

EXECUTIVE SUMMARY

PURPOSE

The Joint Land Use Study (JLUS) program managed by the Department of Defense (DoD) Office of Economic Adjustment (OEA), Office of the Secretary of Defense, is a Department of Defense initiative providing grants to state and local governments to participate with military installations in developing advisory planning documents that promote compatible land use near and around a military installation.

The JLUS program encourages cooperative land use planning between military installations and the adjacent communities so future community growth and development are compatible with the training and operational missions of the installation. It is more inclusive in scope than just noise and accident potential, and is more public in nature than the Air Installations Compatible Use Zones (AICUZ) program. Similar to the AICUZ program, the JLUS is a cooperative land use planning effort between the affected local government(s) and neighboring military installation. While a local or regional agency takes the lead as the Study Sponsor in conducting the civilian driven JLUS process, the AICUZ is a technical military report. The JLUS process typically involves various local community interests along with the military installation, and the study is a locally-produced product. Under this arrangement, there is a greater success of developing strategies to promote compatible land use policies that can be incorporated into the local jurisdiction's planning documents.

The Kings County Association of Governments (KCAG) is the JLUS Study Sponsor on behalf of the City of Lemoore, Fresno County, and Kings County and is responsible for leadership, coordination, and management of all study activities. A Policy Committee of elected officials has been established to guide the JLUS process and make recommendations for coordination between Naval Air Station Lemoore (NASL) and local governments. A Technical Working Group of staff members from local jurisdictions, regulatory agencies, stakeholder groups, and

the military are providing support to the Policy Committee and project team in the collection and review of land use planning information. Funding for the JLUS is being provided by a grant from the OEA.

STUDY GOALS AND OBJECTIVES

The overall goals of the NASL JLUS are:

- Identify land use issues that may impact the operations of NASL
- Identify strategies Kings County, City of Lemoore, and Fresno County can pursue to ensure incompatible development does not impact the operational utility of NASL
- Create a recommended action plan to guide future planning so all involved parties benefit

The overall objectives of this study supporting the above stated goals are:

- Involve the public in all stages of the planning process
- Map recent and future planned development activity
- Identify areas where present land use conflicts occur
- Identify areas where future land use conflicts could occur
- Identify locally applicable and relevant strategies for promoting compatible land uses
- Recommend changes to local government land use policies and documents that would help to accomplish JLUS objectives
- Develop a final action plan with specific recommendations and implementation strategies that have broad support from stakeholders.
- Integrate information from the NASL 2011 AICUZ study
- Develop long-term regional planning policies for high noise areas (65+ dB CNEL) surrounding NASL with consideration of possible future aircraft and mission scenarios

APPROACH

The approach to this report is intended to describe and analyze the issues pertaining to existing and future conditions, and make recommendations for each jurisdiction independently. The organization of each of the seven individual sections by county or city provides a user-friendly document for the public and direct access to appropriate information for each jurisdiction.

The approach for the NASL JLUS is based on three key elements summarized below and in **Figure ES-1**:

- Identify Areas of Concern for Each Jurisdiction
- Develop Potential Strategies to Address the Identified Areas of Concern
- Provide Recommendations for Each Jurisdiction

Issues. Based on information provided by NASL and meetings and discussions with the NASL JLUS Technical Working Group which includes representatives from each jurisdiction in the study area and NASL, areas of concern were identified with respect to encroachment around NASL. During the various public meetings and Public Open Houses, the areas of concern were identified and explained.

Table ES-1 provides a matrix identifying the areas of concern with respect to each jurisdiction presented at public meetings. **Figure ES-2** includes a summary of all areas of concern for the various jurisdictions listed together beneath the “Identify Areas of Concern for Each Jurisdiction” box. All of the areas of concern listed do not necessarily apply to each jurisdiction.

Potential Strategies. A menu of potential strategies related to land use and policies and procedures was developed with opportunities to address the various areas of concern. This menu was also presented to the Technical Working Group and at public meetings showing the means and methods analyzed as part of the NASL JLUS to address the areas of concern. **Figure ES-3** also includes a summary of the potential strategies developed under the “Develop Potential Strategies” box.

NASL JLUS Recommendations. Recommendations for each jurisdiction are provided at the end of each section of the report. The recommendations are focused on addressing the areas of concern identified by the analyses performed.

Table ES-2 provides a summary matrix of the recommendations by jurisdiction.

The NASL JLUS was created through the collaboration efforts of the public, NASL JLUS Policy Committee, and the NASL JLUS Technical Working Group.

Public Meetings

As of May 1, 2011, there have been 12 meetings including six Policy Committee Meetings, four Technical Working Group (TWG) Meetings, and two Public Information Meetings to help engage the public in the JLUS process. The following provides a list of meetings for the NASL JLUS where the JLUS was the only purpose of the meeting.



Figure ES-1: JLUS Approach Simplified

LEMOORE JOINT LAND USE STUDY (JLUS) AREAS OF CONCERN		NAS Lemoore Areas of Concern		Check Marks (✓) Indicate that Listed Facilities or, Operations are Impacted by Land Uses or Activities within Local Governments Cited Below		
				Kings County	City of Lemoore	Fresno County
		Ground Control Approach (GCA) Box		✓	✓	✓
		Inter-Governmental Coordination		✓	✓	✓
		Public Schools Funding		✓	✓	✓
		Development Entitlements		✓	✓	✓
		Emergency Response		✓	✓	✓
		FAA Coordination		✓	✓	✓
		Object Heights		✓	✓	✓
		Air Quality		✓	✓	✓
		Infrastructure Expansion	Light Rail	✓	✓	✓
			Utilities	✓	✓	✓
			Roads	✓	✓	✓
		Agriculture	Crop Selection	✓	✓	✓
			Williamson Act	✓	✓	✓
			Lease Program	✓	✓	✓
		Environmentally Sensitive or Critical Habitat Area		✓	✓	✓
		Nighttime Light/Glare Effects		✓	✓	✓
		Bird Air Strike Hazards (BASH)		✓	✓	✓
		Renewable Energy Sites		✓	✓	✓
		Military Aircraft: High Noise Areas	≥ 85 decibels			✓
			80-84 decibels			✓
			75-79 decibels			✓
			70-74 decibels	✓		✓
			≥ 65-69 decibels	✓		✓
		APZ II I Incompatible Uses/Structures		✓		✓
		APZ I Incompatible Uses/Structures				✓
		Clear Zone Incompatibilities				
		Perimeter Boundary Development		✓	✓	✓

Table ES-1: NASL JLUS Areas of Concern Identified by Jurisdiction

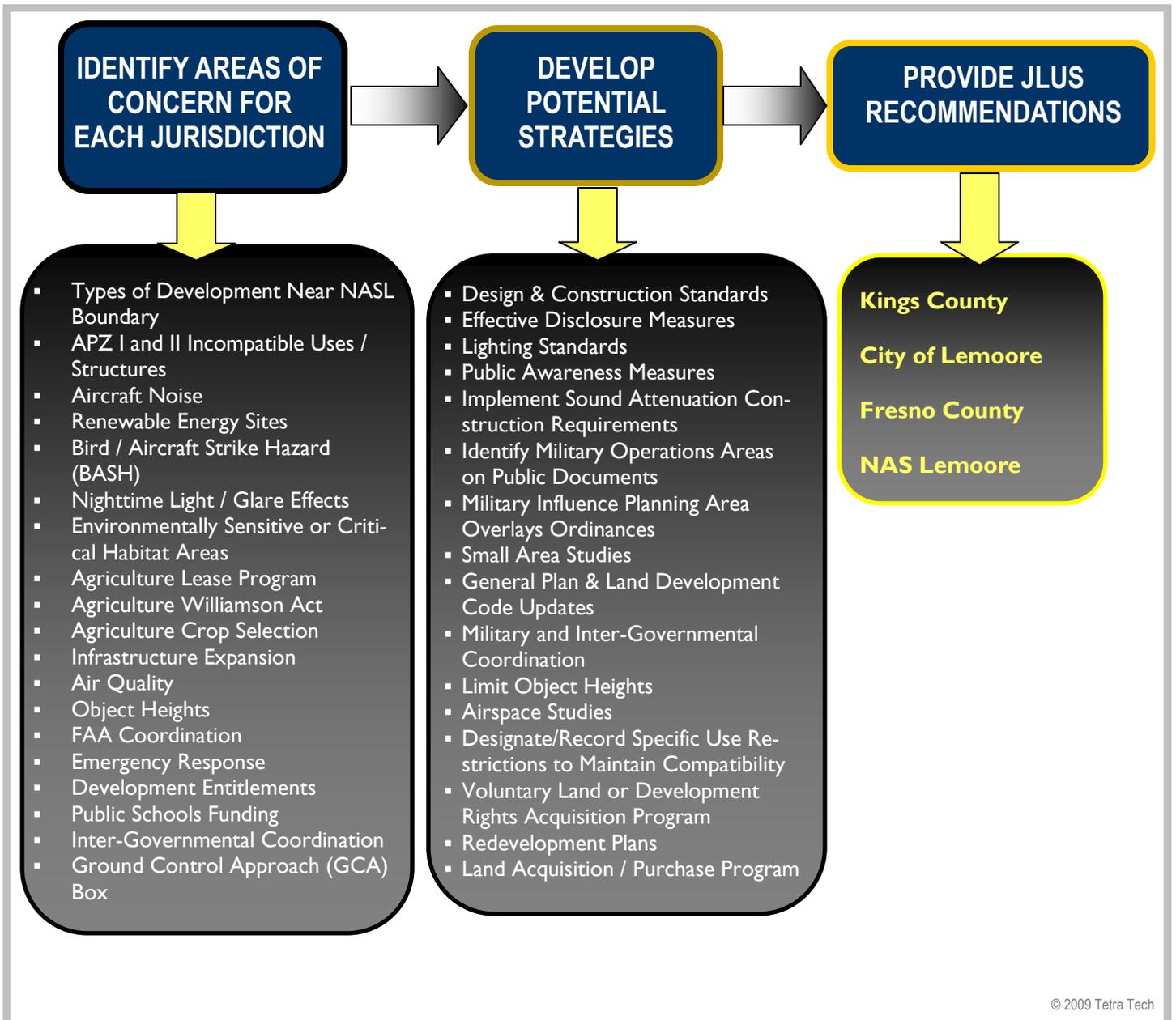


Figure ES-2: NASL JLUS—Areas of Concern Identified and Menu of Potential Strategies to Address the Areas of Concern

		JURISDICTION				
		Kings County	City of Lemoore	Fresno County	NAS Lemoore	
SUMMARY OF RECOMMENDATIONS	ENVIRONMENTAL	Support and/or Collaborate With Ongoing NASL Environmental Stewardship Programs	✓	✓	✓	✓
		Support & Coordinate on the Studying & Implementing Methods to Control BASH	✓	✓	✓	✓
		Develop and Distribute BASH Educational Material				✓
		Develop Policies to Protect Critical Areas Supporting Military Readiness, Agricultural Uses in Compatible Areas, and/or Environmental Conservation	✓	✓	✓	
	NOISE	Continue the Requirement for Noise Attenuation Design and Construction Standards for New Construction in NASL Overlays I and II	✓	✓	✓	
		Establish NASL Overlay Districts I, II, and III	✓	✓	✓	
		Revise Land Use Regulations, As Required, to be Compatible with Overlay Designations	✓	✓	✓	
		Develop & Implement Plan to Construct Hush House(s) to Buffer Jet Noise from Engine Run-ups & Tests				✓
	LAND USE	Monitor Land Use at/near Transportation Corridors and/or Hubs	✓	✓	✓	
		Limit Object Heights in NASL Overlays I, II, and III	✓	✓	✓	
		Implement Lighting Standards to Avoid Glare and Reflection	✓	✓	✓	
		Develop Policies to Protect Critical Areas Supporting Military Readiness, Agricultural Uses in Compatible Areas, and/or Environmental Conservation	✓	✓	✓	✓
		Establish NASL Overlay Districts I, II, and III	✓	✓	✓	
		Update General Plans to Include Language Meeting State Requirements Designed to Strengthen Uses Compatible to NASL Mission Activities	✓	✓	✓	
		Revise Land Use Regulations, As Required, to be Compatible with Overlay Designations	✓	✓	✓	
		Establish Technical Standards for Renewable Energy Facilities Within NASL Overlay Zones I, II, and III	✓	✓	✓	✓
		Implement Effective Disclosure Measures	✓	✓	✓	
		Participate in Small Area Study Creating Strategies for Compatible Development in the GCA Box	✓	✓	✓	✓
	COORDINATION	Continue Ongoing Coordination with the FAA	✓	✓	✓	✓
		Implement Public Awareness Measures	✓	✓	✓	✓
		Support and/or Collaborate with School Districts Seeking Additional Funding Related to NASL Growth	✓	✓	✓	✓
		Collaborate with Local Jurisdictions to Establish NASL Overlay District Zone Designations	✓	✓	✓	✓
		Continue Cross-Jurisdictional Collaboration and Formalize a Coordination Policy in Development Review and Planning Process	✓	✓	✓	✓
		Collaborate with the KCAG as Lead Facilitator of the JLUS Implementation Activities	✓	✓	✓	✓
		Adopt Resolution Supporting the JLUS Recommendations and Implementation	✓	✓	✓	

Table ES-2: NASL JLUS Recommendation Summary Matrix by Jurisdiction

<u>Date</u>	<u>Meeting Description</u>
8 Jul 2010	Public Meeting #1
9 Jul 2010	Policy Committee Meeting #1
15 Oct 2010	TWG Meeting #1
5 Nov 2010	TWG Meeting #2
30 Nov 2010	TWG Meeting #3
30 Nov 2010	Public Information Meeting #2
1 Dec 2010	Policy Committee Meeting #2
22 Feb 2011	TWG Meeting #4
22 Feb 2011	Policy Committee Meeting #3
16 Mar 2011	TWG Meeting #5
17 Mar 2011	Policy Committee Meeting #4
4 May 2011	Policy Committee Meeting #5
24 Jun 2011	Policy Committee Meeting #6

There have also been numerous one-on-one meetings with staff from the three jurisdictions and NASL from the initial data collection phase through the data analysis and development of strategies and recommendations. Additional public outreach has also included press releases to local media outlets, responses to queries from interested citizens and stakeholder groups, activation of a JLUS website (www.lemoorejlus.com), and published JLUS brochure.

NASL JLUS Policy Committee

The NASL JLUS Policy Committee was created to set policy decisions regarding this document. The Policy Committee is comprised of representatives from the local jurisdictions (Fresno County, Kings County, and City of Lemoore) and an *ex-officio* member from NASL. Specific members of the Committee include the following:

- Judy Case, Supervisor, Fresno County
- Capt. James Knapp, NASL (*ex officio*)
- John Murray, Councilmember, City of Lemoore
- Joe Neves, Supervisor, Kings County
- John Plourde, Councilmember, City of Lemoore
- Doug Verboon, Supervisor, Kings County
- Willard Rodarmel, Mayor, City of Lemoore

NASL JLUS Technical Working Group (TWG)

The staff behind the support of the NASL JLUS is the TWG. The TWG's role is to support the effort of the preparation of the NASL JLUS through assistance with data collection including GIS mapping, attendance at TWG meetings, review of the JLUS Issues, review of potential JLUS Strategies, and review of the JLUS Recommendations. The TWG is comprised of representatives from multiple jurisdictions, agencies, and stakeholder groups included the following:

- California Water Alliance
- Central Union Elementary School District
- City of Lemoore
- College of the Sequoias
- Department of Defense—OEA
- Fresno Council of Governments
- Fresno County
- Gary V. Burrows Inc.
- Hanford Airport
- Hanford Sentinel
- Home Builders Association of Tulare-Kings Co
- Kings Council Association of Governments
- Kings County
- Kings Economic Development Council
- Lemoore Chamber of Commerce
- Lemoore Planning Commission
- Lemoore Union Elementary School District
- Leprino Foods
- Naval Air Station Lemoore (NASL)
- Property Owners
- Recurrent Energy
- Riverdale Chamber of Commerce
- Riverdale Joint Unified School District
- Sequoia Riverlands Trust
- Sol Development Associates
- Tulare basin Wildlife Partners
- West Hills College
- Westlands Water District



SECTION 3
CITY OF LEMOORE
NAS LEMOORE JOINT LAND USE STUDY (JLUS)



SECTION 3 - CITY OF LEMOORE



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SECTION 3.0 - CITY OF LEMOORE

3.1 INTRODUCTION

The City of Lemoore was incorporated in 1900 as a city in Kings County. The City is located west of the City of Hanford and east of NASL in the northern part of Kings County. In 2010, the City's population was estimated to be 25,461 according to the California Department of Finance. As of the 2000 census, there were 6,450 households in the City with an average housing density of 807 units per square mile totaling 19,710 persons. In June 1997, the City of Lemoore annexed approximately 1,432 acres of land located west of State Highway 41, south of the present Industry Way alignment, to a point located between the 21st Ave. and 22nd Ave. alignment, with the Iona Ave. alignment serving as a southern border. The annexation action was approved only after the "Final Environmental Impact Report for the College Park at West Hills Development, General Plan Amendment, Sphere of Influence Amendment, Annexation and Amendment No. Two to the Redevelopment Plan for the Lemoore Redevelopment Project" (referred hereafter as the Final EIR) was prepared. The Executive Summary of the Final EIR defined the major City goals related to this annexation to include: "1) achievement of long-term economic growth of the community in a diverse and efficient manner, 2) achievement of a balanced community providing for needs of all the segments of the City, 3) achievement and maintenance of a sound economic base providing diversified employment opportunities, 4) blight remediation, 5) achievement of General Plan goals and objectives particularly as they relate to jobs/housing balance and other needs of the Lemoore Naval Air Station". The primary issue driving the annexation at the time was the 110 acre donation of land for West Hills College at Lemoore Community College Campus, located in the middle of the annexed area, which was complemented by a variety of land uses around the proposed Campus.

As shown on Page 34 of the Final EIR, the United States Department of Navy was notified during the Notice of Preparation, and two representatives attended the EIR Scoping Meeting held November 5, 1996, but no comments were received from the Navy prior to the document preparation. According to the Final EIR Appendix H – Noise Analysis page 11, the published noise contours in place from the air station at the time showed this entire annexation area was located about three miles outside of the 60 dB CNEL noise contour, and therefore it was determined that aircraft noise in the annexed area was anticipated at being less than 50 dB CNEL. The Final EIR determined that these noise exposure levels "do not represent a significant impact".

In reviewing all of the written comments received during the 1997 EIR process, no written comments were received from NASL on the proposed annexation or land uses. Only one comment received on the EIR document (located in Appendix 8.G.6 of the Final EIR) was on the topic of encroachment; it came from the Kings County Planning Agency requesting that the project's potential of "encroachment on Lemoore NAS" be addressed. The Final EIR includes the City's response (listed in Appendix 9.G.6 of the Final EIR) which stated that the annexation area was within the City's secondary Sphere of Influence, is located more than 4 miles from the nearest Accident Potential Zone and no development should expand west of the westerly boundary of the proposed annexation site. The document further stated that "officials at LNAS did not respond to the Draft EIR and, therefore, the City can only assume that the LNAS is in agreement with the Master Development Plan as proposed".

Beginning in 2006, the City undertook a comprehensive update to the Lemoore General Plan. During the process, NASL personnel participated on the General Plan Steering Committee. As a result, the 2030 General Plan, as adopted by the Lemoore City Council on May 6, 2008, made the following changes for areas west of Highway 41:

1. Reduced future residential development density from an estimated 15,000 persons (1997 annexation land uses) to 10,000 persons (2008 General Plan land uses), over a larger area.
2. Modeled anticipated future noise contours independently based on input provided by the Navy to delineate those areas with greater than 60 dB CNEL. The 2008 contour map in the 2030 General Plan shows much of the area to be in greater than 65 dB CNEL noise contours.
3. Contains policy SN-I-46 which requires stringent noise mitigation policy framework for residential areas with aircraft noise exposure greater than “normally acceptable” (greater than 65 dB CNEL noise contour areas) to mitigate noise through recorded noise disclosures, aviation easements, a buyer beware program, as well as noise insulation construction requirements into the building design to achieve interior noise level reduction of 40 dB in all habitable areas and 45 dB in all bedrooms.
4. Pulled the westerly City Urban Growth Boundary away from NASL approximately ½ mile to the 21st Ave. alignment (which removed approximately 150 acres from future development).
5. Contains policy SN-I-47 to “coordinate with NAS Lemoore to incorporate their Air Installation Compatible Use Zone (AICUZ) study into future updates to the City Zoning Ordinance and General Plan to the extent consistent with the City’s compatibility standards and noise level reduction requirements.

Figure 3-1 shows the City of Lemoore city limits with respect to NASL.

3.2 AREAS OF CONCERN

Based on information provided by NASL and meetings and workshops with the public, JLUS Policy Committee and JLUS Technical Working Group,

areas of concern were identified with respect to encroachment on NASL. During the numerous Public Workshops, Policy Committee meetings, and Technical Working Group meetings, the issues for the City were identified and explored. Appendix A—Lemoore JLUS Public Presentations provides copies of this information plus all public presentations included with this study.

The following are the issues identified for the City of Lemoore with respect to NASL’s mission activities:

- Development Near NASL’s Boundary (within 3 mile Green Belt)
- Military Aircraft Noise
- Renewable Energy Sites
- Bird / Aircraft Strike Hazards (BASH)
- Environmental and Conservation Resources
- Nighttime Light/Glare Effects
- Continuing Compatible and Beneficial Agriculture Uses
- Planned Infrastructure Expansion (Roads, Utilities, and Rail)
- Air Quality
- Object Heights
- Coordination with the Federal Aviation Administration (FAA)
- Emergency Response
- Development Entitlements
- Public Schools Funding
- Inter-Governmental Coordination
- Ground Control Approach (GCA) Box

Each area listed above is described further in the following subsections with descriptions, graphics, and land use analysis providing additional information when necessary.

3.2.1 Development Near NASL’s Boundary

Development within three miles of the boundary of a military installation can create security concerns, promote excessive light during nighttime hours, and/

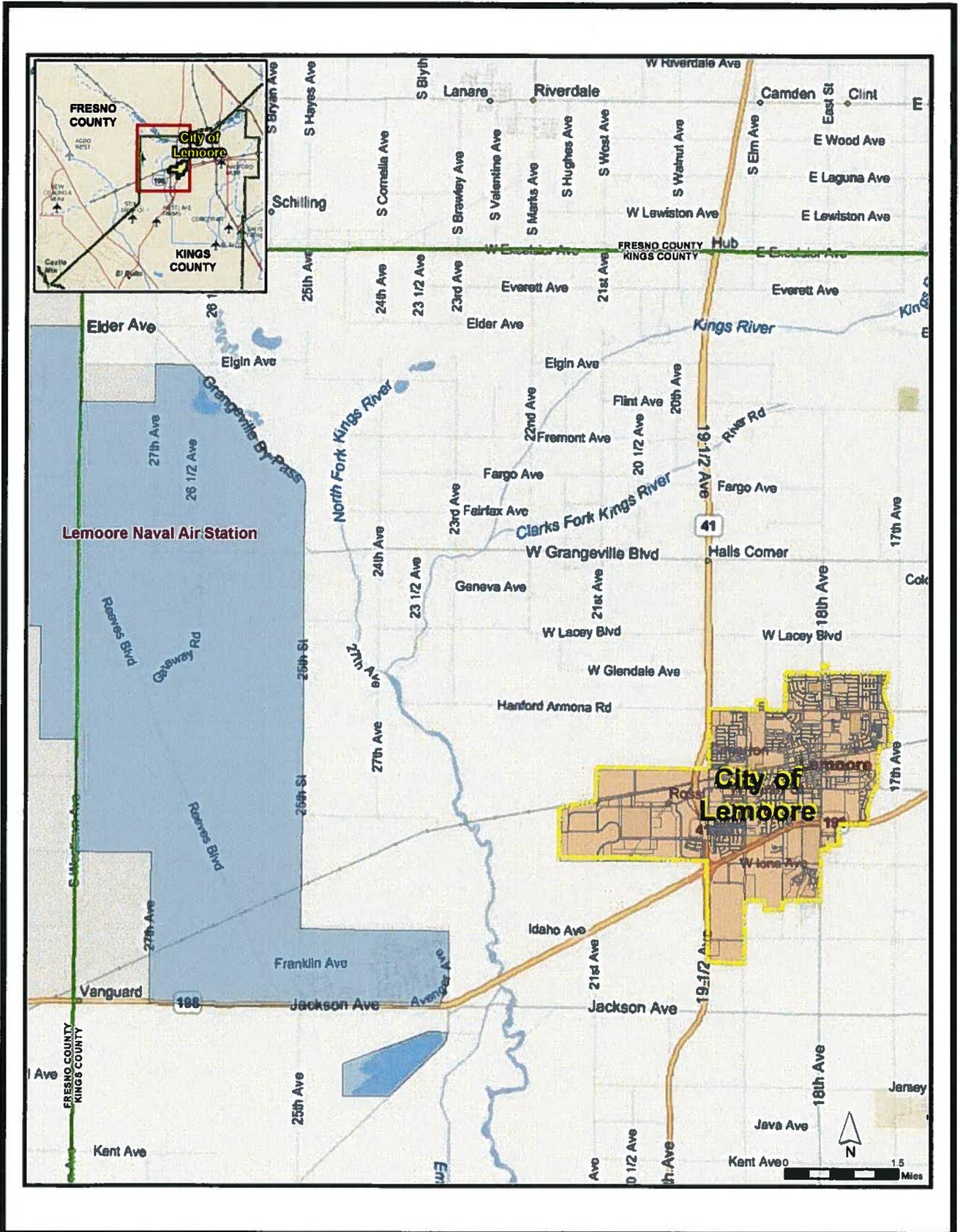


Figure 3-1: City of Lemoore Location Map With Respect to NASL

or encourage other encroachments. In many cases, anti-terrorism and threat protection (AT/TP) requirements become of importance within 3 miles of a military operations area. For the City, development within three miles of NASL's boundary is not a current concern since this is beyond the City's limits but should be recognized when conducting long-range planning in the City. **Figure 3-2** shows the portions of the City near the three mile buffer of NASL's operations areas.

3.2.2 Military Aircraft Noise

DoD Instruction for aircraft noise assessment divides noise exposure into three Noise Zones:

- Noise Zone 1: Community Noise Equivalent Level (CNEL) < 65 decibels (dB), is an area of minimal impact where limited noise reduction (or sound attenuation) may be recommended
- Noise Zone 2: CNEL 65-75 dB, is an area of moderate impact where some land use controls are needed
- Noise Zone 3: CNEL > 75 dB, is the most severely affected area and requires the greatest degree of land use controls to encourage compatibility

In addition to noise zones, areas of concern may be defined where all land uses are considered to be compatible (less than 65dB CNEL) but some degree of land use controls are recommended in order to protect the long term viability of the Station and ensure public safety; such as areas subject to frequent aircraft over flight and noise exposure. These areas may align with critical ingress and egress corridors or areas under flight or training routes providing participating aircraft access to the Station.

Noise contours are delineated by computerized simulation of aircraft activity at each installation and integrate operational data specific to the types of aircraft using a particular airfield. The methodology used to identify noise contours takes into consideration flight paths, frequency and time of operation, as well as the type and mix of aircraft. The noise con-

tours utilized in this Study were provided by the Navy. The scope of this study does not include manipulating the computer simulation to adjust noise contours.

The noise contours utilized in the NASL JLUS are based on the latest contours provided by the Navy as part of NASL's 2010 AICUZ and commonly referred to as NASL 2020 Prospective AICUZ Noise Contours. It is understood that the contours are based on a combination of F-18 Super Hornet and F-35 Air Force Variant Community Noise Equivalent Levels (CNEL's). CNEL's represent an average sound exposure over a 24-hour period. When determining CNEL's during the nighttime period (10:00 p.m. to 7:00 a.m.), averages are artificially increased by 10dB. This weighting reflects the added intrusiveness and the greater disturbance potential of nighttime noise events attributable to the fact that community background noise typically decreases by 10 dB at night.

Figure 3-3 provides ranges of typical A-weighted levels compared with common sounds. "A-weighting" is an adjustment to account for the sound frequencies that the human ear is most sensitive to. **Figure 3-4** shows the 2020 Prospective AICUZ Noise Contours for NASL expressed in 5 dB increments (60, 65, 70, 75, etc.) averaged over a 24-hour period. For planning and analysis purposes, the footprint of the areas equal to or greater than the 65 dB contour will be analyzed as part of this Study.

3.2.3 Renewable Energy Sites

To improve air quality and achieve greenhouse gas emissions reductions mandated by recent State legislation (AB 32), sustainable and renewable alternative energy sources including wind, solar, hydroelectric and biomass energy can be promoted, and energy conservation measures encouraged. The construction of commercial solar farms in industrial zoned land requires site plan review in Lemoore and is directed to lower priority farmland.

In some instances, the effects of renewable energy

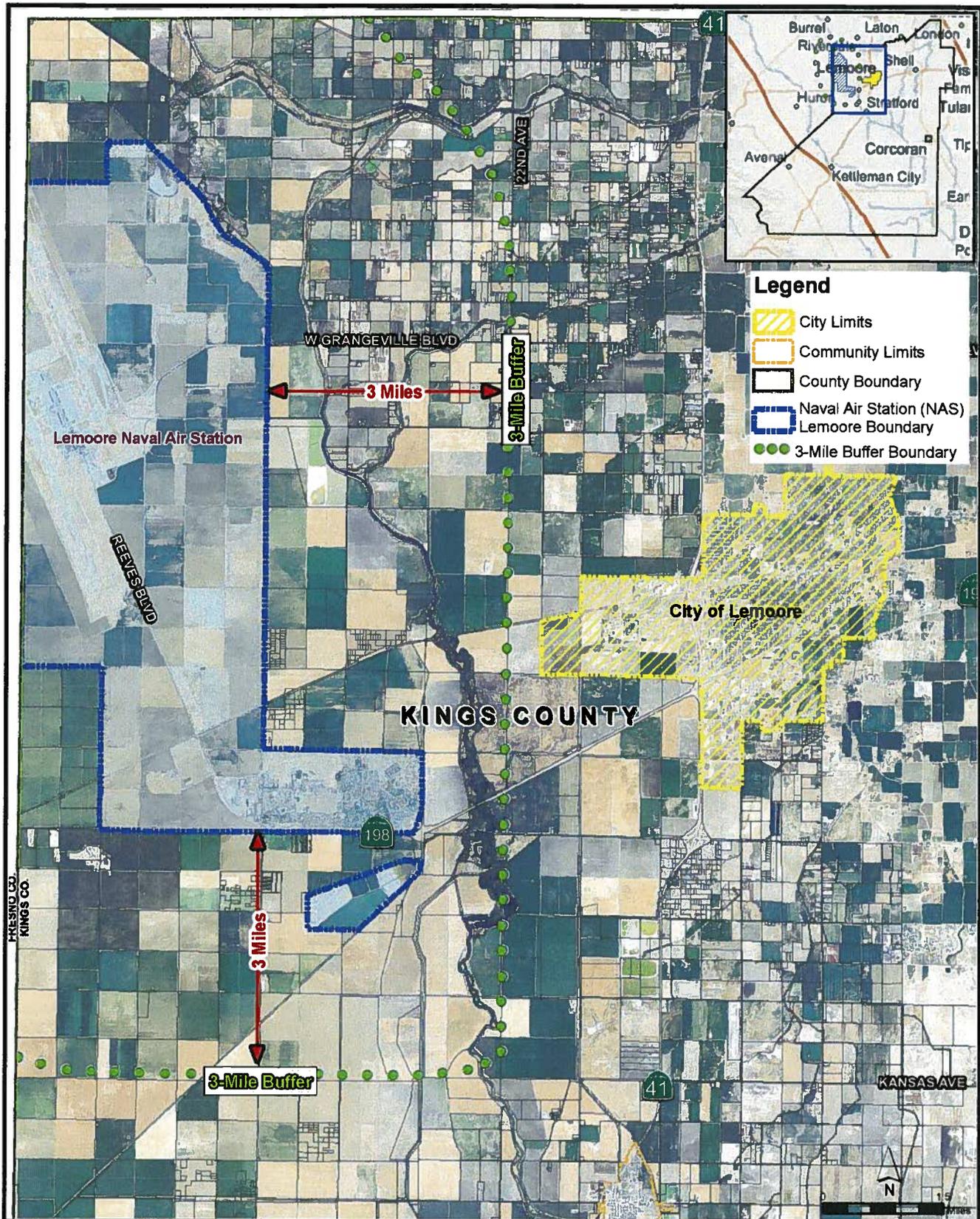


Figure 3-2: City of Lemoore—Three-Mile Buffer from NASL Operations Area

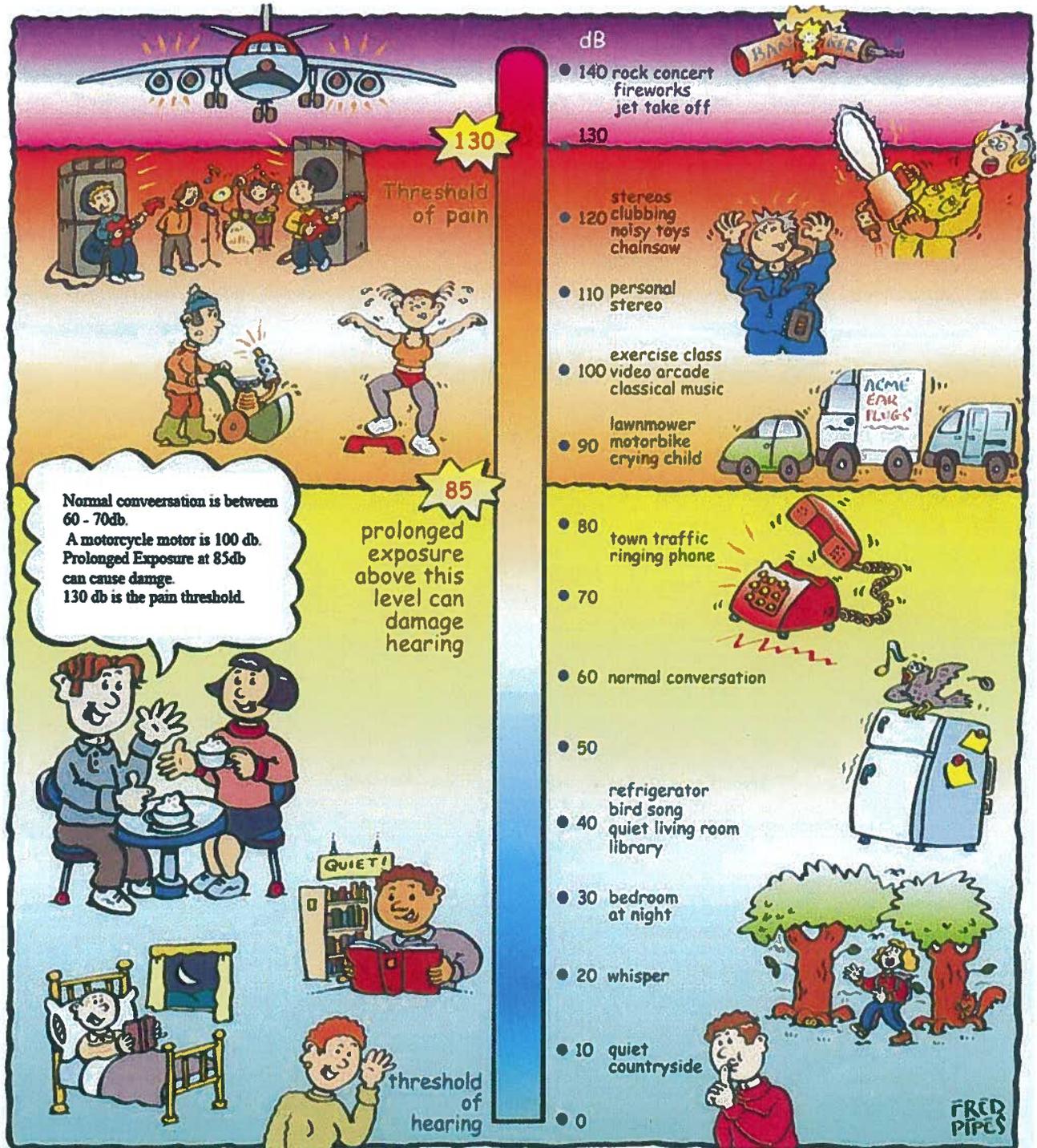


Figure 3-3: "A-Weighted" Single Event Sound Noise Examples

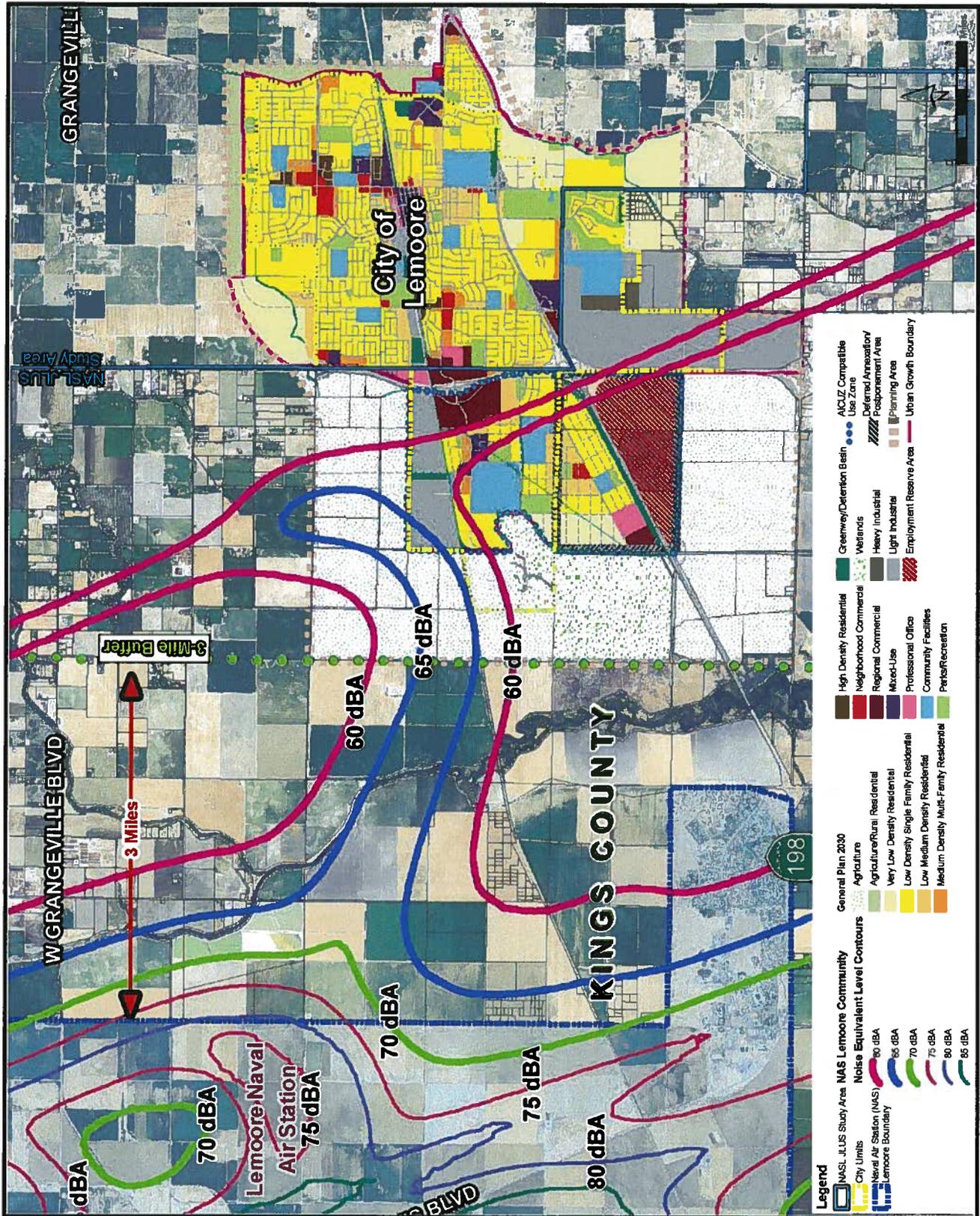


Figure 3-4: NASL 2020 Prospective AICUZ Noise Contours

sites within close proximity to a military installation may disrupt mission activities. Some examples include spinning blades of wind farm turbines interfering with radar signals for aircraft because of vertical obstruction and/or frequency interference to radar equipment or solar farms creating excessive glare from the reflection of the sun. Other alternative energy developments, such as biofuel generation, have no typical compatibility issues, and would be judged for compatibility on a case-by-case basis with consideration to all elements of such facilities.

Recently, there have been advances in the technology behind renewable energy and the important aspect of this area of concern is to incorporate modern technological advances into local approval procedures to avoid a conflict between a renewable energy site and NASL's mission activities. The City has approved projects utilizing modern technology such as low-glare photo-voltaic solar arrays with coordination and open communication with NASL.

Wind Farms

A wind farm is a group of wind turbines in the same location used for production of electric power. Individual turbines can be several hundred feet in height and are interconnected with a power collection system and/or communications network. A large wind farm may consist of several hundred individual wind turbines, and cover an area of hundreds of square miles, but the land between the turbines may be used for agricultural or other purposes. Another related item regarding wind farms is the nearby location of overhead transmission lines connecting wind turbines to electrical distribution systems.

The location and physical characteristics of the wind turbines can conflict with aircraft operations and airspace management because of vertical obstructions and frequency impedance on radar. Proven mitigation methods include spacing between turbines, terrain masking, and terrain relief. All of

those methods keep the wind turbines out of the line of sight of the radars. At this time, there is no known demand for wind farms in the study area.

Solar Power

Converting sunlight into electricity using photovoltaics or concentrated solar power technologies such as lenses or mirrors on a large scale is the basis of solar power generation. Possible issues related to large-scale solar arrays include the height of the tower collector and reflective characteristics. Another related item is the nearby location of overhead transmission lines connecting solar sources to electrical distribution systems. If there is no central collection tower, the new solar panels can be made non-reflective and arrays could be installed to not cause any height or reflective issues. Prior to the development of solar arrays within flight-sensitive areas, the height and effect of these installations along with the distribution system proposed to transmit the power from the source (solar farm) should be carefully considered.

3.2.4 Bird / Aircraft Strike Hazards (BASH)

Bird strikes with aircraft happen most often during takeoff or landing, or during low altitude flight. However, bird strikes have also been reported at high altitudes, some as high as 20,000 feet to 30,000 feet above the ground. A bird air strike hazard (BASH) can exist due to the presence of resident and/or migratory bird populations, and the abundance of habitat including certain types of agriculture uses in the immediate vicinity. BASH can arise from agricultural operations inside or outside the Station's boundary. Different crops vary in their attractiveness to birds. Fallow fields are particularly attractive to birds, resulting in greater potential hazards. Potential loss of future water allotments near NASL could adversely affect agricultural use and result in more fallow fields. Another important factor is the San Joaquin Valley is located in the flight path of the Pacific Flyway, a primary migratory flyway through California. There are efforts ongoing by the United States Department of Agriculture (USDA) to

assist in determining BASH from a wildlife hazard standpoint for NASL.

Industrial land uses such as landfills or solid waste handling facilities can also attract a large number of scavenger species during migratory flights. **Figure 3-5** shows the locations of Waste Sites in Kings County.

3.2.5 Environmental and Conservation Resources

Wetlands and areas with critical vegetative habitat for threatened and endangered species have been identified near NASL. Many of these areas provide conservation, water quality improvement, and flood plain protection opportunities supported by the community, County, environmental regulatory agencies and conservation groups. In most cases, these areas are compatible with military missions but continued comprehensive planning is necessary to ensure these important resources remain.

Water Quality and Quantity

According to the County's General Plan, the most important element for the economic survival of Kings County is the availability, beneficial use, and conservation of its water. A major portion of Kings County has been identified by the California Department of Water Resources as having a critical groundwater overdraft condition. Average rainfall in the area is ten inches per year, although drought conditions may further decrease this figure. A little over 30% of water used annually in Kings County for all purposes is obtained from groundwater. Groundwater is replenished from natural precipitation, stream and creek flows, imported water, and underground flows which vary annually depending on hydrologic conditions. **Figure 3-6** shows the Biological and Water Resource areas identified in the City's 2030 General Plan.

NASL provides wildlife habitat for 183 native and

migratory species, including endangered species and species of concern. The Station is home to one of the few remaining Fresno Kangaroo Rat populations in Kings County and the largest nesting population of burrowing owls in the Central Valley. These populations would be stressed further if NASL lands were not managed accordingly.

3.2.6 Nighttime Light/Glare Effects

Outdoor lights can cause difficult and unsafe flying conditions when located near airfields or within Military Training Routes used during night hours and/or with night vision equipment. Ground lighting can interfere with a pilot's vision or with night vision instrumentation or equipment. Ground lighting may also cause confusion with approach landing patterns. Examples of ground lighting that can interfere with night vision equipment are residential street lighting, stadium lighting, amusement parks, golf courses and driving ranges (if lit at night), and parking lot lighting. Mobile lights (from sources such as motor vehicles or roaming spotlights) can also cause pilot disorientation and difficulty with night vision equipment. **Figure 3-7** shows the various flight patterns utilized by aircraft to and from NASL.

There can also be encroachment from agricultural industries using outdoor or spot lighting which may cause light pollution or interfere with training activities. This is an area of concern around NASL considering the number of dairy farms and potential to have ground lighting for nighttime operations. There are currently no known instances where this has been a problem but it has the potential, if left unplanned, to begin creating problems.

3.2.7 Continuing Compatible and Beneficial Agriculture Uses

NASL is one of the largest leaseholders of agricultural land in Kings and Fresno Counties. Through the largest program in the Navy, NASL leases more than 12,000 acres of farmlands to private farmers. NASL's current agriculture lease program is an ex-

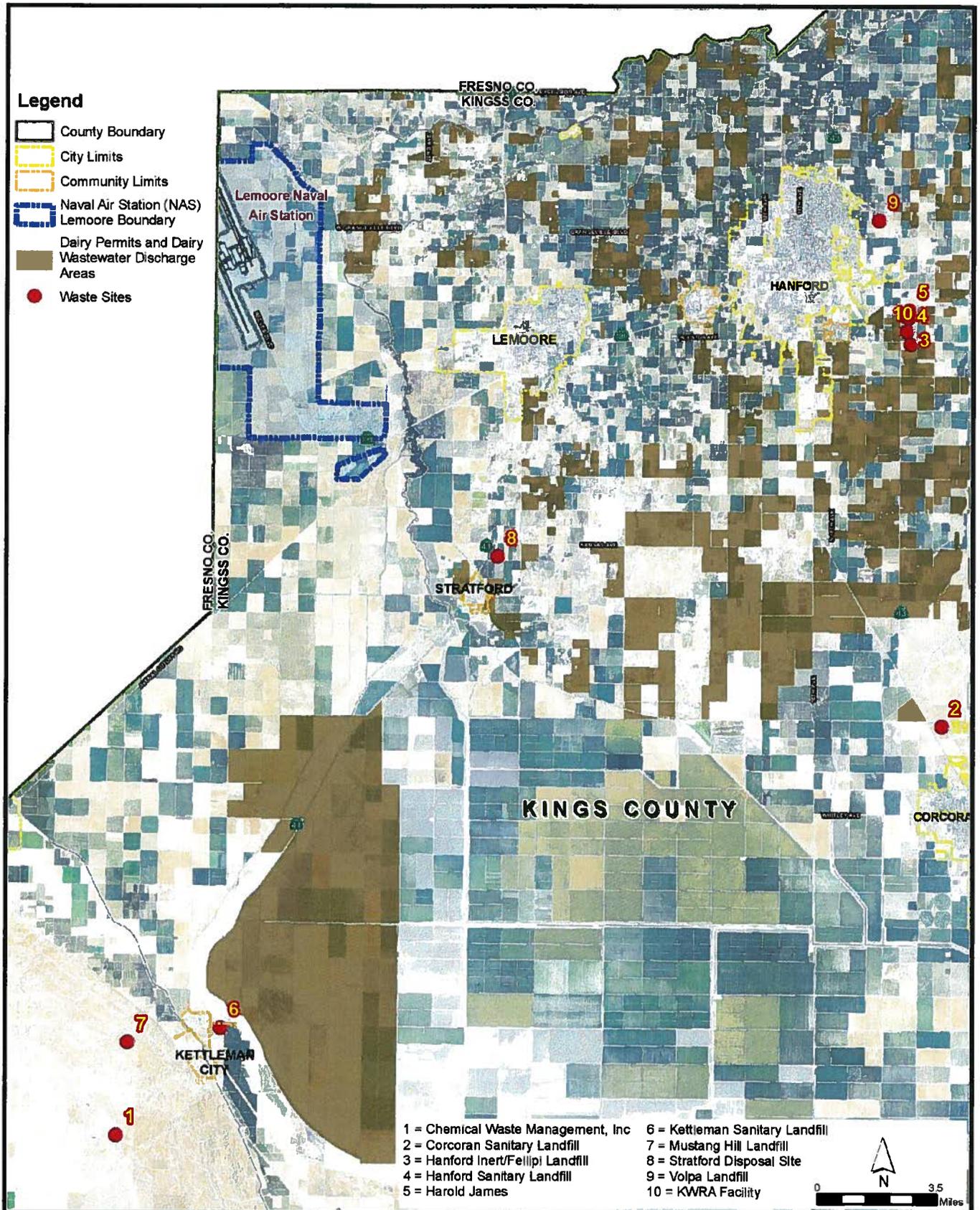


Figure 3-5: Waste Sites Near City of Lemoore

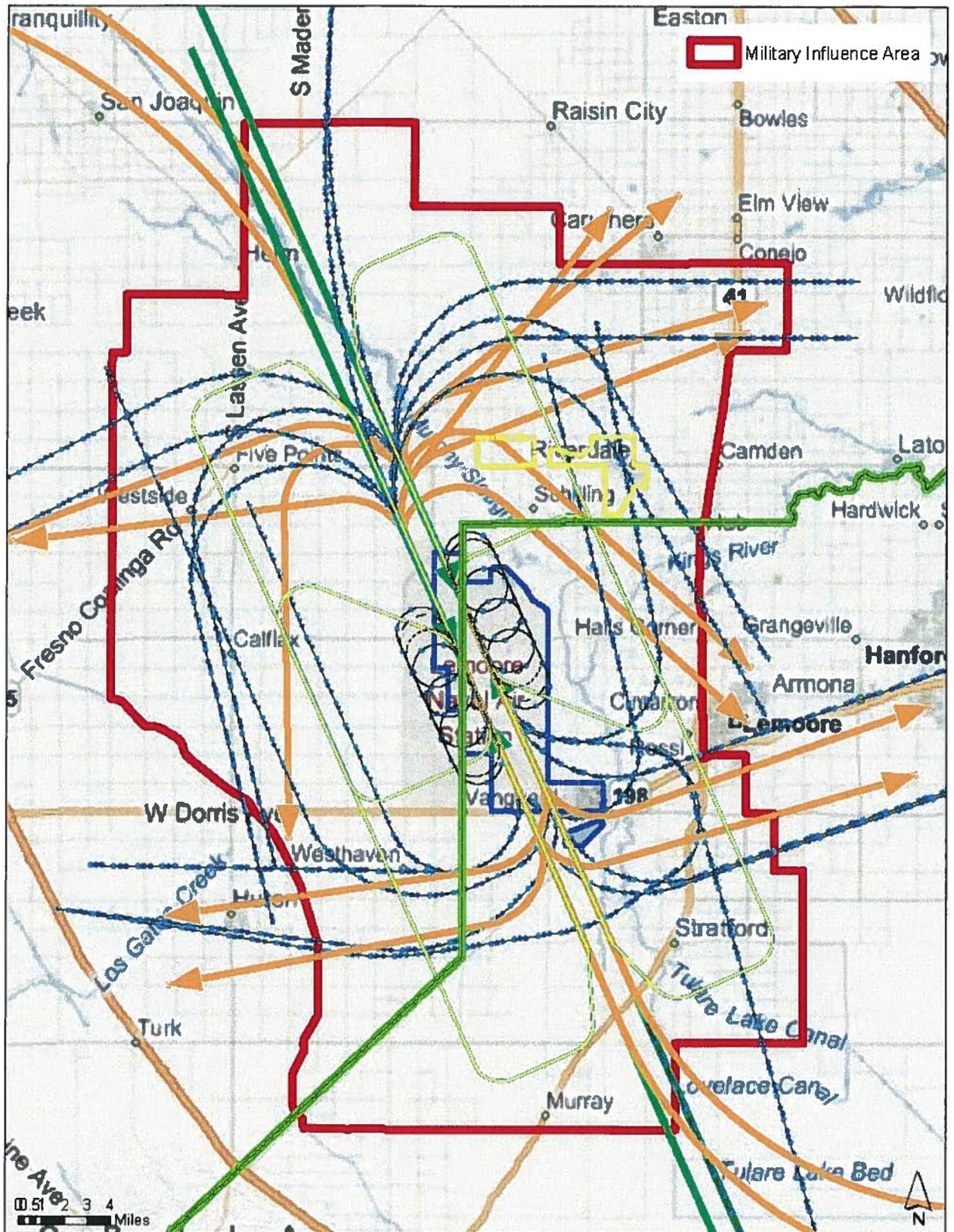


Figure 3-7: NASL Flight Patterns

cellent opportunity to continue a win-win situation for the Station and local farmers.

Generally, agriculture use is compatible with NASL's mission and generates revenue for NASL while providing an opportunity for local farmers. For the areas adjacent to runways, it is important to select crops such as cotton and alfalfa to avoid a bird attractant in agriculture areas. There are also approximately 11,000 acres currently under air easement contracts and used for agriculture. The lease has a special condition that no structure more than 25 feet in height, or any permanent living quarters, can be constructed on the land.

The Williamson Act, also known as the California Land Conservation Act, was enacted in 1965 as an agricultural land protection program. It is intended to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The Act creates an arrangement whereby private landowners contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value. According to the State of California, the Williamson Act is estimated to save agricultural landowners 20-75% in property tax liability each year. The agreements are typically 10 year contracts but can be longer if both parties (land owner and county/city) agree.

As described, the program allows for the state to compensate counties and cities for the reduced property tax revenue but, recently the state cut these subsidies in 2008 and again in 2009. Legislation passed in October 2010 (Assembly Bill 2530) allows counties and cities to voluntarily implement modified contracts for reduced terms but does not ensure continuation of the Williamson Act beyond 2015. The loss of the Act could potentially open up parcels typically used for agriculture to be developed or force the current owners to sell the land to

another owner with development interests. If not properly managed and planned, this could create new incompatible uses within the NASL JLUS Study Area.

3.2.8 Planned Infrastructure Expansion (Roads, Utilities, and Rail)

The expansion of roadways, utilities, rail, and other infrastructure may present a secondary problem by encouraging incompatible development in an area that would be considered encroaching on NASL's mission. Location and accessibility of new infrastructure are important elements because development tends to migrate in these areas. Care must be taken to identify the secondary effects of expanding infrastructure so subsequent developments do not encroach on NASL activities.

Roads

The roadways identified in Section 2 of this Study serve the primary roadway transportation needs to NASL. The following roadways within the City of Lemoore provide additional transportation infrastructure within the City:

Arterial Streets: The major arterial roadway the City has is on a portion of Hanford-Armona Road from Blake Street (near Lemoore Avenue) to the Lemoore Canal. The minor arterial streets existing or planned within the City include Lemoore Avenue, 19th Avenue, Bush Street, D Street, Belle Haven Drive, Iona Avenue, College Drive, Pedersen Avenue, Marsh Drive, Semas Drive (which is also a parkway), Jackson Avenue west of 19th Avenue, and portions of Hanford-Armona Road.

Median Parkways: The City's median parkways have been identified as all of Cedar Lane, Golf Links Drive, and the proposed Semas Drive, portions of Hanford-Armona Road, Fox Street, and portions of Bush Street.

Collector Streets: Collector Streets in the City include Hanford-Armona Road (west of Belle Haven Drive), Industry Way, Cinnamon Drive, Cedar Lane, 19th ½ Avenue, Liberty Drive, Fox Street, Follett Street, Daphne Lane, and three proposed collectors (2 north-south and 1 east-west) in the north-easterly part of the City.

Figure 3-8 shows the locations of arterial streets, median parkways, and collector streets in the City and **Figure 3-9** presents planned roadway improvements in the City .

Rail

The California High Speed Rail Authority (Authority) is currently in the process of implementing a high speed rail system to provide passenger transportation throughout much of California. Still in the planning stages, numerous environmental studies have, or are currently being assessed. A major component of these studies is to determine the best route available. The draft environmental document for the Fresno to Bakersfield segment is scheduled to be released in June of 2011, with a notice of determination/record of decision scheduled by February of 2012. Recently, the Authority authorized the use of available funds to construct the first segment, along with the initial station locations. The initial segment will be constructed between south of Madera and north of Bakersfield, with a station in Fresno and Hanford. The precise rail corridor is still preliminary and has not been finalized. A high speed rail station in Kings County has the potential to induce growth in areas that were not originally proposed for development in local planning documents.

Light rail service in the County is provided by Amtrak who provides passenger service on the North/South Burlington Northern Santa Fe Railroad. Amtrak ridership has grown in recent years due largely to the increased accessibility, public awareness, and more convenient scheduling. Additional marketing by Caltrans and scheduling that now allows for one-day turn around trips to the Bay Area and

Sacramento have all contributed to increased ridership.

Should high speed rail come to the Valley, the City of Lemoore's planning policies have accounted for two potential passenger rail stations along the Cross-Valley rail corridor to connect NASL through Lemoore to high speed rail.

3.2.9 Air Quality

Civilian and military activities can produce dust, smoke, and steam from grading, agriculture or industrial practices, vehicle movement, or flight operations. Suspended particulate matter becomes a compatibility issue if sufficient in quantity to impact flight operations (such as reduced visibility or equipment damage) or substantially impacting the quality of life of local residents. Sources of dust, smoke, and steam in the vicinity of NASL could obstruct the pilot's vision during takeoff, landing, or other periods of low altitude flight. Dust emissions generated near a military base can create an encroachment to mission activities.

As wildfires continue to be a growing concern in California, the use of prescribed burning to reduce hazardous fuels is projected to increase. Prescribed burning is the intentional use of fire to reduce wildfire hazards, clear downed trees, control plant diseases, improve rangeland and wildlife habitats, and restore natural ecosystems. Agricultural burning is the use of open outdoor fires in agricultural operations in the growing of crops. Approximately 150,000 acres of wildlands are treated each year in California using prescribed burning. Prescribed burning, including agricultural burning, produces smoke and if not carefully managed and planned can be a nuisance to residents and businesses and also impact mission activities at NASL.

3.2.10 Object Heights

Vertical obstruction in relation to flight operations from an airfield (military or civilian) are addressed through compliance with Federal Regulation Title 14

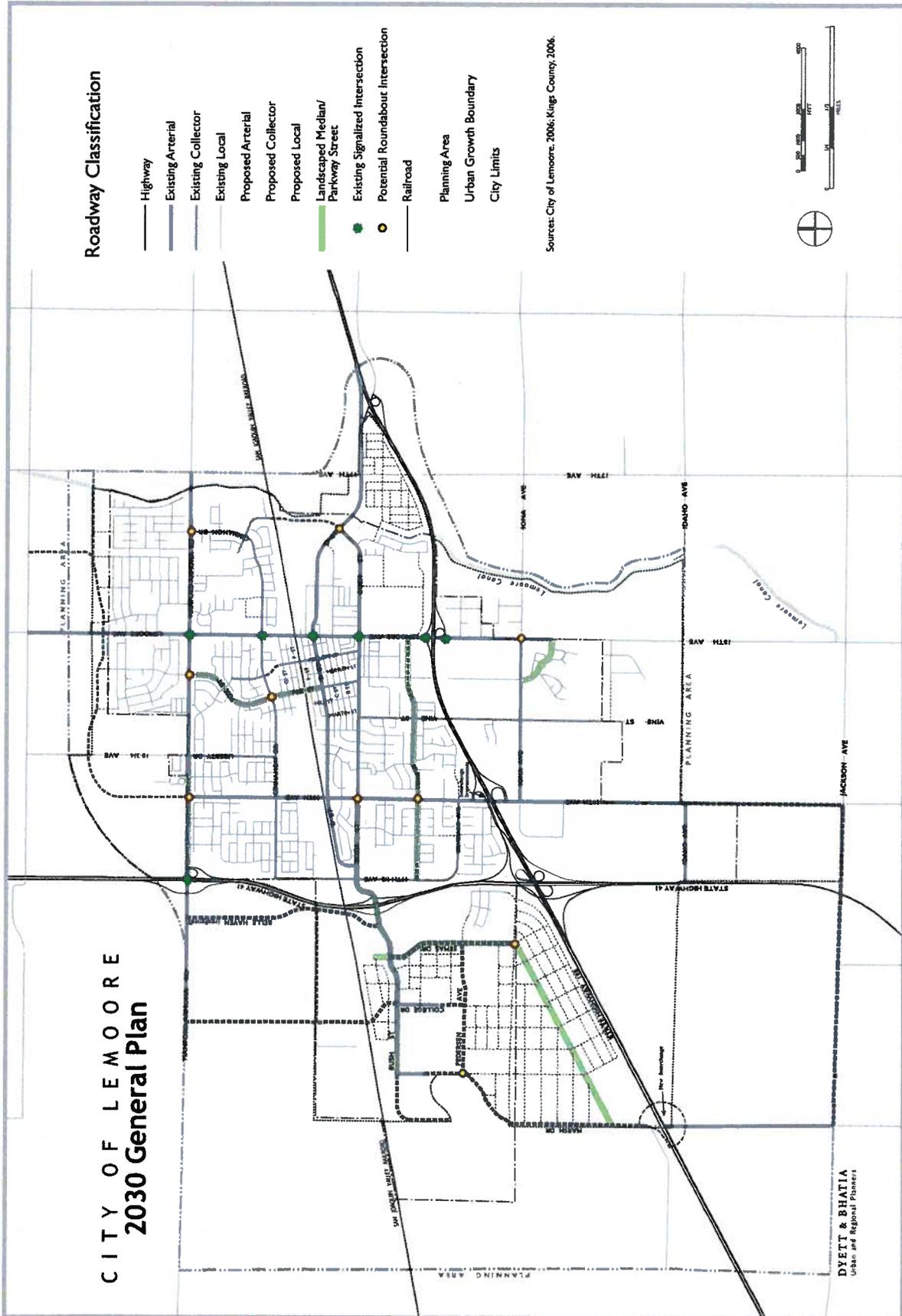


Figure 3-8: City of Lemoore Primary Roadway Network. (Source: Lemoore 2030 General Plan)

Part 77. The Federal Aviation Administration (FAA) must be notified of a list of constructions or alterations exceeding 200 feet above the ground, within specific distances from a runway, or as requested by the FAA. It is important to note, the FAA does not have authority over land use but must be notified of construction within 20,000 feet of an airfield. The FAA evaluates structures to determine if a hazard to air navigation is present and can recommend marking, lighting, and flight communications but land use control is reserved for state and local governments.

Airfields at which instrumented approach and departures are conducted use terminal instrument procedures (TERPS) for prescribing flight path area and vertical clearances from terrain and manmade obstructions. This required open space is defined both vertically and horizontally, and is designed above the airfield imaginary surfaces. The restrictions prescribed for standard instrument approach and departure procedures require limitations on the height of buildings and other structures in the vicinity of airfields in order to ensure the safety of pilots, aircraft, and individuals and structures on the ground (U.S. Air Force, 1999).

Figure 3-10 shows the various height obstruction limits around NASL.

3.2.11 FAA Coordination

Air training operations are enhanced by overlying restricted airspace, military training routes (MTRs), and Military Operations Areas (MOAs). The DoD, in conjunction with the FAA, has established Special Use Airspace (SUA) to separate military sortie operations from other non-compatible aviation activities. The designation of SUAs identifies for other users the areas where such activity occurs, provides for segregation of that activity from other users, and allows charting to keep airspace users informed of potential hazards. Special use airspace includes: Restricted airspace, Prohibited airspace, MOAs, Warning Areas, Alert Areas, and Temporary Flight Restriction (TFR). A MOA usually has an Air Traffic

Control Assigned Airspace (ATCAA) assigned to it that is activated when the MOA is activated.

NASL has five MOA's (A, B, C, D, and E) established and five overlying and corresponding ATCAA's (A, B, C, D, and E) in portions of Fresno, Kern, Kings, and Tulare Counties. Both the MOA and ATCAA for NASL are usually activated concurrently. For a given training mission, the Navy would only activate airspace required to accomplish that specific mission. The airspace associated with the MOA's is 30 nautical miles by 70 nautical miles (approximately 34 by 80 standard miles). The training ceiling for all of NASL's MOA/ATCAA's is 35,000 feet above mean sea level (MSL). The training floors for NASL MOA's A, D, and E is 5,000 feet MSL, for MOA B the training floor is 13,000 feet, and for MOA C it is 16,000 feet.

Within the MOAs, there are Military Training Routes (MTRs) which are parts of airspace with defined dimensions established for the conduct of military aircraft training flights. MTRs are similar to complex systems of interrelated and interdependent highways in the sky that connect military installations and training ranges. They are used by the Department of Defense to conduct low-altitude navigation and tactical training at airspeeds in excess of 250 knots and at altitudes as low as 200 feet above mean sea level (MSL). These low-level, high speed routes allow pilots to develop the skills necessary to avoid detection by enemy radar. For purposes of California Law, AB 1108a Low-altitude MTR, (also referred to as "low-level flight path") is defined as a route where aircraft operate below 1,500 feet MSL.

There are also a variety of flight arrival and departure lines associated with NASL. The NASL arrivals include Field Carrier Landing Practice, Ground Control Approach, Overhead Break Arrival, and Straight-In Arrival. Touch and Go flight patterns are also common for NASL. Figure 3-7 showed the NASL flight patterns.

In the future, the use of Unmanned Aerial Vehicles

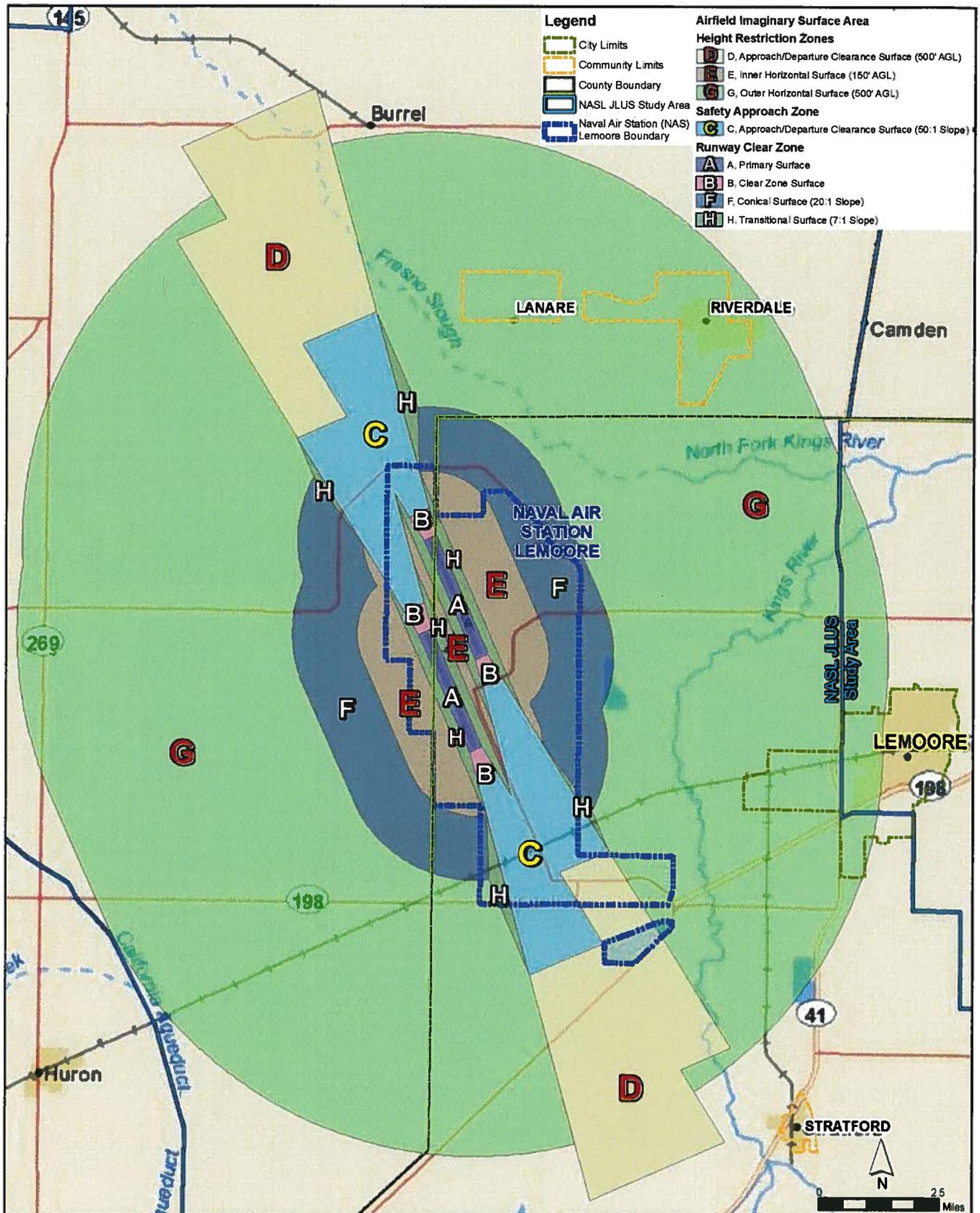


Figure 3-10: Height Obstruction Limits Near NASL

(UAVs) will become more prevalent at military bases across the US. An UAV is an aerial vehicle that flies but does not carry a human operator and is piloted remotely. NASL and its current attributes and facilities represents an opportunity for planning for the integration of UAVs into the current airspace. The use of NASL for UAV training and/or bed-down basing is a high probability.

3.2.12 Emergency Response

The local communities and NASL have an established Mutual Aid Agreement sharing emergency response on an as-needed basis. Effective communication is required to ensure ultimate responsibility is communicated and understood. There is also a need to make sure communication related to changing mission activities are conveyed to all responding parties such as a change in type of aircraft equipment, new construction, and/or other changes at NASL.

3.2.13 Development Entitlements

A number of developments had approved entitlements prior to the commencement of the JLUS. This Study is not considering revoking any development entitlements previously approved by the local governing body. However, some recommendations may apply to those approved developments.

3.2.14 Public Schools Funding

Maintaining a high level of public education is a priority in Lemoore. Expansion of military activities at NASL that result in an increase in the number of resident personnel with school-age children would put increased demands on school facilities and staffing. The capacity of public school districts to fund construction of new schools or expansion of existing schools is limited and would require a local contribution in order to successfully compete for state funding, typically accomplished through new school bonds requiring voter approval. Current economic conditions make it unlikely that voters would approve new school bond measures.

Conversely, if NASL were to close or experience a reduction in personnel, a drop in student population would occur. If school facilities were funded in part through local bond measures, and a reduction of military personnel were to occur during the life of the bonds, local property owners must continue to pay bond assessments for the facilities even though the facilities would be underutilized.

West Hills College was built with the support of NASL and with the assumption that development of the surrounding area would occur according to local plans. If allowable development near the college were substantially reduced, the viability of West Hills College would be adversely impacted.

3.2.15 Inter-Governmental Coordination

Many communities have a formal policy to include military participation in the development review and planning process. Some formal coordination policies include a formal communication process with the Base for all communities to ensure appropriate parties are engaged in reviewing information pertaining to proposed developments, redevelopments, or planning issues upon receipt of an application, or preferably as part of a pre-application meeting. This requires working with developers and community leaders from their initial contact with planning staff regarding their prospective plans through to presentations to policy makers such as Planning Commissions, City Councils, and/or Boards of Supervisors. There should be ongoing opportunities established for the jurisdictions and NASL to communicate amongst themselves.

3.2.16 Ground Control Approach (GCA) Box

The Ground Control Approach (GCA) Box are actually two boxes for two low level GCA corridors located on the east and west side of each of NASL's runways. According to NASL, over 9,000 annual flight operations (training and actual) are supported by these two corridors within NASL's GCA. During

flight operations, the aircraft fly the corridor in a race track pattern at speeds ranging from 140 knots to 250 knots and fly at an altitude of 0' MSL to 1,800' MSL. The pattern characteristics are very specific and were designed to support precision instrument approaches. A precision instrument approach is used during bad weather when visibility is restricted and the air crew intend to land on an aircraft carrier or air field. The air crews rely on strict guidance from the air traffic controller charged with guiding the aircraft in and lining it up for landing. Precision approaches are daunting and perishable skills, thus both the aircrews and air traffic controllers must stay proficient. NASL has stated that protecting the GCA box from encroachment will support the Navy's mission and will minimize health and safety risks to the air crews and community. **Figure 3-11** shows the NASL GCA Box.

3.3 ANALYSIS

To facilitate the analysis of land use for the issues identified in the previous section, the City's Zoning Map and 2030 General Plan Map are provided in **Figures 3-12 and 3-13**, respectively. As previously mentioned, this report covers multiple jurisdictions with different land use designations adopted for related planning maps (zoning and general plan). To facilitate a uniform analysis of land use across the NASL JLUS study area, the different map designations were generalized. The analysis is based on the generalized land use designations as the City's Zoning Map update is still underway and is moving towards consistency with the General Plan.

People living or working near a military installation can expect impacts such as noise, smoke, and dust generated from ground and air operations. Quality of life for those living or working near an installation can be negatively affected when these impacts reach levels creating a nuisance. A potential risk to public safety also exists from the possibility of aircraft crashes or other operational accidents at or near an airfield. The extent and frequency of negative impacts affecting people living near airfields will vary based on the type of aircraft, airfield operating

hours, airfield ground activities, frequency of flight, ground training activities, proximity to the airfield, and mission changes. Future residents choosing to live near NASL and/or any of the various flight lines will be impacted by flight activities.

3.3.1 Development Near NASL's Boundary

There are no areas of the City of Lemoore within NASL's *Green Belt* (three miles from NASL's boundary). The boundary of the *Green Belt* abuts the westernmost side of the City's 2030 General Plan Land Use Planning Area. Since there are no lands within the City also within the three-mile buffer there are currently no land use compatibility issues associated with development near NASL's boundary. Any future considerations for annexation within the City to the west should consider the preservation and encroachment concerns related to the three-mile buffer.

3.3.2 Military Aircraft Noise

There is one parcel partially within the high aircraft noise (>65 dB CNEL) contour in the City of Lemoore. This parcel is currently zoned Light Industrial (ML) in the City's Zoning Map. There are 9 parcels in the City's General Plan Planning Area that fall wholly or partially within the high aircraft noise (>65 dB CNEL) contour. One of these parcels is designated as Light Industrial and remaining 8 parcels are designated Agriculture. Light Industrial is considered a compatible use with conditions and the Agriculture designation is a compatible use. **Figure 3-14** shows NASL's 2020 Prospective AICUZ Noise Contours with current zoning classifications and **Figure 3-15** provides the 2020 Prospective AICUZ Noise Contours with the General Plan land use designations.

3.3.3 Renewable Energy Sites

Recent federal and state legislation along with favorable solar conditions will continue to create renewable energy site opportunities in the San Joaquin Valley. The areas of concern and specific planning strategies associated with these sites were

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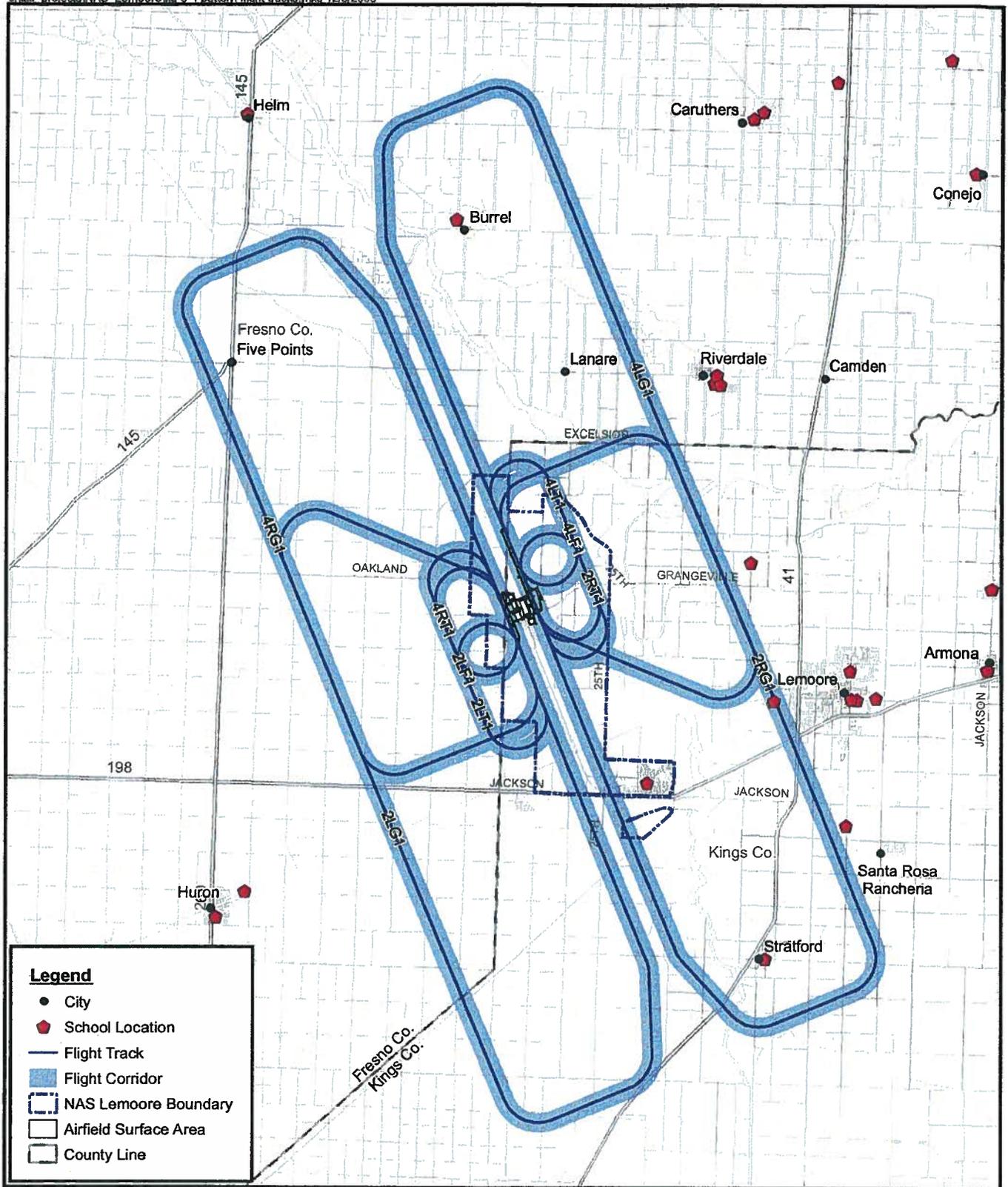


Figure 3-11: NASL Ground Control Approach (GCA) Box

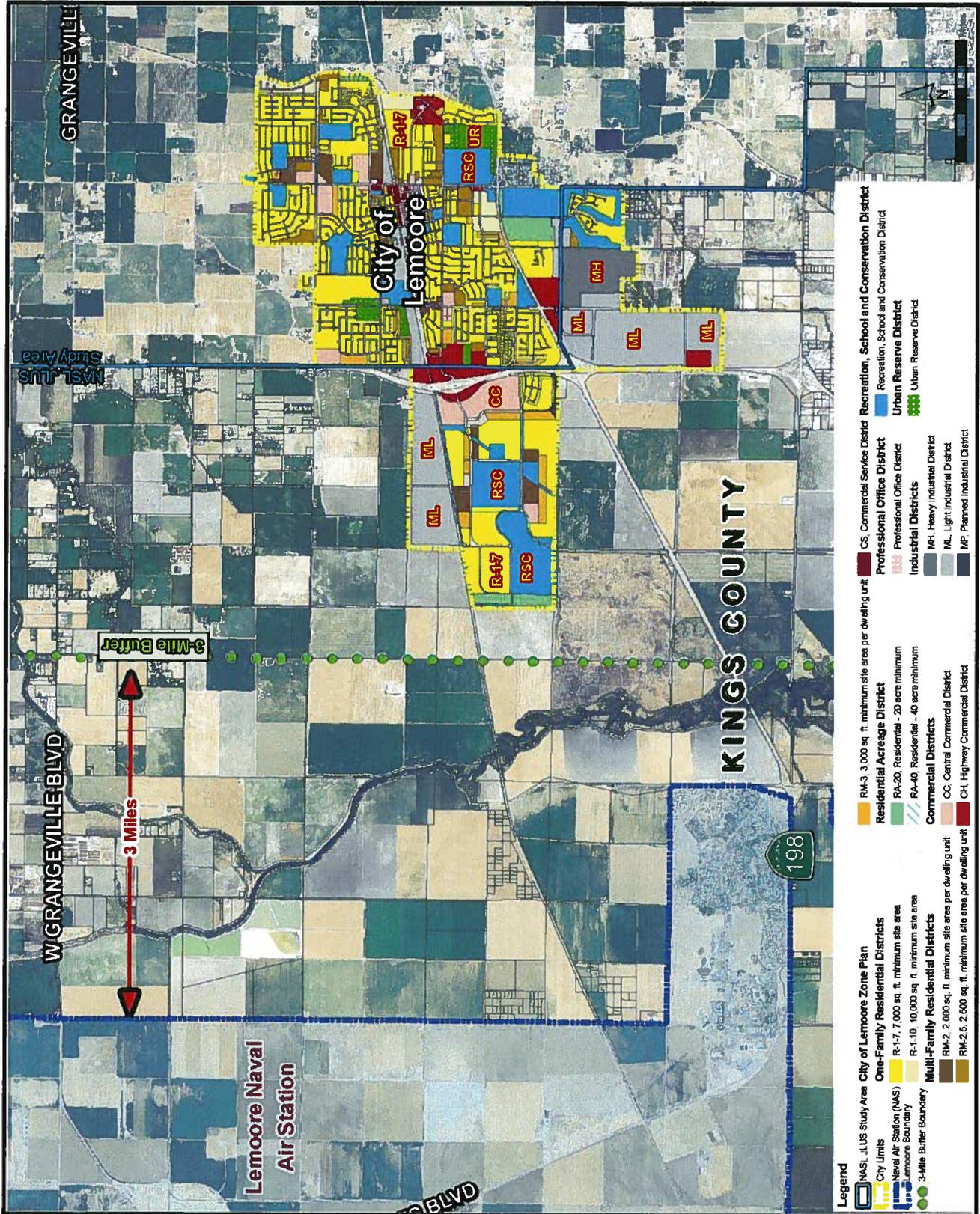


Figure 3-12: City of Lemoore Zoning Map

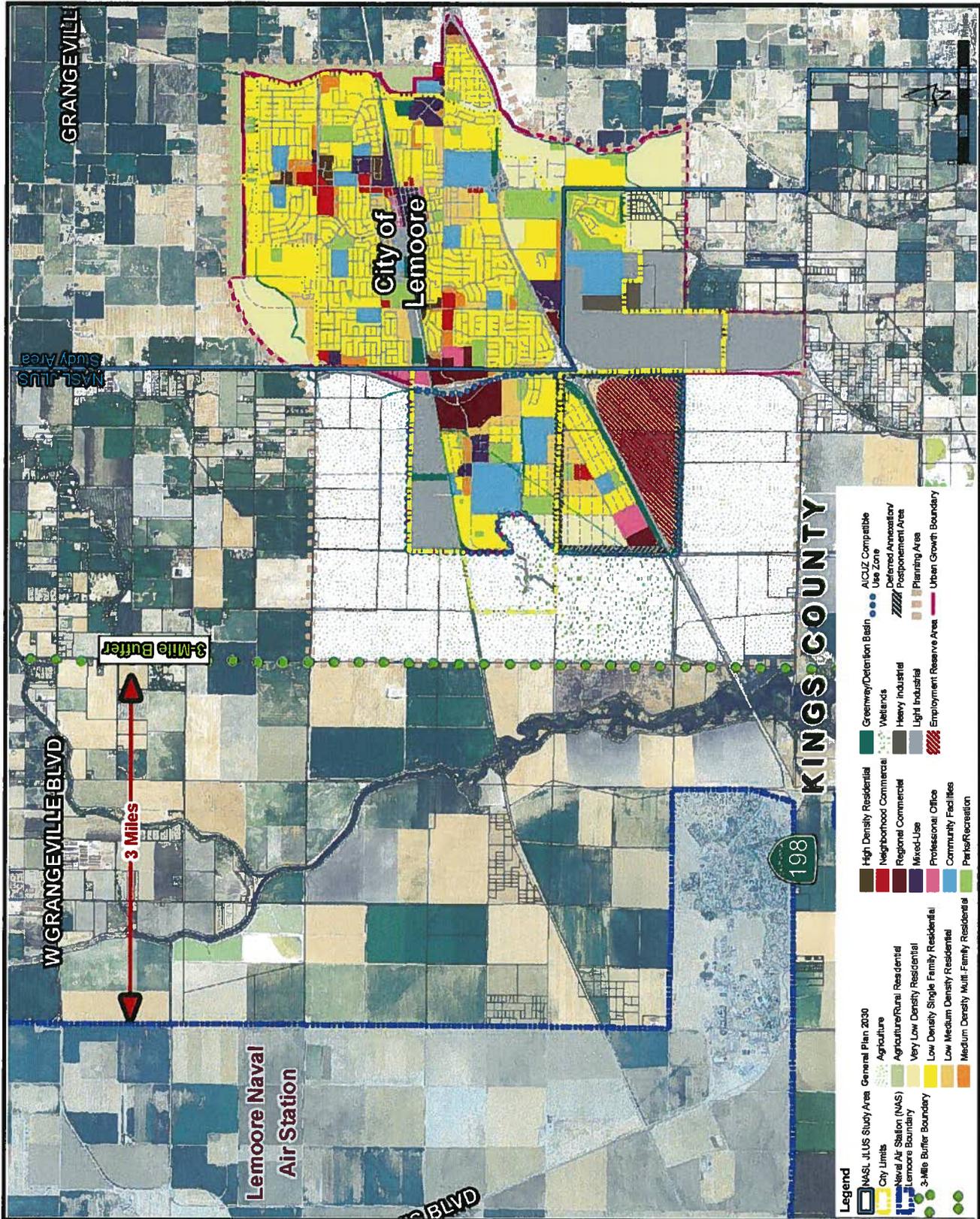


Figure 3-13: City of Lemoore 2030 General Plan Land Use

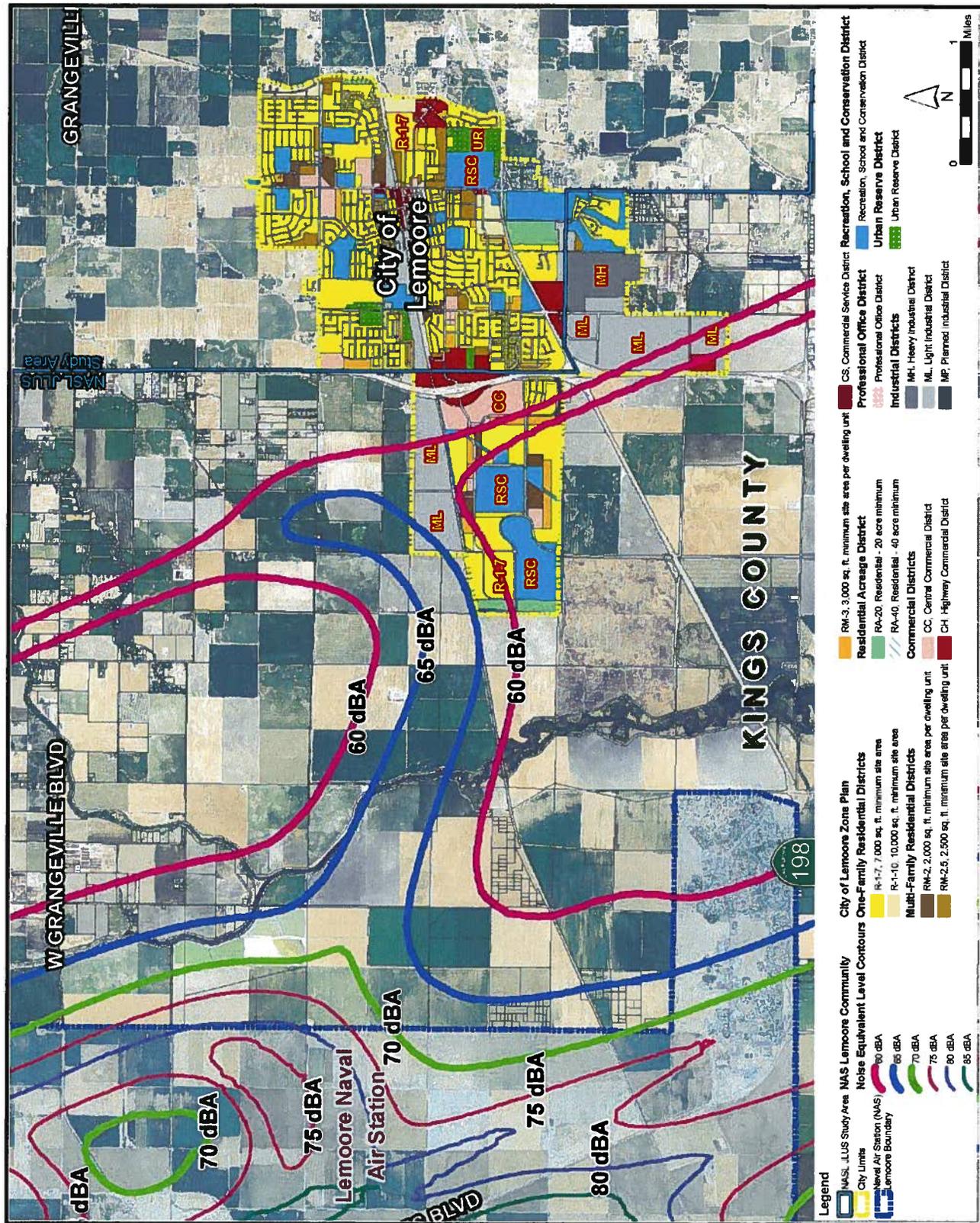


Figure 3-14: City of Lemoore Zoning Map with High Aircraft Noise

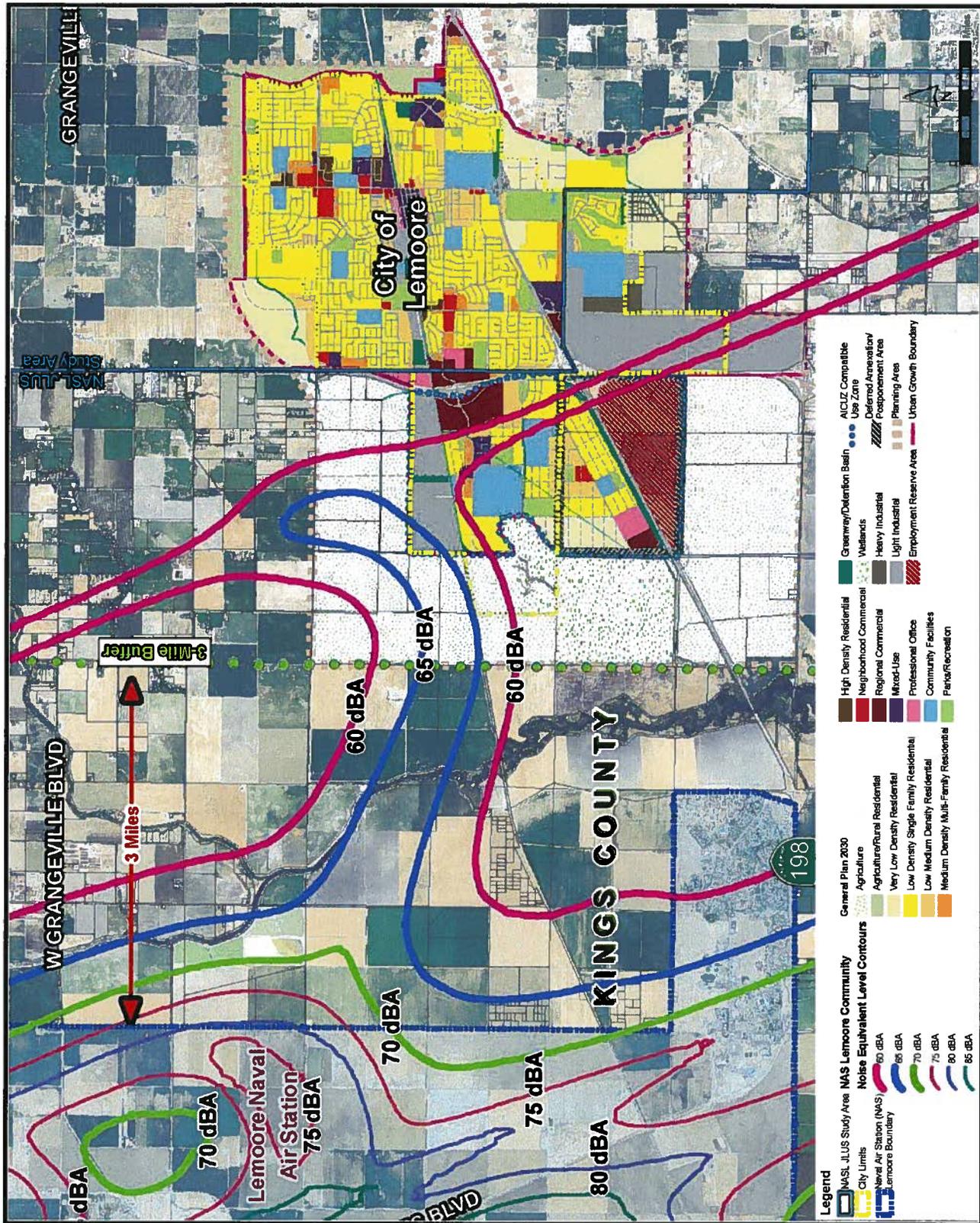


Figure 3-15: City of Lemoore 2030 General Plan Land Use Designation Map with High Aircraft Noise

described in Part 3.2.3 of this section. In order for renewable solar energy sites to become reality and coexist with NASL, planning and coordination is paramount to ensure the type of system being proposed is compatible with NASL's mission activities.

3.3.4 Bird / Aircraft Strike Hazards (BASH)

Areas identified as having potential effects on BASH near NASL are natural areas and agriculture lands used for specific crops. There are no manmade areas such as landfills in the areas of BASH concern (low level flight area) in Lemoore. One natural area providing the opportunity for attractive bird habitat includes the area near the Kings River and its floodplain. Whereas this area creates a compatible land use buffer, it has the potential to create habitats conducive to nesting and rookeries incompatible with the low level approach areas utilized by NASL.

Equally important is to ensure specific types of crops and flooded agriculture lands are managed to avoid attracting large numbers of birds. The USDA recently commenced wildlife assessments near NASL to help identify steps for NASL related to BASH and this study is scheduled for completion in 2012.

3.3.5 Environmental and Conservation Resources

The Agriculture and Wetland Land Use Designations identified on the City's General Plan Map west of Highway 41 represent an excellent opportunity for conserving both agriculture and wetland resource while promoting a compatible use with respect to NASL's mission activities. Both uses with conditions are compatible uses with the existing mission activities.

The Readiness and Environmental Protection Initiative:

The Readiness and Environmental Protection Initiative (REPI) takes advantage of authority (10 USC,

Sec. 2684a) Congress enacted in 2002 authorizing DoD to partner with state and local governments, and non-governmental organizations to acquire from willing sellers conservation easements on private lands. REPI serves to forestall incompatible land use and protect high-value habitat so that DoD retains the discretion to use military lands free of encroachment-related restrictions and environmental constraints. With REPI agreements and funding DoD can cost-share the acquisition of conservation easements creating "win-win" situations for all partners.

REPI projects are selected for funding on the basis of a number of criteria, including: military utility, and training and testing value; potential for limiting incompatible development and protecting high-value habitat; and the level of participation and contributions from other project partners.

Common Goals of the REPI Program:

- DoD wants to protect key test and training areas in order to ensure the readiness of America's military.
- State and local governments may want to protect valuable open space and habitat or ensure the viability and economic benefits of an installation.
- A land trust, conservation group or environmental organization typically wants to conserve unique habitat or open space.
- A local farmer, rancher or owner of a private forest may want to preserve a treasured way of life as well as conserve the land from urban development.
- REPI projects help diverse groups come together to meet mutual interests.

As REPI funding is made available, partners make commitments to willing landowners and apply for outside funding from grant sources and donors. Depending on the complexity, preference of the landowner and availability of cost-share funds, some REPI transactions can be completed within the same fiscal year, while others take up to 18 months to complete or are even phased over several years.

REPI funding policies allow for the Navy to pay for restrictive use easements up to 75% of fee simple value or 100% of the restrictive use easement fee, whichever is less.

REPI and the authority provided under (10 U.S.C. Sec. 2684a) are effective tools to protect military value, meet Service priorities, and leverage other public and private funds. REPI partnerships provide a broad range of secondary benefits for communities, other stakeholders, the environment, and local economies.

- **Mission** - Protects accessibility, availability and capability of training and testing assets. Specifically, sustains operational capability and maximizes use of available land while minimizing environmental or other constraints
- **Community** - Enhances quality of life by supporting regional planning and community growth management efforts; preserves working lands that can benefit the economy while mitigating the effects of climate change; promotes understanding of the military mission.
- **Environment** - Conserves and protects ecological integrity, critical habitat, and endangered species through conservation stewardship; enhances water quality; provides for recreation and open space; and maintains biodiversity.

These partnerships make an important contribution to national defense while also advancing natural resource stewardship and land use planning goals and policies.

3.3.6 Nighttime Light / Glare Effects

There are currently no issues associated with nighttime light or lighting glare encroaching on NASL mission activities. However, the opportunity exists for dairy farm, biofuel facilities, and/or other agricultural and industrial uses with night time operations to encroach on mission capabilities in the future. As

seen at other military installations across the US, it is important to properly plan lighting to ensure no light encroachment concerns develop over time for NASL. Note, the City's General Plan Policy CD-I-64 suggests adopting a Dark Sky Ordinance which can hedge off future light conflicts if properly implemented.

3.3.7 Continuing Compatible and Beneficial Agricultural Uses

The current agriculture lease program opening property on NASL for use by local farmers is an excellent example of a beneficial use of federal property benefiting both the Navy and local community. Currently, the lease revenue generated by the lease program is directed towards aiding the installation in stewardship of the various biological resources on NASL, as well as offsetting the cost of providing irrigation. The City of Lemoore's General Plan Map does have some agriculturally designated parcels around the perimeter of the City that can help perpetuate this compatible land use.

The Williamson Act provides an exceptional incentive for compatible use to continue on current agricultural lands. However, if the funding continues to be cut or officially terminated (currently only funded by the state through 2015) at the state level, development pressures may create opportunities for incompatible development where current compatible agricultural uses exist today.

3.3.8 Planned Infrastructure Expansion (Roads, Utilities, and Rail)

As previously explained, the secondary effect of new infrastructure is the subsequent growth in these areas and if not properly planned, new development may create new encroachment concerns to NASL's mission activities. With respect to compatible land use near NASL, future development plans at and near roadway interchanges (new and existing) and along proposed transportation corridors (roads and/

or rail) should be coordinated with NASL and in-line with the recommendations found in this report.

A good example of this area of concern is the roadway interchange proposed at State Highway 198 and Marsh Drive in the City's General Plan. The interchange itself is a compatible use but interchanges typically promote development activity in their vicinity. Development to the west of this location would begin to encroach on the three-mile buffer area to the Station. If the areas to the northwest, southwest, and southeast at this interchange remain as shown in the General Plan then there should be little concern for encroachment. It is important to note that the northwest quadrant is shielded from development in that 800 acres has conservation easements over the land.

3.3.9 Air Quality

The San Joaquin Valley Air Pollution Control District (APCD) is responsible for authorizing prescribed burns or agricultural burns in Kings County and Fresno County in accordance with the State Air Resources Board. There are currently no known requirements for the APCD to coordinate with NASL prior to issuing a burn permit. The frequency of burns is low but there is the opportunity for burn activities combined with certain atmospheric conditions to encroach on a mission activity by creating a reduction in visibility.

NASL is located in the San Joaquin Valley Air Basin which is currently designated as extreme nonattainment for ozone, and 24-hour particulate matter (PM 2.5) and currently oversees a total of 179 air regulations permits. Areas that violate the federal ambient air quality standards are designated as non-attainment areas and areas that have transitioned from non-attainment to attainment are designated as maintenance areas. Air pollutant emissions at NASL are mainly from aircraft operations and corrosion maintenance, jet engine testing, sand blasting and painting, solvent cleaning, and fuel combustions from emergency engines and boilers. NASL is in compliance with stringent non-attainment air quality regulations administered by the San Joaquin Valley

APCD. Annually, the compliance program undergoes mandated federal, state, and local air district inspections in order for NASL to continue operations.

3.3.10 Object Heights

The Station is currently notified by the City for any proposed structure exceeding 500 feet above mean sea level (MSL) to review and comment. The proposed low level approach for helicopters scheduled to use NASL beginning in 2012 is 500 feet above MSL. Typical planning around military airfields is to keep a clearance between low level approach floors and vertical obstructions such as structures and/or towers. For planning purposes, this would imply a maximum object height of 200 feet in the areas of the low level helicopter flight patterns.

3.3.11 Ground Control Approach (GCA) Box

A variety of land uses exist or are potentially planned to occur in areas within and/or adjacent to the NASL GCA Box. The parcel by parcel analysis associated with addressing these areas is beyond the scope of this JLUS. It is recommended that a Small Area Study be prepared for the GCA Box areas to address transition of land use, plan roadway systems and access management, identify suitable locations for development with specific emphasis on density and intensity, and prepare for the planned provision of public facilities and infrastructure.

3.3.12 FAA Coordination (UAV)

UAV use currently has seven typical functions: remote sensing; commercial aerial surveillance; oil, gas, and mineral exploration and production; transport; scientific research; armed attacks; and search and rescue. The US Air Force, Marines, and Army each currently have various tiers of UAVs that refer to various models of UAVs and the Navy has a UAV version currently in production. The facilities at NASL and the current designated NASL airspace provide some future opportunities to be the home of UAVs either for military or domestic use by the US Government. It appears the use of UAVs will continue growing and therefore could require the use of facilities such as NASL for operations areas to test, maintain, store, and operate.

3.4 RECOMMENDATIONS

Table 3-1 was developed based on the existing areas of concern associated with aircraft noise and/or development in APZ's, baseline land use analysis, and industry standards regarding compatible joint land use between military installations and private lands. This table is intended to further guide the City with compatible land use related to recommendations included herein.

Based on the areas of concern identified and the analysis associated with each concern, recommendations focused on addressing each issue or combination of issues have been prepared. It is the intent of the recommendations to provide guidance to the City on land use and related land use policies and procedures and in some cases, applicable examples successfully implemented from across the US.

The following summarize the recommendations for the City's consideration:

- ◆ **LEMOORE 1:** Continue Ongoing Coordination with the Federal Aviation Administration (FAA) Regarding Airspace Controls and Usage Including Coordination and Planning Efforts for All Airports and Airstrips Within NASL's MOAs
- ◆ **LEMOORE 2:** Implement Public Awareness Measures Such as Public Signage, Website Links, Educational Handouts, etc. Within NASL Overlays I, II, and III (see Lemoore 13) and Other Public Information Locations
- ◆ **LEMOORE 3:** Implement Effective Disclosure Measures Notifying Buyers and Lessees that Property is Near a Military Installation Subject to High Aircraft Noise, Low Level Aircraft, Aircraft Tests, and/or Other Military-Related Issues Within NASL Overlays I, II, and III (see Lemoore 13)
- ◆ **LEMOORE 4:** Implement Lighting Standards to Avoid Glare and Reflection Within NASL Over-

lays I, II, and III (see Lemoore 13)

- ◆ **LEMOORE 5:** Develop Policies to Protect Critical Areas Supporting Military Readiness, Agricultural Uses in Compatible Areas, and/or Environmental Conservation Including Partnering Opportunities with US Navy, Department of Defense, The Nature Conservancy, Regional Lands Trust, Natural Resource Conservation Service (NRCS), State of California (Williamson Act legislation), and Others
- ◆ **LEMOORE 6:** Support and/or Collaborate With Ongoing NASL Environmental Stewardship Programs
- ◆ **LEMOORE 7:** Support, Coordinate with NASL, Local Jurisdictions, and Environmental and Water Resource Agencies Such as US Department of Agriculture (USDA) to Study and Implement Methods to Control Bird and Bird Attractors Near NASL
- ◆ **LEMOORE 8:** Coordinate with Federal and State Transportation Agencies to Strategically Plan Future Transportation Infrastructure to Avoid Encroachment on Military Missions
- ◆ **LEMOORE 9:** Monitor Land Use at Transportation Intersections or Interchanges and Transportation Changes of New or Expanding Corridors and/or Hubs
- ◆ **LEMOORE 10:** Formalize Policy to Implement Cross-Jurisdictional Collaboration and Coordination in Development Review and Planning Process Including Implementing the JLUS Recommendations
- ◆ **LEMOORE 11:** Support and/or Collaborate with the Respective School Districts for Additional Funding Related to NASL Growth Impacts on Local Services and Infrastructure Such as Roads, Schools, and Public Safety
- ◆ **LEMOORE 12:** Update the City's General Plan to Include Language Meeting State Requirements Designed to Strengthen Uses Compatible to NASL's Missions on Proposed Developments, Land Use Amendments, and/or Other Related Change Requests
- ◆ **LEMOORE 13:** Establish NASL Overlay District Zone designations (I, II, and III) addressing compatibility issues identified around NASL to include the 3-Mile Buffer, APZs, Ceiling Heights, Aircraft Noise Ar-

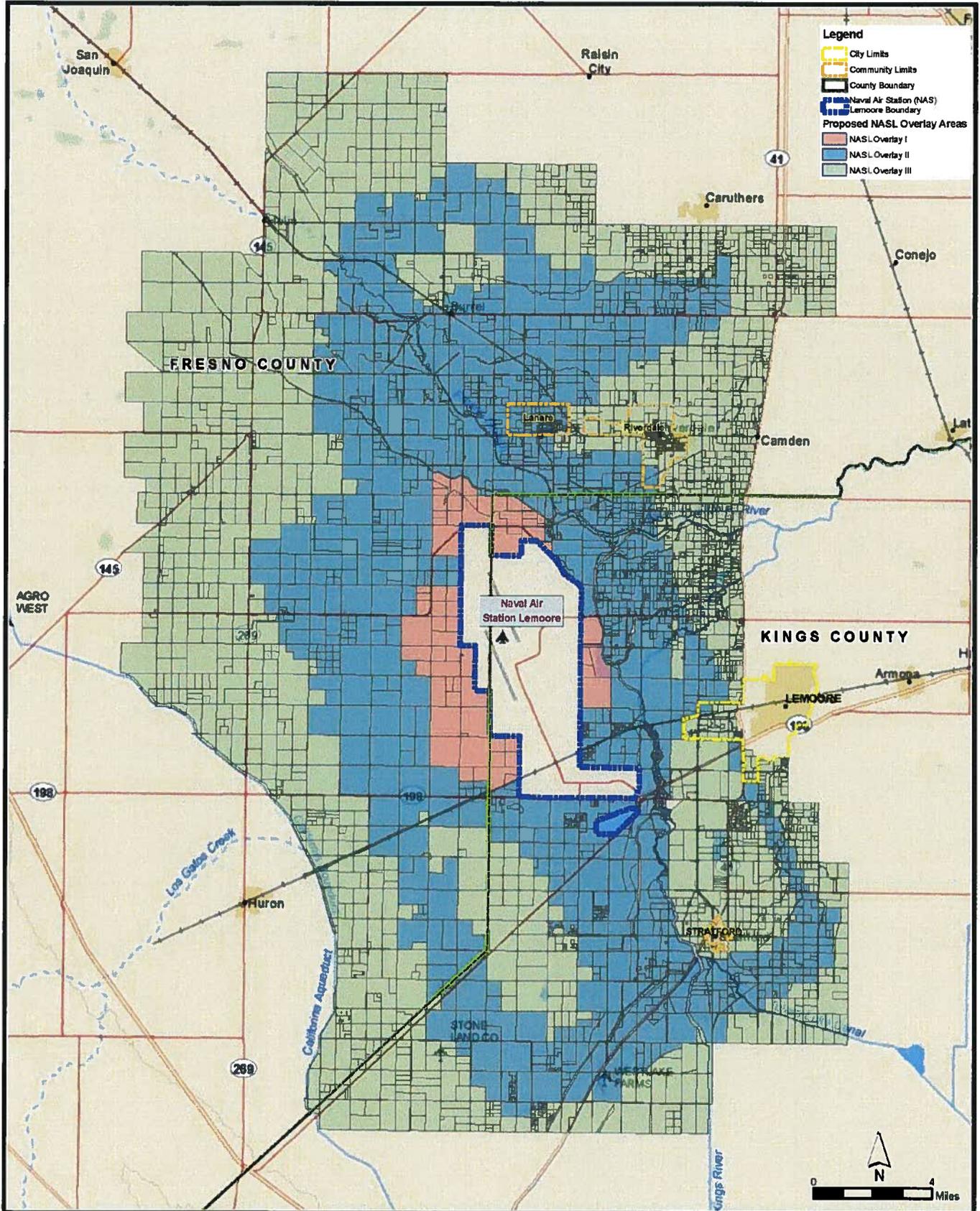


Figure 3-16: Proposed Overlay Zone Designations (I, II, and III)

eas, Renewable Energy Opportunities, Object Heights, and Lighting. The different Overlay Zone designations proposed are shown in **Figure 3-16** and **Table 3-2** and summarized as follows:

- ◇ **NASL Overlay I:** Address compatibility issues in the Accident Potential Zones (APZ's) I and II. NASL Overlay I is focused on limiting density, object height, and nighttime light encroachment and ensuring anti-terrorism and threat protection requirements are met.
- ◇ **NASL Overlay II:** Address compatibility issues related to aircraft noise associated with the projected combined F-35 JSF and F-18 Super Hornet and areas within a 3-mile buffer from NASL operation areas. The NASL Overlay II is focused on limiting single family residential in only areas with 65-75 dB CNEL aircraft noise with sound attenuation requirements and ensuring anti-terrorism and threat protection requirements are met.
- ◇ **NASL Overlay-III:** Areas within an area identified by NASL requiring NASL notification and review of proposed development plans. Areas of concern include object height, BASH, Nighttime Lighting, renewable energy sites, planning infrastructure improvements, and inter-governmental coordination.
- ◆ **LEMOORE 14:** Revise Land Use Regulations to be Compatible with the Overlay Designations

- ◆ **LEMOORE 15:** Continue the Requirement for Noise Attenuation Design and Construction Standards for New Construction in the High Aircraft Noise (>65 dB CNEL) Area (Overlay Zones I and II)
- ◆ **LEMOORE 16:** Limit Object Heights to Ensure Anti-Terrorism/Force Protection (AT/FP) Measures Are Met and Mitigate Vertical Obstructions in Overlay Zones I, II, and III
- ◆ **LEMOORE 17:** Establish Minimum Technical Standards for Renewable Energy Facilities Located Within Overlay Zones I, II, and III
- ◆ **LEMOORE 18:** Adopt Resolution Supporting the JLUS Recommendations and Implementation
- ◆ **LEMOORE 19:** Collaborate with the KCAG as Lead Facilitator of the JLUS Implementation Activities
- ◆ **LEMOORE 20:** Participate in a Small Area Study to Create Strategies for Compatible Development in the GCA Box Low-Level Flight Pattern Areas shown in **Figure 3-17**
- ◆ **LEMOORE 21:** Collaborate with other jurisdictions and U.S. navy to explore REPI opportunities at NASL.

In order to help link the proposed Recommendations with how the Community's Areas of Concern are addressed, **Table 3-3** on the following page was created. This matrix represents how each Area of Concern is directly related to a minimum of one recommendation, if not more.

Naval Air Station Lemoore (NASL) Overlay Designation	Geographic Vicinity				
	APZ I	APZ II	High Aircraft Noise	3-Mile Buffer	Development Review & Notification
I	■	■	■	■	■
II			■	■	■
III					■

Table 3-2: NASL Overlay Zone Designations

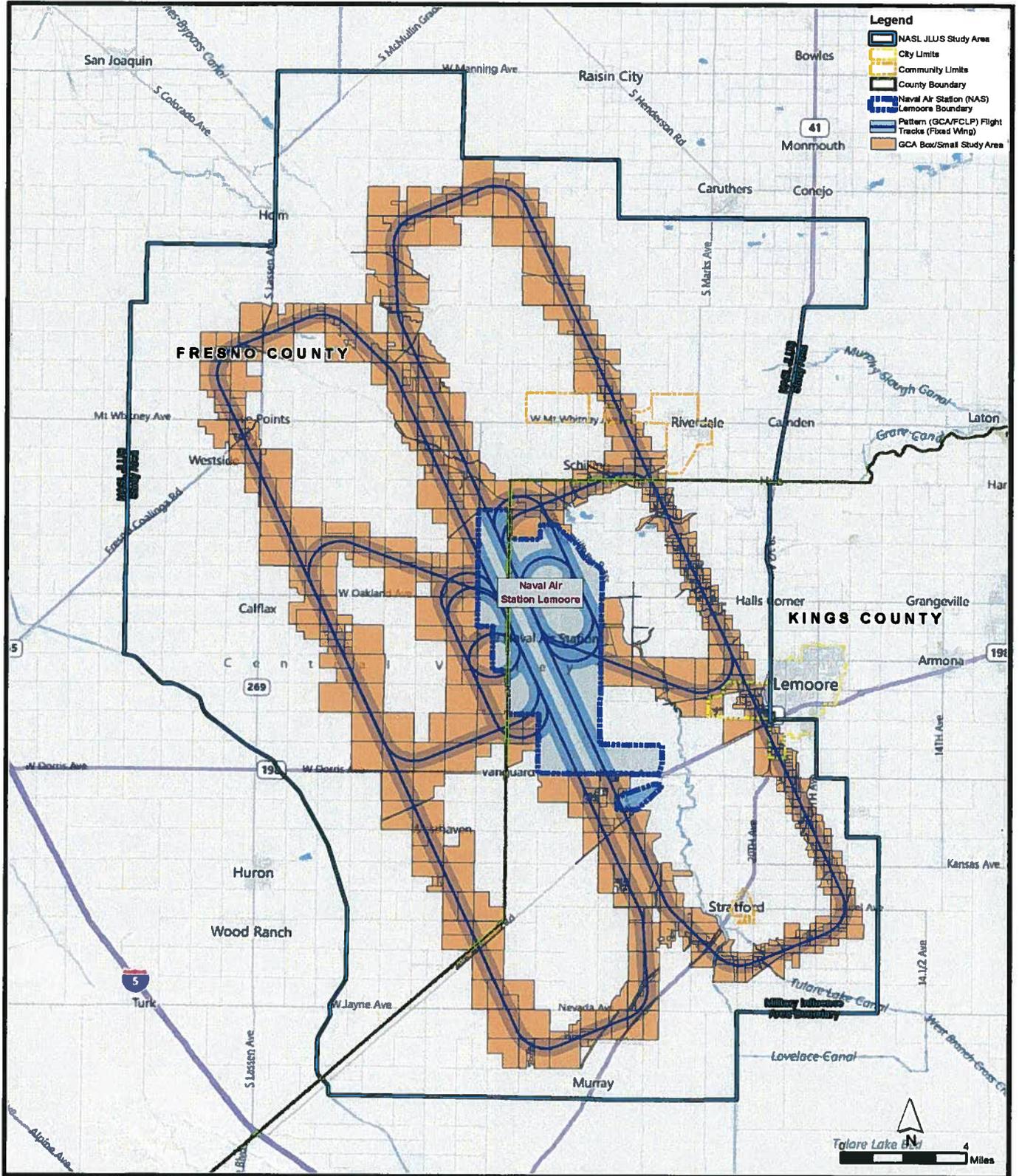


Figure 3-17: GCA Box/Small Study Area

RECOMMENDATIONS	AREAS OF CONCERN														
	Military Aircraft Noise	Renewable Energy Sites	Bird/Aircraft Strike Hazards (BASH)	Environmental and Conservation Re-	Nighttime Light/Glare Effects	Continuing Compatible & Beneficial	Planned Infrastructure Expansion	Air Quality	Object Heights	FAA Coordination	Emergency Response	Development Entitlements	Public Schools Funding	Inter-Governmental Coordination	Ground Control Approach (GCA) Box
1										■					
2	■														■
3	■														■
4					■										
5				■		■									
6				■				■							

Table 3-3: Correlation Between Recommendations and Areas of Concern

RECOMMENDATIONS	AREAS OF CONCERN														
	Military Aircraft Noise	Renewable Energy Sites	Bird/Aircraft Strike Hazards (BASH)	Environmental and Conservation	Nighttime Light/Glare Effects	Continuing Compatible & Beneficial	Planned Infrastructure Expansion	Air Quality	Object Heights	FAA Coordination	Emergency Response	Development Entitlements	Public Schools Funding	Inter-Governmental Coordination	Ground Control Approach (GCA)
7			■	■											
8							■			■				■	
9							■								
10		■								■				■	
11							■						■		
12	■	■													
13	■	■			■				■						

Table 3-3 (continued): Correlation Between Recommendations and Areas of Concern

RECOMMENDATIONS		AREAS OF CONCERN															
		Development Near NASL's Bound-	Accident Potential Zone Beyond	Military Aircraft Noise	Renewable Energy Sites	Bird/Aircraft Strike Hazards (BASH)	Environmental and Conservation	Nighttime Light/Glare Effects	Continuing Compatible & Beneficial	Planned Infrastructure Expansion	Air Quality	Object Heights	FAA Coordination	Emergency Response	Development Entitlements	Public Schools Funding	Inter-Governmental Coordination
14	Revise Land Use Regulations to be Compatible with the Overlay Designations	■	■		■						■						
15	Continue the Requirement for Noise Attenuation Design and Construction Standards for New Construction in the High Aircraft Noise (>65 dB CNEL) Area (Overlay Zones I and II)	■															
16	Limit Object Heights to Ensure Anti-Terrorism/Force Protection (AT/FP) Measures Are Met and Mitigate Vertical Obstructions in Overlay Zones I, II, and III										■						
17	Establish Minimum Technical Standards for Renewable Energy Facilities Located Within Overlay Zones I, II, and III				■												
18	Adopt Resolution Supporting the JLUS Recommendations and Implementation															■	
19	Collaborate with the KCAG as Lead Facilitator of the JLUS Implementation Activities															■	
20	Participate in a Small Area Study to Create Strategies for compatible development in the GCA Box low-level flight pattern areas.																■
21	Collaborate with Other Jurisdictions and U.S. Navy To Explore REPI Opportunities at NASL	■	■	■		■		■								■	■

Table 3-3 (continued): Correlation Between Recommendations and Areas of Concern

Mayor
Willard Rodarmel
Mayor Pro Tem
John Plourde
Council Members
John Gordon
John Murray
William Siegel



**Office of the
Mayor**

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April 5, 2011

Mr. Joe Neves, Chairperson
Lemoore Joint Land Use Study Policy Committee
Kings County Association of Governments
339 W. D St. Suite B
Lemoore, CA 93245

Chairperson Neves:

The City of Lemoore is pleased to provide comments related to the March 22, 2011 Draft Joint Land Use Study.

The City has been a willing partner in the preparation of the Study, and looks forward to continued participation in the process. At this time, the City believes that the Study has fully examined the myriad of issues impacting land use decisions of the County of Kings, County of Fresno and City of Lemoore in the areas that surround Naval Air Station Lemoore. The City is appreciative of the 19 specific recommendations that are included in the Study for Lemoore, and believe that these recommendations are in concert with Lemoore's 2030 General Plan, adopted in 2008.

Since the area west of Highway 41 in Lemoore has become an important matter considered in the Study, we find it necessary to include some additional background information that we would request be included in the Final JLUS document.

In June 1997, the City of Lemoore annexed approximately 1,432 acres of land located west of State Highway 41, south of the present Industry Way alignment, to a point located between the 21st Ave. and 22nd Ave. alignment, with the Iona Ave. alignment serving as a southern border. The annexation action was approved only after the "Final Environmental Impact Report for the College Park at West Hills Development, General Plan Amendment, Sphere of Influence Amendment, Annexation and Amendment No. Two to the Redevelopment Plan for the Lemoore Redevelopment Project" (referred hereafter as the Final EIR) was prepared. The Executive Summary of the Final EIR defined the major City goals related to this annexation to include: "1) achievement of long-term economic growth of the community in a diverse and efficient manner, 2) achievement of a balanced community providing for needs of all the segments of the City, 3) achievement and maintenance of a sound economic base providing diversified employment opportunities, 4) blight remediation, 5) achievement of General Plan goals and objectives particularly as they relate to jobs/housing balance and other needs of the Lemoore Naval Air Station". The primary issue driving the annexation at the time was the 110 acre donation of land

"In God We Trust"

for West Hills College at Lemoore Community College Campus, located in the middle of the annexed area, which was complemented by a variety of land uses around the proposed Campus.

As shown on Page 34 of the Final EIR, the United States Department of Navy was notified during the Notice of Preparation, and two representatives attended the EIR Scoping Meeting held November 5, 1996, but no comments were received from the Navy prior to the document preparation. According to the Final EIR Appendix H – Noise Analysis page 11, the published noise contours in place from the air station at the time showed this entire annexation area was located about three miles outside of the 60 dB CNEL noise contour, and therefore it was determined that aircraft noise in the annexed area was anticipated at being less than 50 dB CNEL. The Final EIR determined that these noise exposure levels “do not represent a significant impact”.

In reviewing all of the written comments received during the 1997 EIR process, no written comments were received from NASL on the proposed annexation or land uses. Only one comment received on the EIR document (located in Appendix 8.G.6 of the Final EIR) was on the topic of encroachment; it came from the Kings County Planning Agency requesting that the project’s potential of “encroachment on Lemoore NAS” be addressed. The Final EIR includes the City’s response (listed in Appendix 9.G.6 of the Final EIR) which stated that the annexation area was within the City’s secondary Sphere of Influence, is located more than 4 miles from the nearest Accident Potential Zone and no development should expand west of the westerly boundary of the proposed annexation site. The document further stated that “officials at LNAS did not respond to the Draft EIR and, therefore, the City can only assume that the LNAS is in agreement with the Master Development Plan as proposed”.

Beginning in 2006, the City undertook a comprehensive update to the Lemoore General Plan. During the process, NASL personnel participated on the General Plan Steering Committee. As a result, the 2030 General Plan, as adopted by the Lemoore City Council on May 6, 2008, made the following changes for areas west of Highway 41:

1. Reduced future residential development density from an estimated 15,000 persons (1997 annexation land uses) to 10,000 persons (2008 General Plan land uses), over a larger area.
2. Modeled anticipated future noise contours independently based on input provided by the Navy to delineate those areas with greater than 60 dB CNEL. The 2008 contour map in the 2030 General Plan shows much of the area to be in greater than 65 dB CNEL noise contours.
3. Contains policy SN-I-46 which requires stringent noise mitigation policy framework for residential areas with aircraft noise exposure greater than “normally acceptable” (greater than 65 dB CNEL noise contour areas) to mitigate noise through recorded noise disclosures, aviation easements, a buyer beware program, as well as noise insulation construction requirements into the building design to achieve interior noise level reduction of 40 dB in all habitable areas and 45 dB in all bedrooms.
4. Pulled the westerly City Urban Growth Boundary away from NASL approximately ½ mile to the 21st Ave. alignment (which removed approximately 150 acres from future development).

5. Contains policy SN-I-47 to “coordinate with NAS Lemoore to incorporate their Air Installation Compatible Use Zone (AICUZ) study into future updates to the City Zoning Ordinance and General Plan to the extent consistent with the City’s compatibility standards and noise level reduction requirements.

As you can see, the issue of compatible growth around NASL has been very important for the City of Lemoore for the past many years. We believe that the 2030 General Plan contains numerous policies to help protect NASL from encroachment, and further believe the Draft JLUS contains recommendations that will help achieve protection from incompatible land uses.

We appreciate the opportunity to provide comments on the Draft Naval Air Station Lemoore Joint Land Use Study.

Sincerely,

Willard J. Rodarmel
Mayor