours down to the 60-dB CNEL level, which are included in the current Beale AFB AICUZ study.

The 2005 AICUZ methodology was different from the previous study in that it looked at two scenarios. One involved a look at the current mission, including programmed changes in the number of aircraft used at the installation (i.e., the current mission included increases in flight operations for the Global Hawk). The study also looked at the future potential of the installation to support new or increased missions, referred to in the AICUZ as the hypothetical mission.

Further Information on AICUZ Scenarios…

Section 4.1 provides a description of the AICUZ scenarios and Appendix C contains a summary of the AICUZ study.

For noise sources attributable to Beale AFB, aircraft noise is the primary concern relative to compatibility planning (☐ Issue 7A). The Beale AFB AICUZ study states that residential development is not recommended in areas impacted by greater than 65 dB CNEL. Figure 3-11 shows the location of the 65 and 60 dB CNEL contours for both the Current Mission and Hypothetical Mission Scenarios contained in the AICUZ study. As shown on the figure, noise levels greater than 60 db CNEL for the Current Mission Scenario are primarily contained within the Beale AFB boundaries; however, there are some areas off base north of the runway. This area is primarily used for mining activities, which are typically compatible with the aircraft noise levels modeled.



Legend

- Study Area
- Beale AFB
- Incorporated Cities
- Sphere of Influence
- County Boundaries
- Highways
- Major Road

Hypothetical Noise Contour (CNEL)

- 65 dBA
- 60 dBA

Current Mission Noise Contours (CNEL)

- 65 dBA
- 60 dBA

0 5 10 Miles

Current Noise Contours | **Figure 3-11**

For the Hypothetical Mission Scenario, the 60 and 65 dB CNEL contours cover a larger area, although still significantly smaller than the 65 dB CNEL contour modeled in the previous AICUZ study (see Figure 3-11 for comparison).

The Beale AICUZ looks at noise for a typical or average day over a given year. On any given day, noise levels on a specific property will be higher or lower depending on a number of factors, including the number of flights, aircraft mix, the actual flight tracks taken, flight elevations, and so forth. Other changes at the base could result in changes to the noise contours. An important point is that the AICUZ contours are averages and reflect only two scenarios. As such, the noise contours should be used as guidance in making future land use decisions, not absolute constraints.

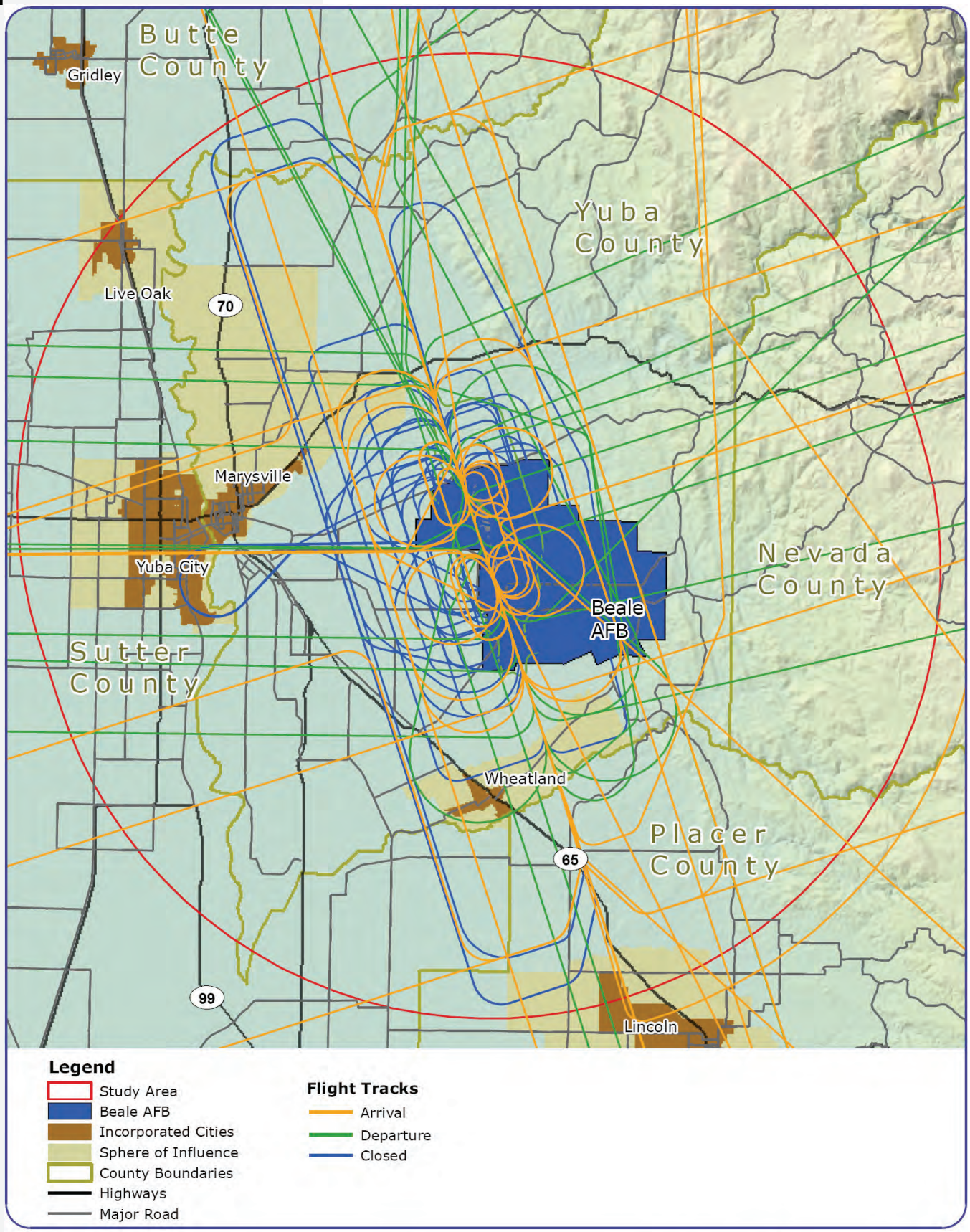
The AICUZ noise contours show areas where noise compatibility issues are likely to occur with more sensitive land uses. Outside of these contours are additional areas where overflight will occur and new development will notice noise from flight operations (see Figure 3-12). The overall shape and size of the study area reflects locations that experience periodic low level overflight, and therefore, may be exposed to occasional noise.

Noise from Firing Ranges

Other than aircraft-related noise, the other two primary noise generating activities at Beale AFB are located in the northern portion of the installation – a weapons firing range and an explosives ordnance disposal area.

Several firing ranges are located on Beale AFB. Figure 3-2 shows the safety arcs for each firing range, with the firing position for each located at the pointed end of the safety arc. As described under Compatibility Factor 2, the northern range is used for small arms training, as well as heavy caliber weapons, such as the M-60 machine gun. Given the close proximity of the north range to the base boundary and the higher noise generation from the use of heavy caliber weapons, this area was noted as a compatibility concern (● Issue 7B).

To evaluate the potential for this range to impact off-site uses, noise parameters were used as published by the U.S. Army Center for Health Promotion and Preventative Medicine – Operational Noise Program. The information provided (see Appendix E) was used to develop the Areas of Concern (AOC) used in Section 5.3.



0 5 10 Miles

Flight Tracks | **Figure 3-12**

Unlike noise from aircraft, which tends to occur on a regular basis throughout the year, use of the firing ranges is more sporadic. The ranges on Beale are used to train and maintain competency ratings for Beale personnel. The ranges are also used by other installations and services, federal and local law enforcement, and other users for training. Given the sporadic nature of training, noise measurements are related to a single event, and are not an average (like done for the AICUZ study).

Another issue related to range operations was identified by the TC. Members of the TC noted the potential for noise from the ranges to be heard on the adjacent Spenceville Wildlife Area. While not noted as a significant issue at this time, it is a consideration should use of nearby ranges increase (● Issue 7D).

Noise from Explosive Ordnance Disposal

Beale AFB has several locations that are used to store, assemble, or dispose of explosive materials. Explosive mishaps at storage or training areas are extremely rare, and therefore, noise from inadvertent explosions was not considered to be a compatibility factor. While not routine, use of the EOD area was considered to occur on a more frequent basis, although still not a routine event. Noise generated from disposal of explosives is not expected to create an unsafe noise environment, but this would have a startle effect on nearby uses. Disclosure of this facility and notice for larger disposal activities would be beneficial (● Issue 7C).

Off-Base Noise Issues

Two off-base noise sources were noted as potential compatibility issues. For both areas, the compatibility issue addressed the potential for noise impacts on the military family housing area.

The first off-site issue identified was noise impacts from the Ostrom Road Quarry (● Issue 7E). The EIR being prepared for this project will address potential noise impacts, and should address this issue in detail. The other issue related to the construction of a new roadway through the southeast corner of Beale AFB. This was included as a transportation alternative in the Yuba Highland EIR (● Issue 7F).

Ostrom Road Quarry…

Details on this project are described under Compatibility Factor 1, Land Use.

8 Vibration

Definition:
Vibration is an oscillation or motion that alternates in opposite directions and may occur as a result of an impact, explosion, noise, mechanical operation, or other change in the environment. In the study area, vibration may be caused by military and civilian activities.

The issues identified for this compatibility factor are listed on Table 3-8 and further described in the following discussion.

Table 3-8. Vibration Issues

ID	Compatibility Issue
8A	Vibration from base operations (EOD, firing ranges, aircraft).
8B	Vibrations from Ostrom Road Quarry affecting base.

Vibration from Noise...

Further information on noise from installation operations are described under Compatibility Factor 7, Noise.

Vibrations from Beale AFB operations can result from operations of aircraft, firing ranges, and explosions associated with ordnance disposal (● Issue 8A). Explosions from ordnance disposal are the only activity likely to have a noticeable vibration effect felt in the surrounding area. Given the infrequent activities at the EOD area and the small size of most munitions disposed, this is not a major compatibility issue; however, it is something that should be disclosed to property owners in the area.

Relative to off-site uses impacting the base, the issue of vibration from the proposed Ostrom Road Quarry was noted (● Issue 8B). This activity should be similar to other mining operations that occur in the region. No adverse impacts on the installation's operations have been noted from existing operations, and are not expected to be an issue with the new project, but this can be evaluated as part of the project's EIR if warranted.

9 Dust

Definition:
Dust is the common term used to describe the suspension of partiulate mater in the air. Dust can be created by fire (controlled burns, agricultural burning), ground disturbance (agricultural operations, grading), industrial activities, or other similar processes. Dust becomes a compatibility issue if sufficient in quantity to impact flight operations (such as reduced visibility or equipment damage).

The issues identified for this compatibility factor are listed on Table 3-9 and further described in the following discussion.

Table 3-9. Dust Issues

ID	Compatibility Issue
9A	Dust from Ostrom Road Landfill has potential to reduce visibility.
9B	Smoke from agriculture burning and prescribed burns throughout the region. (☐ not shown on Figure 3-1)
9C	Dust from agriculture, mining, landfill and grading throughout the region. (☐ not shown on Figure 3-1)
9D	Dust from Ostrom Road Quarry has potential to reduce visibility.

Smoke from fires can be a compatibility issue but has not been a problem at Beale

Dust from the Ostrom Road Landfill has the potential to reduce visibility of military aircraft during takeoff or landing at Beale AFB from the south (● Issue 9A). A similar issue may be associated with mining operations to the installation's north side, as well as future sand and gravel operations at the Ostrom Road Quarry to the south (☐ Issue 9C and ● Issue 9D). Coordination with the State Mines and Geology on mining reviews and ensuring reclamation plans address dust reductions are needed.

Smoke and dust caused by agricultural burning (☐ Issue 9B) can result in visibility reductions for Beale AFB aircraft operations, but according to the base, this has not been an issue in the past. A coordinated approach for the timing of burning will ensure this issue remains insignificant.

10 Light and Glare

Definition:
This factor refers to man-made lighting (street lights, airfield lighting, building lights) and glare (direct or reflected light that is harsh and disrupts normal vision).

Light sources from commercial, industrial, and residential uses at night can cause excessive glare and illumination, which impacts the use of military night vision devices and air operations. Conversely, high intensity light sources generated from a military area (such as ramp lighting) may have a negative impact on the adjacent community.

The issues identified for this compatibility factor are listed on Table 3-10 and further described in the following discussion.

Table 3-10. Light and Glare Issues

ID	Compatibility Issue
10A	Light and glare from ramp and runway operations can be seen from throughout the region.
10B	Light and glare from on-base housing area.
10C	Light and glare affecting Spenceville Wildlife Area.
10D	Light and glare from new development in the foothills and rural development in Yuba and Nevada counties.
10E	Light and glare in the study area will increase with development, thereby increasing background light in area, potentially impacting night training. (☐ not shown on Figure 3-1)
10F	Future solar facilities throughout the region could result in glare impacting aircraft depending on location, materials, and angles. (☐ not shown on Figure 3-1)

On Table 3-10, the first three issues are associated with light originating from the installation and impacting off-base land uses. The base has urban lighting similar to any community. The one area that stands out in the night sky is the lighting of the ramp area of the airfield (● Issue 10A). The tall light standards and high intensity lights create a strong illumination that is noticeable from the surrounding areas, but it is typical for an airport use. Since development around the installation is currently limited, this existing illumination is not a compatibility concern but would need to be considered when deciding on future adjacent land uses.

Lighting from the military housing area was noted since it lies on the perimeter of the installation, and the urban style of lighting is stronger than that found in surrounding areas (● Issue 10B). Lighting from the installation was noted as potentially impacting the Spenceville Wildlife Area and surrounding rural areas (● Issue 10C). If changes in development and lighting are done at the base, increases in illumination should be mitigated as appropriate.

Outside the installation, light and glare impacts will increase as urbanized uses move closer to Beale (● Issue 10D). In the night sky, some training activities at Beale utilize night vision equipment to simulate battlefield conditions. As background lighting in the area increases, this training could be impacted (□ Issue 10E).

An example of the effects of glare on a cockpit canopy

From an air operations standpoint, concerns would include unshielded new lighting sources and the addition of reflective surfaces that could impact a pilot's vision (● Issues 10D and □ Issue 10E). Solar facilities in the region could also cause glare depending on their type, location, angle, and direction, resulting in a reduction of the pilot's view, even at a very high altitude, and should be evaluated with future projects (□ Issue 10F).

11 Alternative Energy Development

Definition:
Alternative energy refers to sources, such as solar, wind, or biofuels that can be used to replace or supplement traditional fossil-fuel sources, as coal, oil, and natural gas. Alternative energy development could pose compatibility issues related to glare (solar energy) or vertical obstruction (wind generation). Other alternative energy developments, such as biofuels, have no typical compatibility issues, and would be judged for compatibility on a case-by-case basis.

The issues identified for this compatibility factor are listed on Table 3-11 and further described in the following discussion.

Table 3-11. Alternative Energy Development Issues

ID	Compatibility Issue
11A	Solar power development potential throughout the region. (☐ not shown on Figure 3-1)
11B	Wind turbines pose issues with vertical obstruction. (☐ not shown on Figure 3-1)

Small scale solar application in Yuba County

Similar to Issue 10G, solar facilities in the region could also cause substantial amounts of glare depending on their type, location, angle, and direction, resulting in a reduction of the pilot's view, even at a very high altitude (☐ Issue 11A).

Wind turbines have two potential compatibility issues (☐ Issue 11B). The most prominent is the vertical obstruction aspect of the systems, which can be several hundred feet in height for a commercial structure. In the Beale area, wind is not constant enough to support large scale wind development, but smaller, localized applications may be possible. Future placement of wind turbines, commercial and private, would need to be coordinated with Beale AFB to avoid height issues (i.e., vertical obstruction).

12 Air Quality

Definition:
Air quality is defined by a number of components that are regulated at the federal and state level. For compatibility, the primary concerns are pollutants that limit visibility, such as particulates, ozone, and potential non-attainment of air quality standards that may limit future changes in operations at the installation.

The issues identified for this compatibility factor are listed on Table 3-12 and further described in the following discussion.

Table 3-12. Air Quality Issues

ID	Compatibility Issue
12A	Smoke from burning and dust from agriculture affects air quality/visibility throughout the region. (☐ not shown on Figure 3-1)
12B	Air quality throughout the region. (☐ not shown on Figure 3-1)
12C	Ostrom Road Quarry (dust).

Agriculture burning causes higher levels of large and fine airborne particulates. This lowers the visibility in the area near the fire; although, larger areas can be impacted by large fires (● Issue 12A). For information on this issue, please refer to Issue 9B, presented earlier in this section.

Overall, air quality in the study area is fairly good. In 2006, only nine days were listed as unhealthy for sensitive groups. The only air quality standard exceeded in 2006 (Yuba City monitoring station) was the 8-hour ozone value. The standard states the basin should not exceed the level of the 8-hour standard (0.08 parts per million (ppm)). The value reported in the basin was 0.09 ppm. The standards for particulates, both 10 microns and 2.5 microns in size, were not exceeded. As growth continues in the area, these measures can be expected to increase, which may reduce flight visibility (● Issue 12B).

For dust related to the proposed Ostrom Road Quarry (● Issue 12C), please refer to Issue 9D.

13 Frequency Spectrum Impedance and Interference

Definition:
Frequency spectrum impedance and interference refers to the interruption of electronic signals by a structure (impedance) or the inability to distribute/receive a particular frequency because of similar frequency competition (interference).

The issues identified for this compatibility factor are listed on Table 3-13 and further described in the following discussion.

Table 3-13. Frequency Spectrum Impedance and Interference Issues

ID	Compatibility Issue
13A	Development near the PAVE PAWS facility has the potential to be affected by electro magnetic interference.
13B	Frequency spectrum impedance and interference throughout the region. (☐ not shown on Figure 3-1)

In performance of typical operations, the military relies on a range of frequencies for communications and support systems. At Beale AFB, clear frequencies are especially critical to support intelligence gathering operations, as well as the command and control infrastructure for the Global Hawk Unmanned Aerial Vehicle (UAV). The public also relies on a range of frequencies to support daily life. As the use of the frequency spectrum increases (such as the rapid increase in cellular phone technology over the last decade) and as development expands near military installations and operations, the issue of frequency spectrum impedance, interference, and competition increases.

Frequency interference is related to other transmission sources. Interference can result from a number of factors, including: new transmissions using a frequency that is near an existing frequency, moving an antennae transmitting on a similar frequency to a closer location, increasing the power of a similar transmission signal, use of poorly adjusted transmission devices that transmit outside their assigned frequency, or production of an electromagnetic signal that interferes with a signal transmission.

PAVE PAWS radar facility at Beale AFB

For Beale, the key issue identified under this compatibility factor was the potential for electromagnetic interference from the operation of the PAVE PAWS radar facility on consumer electronics used in the surrounding area (● Issue 13A).

Located in the northeast corner of the installation, the facility emits radar energy in a 240-degree fan centered along in a southwest direction (see Figure 3-2). While current studies from a similar facility in Cape Cod have found no health implications, the electromagnetic energy from the facility is likely to cause impacts on the operation of some consumer electronics used in the surrounding area (see Appendix D for additional information on testing done on the proposed Yuba Highlands site). The impacts are not clearly defined based on the information available, but given the energy measurements taken in surrounding areas to the north of the facility, the reliability of some consumer electronics is unsure.

Key issues to consider relative to frequency spectrum impedance include the construction of buildings or other facilities that block or impede the transmission of signals from antennas, satellite dishes, or other transmission/reception devices affected by line-of-sight requirements. At Beale AFB, antennae structures are located far enough from the installation boundaries to avoid impendence by construction outside the installation (□ Issue 13B).

14 Public Trespassing

Definition:
This factor addresses public trespassing, either purposeful or unintentional, onto Beale AFB. This issue is related to Compatibility Factor 6, AT/FP.

The issues identified for this compatibility factor are listed on Table 3-14 and further described in the following discussion.

Table 3-14. Public Trespassing Issues

ID	Compatibility Issue
14A	Potential for public trespassing on Beale AFB from Spenceville Wildlife Area.

Fencing along Beale's western boundary

The majority of Beale AFB has been secured with new fencing systems in recent years, providing for enhanced security and the elimination of inadvertent access by the public. On the eastern edge of the base, it may be possible for public trespass to occur due to older fencing in this area and the public use nature of the Spenceville Wildlife Area (● Issue 14A).

15 Cultural Resources

Definition:
Cultural resources may prevent development on the base, apply development constraints, or require special access by native groups or other authorities.

The issues identified for this compatibility factor are listed on Table 3-15 and further described in the following discussion.

Table 3-15. Cultural Resources Issues

ID	Compatibility Issue
15A	Maidu archeological site (National Register of Historic Places Site). (☐ not shown on Figure 3-1 due to sensitivity of location)

Opened in 1942, the installation includes several buildings that are over 50 years old. These facilities have been evaluated for historical significance, and, with the concurrence of the California State Historic Preservation Office (SHPO), the few remaining on-base World War II-era structures have been determined ineligible for listing in the National Register of Historic Places (NRHP).

The majority of the base has been surveyed for archaeological and cultural resources. There are more than 130 known archaeological sites on Beale AFB (☐ Issue 15A). More than 50 of these sites have been determined eligible or are potentially eligible for NRHP listing, pending further study.

The installation maintains a Cultural Resources Management Plan that is designed to protect existing resources. According to information provided by the base, most cultural resource sites are located outside of the development areas, and the presence of historic and archaeological resources does not significantly constrain development.

16 Legislative Initiatives

Definition:
Legislative initiatives are federal, state, or local law and regulations that may have a direct or indirect effect on a military installation to conduct its current or future mission.

The issues identified for this compatibility factor are listed on Table 3-16 and further described in the following discussion.

Table 3-16. Legislative Initiative Issues

ID	Compatibility Issue
--	No issues were noted for this Compatibility Factor.

A number of state legislations are designed to address some of the compatibility issues discussed in this section. This legislation is described in Section 4.5.

17 Interagency Coordination

Definition:
Interagency coordination relates to the level of interaction on compatibility issues between military installations, jurisdictions, land and resource management agencies, and conservation authorities.

The issues identified for this compatibility factor are listed on Table 3-17 and further described in the following discussion.

Table 3-17. Interagency Coordination Issues

ID	Compatibility Issue
17A	Airport Land Use Compatibility Plans in the region need updates to reflect the new AICUZ study results. (☐ not shown on Figure 3-1)
17B	Yuba-Sutter Natural Community Conservation Planning (NCCP) / Habitat Conservation Plan (HCP) program area lies to the west of base and should be expanded to adjoin the installation. (☐ not shown on Figure 3-1)
17C	Spenceville Wildlife Area lays adjacent to base on east side.
17D	Other agency agreements or cooperation throughout the region. (☐ not shown on Figure 3-1)
17E	Beale AFB to work with Yuba County for potential solutions to infrastructure issues on base. (☐ not shown on Figure 3-1)
17F	Coordination with Yuba County on Ostrom Road Quarry development.

Airport Land Use Compatibility Plan

As described in Section 4.3, the purpose of the Airport Land Use Compatibility Plans (ALUCP) is to establish procedures and criteria used to address compatibility issues when making planning decisions regarding airports and surrounding land uses, as well as to safeguard the welfare of the people living near airports and the public in general. To achieve these purposes, safety and noise standards established in the AICUZ study are typically reflected in the ALUCP. With the 2006 publishing of an updated AICUZ by the base, the ALUCP should be updated (☐ Issue 17A).

Natural Resource Planning

During the development of the JLUS, the boundary for the NCCP/HCP was under consideration for expansion to include portions of the installation's southern boundary. This modification was approved, and the Yuba-Sutter Natural Community Conservation Plan (NCCP) and Habitat Conservation Plan (HCP) currently extend to portions of Beale's western and southern boundaries. The boundary for the NCCP/HCP is

under consideration for expansion, which will include a significant portion of the installation's southern border. Figure 4-5 provides a look at the current and proposed boundaries.

The expansion of the NCCP/HCP will allow a more holistic view of the region's resources. While Beale AFB will maintain a separate approach through their Integrated Natural Resources Management Plan and Special Area Management Plan, Beale is involved on a technical basis to ensure the installation's plans and the NCCP/HCP does not adversely impact the base. Through the NCCP/HCP process, conservation areas that benefit the protection of Beale (buffers or mitigation banks) may be possible (☐ Issue 17B).

Spenceville Wildlife Area...

offers fishing, camping, hunting, and wildlife viewing opportunities.

The Spenceville Wildlife Area occupies 11,448 acres of foothill oak and grassland located adjacent to the eastern boundary of Beale AFB. Coordination between the base and the California Department of Fish and Game (management agency for the area) are needed to ensure the viability of the Wildlife Area and the protection of the installation (☐ Issue 17C).

Other Coordination

Other issues for coordination discussed by the AC and TC included the following.

- General support for establishing a coordinating committee to ensure the strategies developed for this JLUS are implemented and maintained (☐ Issue 17D).
- For the installation to work with Yuba County to solve infrastructure issues on the installation (☐ Issue 17E). This issue is also discussed under Issue 5I.
- As highlighted under several compatibility factors, there was a concern over the proposed Ostrom Road Quarry. Coordination between Yuba County, the California Department of Mines and Geology, and Beale AFB are needed to ensure compatibility issues are adequately addressed (● Issue 17F).

3.3 Natural Resource Compatibility Factors

In addition to man-made compatibility factors, natural compatibility factors are also potential sources of conflict with military readiness activities. Like the previous section, natural resource compatibility issues that apply to specific locations are shown on Figure 3-13 and are noted by a dot symbol (●) in the text. Issues that apply to the whole study area or were not geographically specific are noted with a square symbol (□) in the text.

18 Water Quality / Quantity

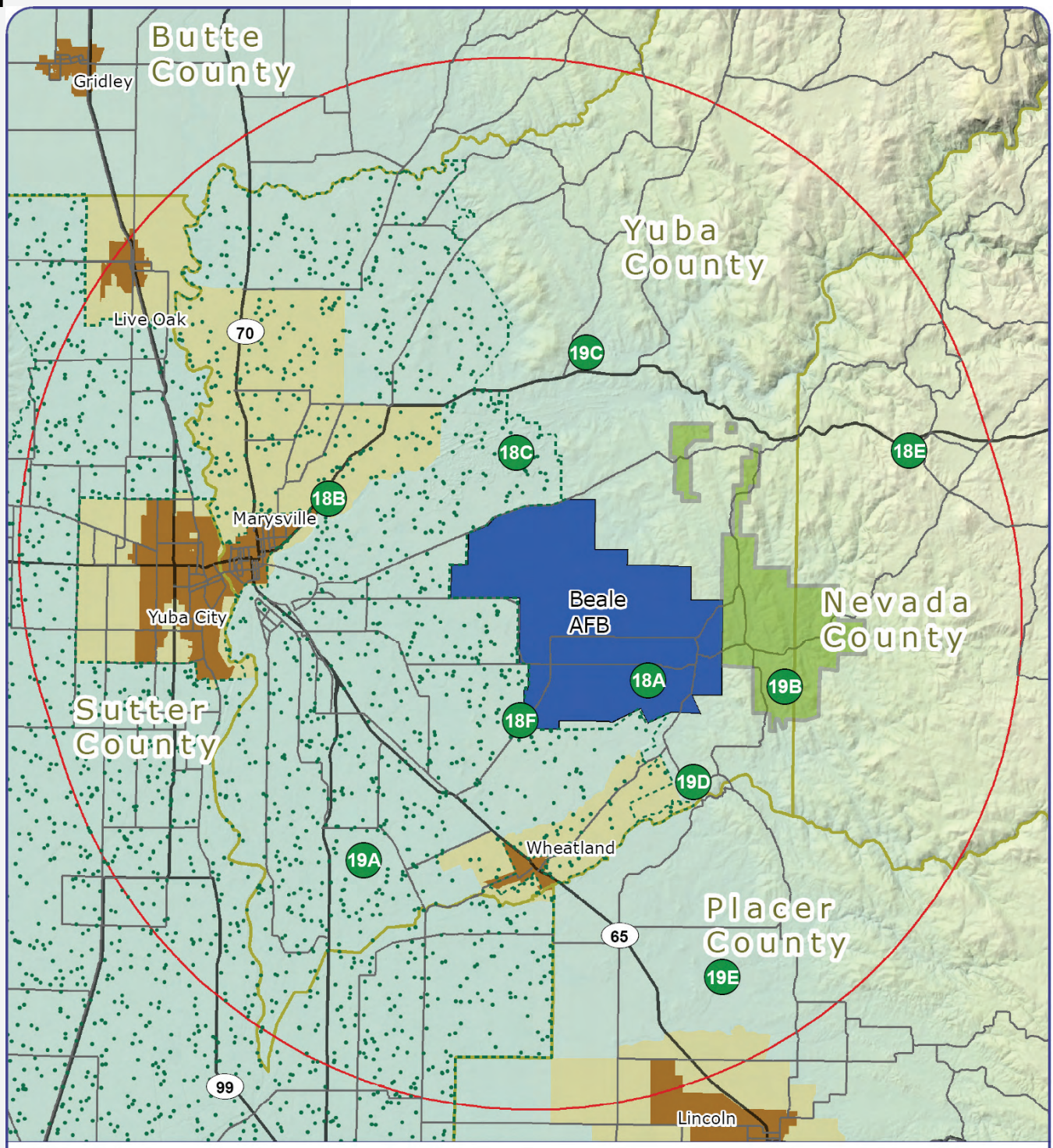
Definition:
Water quality/quantity concerns include ensuring adequate water supplies of good quality for use by the base and surrounding communities as the area develops.

The issues identified for this compatibility factor are listed on Table 3-18 and further described in the following discussion.

Table 3-18. Water Quality/Quantity Issues

ID	Compatibility Issue
18A	Beale AFB to work with Yuba County for potential solutions to water capacity on base.
18B	Potential water issues with YSOI facility.
18C	Groundwater supply south of the Yuba River is limited.
18D	Highway water runoff and water quality throughout study area. (□ not shown on Figure 3-13)
18E	10 years ago there was a water issue due to too many wells in particular area.
18F	Groundwater use restrictions due to groundwater contamination/cleanup.

As illustrated in Figure 3-12, there are seven water-related factors that have been identified within the study area (● Issues 18A, 18C, and 18E). These three address water supply issues while Issues 18B, 18D, and 18F relate to water quality issues.



Legend

- Study Area
- Beale AFB
- Incorporated Cities
- Sphere of Influence
- County Boundaries
- Highways
- Major Road

Natural Resources

- Natural Resource Factors
- Spenceville Wildlife and Recreation Area
- Yuba Sutter NCCP

0 5 10 Miles

Natural Resource Factors | Figure 3-13

19 Threatened & Endangered Species

Definition:
A ***threatened*** species is one that may become extinct if measures are not taken to protect it. An ***endangered*** species is one that has a very small population and is at greater risk of becoming extinct. Many species that become extinct never make it to the endangered species list. The presence of threatened and endangered species may require special development considerations and should be included early in planning processes to ensure compatibility with military missions.

More than 14 federal and state listed threatened and endangered species are known to exist in areas on and around Beale AFB and may be affected by current or future missions. Some of these species are mobile (birds), while others are bound to specific areas (vernal pool shrimp species). Conservation authorities and reserves (parks) adjacent to the base could provide compensatory mitigation for future mission projects (see Table 3-19 and Figure 3-13).

Table 3-19. Threatened and Endangered Species Issues

ID	Compatibility Issue
19A	Yuba-Sutter NCCP / HCP plan area lies just west and south of the base.
19B	Threatened and endangered species on Spenceville Wildlife Management Area east of the base.
19C	Threatened and endangered species by Spring Valley, north of the base.
19D	Threatened and endangered species south of base.
19E	Placer Legacy Natural Community Conservation Planning program area is southeast of the base.

Figure 3-13 identifies three areas within the study area where this factor may be an issue – east and west of Wheatland (● Issues 19A and 19D), as well as near Spring Valley (● Issue 19C) north of Beale AFB. Issue 19A is located within the Yuba-Sutter Natural Community Conservation Planning (NCCP) boundary southwest of Beale AFB.

20 Marine Environments

Definition:
Regulatory or permit requirements protecting marine and ocean resources can cumulatively affect the military's ability to conduct operations, training exercises, or testing in the marine environment.

The issues identified for this compatibility factor are listed on Table 3-20 and further described in the following discussion.

Table 3-20. Marine Environments Issues

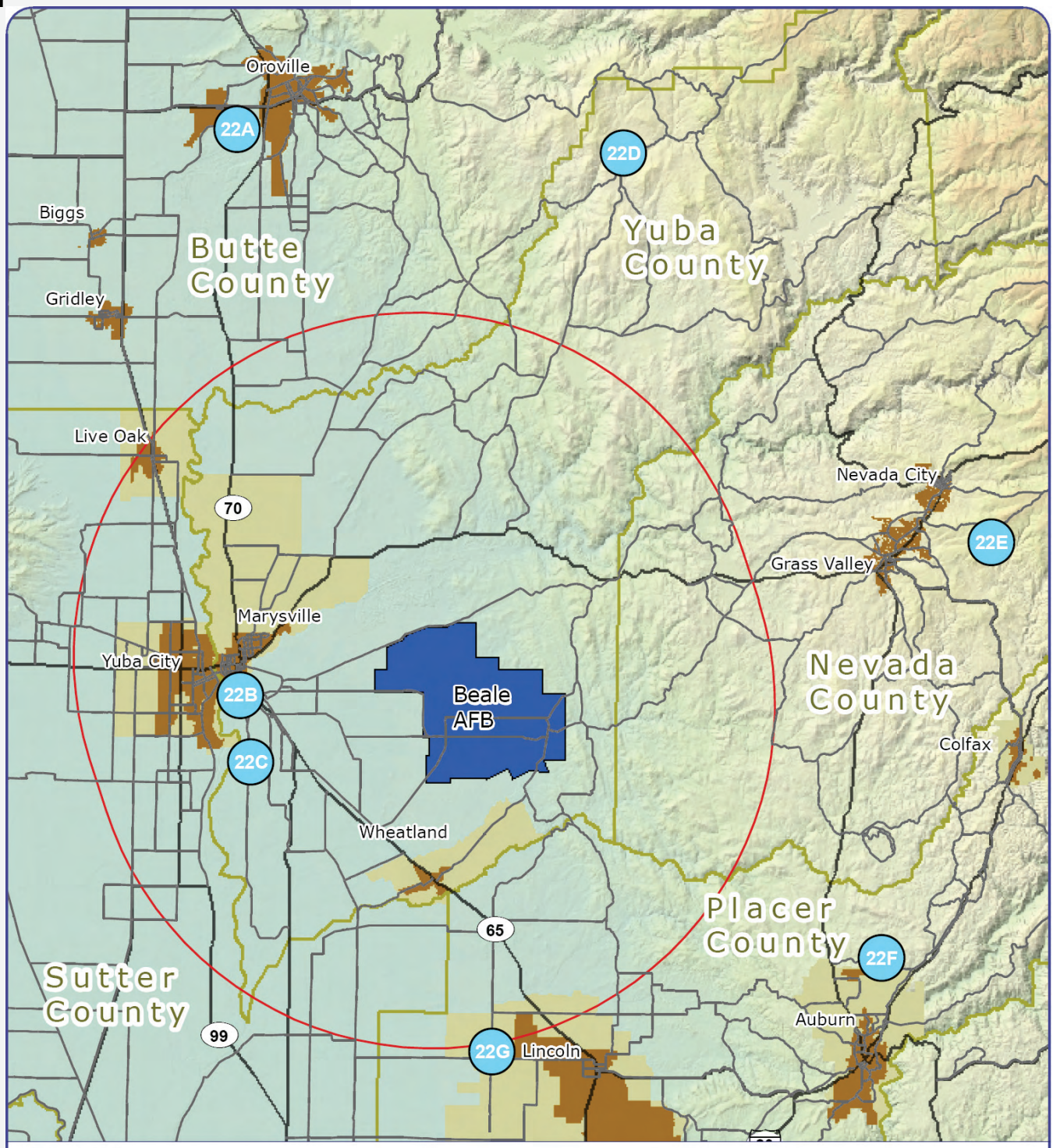
ID	Compatibility Issue
--	No issues were noted for this Compatibility Factor.

There are no marine environments in the study area; therefore, no issues were identified under this Compatibility Factor.

3.4 Competition for Scarce Resources

Competition for scarce resources can cause compatibility issues due to competition between local and federal government agencies, other agencies, private development concerns, and the military. The following is a description of some of the key resources that can be in high demand; however, only issues associated with the competition for Land, Air, and Sea Spaces and for Ground Transportation Capacity have been identified for the Beale JLUS.

Like the previous section, issues related to competition for scarce resources that apply to specific locations are shown on Figure 3-14 and are noted by a dot symbol (●) in the text. Issues that apply to the whole study area or were not geographically specific are noted with a square symbol (□) in the text.



Legend

- Study Area
- Beale AFB
- Incorporated Cities
- Sphere of Influence
- County Boundaries
- Highways
- Major Road
- Competition Factors

0 5 10 Miles

Competition Factors | Figure 3-14

21 Scarce Natural Resources

Definition:
Pressure to gain access to valuable natural resources (such as oil, gas, minerals, and water resources) located on military installations, within military training areas, or on public lands historically used for military operations can impact resource utilization and military operations.

Scarce Natural Resources...

Further information on this topic is provided under Compatibility Factor 17, Interagency Coordination and Compatibility Factor 19, Threatened and Endangered Species.

The issues identified for this compatibility factor are listed on Table 3-21 and further described in the following discussion.

Table 3-21. Scarce Natural Resources Issues

ID	Compatibility Issue
--	No issues were noted for this Compatibility Factor.

No issues were identified under this Compatibility Factor.

22 Land, Air, and Sea Spaces

Definition:
Land, Air, and Sea Spaces with regard to other airports in the proximity of the military installations.

The issues identified for this compatibility factor are listed on Table 3-22 and further described in the following discussion.

Table 3-22. Land, Sea, and Air Spaces Issues

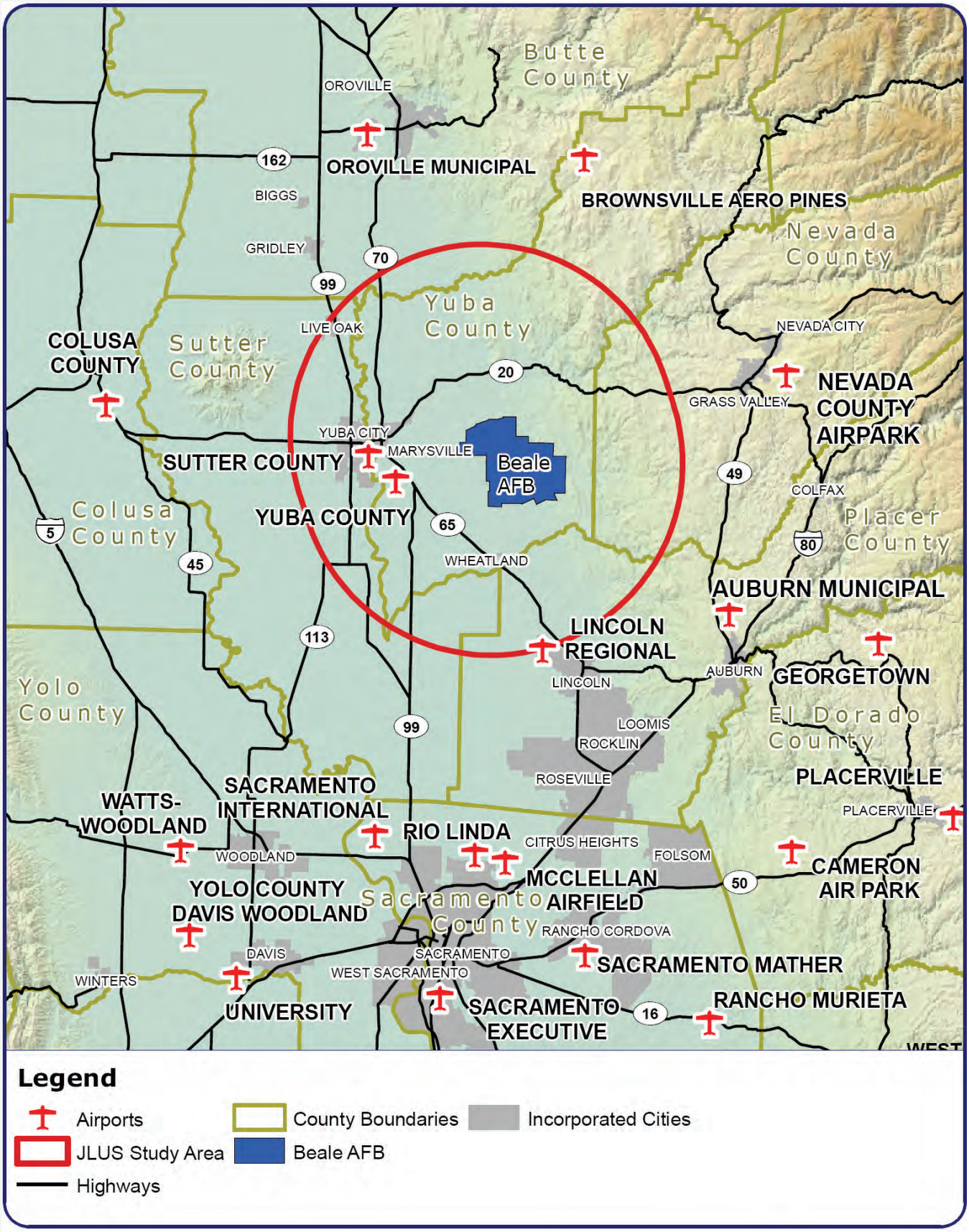
ID	Compatibility Issue
22A	Oroville Municipal Airport northeast of base.
22B	Sutter County Airport west of base.
22C	Yuba County Airport west of base.
22D	Brownsville Aero Pines north of base.
22E	Nevada County Airpark east of base. (☐ not shown on Figure 3-14)
22F	Auburn Municipal Airport east of base.
22G	Lincoln Regional Airport south of base.
22H	Regional airports such as Sacramento International, McClellan, Mather, in the region. (☐ not shown on Figure 3-14)

Compatibility Issues 22A through 22H address the high density of civilian airports within and in close proximity to the study area. There are 20 public use airports in the region surrounding Beale AFB, with three airports located within the study area. The three airports in the study area are the Lincoln Regional Airport, Yuba County Airport, and Sutter County Airport (see Figures 3-15 and 3-16).

General aviation aircraft use study area airports

Lincoln Regional Airport (● Issue 22G) is the busiest public access airport in the study area with 193 daily operations (96 percent general aviation). Sutter County Airport (● Issue 22B) has only 53 daily operations (98 percent general aviation). Daily operation data was not available for Yuba County Airport (● Issue 22C). Additionally, the Auburn Municipal Airport (● Issue 22F) and the Nevada County Airpark (☐ Issue 22E) are located less than 10 miles from the JLUS study area.

As airspace in the region is a high-demand resource, the large number of civilian airports in the region can impact existing and future aircraft operations (i.e., approach and departure tracks, closed pattern flight tracks, etc.) at Beale AFB.



Regional Airports | **Figure 3-15**

Beale Airspace

Since the airfield at Beale AFB has a manned tower serviced by a radar approach control and handles flights using Instrument Flight Rules (IFR), the airspace around Beale AFB is defined as Class C airspace. Class C airspace typically runs from the surface elevation at the airfield up to 4,000 above ground level (AGL). Although Class C airspace can be irregular in shape depending on local conditions and requirements, the airspace at Beale AFB is defined by two circular areas, shown in purple on Figure 3-16. The inner circle has a 5 nautical mile (NM) radius, and the outer circle has a 10 NM radius. In three-dimensions, the airspace resembles a mushroom shape. The inner 5 NM area extends from ground level to 4,000 feet AGL. The outer circle extends from 1,200 feet AGL to 4,000 feet AGL.

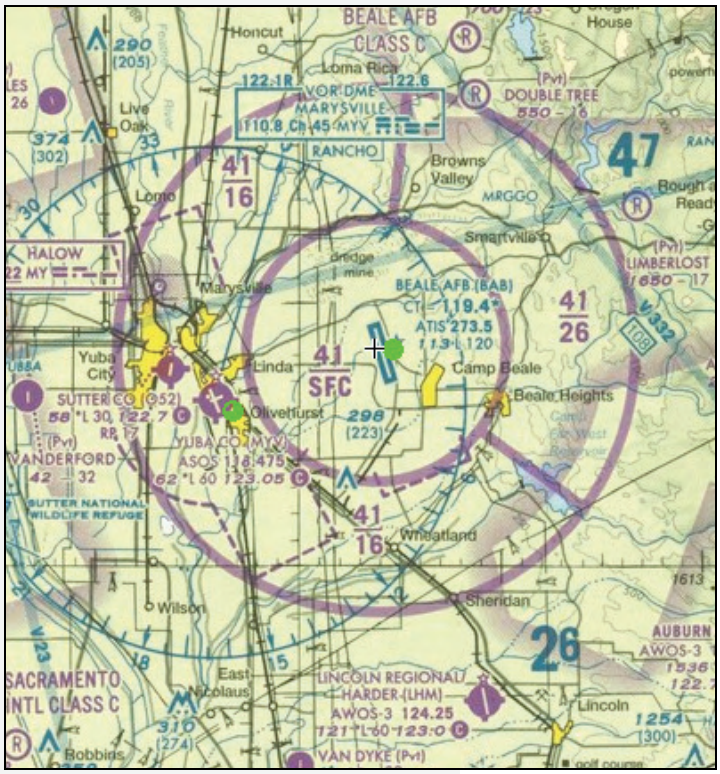


Figure 3-16. Beale AFB Airspace

Source: http://skyvector.com, 2007.

Regional Airports and Airspace

As mentioned above, there are 20 public use airports in the region surrounding Beale AFB including Sacramento Executive Airport, Sacramento International Airport, and Mather Airport (☐ Issue 22H), which have 368, 325, and 274 operations per day (OPD), respectively. These airports are illustrated on Figure 3-15. Given their regional locations, proximity to Beale AFB and high OPD, it is important that the findings and recommendations of the Beale JLUS be incorporated in updates of the corresponding ALUCPs. Chapter 5 details strategies related to this issue.

23 Frequency Spectrum Capacity

Definition:
Frequency spectrum capacity is critical for maintaining existing and future missions at Beale AFB. This also needs to be addressed from the standpoint of consumer electronics.

The issues identified for this compatibility factor are listed on Table 3-23 and further described in the following discussion.

Table 3-23. Frequency Spectrum Capacity Issues

ID	Compatibility Issue
--	No issues were noted for this Compatibility Factor.

No issues were identified under this Compatibility Factor.

24 Ground Transportation Capacity

Definition:
This factor addresses ground transportation capacity on highways and other local roads.

The issues identified for this compatibility factor are listed on Table 3-24 and further described in the following discussion.

Table 3-24. Ground Transportation Capacity Issues

ID	Compatibility Issue
24A	Ground transportation capacity throughout the region with potential development. The timing of funding and improvements in relationship to the demand is critical. (☐ not shown on Figure 3-14)

There are limited numbers of high speed, high capacity roadways within the study area. With a 73 percent anticipated population increase for counties in the region, ground transportation resources (☐ Issue 24A) will become even more strained.

Beale AFB enjoys a rural setting with five roads providing access to the installation. These roads are described below to provide an understanding of existing conditions as they relate to installation access.

- North Beale Road extends from State Route 70 (SR 70) in Linda to the Main Gate. It is the primary road connecting the installation and SR 70, Marysville, and Yuba City. In Linda, it is a four-lane undivided arterial with a two-way left turn lane. East of Yuba College, the roadway narrows to two-lanes to Beale AFB.
- Hammonton-Smartville Road is a two lane rural roadway providing access from North Beale Road in Linda to SR 20 near Smartville. The roadway provides access to Beale AFB at the Doolittle Gate and for personnel traveling to the Grass Valley-Nevada City area.
- Smartville Road is a two-lane rural roadway providing access from the Grass Valley Gate to Hammonton-Smartville Road south of SR 20. This is the primary access route for personnel traveling to the Grass Valley-Nevada City area.

- South Beale Road is a two-lane roadway providing access from SR 65 northwest of Wheatland to the Wheatland Gate.
- Spenceville Road is a two-lane rural roadway connecting SR 65 at the city of Wheatland to the Vassar Lake Gate. This is the primary travel route of personnel accessing the installation from the Wheatland area.

Please see the next page.

Section 4

Existing Plans and Programs

4

EXISTING PLANS AND PROGRAMS

In this section…

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This section provides an overview of the primary plans and programs that are currently used or applied in evaluating and addressing compatibility issues in the study area. Section 4.1 provides an overview of the Beale AFB Air Installation Compatible Use Zone (AICUZ) study. This study is designed to provide guidance to decision-makers and stakeholders on compatibility from the Air Force perspective relative to aircraft noise, air operations safety, and vertical encroachment.

Section 4.2 highlights plans and programs currently used by local jurisdictions to address compatibility issues including an overview of each jurisdiction's general plan and regulatory tools (i.e., tools codified through a formal action such as a zoning ordinance, subdivision ordinance, building code). Most jurisdictions do not have specific regulatory tools for compatibility, although many common zoning regulations can apply to these issues. For example, zoning ordinances may include regulations on grading, dust control, height restrictions for new structures, and so forth. This section will also describe major community and specific plans within the study area.

Section 4.3 discusses plans and programs maintained by agencies or organizations that relate to compatibility planning in the study area.

Seciton 4.4 provides an overview of the California Advisory Handbook for Community and Military Compatibility Planning, the state's guidebook on compatibility planning.

The final section, Section 4.5, describes legislation and other regulations that directly apply to compatibility planning.

4.1 Beale AFB Plans

Beale General Plan

In many ways, an Air Force base is a small city. The installation contains industrial areas, commercial uses, office and administrative areas, residential areas, recreation, open space, and an airport. Just like a city, it requires a comprehensive plan to meet current planning needs to set a vision for meeting the challenges related to future growth and change. Like a city or county, this is where the General Plan contributes. The General Plan helps base personnel understand existing conditions, documents existing needs and future expectations, and provides the programs and projects that can help the base fluidly react to an ever-changing world.

Similar to a city or county general plan, the Beale General Plan (2006) contains vision statements supported by a set of goals and objectives. In the General Plan, the installation defines a development vision for the base, which includes the following key statements relative to compatibility planning.

Maintain, revitalize, and expand facilities to support 21st Century Air Force missions that play a prominent role in protecting the national interests of the United States of America

Beale AFB is a **national asset**, ideally suited for continued development as a prominent, 21st Century Air Force base. Its significant potential to accept new missions; additional aircraft, personnel, and equipment; and the expanded facilities necessary to support them are based on:

- Airfield facilities that can accept any aircraft in the Air Force inventory
- No major encroachment issues in areas surrounding the installation
- Local community planners and officials who actively work to protect the installation's potential for future development
- Relatively open air lanes
- A rural location devoid of large population concentrations
- Significant developable land area on the installation, as well as acquirable land contiguous to the installation

The General Plan contains a discussion on compatibility planning and includes policy directives related to compatibility issues described in this JLUS, including the following key statements.

Protect our environment. Installation operations and development actions must be sensitive to the effects on the environment and consciously strive to further the policies and goals of the National Environmental Policy Act of 1969 (NEPA).

Promote compatible off-installation land uses that support current and potential missions. Compatible land uses adjacent to the installation are required to maintain Beale's viability for development as a prominent 21st Century Air Force base.

Resources Management Plans

The policy of DOD and Beale AFB is to fully comply with applicable federal, state, and county laws, ordinances, regulations, and guidelines, specifically designed to protect and preserve the environment. To guide natural resource management efforts at the base, Beale AFB maintains an Integrated Natural Resources Management Plan (INRMP). For cultural resources, the base maintains an Integrated Cultural Resources Management Plan (ICRMP).

Beale AFB contains a range of natural and cultural resources that they manage and protect. Although the installation contains about 23,000 acres of land, protection of habitats, species, and cultural resources constrains development on a large portion of the installation.

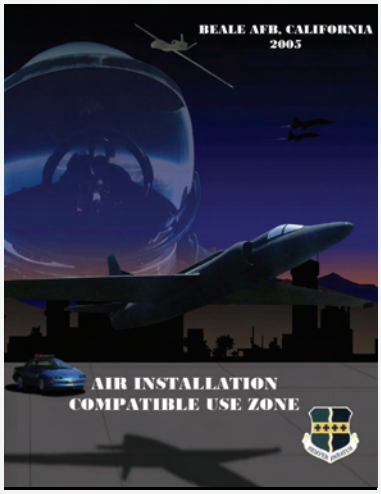
Air Installation Compatible Use Zone (AICUZ) Study

The AICUZ program is a DOD planning program developed in 1973 as a response to incompatible urban development and land use conflicts around military airfields. The program seeks to provide information on compatibility, develop a cooperative relationship between communities and military installations, and provides land use compatibility guidelines designed to protect public health and safety, as well as maintain military readiness.

As designed, The AICUZ study evaluates three components: noise, vertical obstructions, and accident potential zones.

The 2005 Beale AFB AICUZ study was an update to the previous study prepared in 1982. The 2005 AICUZ was initiated as a result of changes in aircraft types and numbers of operations at the installation. More specifically, the changes in the AICUZ are attributed to:

- removal of the SR-71 and B-52 aircraft,
- addition of the Global Hawk Unmanned Aerial Vehicle (UAV),
- adjustments in flight tracks, and
- technical improvements to the noise modeling program.



Beale AFB 2005 AICUZ Study

The 2005 AICUZ methodology was different from the previous study in that it looked at two scenarios. The Current Mission Scenario involved a look at the current mission, including programmed changes in the number of aircraft used at the installation (i.e., this scenario included increases in flight operations for the Global Hawk). The study also looked at the future potential of the installation to support new or increased missions, referred to in the AICUZ as the Hypothetical Mission Scenario.

The Current Mission Scenario is only a snapshot in time and includes no provision for a change in operations at the base over time. Using this information from this scenario to guide community growth could minimize or eliminate the potential of the base to take on new missions. In other words, to maintain viability as an installation, the Air Force felt it was important a look at the base's future potential to support mission increases and to work with local jurisdictions and agencies to protect the ability of the base to change over time. For the Hypothetical Mission Scenario, the base developed noise contours using the largest aircraft that the Beale AFB flightline can accommodate (B-52's). Since there are currently no B-52s at Beale, the Hypothetical Mission's model used flight track and flight profile information typically used at the base for larger aircraft. To accommodate the potential for a full wing of B-52's, additional night flights were added into the model.

Hypothetical Mission…

Beale AFB used the term "Hypothetical Mission" in the AICUZ study. The base currently uses the term "Future Potential Mission". These forms are synonymous.

Understanding Noise…

Section 3.2 provides a more detailed description on how noise is described.

Noise

Noise is the cornerstone of the AICUZ study. The noise generated by military aircraft operations and the resulting impacts on local communities are presented numerous ways in the study (i.e., written text, graphically, etc.). To fully appreciate the findings and recommendations presented in the AICUZ study, it is beneficial for the reader to have an understanding of how military aircraft noise is measured, evaluated, and graphically illustrated. Information on this can be found in Section 3.2 under Compatibility Factor #7, Noise.

The 2005 Beale AFB AICUZ study noise contours for Current Mission and Hypothetical Mission Scenarios are significantly smaller than those in the 1982 AICUZ study. The contours for the 2005 and 1982 AICUZ studies are shown on Figure 4-1.

Vertical Obstructions

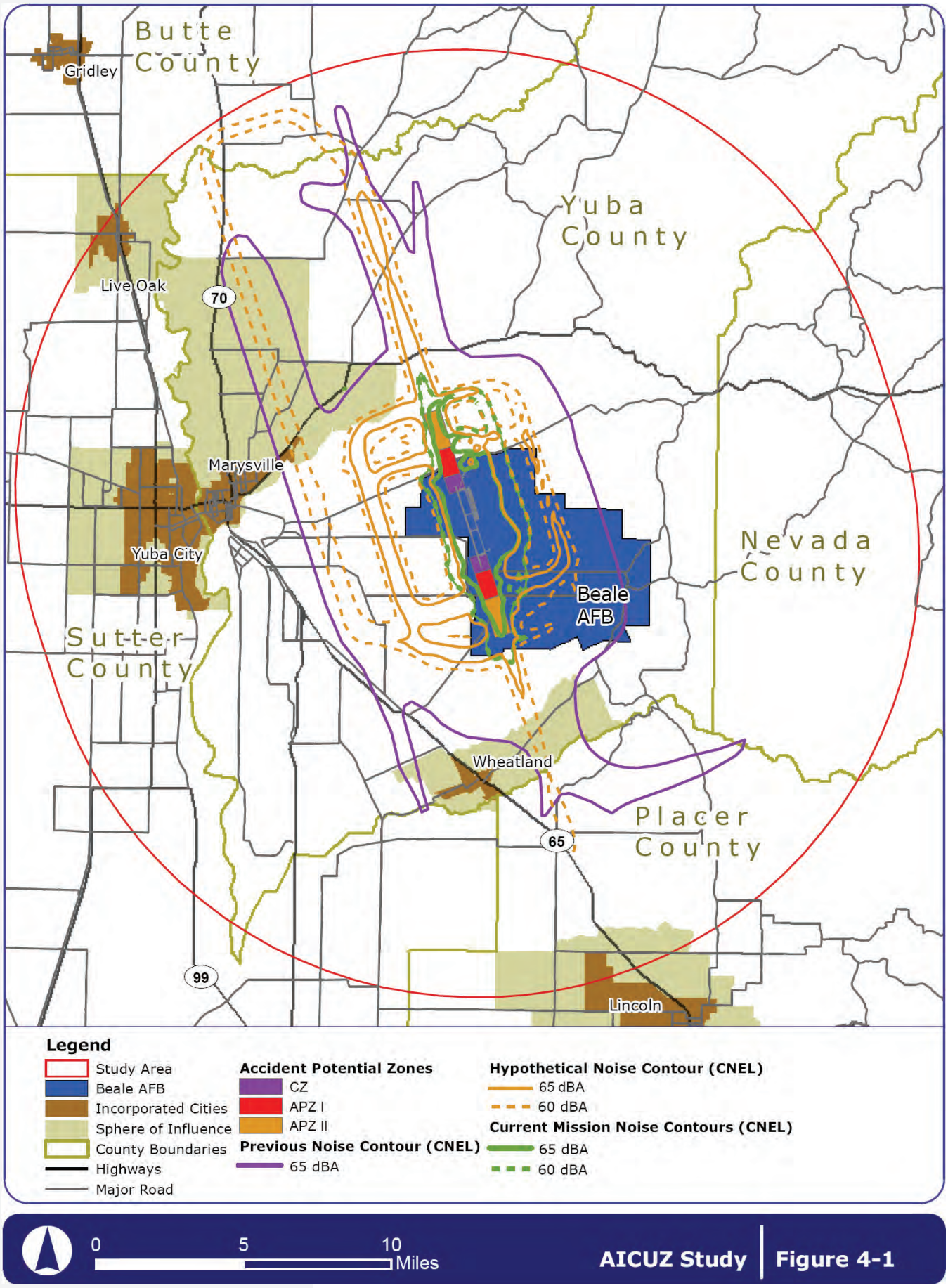
Vertical obstructions are evaluated based on Federal Aviation Administration (FAA) Regulation Part 77, Subpart C (see Compatibility Issue 3 in Section 3.2 and Appendix F for more details on this regulation). This regulation looks at the height of vertical structures or natural features in relation to their distance from the ends of the runway. Using a distance formula from this regulation, local jurisdictions can easily assess the height restrictions near airfields.

Understanding APZ/CZ…

Section 3.2 provides a more detailed description on how APZs and CZs are defined.

Accident Potential Zones

Every Air Force installation has delineated at both ends of all active runways a set of three accident potential zones referred to as the Clear Zone (CZ), Accident Potential Zone I (APZ I), and Accident Potential Zone II (APZ II). These areas are determined based on a statistical analysis of all DOD aircraft accidents. Figure 4-1 shows the CZs and two APZs for both ends of the runway at Beale AFB. Figure 3-2 provides a closer look at these areas.



AICUZ Study | Figure 4-1

4.2 Local Jurisdiction Planning Tools

In this section, local jurisdictions are discussed in alphabetical order, first by county and then by city.

General Plans

Every county and city in California is required by state law to prepare and maintain a planning document called a general plan. A general plan is designed to serve as the jurisdiction's "constitution" or "blueprint" for future decisions concerning land use, infrastructure, public services, and resource conservation. All specific plans, subdivisions, public works projects, and zoning decisions made by the city must be consistent with the general plan.

A general plan typically has three defining features:

- **General**. As the name implies, a general plan provides general guidance that will be used to direct future land use and resource decisions.
- **Comprehensive**. A general plan covers a wide range of social, economic, infrastructure, and natural resource factors. These include topics such as land use, housing, circulation, utilities, public services, recreation, agriculture, biological resources, and many other topics.
- **Long-range**. General plans provide guidance on reaching a future envisioned 20 or more years in the future.

Adding Compatibility Tools in General Plans

Recommendations to update local general plans to specifically address compatibility issues related to Beale AFB are included in Section 5.

The purpose of a general plan is to:

- Identify the jurisdiction's land use, circulation, environmental, economic, and social goals and policies as they relate to future development in the jurisdiction;
- Provide a basis for local government decision-making, including decisions on development approvals;
- Provide citizens with opportunities to participate in the planning and decision making processes of their communities; and
- Inform citizens, developers, decision-makers, other cities and counties, and other organizations (such as Beale AFB) of the policies that guide development within a particular community.

To provide an understanding of the future of the study area, a compilation of the general plans affecting these areas is provided on Figure 4-2. Given the number of jurisdictions represented in the study area, the land use designations were simplified into a common set of categories, which provides an overview of future plans for the area.

For many of the jurisdictions in the study area, compatibility with Beale AFB is not specifically addressed as part of a policy statement. Instead, protections are addressed through general policies that apply to any project and location, such as policies addressing acceptable noise levels. Protections are also developed during the project's environmental review as required by the California Environmental Quality Act (CEQA) and implemented through the appropriate mitigation measures.

Butte County

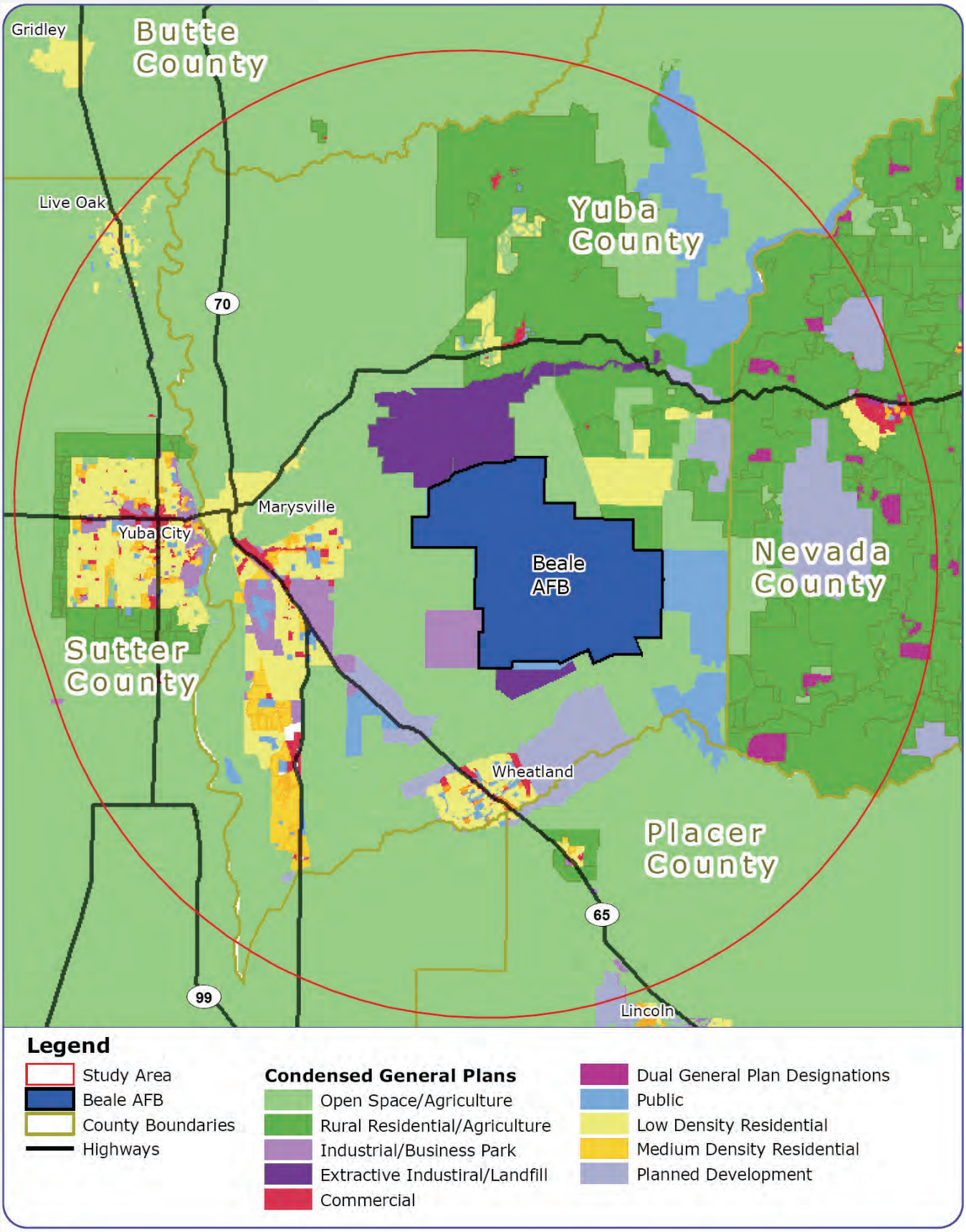
The Butte County General Plan is currently being updated and will not be adopted until after completion of the Beale JLUS. The county general plan update effort contains three major components: a comprehensive update to the general plan, an updated Zoning Ordinance, and an Environmental Impact Report (EIR) to support both projects. Given the timing of the community's update process, strategies presented in Section 5 should be considered for inclusion in the update, when appropriate.

The existing Butte County Land Use Element was adopted in 1979 and revised in 2000. The plan's other existing elements were last revised between 1971 and 1994. No specific compatibility policies were noted in the plan.

Nevada County

The Nevada County General Plan was approved by the Board of Supervisors in 1996. The general plan does not specifically address Beale AFB compatibility. Development in the study area would be assessed on a case-by-case basis, with standard development policies from the general plan; such as appropriate noise levels, applied to the review.

The portion of Nevada County within the study area is rural with very low densities and a scattered distribution of residential uses.



General Plans | Figure 4-2

Placer County

The last major update to the county's general plan was adopted in 1994. The Placer County General Plan does not include specific compatibility policies or other notations concerning Beale AFB. Development in the study area would be assessed on a case-by-case basis and reviewed according to standard general plan development policies (i.e., appropriate noise levels).

Sutter County

Six of the seven mandatory elements of the Sutter County General Plan were last updated in 1996. Sutter County started a General Plan update in July 2007, with completion projected for late 2009 or early 2010. The Housing Element, however, was updated and adopted in September 2004.

Although the county's general plan does not specifically address land use compatibility as it applies to Beale AFB, it does contain policies focused on ensuring that land development within the county is done in a manner that reduces sprawl and thereby reduces the development footprint. This is accomplished by limiting development on isolated parcels of land surrounded by agriculture and discouraging modification or expansion of Yuba City's or Live Oak's sphere of influence until substantial build out has occurred.

The general plan also addresses cluster development in Policy 6.A-4. The purpose of this particular policy is to reduce agricultural land loss by defining zoning densities for cluster development.

Yuba County

Yuba County has jurisdiction over the largest land area within the Beale JLUS study area, including all of the lands adjacent to Beale AFB. Given the county's long-term relationship in working with the installation on land use and other resource issues, Yuba County also has the most robust set of policies specifically addressing compatibility issues with the base.

The current Yuba County General Plan was partially updated in 1996. During the 1996 update, the county determined that the existing Housing, Noise, and Safety Elements were current; therefore, the update focused on the Land Use, Circulation, Open Space, and Conservation Elements. A subsequent update to the Housing Element was completed in 2004.

The process to update the existing Yuba County General Plan is underway and will not be completed until after the release of the Beale JLUS. The first meeting of the General Plan Update Advisory Committee (GPUAC) was held in September 2007. Given the timing of the community's update process, strategies presented in Section 5 should be considered for inclusion in the update, when appropriate.

The following discussion highlights some of the key compatibility policies by topic area but does not reflect all of the policy actions used by the county to enhance compatibility.

Land Use

The current Yuba County General Plan identifies Beale AFB as an important element of the county's economy and states that the county and the installation will work to protect this asset. To ensure land use compatibility, the plan includes several goals focused on Beale AFB.

The primary components in dealing with land use compatibility are the policies under **Land Use Goal 8** and **Land Use Goal 13**.

Land Use Goal 8: Maintain a close working relationship between Wheatland, Marysville, Beale Air Force Base, and Yuba County, and facilitate development patterns around cities which are compatible with city, county, and base plans and policies.

Land Use Goal 13: Protect and Enhance Beale AFB

These goals are supported by a number of objectives, policies, and implementation strategies designed to address compatibility planning, as follows:

43-LUO. Establishment of Community Boundaries around Wheatland and Marysville and coordination of city, county, and Beale Air Force Base plans within those boundaries.

- **164-LUP**. The cities of Marysville and Wheatland and Beale Air Force Base shall be afforded the opportunity to review and comment on development projects within their adopted Community Boundaries, and their recommendations shall be considered in rendering land use decisions.
- **167-LUP**. All lands within the 65-dB CNEL noise contour of Beale Air Force Base shall be maintained in agricultural, open space or industrial use, or other uses permitted by the Beale Air Force

Key to Yuba County General Plan Acronyms

LUO –
Land use objective

LUP –
Land use policy

LUI –
Land use implementation

Base Comprehensive Land Use Plan (CLUP). Land uses which encroach on Beale Air Force Base or impact on its mission capabilities shall be prohibited. Residential land uses within the 70-dB CNEL contour (or greater) shall be prohibited.

- **168-LUP**. Proposed development project plans shall be evaluated on a case-by-case basis to determine the mitigation measures required to offset potential impacts of the Beale Air Force Base PAVE Phased Array Warning System (PAWS).

59-LUO. Consistency between County planning actions and the Beale AFB Comprehensive Land Use Plan (CLUP).

- **205-LUP**. All development projects within the Beale Air Force Base area of influence shall be reviewed for consistency with the CLUP.

60-LUO. Assurance that County land use planning and decision making do not foreclose future options for the use of Beale Air Force Base.

- **206-LUP**. A buffer/greenbelt area shall be maintained around Beale Air Force Base that is protected from development projects other than agricultural, industrial, business park or open space uses.
- **45-LUI**. Maintain a development project review process which documents compliance with the adopted objectives and policies for protection and enhancement of Beale AFB.
- **46-LUI**. Routinely monitor actions affecting the base in order to be able to respond quickly to changing conditions.

Communication Outreach

In addition to the policy components listed above, another land use policy calls for a close working relationship between Wheatland, Marysville, Beale AFB, and Yuba County, **Land Use Goal 8** states that Yuba County will maintain close working relationships with local jurisdictions and Beale AFB. The general plan also includes policies and implementations to ensure this coordination, as listed below.

42-LUO. Maintain regular and structured communication between Wheatland, Marysville, Beale Air Force Base, and Yuba County.

- **163-LUP.** An orderly framework for communication and coordination shall be maintained through the Intergovernmental Relations Committee between the County and the cities of Marysville and Wheatland and Beale Air Force Base regarding development, public services and improvements.
- **33-LUI.** Maintain the Beale AFB Liaison Committee composed of representatives from the two cities, the County and Beale Air Force Base which meets on a scheduled basis to review development project plans and discuss matters of mutual and continuing interest.

Light and Glare

Yuba County outlines its outdoor lighting standards with the Policy 122-LUP.

- **LUP-122.** Light and glare from new development projects shall be minimized through application of one or more of the following measures:
- Careful siting of illumination on a parcel in relation to adjacent properties;
- Use of non-reflective paint and building materials;
- Screening or shielding light at the source;
- Use of vegetation screening or fencing and trees to shade roads and other pavement expanses;
- Use of directional lighting that focuses narrowly on the desired area of illumination;
- Use of lower intensity or temporary lighting controlled by timing devices; and
- Use of sound- or motion-activated lighting that illuminates only when there is nearby activity.

Yuba County General Plan Housing Element

Action 2.16 specifically identifies housing for military personnel by identifying a strategy for cooperation between the county and Beale AFB *(Yuba County General Plan Housing Element, 2004)*. When meeting with Beale AFB, the county will determine if there are specific actions they may take to assist the base in implementing the Air Force Center for Environment Excellence (AFCEE) Housing Privatization Program and Family Housing Master Plan as it pertains to the base's recently completed housing assessment. If any actions are identified, then the county will work with Beale AFB to take action on funding and development opportunities.

City of Lincoln

The City of Lincoln is currently in the process of updating its general plan, which is scheduled to be complete by early 2008. The city and those involved with the general plan are aware of the JLUS process and have been keeping compatibility issues in mind when planning for growth. Land use conflicts with the city are considered minimal due to its distance from the base, which results in no noise contours being located over the area. Of concern would be specialty land uses that would have unique attributes. Since the city's general plan update is currently underway, strategies presented in Section 5 should be considered for inclusion in the update, as appropriate.

The city is currently experiencing high levels of ground traffic and is in the final steps of environmental review for the State Highway (Highway) 65 Bypass, which will reroute the city's main arterial and ease circulation congestion within the community. Highway 65 is the main route from Beale AFB to the greater Sacramento Metropolitan Area and is being built to support future population growth in the region.

The Lincoln General Plan does include a proposed expansion of the Lincoln Regional Airport's main runway. This proposal would extend the runway 1,000 feet to the north. While this change does not necessarily raise compatibility issues with Beale, if this expansion allows for changes in the types and patterns of air traffic, the airport should consult with the base.

Concerning overall airport compatibility around the Lincoln Regional Airport, which will also reduce density in the southern edge of the JLUS study area, the following policy is proposed.

Policy LU-2.10 Airport Buffer. The City shall prohibit residential land uses within the city from being located within zones A, B-1, and B-2 that are inconsistent with the policies of the Placer County Airport Land Use Compatibility Plan (ALUCP). [Revised Land Use Element Policy 4.12]

Policy LU-5.1 Rural Land Uses. The City shall urge Placer County to maintain low density rural land use designations and large parcel zoning in areas outside the city limits. The City shall also urge Placer County to require new subdivisions of land within one mile of the Lincoln Regional Airport runway to maintain a maximum density of one dwelling unit per 20 acres, and provide aviation easements. This will preserve current operations and planned runway expansion. [Revised Land Use Element Policy 4.24]

City of Live Oak

The current Live Oak General Plan is dated 1994; however, a project is underway to update the plan. The updated Live Oak General Plan will not be adopted until after completion of the Beale JLUS.

The current 1994 general plan does not mention Beale AFB compatibility specifically and proposed projects would be addressed on a case-by-case basis to determine if they would impact the installation.

Given the timing of the community's update process, strategies presented in Section 5 should be considered for inclusion in the update, as appropriate.

City of Marysville

The current city general plan was published in August 1985. Since that time, incremental amendments have occurred, and the current Housing Element was adopted in 2004. Although Beale is located approximately eight miles to the city's east, the general plan does not have specific policies directed at compatibility planning with Beale.

The City of Marysville has a large sphere of influence extending to the south and north. Currently, the city is in the process of evaluating their sphere of influence with the Local Agency Formation Commission (LAFCO). If the city moves closer to Beale, incorporation of appropriate strategies from Section 5 will be critical to ensuring future compatibility.

City of Wheatland

The City of Wheatland recently completed a general plan update, with the final document adopted in 2006. The city is in the process of evaluating a sphere of influence expansion with LAFCO that extends north to the southern edge of Beale AFB.

Several sections of the Wheatland General Plan Policy Document contain text addressing future development as it relates to Beale AFB. The Health and Safety section contains a policy that addresses the need for new development to avoid creating safety hazards for Beale operations resulting from light and glare from direct or reflective sources, smoke, electrical interference, hazardous chemicals, or fuel storage *(Policy 9.E.1, Wheatland General Plan, 2006)*. Additionally, the document calls for development within the Beale AFB approach and departure zones to comply with Part 77 of the FAA Regulations (objects affecting navigable airspace).

GOAL 9.E. To minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from aircraft hazards.

Policy 9.E.1. The City shall work with Beale Air Force Base to ensure that new development does not create safety hazards such as lights from direct or reflective sources, smoke, electrical interference, hazardous chemicals, or fuel storage in violation of adopted safety standards.

Policy 9.E.2. The City shall ensure that development within the Beale Air Force Base approach and departure zones comply with Part 87 of the Federal Aviation Administration Regulations (objects affecting navigable airspace). [*Note: this should refer to Part 77*]

The Transportation and Circulation section and the Health and Safety section also identify policies that protect Beale AFB and Wheatland's economic base by addressing land use compatibility and encroachment concerns. These policies call for the city to work with the Sacramento Area Council of Governments (SACOG) and Beale AFB to ensure that city's noise policies and contours are consistent with the Beale AFB Land Use Plan; to ensure compatibility of land uses that fall within overflight zones; and to coordinate changes to Beale AFB flight patterns with land use decisions.

GOAL 2.G: To support the continued operation of Beale Air Force Base and its associated facilities while ensuring compatibility between urban development in Wheatland and aircraft operations.

Policy 2.G.1. The City shall work closely with appropriate agencies, including Beale Air Force Base and the Sacramento Area Council of Governments (SACOG), to ensure compatibility of land uses that fall within overflight zones.

Policy 2.G.2. The City shall work with Beale Air Force Base to coordinate changes to their flight patterns with land use decisions.

Policy 9.H.4. The City shall work with the Sacramento Area Council of Governments (SACOG) to ensure that city's noise policies and contours are consistent with the Beale Air Force Base Land Use Plan.

The Wheatland General Plan classifies over 6,000 acres of undeveloped land, primarily east of the city, as Urban Reserve. To ensure development on these lands is compatible with Beale AFB operations, a policy is established that calls for the city to consider the noise contour implications of Beale AFB when determining the appropriateness of development of Urban Reserve lands *(1.H.2.J, Wheatland General Plan, 2006)*.

Policy 1.H.2. The City shall, when deemed necessary, consider the appropriateness of development of Urban Reserve lands based upon the following factors:

j. Noise contour implications of Beale Air Force Base.

Wheatland communication outreach strategy, when discussing development notification to Beale AFB and the general public, varies depending on the requirements of the proposal. There are three major projects that have recently been approved for annexation into the city of Wheatland. These include Heritage Oaks Estates to the east, Jones Ranch to the south, and the centrally-located "island" between the new junior high school and Wheatland High School.

Overall, the Wheatland General Plan documents describe Beale AFB as a valuable asset to Wheatland's future and focus on avoiding encroachment on the base. As the city expands to the east, general plan policy will help guide decision makers in the designation of appropriate

land uses. The inclusion of strategies from Section 5 will strengthen the city's ability to limit compatibility conflicts.

City of Yuba City

The Yuba City General Plan was last updated in 2004 (an update from the previous 1989 plan). The Yuba City General Plan seeks to preserve the city's small town feel, the availability and affordability of housing, and the surrounding rural landscape.

The current 2004 general plan does not mention Beale AFB compatibility specifically, and would be addressed on a case by case basis.

Zoning

The zoning ordinance (also referred to as a development code) is the primary mechanism whereby local governments influence the direction, type, use, density, and location of development. The primary purpose of zoning is to:

- Protect public health, safety, and welfare
- Protect against physical danger, particularly safety considerations for properties in proximity to military ranges or within military flight areas
- Protect against common law nuisances – noise, vibration, air pollution, etc. – associated with military operations
- Protect against aesthetic nuisances impacting military installations
- Protect against "psychological nuisances" such as perceived and actual dangers associated with military operations
- Regulation of uses impacting light, glare, air quality, and privacy issues
- Provision of open space and agricultural preservation

Zoning ordinances enumerate uses permitted by right or are subject to the approval of a land use review process within each district. Local zoning ordinances and development codes are the primary means to designate defined geographic areas or zones that separate incompatible uses. Most ordinances also possess a means to grant discretionary permits, provided certain conditions are met. These discretionary permits are often referred to as Conditional Use Permits (CUP) or Special Use Permits (SUP).

In addition to land uses, the zoning ordinances sets the development standards for permitted land uses, densities or development, location of

structures, building heights, setbacks, acreage requirements, and other standards.

Yuba County's zoning code, §12.115, covers height and uses of property. Yuba County's Avigation standards are also detailed in zoning code §12.115. Yuba County's Code §12.80 discusses cluster development.

Extractive mining northwest of Beale, which may result in bird attraction during mining activity or following reclamation, is covered in Yuba County zoning code under §12.20.040. This section allows surface mining to be classified as a type of agriculture production as long as the mining is restored back to an agricultural or natural resource.

Sutter County's zoning code has lighting standards for commercial development. These can be found under §1500-8116. Furthermore zoning §1500-8210 contains standards for light and glare and §1500-8118H has a Red-Yellow-Green map showing height standards described through the zoning code.

Other Local Plans

The following subsection provides an overview of the major community and specific plans approved within the study area (presented in alphabetic order). These plan areas are illustrated on Figure 4-3.

East Linda Specific Plan

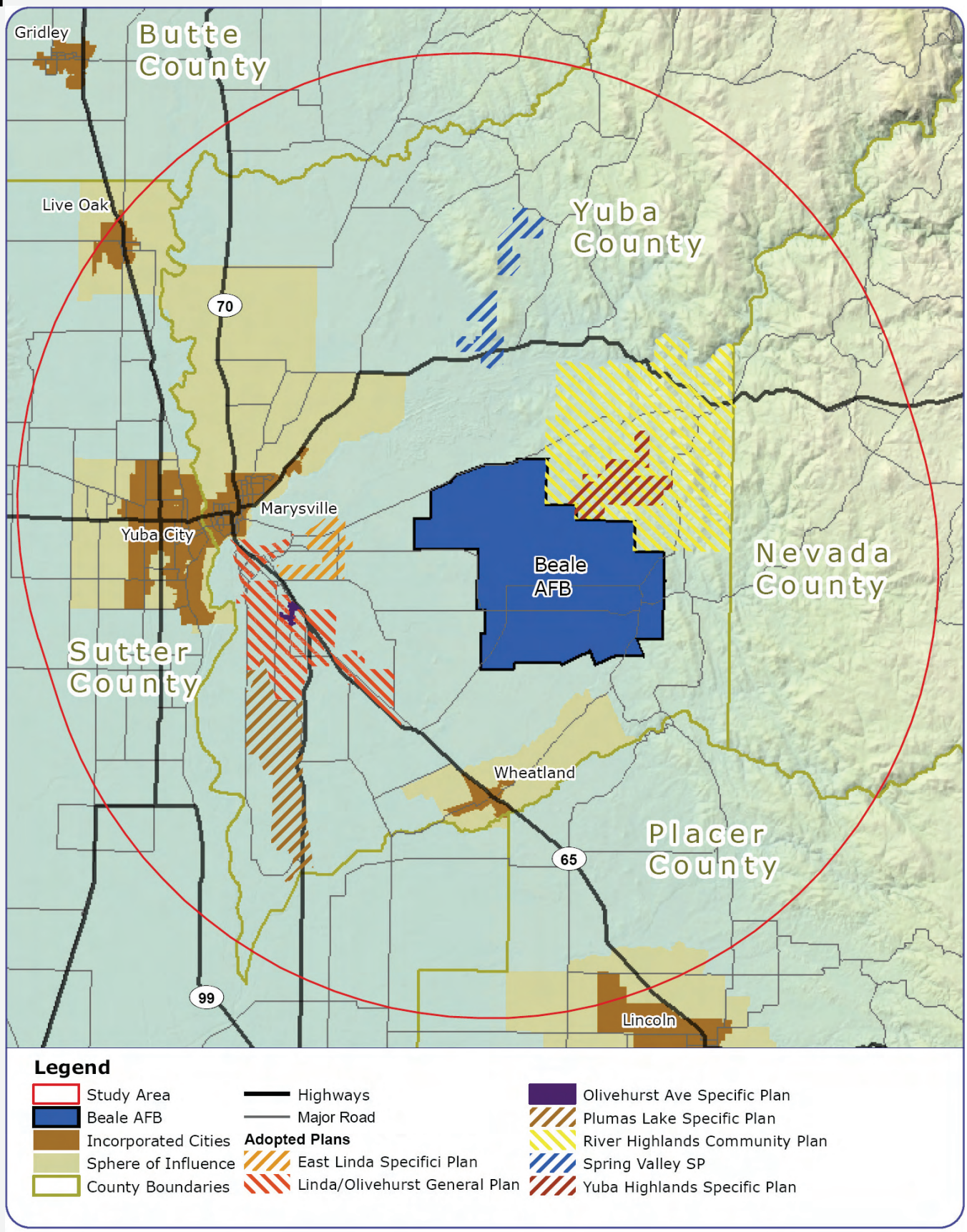
The East Linda Specific Plan was adopted on May 14, 1990, and encompasses approximately 1,760 acres east of the unincorporated community of Linda. The site is situated about three miles southeast of the City of Marysville and about four miles west of Beale. The planning area extends north and south of North Beale Road.

The plan provides for the development of a residential community consisting of single family and multi-family residences, neighborhood-serving commercial uses, schools, and parks. The plan intends to develop over 6,000 dwelling units supporting approximately 15,500 people.

Plumas Lake Specific Plan

The Plumas Lake Specific Plan was adopted on September 21, 1993. The planning area is comprised of approximately 5,000 acres of land about one mile south of Olivehurst and extending along Highway 70 south to the Yuba and Sutter county border.

Although no specific mention of Beale AFB is made, the plan draws heavily upon the elements and policies established in the 1981 Yuba County General Plan.



Adopted Plans | **Figure 4-3**

River Highlands Community Plan

The River Highlands Community Plan was approved by the Yuba County Board of Supervisors in December 1993. The planning area is located approximately 20 miles east of Marysville and includes over 21,800 acres of land, as well as the historic communities of Timbuctoo and Smartville. It is bordered on the west and south by Beale AFB.

The plan addresses the noise impacts of Beale AFB through several policies and seeks to maintain overall compatibility with the installation. Land uses are to be as permitted by the Beale AFB Comprehensive Land Use Plan. Specifically, development in areas within the 65-dB CNEL contour of Beale is restricted to minimum 40-acre residential lots, rural commercial/office, industrial, and recreational uses. Additional compatibility text calls for the evaluation of proposed development projects to determine mitigation measures to offset potential impacts of Beale's PAVE PAWS.

River Highlands Community Plan also explicitly mentions planning land uses with regard to noise contours in Policy NP-1 *(NP-1, River Highlands Community Plan, 2006)*. This policy calls for restricting development in zoning designation RPZ-40 due to noise impacts from Beale. Any development which will be adversely impacted by noise from Beale AFB air operations, which cannot be mitigated to the satisfaction of both Yuba County and Beale AFB, is prohibited by this plan.

The specific goal and associated policies contained in this plan that relate to compatibility issues at Beale include the following.

Goal LUG-9: Maintain the integrity of Beale AFB.

Policy LUP-9a: All lands which fall within the 65 CNEL noise contour of Beale AFB shall be designated as Resource Preserve Zone-40 (RPZ-40) and shall permit minimum forty acre residential lots, commercial/office, industrial or recreational or other uses permitted by the Beale AFB Comprehensive Land Use Plan (CLUP). Land uses which encroach on Beale AFB's noise zone or impact on its mission capabilities shall be prohibited. The precise location of the 65 CNEL noise contour shall be determined on a project-by-project basis by Yuba County and Beale Air Force Base officials. Land owners/developers shall provide detailed noise data, prepared by a County approved consultant, for use in determining such contours. The County and Beale officials shall also jointly evaluate the impacts of the Phased Array Warning System (PAWS) on development proposed within areas likely to be impacted by PAWS.

LUP-9b: Evaluate proposed development projects on a case-by-case basis to determine the mitigation measures required to offset potential impacts of the Beale AFB Phased Array Warning System (PAWS).

The Yuba Highlands Area Plan (covered later in this section) is within the River Highland Community Plan.

Spring Valley Specific Plan

The Spring Valley Specific Plan was approved by the Yuba County Board of Supervisors on February 11, 1992. The planning area is located on approximately 2,500 acres of land north of the Yuba River and Beale AFB. This site is approximately eight miles northeast of Marysville.

As with the Plumas Lake Specific Plan, the Spring Valley Specific Plan draws heavily from the 1981 Yuba County General Plan regarding compatibility planning. Noise considerations for the Spring Valley Specific Plan include noise generated by aircraft overflight operations from Beale AFB; however, since its 1992 approval, Beale AFB aircraft operations and noise contours have changed. The plan states that "[a]ll standards of the Noise Element for compatibility of uses, and structural attenuation are applicable to the Spring Valley Specific Plan."

Yuba Highlands Area Plan

The Yuba Highlands Area Plan is a comprehensive plan for nearly 3,000 acres within the central area of the River Highlands Community Plan. This planning area is bounded in the southwest by Beale AFB and has a residential build out at a maximum of 5,082 dwelling units. The plan was approved by the Board of Supervisors in mid-2007, but was placed on the ballot as Measure N. In the February 2008 vote, Measure N did not pass.

The Yuba Highlands Area Plan maintains the policies contained in the River Highlands Community Plan as they relate to the relationship and compatibility with Beale AFB. This plan has more specific language prohibiting any development that will be adversely impacted by noise from Beale AFB air operations, which cannot be mitigated to the satisfaction of both Yuba County and Beale AFB.

An infrastructure alternative discussed in the plan is the possibility of entering into public/private partnership with Beale AFB for the use of their existing wastewater treatment facilities.

4.3 Other Agency Plans

Airport Land Use Compatibility Plan

An Airport Land Use Compatibility Plan (ALUCP) is "a plan, usually adopted by a County Airport Land Use Commission (ALUC) or other entity established to accomplish land use compatibility planning, which sets forth policies for promoting compatibility between airports and the land uses which surround them." *(California Airport Land Use Planning Handbook, January 2002)*

State statutes require that, once an ALUC has adopted or amended an ALUCP, the entity with land use jurisdiction (in this case, Yuba and Sutter counties) and any affected cities (Marysville, Wheatland, Yuba City) must: (1) update their general plans and any applicable specific plans to be consistent with the ALUC's plan within 180 days *(CA Government Code, §65302.3)*; or (2) take the required steps to overrule all or part of the ALUC's plan. In addition, ALUCPs should be consistent with the safety and noise standards established in the AICUZ study prepared for Beale AFB.

The purpose of the ALUCP is to:

- Establish procedures and criteria used to address compatibility issues when making planning decision regarding airports and surrounding land uses; and
- Safeguard the general welfare of the people living near airports and the public in general.

Sutter County

The Sutter County Airport Comprehensive Land Use Plan (CLUP) was published by the SACOG ALUC in April of 1994. The ALUC developed the plan by incorporating land use compatibility guidelines contained in the CLUP into the general plan and the land use regulations of cities and counties with jurisdiction over any geographic area subject to the CLUP. Furthermore, the ALUC reviewed and determined the compatibility of individual development proposals, general plan amendments, and other land use plans and regulations around the airport. The CLUP makes no mention of Beale AFB.

Sutter County Airport is located east of Garden Highway and west of the Feather River. The airport is operated by Sutter County Public Works Departments and lies just outside of Yuba City. It was established in 1947. The airport is classified as a basic Utility Stage II airport with annual operations of 58,500 flights. A major portion of operations are the result of agricultural aircraft involved in crop dusting activities.

The Sutter County Community Services Department is responsible for reviewing all new development projects located within overflight zones affecting Sutter County to ensure consistency with the CLUP. Additionally, the general plan contains language to protect public and private airports from conflicting land use patterns to the extent practicable.

Yuba County

The Yuba County Airport is located on a 933-acre site east of the Feather River, three miles south of Marysville, near Linda and Olivehurst. It is owned and operated by Yuba County. There are 58,000 flight operations annually. There was a tower facility at the airport, but it was closed by the FAA in 1982 when air carrier service to the airport was terminated. Future plans call for the possible reopening of the tower should air carrier service continue.

In addition to its aviation role, the airport has also played a significant role in the economic development of the airport area. The airport markets surplus airport properties and uses the receipts to match state and federal grant for airport improvements. The development of surplus properties also encouraged a number of companies to locate in the industrial parks adjacent to the airport. The airport intends to continue to market surplus properties in order to finance airport improvements and stimulate area economic development.

The Yuba County Airport CLUP was published by the SACOG ALUC in May of 1994. The ALUC wrote the plan by incorporating land use compatibility guidelines contained in the CLUP into the general plan and the land use regulations of cities and counties with jurisdiction over any geographic area subject to the CLUP. Furthermore, the ALUC reviewed and determined the compatibility of individual development proposals, general plan amendments, and other land use plans and regulations around the airport. The CLUP makes no mention of Beale AFB.

The City of Wheatland

Wheatland does not have a specific ALUCP, but its general plan addresses the city's proximity to Beale AFB through specific goals and policies. These goals and policies address land use compatibility planning. Goal 2.G in the 2006 Wheatland General Plan update states; "[t]o support the continued operation of Beale AFB and its associated facilities while ensuring compatibility between urban development in Wheatland and aircraft operations." In addition to this goal, there are several associated policies that discuss coordination between Beale AFB,

SACOG, and Wheatland in regard to flight patterns. *(Wheatland General Plan, 2006, Policies: 2.G.1 and 2.G.2)*.

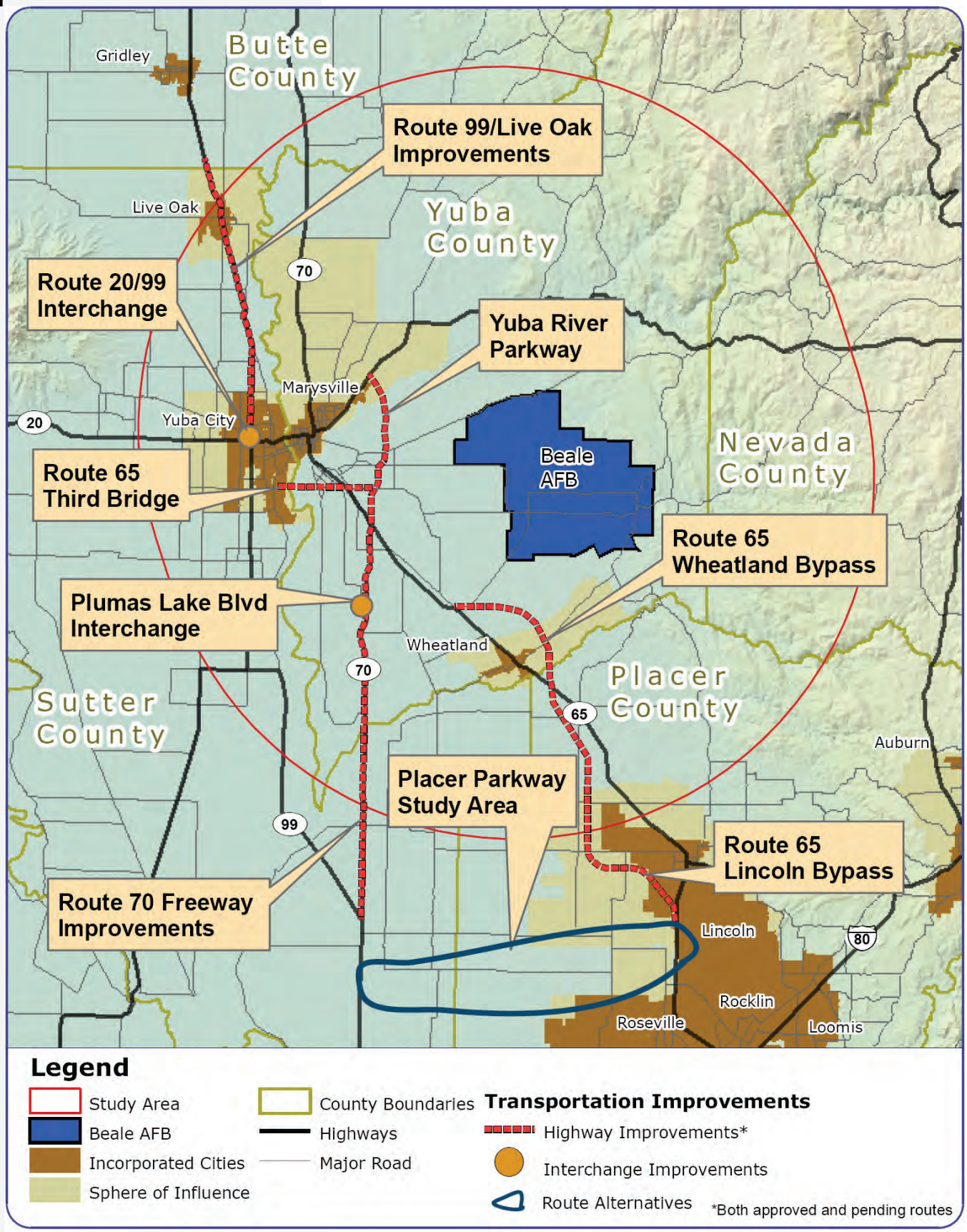
Furthermore, to reduce the risks associated with aircraft crashes, Wheatland has included additional measures in its general plan to deal with related to safety issues through aircraft crash hazards. These include Goal 9.E where the city vows to, "[t]o minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from aircraft hazards." Associated policies include 9.E.2, which states that the city will coordinate development with Part 87 of the FAA regulations (objects affecting navigable airspace).

Regional Transportation Plans

Major transportation corridors in proximity to Beale AFB include State Highways 65, 70, and 99. These roadways are generally located to the west of the installation and comprise Yuba County's primary north-south transportation corridors. State Highway 20 acts as the primary east-west transportation corridor through Sutter and Yuba counties (see Figure 4-4).

With its location in south Yuba County, Beale AFB falls within the SACOG planning area. As detailed in the SACOG Metropolitan Transportation Plan (MTP) 2027, the region recognizes that to control of sprawl, transportation planning must be more closely linked both to land use plans and the progress of land development. The MTP is a long-range plan for transportation improvements in the SACOG six-county region based on projections for growth in population, housing, and jobs. The MTP is viewed as critical to the quality of life and economic health of the region.

The SACOG MTP 2027 proposes a number of transportation improvements throughout the SACOG planning area; however, only a handful of these projects are in the Beale AFB study area. Only one of the projects in Beale's vicinity poses a potential impact to military operations - the Wheatland Highway 65 Bypass. This project will construct a new four-lane expressway from the future north end of the proposed Lincoln Highway 65 Bypass to a point north of Wheatland near South Beale Road (see Figure 4-4).



Regional Transportation Improvement Projects | **Figure 4-4**

Unlike the Highway 65 Bypass in the Lincoln area, which extends southwest and away from the installation, the Wheatland Bypass extends on the east side of the community toward the installation's flight path. Although this SACOG transportation improvement project does not encroach upon the installation's physical boundaries, this bypass will potentially fall under existing and future military aircraft arrival and departure flight tracks. Close coordination between SACOG, the City of Wheatland, and Beale AFB is needed to ensure any potential conflicts are identified and resolved prior to construction of this portion of the Highway 65 Bypass.

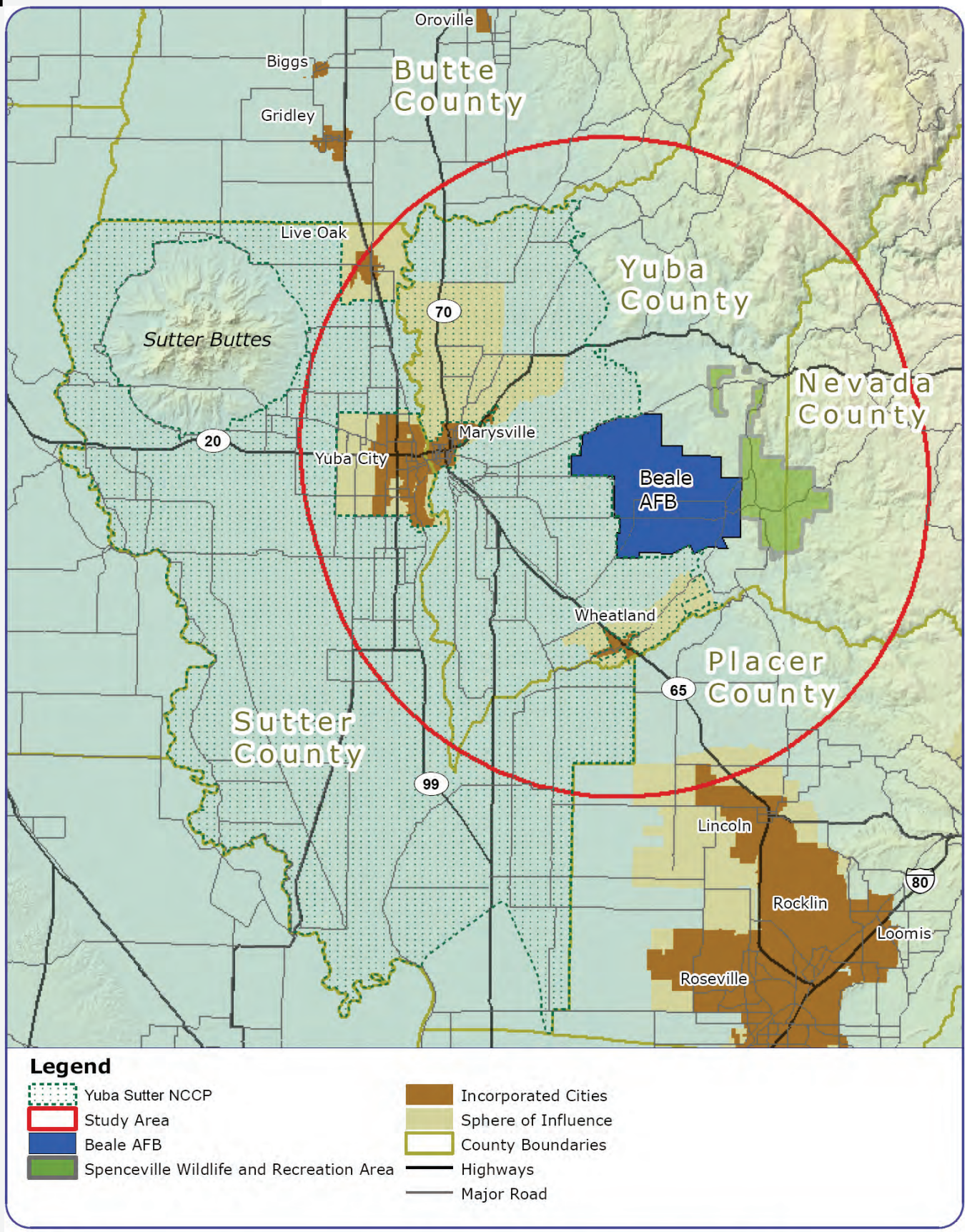
Habitat Plans

The Yuba-Sutter Natural Community Conservation Plan (NCCP) and Habitat Conservation Plan (HCP) identify and provide for the regional or area wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The NCCP/HCP planning area includes Live Oak, Yuba City, Marysville, and Wheatland. It extends to portions of Beale's north and south boundaries, as well as the entire west boundary. Currently, the boundary for the NCCP/HCP is under consideration for expansion. Figure 4-5 provides a look at the current and proposed boundaries.

The Placer Legacy Open Space and Agricultural Conservation Program is a program of Placer County to protect and conserve open space and agricultural lands in the county. Dated June 20, 2000, the program does not specifically mention Beale AFB. The program has been developed to implement the goals, policies, and programs of the 1994 Placer County General Plan. The documents that guide program implementation include the Placer Legacy Summary and a background report printed separately.

The Middle Mountain Foundation has preserved land in Sutter and Yuba counties, as well as other jurisdictions throughout the Sacramento Valley. It most recently purchased approximately 31 acres of farmland as a land protection agreement in the City of Marysville.

Yuba County has a conservation easement policy defined in Land Use Policy 44, "[t]he voluntary donation of conservation easements or other development restrictions to the County or a qualified nonprofit corporation to reserve the use of land for grazing or timber production in areas designated for agricultural or timber use shall be solicited and encouraged, when proposed development projects would conflict with timber and grazing operations."



0 3 6 Miles

Yuba Sutter Natural Community Conservation Plan (NCCP) | **Figure 4-5**

This is pertinent to Beale as a large amount of the adjacent and surrounding land is zoned for agriculture. Additionally, Land Use Policy 116 mandates buffering for residential land uses around airports, landfills, and sewage treatment plants.

Adjacent to the east side of Beale is the Spenceville Wildlife Area. This resource management area covers 11,448 acres of foothill oak and grassland. Managed by the California Department of Fish and Game, this area provides fishing, camping, hunting, and wildlife viewing opportunities, as well as the protection of the natural habitat and species.

4.4 California Compatibility Handbook

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 ...".

Learn more...

The handbook can be downloaded at:

http://www.opr.ca.gov/index.php?a=military/info.html

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 would 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 describes in detail the different compatibility issues that should be explored and the range of compatibility tools types available to address these issues.

4.5 Legislation and Other Regulations

The following is an overview of existing legislation and policy that impacts compatibility planning.

State Legislation

Assembly Bill 1108

California Assembly Bill (AB) 1108 (Chapter 638, Statutes of 2002) amends CEQA law to require CEQA lead agencies to notify military installations when a project meets certain criteria. The purpose of

AB 1108 is to ensure military notification of proposed projects potentially impacting military operations though the CEQA process.

AB 1108 amends CEQA to provide military agencies with early notice of proposed projects within two miles of installations or underlying training routes and SUA. To obtain this information, Beale AFB must provide local planning agencies within the COA with the installation's contact person, the relevant information, and boundaries of the installation's COAs. The local lead agency is required to give notice to Beale of any project within its boundaries if: (1) the project includes a general plan amendment; (2) the project is of statewide, regional, or area wide significance; or (3) the project is required to be referred to the ALUC or appropriately designated body. This notification will provide Beale AFB with an opportunity to provide early input so potential conflicts can be evaluated and addressed proactively.

Assembly Bill 2641

The Native American Human Remains and Multiple Human Remains legislation (Chapter 863, Statutes of 2006) amends the Public Resources Code relating to burial grounds. The law authorizes a commission to act to prevent damage to Native American burial grounds or places of worship. The bill calls for meaningful discussion between descendents of those whose remains are found and landowners so the Native American human remains are identified and considered during development activities. The commission must contact the most likely descendents in the event of being notified by a county coroner of a Native American human remains discovery. Upon such discovery, the landowner must ensure that the surrounding area not be disturbed or damaged in the vicinity of the discovery location until discussion has taken place with the descendents regarding their recommendations. To protect sites where remains have been identified, the landowner must: record the site with the commission; use an open space or conservation zoning designation or easement; or, record a document with the county in which the property is located.

Assembly Bill 2776

The Aviation Noise Disclosure legislation (AB 2776) was passed in the 2002–2003 regular legislative session and was signed by the Governor. It amends the real estate transfer disclosure statute (California Civil Code, Division 2 – Property, Part 4 – Acquisition of Property, Title 4, Chapter 2 – Transfer of Real Property) to require sellers or leasers to disclose the fact that a house for sale or lease is near an airport if the house falls within an airport influence area (that could be several miles from an existing or proposed airport). An airport influence area is defined as the area in

which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses. The intent of the legislation is to notify buyers that they could experience airport noise, vibration, odor, annoyances, or other inconveniences at some time in the future as a result of the normal operation of an existing or proposed airport.

Senate Bill 18

California Senate Bill (SB) 18 (Chapter 904, Statutes 2004) established the Native American Heritage Commission to bring on actions to prevent severe and irreparable damage to a Native American sanctified cemetery, place of worship, religious or ceremonial site, or a sacred shrine located on public property. It included entities able to acquire and hold conservation easements as federally recognized California Native American tribes or a non-federally recognized California Native American tribe that is on the contact list maintained by the Native American Heritage Commission.

SB 18 required that on and after March 1, 2005, all planning agencies must refer to and provide involvement opportunities for California Native American tribes on proposed actions affecting tribes. Prior to the adoption or amendment of a city or county general plan, the jurisdiction must consult with California Native American tribes to preserve specified places, features, and objects located within the jurisdiction.

Senate Bill 1099

California Senate Bill (SB) 1099 (Chapter 425, Statutes of 1999) established the California Defense Retention and Conversion Council in the Trade and Commerce Agency is to be active until January 1, 2007. The membership of this organization could include major executive branch agencies and public appointees. Representatives from California colleges and universities and California-based branches of the United States Armed Forces could participate as nonvoting members.

The Bill provides a provision to grant funds to communities to develop military base retention strategies. It also mandates the preparation of a study considering strategies for long-term protection of lands next to military bases. This requirement was met in 2001 by a draft report entitled *Forecasting and Mitigating Future Urban Encroachment Adjacent to California Military Installations: A Spatial Approach* written by the University of California, Berkeley, Institute of Urban and Regional Development. According to the report, “more than half of California's military installations are located within, at the edge of, or within a stone's throw of major metropolitan areas.”

Senate Bill 1462

SB 1462 (Chapter 907, Statutes of 2004) expanded the requirements for local government to notify military installations of proposed development and planning activities. This Bill states that "prior to action by a legislative body to adopt or substantially amend a general plan, the planning agency shall refer the proposed action to . . . the branches of the Armed Forces when the proposed project is located within 1,000 feet of a military installation, beneath a low-level flight path, or within Special Use Airspace (SUA) . . .".

The purpose of SB 1462 is to require public agencies to provide a complete copy of a development application of the proposed development that is located within 1,000 feet of a military installation, SUA, or a low-level flight path. Furthermore, it authorizes any branch of the United States Armed Forces "to request consultation" to avoid potential conflict and to discuss "alternatives, mitigation measures, and the effects of the proposed project on military installations." Also, SB 1462 requires military review of proposed actions potentially impacting mission operations of the installation, decreases potential for incompatible land use development and provides military installations the opportunity to comment on proposed development and express concerns with potential impacts to the installation.

Senate Bill 1468

SB 1468 (Chapter 971, Statutes of 2002) requires OPR to include guidance on how military compatibility can be addressed in a general plan, and how a general plan can consider the impact of growth on military readiness activities carried out on military bases, installations, and operating and training areas. The bill includes the following methods to address military compatibility in a general plan:

- In the land use element, consider the impact of new growth on military readiness activities carried out on military bases, installations, and operating and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land or other territory adjacent to those military facilities, or underlying designated military aviation routes and airspace.
- In the open-space element, open-space land is defined to include areas adjacent to military installations, military training routes, and restricted airspace.
- In the circulation element, include the general location and extent of existing and proposed military airports and ports.

SB 1468 is part of a state policy package to promote the development of a partnership between communities and the military that allows for collaboration on land use compatibility issues. OPR encourages local jurisdictions near military installations, and under military training routes or restricted airspace, to incorporate the above items into their general plans.

However, local governments are not currently required by law to include the SB 1468 military compatibility issues in their general plans. The bill specifies that if a funding agreement is reached between OPR and the military to support these efforts, the inclusion of military compatibility issues in a general plan will become mandatory.

Environmental Compliance

California Environmental Quality Act / National Environmental Quality Act

The California Environmental Quality Act (CEQA) was enacted in 1970 to protect the environment by requiring public agencies to analyze and disclose the potential environmental impacts of proposed land use decisions. CEQA is modeled after the federal National Environmental Policy Act (NEPA).

The purpose of CEQA is to inform agency decision makers and the public about the potential environmental effects of proposed activities. Using this information, decision makers can identify ways that environmental impacts can be avoided or significantly reduced by requiring the mitigation of significant environmental effects, when feasible.

The NEPA of 1969 requires Federal agencies to file an environmental assessment (EA) and sometimes an environmental impact statement (EIS) for major Federal actions that have an environmental impact. NEPA is applicable to all Federal agencies, including the military.

NEPA mandates that the military analyze the impact of its actions and operations on the environment, including that of the surrounding communities. Inherent in this analysis is an exploration of methods to lessen any adverse environmental impact. The EIS is a public process that allows participation by the community.

For local planning officials, an EIS or EA is a valuable planning document in determining the extent of impacts of changing military actions or operations on their policies, plans, and programs, if any, and on the surrounding community. Public hearings are required for all EIS and EA documents released by the military under NEPA. A Finding of No

Significant Impact (FONSI) under an EA or a full EIS that considers alternatives to the proposed military actions or operations also is required and is subject to public scrutiny. The information obtain by the EIS/EA is valuable in planning coordination and policy formulation at the local government level.

The Yuba County Environmental Code 11.10 does not contain specific policies with regard to Beale, but a more informal process of using CEQA has been maintained by the county. If the property is adjacent to Beale or inside the 65 dB noise contours (this process was set up based on the Beale AFB 1982 AICUZ study), or if the height of a building is greater than 200 feet, then the county is required to consult with Beale AFB.

Federal Initiatives

The following is an overview of existing legislation and policy that impacts military activities and surrounding communities.

Air Installations Compatible Use Zones Program

The Air Installations Compatibility Use Zones (AICUZ) program is a DOD planning program that was developed in response to incompatible urban development and land use conflicts around military airfields. (Note: the Air Force use the singular form, Air Installation Compatible Use Zone) The AICUZ program seeks to provide information on compatibility, develop a cooperative relationship between communities and military installations, and provide land use compatibility guidelines that protect public health and safety and maintain military readiness. The purpose of an AICUZ is to:

- Protect investment by safeguarding installation operational capabilities
- Protect the health, safety, and welfare of civilians and military personnel by encouraging land use which is compatible with aircraft operations
- Inform the public about the AICUZ program and seek cooperative efforts to minimize noise and aircraft accident potential impact by promoting compatible development in the vicinity of military air installations

DOD Conservation Partnering Initiative

In 2003, Congress amended Title 10 U.S.C. §§2684a and 2692a (P.L. 107-314) to add authority to DOD to partner with other federal agencies, states, local governments, and conservation-based Non-Governmental Organizations (NGO) to set aside lands near military bases for conservation purposes and to prevent incompatible development from

encroaching on, and interfering with, military missions. This law provides an additional tool to support smart planning, conservation, and environmental stewardship on and off military installations.

Federal Aviation Act

The Act requires the Secretary of Transportation to make long-range plans to formulate policy for the orderly development and use of "navigable air space" to serve the needs of civilian aeronautics and national defense except for the specific needs of military agencies. Military planning strives to work alongside local, state, and federal aviation law and policies but sometimes must supersede other levels of government due to national security interests.

The '500-foot rule' is discussed in the Federal Aviation Act. It states that flights 500 feet or more above ground level (AGL) do not represent a compensable taking because flights 500 feet AGL enjoy a right of free passage without liability to the owners below. This is important to military installations and their surrounding communities when considering land acquisition and development rights.

Joint Land Use Study

A Joint Land Use Study (JLUS) is a collaborative planning effort between active military installations, surrounding counties and cities, and other affected agencies. The JLUS is an inter-jurisdictional partnership that is funded by the DOD Office of Economic Adjustment (OEA). The JLUS process encourages residents, local decision-makers, and installation representatives to study issues of compatibility in an open forum with the goal of balancing both military and community interests. The resulting recommendations are intended to reduce potential conflicts while accommodating growth, sustaining the economic health of the region, and protecting public health and safety.

4.6 Other Resources

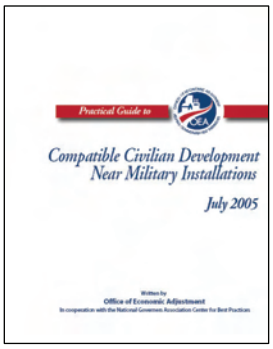
In hopes of preventing land use compatibility issues between the military and the local community, the DOD Office of Economic Adjustment (OEA) and other public interest groups, such as the National Association of Counties (NACO), have taken steps to inform the public on encroachment issues and methods that can be used to address or completely avoid compatibility issues. Below are four resources that have been published to inform the public on those issues.

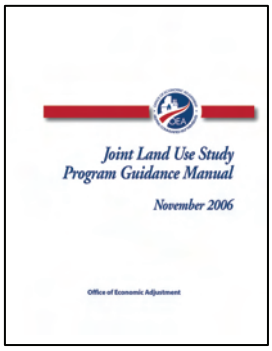
Documents

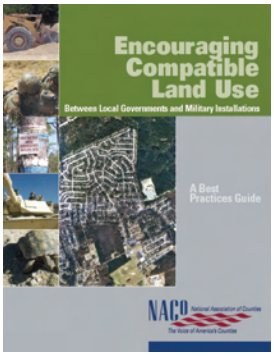
The Practical Guide to Compatible Civilian Development near Military Installations (July 2007), OEA. This guide offers general information on community development and civilian encroachment issues. The guide can be found at: http://www.oea.gov/.

Joint Land Use Study Program Guidance Manual (November 2006). This manual provides guidance on the JLUS program, process, and efforts to support compatible development. This manual can be obtained on the OEA internet site at the following address: http://www.oea.gov/.

Encouraging Compatible Land Use between Local Governments and Military Installations: A Best Practices Guide (April 2007), National Association of Counties. This guidebook presents case studies of best practices between the military and communities through communication, regulatory approaches, and Joint Land Use Studies. The guide can be accessed on the NACO internet site at the following address: http://www.naco.org/.







Videos

The Base Next Door: Community Planning and the Joint Land Use Study Program, OEA. This informative video discusses the issue of encroachment on military installations as urban development occurs in the vicinity of installations.

Managing Growth, Communities Respond, OEA. This video highlights the lessons learned from three communities successful in managing growth near military installations.

Section 5

Recommendations

5

RECOMMENDATIONS

In this section…

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5.1	Developing Recommendations	5-1
5.2	Military Influence Areas – Strategies	5-8
5.3	JLUS Areas of Concern – Strategies	5-39
5.4	Strategy Summaries	5-42

This section lays out a specific course of action that has been developed cooperatively with representatives from local jurisdictions, Beale AFB, state and federal agencies, local organizations, Native American tribal governments, and other interested entities. 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 the stakeholders involved.

5.1 Developing Recommendations

There are several measures of a successful planning process. As described below, the JLUS process has met these requirements.

Q *Did the process provide for substantial involvement of those responsible for implementation?*

A *The Beale JLUS Advisory Committee (AC) and Technical Committee (TC) met throughout the development of the JLUS and provided input on each step of the study's development. The committees assisted in the identification of compatibility issues (both current and future) and the development and refinement of the strategies presented in this section. The committee members' insight also helped to develop a set of strategies that not only resolved the compatibility issues identified, but could be implemented by the stakeholders involved.*

The recommendations presented below represent a consensus that was supported by all members of the AC and TC.

Q *Does the plan cover the geographic area necessary to ensure appropriate compatibility planning?*

A *At the beginning of the JLUS process, the project team invited agencies and organizations from the surrounding region to be a part of the planning process and to assist in identifying any area that may be important to the development and implementation of the plan. During the process, the committees refined the study area from what was originally identified to a smaller area that reflected the issues identified.*

Q *Are the proposed strategies realistic?*

A *The design of the committees helped ensure that the plan would be realistic in approach. The AC represented decision makers from each of the agencies and organizations involved. They helped develop approaches that could be implemented. The TC represented the staff functions of these agencies and organizations. They helped refine the strategies and provided input on the processes, staffing, and funding necessary for implementation.*

Q *Do the strategies strike a balance between sustaining military operations and providing opportunities for local economic development?*

A *Bringing together all of the stakeholders and opening lines of communication on a wide range of compatibility issues started a higher level of communication on issues than had been achieved in the past. The consensus of both the AC and TC to support the JLUS is a testament to striking the right balance.*

Q *Does the plan include a mechanism to oversee the implementation of the JLUS recommendations?*

A *Strategy 29 establishes a JLUS Coordinating Committee. Made up of representatives from Beale AFB and the local jurisdictions in the study area, they will monitor, assess, and refine the requirements in this JLUS to address the changing conditions and ensure the JLUS provides a long-term vision for meeting encroachment challenges.*

A summary of recommended JLUS strategies by agency / organization is presented in Table 5-25. A summary by implementation timeline is located in Table 5-26.

There are a total of 59 recommended strategies in the Beale JLUS. These strategies cover the broad range of compatibility issues discussed in Section 3. To help organize the presentation of the JLUS recommendations, the strategies are grouped under the compatibility tool heading that best represents each strategy. There are a total of 21 compatibility tool headings used:

- Military Influence Area(Table 5-2)
- Acquisitions (Table 5-3)
- AICUZ (Table 5-4)
- Airport Land Use Compatibility (Table 5-5)
- Avigation Easements (Table 5-6)
- BASH (Table 5-7)
- Beale Planning and Operations (Table 5-8)
- Building Codes (Table 5-9)
- Capital Improvements Programs (Table 5-10)
- CEQA / NEPA (Table 5-11)
- Code Enforcement / Building Inspection (Table 5-12)
- Communications / Coordination (Table 5-13)
- Deed Restrictions / Covenants (Table 5-14)
- General Plans (Counties / Cities) (Table 5-15)
- Habitat Conservation Tools (Table 5-16)
- Hazard Mitigation Plans (Table 5-17)
- Memorandum of Understanding (Table 5-18)
- Real Estate Disclosure (Table 5-19)
- Zoning / Subdivision / Other Local Regulations (Table 5-20)
- Other Strategies (Table 5-21)
- Areas of Concern (Table 5-22)

How to Read the Strategies

The strategies are divided in two major parts. The first set of strategies (Section 5.2) presents strategies that apply to the Military Influence Areas (MIA) that are defined under Strategy 1. These strategies cover the broad range of compatibility issues discussed in Section 3. Two facilities on the installation were determined to be unique and are covered under a separate set of strategies presented in Section 5.3. The two facilities in question are the PAVE PAWS radar site (frequency interference) and noise associated with the firing range located near the northern edge of the installation. For these two facilities, Areas of Concern (AOC) were identified and specific strategies to address issues associated with these AOCs were developed.

Figure 5-1a provides a guide to reading the strategies in both sections. For Section 5.3, the middle columns reflect the two AOCs identified instead of the four MIAs used in Section 5.2.

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
1	**Define and Establish MIA Zones** Create a Military Influence Area (MIA) containing four zones (MIA I, IIa, IIb, and III as shown on Figure 5-2) that reflect the types and intensity of compatibility issues. The MIA zones established should be used by local jurisdictions to identify areas where specific compatibility issues are more likely to occur. Implementation of the MIA and associated strategies for these zones will: ▪ Create a broader framework for making sound planning decisions around military airfields ▪ More accurately identify areas that can affect or be affected by military missions ▪ Protect the public health, safety, and welfare ▪ Protect the military missions	■	■	■	■	*Primary Responsibility* ▪ Local Jurisdictions ▪ Beale AFB *Partners* ▪ Agencies (State and Federal) ▪ SACOG	■		■

Strategy Number. Used for reference.

Strategy. This column contains a description of the strategy, including actions to be taken.

Geographic Area. For each strategy, these boxes describe where the strategy applies. For example, if only MIA I is marked, then that strategy only applies to areas within MIA I.

Who Will Complete. This column lists the organizations with primary responsibility for the strategy, and the partners that can assist them with implementation.

When. These columns show when the strategy is proposed to be completed. Some strategies are also marked as "Ongoing" activities.

Figure 5-1a. Strategy Guide

Table 5-1 provides an index of the strategies contained under each compatibility tool type. The corresponding page number for each strategy is also listed.

Table 5-1. Index of Strategies

Strategy Number, Title, and Location in Document	
Military Influence Area	
1 Define and Establish MIA Zones	5-9
Acquisitions	
2 Identify Priority Locations for Acquisition	5-12
3 Establish Voluntary Acquisition Program	5-12
4 Establish Conservation Easement Program	5-12
5 Develop Transfer of Development Rights Program	5-13
6 Use Land and Water Conservation Fund Grants	5-13
7 Use DOD Easement Partnership Program	5-13
8 Focus Conservation Partnering Opportunities	5-13
AICUZ	
9 Implement AICUZ Recommendations	5-14
Airport Land Use Compatibility	
10 Update ALUCP to Reflect Current AICUZ	5-15
11 Update ALUCP an Associated Ordinances	5-16
12 Involve Beale AFB Officials in Airport Planning	5-16
Avigation Easements	
13 Develop or Update Avigation Easement Programs	5-17
BASH	
14 Develop and Distribute BASH Education Materials	5-18
15 Control Bird and Wildlife Attractions Near Base	5-18
Beale Planning and Operations	
16 Flight Operations for Future Missions	5-19
17 Update Beale AFB General Plan	5-19
18 Develop Public Summary of Beale AFB General Plan	5-19
19 Involve Local Jurisdictions in Defining Data Needs	5-19
Building Codes	
20 Sound Attenuation for Occupied Buildings	5-20
21 Require Appropriate Sound Attenuation for Schools	5-20
Capital Improvements Programs (CIP)	
22 Incorporate Compatibility Planning Concepts in CIPs	5-21
23 Ensure Adequate Transportation Infrastructure	5-21
24 Incorporate Beale into Regional Infrastructure Planning	5-21
CEQA / NEQA	
25 Refer CEQA Documents to Beale AFB	5-23
26 Refer NEPA Documents to local Jurisdictions	5-23
Code Enforcement / Building Inspection	
27 Ensure Construction Standards for Noise are Met	5-24
28 Code Enforcement Relative to Compatibility Concerns	5-24

Strategy Number, Title, and Location in Document

Communications / Coordination
29 Establish a JLUS Coordinating Committee 5-25
30 Establish Procedures for Plan Review and Comment 5-25
31 Refer Development Application to Beale for Review and Comment 5-26
32 Refer Local Proposals to Beale for Review and Comment 5-26
33 Coordination on School Site Planning 5-26
34 Educational Outreach on Aviation Planning 5-26
35 Develop and Distribute Public Education Materials 5-27
36 Beale Public Affairs Liaison to JLUS Coordinating Committee 5-27
37 Technical Support for Local Decision Making Process 5-27
38 Actively Seek Local Input on Compatibility Issues 5-27
39 Establish and Maintain Compatibility Clearinghouse 5-28

Deed Restriction / Covenants
40 Recommend Deed Restrictions in Impacted Areas 5-29

General Plans (Counties / Cities)
41 Updating Local General Plans 5-30
42 Incorporating Military Housing Needs in Local Housing Elements 5-31

Habitat Conservation Tools
43 Support Completion of Yuba-Sutter NCCP / HCP 5-32

Hazard Mitigation Plans
44 Update Plans to Reflect Current and Former Military Operations 5-33

Memorandum of Understanding
45 Develop General MOU to Implement JLUS Process 5-34
46 Develop Specific MOUs to Implement JLUS Recommendations 5-34

Real Estate Disclosure
47 Develop an Enhanced Real Estate Disclosure Ordinance 5-35

Zoning / Subdivision / Other Local Regulations
48 Encourage Area Planning Approach 5-37
49 Incorporate AICUZ Compatibility Guidelines, Part 1 5-37
50 Incorporate AICUZ Compatibility Guidelines, Part 2 5-37
51 Ensure FAA Part 77 Compliance 5-37
52 Develop or Update Light and Glare Controls 5-37
53 Modify Subdivision Regulations, Disclosure 5-38

Other Strategies
54 Reduce Bird and Wildlife Attraction Near Base 5-38
55 Pursue Additional Missions at Beale AFB 5-38
56 Encourage Research on Noise Attenuation 5-38

Areas of Concern
57 Define and Establish JLUS Areas of Concern 5-39
58 Enhanced Disclosure Requirements in AOC 5-39
59 Investigate Development of Electrical / Electromagnetic Interference Ordinance 5-40

Strategy Summary

This JLUS is designed to provide strategies that can be applied by local jurisdictions, agencies, and organizations; therefore, it is important to be able to identify which strategies may apply to your group and when they should be implemented. To assist in this effort, tables are included at the end of this section that provide an easy cross-reference to the information needed. Figures 5-1b through 5-1e illustrate how these tables are organized.

#	Strategy	MIA I	MIA IIa	MIA IIb	MIA III
1	Define and Establish MIA Zones	■	■	■	■
2	Identify Priority Locations for Acquisition	■	■		

Figure 5-1b. Find Strategies by MIA Designation (Table 5-23)

#	Strategy	AOC 1	AOC 2
57	Define and Establish JLUS Areas of Concern	■	■
58	Enhanced Disclosure Requirements in AOC	■	■

Figure 5-1c. Find Strategies by AOC (Table 5-24)

As a Responsible Party	As a Partner
Local Jurisdictions 1. Define and Establish MIA Zones 2. Identify Priority Locations for Acquisition 3. Establish Voluntary Acquisition Program 4. Establish Conservation Easement Program	Local Jurisdictions 7. Use DOD Easement Partnership Program 14. Develop and Distribute BASH Educational Materials 15. Control Bird and Wildlife Attractions Near Base

Figure 5-1d. Who is Responsible for Each Strategy (Table 5-25)

Strategies Corresponding with 0 to 2-Year Strategy Timeline	
1. Define and Establish MIA Zones 2. Identify Priority Locations for Acquisition 3. Establish Voluntary Acquisition Program 4. Establish Conservation Easement Program 5. Develop Transfer of Development Rights Program 9. Implement AICUZ Recommendations 10. Update ALUCP to Reflect Current AICUZ 11. Update ALUCP and Associated Ordinances 13. Develop or Update Avigation Easement Programs	36. Beale Public Affairs Liaison to JLUS Coordinating Committee 39. Establish and Maintain Compatibility Clearinghouse 41. Updating Local General Plans 45. Develop General MOU to Implement JLUS Process 46. Develop Specific MOUs to Implement JLUS Recommendations 47. Develop an Enhanced Real Estate Disclosure Ordinance

Figure 5-1e. When Each Strategy Should Occur (Table 5-26)

For each strategy, the "Responsibility / Partners" column identifies what entity (local jurisdiction, agency, Native American tribal government, or organization) is responsible for implementing the strategy (Primary Responsibility) and which entities are considered to be Partners in the strategy. A Partner is simply an entity that can provide technical information or can otherwise support the efforts to implement the strategy.

One of the terms used in the "Responsibility / Partners" column is "Local Jurisdictions". The strategies do not identify a specific jurisdiction as a responsible party or partner. During development of the JLUS, jurisdiction names were considered, but the AC and TC discussed what happens over time as a city's incorporated boundary or sphere of influence changes. The decision was made to use the term Local Jurisdiction and allow the MIA and AOC boundaries to determine which jurisdictions would be involved.

5.2 Military Influence Areas – Strategies

Military Influence Area

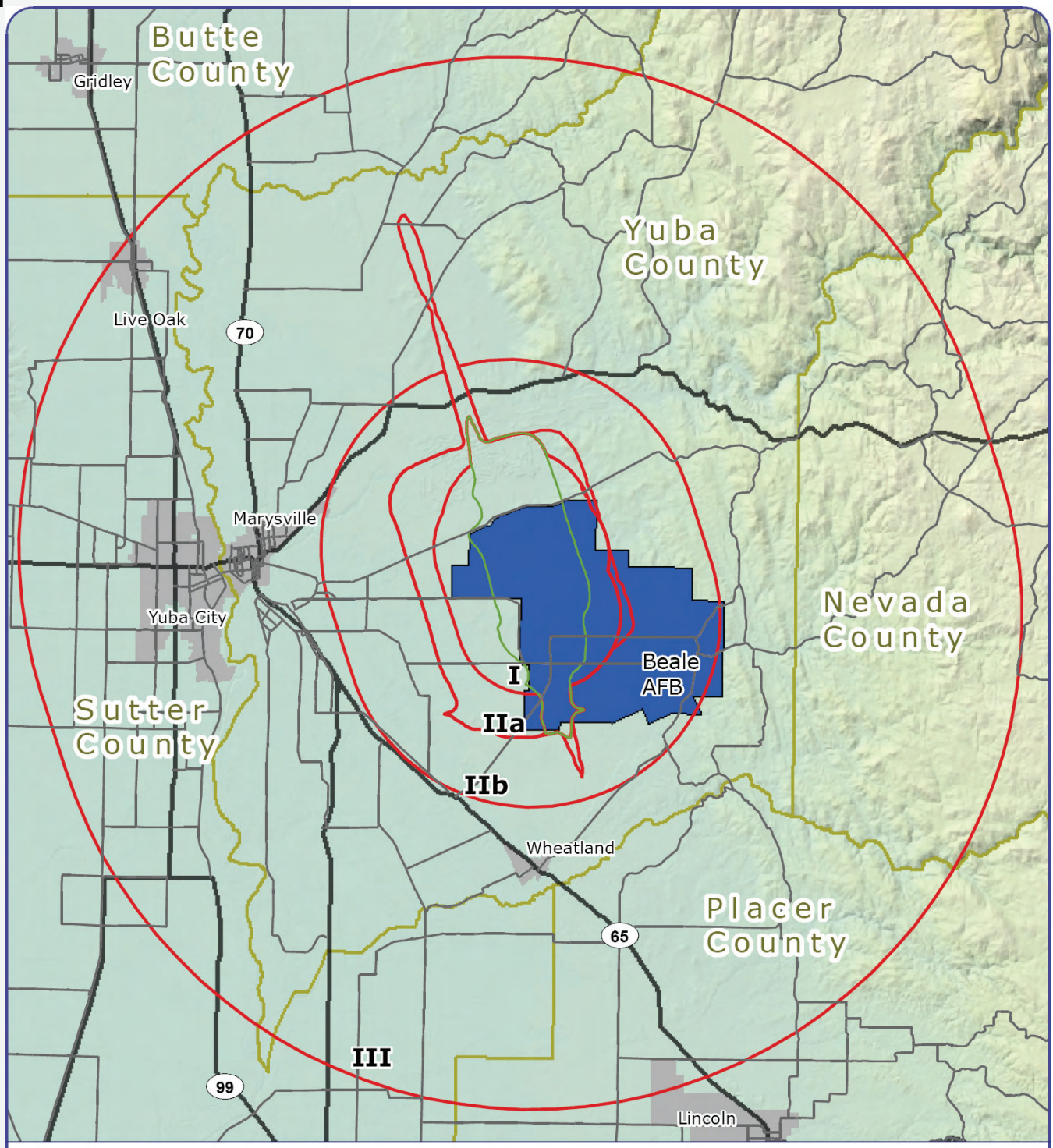
A Military Influence Area is a formally designated geographic planning area where military operations may impact local communities, and conversely, where local activities may affect the military's ability to carry out its mission. These areas may also be referred to as: Region of Military Influence (RMI), Military Influence Planning District (MIPD), Military Influence Overlay District (MIOD), Military District Disclose District (MIDD), Airfield Influence Planning District (AIPD), and Areas of Critical State Concern (ACSC).

A Military Influence Area is designated to accomplish the following purposes.

- Promote an orderly transition between community and military land uses so that land uses remain compatible.
- Protect public health, safety, and welfare.
- Maintain operational capabilities of military installations and areas.
- Promote the awareness of the size and scope of military training areas to protect areas separate from the actual military installation (i.e., critical air and sea space) used for training purposes.
- Establish compatibility requirements within the designation area, such as requirements for sound attenuation, real estate disclosure, and avigation easements.

Table 5-2. Military Influence Area Strategy

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
1	Define and Establish MIA Zones Create a Military Influence Area (MIA) containing four zones (MIA I, IIa, IIb, and III as shown on Figure 5-2) that reflect the types and intensity of compatibility issues. The MIA zones established should be used by local jurisdictions to identify areas where specific compatibility issues are more likely to occur. Implementation of the MIA and associated strategies for these zones will: ▪ Create a broader framework for making sound planning decisions around military airfields ▪ More accurately identify areas that can affect or be affected by military missions ▪ Protect the public health, safety, and welfare ▪ Protect the military missions ▪ Create a compatible mix of land uses ▪ Promote an orderly transition and rational organization of land use around military airfields The MIA zones are defined as follows, and are illustrated on Figure 5-2. ▪ MIA I. Includes the Clear Zone (CZ), Accident Potential Zones I and II (APZ I and II), the 60 dB CNEL Current Mission scenario contour, and a 2-nautical mile (NM) overflight area. ▪ MIA IIa. Includes areas within the 65 CNEL contour for the Future Potential Mission scenario. ▪ MIA IIb. Includes the overflight area within 5 NM of the Beale AFB runway. ▪ MIA III. Includes all areas within 15 miles of the Beale AFB runway To assist in this effort, geographic information system (GIS) files of these boundaries can be obtained from the Governor's Office of Planning and Research (OPR) following finalization of this JLUS. Updates to the data relative to noise contours shall be provided by the base as a result of significant changes that support a public release of an updated Air Installation Compatible Use Zone (AICUZ) study.	■	■	■	■	*Primary Responsibility* ▪ Local Jurisdictions ▪ Beale AFB *Partners* ▪ Agencies (State and Federal) ▪ SACOG	■		■



Legend

- Potential MIA
- Current Mission 60 dBA Contour (CNEL)
- Beale AFB
- County Boundaries
- Incorporated Cities
- Highways
- Major Road

0 5 10 Miles

Military Influence Areas | **Figure 5-2**

Acquisitions

As a land use planning tool, property rights can be acquired through donation, easement, or the outright purchase of property for public purposes. Types of acquisition include the following:

- **Fee Simple Acquisition**. This option involves the purchase of property and is typically the most costly method to protect open space, sensitive, or critical areas. Cost and the need for a willing seller can be constraints.
- **Fee Simple/Leaseback**. A land trust is established when a government agency purchases the full title to a property and then leases it back to the previous owner. The land's natural resource and open space values are protected through lease controls that restrict land uses.
- **Conservation Easement**. Conservation easements can be acquired through a number of mechanisms, including donation or purchase. If they are donated, the donor could qualify for a federal income tax deduction making this option more desirable to the property owner. Conservation easements are a more cost effective method to acquire land than outright purchase.
- **Lease**. In cases where the landowner does not want to, or cannot make a permanent commitment, this may be a way to control land uses for a short timeframe. Leases can be obtained by government agencies or jurisdictions, non-profit organizations, land trusts, or private entities.
- **Management Agreement**. A management agreement is a specified plan under which the landowner or the land trust (or combination thereof) will manage the land. Management agreements last for a specific amount of time making them a short-term approach to protecting land.
- **Eminent Domain**. A local government can use the power of eminent domain to appropriate private property for public use, in exchange for payment of fair market value, through the process of condemnation.

What is a conservation easement?

A conservation easement is a legal agreement that a property owner voluntarily places on a piece of property to restrict the development, management, or use of the land. Landowners can be compensated directly (purchase) or can provide the easement to receive tax incentives. These easements are often used to protect a sensitive resource (such as a wetland or agricultural land) or provide for public use of private land, such as a trail.

The purpose of acquisition tools is to eliminate land use incompatibilities through market transactions and the local development process. Acquisition tools are particularly effective because they advance the complementary goals of shifting future growth away from military installations and preserving community assets such as agriculture, open space, rural character, or sensitive natural habitats. Land use compatibility issues can be addressed by:

What is a land trust?

In this document, the term land trust is used generically to describe any entity that can hold property or property rights for the purpose of protecting the land for a given purpose (e.g., conservation, agriculture), to protect an activity or function (e.g., air operations at Beale), or other desired uses that would benefit from protections.

- Creating a land barrier between active military installations and incompatible land uses;
- Shifting future growth away from critical military lands;
- Protecting public safety by directing incompatible land uses to other locations;
- Protecting the natural environment;
- Maintaining and protecting existing agriculture resources; and,
- Conserving open space.

Table 5-3. Acquisition Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
2	Identify Priority Locations for Acquisition Identify priority locations for acquisition programs (property purchase or easement purchase) should funds become available. ▪ Beale AFB to work with local jurisdictions to identify locations requiring additional protections ▪ Identify locations that provide protections to the installation and also provide habitat values that can be used in the establishment of a mitigation bank associated with the findings of the NCCP / HCP. ▪ Work with State congressional delegation to obtain necessary appropriations in the DOD budget for the purchase of critical parcels and conservation easements that protect current and future missions at Beale AFB.	■	■			*Primary Responsibility* ▪ Local Jurisdictions ▪ Beale AFB *Partners* ▪ Yuba-Sutter NCCP / HCP Participating Agencies ▪ Reclamation Districts	■		■
3	Establish Voluntary Acquisition Program Establish and promote a voluntary acquisition program. ▪ Program should include provision of property purchase or acquisition of development rights through implementation of a conservation easement. ▪ Program should include transfer to a trust of property or conservation easement limiting future uses of the land.	■	■			*Primary Responsibility* ▪ Local Jurisdictions *Partners* ▪ Land Trusts	■		
4	Establish Conservation Easement Program Establish a Conservation Easement (purchase or donation of Development Rights) program in association with local land trusts to protect areas of critical importance to maintaining public safety and mission sustainability. ▪ For Yuba County, implementation of this strategy could include an amendment to General Plan Policy 44-LUP or creation of a new policy. Recommend policy either specifies protection of Beale AFB missions as one of the criteria or broadens the policy to allow voluntary donations of conservation easements in general (i.e., do not specify circumstances for the donation).	■	■	■		*Primary Responsibility* ▪ Local Jurisdictions *Partners* ▪ Land Trusts	■		

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
	Would also recommend expanding the policy to allow not only voluntary donations, but to also allow for conservation easements to be purchased.								
5	Develop Transfer of Development Rights Program Maintain public safety and mission sustainability in areas of critical importance by developing a transfer of development rights (TDR) program where development rights currently exist. This program could be used to allow land owners to sell development rights for property owned in MIA I and IIa to other appropriate development areas in the same jurisdiction.	■	■			*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ Land Trusts	■		■
6	Use Land and Water Conservation Fund Grants Take part in Land and Water Conservation Fund (LWCF) matching grants program that provides funds to states for planning, developing, and acquiring land and water areas for state and local parks and recreation areas. ■ Natural open space uses would be appropriate in MIA I. ■ Applications could include expansions or enhancements for Spenceville Wildlife area or new parks in Yuba County or City of Wheatland. ■ This is an annual program with a current expiration data of January 2015. A 50 percent local match is required.	■	■	■		*Primary Responsibility* ■ Local Jurisdictions ■ Beale AFB *Partners* ■ National Park Service ■ California State Parks			■
7	Use DOD Easement Partnership Program Beale AFB and the DOD should pursue conservation opportunities near the installation using the DOD Easement Partnership Program and other available federal funding sources.	■	■			*Primary Responsibility* ■ Beale AFB ■ DOD *Partners* ■ OEA ■ Local Jurisdictions			■
8	Focus Conservation Partnering Opportunities Focus on conservation partnering possibilities where easements benefit protection of Beale operations but also protect other community values, such as preservation of agricultural land or habitat protection. Acquisition of easements assumes a willing seller.	■	■			*Primary Responsibility* ■ Local Jurisdictions ■ Beale AFB *Partners* ■ Land Trusts ■ Yuba-Sutter NCCP / HCP Participating Agencies			■

AICUZ

The Air Installation Compatibility Use Zone (AICUZ) program is a DOD planning program that was developed in response to incompatible urban development and land use conflicts around military airfields. The AICUZ program has two objectives: (1) to assist local, regional, state, and federal officials in protecting the public health, safety, and welfare by promoting compatible development within the AICUZ area of influence; and (2) to protect operational capabilities from the effects of land uses that are incompatible with aircraft operations. While prepared by or for a military installation, the primary users of an AICUZ study are the local communities surrounding the installation or an offsite location (such as auxiliary fields or training areas). The AICUZ study is also a tool used by the installation's community planner to evaluate proposed projects (both on and off the installation) for their compliance with the information presented in the AICUZ study.

The current Beale AFB AICUZ study is dated 2005 and was released in June 2006.

Table 5-4. AICUZ Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
9	Implement AICUZ Recommendations Implement recommendations contained in the current Beale AFB AICUZ. ■ Incorporate AICUZ policies and guidelines into the general plans of the local jurisdictions within MIA I and IIa. ■ Within the outer edge of the 2005 AICUZ noise contour for the Future Potential Mission 65 CNEL scenario, local jurisdictions will use the Air Force Land Use Compatibility Guidelines to evaluate existing and future land use proposals in this area. ■ Ensure height and obstruction ordinances reflect current Air Force and Federal Aviation Administration (FAA) Part 77 requirements. ■ Modify building codes to ensure that new construction within the AICUZ area has the recommended noise level reductions incorporated into its design and construction. (See "Building Codes" section for details) ■ Continue to coordinate with Beale AFB for planning and zoning actions that have the potential of affecting base operations. Develop a working group representing city planners, county planners, and base planners to meet periodically, as needed, to discuss AICUZ concerns and major development proposals that could affect airfield operations.	■	■			*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ Beale AFB ■ Caltrans, Division of Aeronautics ■ FAA	■		■

Airport Land Use Compatibility

An Airport Land Use Compatibility Plan (ALUCP) is "a plan, usually adopted by a County Airport Land Use Commission (ALUC) or other entity established to accomplish land use compatibility planning, which sets forth policies for promoting compatibility between airports and the land uses which surround them." (California Airport Land Use Planning Handbook, January 2002).

The California law governing creation of ALUCs applies to every county in California having a public airport. The statute also allows counties to use an alternative to ALUCs to accomplish airport land use compatibility planning. For the purposes of this document, the term "ALUC" refers to both officially designated ALUCs and the alternative entities that perform the same functions.

The California State Aeronautics Act typically refers to these documents as ALUCPs. These plans are also referred to as Comprehensive Land Use Plans (CLUPs), airport land use policy plans, and airport environs land use plans. All of these plans perform the same purpose and are required to conform to state law.

An ALUCP should not to be confused with an airport master plan. Airport master plans are designed to plan for airport facilities, circulation, infrastructure, security, and other factors that guide the orderly development of on-airport land uses.

The purpose of the ALUCP is to:

- Provide for the orderly growth of each public airport and the area surrounding the airport within the jurisdiction of the ALUC.
- Safeguard the general welfare of the people living near airports and the public in general (California Public Utilities Code, Section 21675(a)).

Table 5-5. Airport Land Use Compatibility Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
10	Update ALUCP to Reflect Current AICUZ Recommend the ALUCP for Beale AFB be updated to use the 60-dB CNEL current mission contour from the 2005 AICUZ study for promoting land use compatibility.	■				*Primary Responsibility* ■ SACOG ■ Local Jurisdictions *Partners* ■ Beale AFB	■		■

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
11	Update ALUCP and Associated Ordinances For other airports in the region: ▪ Pursue funding (with the support of Beale AFB) to update all affected ALUCPs. ▪ ALUCPs should be updated as necessary to reflect changes in operations or missions at Beale AFB that impact air operations. ▪ Updates to the Beale ALUCP will require a similar update to the implementation components of this plan in the Yuba County Zoning Ordinance (Section 12.115)	■				*Primary Responsibility* ▪ SACOG ▪ Local Jurisdictions *Partners* ▪ Beale AFB	■		■
12	Involve Beale AFB Officials in Airport Planning Ensure Beale AFB officials are involved, in an advisory capacity, relative to operational changes at public airports and in the update of airport master plans and expansion plans for all airports in the surrounding region. ▪ Depending on the type of operational changes, it may be appropriate to expand the MIA for this strategy to include all airports in the region (see Figure 3-15). ▪ Form a Regional Airports Committee to meet quarterly, or as needed, to discuss regional airspace, operational, and planning issues.	■	■	■	■	*Primary Responsibility* ▪ SACOG *Partners* ▪ Beale AFB ▪ Sacramento County Airport System			■

Avigation Easements

An easement is a non-possessory right to use land owned by another party. An avigation easement is an easement that grants the holder one or more of the following rights: the right of flight; the right to cause noise, dust, or other impacts related to aircraft flight; the right to restrict or prohibit certain lights, electromagnetic signals, and bird-attracting land uses; the right to unobstructed airspace over the property above a specified height; and, the right of ingress or egress upon the land to exercise those rights.

Avigation easements transfer certain property rights from the owner of the underlying property to another entity. This entity could be the owner of an airport or, in the case of military airports, to a local government agency or authorized federal agency on behalf of the military. The DOD is not authorized to accept avigation easements. Historically, if the military desires such easements, there are several ways they can be obtained. The US Army Corps of Engineers serves as the negotiator and the principle real estate agent for the Air Force.

Entities acquire avigation easements to the airspace over neighboring properties to: (1) prevent construction of buildings and towers, planting of trees, installation of lighting, or any other development that might interfere with aircraft takeoff and landing, or (2) protect against liability for any nuisance caused by aircraft using the airport (i.e. noise, fumes, and vibration) that might impact the use and enjoyment of properties adjacent to an airfield or under its flight paths.

Table 5-6. Avigation Easement Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
13	Develop or Update Avigation Easement Programs Modify avigation easement program for Yuba County and establish a similar program in other affected jurisdictions, to require that avigation easements be recorded with the local jurisdiction for all land divisions and other discretionary actions. Sample language for an avigation easement is included in Appendix E.	■				*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ None Identified	■		

BASH Coordination

The Bird Wildlife Strike Hazard (BASH) program is aimed at minimizing collisions between military aircraft and birds. Knowledge of where birds travel, nest, and feed helps DOD avoid problem areas, and therefore save lives and avoid the destruction of valuable aircraft. The program considers not only wildlife within the confines of the airfield, but also in neighboring areas. The BASH program covers predatory birds, nuisance flocking birds (gulls), and migratory geese and ducks. In addition to birds, the BASH program also addresses other animals that could pose a hazard to aircraft operations including coyotes, deer, and rabbits.

The objective of the BASH program is to reduce the potential for collisions between aircraft and birds or other animals, and to minimize damage and injuries when collisions occur. The BASH program promotes both land management practices that minimize bird attractants and safety procedures to recognize, control, and avoid hazardous bird concentrations.

Table 5-7. BASH Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
14	Develop and Distribute BASH Educational Materials Provide educational information to local jurisdictions and agencies in the region relative to reducing the potential for bird and wildlife attractions that may impede safe air operations.	■	■	■	■	*Primary Responsibility* ■ Beale AFB *Partners* ■ Local Jurisdictions ■ California Dept. of Fish and Game ■ U.S. Fish and Wildlife	■		■
15	Control Bird and Wildlife Attractions Near Base Work directly with local jurisdictions and other appropriate agencies on control of bird and wildlife attractions in the immediate vicinity of the base.	■	■	■		*Primary Responsibility* ■ Beale AFB *Partners* ■ Local Jurisdictions ■ California Dept. of Fish and Game ■ U.S. Fish and Wildlife			■

Beale Planning and Operations

Similar to a local jurisdiction, Beale AFB maintains a long-range general plan. The Beale General Plan is the primary document that provides the installation commander and other military decision makers with a condensed picture of whether or not an installation has the physical assets and delivery systems to support its mission. The purpose of the Beale AFB General Plan is to provide an assessment of the installation's infrastructure and attributes for the purpose of gauging the installation's development and growth potential.

In addition to its General Plan, Beale AFB also maintains a number of plans that describe the operational parameters for activities on the installation and in the airspace around the base.

Table 5-8. Beale Planning and Operational Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
16	Flight Operations for Future Missions For future air missions or aircraft at Beale AFB, design flight operations to minimize impacts on developed areas surrounding Beale AFB.	■	■	■	■	*Primary Responsibility* ■ Beale AFB *Partners* ■ Local Jurisdictions			■
17	Update Beale AFB General Plan Update Beale AFB General Plan to incorporate the accepted strategies of the Beale JLUS.	■	■	■	■	*Primary Responsibility* ■ Beale AFB *Partners* ■ US Air Force		■	
18	Develop Public Summary of Beale AFB General Plan On update of the Beale AFB General Plan, Beale AFB will prepare a public summary that is provided to local jurisdictions, interested parties, and is publicly accessible from the base website.	■	■	■	■	*Primary Responsibility* ■ Beale AFB *Partners* ■ US Air Force		■	■
19	Involve Local Jurisdictions in Defining Data Needs Beale AFB will work with the JLUS Coordinating Committee (see Strategy 29) to assist in refining the information that could be contained in the General Plan public summary that would assist local jurisdictions in compatibility planning.	■	■	■	■	*Primary Responsibility* ■ Beale AFB ■ JLUS Coordinating Committee *Partners* ■ None Identified		■	■

Building Codes

Construction standards and building codes are ordinances and regulations controlling the design, construction process, materials, alteration, and occupancy of any structure to safeguard human safety and welfare. They include both technical and functional standards and generally address the following.

- **Structural Safety**. Buildings should be strong enough to resist internally and externally applied forces without collapsing.
- **Fire Safety**. Includes requirements to prevent fire from spreading to and from neighboring structures, provide warning to occupants, provide for safe exit routes from the building, and provide access for fire suppression.
- **Health Requirements**. Provides for adequate plumbing and sanitation facilities for occupation of a structure.
- **Accessibility**. Requires a building to be accessible for persons in wheelchairs or having other disabilities.

Construction standards and building codes are designed to protect the health, safety, and welfare of citizens.

Table 5-9. Building Code Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
20	Sound Attenuation for Occupied Buildings Require sound attenuation for occupied buildings. The level of sound protection should be based on noise exposure and the type of land use. ▪ For Yuba County, modify Zoning Ordinance Section 12.115 should be reviewed and updated as necessary to ensure it implements applicable noise attenuation strategies such as requiring an acoustical study for areas within MIA I and MIA IIa. Acoustic study will provide recommendations for sound attenuation.	■	■			*Primary Responsibility* ▪ Local Jurisdictions ▪ School Districts *Partners* ▪ None Identified			■
21	Require Appropriate Sound Attenuation for Schools For all schools, require appropriate sound attenuation. The level of sound protection should be based on noise exposure and the type of land use. See also Strategy 33		■	■		*Primary Responsibility* ▪ California Department of Education ▪ School Districts *Partners* ▪ Beale AFB			■

Capital Improvements Programs (CIP)

A Capital Improvements Program (CIP) is a detailed fiscal and planning document used to plan and direct a jurisdiction's or agency's (federal or state) investment in facilities, including infrastructure. A CIP lays out the facility plans and programs of the jurisdiction or agency and provides details on expenditures that can be incorporated into the jurisdiction's or agency's annual budgeting process. Most CIPs cover multiple years in order to plan for major expenditures and projects that may occur over several years. Jurisdictions can influence where and when growth will take place through capital investment decisions, such as the placement of roadways or other infrastructure systems. In addition to facility planning and design, the timing of the facilities is also critical to compatibility. Premature extension of infrastructure can encourage growth in an area. Inversely, lack of funding for regional transportation projects can cause capacity shortages in the short term. For instance, the timing of adequate federal, state, and local funds to complete the

development of Highway 65 has caused capacity shortages as the area grows.

Table 5-10. CIP Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
22	Incorporate Compatibility Planning Concepts in CIPs Incorporate land use compatibility planning concepts into CIPs for infrastructure extensions and improvements.	■	■	■		*Primary Responsibility* ■ Local Jurisdictions ■ Water and Sewer Districts *Partners* ■ None Identified			■
23	Ensure Adequate Transportation Infrastructure Adequate transportation facilities are critical for continued operations at Beale AFB. To protect these resources, the following implementations are proposed. ■ Incorporate into the Yuba County CIP provisions for ongoing roadway maintenance as needed based on a condition assessment. ■ Yuba, Nevada, and Placer counties and the cities of Lincoln, Marysville, and Wheatland will ensure traffic mitigations for projects contributing traffic to the primary roadways serving Beale AFB are appropriate to maintain County LOS standards. ■ Beale AFB, OEA, and the Department of Defense will work with local agencies to assist in funding for infrastructure enhancements and maintenance needed to address changes in mission at Beale AFB.	■	■	■	■	*Primary Responsibility* ■ Local Jurisdictions ■ Beale AFB ■ DOD ■ OEA ■ Caltrans, District 3 ■ SACOG *Partners* ■ State Legislature		■	■
24	Incorporate Beale Into Regional Infrastructure Planning As part of regional infrastructure planning, consider regional needs, including those of Beale AFB, for new and expanded infrastructure as well as ongoing maintenance needs for those infrastructure systems.	■	■	■	■	*Primary Responsibility* ■ Local Jurisdictions ■ Water and Sewer Districts ■ SACOG *Partners* ■ Beale AFB			■

CEQA / NEPA

The California Environmental Quality Act (CEQA) was enacted in 1970 and requires all lead agencies to consider the potential environmental impacts of a project before they approve it. CEQA also requires that a project's environmental impacts be disclosed to the public so community members have an opportunity to make comments on proposed land use decisions. CEQA is modeled after the federal National Environmental Policy Act (NEPA).

The NEPA is the federal law, effective on January 1, 1970, that established a national policy for the environment and requires federal agencies (1) to become aware of the environmental ramifications of their proposed actions, (2) to fully disclose to the public proposed federal actions and provide a mechanism for public input to federal decision making, and (3) to prepare environmental impact statements for every major action that would significantly affect the quality of the human environment.

The primary purpose of CEQA (Public Resources Code, Section 21000 et seq.) is to develop and maintain a high-quality environment in the State of California now and in the future. According to statute, CEQA has four major purposes:

- Inform governmental decision makers and the public about the potential significant environmental effects of proposed activities;
- Identify ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring mitigation actions when the governmental agency finds the changes to be feasible; and,
- Disclose to the public the reasons for approval of a project that has significant environmental effects.

CEQA applies to projects undertaken by a public agency, funded by a public agency, or that require issuance of discretionary permits by a local or state public agency. A project is defined as any action that has a potential for resulting in physical change to the environment and is an activity that may be subject to several discretionary approvals by government agencies (i.e., construction activities, clearing or grading of land, improvements to existing structures, and activities or equipment involving the issuance of a permit). A project is exempt from CEQA if it can be said with certainty that there is no possibility that the activity in question will have a significant effect on the environment.

NEPA's purpose, as stated in Section 2 of NEPA legislation, is to "encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage

to the environment and biosphere and stimulate the health and welfare of man; and to enrich the understanding of the ecological systems and natural resources important to the Nation…" NEPA ensures that the environmental impacts of a proposed action, and potential alternatives to the action, will be considered by a Federal agency before it decides to fund and implement the action. The process required under NEPA is intended to increase the quality of decisions because it demands a full understanding of the various impacts, and because input must be received from a range of stakeholders. Emergency exceptions are made when the immediate health and safety of people are threatened.

Table 5-11. CEQA / NEPA Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
25	Refer CEQA Documents to Beale AFB Refer projects to Beale AFB officials for review and comment on CEQA documentation as defined under the process stated in Strategy 30. ▪ This strategy applies to MIA I, IIa, and IIb. Projects of significant regional impact in MIA III should also be referred to the installation. See also Strategies 30 and 31 on process.	■	■	■	■	*Primary Responsibility* ▪ CEQA Lead Agency *Partners* ▪ Beale AFB			■
26	Refer NEPA Documents to Local Jurisdictions Refer to affected local jurisdictions, agencies, and organizations notice of all NEPA documentation, except for categorical exemptions, or as otherwise refined by the JLUS Coordinating Committee (see Strategy 29), for comment. ▪ This strategy applies to jurisdictions with land within MIA I, IIa, and IIb. Projects of significant regional impact should also be referred to local jurisdictions and agencies within MIA III. ▪ See also Strategies 29, 30, and 31 on process.	■	■	■	■	*Primary Responsibility* ▪ Beale AFB *Partners* ▪ Local Jurisdictions			■

Code Enforcement / Building Inspection

Code enforcement attempts to ensure that property owners maintain their property and bring substandard structures and conditions up to Building and Zoning Code standards. Code enforcement programs are responsible for enforcing codes that address public health and safety issues, including regulations related to garbage, specific nuisances, removal of vegetation, zoning violations, and structures. Enforcement

actions are taken both proactively and in response to complaints from residents.

The purpose of code enforcement programs is to promote and maintain a safe and desirable living and working environment. Related to land use compatibility, code enforcement is a tool used by the community to ensure its rules are enforced. Issues could arise relative to structure heights, light and glare, and fire hazards.

Table 5-12. Code Enforcement / Building Inspection Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
27	Ensure Construction Standards for Noise are Met Ensure contractors are following appropriate noise attenuation standards as part of new construction or substantial remodels or reconstructions.	■	■			*Primary Responsibility* ■ Local Jurisdiction ■ Beale AFB *Partners* ■ None Identified			■
28	Code Enforcement Relative to Compatibility Concerns Pursue correction of code violations that impact operations at Beale AFB, including vertical height obstructions, light and glare issues, dust and debris, and bird and wildlife attractions. ■ It is the responsibility of Beale AFB to identify issue areas outside the installation boundaries where conditions exist that endanger operations, and to provide notification to the appropriate local jurisdiction or agency. See also Strategies 30 and 31 on process.	■	■	■	■	*Primary Responsibility* ■ Local Jurisdiction ■ Beale AFB *Partners* ■ None Identified			■

Communications / Coordination

In any planning effort, plans can only move towards successful implementation if there are ongoing communications between Beale AFB, local jurisdictions, agencies, landowners, and the public. Enhanced communication and coordination is seen as being integral to successful compatibility planning in the study area.

Table 5-13. Communications / Coordination Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
29	**Establish a JLUS Coordinating Committee** Establish a JLUS Coordinating Committee (multi-stakeholder) to maintain efficient and effective coordination between local jurisdictions, Beale AFB, and other interested parties to focus on the implementation of the JLUS. ▪ The JLUS Coordinating Committee shall be formed within one year of the published date for the Beale JLUS. ▪ The JLUS Coordinating Committee shall be made up of two representatives from each of the following: ▪ Beale AFB ▪ Yuba County ▪ City of Lincoln ▪ City of Marysville ▪ City of Wheatland ▪ The JLUS Coordinating Committee can invite additional members as agreed to by the Committee, including land owners and other public members, agencies, and organizations. ▪ A standing JLUS Technical Committee, including representatives from the jurisdictions noted above plus other agency members with expertise needed to advise the JLUS Coordinating Committee, will be maintained and will meet as requested to provide input on issues of interest to the JLUS Coordinating Committee. ▪ The JLUS Coordinating Committee shall meet on a quarterly basis, or as otherwise agreed to by the Committee. ▪ Meetings between individual members pertaining to issues specific to Beale AFB and the effected agency(ies) is encouraged.	■	■	■	■	*Primary Responsibility* ▪ Beale AFB ▪ Local Jurisdictions *Partners* ▪ Agencies (State and Federal)	■		■
30	**Establish Procedures for Plan Review and Comment** Beale AFB shall work with local jurisdictions and relevant agencies to establish procedures for consultation between the base and local jurisdictions relative to planning review and comment. This will include: ▪ Definition of projects types that require review ▪ Identification of the Points of Contact for all coordination ▪ Provision of opportunities for Beale AFB personnel to be involved in pre-application meetings for significant projects ▪ Establishing a formal procedure for requesting and receiving comments ▪ Establishing a standard timeline for responses, keeping in mind mandated review time periods as specified by State law and local procedures ▪ Develop outreach plan	■	■	■	■	*Primary Responsibility* ▪ Beale AFB ▪ Local Jurisdictions *Partners* ▪ Agencies (State and Federal)	■		

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
	▪ Providing notice to Beale AFB on all public hearings regarding projects identified for coordination While consultation is expected to occur primarily on projects in MIA I, IIa, and IIb, the installation should establish contacts and procedures for receiving notices and review opportunities on significant regional projects inside of MIA III. Procedures should be reviewed annually and updated as appropriate by the JLUS Coordinating Committee								
31	Refer Development Applications to Beale for Review and Comment Refer projects to Beale AFB officials for review and comment as defined under the process developed under Strategy 30. Beale AFB shall provide timely input on projects where the installation has concerns. This strategy primarily applies to MIA I, IIa, and IIb. Projects of significant regional impact in MIA III should also be referred to the installation. See also Strategies 24, 25, 30, and 31	■	■	■	■	*Primary Responsibility* ▪ Local Jurisdictions ▪ Agencies (Regional and State) ▪ Beale AFB *Partners* ▪ None Identified			■
32	Refer Local Proposals to Beale for Review and Comment Refer appropriate projects to Beale AFB officials for review and comment on jurisdictional or agency plans such as General Plans and General Plan Amendments, zone changes, specific plans, and similar comprehensive plans defined under Strategy 30. Beale AFB shall provide timely input on projects where the installation has concerns. See also Strategies 24, 25, 30, and 31			■	■	*Primary Responsibility* ▪ Local Jurisdictions ▪ Beale AFB *Partners* ▪ None Identified			■
33	Coordination on School Site Planning Provide input to local school districts and the Office of the State Architect on areas that are not suitable for school development due to noise, safety, or other operational concerns. ▪ Provide information on the location of MIA I and IIa and the desire to avoid school sites in these areas ▪ Request school districts consult with Beale AFB on school site selection in MIA I and IIa to provide a cooperative foundation for more informed land use decisions See also Strategy 21	■	■			*Primary Responsibility* ▪ Beale AFB ▪ School Districts ▪ California Department of Education ▪ Caltrans, Division of Aeronautics *Partners* ▪ Local Jurisdictions	■		■
34	Educational Outreach on Aviation Planning The FAA and Caltrans Aeronautical staff should provide assistance and technical information to help inform local decision making, especially during general plan or zoning ordinance updates.	■	■	■	■	*Primary Responsibility* ▪ FAA ▪ Caltrans, Division of Aeronautics *Partners* ▪ Local Jurisdictions			■

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
35	**Develop and Distribute Public Education Materials** Beale AFB shall develop and distribute public education materials providing information on the installation's AICUZ program, land use, noise, safety, and operational overviews, and the ability to take public comments. ▪ Printed summaries on these issues should be provided to local jurisdictions within the study area for staff education and as a handout to the public. ▪ Information on these topics should be provided on the publicly available part of the installation's website. ▪ Beale AFB should provide timely updates as key information changes to ensure local jurisdictions, agencies, and the public are informed on current mission requirements and operations.	■	■	■	■	*Primary Responsibility* ▪ Beale AFB *Partners* ▪ None Identified	■		■
36	**Beale Public Affairs Liaison to JLUS Coordinating Committee** Establish a Public Affairs liaison with JLUS Coordinating Committee to address noise and other community issues.	■	■	■	■	*Primary Responsibility* ▪ Beale AFB *Partners* ▪ None Identified	■		■
37	**Technical Support for Local Decision Making Process** Beale AFB should assign personnel to supply technical input and assistance to local jurisdictions to support discussion of projects with potential compatibility issues at planning commission, city council, and board of supervisor meetings. This support can include: ▪ For Yuba County, Beale AFB should designate a regular contact for the ex-officio Planning Commission post and be available for input on critical projects. ▪ For other local jurisdictions, the base should provide personnel to provide input as needed relative to projects defined under Strategy 30.	■	■	■		*Primary Responsibility* ▪ Beale AFB *Partners* ▪ Local Jurisdictions			■
38	**Actively Seek Local Input on Compatibility Issues** Actively seek input from local jurisdictions on compatibility issues and use this input in the preparation of plans. As part of this effort, ensure that local jurisdictions have the information they need to make informed planning decisions regarding the base. To the extent possible, update local jurisdictions on plans, programs, housing needs, and other changes that may impact areas outside the base.	■	■	■	■	*Primary Responsibility* ▪ Beale AFB *Partners* ▪ Local Jurisdictions			■

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
39	**Establish and Maintain Compatibility Clearinghouse** Create a clearinghouse of planning information regarding compatibility planning through collaboration with the California Resources Agency. This clearinghouse should provide web access to this information. ▪ Information of local importance should be maintained by the member agencies of the JLUS Coordinating Committee ▪ Pursue funding from OEA or other DOD sources to maintain this database ▪ The State of California should take an active role in establishing resources to support compatibility planning in this area as well as the State as a whole	■	■	■		*Primary Responsibility* ▪ JLUS Coordinating Committee ▪ Beale AFB ▪ OPR *Partners* ▪ OEA ▪ DOD ▪ California Resources Agency	■		■

Deed Restrictions / Covenants

Deed restrictions, or covenants, are written agreements that restrict or limit some of the rights associated with property ownership. These restrictions are recorded with the deed for the property and stay with the property when it is sold to a new owner (i.e., remain in effect). Deed restrictions are private agreements or contracts between an interested buyer and a seller. Deed restrictions are often established by the initial subdivider, either voluntarily or as a condition of approval on the subdivision.

Deed restrictions can cover a wide range of restrictions and can be tailored to meet specific needs. They can also be used to eliminate or mitigate impacts associated with local development on military installations. This is done through the incorporation of restrictions or limitations on development types or certain land uses. Examples include specifying a maximum height for trees and structures, restricting the use of motorized vehicles, limiting lighting, and so forth.

Table 5-14. Deed Restriction / Covenants Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
40	Recommend Deed Restrictions in Impacted Areas Projects not required to file an Avigation Easement (see Strategy 13) should be required to include a disclosure, recorded with the deed to the property, disclosing the location of the installation, its operations, and the potential for noise, vibration, and electromagnetic interference. Projects located in Accident Potential Zones north of the base will also be required to note their location within this area and describe the zone as defined in the Beale AICUZ. Deed notification should also disclose limitations identified through the ALUCP and other plans and programs affecting a property. See also Strategies 47 and 58		■	■		*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ Beale AFB ■ California Department of Real Estate ■ Real Estate Professionals			■

General Plans (Counties / Cities)

Every city and county in California is required by state law to prepare and maintain a policy document called a general plan. General plans are designed to serve as the jurisdiction's blueprint for future decisions concerning physical development, including land use, infrastructure, public services, and resource conservation. Most general plans consist of: (1) a written text discussing the community's goals, objectives, policies, and programs for the distribution of land use; and, (2) one or more diagrams or maps illustrating the general location of existing and future land uses. All specific plans, subdivisions, public works projects, and zoning decisions made by the local government must be consistent with the general plan.

A general plan typically has three defining features:

- **General**. As the name implies, a general plan provides general policy guidance that will direct community land use and resource decisions.
- **Comprehensive**. A general plan covers a wide range of social, economic, infrastructure, and natural resource factors as they relate to land use and development. These include topics such as land use, housing, circulation, utilities, public services, recreation, agriculture, biological resources, noise, safety, and other issues that are relevant to the jurisdiction.
- **Long-range**. General plans provide guidance on reaching an envisioned future. To fulfill this vision, the general plan will include policies and actions that address both immediate and

long-term needs. Most general plans look 20 years into the future.

The primary purposes of a general plan are to:

- Identify the community's land use, circulation, environmental, economic, and social goals and policies as they relate to future development in the community;
- Provide a basis for local government decision making, including decisions on development approvals;
- Provide citizens with opportunities to participate in the planning and decision making processes of their communities; and,
- Inform citizens, developers, decision makers, and other cities and counties of the policies that guide development within a particular community.

Senate Bill (SB) 1468 (Knight, Chapter 971, Statutes of 2002) is part of a state policy package to promote the development of a partnership between communities and the military that allows for collaboration on land use compatibility issues. OPR encourages local jurisdictions near military installations, and under military training routes or restricted airspace, to incorporate the above items into their general plans. However, local governments are not currently required by law to include the SB 1468 military compatibility issues in their general plans. The bill specifies that if a funding agreement is reached between OPR and the military to support these efforts, the inclusion of military compatibility issues in a general plan will become mandatory.

Table 5-15. General Plan Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
41	Updating Local General Plans In the short-term, local jurisdictions need to update existing elements to implement recommended compatible land use policies and other policies outlined in the Beale JLUS, towards continuing discussions with Beale AFB, and to meet the requirements of State law (Senate Bill [SB] 1468 [Knight, Chapter 971, Statutes of 2002]). In the long-term, jurisdictions should consult with Beale AFB when General Plan updates are proposed to ensure the jurisdiction has the latest information on operations and other compatibility issues. ▪ As appropriate (based on location), a jurisdiction's general plan should include policy to implement Strategy 9 regarding implementation of the 2005 AICUZ. ▪ A jurisdiction's general plan should include policy to require establishment of the MIA and associated controls.	■	■	■	■	*Primary Responsibility* ▪ Local Jurisdictions *Partners* ▪ Beale AFB	■	■	■

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
42	**Incorporating Military Housing Needs in Local Housing Elements** When a jurisdiction updates its Housing Element, the element should include a discussion of military housing needs and programs to address housing needs. As part of this effort, Beale AFB 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.	■	■	■	■	*Primary Responsibility* ■ Local Jurisdictions ■ Beale AFB *Partners* ■ California Department of Housing and Community Development		■	■

Habitat Conservation Tools

The California Natural Community Conservation Planning Act and the Federal Endangered Species Act allow for the development of Natural Community Conservation Plans (NCCPs) and Habitat Conservation Plans (HCPs). An NCCP identifies and provides for the regional or areawide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

Incidental take permits help landowners legally proceed with activities that might otherwise result in illegal impacts to a listed species. A HCP is a document that supports an incidental take permit application pursuant to section 10(a)(1)(B) of the Federal Endangered Species Act. HCPs are an evolving tool. Initially designed to address individual projects, HCP are currently more likely to be broad-based plans covering a large area. The geographically broader HCP is used as the basis for an incidental take permit for any project within the boundaries of the HCP. Regardless of size, a HCP should include measures that, when implemented, minimize and mitigate impacts to the designated species to the maximum extent possible, and the means by which these efforts will be funded.

The primary objective of the NCCP and HCP programs is to conserve natural communities at the ecosystem level while accommodating compatible land use. The programs seek to anticipate and prevent the controversies and gridlock that can be caused by species' listings. Instead, they focus on the long-term stability of wildlife and plant communities. The programs also include key stakeholders in the development process for the plan.

Table 5-16. Habitat Conservation Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
43	Support Completion of Yuba-Sutter NCCP / HCP Support the completion of the Yuba-Sutter NCCP / HCP program. As part of this program: ▪ Support tools and programs as part of the Yuba-Sutter NCCP/HCP that has the ability to optimize encroachment reduction, protection of significant natural resources, and open space and agricultural preservation. ▪ Integrate Beale natural resource planning with efforts in the Yuba-Sutter NCCP/HCP program.	■	■	■	■	*Primary Responsibility* ▪ Yuba-Sutter NCCP / HCP Participating Agencies *Partners* ▪ Beale AFB ▪ Agencies (State and Federal Regulatory Agencies)			■

Hazard Mitigation Plans

Hazard Mitigation is defined as any sustained, cost-effective action taken to reduce or eliminate long-term risk to people, property, and the environment from natural and man-made hazards and their effects. Hazard Mitigation Plans include actions that have a positive impact over an extended period of time. This distinguishes them from emergency planning or emergency services, which are associated with preparedness for immediate response to, and short-term recovery from, a specific event. Hazard mitigation actions, which can be used to eliminate or minimize the risk to life and property, fall into three categories: (1) those that keep the hazard away from people, property, and structures; (2) those that keep people, property, and structures away from the hazard; and (3) those that reduce the impact of the hazard, such as property insurance.

A hazard mitigation plan identifies hazard mitigation goals, objectives, and recommended actions that will reduce or prevent injury to people and damage to property from natural and man-made hazards. The hazard mitigation plan provides guidance for hazard mitigation activities in the designated planning area.

For land use compatibility planning, hazard mitigation planning applies when the actions of one group increase the hazard potential for another group. For example, when development outside an installation increases flood risk on an installation or when a natural area on an installation becomes a wildfire hazard to a nearby community due to poor management.

Table 5-17. Hazard Mitigation Plan Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
44	Update Plans to Reflect Current and Former Military Operations Incorporate and update Beale AFB operations and former federal properties associated with Camp Beale in Hazard Mitigation Plans.	■	■	■	■	*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ U.S. Army Corps of Engineers ■ Beale AFB		■	■

Memorandum of Understanding

A Memorandum of Understanding (MOU) is a contract between two or more government entities. The governing bodies of the participating public agencies must take appropriate legal actions, often adoption of an ordinance or, resolution, before such agreements become effective. These agreements are also known as Joint Powers Agreements or Interlocal Agreements.

California Government Code, Section 6500 et seq. allows public agencies to enter into joint agreements. The definition of public agency includes, but is not limited to, the federal government or a federal agency, the state or any state department or agency, a county, city, county board of education or school superintendent, public corporation, or public district.

The purpose of an MOU is to establish a formal framework for coordination and cooperation. These agreements may also assign roles and responsibilities for all of the agreement's signatories. MOUs generally promote:

- Coordination and collaboration by sharing information on specific community development proposals, such as rezonings and subdivisions.
- Joint communication between participating jurisdictions and the military ensuring that residents, developers, businesses, and local decision makers have adequate information about military operations, possible impacts on surrounding lands, procedures to submit comments, and any additional local measures to promote land use compatibility around installations.

- Formal agreement on land use planning activities, such as implementation of a Joint Land Use Study (JLUS).

Table 5-18. MOU Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
45	**Develop General MOU to Implement JLUS Process** Member jurisdictions and agencies of the JLUS Coordinating Committee should develop a general MOU to be executed at the beginning stages of implementation of the recommendations adopted by each jurisdiction. This MOU will detail the expectations for coordination and agreement to establish and maintain the JLUS Coordinating Committee.	■	■	■		*Primary Responsibility* ■ JLUS Coordinating Committee Member Agencies *Partners* ■ Technical Experts (as needed)	■		
46	**Develop Specific MOUs to Implement JLUS Recommendations** Sign specific MOUs between individual jurisdictions and Beale AFB as tools are adopted. MOUs should cover: ■ Interagency coordination (see Strategies under "Communication / Coordination" in Table 5-13) ■ Other tools involving the interaction of two or more jurisdictions, agencies, or Beale AFB.	■	■	■		*Primary Responsibility* ■ Local Jurisdictions ■ Beale AFB ■ Agencies (State and Federal Regulatory Agencies) *Partners* ■ None Identified	■		

Real Estate Disclosure

Prior to the transfer of real property to a new owner, California law requires sellers and their agents to disclose all actual known facts related to the condition of the property (California Civil Code, Section 1102). This disclosure should include noise or other proximity impacts associated with property located near a military installation or operations area.

The purpose of real estate disclosure is to protect the seller, buyer, and sales agent from potential litigation resulting from specified conditions (i.e., hazard areas, existing easements). Real estate disclosure can be used to inform potential buyers and renters of the possible affects from nearby military installations. This disclosure can be one of the most practical and cost effective land use compatibility tools. California has enabled local governments, working in cooperation with the real estate industry, to establish noise disclosure by regulation or voluntary initiation (California Civil Code, Section 1102).

Table 5-19. Real Estate Disclosure Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
47	**Develop an Enhanced Real Estate Disclosure Ordinance** Develop an enhanced Real Estate Disclosure Ordinance to ensure appropriate information about the missions and operations at Beale AFB are fully disclosed at the earliest possible point in the interaction between realtor or real estate agent and a buyer or renter. ▪ Work with State Real Estate Board and local real estate representatives to develop and implement adequate language for inclusion in disclosure notices. ▪ Work with State Real Estate Board and local real estate representatives to ensure compliance with notification requirements. ▪ Local jurisdictions and Beale AFB should work cooperatively to make available the information required for real estate disclosure (as defined by this strategy) regarding operational issues at Beale AFB (aircraft, gunnery, and explosive noise potential; overflight; light and glare; etc.). ▪ Provide disclosure of potential unexploded ordnance issues for any property on or adjacent to Beale AFB or the former Camp Beale area.	■	■	■		*Primary Responsibility* ▪ JLUS Coordinating Committee *Partners* ▪ California Department of Real Estate ▪ California Department of Toxic Substances ▪ Project Developers ▪ Real Estate Professionals ▪ Regional Water Quality Control Board ▪ US Air Force	■		■

Zoning / Subdivision / Other Local Regulations

Zoning

Zoning is the division of a jurisdiction into districts (zones) within which permissible uses are prescribed and restrictions on building height, bulk, layout, and other requirements are defined.

The primary purpose of zoning is the protection of public health, safety, and welfare. Refining this goal further, zoning provides opportunities for the implementation of regulations supporting land use compatibility, as shown in the following examples.

- Protection against:
  - Physical danger, particularly safety considerations for properties in proximity to military ranges or within military flight areas.
  - Nuisances associated with military operations, such as noise, vibration, air emissions, etc.
  - Heavy traffic flows or truck routes in residential areas.
  - Aesthetic nuisances impacting military installations.

  - Psychological nuisances, such as perceived and actual dangers associated with military operations.
  - Light and glare, air emissions, and loss of privacy.
- Provision of open space and agricultural preservation.
- Zoning and the general plan are inexorably tied to each other. Policies recommended within the general plan should be reflected within the zoning ordinance or development code.
- Zoning ordinances requiring rigid separation of uses or inflexible provisions can make creative solutions to land use compatibility, such as cluster development, difficult or impossible.
- When designating military compatible use districts, the ordinance should recognize that the local community has no regulatory control over development or activities on federal property.

Subdivisions

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 its lots, and the types of required improvements, such as street construction, sewer lines, and drainage facilities.

There are two types of subdivisions:

- Parcel maps, which create fewer than five new lots; and,
- Tentative subdivision maps (also called tract maps), which create five or more new lots.

Applications for both types of subdivisions must be submitted to the local government for consideration.

Subdivision ordinances set forth the minimum requirements deemed necessary to protect the health, safety, and welfare of the public. More specifically, the subdivision ordinances are designed to accomplish the following initiatives.

- Assure that effective protection is given to the natural resources of the community, especially ground water and surface waters.
- Encourage well-planned subdivisions through the establishment of adequate design standards.
- Facilitate adequate provisions for transportation and other public facilities.
- Secure the rights of the public with respect to public lands and waters.

- Improve land records by the establishment of standards for surveys and plats.
- Safeguard the interests of the public, the homeowner, the subdivider, and units of local government.
- Prevent, where possible, excessive governmental operating and maintenance costs.

Table 5-20. Zoning / Subdivision Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
48	Encourage Area Planning Approach Encourage the use of specific plans, planned unit developments, or other techniques to help minimize conflicts and enhance compatibility between Beale AFB and new land uses.	■	■	■		*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ None Identified			■
49	Incorporate AICUZ Compatibility Guidelines, Part 1 Land use designations and density restrictions in local general plans should be designed to maintain compatibility with airfield operations utilizing the airfield planning guidance provided by Caltrans and the recommendations in the Beale AICUZ, as defined under Strategy 9.	■	■	■		*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ None Identified		■	
50	Incorporate AICUZ Compatibility Guidelines, Part 2 Modify existing zoning ordinances and subdivision regulations to support the use of the Air Force Land Use Compatibility Guidelines for areas within the outer edge of the 2005 AICUZ noise contour for the Future Potential Mission 65 CNEL scenario (as defined under Strategy 9).	■	■			*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ None Identified		■	
51	Ensure FAA Part 77 Compliance For all structures, ensure compliance with FAA Part 77 requirements when establishing height regulations or restrictions. NOTE: For further information on Part 77, please refer to the discussion under Issue #3, Vertical Obstructions, in Section 3 and Appendix F.	■	■	■	■	*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ Beale AFB ■ FAA			■
52	Develop or Update Light and Glare Controls Develop or update light and glare controls to protect the operational environment near Beale AFB. These controls should be designed to reduce the amount of light that spills into surrounding areas and impacts regional ambient illumination. ■ For Yuba County, the county's existing ordinance should be reviewed and updated as necessary to ensure it fully implements the applicable strategies contained in the Beale JLUS.	■	■	■	■	*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ Beale AFB	■		

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
53	Modify Subdivision Regulations, Disclosure Modify subdivision regulations to require appropriate disclosures are recorded as part of a property's deed upon sale of land. Disclosure shall notify purchasing party of Beale AFB operations and potential compatibility issues. See also Strategies 13, 40, 47, and 58	■	■	■		*Primary Responsibility* ■ Local Jurisdictions *Partners* ■ Beale AFB			■

Other

The strategies that did not fit specifically under one of the previous tool categories are documented below.

Table 5-21. Other Strategies

#	Strategy	MIA I	MIA IIA	MIA IIb	MIA III	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
54	Reduce Bird and Wildlife Attraction Near Base For surface mining, include measures to reduce bird and wildlife attractions as part of all mining applications, remediation plans, and other SMARA reviews. ■ Consultation with Beale officials should be incorporated into plan review. * Note: For MIA IIb and III, consultation with Beale officials and mitigations would only apply for activities in the approach and departure zones.	■	■	■*	■*	*Primary Responsibility* ■ California Department of Mines and Geology *Partners* ■ Beale AFB ■ Local Jurisdictions			■
55	Pursue Additional Missions at Beale AFB State and federal legislators will work with interested local jurisdictions, agencies, and organizations to advocate for additional, compatible missions at Beale AFB.	■	■	■	■	*Primary Responsibility* ■ Governor's Office ■ DOD ■ Local Jurisdictions *Partners* ■ Beale AFB			■
56	Encourage Research on Noise Attenuation Encourage state and federal agencies to promote research and funding for noise attenuation and retrofit programs.	■	■	■	■	*Primary Responsibility* ■ OPR *Partners* ■ Beale AFB			■

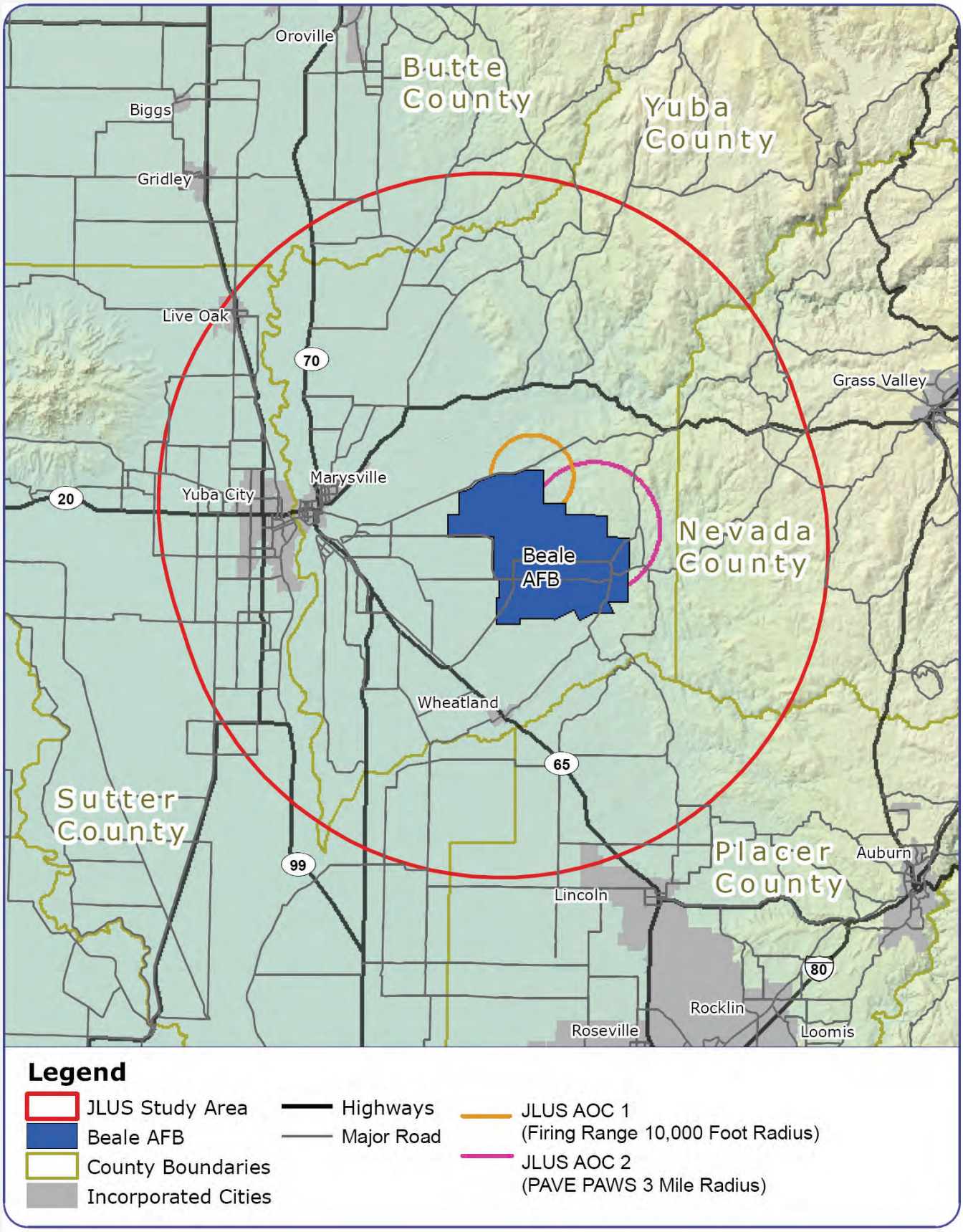
5.3 JLUS Areas of Concern – Strategies

The following strategies apply to the two AOC identified on Figure 5-3. The two AOC were developed based on sample information available for electromagnetic interference (Beale study) and modeled noise information for a gunnery range using an M-60 machine gun. The information used to define the two AOCs are included in Appendices C and D, respectively. The size and shape of the AOC may be refined in the future as part of Strategy #59.

Table 5-22. Areas of Concern Strategies

#	Strategy	AOC 1	AOC 2			Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
57	Define and Establish JLUS Areas of Concern Establish necessary JLUS AOC to define areas where additional notification should be provided to prospective landowners and developers. ▪ Establish a JLUS AOC for the gunnery range located at the northwest edge of Beale AFB. This AOC, shown on Figure 5-3, includes the areas likely to perceive a nuisance from the single-event noise at the range. Information from the US Army Center for Health Promotion & Preventive Medicine (USACHPPM) was used to establish this JLUS AOC based on a 65 dB, single event level for the use of an M-60 weapon. ▪ Establish a JLUS AOC for the PAVE PAWS facility on Beale AFB. Recommend that Yuba County, in consultation with Beale AFB, refine the size of this area. In the interim, and based on available information, recommend that a 3 mile radius be used (see Figure 5-3).	■	■			*Primary Responsibility* ▪ Local Jurisdictions ▪ Beale AFB *Partners* ▪ Agencies (State and Federal Regulatory Agencies)	■		■
58	Enhanced Disclosure Requirements in AOC Work with California Department of Real Estate, local real estate professionals, and military representatives to develop and implement adequate language for inclusion within disclosure notices pertaining to noise, safety, or electromagnetic interference issues associated with the military missions. Notice shall also be provided that radio transmission (such as Ham radio operation) is restricted in areas near Beale AFB.	■	■			*Primary Responsibility* ▪ Local Jurisdictions ▪ Beale AFB *Partners* ▪ California Department of Real Estate ▪ California Department of Toxic Substances ▪ Project Developers ▪ Real Estate Professionals ▪ Regional Water Quality Control Board ▪ US Air Force	■		■

#	Strategy	AOC 1	AOC 2			Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
59	Investigate Development of Electrical / Electromagnetic Interference Ordinance As information becomes available, Beale AFB will work with local jurisdictions to develop guidelines to identify and address future concerns, such as the development of an electrical/ electromagnetic interference ordinance.		■			*Primary Responsibility* ■ Local Jurisdictions ■ Beale AFB ■ DOD *Partners* ■ None Identified			■



Areas of Concern | **Figure 5-3**

5.4 Strategy Summaries

The following section provides a set of summary tables designed to allow readers to look up applicable strategies based on the following categories:

- MIA location (Tables 5-23 and 5-24);
- Responsible or partner jurisdiction, organization or agency (Table 5-25); and
- Implementation timeline (Table 5-26).

Each table lists the strategy number and title. Details on each strategy can be found in Tables 5-1 through 5-22 presented earlier in this section. Locations of MIAs are shown on Figure 5-2, and AOCs are shown on Figure 5-3.

Table 5-23. Strategies by MIA Designation

#	Strategy	MIA I	MIA IIa	MIA IIb	MIA III
1	Define and Establish MIA Zones	■	■	■	■
2	Identify Priority Locations for Acquisition	■	■		
3	Establish Voluntary Acquisition Program	■	■		
4	Establish Conservation Easement Program	■	■	■	
5	Develop Transfer of Development Rights Program	■	■		
6	Use Land and Water Conservation Fund Grants	■	■	■	
7	Use DOD Easement Partnership Program	■	■		
8	Focus Conservation Partnering Opportunities	■	■		
9	Implement AICUZ Recommendations	■	■		
10	Update ALUCP to Reflect Current AICUZ	■			
11	Update ALUCP and Associated Ordinances	■			
12	Involve Beale AFB Officials in Airport Planning	■	■	■	■
13	Develop or Update Avigation Easement Programs	■			
14	Develop and Distribute BASH Educational Materials	■	■	■	■
15	Control Bird and Wildlife Attractions Near Base	■	■	■	
16	Flight Operations for Future Missions	■	■	■	■

#	Strategy	MIA I	MIA IIa	MIA IIb	MIA III
17	Update Beale AFB General Plan	■	■	■	■
18	Develop Public Summary of Beale AFB General Plan	■	■	■	■
19	Involve Local Jurisdictions in Defining Data Needs	■	■	■	■
20	Sound Attenuation for Occupied Buildings	■	■		
21	Require Appropriate Sound Attenuation for Schools		■	■	
22	Incorporate Compatibility Planning Concepts in CIPs	■	■	■	
23	Ensure Adequate Transportation Infrastructure	■	■	■	■
24	Incorporate Beale Into Regional Infrastructure Planning	■	■	■	■
25	Refer CEQA Documents to Beale AFB	■	■	■	■
26	Refer NEPA Documents to Local Jurisdictions	■	■	■	■
27	Ensure Construction Standards for Noise are Met	■	■		
28	Code Enforcement Relative to Compatibility Concerns	■	■	■	■
29	Establish a JLUS Coordinating Committee	■	■	■	■
30	Establish Procedures for Plan Review and Comment	■	■	■	■
31	Refer Development Applications to Beale for Review and Comment	■	■	■	■
32	Refer Local Proposals to Beale for Review and Comment			■	■
33	Coordination on School Site Planning	■	■		
34	Educational Outreach on Aviation Planning	■	■	■	■
35	Develop and Distribute Public Education Materials	■	■	■	■
36	Beale Public Affairs Liaison to JLUS Coordinating Committee	■	■	■	■
37	Technical Support for Local Decision Making Process	■	■	■	
38	Actively Seek Local Input on Compatibility Issues	■	■	■	■
39	Establish and Maintain Compatibility Clearinghouse	■	■	■	
40	Recommend Deed Restrictions in Impacted Areas		■	■	
41	Updating Local General Plans	■	■	■	■
42	Incorporating Military Housing Needs in Local Housing Elements	■	■	■	■

#	Strategy	MIA I	MIA IIa	MIA IIb	MIA III
43	Support Completion of Yuba-Sutter NCCP / HCP	■	■	■	■
44	Update Plans to Reflect Current and Former Military Operations	■	■	■	■
45	Develop General MOU to Implement JLUS Process	■	■	■	
46	Develop Specific MOUs to Implement JLUS Recommendations	■	■	■	
47	Develop an Enhanced Real Estate Disclosure Ordinance	■	■	■	
48	Encourage Area Planning Approach	■	■	■	
49	Incorporate AICUZ Compatibility Guidelines, Part 1	■	■	■	
50	Incorporate AICUZ Compatibility Guidelines, Part 2	■	■		
51	Ensure FAA Part 77 Compliance	■	■	■	■
52	Develop or Update Light and Glare Controls	■	■	■	■
53	Modify Subdivision Regulations, Disclosure	■	■	■	
54	Reduce Bird and Wildlife Attraction Near Base	■	■	■	■
55	Pursue Additional Missions at Beale AFB	■	■	■	■
56	Encourage Research on Noise Attenuation	■	■	■	■

Table 5-24. Strategies by AOC Designation

#	Strategy	AOC 1	AOC 2
57	Define and Establish JLUS Areas of Concern	■	■
58	Enhanced Disclosure Requirements in AOC	■	■
59	Investigate Development of Electrical / Electromagnetic Interference Ordinance		■

Table 5-25. Strategies by Responsible Party / Partner

As a Responsible Party	As a Partner
Local Jurisdictions 1. Define and Establish MIA Zones 2. Identify Priority Locations for Acquisition 3. Establish Voluntary Acquisition Program 4. Establish Conservation Easement Program 5. Develop Transfer of Development Rights Program 6. Use Land and Water Conservation Fund Grants 8. Focus Conservation Partnering Opportunities 9. Implement AICUZ Recommendations 10. Update ALUCP to Reflect Current AICUZ 11. Update ALUCP and Associated Ordinances 13. Develop or Update Avigation Easement Programs 20. Sound Attenuation for Occupied Buildings 22. Incorporate Compatibility Planning Concepts in CIPs 23. Ensure Adequate Transportation Infrastructure 24. Incorporate Beale Into Regional Infrastructure Planning 27. Ensure Construction Standards for Noise are Met 28. Code Enforcement Relative to Compatibility Concerns 29. Establish a JLUS Coordinating Committee 30. Establish Procedures for Plan Review and Comment 31. Refer Development Applications to Beale for Review and Comment 32. Refer Local Proposals to Beale for Review and Comment 40. Recommend Deed Restrictions in Impacted Areas 41. Updating Local General Plans 42. Incorporating Military Housing Needs in Local Housing Elements 44. Update Plans to Reflect Current and Former Military Operations 46. Develop Specific MOUs to Implement JLUS Recommendations 48. Encourage Area Planning Approach 49. Incorporate AICUZ Compatibility Guidelines, Part 1 50. Incorporate AICUZ Compatibility Guidelines, Part 2 51. Ensure FAA Part 77 Compliance 52. Develop or Update Light and Glare Controls 53. Modify Subdivision Regulations, Disclosure 55. Pursue Additional Missions at Beale AFB 57. Define and Establish JLUS Areas of Concern 58. Enhanced Disclosure Requirements in AOC 59. Investigate Development of Electrical / Electromagnetic Interference Ordinance	Local Jurisdictions 7. Use DOD Easement Partnership Program 14. Develop and Distribute BASH Educational Materials 15. Control Bird and Wildlife Attractions Near Base 16. Flight Operations for Future Missions 26. Refer NEPA Documents to Local Jurisdictions 33. Coordination on School Site Planning 34. Educational Outreach on Aviation Planning 37. Technical Support for Local Decision Making Process 38. Actively Seek Local Input on Compatibility Issues 54. Reduce Bird and Wildlife Attraction Near Base

Order of Presentation

As the most common responsible parties, Local Jurisdictions and Beale AFB are presented first. The other agencies and organizations are presented alphabetically.

As a Responsible Party	As a Partner
Beale AFB 1. Define and Establish MIA Zones 2. Identify Priority Locations for Acquisition 6. Use Land and Water Conservation Fund Grants 7. Use DOD Easement Partnership Program 8. Focus Conservation Partnering Opportunities 14. Develop and Distribute BASH Educational Materials 15. Control Bird and Wildlife Attractions Near Base 16. Flight Operations for Future Missions 17. Update Beale AFB General Plan 18. Develop Public Summary of Beale AFB General Plan 19. Involve Local Jurisdictions in Defining Data Needs 23. Ensure Adequate Transportation Infrastructure 26. Refer NEPA Documents to Local Jurisdictions 27. Ensure Construction Standards for Noise are Met 28. Code Enforcement Relative to Compatibility Concerns 29. Establish a JLUS Coordinating Committee 30. Establish Procedures for Plan Review and Comment 31. Refer Development Applications to Beale for Review and Comment 32. Refer Local Proposals to Beale for Review and Comment 33. Coordination on School Site Planning 35. Develop and Distribute Public Education Materials 36. Beale Public Affairs Liaison to JLUS Coordinating Committee 37. Technical Support for Local Decision Making Process 38. Actively Seek Local Input on Compatibility Issues 39. Establish and Maintain Compatibility Clearinghouse 42. Incorporating Military Housing Needs in Local Housing Elements 46. Develop Specific MOUs to Implement JLUS Recommendations 57. Define and Establish JLUS Areas of Concern 58. Enhanced Disclosure Requirements in AOC 59. Investigate Development of Electrical / Electromagnetic Interference Ordinance	Beale AFB 9. Implement AICUZ Recommendations 10. Update ALUCP to Reflect Current AICUZ 11. Update ALUCP and Associated Ordinances 12. Involve Beale AFB Officials in Airport Planning 21. Require Appropriate Sound Attenuation for Schools 24. Incorporate Beale Into Regional Infrastructure Planning 25. Refer CEQA Documents to Beale AFB 40. Recommend Deed Restrictions in Impacted Areas 41. Updating Local General Plans 43. Support Completion of Yuba-Sutter NCCP/HCP 44. Update Plans to Reflect Current and Former Military Operations 51. Ensure FAA Part 77 Compliance 52. Develop or Update Light and Glare Controls 53. Modify Subdivision Regulations, Disclosure 54. Reduce Bird and Wildlife Attraction Near Base 55. Pursue Additional Missions at Beale AFB 56. Encourage Research on Noise Attenuation

As a Responsible Party	As a Partner
Agencies (includes regulatory, resource, and other as defined in the strategies) 31. Refer Development Applications to Beale for Review and Comment 46. Develop Specific MOUs to Implement JLUS Recommendations	Agencies (includes regulatory, resource, and other as defined in the strategies) 1. Define and Establish MIA Zones 29. Establish a JLUS Coordinating Committee 30. Establish Procedures for Plan Review and Comment 43. Support Completion of Yuba-Sutter NCCP / HCP 57. Define and Establish JLUS Areas of Concern
California Department of Education 21. Require Appropriate Sound Attenuation for Schools 33. Coordination on School Site Planning	California Department of Education None
California Department of Fish and Game None	California Department of Fish and Game 14. Develop and Distribute BASH Educational Materials 15. Control Bird and Wildlife Attractions Near Base
California Department of Housing and Community Development None	California Department of Housing and Community Development 42. Incorporating Military Housing Needs in Local Housing Elements
California Department of Mines and Geology 54. Reduce Bird and Wildlife Attraction Near Base	California Department of Mines and Geology None
California Department of Real Estate None	California Department of Real Estate 40. Recommend Deed Restrictions in Impacted Areas 47. Develop an Enhanced Real Estate Disclosure Ordinance 58. Enhanced Disclosure Requirements in AOC
California Department of Toxic Substances None	California Department of Toxic Substances 47. Develop an Enhanced Real Estate Disclosure Ordinance 58. Enhanced Disclosure Requirements in AOC
California Resources Agency None	California Resources Agency 39. Establish and Maintain Compatibility Clearinghouse
California State Parks None	California State Parks 6. Use Land and Water Conservation Fund Grants

As a Responsible Party	As a Partner
Caltrans, District 3 23. Ensure Adequate Transportation Infrastructure 34. Educational Outreach on Aviation Planning	Caltrans, District 3 None
Caltrans Division of Aeronautics 33. Coordination on School Site Planning 34. Educational Outreach on Aviation Planning	Caltrans Division of Aeronautics 9. Implement AICUZ Recommendations
CEQA Lead Agency 25. Refer CEQA Documents to Beale AFB	CEQA Lead Agency None
DOD 7. Use DOD Easement Partnership Program 23. Ensure Adequate Transportation Infrastructure 55. Pursue Additional Missions at Beale AFB 59. Investigate Development of Electrical / Electromagnetic Interference Ordinance	DOD 39. Establish and Maintain Compatibility Clearinghouse
FAA 34. Educational Outreach on Aviation Planning	FAA 9. Implement AICUZ Recommendations 51. Ensure FAA Part 77 Compliance
Governor's Office 55. Pursue Additional Missions at Beale AFB	Governor's Office None
JLUS Coordinating Committee 19. Involve Local Jurisdictions in Defining Data Needs 39. Establish and Maintain Compatibility Clearinghouse 45. Develop General MOU to Implement JLUS Process 47. Develop an Enhanced Real Estate Disclosure Ordinance	JLUS Coordinating Committee None
Land Trusts None	Land Trusts 3. Establish Voluntary Acquisition Program 4. Establish Conservation Easement Program 5. Develop Transfer of Development Rights Program 8. Focus Conservation Partnering Opportunities
National Park Service None	National Park Service 6. Use Land and Water Conservation Fund Grants
OEA 23. Ensure Adequate Transportation Infrastructure	OEA 7. Use DOD Easement Partnership Program 39. Establish and Maintain Compatibility Clearinghouse

As a Responsible Party	As a Partner
OPR 39. Establish and Maintain Compatibility Clearinghouse 56. Encourage Research on Noise Attenuation	OPR None
Project Developers None	Project Developers 47. Develop an Enhanced Real Estate Disclosure Ordinance 58. Enhanced Disclosure Requirements in AOC
Real Estate Professionals None	Real Estate Professionals 40. Recommend Deed Restrictions in Impacted Areas 47. Develop an Enhanced Real Estate Disclosure Ordinance 58. Enhanced Disclosure Requirements in AOC
Reclamation Districts None	Reclamation Districts 2. Identify Priority Locations for Acquisition
Regional Water Quality Control Board None	Regional Water Quality Control Board 47. Develop an Enhanced Real Estate Disclosure Ordinance 58. Enhanced Disclosure Requirements in AOC
SACOG 10. Update ALUCP to Reflect Current AICUZ 11. Update ALUCP and Associated Ordinances 12. Involve Beale AFB Officials in Airport Planning 23. Ensure Adequate Transportation Infrastructure 24. Incorporate Beale Into Regional Infrastructure Planning	SACOG 1. Define and Establish MIA Zones
Sacramento County Airport System None	Sacramento County Airport System 12. Involve Beale AFB Officials in Airport Planning
School Districts 20. Sound Attenuation for Occupied Buildings 21. Require Appropriate Sound Attenuation for Schools 33. Coordination on School Site Planning	School Districts None
State Legislature None	State Legislature 23. Ensure Adequate Transportation Infrastructure
US Air Force None	US Air Force 17. Update Beale AFB General Plan 18. Develop Public Summary of Beale AFB

As a Responsible Party	As a Partner
	General Plan 47. Develop an Enhanced Real Estate Disclosure Ordinance 58. Enhanced Disclosure Requirements in AOC
US Army Corps of Engineers None	US Army Corps of Engineers 44. Update Plans to Reflect Current and Former Military Operations
US Fish and Wildlife None	US Fish and Wildlife 14. Develop and Distribute BASH Educational Materials 15. Control Bird and Wildlife Attractions Near Base
Water and Sewer Districts 22. Incorporate Compatibility Planning Concepts in CIPs 24. Incorporate Beale Into Regional Infrastructure Planning	Water and Sewer Districts None
Yuba-Sutter NCCP / HCP Participating Agencies 43. Support Completion of Yuba-Sutter NCCP / HCP	Yuba-Sutter NCCP / HCP Participating Agencies 2. Identify Priority Locations for Acquisition 8. Focus Conservation Partnering Opportunities

Table 5-26. Implementation Timeline

Strategies Corresponding with 0 to 2-Year Strategy Timeline	
1. Define and Establish MIA Zones 2. Identify Priority Locations for Acquisition 3. Establish Voluntary Acquisition Program 4. Establish Conservation Easement Program 5. Develop Transfer of Development Rights Program 9. Implement AICUZ Recommendations 10. Update ALUCP to Reflect Current AICUZ 11. Update ALUCP and Associated Ordinances 13. Develop or Update Avigation Easement Programs 14. Develop and Distribute BASH Educational Materials 29. Establish a JLUS Coordinating Committee 30. Establish Procedures for Plan Review and Comment 33. Coordination on School Site Planning 35. Develop and Distribute Public Education Materials	36. Beale Public Affairs Liaison to JLUS Coordinating Committee 39. Establish and Maintain Compatibility Clearinghouse 41. Updating Local General Plans 45. Develop General MOU to Implement JLUS Process 46. Develop Specific MOUs to Implement JLUS Recommendations 47. Develop an Enhanced Real Estate Disclosure Ordinance 52. Develop or Update Light and Glare Controls 57. Define and Establish JLUS Areas of Concern 58. Enhanced Disclosure Requirements in AOC

Strategies Corresponding with 3 to 5-Year Strategy Timeline	
17. Update Beale AFB General Plan 18. Develop Public Summary of Beale AFB General Plan 19. Involve Local Jurisdictions in Defining Data Needs 23. Ensure Adequate Transportation Infrastructure 41. Updating Local General Plans	42. Incorporating Military Housing Needs in Local Housing Elements 44. Update Plans to Reflect Current and Former Military Operations 49. Incorporate AICUZ Compatibility Guidelines, Part 1 50. Incorporate AICUZ Compatibility Guidelines, Part 2

Strategies Corresponding with Ongoing Strategy Timeline	
1. Define and Establish MIA Zones 2. Identify Priority Locations for Acquisition 5. Develop Transfer of Development Rights Program 6. Use Land and Water Conservation Fund Grants 7. Use DOD Easement Partnership Program 8. Focus Conservation Partnering Opportunities 9. Implement AICUZ Recommendations 10. Update ALUCP to Reflect Current AICUZ 11. Update ALUCP and Associated Ordinances 12. Involve Beale AFB Officials in Airport Planning 14. Develop and Distribute BASH Educational Materials 15. Control Bird and Wildlife Attractions Near Base 16. Flight Operations for Future Missions 18. Develop Public Summary of Beale AFB General Plan 19. Involve Local Jurisdictions in Defining Data Needs 20. Sound Attenuation for Occupied Buildings 21. Require Appropriate Sound Attenuation for Schools 22. Incorporate Compatibility Planning Concepts in CIPs 23. Ensure Adequate Transportation Infrastructure 24. Incorporate Beale Into Regional Infrastructure Planning 25. Refer CEQA Documents to Beale AFB 26. Refer NEPA Documents to Local Jurisdictions 27. Ensure Construction Standards for Noise are Met 28. Code Enforcement Relative to Compatibility Concerns 29. Establish a JLUS Coordinating Committee 31. Refer Development Applications to Beale for Review and Comment	32. Refer Local Proposals to Beale for Review and Comment 33. Coordination on School Site Planning 34. Educational Outreach on Aviation Planning 35. Develop and Distribute Public Education Materials 36. Beale Public Affairs Liaison to JLUS Coordinating Committee 37. Technical Support for Local Decision Making Process 38. Actively Seek Local Input on Compatibility Issues 39. Establish and Maintain Compatibility Clearinghouse 40. Recommend Deed Restrictions in Impacted Areas 41. Updating Local General Plans 42. Incorporating Military Housing Needs in Local Housing Elements 43. Support Completion of Yuba-Sutter NCCP / HCP 44. Update Plans to Reflect Current and Former Military Operations 47. Develop an Enhanced Real Estate Disclosure Ordinance 48. Encourage Area Planning Approach 51. Ensure FAA Part 77 Compliance 53. Modify Subdivision Regulations, Disclosure 54. Reduce Bird and Wildlife Attraction Near Base 55. Pursue Additional Missions at Beale AFB 56. Encourage Research on Noise Attenuation 57. Define and Establish JLUS Areas of Concern 58. Enhanced Disclosure Requirements in AOC 59. Investigate Development of Electrical / Electromagnetic Interference Ordinance

Section 6

Acronyms

6

Acronyms

A

AB	Assembly Bill
AC	Advisory Committee
ACSC	Areas of Critical State Concern
AFB	Air Force Base
AFCEE	Air Force Center for Engineering and the Environment
AFCOMAC	Air Force Combat Ammunition Center
AGL	Above Ground Level
AICP	American Institute of Certified Planners
AICUZ	Air Installation Compatible Use Zone (also: Air Installations Compatible Use Zones)
AIPD	Airfield Influence Planning District
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AOC	Area of Concern
APZ	Accident Potential Zone
ARW	Air Refueling Wing
AT / FP	Anti-Terrorism / Force Protection

B

BASH	Bird / Wildlife Aircraft Strike Hazard
BRAC	Base Realignment and Closure

C

Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CIP	Capital Improvements Program
CLUP	Comprehensive Land Use Plan
CNEL	Community Noise Equivalent Level
CUP	Conditional Use Permit
CZ	Clear Zone

D

dB	Decibel
dBA	A-weighted decibel
DNL	Day-Night Average Sound Level, *see also Ldn*
DOD	Department of Defense
DTSC	California Department of Toxic Substance Control

E

EA	Environmental Assessment
ECS	Expeditionary Combat Support
EE / CA	Engineering Evaluation and Cost Analysis
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
ESQD	Explosive Safety Quantity Distance

F

FAA	Federal Aviation Administration
FONSI	Finding of No Significant Impact

G

GIS	Geographic Information System

H

HCP	Habitat Conservation Plan

I

ICBM	Intercontinental Ballistic Missiles
ICRMP	Integrated Cultural Resources Management Plan
IFR	Instrument Flight Rules
IG	Intelligence Group
INM	Integrated Noise Model
INMRP	Integrated Natural Resources Management Plan

J

JLUS	Joint Land Use Study

L

LAFCO	Local Agency Formation Commission
Ldn	Day-Night Average Sound Level, *see also DNL*
Leq	Equivalent Sound Level
LLC	Limited Liability Corporation
LWCF	Land and Water Conservation Fund
LUO	Land Use Objectives
LUP	Land Use Policy
LUI	Land Use Implementation

M

MEC	Munition and Explosive of Concern
MIA	Military Influence Area
MIDD	Military District Disclose District
MIOD	Military Influence Overlay District
MIPD	Military Influence Planning District
MOU	Memorandum of Understanding
MSR	Municipal Service Review
MTP	Metropolitan Transportation Plan

N

NACO	National Association of Counties
NAS	National Academies of Sciences
NAWS	Naval Air Weapons Station
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
NM	Nautical Miles
NRHP	National Register of Historic Places
NTC	National Training Center

O

OEA	Office of Economic Adjustment
OPD	Operations Per Day
OPR	Governor's Office of Planning and Research

P

PAVE PAWS	PAVE Phased Array Warning System

R

RI / FS	Remedial Investigation / Feasibility Study
RMI	Region of Military Influence
RW	Reconnaissance Wing

S

SACOG	Sacramento Area Council of Governments
SB	Senate Bill
SHPO	State Historic Preservation Office
SI	Site Inspection
SLBM	Sea-Launched Ballistic Missiles
SMARA	Surface Mine and Reclamation Act
SOI	Sphere of Influence
SUA	Special Use Airspace
SUP	Special Use Permit
SWS	Space Warning Squadron

T

TC	Technical Committee
TDR	Transfer of Development Rights
TLF	Transient Lodging Facility

U

UAV	Unmanned Aerial Vehicle
UOQ	Unaccompanied Officer Quarters
USACE	United States Army Corps of Engineers

V

VAQ	Visiting Airmen Quarters
VOQ	Visiting Officer Quarters

W

WWTP	Waste Water Treatment Plant

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