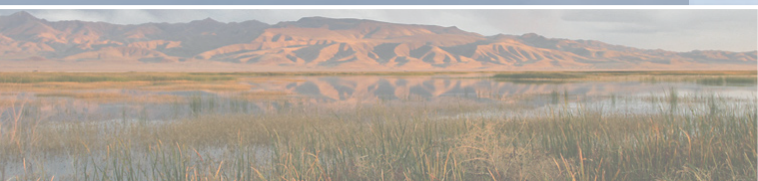


May 2015



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



NAVAL AIR STATION FALLON

JOINT LAND USE STUDY

Prepared by



May 2015

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

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The Policy Committee (PC) served an active and important role in providing policy direction during the development of the Naval Air Station Fallon (NAS Fallon) Joint Land Use Study (JLUS). The Policy Committee comprised the following individuals:

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Acronyms

A

AB	Assembly Bill
acq	acquisition
AICUZ	Air Installation Compatible Use Zones
APZ	Accident Potential Zone
AQ	Air Quality
ATCAA	Air Traffic Controlled Assigned Airspace

B

BASH	Bird / Wildlife Aircraft Strike Hazard
BIO	Biological Resources
BLM	Bureau of Land Management
BNOISE	BNOISE Noise Modeling Program

C

CIP	Capital Improvement Program
COM	Communication / Coordination
Comm	Communication and Coordination
CR	Cultural Resources
CZ	Clear Zone

D

dB	decibel
dBc	decibel C-weighted
Disc	Real Estate Disclosures
DOD	Department of Defense
DOT	Department of Transportation
DON	Department of Navy
DSS	Dust, Smoke, and Steam

E

ED	Energy Development
Edu	Education / Communication
EIS	Environmental Impact Statement

F

FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FRTC	Fallon Range Training Complex
FSC	Frequency Spectrum Capacity
FSI	Frequency Spectrum Interference / Impedance
FY	fiscal year

G

GIS	Geospatial / Geographic Information Systems
GPS	Global Positioning Satellite System

H

HA	Housing Availability
Hab	Habitat Conservation Tools

I

I	Interstate
ICRMP	Integrated Cultural Resources Management Plan
IE	Infrastructure Extensions
IGA	Intergovernmental Agreement
INRMP	Integrated Natural Resources Management Plan

J

JLUS	Joint Land Use Study
JNTC	Joint National Training Capability

L

LAS	Competition for Land and Air Space
Leg	Legislative Tools
LU	Land Use

M

MIA	Military Influence Area
MIDCA	Military Influence Development Coordination Area
MOA	Military Operating Area
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRNMAP	MOA Range NOISEMAP
MSL	mean sea level
MTR	Military Training Route

N

NAS Fallon	Naval Air Station Fallon
NDOW	Nevada Department of Wildlife
NJMAC	Nevada Joint Military Affairs Committee
NOI	Noise and Vibration
NRS	Nevada Revised Statute
NSAWC	Naval Strike and Air Warfare Center
NVDOT/NDOT/DOT	Nevada Department of Transportation

O

OEA	Office of Economic Adjustment
OHV	off-highway vehicle

P

PC	Policy Committee
PL	Public Law
Plans	Comprehensive / Master / General / Hazard / Airport Plans
POC	points of contact
PT	Public Trespassing

R

RA	Restricted Airspace
RAICUZ	Range and Air Installations Compatible Use Zones
RCMP	Range Complex Management Plan
RCZ	Range Compatibility Zone
Reclamation	Bureau of Reclamation
REMI	Regional Economics Model, Inc.
REPI	Readiness Environmental Protection Initiative
RMP	Resource Management Plan

S

SA	Safety Zones
SETT	Nevada Sagebrush Ecosystem Technical Team
SHPO	State Historic Preservation Officer / Office
SNR	Scarce Natural Resources
SOA	Supersonic Operating Area
SUA	Special Use Airspace

T

TACTS	Tactical Aircrew Combat Training System
TC	Technical Committee
TCID	Truckee Carson Irrigation District
TDR	Transfer of Development Rights

U

U.S.	United States
UAS	unmanned aerial system
USFS	United States Forest Service
USFWS	US Fish and Wildlife Service

V

VO	Vertical Obstructions
----	-----------------------

W

WQQ	Water Quality / Quantity
-----	--------------------------

Z

Zone	Zoning Ordinance / Subdivision Regulations
------	--



Please see the next page.

The Naval Air Station Fallon (NAS Fallon) Joint Land Use Study (JLUS) is a joint, collaborative effort between the cities of Fallon and Fernley and the County of Churchill and portions of seven north-central Nevada counties: Eureka, Mineral, Lander, Lyon, Nye, Pershing, and Washoe and NAS Fallon. The JLUS was undertaken in an effort to guide planning and land use decisions about development in local governments surrounding NAS Fallon and within the Fallon Range Training Complex (FRTC). NAS Fallon is home to the Naval Strike and Air Warfare Center (NSAWC), which includes the well-known TOPGUN school. These activities are vital to the overall Navy Warfare mission in Nevada; the land used for the activities must be protected. Conversely, the landowners, residents, recreationalists, and business owners surrounding NAS Fallon and within the FRTC must also be protected from adverse impacts that could occur due to training activities performed at NAS Fallon and the FRTC. These joint planning efforts establish recommended strategies that will mutually protect all interested parties.

The JLUS for NAS Fallon has resulted in a set of strategy recommendations in the areas of policy, planning and zoning, coordination and communication, and outreach. A set of strategies was provided to address each NAS Fallon Compatibility Factor. One of the key recommendations is for the formation of a JLUS Coordination Committee that will be responsible for overseeing the progress of the implementation in the months and years after the JLUS is completed. The recommended strategies are outlined in more detail in Chapter 6 of this report. Additionally, the Background Report was prepared in conjunction with the JLUS report that details the compatibility issues and process that went into the development of the strategies.

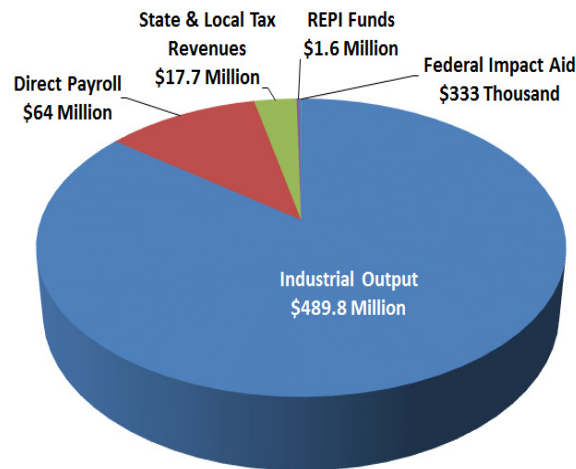
These recommendations address the need for increased coordination and communication between NAS Fallon staff and the surrounding local governments, regional agencies and the public. They also seek to address public health, safety, and welfare, and protection of quality of life in the areas of surrounding NAS Fallon and within the FRTC. The collaborative spirit of the JLUS is an effective beginning for a continued collaborative planning and communication effort between all involved parties.

1.1 Why Do a Joint Land Use Study?

A JLUS is necessary to ensure the future compatibility between land uses necessary to support the continuation of the military mission at NAS Fallon and the FRTC and the numerous public land uses occurring near the installation and on the FRTC.

NAS Fallon supports the United States (U.S.) Navy by providing a center and premier school of excellence in Naval Strike Warfare enabling testing on numerous weapons systems and combat and air maneuver tactics due to its premier location and relatively few compatibility conflicts. The mission is important to protect to ensure the viability and sustainability of the military mission readiness for the U.S. Navy.

1.2 Economic Benefit to the Region



In addition to being a critical U.S. Navy installation for warfare training, NAS Fallon is also an important economic engine contributing to the regional economy through sustained direct payroll, state and local tax revenues, and industrial output. Direct payroll refers to the sum of all salaries from employee wages (military and

civilian). Industrial output refers to all revenues generated from maintenance and operations contracts, payroll from those sources, and visitor spending by transient personnel. The JLUS assists in preserving the continued economic benefit that NAS Fallon provides. In Fiscal Year (FY) 2008, NAS Fallon generated over \$573 million in economic impact for the local and regional economies and supported over 2,800 personnel. While the 2008 number is dated, it should be noted that there have not been any significant mission or personnel changes that would warrant the need for a more current economic impact number; therefore, the \$573 million is a good number for the purposes of this JLUS. The \$573 million impact is broken into five categories: direct payroll, state and local tax revenues, industrial output, Readiness Environmental Protection Initiative (REPI) Funds, and Federal Impact Aid provided to schools in the area.

1.3 Community Support

As a community presence, NAS Fallon supports and contributes much more than economic benefit to the region. The installation and its personnel are an important asset and well integrated into the civilian community as well. Many

NAS Fallon personnel serve the community as Scout Leaders, coaches for youth sports teams, Sunday School teachers, and are members of many social clubs including the Churchill County Desert Coalition clean ups and Navy Junior ROTC. In addition, NAS Fallon adopts schools in their “Partners in Education” program, where NAS Fallon provides tutors for students, hosts academic activities such as science fairs, and holds a “Navy Day” field day each spring. Furthermore, NAS Fallon participates in many law enforcement activities including Nevada’s “Click it or ticket” and “McGruff the crime dog” safety events to raise children’s security awareness.

1.4 Compatibility Concerns

At NAS Fallon, the compatibility concerns relate to the expansion and integration of civilian unmanned aerial systems (UAS) in the airspace as Nevada was selected for one of the Federal Aviation Administration Test Sites for the commercial UAS program sites. In addition, the concerns about appropriate level of coordination and communication regarding development in the area due to the various areas needed for low-level flight training and supersonic maneuvers, and generally, the concern about increasing geothermal resource development. Moreover, the NAS Fallon JLUS identified an overall general concern for the preservation of the natural environments and species relative to mission impacts. All of these concerns if left unmanaged or without enhanced coordination efforts, could unintentionally jeopardize the Navy’s ability to train its resident and visiting personnel at NAS Fallon and the FRTC. In addition, lack of planning and / or understanding of local concerns has the potential to jeopardize community economic development and quality of life.



NAS Fallon Air Traffic Control Tower

1.5 What Is a Joint Land Use Study?

A JLUS is a planning process accomplished through the collaborative efforts of a comprehensive list of stakeholders in a defined study area. It is a process designed to identify and determine ways to enhance compatible land uses and growth management practices within and adjacent to active military installations, such as NAS Fallon and the FRTC. The intent of the process is to establish and foster a working relationship among a military installation and its proximate local jurisdictions to act as a team to address compatibility issues and prevent and / or reduce encroachment issues associated with achieving existing mission objectives, allowing for mission expansion (not boundary expansion) and fostering community economic development goals. Although primarily federally funded by the Department of Defense (DOD), Office of Economic Adjustment (OEA), a JLUS is produced by and for local communities. The local project management organization and sponsor for this JLUS is Churchill County.

JLUS Goal

The goal of the NAS Fallon JLUS is to protect the viability of current and future military training operations, while simultaneously guiding community growth, sustaining the environmental and economic health of the region, and protecting public health, safety, and welfare in the areas surrounding NAS Fallon and within the FRTC.

JLUS Objectives

To help meet this goal, the primary JLUS objectives of the NAS Fallon JLUS are:

- **Understanding.** Convene community and military representatives to identify, confirm, and understand the issues in an open forum, taking into consideration both community and NAS Fallon perspectives and needs. This includes public awareness, education, and input organized in a cohesive outreach program.
- **Collaboration.** Encourage cooperative land use and resource planning among NAS Fallon and the surrounding jurisdictions so that future community growth and development are compatible with the training and operational missions at NAS Fallon. Concurrently, seek ways to reduce operational impacts on adjacent lands within the study area.
- **Actions.** Provide a set of mutually supported tools, activities, and procedures from which local jurisdictions, agencies, and NAS Fallon can select, prepare, and approve / adopt and then use to implement the recommendations developed during the JLUS process. The actions proposed include both operational measures to mitigate installation impacts on surrounding communities and local government and agency approaches to reduce community impacts on military operations. These collective tools will help decision makers resolve compatibility issues and prioritize projects within the annual budgeting process of their respective entity / jurisdiction.

1.6 JLUS Partners

As previously stated and highlighted in the JLUS objectives, the JLUS process was designed to create a locally relevant plan that builds consensus and obtains support from the various stakeholders involved. To achieve the JLUS goal and objectives, the planning process included a public outreach program that utilized a variety of opportunities for stakeholders and interested parties to contribute to the development of this study.

Stakeholders include individuals, groups, organizations, and government entities interested in, affected by, or affecting the outcome of the JLUS project. An early step in any planning process is the identification of stakeholders. Informing or involving stakeholders early in the project is essential in the identification of critically important compatibility issues to address and resolve through the development of integrated strategies and actions. Stakeholders identified for the NAS Fallon JLUS included, but were not limited to, the following:

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

These groups of stakeholders played a critical role in the development of the NAS Fallon JLUS and Background Reports. Their input provided comprehensive, technical guidance relevant to their jurisdiction's policies, regulations, culture, and values. The NAS Fallon stakeholder groups helped shape the numerous strategies identified in this document.

Local Communities

This JLUS could not have been possible without the many hours and efforts provided by the 10 JLUS jurisdictions affected by this study (see Figure 1 for the location of each jurisdiction):

- City of Fallon
- City of Fernley
- Churchill County
- Lyon County
- Eureka County
- Lander County
- Mineral County
- Nye County
- Pershing County
- Washoe County
- Other Agency / Organization Partners.

In addition to the partners listed above, the NAS Fallon JLUS partnered with other organizations that provide federal, state, regional and / or community perspective. These partners brought to the study a vast, expert knowledge base in varying disciplines, including state land use management practices, regional transportation practices, natural resources and fire management, and a local “on-the-ground” perspective relevant to the unique land features and land ownership patterns. A complete listing of the affiliated stakeholder groups that played a vital role in the development of the NAS Fallon JLUS follows:

- Bureau of Land Management
- Bureau of Reclamation
- Fallon-Paiute Shoshone Tribe
- Nevada Farm Bureau
- Nevada Cattleman's Association
- Nevada Division of State Lands (Nevada State Planning Agency)
- Nevada Department of Wildlife
- United States Fish and Wildlife Service

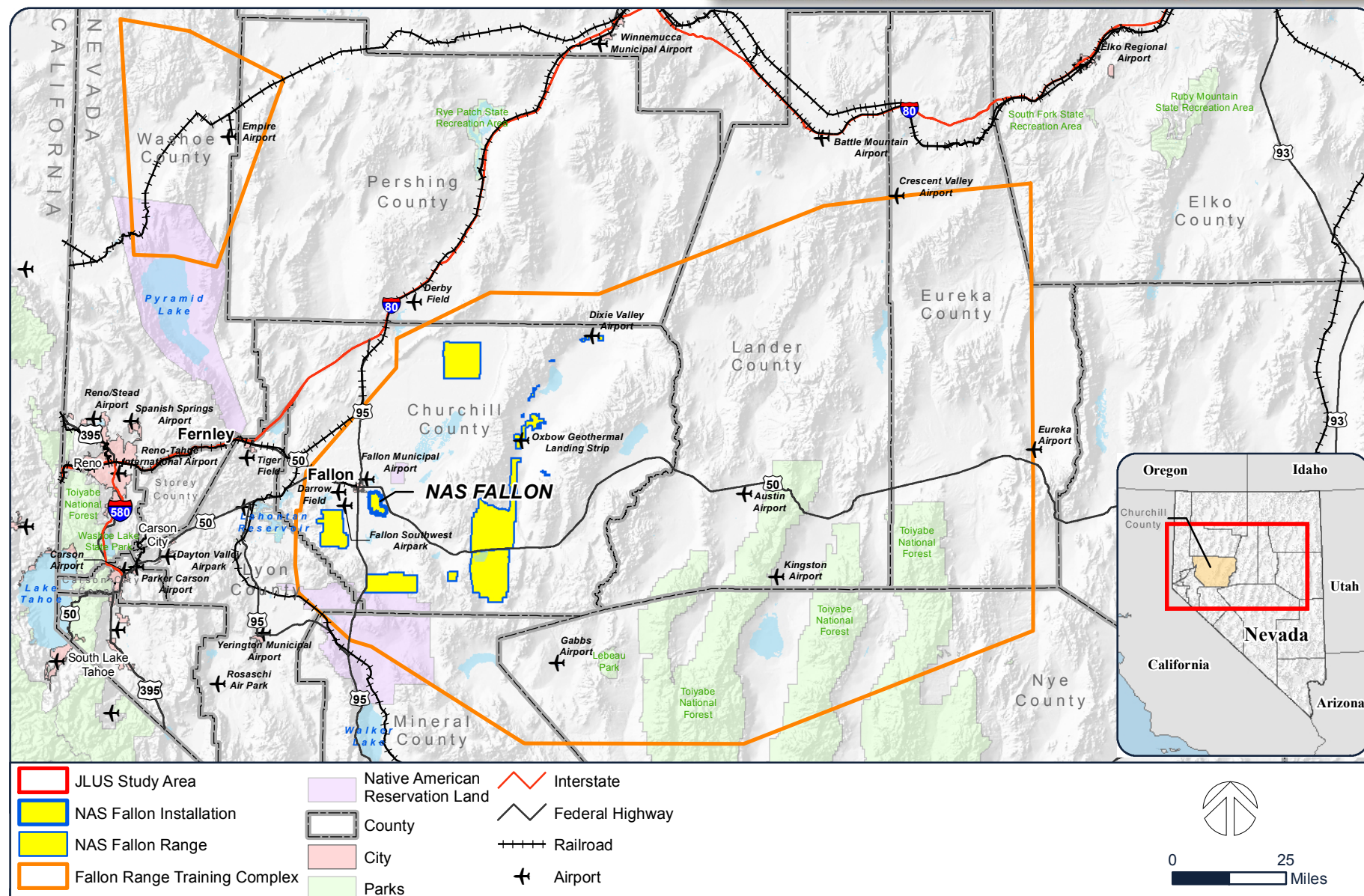


Figure 1
JLUS Study Area

Matrix
DESIGN GROUP

Sources: NAS Fallon, 2013; Churchill County, 2013; NDOT, 2013; BLM, 2013.

These partners provided invaluable insights and perspectives to the development of the JLUS and the Background Reports.

Public Participation

The general public was instrumental in the development of the JLUS and its strategies by providing their perspective and feedback, both in the public workshops and through the use of the interactive project website (www.nasfallonjlus.com). During the development of the JLUS, three public workshops were held to solicit public input on the direction and content of the JLUS.



Public Workshop #1, Churchill County Administrative Building Chambers

JLUS Committees

Two committees, comprised of city, county, military, and other partner agencies and organizations, guided the development of the NAS Fallon JLUS. These committees were:

Policy Committee (PC). The PC is responsible for the overall direction of the JLUS; its members are listed in the Acknowledgements section of this report.

Technical Committee (TC). The TC is responsible for identifying and studying technical issues. The TC assists in reviewing the analysis and the development and evaluation of implementation strategies and tools. The TC members are listed in the Acknowledgements section of this report.



Technical Committee Meeting #3, Churchill County Administrative Building Chambers

1.7 JLUS Study Area

The NAS Fallon JLUS study area is designed to address all lands near NAS Fallon and the FRTC that may impact current or future military operations or be impacted by the military operations. The NAS Fallon JLUS study area covers the cities of Fallon and Fernley and Churchill and portions of Eureka, Lander, Lyon, Mineral, Nye, and Pershing and Washoe counties. The primary characteristics evaluated to determine the study area included 23 general compatibility factors and their association with military mission readiness and community zoning and development functions, e.g., interagency communication and coordination, land uses, infrastructure extensions, safety, and noise. Figure 1 illustrates the NAS Fallon JLUS study area.

Please see the next page.



The study area for the Naval Air Station Fallon (NAS Fallon) Joint Land Use Study (JLUS) includes the NAS Fallon, the Fallon Range Training Complex (FRTC), the nearby cities of Fallon and Fernley, Churchill County, and portions of seven counties in northern Nevada.

The JLUS study area includes long north-south running mountain ranges and valleys that allow for irrigation-supported agriculture and a unique military training environment. Agriculture represents a significant land use in the area and select mining operations also occur throughout the region. These mining operations occur on federally-managed lands by agencies, the Bureau of Land Management (BLM) and the United States (U.S.) Forest Service. These qualities and attributes create a unique advantage for both NAS Fallon and the local jurisdictions to benefit from proximity to one another.

2.1 Local Jurisdictions in the Study Area

NAS Fallon is situated in northern Nevada approximately three miles southeast of the City of Fallon located in Churchill County. The FRTC; however, encompasses all of Churchill County and portions of seven counties in northern Nevada: Eureka, Lander, Lyon, Mineral, Nye, Pershing, and Washoe.

This area is characterized by a variety of natural resources including wildlife refuges, alkali flats, mountainous terrain, and other ecologies important to wildlife and various species. This geography makes it ideal to train in tactical aircraft maneuvering and supersonic exercises as development is isolated to major economic nodes and utility and transportation corridors such as U.S. Highways 50 and 95 and Interstate-80 (I-80).

2. Community Profile

2.2 Study Area Growth Trends

Population growth and subsequent land development trends in the study area vary significantly between the counties. Several fundamental factors, though, contribute to slow but comparable rate of growth and development throughout the study area. These factors include property ownership, natural resources availability, location, and weather.

Furthermore, infrastructure limitations, such as the lack of navigable roads, available potable water, and proximity to other urban areas, limit development in many counties. I-80 and U.S. Highway 50, though, support limited development corridors through the study area, particularly between the cities of Fernley and Fallon northwest of NAS Fallon, and present the most immediate future growth opportunities in the region.

Population

The population data incorporated herein is based on information from the 2010 U.S. Census as well as the Nevada State Demographer's Office. Population projections show the overall trends in population change in the area and assist policymakers in making informed decisions based on these prevailing tendencies. Table 1 shows the change in population from 1990 to 2010 and notes the percent change between 2000 and 2010.

The largest population centers in the study area occur in Churchill and Lyon counties, which are home to the cities of Fallon and Fernley. Most of the population growth is centered on the I-80 and U.S. Highway 50 corridors, which connect these areas to Reno, NV.

Nye County has a significant population, but most of these inhabitants reside on the border between Clark County and the City of Las Vegas. This area in Nye County is south of the study area and minimally impacted by NAS Fallon.

Future Population Projections

Regional Economics Model, Inc. (REMI) projected twenty year population estimates for Nevada counties as shown in Table 1. The projections do not include cities or towns. During the period between 2010 and 2020, the REMI population model predicts the Churchill County population will increase by 9.25 percent, which averages less than one percent annual increase. At this rate of growth, Churchill County is in the middle range of JLUS Study Area

counties for projected future population increases. Eureka County is projected to grow at a similar rate to Churchill, while Lander, Lyon, and Washoe counties are estimated to grow at a rate of around 14 to 15 percent from 2010 to 2020. Nye and Pershing counties are estimated to see the smallest percent of growth at less than five percent, and Mineral County is anticipated to decline by approximately 13 percent. In terms of numbers, Washoe County, with the largest population, is estimated to have the largest increase in population with a gain of almost 63,000 people. It should be noted that REMI updates these projections on a regular basis (usually annually), so the future population numbers are subject to change from year to year. The numbers provided in Table 1 are from the most recent projections at the time this JLUS was prepared.

Table 1. Population Change 1990-2010 NASF JLUS Area

Jurisdiction	1990	2000	% Change 1990-2000	2010	% Change 2000-2010	2020 Est.	% Change Est. 2010-2020
Churchill County	17,938	23,982	25.20%	24,877	3.60%	27,177	9.25%
City of Fallon	6,438	7,536	14.57%	8,606	12.43%		Unavailable
City of Fernley	5,164	8,830	41.52%	19,368	54.41%		Unavailable
Eureka County	1,547	1,651	6.30%	1,987	16.91%	2,170	9.21%
Lander County	6,266	5,794	-8.15%	5,775	-0.33%	6,568	13.73%
Lyon County	20,001	34,501	42.03%	51,980	33.63%	59,436	14.34%
Mineral County	6,475	5,071	-27.69%	4,772	-6.27%	4,141	13.22%
Nye County	17,781	32,485	45.26%	43,946	26.08%	46,098	4.90%
Pershing County	4,336	6,693	35.22%	6,753	0.89%	7,008	3.78%
Washoe County	254,667	339,486	24.98%	421,407	19.44%	484,304	14.93%

Source: Nevada State Demographer's Office; Regional Economics Model, Inc.; Nevada County Population Projections 2014 to 2033, dated October 1, 2014

2.3 JLUS Community Economic Trends

The traditional economic activity of north central Nevada has been based largely on the agriculture and mining industries, with recent economic growth in services associated with the outdoor recreation and tourism industries. Additionally, military installations such as NAS Fallon and the U.S. Ammunition Depot have provided steady sources of local income to Churchill and Mineral counties. In addition, construction-related industries represent a major sector of the local economy around NAS Fallon. Other significant local industries include healthcare, accommodation and food services, and retail trade. Furthermore, manufacturing continues to increase in the region, most likely due to the development of the Crossroads Commercial Center in Fernley. Connectivity to regional markets through I-80 and U.S. Highway 50 and inexpensive land prices has made Fernley an attractive location for many businesses. However, the manufacturing industry suffered during the national recession and full recovery will likely be slow.



Please see the next page.



To appropriately develop and assess compatibility issues for the Naval Air Station Fallon (NAS Fallon) Joint Land Use Study (JLUS), it is critical to understand the military operations and activities associated with NAS Fallon mission and how those operations interface with nearby communities and land uses. This chapter provides a brief overview of the mission operational footprint for NAS Fallon and the Fallon Range Training Complex (FRTC).

NAS Fallon is located in Churchill County, Nevada about 3.5 miles south-southeast of the City of Fallon. The installation is near major transportation corridors such as United States (U.S.) Highways 50 and 95. Neighboring communities include the City of Fernley located approximately 34 miles northwest of the installation and portions of Eureka, Lander, Lyon, Mineral, Nye, Pershing, and Washoe counties are all surrounding the installation or impacted by the FRTC footprint.

3.1 Installation Setting

NAS Fallon is owned by the U.S. Department of Defense (DOD) Department of Navy (DON). The main base occupies 8,671 acres of land with oversight of an additional 241,127 acres of training ranges in the northwestern region of Nevada located in Churchill County. In addition to the installation acres and training ranges, there are approximately 14,182 square nautical miles of special use airspace (SUA). The FRTC encompasses the range and air space that traverses seven other counties in northwestern Nevada. A majority of the land surrounding the installation to the north, east, and south is used for agriculture. Urban development occurs approximately 3.5 miles north-northwest of the base located in the City of Fallon.

The terrain surrounding NAS Fallon and the FRTC is a unique combination of northern Nevada desert, wildlife refuges, alkali flats, and farmlands found in the Lahontan Valley.

Source: Churchill County Master Plan, 2010. Churchill County.

NAS Fallon is made up of the main base area and the FRTC. The main base area includes the primary operational facilities including administrative buildings, barracks, and three runways (one of which is the longest runway in the Navy). The FRTC includes the target range areas and the airspace supporting flight operations. The main base is home to the command facilities and personnel support facilities, which are concentrated and located in the northwest portion of the base; whereas, the housing units are in the western portion of the base. The outlying area of the FRTC is the airspace and training range where maneuver training and bombing activities occur.

Military Strategic Importance

The primary mission of NAS Fallon is to prepare U.S. carrier-based air wings to work as a cohesive unit prior to deployment. NAS Fallon is the premier training and warfare center for naval aviators with 57,000 flight operations annually. This number is projected to increase to approximately 63,000 flights operations annually in the future. NAS Fallon serves as a premier naval advanced, integrated training installation for carrier-wings providing comprehensive, realistic strike, and tactical training to activate aviation units and activities of the Navy's operating and training forces. Surrounded by a vast unobstructed desert terrain and limited non-military air traffic with dedicated gunnery and bombing ranges, NAS Fallon plays a key role in graduate-level warfare training of aviation units serving the U.S. Navy and Marine Corps.

Current Mission Operations

NAS Fallon is the premier Naval Aviator Warfare Center for advanced, integrated training in warfare tactics including maneuvering and bombing practice. The installation is able to provide “realistic integrated air warfare training” for its units during training events.

NAS Fallon installation has three operating runways, the 13R/31L, 13L/31R, and the crosswind runway. The 13R/31L Runway is the longest runway in the U.S. Navy at 14,003-feet and is aligned northwest to southeast. This runway has a parallel runway designated 13L/31R and it has a length of 11,077 feet. The third runway is the crosswind runway, 07/25; it runs west to east at a length of 7,003 feet.

The relatively isolated desert location of NAS Fallon and the FRTC plays a significant role by enabling U.S. and international aviators to familiarize themselves with multiple weapons systems, including aircraft maneuvering and gunnery and target bombing practice. The FRTC is equipped with four target ranges and three training areas, where target and bombing practice is performed (see Fallon Range Training Complex Target Ranges and Training Areas information in this section). The FRTC is also equipped with the latest technology in electronic warfare capabilities, which enables aviators to develop tactical skills in Guided Laser Target practice as well as other electronic warfare strategies, i.e., jamming radars.

The FRTC also has capabilities for night-vision training as Targets B-16 and B-19 are equipped with night lighting. This allows for training in all potential conflict scenarios including day and night.

Source: NAS Fallon AICUZ, 1999; Fallon Range Training Complex RAICUZ, 2011.

Future Mission Operations

Developed as a Navy standard installation, NAS Fallon comes equipped with state-of-the-art facilities, ranges, and training areas. These assets facilitate tactical training experiences and integrated carrier wing mission requirements, which positions NAS Fallon as the premier facility for

advanced-level tactical training and development, including aerial combat maneuvering, air-to-air and air-to-ground weapons delivery, special weapons delivery, and electronic warfare training.

An environmental impact statement (EIS) is currently in progress for the FRTC to assess the potential for an increase in missions at NAS Fallon and the potential introduction of new aircraft at NAS Fallon. The EIS outlines and describes in detail, including all environmental impacts associated with alternatives proposed, two alternatives and one no action alternative for the FRTC. This EIS assists federal, state, and local decision makers with planning and land use decisions.

3.2 NAS Fallon Mission Profile

The NAS Fallon mission profile is composed of various footprints that are associated with the mission. These components are either tangible meaning that they are either physically seen and / or heard or intangible meaning that they exist within space without being seen or heard. One example of a tangible footprint is noise associated with aircraft activity; one example of an intangible component is the flight path that an aircraft follows. These tangible and intangible footprints comprise the mission profile. Oftentimes, the profile is not contained within the confines of the military installation; noise, for example, does not stop at the fence line. The mission profile can potentially affect areas adjacent to or near the installation. Conversely, some development activities occurring in communities such as residential or commercial development within or adjacent to a military installation (depending on location) have a potential to adversely impact aircraft operations. The mission profile and associated footprints of NAS Fallon are:

- Installation Profile
- FRTC Target Ranges and Training Areas
- FRTC Military Operating Area

The components within the profiles play a significant role in the installation’s viability for sustaining current training opportunities and positioning for potential future missions.

NAS Fallon Installation Profile

The NAS Fallon Installation Profile covers the military operational components that comprise a portion of the training activities performed at the main base, NAS Fallon. As shown in Figure 2, this operational footprint contains the airfield accident potential zones, airfield noise contours, and the outermost boundary of the airfield imaginary surfaces.

Airfield Accident Potential Zones

The accident potential zones are where aircraft collisions are statistically more likely to occur thus creating the need to protect the general public from such safety hazards. The outer extent of these footprints is illustrated in Figure 2 with the noise contour outer extent.

The accident potential zones are comprised of three distinct areas:

- Clear Zones;
- Accident Potential Zone I; and
- Accident Potential Zone II.

The **Clear Zone (CZ)** is the zone that begins at the end of each runway measuring 1,500 feet wide extending outward in a fan-shape to a length of 3,000 feet from the end of each runway. The fan-shape of this zone flares to a width of 2,284 feet at the end of the zone. The **Accident Potential Zone I (APZ I)** begins at the end of each CZ and continues in a flared-rectangle that extends to a length of 5,000 feet; it measures 3,000 feet wide. The **Accident Potential Zone II (APZ II)** is the area that starts at the end of each APZ I at both ends of the runway, extends to a length of 7,000 feet, and measures 3,000 feet wide. The CZ is the most restrictive regarding development recommending that no development or earth moving occur in the CZ, and the APZ I and APZ II is where development is less restricted due to lower risk of accidents as a result of being located further from the end of the runway.

Airfield Noise Contours

The 2002 NAS Fallon Air Installation Compatibility Use Zone (AICUZ) report delineates recommendations for compatible land uses associated with noise

and safety impacts generated by aircraft that use the airfield. The NAS Fallon 60 dB noise contour footprint is illustrated in Figure 2. There are various other noise contours that increase in decibels as it nears the installation and the runways.

NAS Fallon is mostly surrounded by wetlands, agricultural lands, and farmlands to the north, south, west, and east. The City of Fallon, though, is located just 3.5 miles north-northwest of NAS Fallon and is located where the 60 dB noise contour traverses the city limits in the city's south-southeast corner. The land uses that are impacted by the noise contour include some rural residential, single-family residential, and agricultural-related land uses. These land uses currently do not represent major incompatibilities.

Source: NAS Fallon Air Installation Compatible Use Zone (AICUZ), 2002.

Imaginary Surfaces

The Federal Aviation Administration (FAA) has identified certain imaginary surfaces around runways to determine how structures and facilities are evaluated for creating vertical obstructions around an active airfield. The imaginary surfaces build upon each other and are designed to eliminate obstructions either natural or man-made, to air navigation and operations. Each type of imaginary surface has different dimensions, planes or slopes in which a structure intruding upon it may be considered a vertical obstruction. Figure 2 illustrates the outermost imaginary surface for NAS Fallon. For a detailed description including their slopes and planes, please see Chapter 3 of the Background Report.

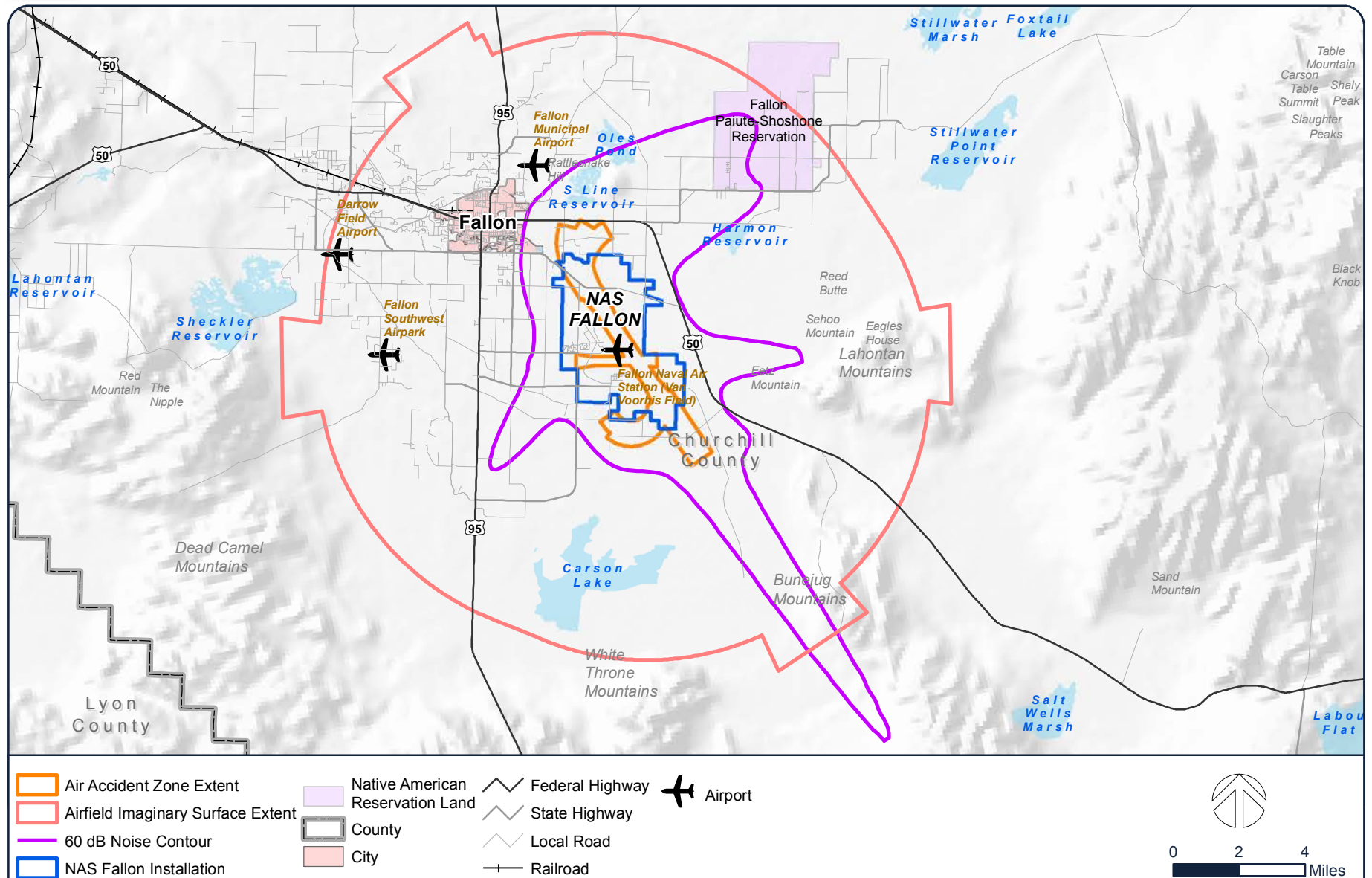


Figure 2
Installation Profile

3.3 Fallon Range Training Complex Target Ranges and Training Areas

The FRTC serves as a bombing and air warfare training range that allows for up to six air wings totaling over 1,800 personnel to train for an average stint of 14 days. These wings include a variety of national and international defense-related missions, including: Navy, Air Force, Marine Corps, and Canadian aviators. These aviators train in advanced tactical development procedures and combat maneuvering at the FRTC. Figure 3 illustrates the target ranges and training areas associated with NAS Fallon. There are four target ranges and three training areas used by aviators worldwide. These target ranges and training areas include:

- Bravo-16
- Bravo-17 (West and East)
- Bravo-19
- Bravo-20
- Dixie Valley Training Area
- Shoal Site
- Electronic Warfare Complex

Bravo-16 Range

B-16 target range is located south-southwest of NAS Fallon proper and is composed of 27,506 acres at 3,942 feet MSL. The primary use for this range is for Naval Special Warfare ground training.

Bravo-17 Range

B-17 target range is located east-southeast of NAS Fallon proper and covers 52,830 acres at 4,153 feet MSL. This range is the most frequently used target range and is the most developed with tactical warfare and electronic warfare components. B-17W is designated as a “no drop area” meaning no ordnance is allowed to be expended in this range area.

B-17E range consists of a Light Inert Impact Area, a Heavy Inert Impact Area, and a Live Impact Area. The light inert impact area offers a number of training targets and components that assist carrier wings to train in integrated warfare tactics.

Additionally, the light inert impact area offers additional Close-Air Support training components including a forward air controller platform, one helicopter landing zone; and the Bad Monkey drop zone.

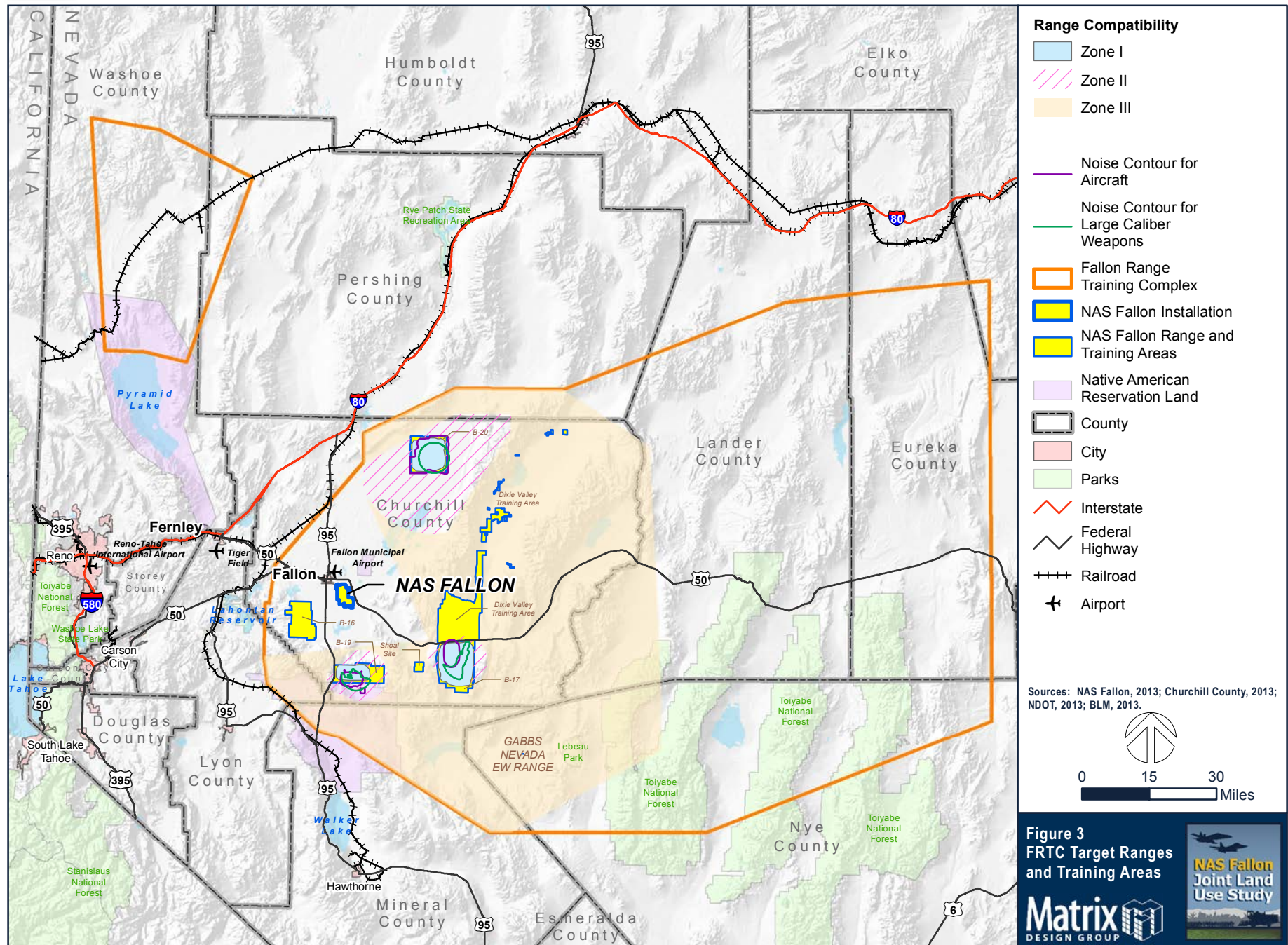
The B-17E range also includes a live impact area where live ordnance is expended. This live impact area also includes several tank vehicle targets and a camouflaged cave entrance.

Bravo-19 Target Range

B-19 target range is located due south of the NAS Fallon installation and covers 28,964 acres and is 3,882 feet Mean Sea Level (MSL) in the southern portion of the FRTC. This range is primarily used for strafe target practice and includes a helicopter strafe area and tank target practice. Strafing is an aircraft attack technique that occurs at a low-level altitude through the use of repeated bombs or machine-gun firing. In addition, this range is equipped with night lighting for night training capabilities.

Bravo-20 Target Range

B-20 is located east-northeast of NAS Fallon and covers approximately 41,000 acres at 4,040 feet MSL. This target is the least developed and is primarily used for air-to-ground bombing practice in strafing, missile and rocket, and laser bombing practice. The range is composed of a light inert impact area, heavy inert impact area, and five laser target areas. The heavy inert impact area provides the FRTC a primary ordnance dropping zone along with the other capabilities.



Dixie Valley Training Area

The Dixie Valley Training Area is an 80,000-acre training area divided into four subareas in which the combat search and rescue activities and ground training occur.

Shoal Site

The Shoal Site is a 2,560-acre additional training area that complements the combat search and rescue activities at the Dixie Valley Training Area. In addition, this site also provides capabilities for tactics and training in naval special warfare.

Electronic Warfare Complex

The EWC is located throughout the FRTC at fixed and mobile sites. The fixed sites are located within the Dixie Valley Training Area at 4,170 feet MSL. The EWC provides multiple capabilities for electronic combat for both fixed and mobile threat scenarios. The EWC can be customized by mission to achieve exact and specialized skills in electronic warfare. This complex provides services such as reconnaissance training, control and communication network and network emulator, and search radar systems among others.

Range Compatibility Zones

The Range Air Installations Compatible Use Zones (RAICUZ) report establishes range compatibility zones (RCZs) for the FRTC based on historical operational data including: type of aircraft, weapons being delivered, and the weapon release components that include the delivery dive angle, altitude, and airspeed. The RCZs measure the impact of the ordnance upon target impact. This measurement is then used to recommend compatible land uses for the range compatibility zones to effectively provide for the general safety of the public. The three RCZs are:

- RCZ I;
- RCZ II; and
- RCZ III.

The **RCZ I** is the location of the ordnance striking the surface; it includes various components of ordnance expenditure such as detonation, ricochet potential, and areas where ordnance debris or fragments from an armed aircraft may fall.

The **RCZ II** is the entire area that includes armed overflight; this area is specifically defined by the FRTC range instructions.

The **RCZ III** is the SUA used by aircraft to perform training missions, including access to the range, tactical maneuvering, and separation of participating and non-participating aircraft.

Large Weapons Noise Contours

Noise contours for large weapons use and the operational aircraft are associated with the RCZs, which is where the noise is most likely to occur and be loudest. The BNOISE program is the program used to model noise impacts for high explosive ordnance detonations. This program considers numerous variables in order to develop a set of noise contours that can be used in land use planning. This program contributed to the development and use of C-Weighted noise contours for the target ranges. There were three contours modeled for each of the targets in the FRTC, they are: the 57 dBC, 62 dBC, and 70 dBC.

Aircraft Noise Contours

Unlike the large weapons noise modeling program, the MOA Range NOISEMAP (MRNMAP) program is used to model the noise generated from aircraft that perform target practice and other tactical training exercises at the FRTC. The MRNMAP is based on the NOISEMAP technology, a technology used to model noise for DOD airfield and range training activities. The program models aircraft noise when it is operating in several types of airspaces including military operating areas (MOAs), restricted airspace (RA), and military training routes (MTRs).

3.4 NAS Fallon and FRTC Military Operating Area (Airspace)

The NAS Fallon and FRTC military operating areas (MOA) encompass all of the areas used for aerial training maneuvers including the restricted airspace (RA), supersonic operating area (SOA); the air traffic controlled assigned areas (ATCAA) and the military training routes (MTRs). This is the most expansive operational footprint within the NAS Fallon military profile.

Airspace

A MOA is the SUA in which military or defense-related aviation occurs for training and / or special operations. This airspace designation notifies other air traffic users about restrictions on airspaces. Figure 4 illustrates the footprint of the vast SUA and the Supersonic Airspace for the NAS Fallon training mission.

MOAs are further defined by usage. This is to protect the general aviation operations as well as the general public from unnecessary impacts associated with these types of exercises. In addition to RAs, there is a SUA designated for supersonic activity. ATCAAs are also used in the FRTC to allow for certain types of aviation operations in the assigned area and provide for a separation between instrument flight rule air traffic.

Military Training Routes

The Navy also uses the MRNMAP to model noise associated with the MTRs located within the FRTC and NAS Fallon. The MTRs are special flying routes that aircraft use to execute mission and training exercises.

The NAS Fallon MTR extends beyond the military operating areas, as illustrated in Figure 5. While the MTRs do not directly impact the communities within the JLUS study area, the operations associated with these MTRs include low-level flight operations as well as high-air-speed flyover. These types of operations can generate noise and vibration that can

potentially impact proximate land uses. The degree of impact is dependent on several variables, including weather and aircraft type.

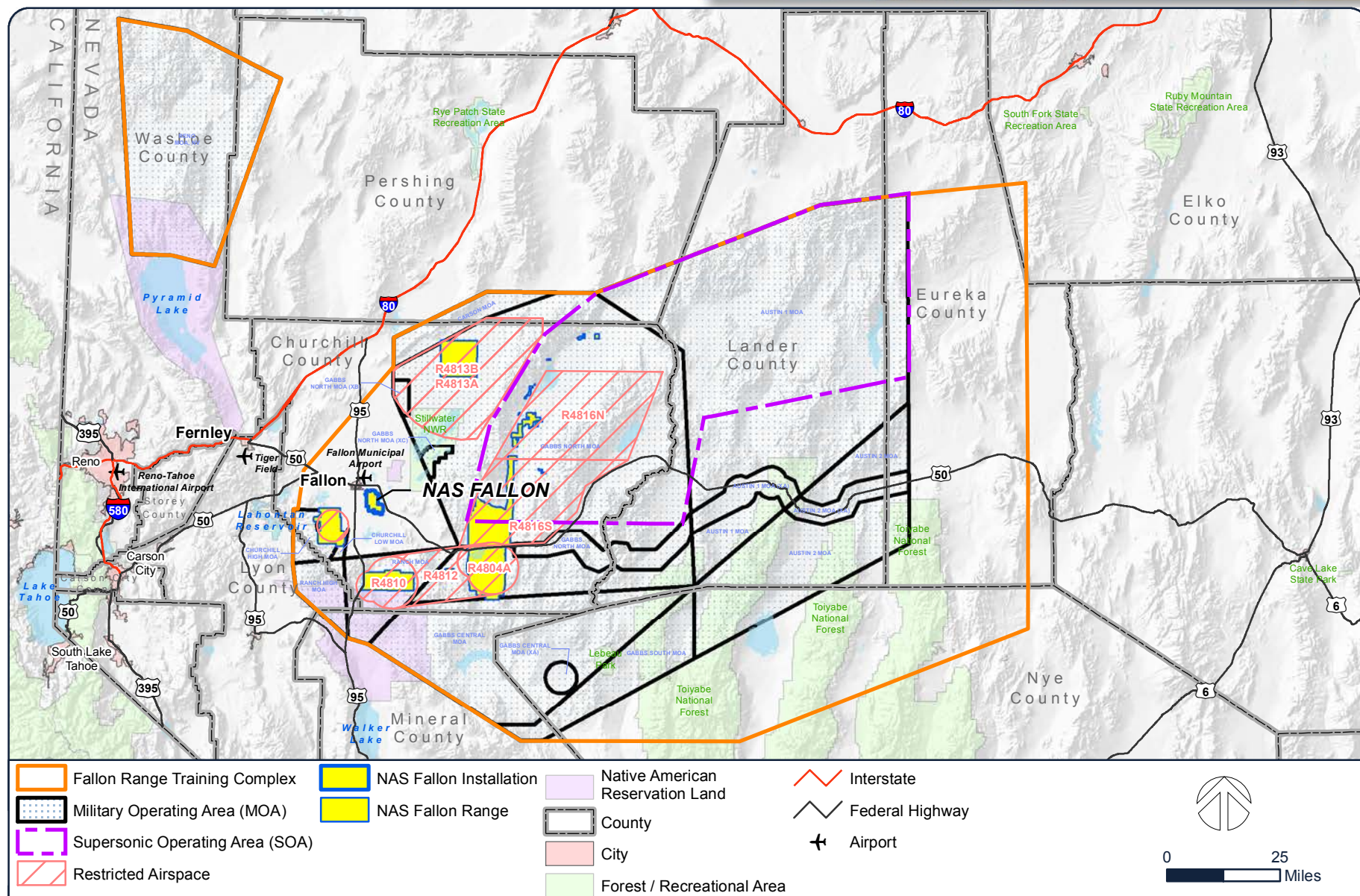


Figure 4
FRTC Military Operating Area

Sources: NAS Fallon, 2013; Churchill County, 2013; NDOT, 2013; BLM, 2013.

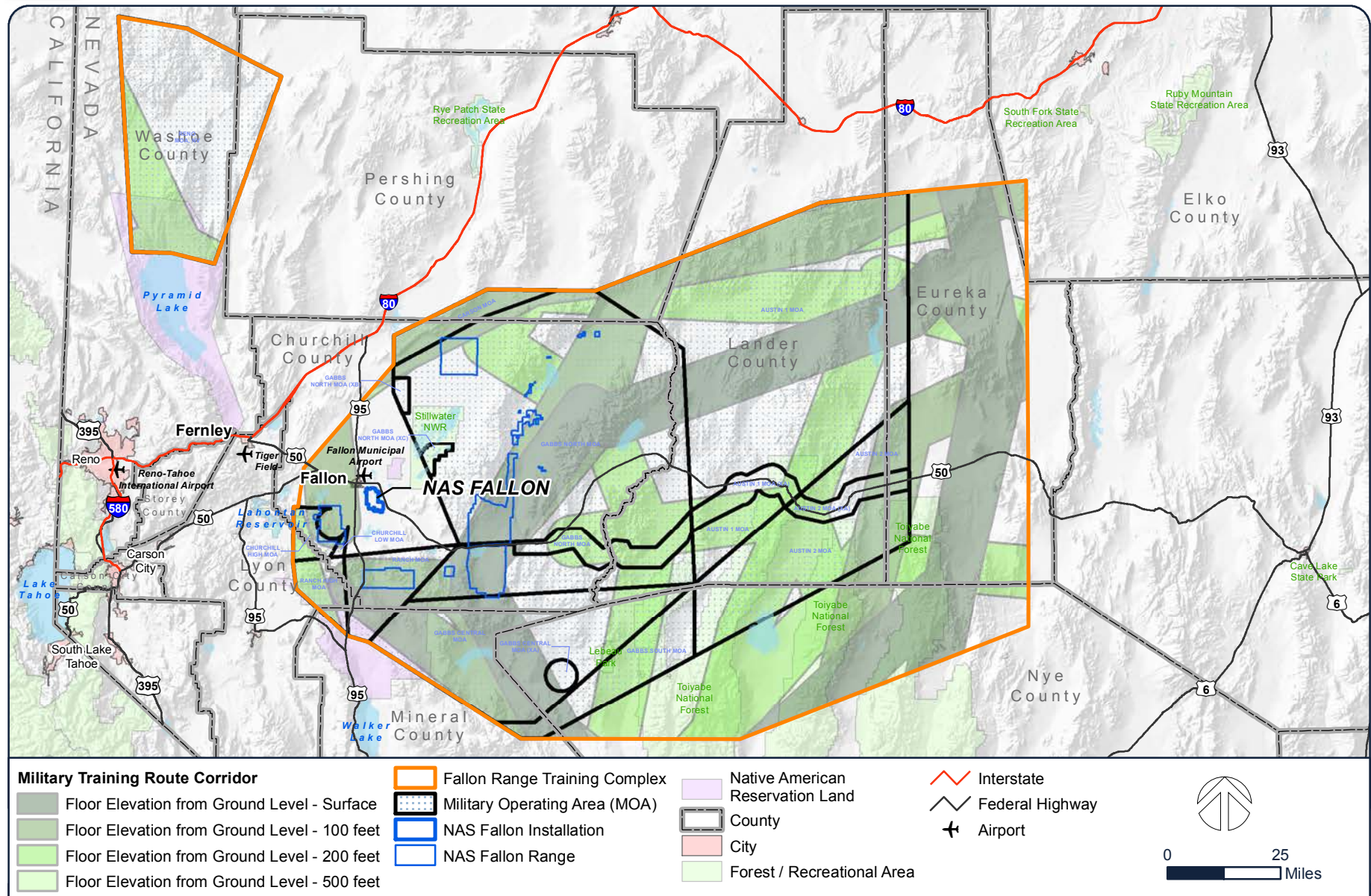


Figure 5
FRTC Military Training Routes

There are three types of planning tools that are evaluated: permanent, semi-permanent, and conditional. Permanent planning tools include acquisition programs, either fee simple purchase of property or the purchase of development rights. Semi-permanent tools include regulations such as zoning or adopted legislation. Examples of conditional tools would include comprehensive master plans, memorandums of understanding (MOU), and intergovernmental agreements (IGA).

This chapter lists some of the key tools that are currently, or are recommended to be more efficiently utilized or enhanced to address the compatibility issues identified by the Naval Air Station Fallon (NAS Fallon) Joint Land Use Study (JLUS) process. The tools listed in this section are not exhaustive, but are meant to provide a brief overview of the primary tools currently utilized in the JLUS Study Area.

4.1 Federal Programs and Policies

Air Installations Compatible Use Zones

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

The AICUZ provides recommendations to local government and other entities for actions they can implement to further compatibility goals and objectives of their comprehensive master plans, development codes (zoning ordinances), and other land use regulations. The AICUZ provides the methodology for assessing impacts of noise generated by military operations on surrounding communities. The NAS Fallon contour maps accurately reflect current aircraft arrival / departure procedures and projections for potential changes in aircraft type and number.

Federal Aviation Act (14 CFR Part 77)

An important outcome of the Act is FAA Regulation Title 14 Part 77, commonly known as Part 77, which provides the basis for evaluation of vertical obstruction compatibility. This regulation determines compatibility based on the height of proposed 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. Additional information on Part 77 is located on the Federal Aviation Administration Internet website at <http://www.faa.gov/>.

The FAA has identified certain imaginary surfaces around runways that are used to determine how structures and facilities are evaluated to identify if they pose a vertical obstruction in relation to the airspace around a runway. The levels of imaginary surfaces build upon one another and are designed to eliminate obstructions to air navigation and operations, either natural or man-made. The dimension or size of an imaginary surface depends on the runway classification.

Public Law 101-618 Fallon Paiute Shoshone Tribal Settlement Act

Public Law (PL) 101-618, also known as the Fallon Paiute Shoshone Tribal Settlement Act authorized the establishment of measures, i.e. Funds and Acquisition Programs to protect natural resources in Nevada and California including tribal and cultural resources, water resources, and natural and wildlife resources.

These sensitive natural and cultural resource areas are located within the FRTC and the management or lack of management of these areas and surrounding areas can potentially impact the NAS Fallon mission.

Range Air Installations Compatible Use Zones

The Range Air Installations Compatible Use Zones (RAICUZ) report is a DOD program used to identify safety zones and noise contours associated with military-related operations and training exercises such as weapons delivery and target bombing practice conducted on a range. The primary purpose of a RAICUZ is to provide local government and land management agencies with recommended land uses to protect the general welfare of the public from impacts related to military training and operations and preserve the viability of the military mission and readiness. NAS Fallon completed a RAICUZ report during 2011.

DOD Siting Clearinghouse

Section 358 of the 2011 National Defense Authorization Act pertains to studying the impacts of the development of new energy production facilities on military operations and readiness. The Energy Siting Clearinghouse serves to coordinate the DOD review of existing applications for energy projects. Several key elements of Section 358 include designation of a senior official and lead organization to conduct the review of energy project applications, a specific time frame for completion of a hazard assessment associated with an application (30 days), specific criteria for DOD objections to projects and a requirement to provide an annual status report to Congress. This legislation facilitates procedural certainty and a predictable process that promotes compatibility between energy independence and military capability.

For more information about the DOD Siting Clearinghouse, see the Energy Development Section and Issue ED-1 in Chapter 5 of the JLUS Background Report.

4.2 NAS Fallon Installation Plans and Programs

The NAS Fallon plans and programs are the specific, existing tools that the installation, in collaboration with the Department of the Navy (DON), has developed to implement various federal statutes. These plans may be changed based on mission changes or requirements and funding availability, so these would be considered semi-permanent programs.

Fallon Range Training Complex Management Plan

The Fallon Range Training Complex (FRTC) Management Plan (RCMP) is designed to ensure that the FRTC is sustainable and capable of supporting the Navy readiness training over a 10-year planning horizon (2012-2022). This planning document provides the strategic vision for the FRTC in various components including continuing upgrades to the Fallon training program to maintain accreditation and certification as a Joint National Training Capability (JNTC) and maintaining the long-term viability of the FRTC while protecting human health and the natural environment.

Fallon Range Training Complex Environmental Impact Statement

The FRTC Environmental Impact Statement (EIS) is a report and an evaluation of the existing and proposed capabilities and assets at the FRTC. The purpose of the EIS is to assess environmental impacts associated with existing and adding new weapons systems including new airframes, such as the Joint Strike Fighter, at the FRTC.

The evaluation is between three options—a no action option and two alternatives. Currently, the total training activities at NAS Fallon consist of 8,558 combined activities. Alternative one proposes an increase in combined activities to roughly 9,147 operations and investment in the FRTC to include Tactical Aircrew Combat Training System (TACTS) upgrades, electronic warfare threat systems upgrades, and fiber optic telecommunications infrastructure.

Alternative two proposes all the infrastructure upgrades as outlined in alternative one, but with a 10 percent increase in operations to a combined total of 10,061.

4.3 State of Nevada Legislation

Assembly Bill 239

Assembly Bill (AB) 239, passed in the 2013 Nevada State Legislature, authorized a planning commission or governing body to establish and permit above ground utility corridors. AB 239 sets provisions for the process of identifying the utility corridors, coordination and consistency with other local, State, and Federal plans, construction permitting of these corridors, and special use permitting for above ground utilities to be located outside of the corridors.

This legislation requiring the establishment and permitting of energy transmission lines throughout the State of Nevada affects all planning commissions and governing boards within the NAS Fallon JLUS study area.

Assembly Bill 380

Assembly Bill 380, passed in 1999, established a water rights acquisition program and altered Nevada law regarding forfeiture of surface water rights. The purpose of AB 380 was to establish a fund to acquire, abandon and retire water rights to resolve litigation against privately-owned property.

4.4 Nevada Local Jurisdiction Planning Tools

Key plans and programs utilized by local jurisdictions for compatibility planning, including proposed plans and programs that have been prepared and adopted by the study area jurisdictions, are identified and discussed in this section. These plans and programs are considered to be semi-permanent and/or conditional tools because they can be amended.

Master Plans, Development Codes and Zoning Ordinances, Airport Compatibility, and Subdivision Regulations

In Nevada, cities and counties may enforce land use and development regulatory authority. In accordance with Nevada Revised Statutes (NRS) 278.150 through 278.230, the master plan may address, but is not limited to, community design, conservation, housing, land use, population, public buildings, public services and facilities, recreation, seismic safety, streets and highways, transit and transportation. The Master Plan commonly reflects a philosophy of broad policies and general land use designations to guide growth and development.

Pursuant to NRS Chapter 278, cities and counties can exercise zoning power to regulate land use compatibility, airport land use compatibility, and development standards. Most development, or zoning codes include provisions for height restrictions, while some include regulations pertaining to Dark Skies and outdoor lighting.

Subdivision regulations are adopted typically to define the standards, procedures and other requirements for land divisions, they also have the ability to serve as a planning tool to prevent or limit future encroachment around the installation or adjacent operational areas by specifying the types of infrastructure improvements associated with a subdivision that may be or may not be allowable, such as streetlights.

Building Codes

Nevada Revised Statutes 244.105, 278.580, 278.583 and 444.350 provide the statutory authority for jurisdictions to regulate the construction of buildings in the State of Nevada. Building codes can regulate building construction such that it is compatible with military operations, including sound attenuation for residences within applicable noise zones. Additionally, Nevada Administrative Code 477.281 sets forth standards for adoption of building codes.

Without a building code, it may be difficult to implement actions supportive of compatibility planning measures and military mission sustainment and enhancement. It should be noted that not all the jurisdictions in the JLUS study area have adopted building codes to protect the various military operations in this region. Some jurisdictions that have adopted codes include Churchill County, Lyon County, City of Fernley, and Mineral County.



5.1 Identification of Compatibility Issues

Compatibility, in relation 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 communicate, coordinate, and implement mutually supportive actions that allow them to achieve their respective goals and objectives.

Numerous factors influence whether community and military plans, programs, and activities are compatible or in conflict. For the Naval Air Station Fallon (NAS Fallon) Joint Land Use Study (JLUS), 24 compatibility factors were evaluated to confirm the presence of, and establish priorities for, the key Study Area issues. Two of these factors, noise and vibration, were grouped together due to similar issues and strategies.

5.2 NAS Fallon Compatibility Issues by Factor

Air Quality is an issue for NAS Fallon due to the dust and smoke generated by mission operations and / or the emitting of debris and particulate matter into the air. Conversely, construction, agricultural, and development activities can also emit airborne debris, compromising the air quality in areas surrounding NAS Fallon and its associated ranges. The following Air Quality issues were identified:

- **Concern about Air Quality.** Concern about air quality impacts associated with existing operations (flight operations, range operations, etc.).
- **Concern about Fuel Dumping.** Jet fuel dumping is speculated to occur over the FRTC, which can potentially cause natural resource degradation.

Biological Resources constitutes a minor yet relevant threat for NAS Fallon and the surrounding communities in the JLUS area. NAS Fallon complies with federal and state laws by mitigating impacts of various species that may be threatened or endangered. Competition for the land in this area can lead to issues with preserving these species and delaying military training operations. The following Biological Resources issues were identified:

- **Proactive Management of Species with Potential for Listing.** Concern over potential listing of additional species and impacts of additional listings on military operations.
- **Low Flying Aircraft can Disturb Animals.** Bighorn Sheep, Pronghorn Antelope, migratory birds, and grazing cattle are subject to impacts associated with military aircraft and other military operations.
- **Adequate Information on Biological Resources.** To ensure information about biological resources in the area is current and accurate when educating pilots and other active-duty military.

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

- **Formalized Communication Procedures.** Necessary for enhanced/increased communication procedures between the Navy / NAS Fallon and local jurisdictions and local, state and federal agencies to share information about local and regional planning matters. Currently, communication occurs in an informal setting, making it difficult to ensure important information about mission and community changes that could impact one another are addressed.
- **Use of Unmanned Aerial Systems (UAS).** Safety and privacy concerns associated with the potential expansion of UAS use at NAS Fallon and Fallon Municipal Airport.
- **Providing Technical Support to Local Jurisdictions.** While the Navy attends some local jurisdiction meetings, an established procedure for providing technical support to the local jurisdiction review and decision making process is not formalized and is dependent on specific personnel.
- **Enhanced Economic Benefit.** There is a need for enhanced communication on the operations and benefits associated with NAS Fallon.
- **Natural Resource Management.** When aircraft crash on the range, the collision has the potential to degrade the natural environment. All affected land management agencies are not currently involved in the appropriate and adequate clean-up and restoration of the lands and better communication in response to these events.

Cultural Resources are those cultural and historic resources that require management and preservation under the National Historic Preservation Act. NAS Fallon and the Fallon Range Training Complex (FRTC) contain several cultural and historical sites requiring coordination and compliance with state and federal laws. The following Cultural Resources issues were identified:

- **Protection of Cultural Resources.** There are cultural resources located within the FRTC (e.g., the petroglyphs at Grimes Point and Hidden Cave, the Pony Express Trail, Lincoln Highway, and so forth) that need

protection from impacts associated with military training exercises (e.g., vibration from military aircraft).

- **Cultural Resources Coordination Process Update.** FRTC contains significant Native American and historic resources, and thus require historic preservation agency review and assessment before certain types of projects may be executed on the installation or in the FRTC. The coordination protocol should be assessed for determining items of cultural or historic significance.
- **Accessing Cultural Resources by Native Americans.** Provide appropriate access to Native American groups for spiritual, medicinal, and other culturally-related activities.

Dust, Smoke, and Steam is a by-product generated by both military and civilian activities. Dust and smoke is not only a visibility nuisance, but can also be an air quality issue for Churchill County and other jurisdictions in the Study Area. Dust from agriculture activities located near the airfields can be incompatible with low-level flight operations and create visual impediments for pilot navigation. The following Dust, Smoke, and Steam issues were identified:

- **Steam Plumes from Geothermal Plants.** The steam expended from cooling towers of geothermal plants could represent visual impairments to flight operations near NAS Fallon and within the FRTC. In addition, geothermal steam can potentially affect infrared targeting systems if avoidance measures are not implemented such as locating plants out of the mission-critical aviation area.
- **Fugitive Dust Management.** Dormant lands near the NAS Fallon airfield generate fugitive dust due to non-compliance with dust control measures in the County. Dust can create visual impairments for flight operations and air quality concerns. This impact can be intensified by loss of water rights necessary to irrigate surrounding areas.

Energy Development is the likelihood of development of alternative energy developments within the NAS Fallon JLUS Study Area. Alternative energy includes wind, geothermal and solar energy facilities. Any current or proposed wind or solar facilities in the study area located in areas where low-altitude aviation operations can occur can create a vertical obstruction and / or visual impairment for pilots. The uncoordinated placement of these facilities can lead to incompatibilities with the NAS Fallon mission. The following Energy Development issue was identified:



- **Siting of Alternative Energy Developments.** Alternative energy developments can have implications on military activities depending on type and location. For example, wind energy can impact low level flight or radar observation. Solar panels can produce glare, and large solar farms can produce glare and/or vertical obstructions. Geothermal energy can also have impacts associated with steam. Ensure that all appropriate parties are engaged in planning and review of new facilities.

Frequency Spectrum Capacity refers to the allowable range of electromagnetic waves capable of carrying signals for point-to-point wireless communications. In a defined area, the frequency spectrum is limited and increasing demand for frequency bandwidth from commercial applications such as cellular phones, computer networking, GPS units, and mobile radios, is in direct competition with the capacity necessary for maintaining existing and future missions and communications on installations. The following Frequency Spectrum Capacity issue was identified:

- **Frequency Spectrum Management.** Expansion of the commercial broadband would adversely impact the Electronic Warfare Center associated with NAS Fallon.

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

- **Impacts of Electronic Warfare.** Electronic warfare training operations can impact electronic devices in specific locations, such as GPS and cellular communications.
- **Impacts of Commercial Transmission Facilities on Navy Operations.** Concern over placement of new commercial transmission facilities in the FRTC.

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

- **Future Housing for Military Personnel and Families.** Use of surrounding communities to provide adequate housing in the event of future changes in the NAS Fallon mission.

Infrastructure Extensions represent compatibility issues for NASF based on their proposed or planned location. Transportation routes and electrical and water infrastructure impact land uses differently based on location,

magnitude of the improvements, and the resulting outcome. Infrastructure extensions tend to catalyze development in the surrounding communities. This development can create incompatibilities with NAS Fallon military operations. The following Infrastructure Extensions issues were identified:

- **New or Expanded Electrical Transmission Lines.** Expansions or new transmission facilities can impact low-level flight operations. Include discussion of implications of conservation easement height restrictions.
- **Joint Infrastructure Planning.** With continued reductions in federal budgets, constraints on military operation and construction funds will impact the ability of the installation to provide adequate infrastructure and services.

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

- **Transfer Development Rights (TDR) Program Updates.** Churchill County's TDR program establishes provisions for acquiring development rights using conservation easements; however, receiving sites as part of Planned Unit Developments could be placed in close proximity to NAS Fallon, potentially affecting compatibility.
- **Cluster Zoning Ordinance Updates.** The Churchill County ordinance currently allows for the clustering of homes, but not provide guidance on the location of these clusters in association with military compatibility issues, such as noise.

- **Disposal of Bureau of Reclamation Lands.** Future disposal of Bureau of Reclamation (Reclamation) lands to the Bureau of Land Management (BLM) could result in lands not covered under current Resource Management Plan (RMP).
- **DOD Land Withdrawal.** Concern over any additional withdrawal of lands for exclusive military use or reduction of current multiple uses of lands. Maintenance of multiple use of lands is preferred.
- **Clean Energy Park.** Concern about potential compatibility issues associated with the proposed Clean Energy Park along the Highway 50 corridor.



Land, Air and Sea Space Competition is defined as multiple uses of both land and air spaces. The NAS Fallon JLUS evaluated land and air space shared between military and civilian activities relative to commercial / civilian—general aviation operations in the

region. The NAS Fallon JLUS also assessed several land areas used for recreational purposes. The following Land, Air and Sea Space Competition issues were identified:

- **Unmanned Aerial Systems Development and Use.** There may be increased use of Unmanned Aerial Systems (UAS) by military, commercial, or other federal agencies that may have impacts on civilian and military airspace use.
- **Civilian Airports / Airfields.** Preservation of current and future private / commercial flight operation capabilities associated with the civilian airports / airfields located in the Study Area.

Light and Glare can be generated by both military and civilian uses. Light and glare can be generated from certain construction materials during the daytime when sunlight reflects off the structure. This can create visual

impairments for pilots flying at low altitudes. Certain types of alternative energy development can create glare for pilots in training, posing a safety hazard to the pilot and the aircraft. The following Light and Glare issues were identified:

- **Maintaining Dark Skies.** Night vision training requires environments that are not exposed to excessive light and glare. Ensure that illumination levels that could potentially affect the night training exercises that occur in the FRTC to be controlled.
- **Excess Light from Base Operations.** Concern over high-intensity lights on NAS Fallon that may impact off installation land uses.

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

- **Noise from Flight Operations at NAS Fallon.** Helicopter and fixed-wing flights create noise that is heard off installation. This includes noise associated with transit to and from the installation and ranges and approach and departure operations from NAS Fallon. This noise could affect both residents and livestock.
- **Noise from Flight Operations in FRTC.** Training operations conducted within the FRTC create noise that is heard at locations in and near the FRTC.
- **Supersonic Flight Operations.** Use of the Supersonic Corridor within the FRTC has the potential to create noise and vibrational impacts that could impact communities near this area, such as Crescent Valley.
- **Flight Tracks Traverse Sensitive Wildlife Habitat.** Rotary- and fixed-wing aircraft perform flying training exercises over and near sensitive

habitats within the FRTC. Concerns over balancing species protection and maintaining flight operations.

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

- **Public Trespassing onto Navy Managed Lands.** Public recreational shooting, horseback riding, and other recreational activities occurs in FRTC areas managed by the Navy (including near the B-16 range and areas near Division Road) which can interfere with the safety of military training and the safety of the general public.
- **Livestock Trespass.** Grazing Management Plan lacks prescriptive monitoring and controls for livestock grazing area that traverses military operating and training areas.

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

- **Wildland Fires.** Flare training and other training activities in the FRTC could ignite wildfires that could threaten wildlife and their management areas as well as impact ranching activities. Wildfires

created by non-military use and natural causes could also impact Navy facilities.

- **Bird and Wildlife Strike Hazards.** The military operating areas for NAS Fallon and the FRTC traverse a rich natural resource environment where several wetlands, natural habitats, and farmlands provide the habitat and feeding grounds for numerous species that can impact flight safety.
- **Portion of Clear Zone Lies off Installation Lands.** The northeast corner of Runway 07/25 lies off lands controlled by NAS Fallon, which can allow for structures or objects to be placed in this area in violation of safety standards.
- **Portions of Range Compatibility Zone II and III of the B-16 Range Lie Off Navy Managed Lands.** Concern use or development of these lands and compatibility of such uses.
- **Concern over Size / Use of B-17.** Ensure size and military uses of B-17 are appropriate to meet the needs of the Navy missions.

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



- **Sustainability of Water in Valley.** Transfers of water out of the valley or mandates for changes in distribution have direct impacts on lands around NAS Fallon and the sustainability of the installation.

- **BLM Land Management / Recreational Use.** Optimizing the use of public lands to allow a range of public and military uses. Work to design recreational activity sites that are compatible with military operations and work to avoid public access to areas of concern. Address increased use of off-highway vehicles (OHV) in range area.

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

- **Building / Structure Height in Low-Level Flight Areas.** Concern about buildings or structures height that may interfere with aviation. Ensure plans, regulations, and requirements are appropriate for evaluating and assessing proposed structures or buildings in proximity to low level flight activities associated with NAS Fallon and FRTC.

Water Quality and Quantity is the factor that assesses the quantity and quality of water resources in the NAS Fallon JLUS Study Area. This factor evaluates the amount of water that is utilized by the installation relative to the available supply of water and then compares that with the demand and supply that is utilized by the surrounding communities to provide for the necessary public services. In addition to evaluating the water supply, this factor also reviews the overall quality of public water use in the JLUS Study Area. Water quality can be affected by military operations, public recreation use and stormwater drainage. The following Water Quality and Quantity issue has been identified:

- **Concern about NAS Fallon Water Quality.** General concern about protecting water quality and quantity in the area.



6.1 Implementation Plan

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

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

JLUS strategies incorporate a variety of actions that can be implemented to promote compatible land use and resource planning. Upon implementation, existing and potential compatibility issues

arising from the civilian / military interface can be removed or significantly mitigated. As such, the recommended strategies function as the heart of the JLUS document and are the culmination of the planning process.

The key to the implementation of the strategies is the establishment of a JLUS Coordination Committee to oversee the JLUS execution. Through this Committee, local jurisdictions, NAS Fallon, and other interested parties can continue their initial work together to establish procedures, recommend or refine specific actions for member agencies, and make adjustments to

strategies over time to ensure the JLUS continues to resolve key compatibility issues through realistic strategies and implementation.

Implementation Plan Guidelines

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

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

Military Compatibility Areas

In compatibility planning, the term “Military Compatibility Area” (MCA) is used to formally designate a geographic area where military operations may impact local communities, and conversely, where local activities may affect the military’s ability to conduct its mission. An MCA is designated to accomplish the following:

- (1) Promote an orderly transition between community and military land uses so that land uses remain compatible.
- (2) Protect public health, safety, and welfare.
- (3) Maintain operational capabilities of military installations and areas.
- (4) Promote an awareness of the size and scope of military training areas to protect areas separate from the actual military installation (e.g., critical air space) used for training purposes.
- (5) Establish compatibility requirements within the designated area, such as requirements for sound attenuation and aviation easements.

An MCA delineates a geographic area where strategies are recommended to support compatibility planning and the JLUS goal and objectives. The MCAs are where the majority of the recommended strategies apply. To better reflect the area of interest and focus implementation, several MCAs are further divided into subareas. The four MCAs and one Military Compatibility Development Coordination Area (MCDCA) used in the NAS Fallon JLUS Implementation Plan are identified below, and the four NAS Fallon subzones are shown and described on the following pages:

- General MCA
- Vertical Obstruction MCA
- Noise MCA
- Land Use MCA
- NAS Fallon MCDCA

MCA 1: Study Area (Figure 1)

This MCA covers regional strategies that apply to the Study Area as a whole (see Figure 1).

MCA 2: General Military Compatibility Area (Figure 6)

The general MCA for NAS Fallon is illustrated in Figure 6. It reflects strategies that are general in nature, and may not have geographic properties. This MCA covers strategies that address the establishment of common plans and programs in regards to compatibility.

MCA 3: Vertical Obstruction Military Compatibility Area (Figure 7)

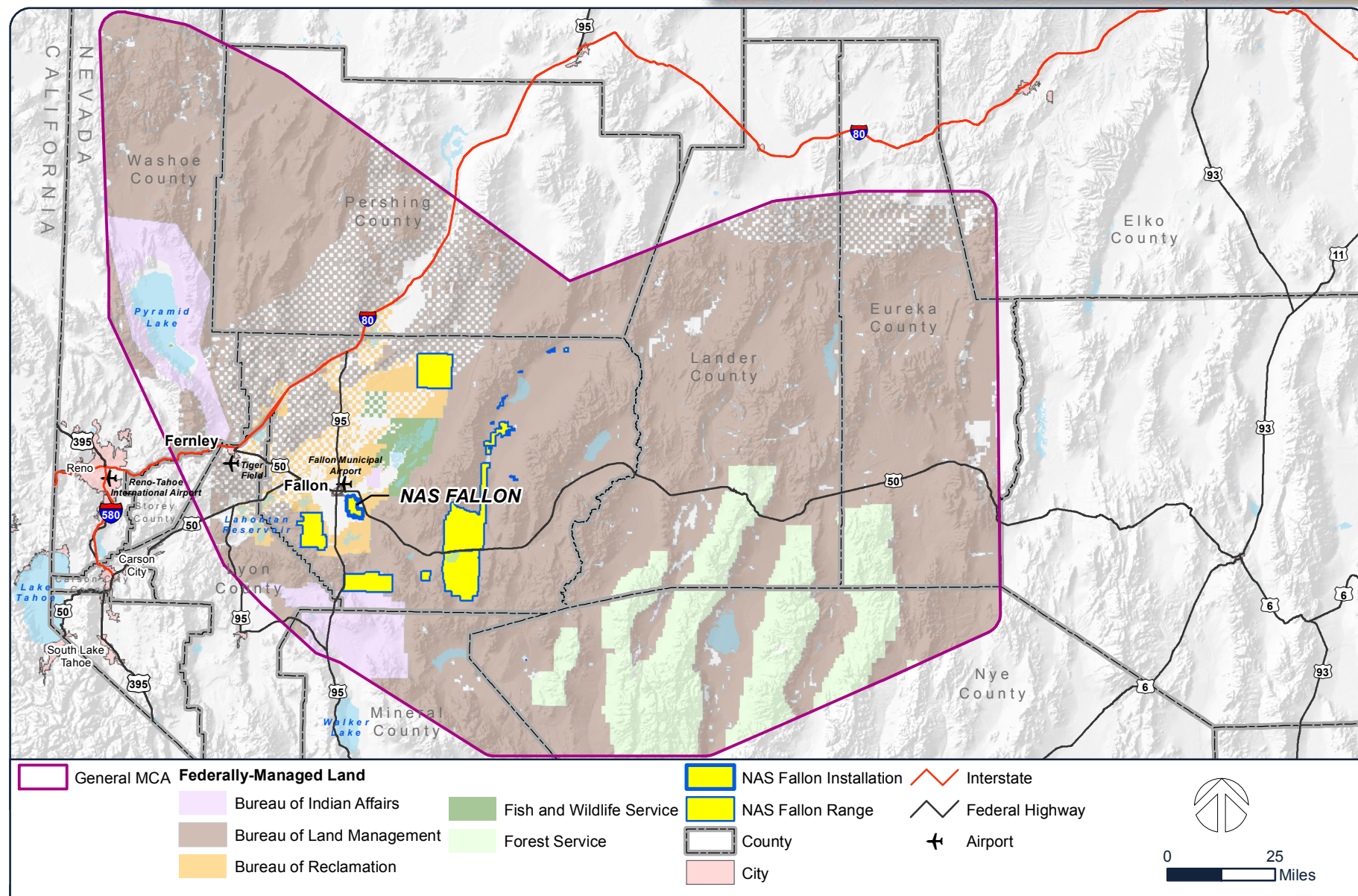
The Vertical Obstruction MCA serves to protect important flight areas for aircraft that operate out of NAS Fallon. Within this MCA, strategies address height restrictions to avoid vertical obstructions. The Vertical Obstruction MCA at NAS Fallon is depicted in Figure 7.

500-Foot Vertical Clearance

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

MCA 4: Noise Military Compatibility Area (Figure 8)

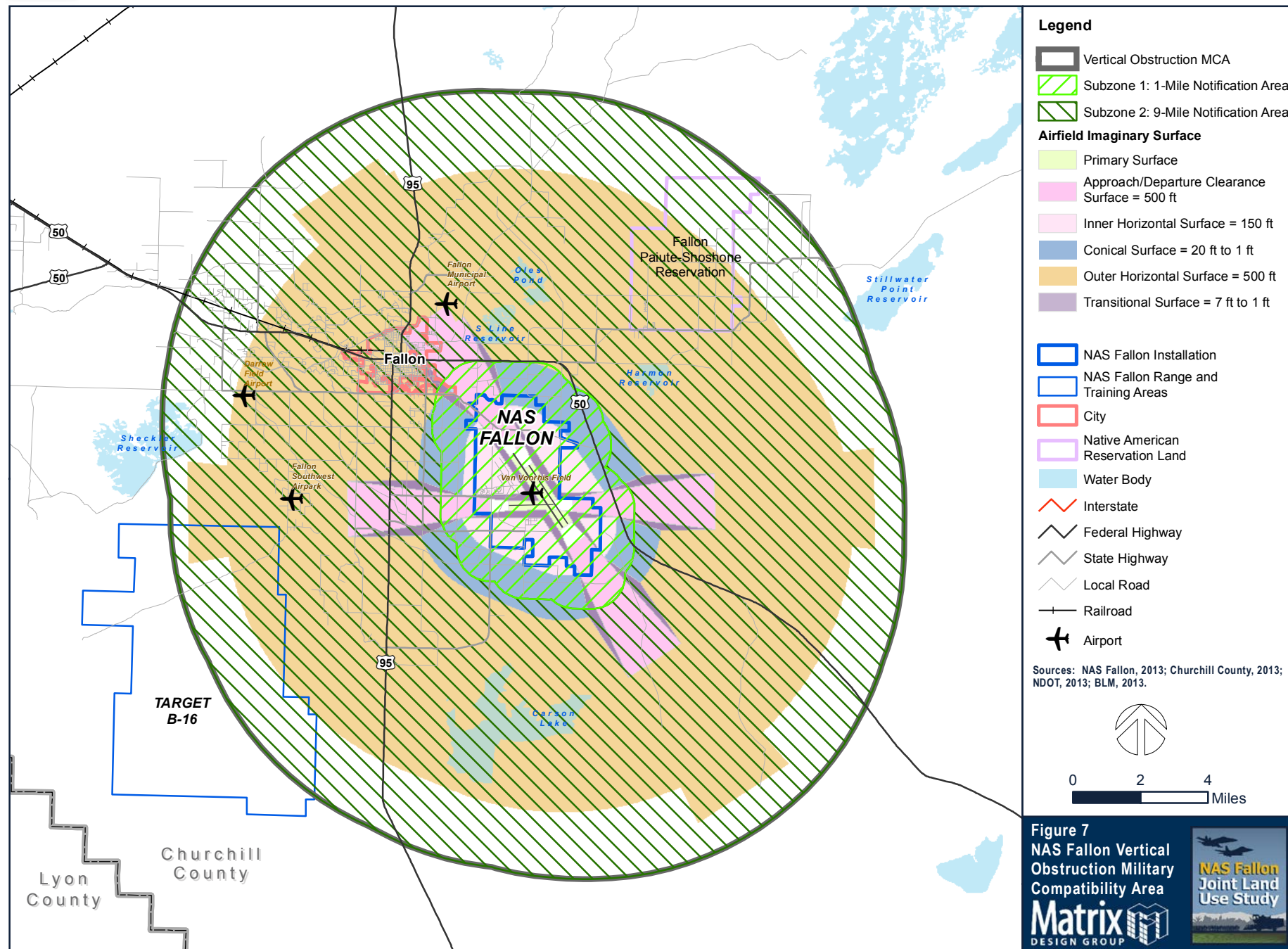
The Noise MCA includes all land located off-installation within the 60 dB noise contour for notification and the 65 dB for sound attenuation measures for NAS Fallon. Other noise contours represent subzones for which residential development and other noise sensitive land uses within this MCA and subzones may be subject to sound attenuation measures to reduce noise impacts. Figure 8 illustrates the NAS Fallon Noise MCA.

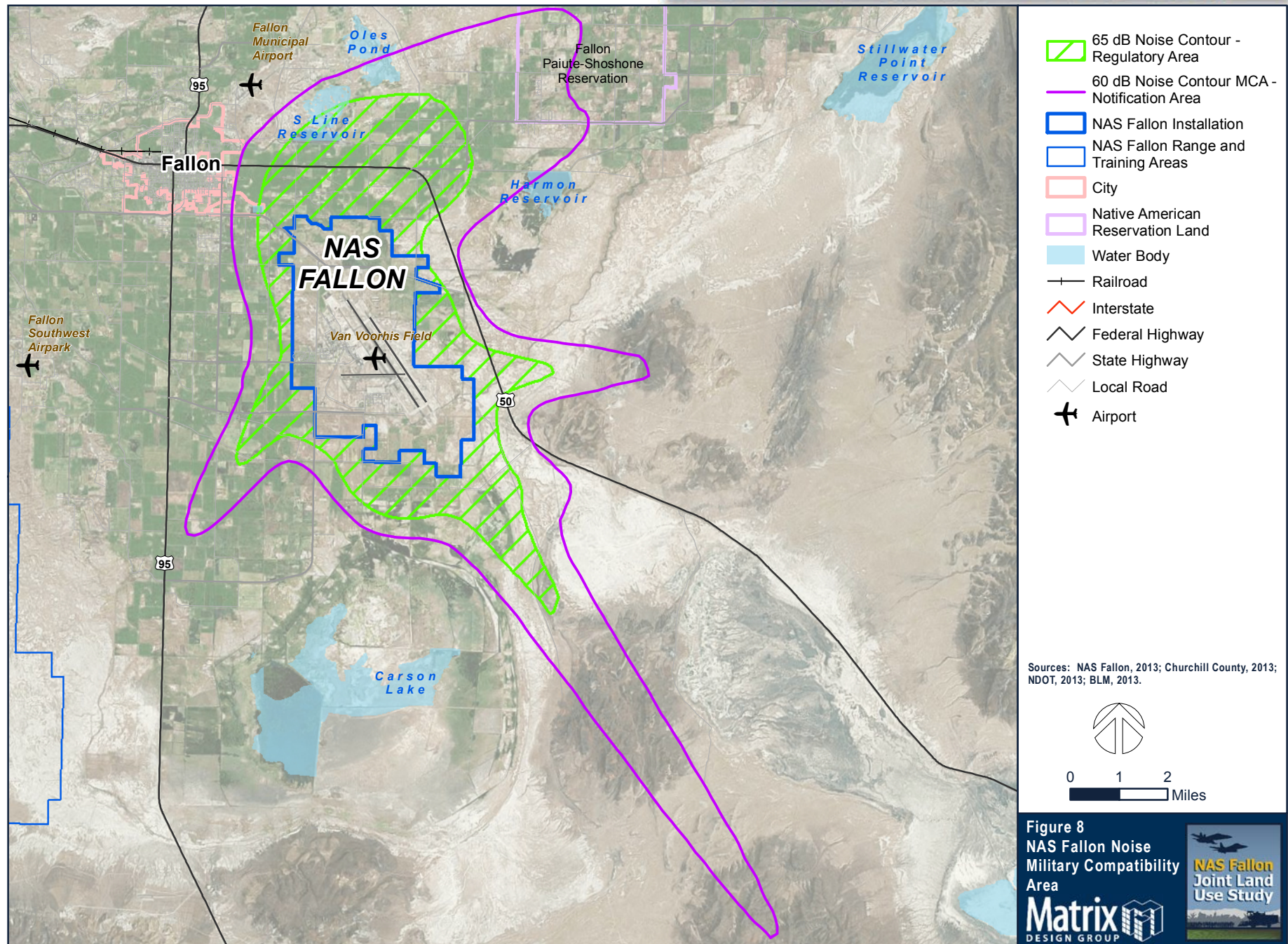


Matrix
DESIGN GROUP

Sources: NAS Fallon, 2014; Churchill County, 2013; NDOT, 2013; BLM, 2013.

Figure 6
NAS Fallon General Military Compatibility Area





MCA 5: Land Use Military Compatibility Area (Figure 9)

This MCA encompasses the land area within one to three miles of the boundary of NAS Fallon. The land use MCA consists of two subzone areas (see Figure 9) designed to provide a transitional area relative to land use density and intensity transitioning from a less dense area nearer the installation to a denser area further from the installation boundary. Strategies attached to this MCA are related to land use planning and disclosure requirements (as a part of real estate transactions).

Land Use MCA 1 Mile Subzone

The Land Use MCA 1 mile Subzone represents the 1 mile area around the perimeter of NAS Fallon. This area shall be characterized by lower density / intensity development to consider the military training operations that occur on NAS Fallon and in the Fallon Range Training Complex (FRTC). Strategies for this area recommend to maintain a development density of not more than two (2) dwelling units per acre, dust and steam mitigation measures, as well as sound attenuation regulations.

Land Use MCA 3 Mile Subzone

The Land Use MCA 3 mile Subzone represents the area one mile to three miles from the installation boundary. This subzone area is designed to be a transitional area where higher densities / intensities than allowed in the 1 mile Subzone may be considered. Other strategies for this area recommend less stringent dust, steam and sound attenuation mitigation measures.

NAS Fallon Military Compatibility Development Coordination Area (Figure 10)

The NAS Fallon Military Compatibility Development Coordination Area (MCDCA) is an area characterized by military surface- and low-level flight operations in the NAS Fallon Study Area and the FRTC. This area, illustrated in Figure 10, covers the majority of Churchill County and portions of the surrounding counties. Land uses in this area should be coordinated with NAS Fallon on a case-by-case basis.

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

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

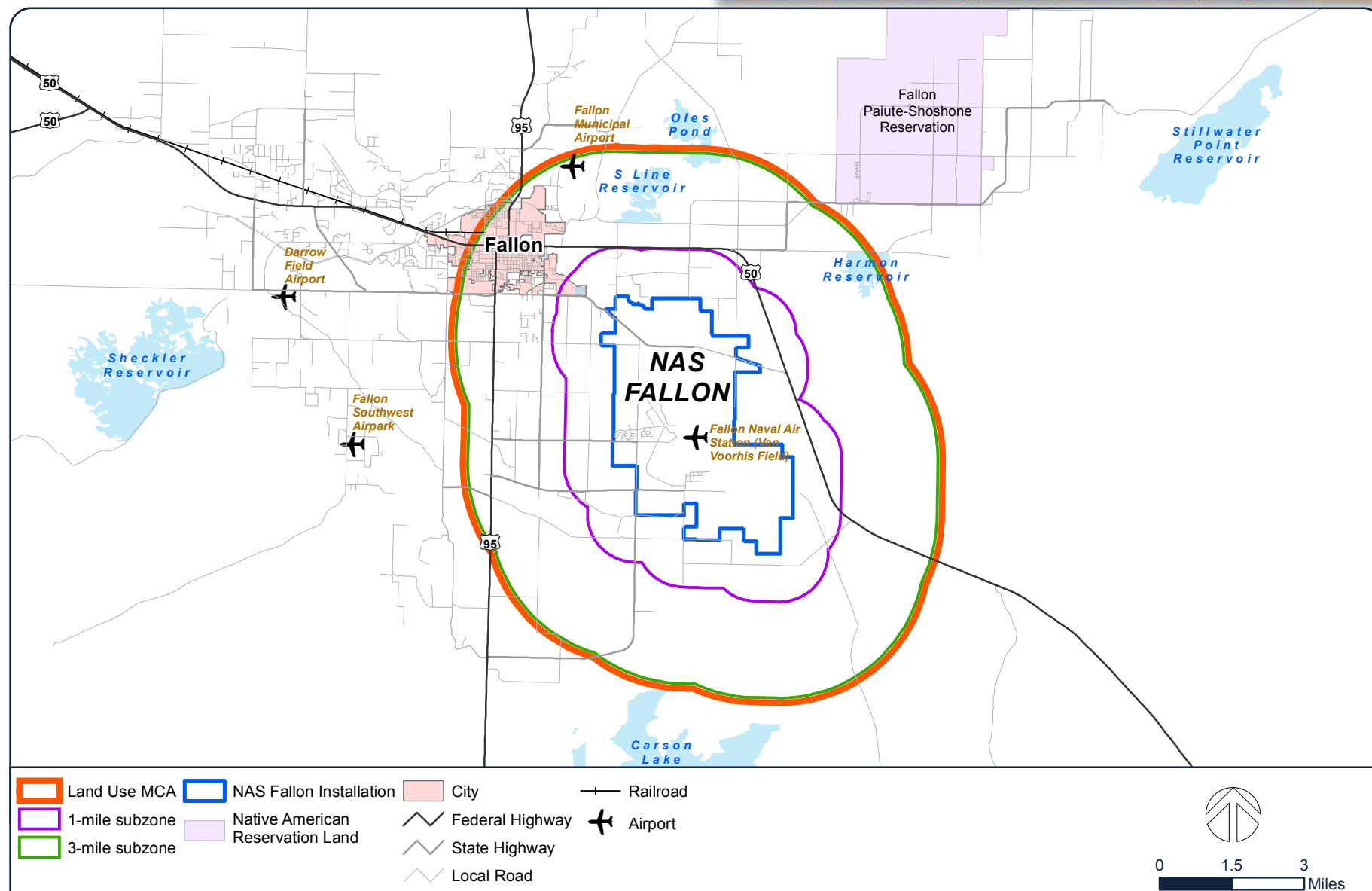


Figure 9
NAS Fallon Land Use Compatibility Area



Matrix
DESIGN GROUP

Sources: NAS Fallon, 2013; Churchill County, 2013; NDOT, 2013; BLM, 2013.

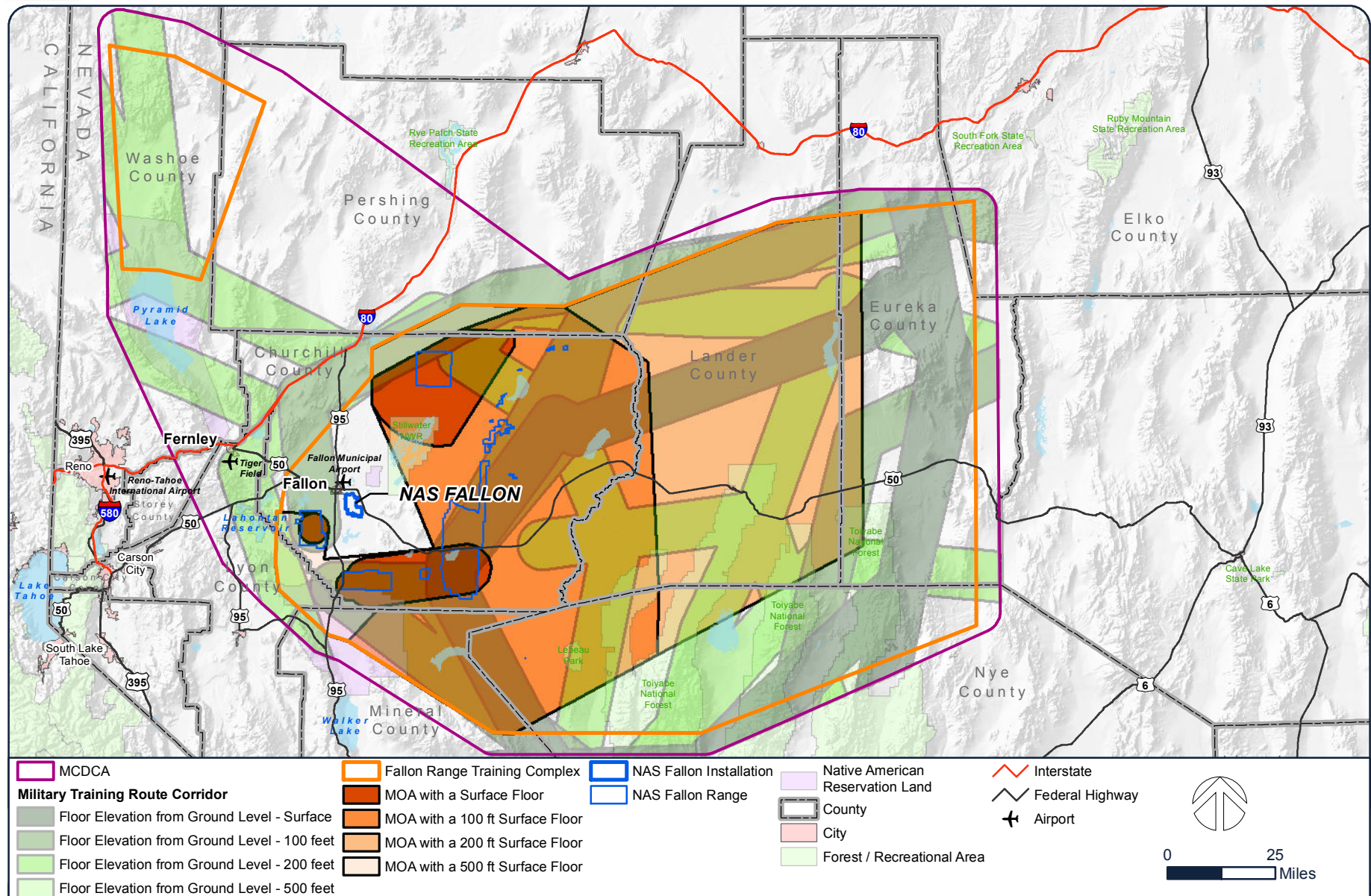


Figure 10
NAS Fallon Military Compatibility Development Coordination Area

Sources: NAS Fallon, 2014; Churchill County, 2013; NDOT, 2013; BLM, 2013.

6.2 How to Read the Implementation Plan

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

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

To make the strategies easier to use, they are presented in a table format (Table 2) that provides the strategy and information on when and how that strategy will be implemented. Figure 11 highlights the format and content of the strategy table, and the following paragraphs provide an overview of how to read the information presented within each strategy.

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

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

- Acq – Acquisition
- CIP – Capital Improvement Program
- Comm – Communication and Coordination
- Disc – Real Estate Disclosures
- Hab – Habitat Conservation Tools
- Leg – Legislative Tools
- MCA – Military Compatibility Area
- MOA – Memorandum of Agreement
- MOU – Memorandum of Understanding

- Plans – General / Comprehensive / Master / Hazard / Airport Plans
- Zone – Zoning Ordinance / Subdivision Regulations

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

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

Timeframe. This column indicates the projected timeframe of each strategy. The year listed reflects the starting timeframe for initiating work on this strategy.

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

BLM	Bureau of Land Management
Reclamation	Bureau of Reclamation
NDOW	Nevada Department of Wildlife
USFWS	United States Fish and Wildlife Service

Figure 11. NAS Fallon Strategy Key

Issue or Strategy #	Type of Strategy	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Fallon	City of Fernley	Churchill County	Eureka County	Lander County	Mineral County	Nye County	Pershing County	Washoe County	Tribal Governments	NAS Fallon	BLM/USFS	Reclamation	USFWS	Nevada State Lands	NDOW	Other Partner (see notes)
COM-1C	Plans / Zone	MCA 1	Maintenance and Update of MCAs NAS Fallon shall provide updated information to the JLUS Coordination Committee when changes in operations or circumstances result in the need to update or modify one of the MCA boundaries. The JLUS Coordination Committee will be responsible for making a recommendation to members to incorporate these changes into appropriate plans, regulations, and policies.	2016 and On-going	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
COM-1D	Comm	MCA 1	Information on Prescribed Burns BLM & Truckee-Carson Irrigation District (TCID) will notify NAS Fallon of planned prescribed burns as soon as dates / times are planned so NAS Fallon can inform organizations operating on or from NAS Fallon or utilizing portions of the FRTC. Other Partners: TCID, Nevada Division of Forestry	On-going											□	■		□			□

Issue / Strategy Number: Used for reference.

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

Geographic Area. Where each strategy applies. For example, MCA 1 covers regional strategies that apply to the Study Area as a whole.

Strategy: A description of the strategy, including actions to be taken.

When. Timeframe for each. Some strategies are also marked as *ongoing* activities.

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

Table 2. Issues / Strategies by Compatibility Factor (Alphabetized by Factor)

Issue or Strategy #	Type of Strategy	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Fallon	City of Fernley	Churchill County	Eureka County	Lander County	Mineral County	Nye County	Pershing County	Washoe County	Tribal Governments	NAS Fallon	BLM/USFS	Reclamation	USFWS	Nevada State Lands	NDOW	Other Partner (see notes)
AIR QUALITY (AQ)																					
AQ-1	ISSUE	<i>Concern about Air Quality.</i> Concern about air quality impacts associated with normal operations (flight operations, range operations, etc.).																			
			The issue is adequately addressed through current programs. No further action needed.																		
AQ-2	ISSUE	<i>Concern about Fuel Dumping.</i> Jet fuel dumping is speculated to occur over the FRTC, which can potentially cause natural resource degradation.																			
AQ-2A	Comm / Edu	MCA 2	<p>Develop Informational Brochure / Add Language to Existing Brochures / Awareness Message via Website</p> <p>NAS Fallon should develop an educational or informational brochure incorporate language into an existing brochure, or add notification message to the Navy's website with a point-of-contact, all intended to educate the public on this activity using the information provided in this JLUS and the NAS Fallon instruction. The brochure should include a point-of-contact to ensure the public can reach someone on base about this issue. NAS Fallon should distribute the brochures to city and county</p>	2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						<input type="checkbox"/>

Issue or Strategy #	Type of Strategy	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Fallon	City of Fernley	Churchill County	Eureka County	Lander County	Mineral County	Nye County	Pershing County	Washoe County	Tribal Governments	NAS Fallon	BLM/USFS	Reclamation	USFWS	Nevada State Lands	NDOW	Other Partner (see notes)
			offices and post on their website. Other Partner: Nevada Division of Environmental Protection (NDEP)																		
BIOLOGICAL RESOURCES (BIO)																					
BIO-1	ISSUE	<i>Proactive Management of Species with Potential for Listing.</i> Concern over potential listing of additional species and impacts of additional listings on military operations.																			
BIO-1A	Plans	MCA 1	Species for Potential Listing Collaborate with USFWS on species that may be considered in the future for potential listing under the Endangered Species Act and develop coordinated management strategies that allow continuation of training activities while providing necessary habitat and species protections. Other Partner: Nevada Natural Heritage Program (NNHP)	2014 / On-going	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BIO-1B	Comm	MCA 1	Greater Sage Grouse Work with all resource management agencies to develop approaches to protect Greater Sage Grouse and its associated ecosystem by developing management strategies that provide adequate	2014 / On-going	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Issue or Strategy #	Type of Strategy	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Fallon	City of Fernley	Churchill County	Eureka County	Lander County	Mineral County	Nye County	Pershing County	Washoe County	Tribal Governments	NAS Fallon	BLM/USFS	Reclamation	USFWS	Nevada State Lands	NDOW	Other Partner (see notes)
			protections to the species survival, thereby avoiding the listing of this species. Other Partner: Nevada Sagebrush Ecosystem Technical Team (SETT), NNHP																		
BIO-1C	Comm	MCA 2	Website Outreach Incorporate prevention and protection information concerning species of concern on a publicly accessible website to ensure maximum outreach by engaging the public. Other Partner: NHHP, SETT	2014 / On-going	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BIO-1D	Comm / Plans	MCA 1	Coordination on Sensitive Biological Resources BLM, USFWS, and Reclamation should continue to coordinate with the Navy regarding changes to resource management (including monitoring requirements) for incorporation in the installation's INRMP. Other Partner: NHHP	2014 / On-going	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Issue or Strategy #	Type of Strategy	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Fallon	City of Fernley	Churchill County	Eureka County	Lander County	Mineral County	Nye County	Pershing County	Washoe County	Tribal Governments	NAS Fallon	BLM/USFS	Reclamation	USFWS	Nevada State Lands	NDOW	Other Partner (see notes)
BIO-1E	Comm / Plans	MCA 1	Coordination of Sensitive Biological Resources Agencies should continue collaborative efforts if Sage Grouse is listed as an endangered species to design appropriate measures that will protect the species and its habitat from further degradation while still allowing for military training and other multiple uses of the land. Other Partner: NNHP	2014 / On-going	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BIO-2	ISSUE	Low Flying Aircraft can Disturb Animals. Bighorn Sheep, Pronghorn Antelope, migratory birds, and grazing cattle are subject to impacts associated with military aircraft and other military operations.																			
BIO-2A			See Strategies under issue NOV-4.																		
BIO-3	ISSUE	Adequate Information of Biological Resources. To ensure information about biological resources in the area is current and accurate when educating pilots and other active-duty military.																			
BIO-3A	Plans	MCA 2	Maintain Prevention Procedure NAS Fallon should work with the USFWS to review and update briefing materials provided to pilots and those training in the FRTC regarding the protection of sensitive biological resources.	On-going											<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	

Issue or Strategy #	Type of Strategy	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Fallon	City of Fernley	Churchill County	Eureka County	Lander County	Mineral County	Nye County	Pershing County	Washoe County	Tribal Governments	NAS Fallon	BLM/USFS	Reclamation	USFWS	Nevada State Lands	NDOW	Other Partner (see notes)
COMMUNICATION / COORDINATION (COM)																					
COM-1	ISSUE	<p><i>Formalized Communication Procedures.</i> Necessary for enhanced/increased communication procedures between the Navy / NAS Fallon and local jurisdictions and local, state and federal agencies to share information about local and regional planning matters. Currently, communication occurs in an informal setting, making it difficult to ensure important information about mission and community changes that could impact one another are addressed.</p> <ul style="list-style-type: none">■ Planning and development review of proposed projects■ Emergency management situations■ Noise complaints■ Fire and prescribed burns management and public awareness■ Public access to recreational areas■ Natural resources management■ Water transfer agreements and infrastructure planning■ Notification / coordination on mission changes at installation■ Better coordination concerning changes in the Study Area■ Changes affecting private and commercial aviation																			

Issue or Strategy #	Type of Strategy	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Fallon	City of Fernley	Churchill County	Eureka County	Lander County	Mineral County	Nye County	Pershing County	Washoe County	Tribal Governments	NAS Fallon	BLM/USFS	Reclamation	USFWS	Nevada State Lands	NDOW	Other Partner (see notes)	
COM-1A	MOA	MCA 2	<p>Establish a JLUS Coordination Committee</p> <p>Establish a JLUS Coordination Committee to maintain efficient and effective coordination among the JLUS partners and to oversee the implementation of JLUS recommendations and increase coordination on military compatibility issues.</p> <ul style="list-style-type: none">■ The JLUS Coordination Committee should be comprised of the same jurisdictions, agencies, and NAS Fallon as included in the development of the JLUS.■ Additional entities identified as “Other Partners” as part of the JLUS strategies should be included.■ The JLUS Coordination Committee should meet on a regular basis as agreed upon by the Committee members.■ The JLUS Coordination Committee can be either a standalone organization or integrated into existing advisory committee appropriate to the area and issues addressed. <p>Other Partners: Any additional entities deemed appropriate (e.g. entities from the JLUS Technical or Policy Committees).</p>	2016	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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COM-1B	Plans / Zone	MCA 1	<p>Military Compatibility Areas (MCAs) Establish MCAs shown on Figures 6 through 10. The MCAs should be used by stakeholders to identify where, geographically, each JLUS strategy should be applied.</p> <ul style="list-style-type: none">■ MCA 1 (Study Area). This MCA covers regional strategies that apply to the Study Area as a whole (see Figure 1).■ MCA 2 (General). Reflects strategies that are general in nature, and may not have geographic properties. This MCA covers strategies that address the establishment of common plans and programs in regards to compatibility.■ MCA 3 (Vertical Obstruction). This MCA and its subzones document the areas subject to vertical height restrictions due to aircraft activity. This includes areas surrounding NAS Fallon as well as areas under Military Training Routes (MTRs) with floors lower than 500 feet.■ MCA 4 (Noise). An area that is defined by the 65 dB Ldn noise contour associated with air operations at NAS Fallon.	2017	■	■	■	■	■	■	■	■	■	□	□	■	□	□	□	□	□	

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			<ul style="list-style-type: none"> MCA 5 (Land Use). The area within three miles of NAS Fallon. 																		
COM-1C	Plans / Zone	MCA 1	Maintenance and Update of MCAs NAS Fallon shall provide updated information to the JLUS Coordination Committee when changes in operations or circumstances result in the need to update or modify one of the MCA boundaries. The JLUS Coordination Committee will be responsible for making a recommendation to members to incorporate these changes into appropriate plans, regulations, and policies.	2016 and On-going	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
COM-1D	Comm	MCA 1	Information on Prescribed Burns BLM & Truckee-Carson Irrigation District (TCID) will notify NAS Fallon of planned prescribed burns as soon as dates / times are planned so NAS Fallon can inform organizations operating on or from NAS Fallon or utilizing portions of the FRTC. Other Partners: TCID, Nevada Division of Forestry	On-going											□	■		□			□

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COM-1E	MOU / MOA	MCA 2	Formalize Navy Cooperation with Federal and State Agencies NAS Fallon should initiate formal procedures, including potential MOU's, regarding the establishment of coordination procedures relative to land management changes, land use applications, and land transfers with BLM, Reclamation, USFWS, and the Nevada State Clearinghouse, etc. Other Partner: Nevada State Clearinghouse	2016											■	□	□	□			□
COM-1F	Disc	MCA 4	Develop or Amend Real Estate Disclosure Language / Rental Agreements The cities and counties in the MCA 4 / 65 dB contour line should develop real estate disclosure language or modify existing language similar to the language in Title 14, Chapter 14.18.010 Churchill County Code, to ensure renters and buyers are aware of military operations in the vicinity. The disclosure should specify that said property is located near an active military installation or range and may be subject to aircraft overflight, noise, vibration, and other related impacts associated with military training.	2017			■														

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COM-1G	Comm	MCA 2	Create and Maintain a GIS Data Clearinghouse Counties and cities in the Study Area, as well as BLM, Reclamation, USFWS, and NAS Fallon should work collaboratively to develop a GIS clearinghouse to share GIS data (e.g., military footprints, geothermal development sites, and other pertinent GIS data) to enable enhanced long-range compatibility planning. In addition, a protocol for accessing and updating the information should be developed to ensure accuracy and appropriate security measures are established.	2018	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM-1H	Comm	MCA 1	Nevada State Clearinghouse Local jurisdictions, BLM, Reclamation, USFWS, and the Navy should develop an MOU to provide copies of project notifications and materials to the Nevada State Clearinghouse for all projects determined to be of interest concerning military compatibility (as defined by the process described under Strategy COM-3A).	On-going	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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COM-1I	Comm	MCA 1	<p>Coordination with Nevada Joint Military Affairs Committee</p> <p>Where appropriate, all the jurisdictions and agencies should coordinate with the Nevada Joint Military Affairs Committee (NJMAC) as another avenue to coordinate about military affairs.</p> <p>Other Partner: NJMAC</p>	2014 / On-going	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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COM-2	ISSUE	<i>Use of Unmanned Aerial Systems (UAS).</i> Safety and privacy concerns associated with the potential expansion of the UAS use at NAS Fallon and Fallon Municipal Airport.																			
COM-2A	Comm	MCA 2	<p>Establish UAS Coordination Group</p> <p>Churchill County, the City of Fallon, and NAS Fallon should establish a UAS Coordination Group whose purpose is to coordinate with the new UAS Test Site Program Offices to determine best strategies for managing safety and privacy concerns. This group should also coordinate on the management of frequency spectrum to ensure various users can safely operate without impacting other users.</p> <p>Other Partners: NJMAC, University of Nevada Reno (UNR), Nevada Governor's Office of Economic Development (GOED).</p>	2015	■	□	■	□	□	□	□	□	□	□	□						■
COM-2B	Comm / Edu	MCA 2	<p>UAS Educational Outreach</p> <p>The State Office of Economic Development will work with the UAS Test Site Program Offices to develop outreach materials and coordinate on-going media coverage to outline any future / previous operations. Outreach materials should include but not be limited to:</p>	2017	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	■

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			<ul style="list-style-type: none"> ■ Informational Brochures ■ Website Updates ■ Open Houses / Public Forums Other Partners: GOED, UNR																		
COM-3	ISSUE	<i>Providing Technical Support to Local Jurisdictions.</i> While the Navy attends some local jurisdiction meetings, an established procedure for providing technical support to the local jurisdiction review and decision making process is not formalized and is dependent on specific personnel.																			
COM-3A	MOA	MCA 2	Establish Procedures for Plan Review and Comment NAS Fallon shall work with local jurisdictions and relevant agencies to establish procedures for coordination between the base and local jurisdictions / agencies relative to planning review and comment. This review and comment is advisory in nature and is not meant to imply the installation has authority to approve or deny projects. This will include: <ul style="list-style-type: none"> ■ Define project types that require review. ■ Establishing technical input and assistance to local jurisdictions to support discussion of projects and potential compatibility issues. 	2016	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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			<ul style="list-style-type: none"> Identify Points of Contact for all coordination. Identify opportunities for NAS Fallon personnel to be involved in pre-application meetings for significant projects. Establish a formal procedure for requesting and receiving comments. Establish a standard timeline for responses, keeping in mind mandated review time periods as specified by State law and local procedures. Provide notice to NAS Fallon on all public hearings regarding projects identified for coordination. <p>While consultation is expected to occur primarily on projects in the defined MCAs, the installation should establish contacts and procedures for receiving notices and review opportunities on significant regional projects outside of the MCAs. Procedures should be reviewed annually and updated as appropriate by the JLUS Coordination Committee.</p>																		

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COM-3B	Comm	MCA 2	Maintain Planning Board Representative Continue to provide for a NAS Fallon representative, when appropriate and available, to local planning boards in each local jurisdiction (and other advisory boards, as appropriate) within the Study Area to attend meetings and be available to answer questions relative to applications or plans that may affect operations associated with NAS Fallon and the FRTC. If there are jurisdictions that do not currently provide this, then implement this upon acceptance of the JLUS Report.	On-going	■	■	■	■	■	■	■	■	■	■	■	□	□	□		□	
COM-4	ISSUE	Enhanced Economic Benefit. There is a need for enhanced communication on the operations and benefits associated with NAS Fallon.																			
COM-4A	Comm / Edu	MCA 2	Maintain Current Informational Brochures / Develop or Modify Brochures as Appropriate NAS Fallon should work with the cities and counties to maintain current informational brochures and develop new brochures as appropriate about the operations and mission in order to educate the public and potentially attract businesses that would complement the NAS Fallon mission. In	2017	□	□	□	□	□	□	□	□	□	□	■						□

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			addition, the jurisdictions should consider hosting these brochures on their websites as another outlet to the public. Other Partner: NJMAC, Churchill Economic Development Authority																		
COM-4B	Comm / Edu	MCA 2	Conduct / Facilitate Business Fairs NAS Fallon should conduct and facilitate business fairs where NAS Fallon contracting needs are matched with potential local / regional businesses to gain better local participation in provision of services and materials to the base.	On-going	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
COM-4C	Comm / Edu	MCA 2	Conduct / Facilitate Vendor Training Jurisdictions should work together to facilitate training opportunities with local vendors to assist them in competing successfully for contracts offered by NAS Fallon and the Navy. Other Partners: Nevada Small Business Administration (NSBA) and Nevada Office of Economic Development (NOED)	On-going	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>
COM-4D	Comm / Edu	MCA-2	Use of Local Businesses NAS Fallon and Navy contracting officials are encouraged to utilize existing tools to	On-Going											<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>

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			integrate local small businesses into the operations and services contracted on the base. Other Partners: NSBA and NOED																		
COM-5	ISSUE	Natural Resource Management. When aircraft crash on the range, the collision has the potential to degrade the natural environment. All affected land management agencies are not currently involved in the appropriate and adequate clean-up and restoration of the lands and better communication in response to these events.																			
COM-5A	MOA	MCA 2	Develop Memorandum of Agreement (MOA) NAS Fallon should develop an MOA with standard operating protocol for coordinating with jurisdictions, partner agencies, and property owners regarding aircraft crashes and ensure notification of all necessary jurisdictional authorities including the Fallon-Paiute-Shoshone Tribe, NDOW, BLM, and so forth. Other Partner: Nevada State Clearinghouse	2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COM-5B	Comm	MCA 2	Consider Developing Dispatch System NAS Fallon should consider creating interagency coordination procedures (similar to that of the State of Nevada's Dispatch System for Wildland Fires) to	2017			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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			ensure appropriate, comprehensive, and timely management of aircraft crashes within the FRTC and that may be located on other public land not managed by NAS Fallon.																		
CULTURAL RESOURCES (CR)																					
CR-1	ISSUE	<i>Protection of Cultural Resources.</i> There are cultural resources located within the FRTC (e.g. the petroglyphs at Grimes Point and Hidden Cave, the Pony Express Trail, Lincoln Highway, and so forth) that need protection from impacts associated with military training exercises (e.g., vibration from military aircraft).																			
CR-1A	Plans	MCA 1	Cultural Resources Management Continue to implement the best practices prescribed in the Integrated Cultural Resources Management Plan (ICRMP) for NAS Fallon and the FRTC. Work with local Native American Tribal governments to update the ICRMP to address areas of change and to enable preservation of valuable cultural resources. Other Partners: State Historic Preservation Office / Officer (SHPO), Nevada Natural Heritage Program (NNHP), and National Park Service (NPS)	2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>

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CR-1B	Plans	MCA 1	Protection of Known Cultural Resources Continue to plan training exercises and other activities to avoid or otherwise limit overflight or disturbance to such sites. Other Partner: SHPO, NNHP	2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/>
CR-1C	Plans	MCA 1	Consider Conducting Vibration Impact Analyses NAS Fallon should work with the SHPO to determine if conducting a vibrational impact analysis for the cultural resource sites that were identified in this JLUS as potentially receiving impact from low-level flights is necessary. Other Partner: SHPO, NNHP	2017											<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>
CR-2	ISSUE	<i>Cultural Resources Coordination Process Update.</i> FTRC contains significant Native American and historic resources, and thus require historic preservation agency review and assessment before certain types of projects may be executed on the installation or in the FTRC. The coordination protocol should be assessed for determining items of cultural or historic significance.																			
			The issue is adequately addressed through current programs and Strategy CR-1A																		

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CR-3	ISSUE	<i>Accessing Cultural Resources by Native Americans.</i> Provide appropriate access to Native American groups for spiritual, medicinal, and other culturally-related activities.																			
CR-3A	Comm	MCA 1	Access Continue discussion with local Native American Tribal governments and groups to identify areas and appropriate times of access, protocols to allow access, and any other parameters affecting significant Native American cultural heritage sites or activities within the FRTC ranges that are otherwise restricted to public access. Other Partner: SHPO	2015										■	■						■
CR-3B	Comm / MOA	MCA 2	Establish Single Points-of-Contact NAS Fallon should work with Native American Tribal Governments to establish single Points-of-Contact (POCs) for notification of certain events and situations. The Native American Governments would have these established POCs and NAS Fallon would have the POCs on appropriate outreach materials and websites. Other Partner: SHPO, Nevada State Clearinghouse	2016										■	■						■

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DUST / SMOKE / STEAM (DSS)																					
DSS-1	ISSUE	<i>Steam Plumes from Geothermal Plants.</i> The steam expended from cooling towers of geothermal plants could represent visual impairments to flight operations near NAS Fallon and within the FRTC. In addition, geothermal steam can potentially affect infrared targeting systems if avoidance measures are not implemented such as locating plants out of the mission-critical aviation area.																			
DSS-1A	Comm	MCA 1	Effect of Steam Plumes Define and formalize the extent of the area within the FRTC in which flight operations that could be impacted by steam plumes associated with flight operations.	2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
DSS-1B	Plans / Zone	MCA 1	Cooling Systems Permitting agencies should consider and work with geothermal operators for new or expanded facilities to utilize dry cooling systems during the winter months.	On-going	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
DSS-2	ISSUE	<i>Fugitive Dust Management.</i> Dormant lands near the NAS Fallon airfield generate fugitive dust due to non-compliance with dust control measures in the County. Dust can create visual impairments for flight operations and air quality concerns. This impact can be intensified by loss of water rights necessary to irrigate surrounding areas.																			
DSS-2A	Plans / Zone	MCA 1	Fugitive Dust Programs Working with Churchill County, USFWS, and private land owners near NAS Fallon,	2015	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input type="checkbox"/>

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			review current policies, procedures, and enforcement for dust containment and consider enhancements to reduce dust that can impede military training activities. This might include specifying the use of materials, such as dust suppression treatments. Other Partner: Nevada Division of Environmental Protection (NDEP)																		
DSS-2B	Plans / Zone	MCA 5	Fugitive Dust Control from Fallow Lands Work with USFWS, Reclamation and other responsible agencies to ensure that lands near NAS Fallon maintain adequate mitigation measures to ensure effective dust control. Other Partner: NDEP				<input type="checkbox"/>								<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
DSS-2C	Acq	MCA 1	Continue to Utilize Readiness Environmental Protection Initiative (REPI) Funds to Secure Buffer around NAS Fallon Churchill County and NAS Fallon should continue to apply and submit for a REPI to assist in securing the lands adjacent to the airfield, protecting from potential development.	On-going	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						

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ENERGY DEVELOPMENT (ED)																					
ED-1	ISSUE		<i>Siting of Alternative Energy Developments.</i> Alternative energy developments can have implications on military activities depending on type and location. For example, wind energy can impact low level flight or radar observation. Solar panels can produce glare, and large solar farms can produce glare and/or vertical obstructions. Geothermal energy can also have impacts associated with steam. Ensure that all appropriate parties are engaged in planning and review of new facilities.																		
ED-1A	Zone	MCA 1	Land Use and Zoning Ordinances Land use and zoning ordinances should consider the use of non-reflective construction materials for all new solar energy projects within the FRTC. Ordinances should also be amended to require review and coordination by NAS Fallon prior to issuing a permit for all commercial alternative energy developments in the study area. Native American tribal governments are encouraged to do the same.	2016	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
ED-1B	Comm	MCA 1	DOD Siting Clearinghouse The Department of Defense Siting Clearinghouse requirements and standards published in Title 32, Code of Federal Regulations, Part 211 shall advise and facilitate the process of early submission	2016	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		

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			for renewable energy project proposals to the Clearinghouse for military mission compatible review.																		
ED-1C	Plans / Zone	MCA 1	Coordinate with DOD Siting Clearinghouse Amend comprehensive plans / land use ordinances (local jurisdictions) and resource management plans (BLM) to incorporate procedures for coordinating renewable energy development applications with the DOD Siting Clearinghouse.	2017		■	■	■	■	■	■	■	■	■	□	■					
			See also Strategies VO-1 A, B, and C.																		
FREQUENCY SPECTRUM CAPACITY (FSC)																					
FSC-1	ISSUE	Frequency Spectrum Management. Expansion of the commercial broadband would adversely impact the Electronic Warfare Center associated with NAS Fallon.																			
FSC-1A	Comm	MCA 2	DOD Spectrum Legislation Provide advocacy for legislation to protect the DOD spectrum.	2015	■	■	■	■	■	■	■	■	■	■	□						
			See also Strategies FSI-1 and FSI-2.																		

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FREQUENCY SPECTRUM INTERFERENCE / IMPEDANCE (FSI)																					
FSI-1	ISSUE	<i>Impacts of Electronic Warfare.</i> Electronic warfare training operations can impact electronic devices in specific locations, such as GPS and cellular communications.																			
FSI-1A	CIPs	MCA 1	Highway Signage Work with Nevada DOT, affected county and tribal government transportation departments, and BLM on the placement of signs noting that GPS and cellular technologies could be impacted by military training operations in the area and appropriate care should be taken when entering these areas. NAS Fallon shall provide information to Nevada Department of Transportation (NDOT) on areas subject to this interference. Other Partner: NDOT	2016			■	■	■	■	■	■	■	■	■	■					■
FSI-1B	Comm	MCA 2	Formalize Communication Procedures As part of Strategy FSI-1A, a coalition of spectrum stakeholders needs to discuss use of frequencies and notification procedures for possible interruption of service.	2015	■	■	■	■	■	■	■	■	■	■	■	■					

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FSI-1C	Comm / Edu	MCA 2	Develop Outreach Materials NAS Fallon should work with affected jurisdictions to develop public outreach materials, including website updates and public service announcements, to inform the public about the potential for GPS and interruption of cellular service within identified areas associated with NAS Fallon training.	2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input checked="" type="checkbox"/>						
FSI-1D	Comm / Plans	MCA 1	Update Plans and Amend Development Codes to Include Frequency Spectrum Interference Areas Local jurisdictions should update its Master Plan and amend its Development Code to incorporate the maps for where frequency spectrum interference may occur. Coordination with NDOT and other agencies for projects should occur, as needed. Other Partner: NDOT	2017	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>						<input checked="" type="checkbox"/>

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FSI-2	ISSUE	<i>Impacts of Commercial Transmission Facilities on Navy Operations.</i> Concern over placement of new commercial transmission facilities in the FRTC.																			
FSI-2A	Zone	MCA 1	Dual Band Towers Cellular Transmission Towers must have dual band capability to broadcast on multiple frequencies should a frequency be blocked by military activity. Location jurisdictions can recommend that cellular providers work with Federal Communications Commission (FCC) and NAS Fallon to ensure appropriate regulatory guidance. Other Partners: Cellular service providers and FCC	2015			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					■
FSI-2B	Plans	MCA 1	Joint Infrastructure Corridors Cities and counties should encourage colocation of communication infrastructure for the siting of cellular transmission towers. This will minimize the footprint already established for utility infrastructure. Other Partners: Cellular service providers	2016			■	■	■	■	■	■	■	■	<input type="checkbox"/>	<input type="checkbox"/>					■

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HOUSING AVAILABILITY (HA)																					
HA-1	ISSUE	<i>Future Housing for Military Personnel and Families.</i> Use of surrounding communities to provide adequate housing in the event of future changes in the NAS Fallon mission.																			
HA-1A	Plans	MCA 5	Incorporating Military Housing Needs in Jurisdictional Housing Plans When a jurisdiction updates its comprehensive plan, the plan should include a discussion of military housing needs and programs to address housing needs, both permanent (family and unaccompanied service members) and transient housing. As part of this effort, NAS Fallon 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 of off-base personnel by ZIP Code.	2015	■		■								■						
HA-1B	Plans	MCA 5	Military Housing in Local Communities If additional or replacement housing is needed to serve NAS Fallon, the installation will work with local jurisdictions to determine if this housing	On-going	■		■								■						

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			need can be met locally with existing housing stock or new privatized housing in the community. Emphasis on providing housing, especially rentals, in the community is desired.																		
INFRASTRUCTURE EXTENSIONS (IE)																					
IE-1	ISSUE	<i>New or Expanded Electrical Transmission Lines.</i> Expansions or new transmission facilities can impact low-level flight operations. Include discussion of implications of conservation easement height restrictions.																			
IE-1A	Plans	MCA 1	Implement Transmission Line Utility Corridors into Master Plan The cities and counties are required to develop and implement utility corridor master plans that must be consistent with adjacent jurisdictions. This will assist in the identification of optimal areas for structures associated with utilities and transmission lines.	2016			■	■	■	■	■	■	■		□						
IE-1B	Leg	MCA 2	Amend Assembly Bill 239, Sections 27.5 and 27.7 to Consider Military Compatibility and Energy Conservation Amend AB 239, Sections 27.5 and 27.7 to incorporate military compatibility considerations, including enabling the	2017	□	□	□	□	□	□	□	□	□	□	□						■

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			establishment of joint infrastructure corridors and denying a permit if projects are proposed for areas in low-altitude military aviation operations, this includes airspace and other military operating areas such as military training routes. Other Partner: Nevada State Legislature																		
			See also Strategies VO-1 A, B, and C.																		
IE-2	ISSUE	Joint Infrastructure Planning. With continued reductions in federal budgets, constraints on military operation and construction funds will impact the ability of the installation to provide adequate infrastructure and services.																			
IE-2A	Plans	MCA 2	On-going Feasibility Assessment The City of Fallon, Churchill County, and NAS Fallon should routinely evaluate the ability for local jurisdictions to provide infrastructure and services, in keeping with the National Defense Authorization Act, Section 331 concerning public-public partnerships. This could help reduce redundant services in the Study Area and provide more cost effective services to the Navy and local jurisdictions.	2015	■		■								■						

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LAND USE (LU)																					
LU-1	ISSUE	Transfer Development Rights (TDR) Program Updates. Churchill County's TDR program establishes provisions for acquiring development rights using conservation easements; however, receiving sites as part of Planned Unit Developments could be placed in close proximity to NAS Fallon, potentially affecting compatibility.																			
LU-1A	Zone	MCA 5	Enhance Transfer of Development Rights (TDR) Program Churchill County's TDR program should be updated to state that receiver sites or Planned Unit Development utilizing the TDR program cannot transfer development rights into within the Land Use MCA (MCA 5).	2015			■														
LU-2	ISSUE	Cluster Zoning Ordinance Updates. The Churchill County ordinance currently allows for the clustering of homes, but not provide guidance on the location of these clusters in association with military compatibility issues, such as noise.																			
LU-2A	Zone	MCA 5	Amend Churchill County Cluster Development Ordinance The Cluster Development Ordinance should be amended to reflect development that places cluster outside of Land Use MCA to the greatest extent possible.	2015			■														

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LU-2B	Zone	MCA 5	Establish Minimum Lot Size for Cluster Development Ordinance Churchill County should amend its Cluster Development Ordinance to state that densities less than 2 dwelling units per acre are not allowed within Accident Potential Zone II to be consistent with AICUZ guidelines.	2015			■														
LU-2C	Zone	MCA 5	Amend Development Code Churchill County should amend Development Code to restrict the use of cluster developments in Accident Potential Zone I.	2015			■														
LU-3	ISSUE	Disposal of Bureau of Reclamation Lands. Future disposal of Bureau of Reclamation (Reclamation) lands to the Bureau of Land Management (BLM) could result in lands not covered under current Resource Management Plan (RMP).																			
LU-3A	Plans	MCA 1	BLM Resource Management Plan Update As part of the 2017 / 2018 resource management plan (RMP) update process, BLM should: ■ Include protection of military operating areas as a criteria in the development of land use options, e.g. military stipulations for mineral development and extraction, and	2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■					

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			<ul style="list-style-type: none"> Include policy on disposal and transfer of land (to or from the BLM) that works to enhance military compatibility. 																		
LU-3B	Plans	MCA 2	Create a BLM Lease Process Stipulation BLM, working with NAS Fallon, should create a lease process stipulation requiring military coordination for any entity(ies) requesting to construct or erect structures within the FRTC.	2019											<input type="checkbox"/>	<input checked="" type="checkbox"/>					
LU-4	ISSUE	DOD Land Withdrawal. Concern over any additional withdrawal of lands for exclusive military use or reduction of current multiple uses of lands. Maintenance of multiple use of lands is preferred.																			
LU-4A	MOU	MCA 1	Future Land Withdrawal The Navy will limit land withdrawals in the future to areas where public health and safety are at risk without complete control of use of lands or where existing controls may not adequately address compatible use with Navy training. For most training, joint use with the public is preferred.	On-going											<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					

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LU-5	ISSUE		<i>Clean Energy Park.</i> Concern about potential compatibility issues associated with the proposed Clean Energy Park along the Highway 50 corridor.																		
			This issue is adequately addressed through current programs. No further action needed.																		
LAND, AIR, AND SEA SPACE COMPETITION (LAS)																					
LAS-1	ISSUE		<i>Unmanned Aerial Systems Development and Use.</i> There may be increased use of Unmanned Aerial Systems (UAS) by military, commercial, or other federal agencies that may have impacts on civilian and military airspace use.																		
LAS-1A	Comm / Plans	MCA 1	UAS Operating Areas / Corridors Working with the Navy, local jurisdictions, and resource management agencies need to provide coordination and input procedures on the identification and development of UAS operating areas / corridors. Other Partners: NJMAC, FAA	2015	■	■	■	■	■	■	■	■	■	■	■	■	■				■

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LAS-1B	CIPs	MCA 1	Communications and Control Infrastructure Navy and UAS officials should work together to optimize command and control facilities and the sites they are located on. Potential for shared space that could benefit both include locations such as Rattlesnake Hill. Other Partner: NJMAC, FAA	2016	■		■								■						■
LAS-1C	Comm / Edu	MCA 2	Enhance Coordination Efforts The Department of Defense through the Navy, the FAA, and the State of Nevada should develop a formalized communication / coordination protocol delineating points of contact, the responsibilities for each agency, establish regular meetings, and identify areas for coordination relative to UAS development and use in the area. Consider using the Nevada Joint Military Affairs Committee through the State of Nevada's Clearinghouse as a platform for coordination. Other Partner: NJMAC, FAA	2016	■		■								■						■

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LAS-2	ISSUE	<i>Civilian Airports / Airfields.</i> Preservation of current and future private / commercial flight operation capabilities associated with the civilian airports / airfields located in the Study Area.																			
LAS-2A	MOA	MCA 2	<p>Develop Memorandum of Agreement for Coordination</p> <p>Based on the discussions and decisions derived from the Civilian / Military Aviation Coordination Committee, the aviation partners should formalize areas for coordination to include but not limited to:</p> <ul style="list-style-type: none"> ■ Establish procedures for integrated military and civilian aviation operations ■ Flexible use airspace (maximum utilization of airspace) ■ Sharing of common navigation facilities and aviation services (See Strategy IE-2A) ■ Joint consultation for avionics development to facilitate sustainable compatibility ■ Expanded collaborative decision making from airport to FAA to also include airlines and military ■ Enhanced information exchange, data sharing, and automated prediction tools <p>Other Partners: FAA, Airlines, Local Airports—Fallon, Eureka, Austin, Dixie Geo Plant, Battle Mountain</p>	2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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LIGHT AND GLARE (LG)																					
LG-1	ISSUE	Maintaining Dark Skies. Night vision training requires environments that are not exposed to excessive light and glare. Ensure that illumination levels that could potentially affect the night training exercises that occur in the FRTC to be controlled.																			
LG-1A	Zone	MCA 1	Dark Skies Ordinances Develop standard conditions of approval to protect night skies from significant increases in ambient light and glare. This includes designs that ensure lighting is limited to illuminating the site in question (no spill over lighting) and is designed to utilize downward facing lighting and lighting that is shielded.	2017		■	■	■	■	■	■	■	■	■	□	■	■				
LG-1B	Zone	MCA 1	Develop Alternative Energy Ordinances / Directives The counties in the Study Area, along with BLM and Reclamation, should develop ordinances / directives / regulations / mitigation measures that set controls for lighting on energy and other industrial facilities, both exploratory and permanent, to ensure lighting is downward facing or shielded and consistent with FAA guidance to minimize off-site light and glare. Other Partner: FAA	2017		■	■	■	■	■	■	■	■	■	□	■	■				■

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LG-2	ISSUE	<i>Excess Light from Base Operations.</i> Concern over high-intensity lights on NAS Fallon that may impact off installation land uses.																			
			The issue is adequately addressed through current programs. No further action needed.																		
NOISE / VIBRATION (NOV)																					
NOV-1	ISSUE	<i>Noise from Flight Operations at NAS Fallon.</i> Helicopter and fixed-wing flights create noise that is heard off installation. This includes noise associated with transit to and from the installation and ranges and approach and departure operations from NAS Fallon. This noise could affect both residents and livestock.																			
NOV-1A	Code	MCA 4	Develop Sound Attenuation Building Standards for New Construction Amend the Building Code to require sound attenuation measures for all new construction of noise sensitive land uses (e.g. residential uses, hospitals, elderly care facilities, schools, churches) located within the 65 dB noise contour regulatory area of the Noise MCA. These structures should be designed and constructed so as to limit their interior noise level to no greater than 45 dB Ldn and certified by an accredited acoustical engineer. The minimum STC rating of structure components shall be provided in compliance	2016			■							■							

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			<div>with the table shown below. As an alternative to compliance with this table, structures shall be permitted to be designed and constructed so as to limit their interior noise level to no greater than 45 Ldn. Exterior structures, terrain and permanent plantings shall be permitted to be included as part of the alternative design. The alternative design shall be certified by an acoustical engineer.</div> <table><tr><th>dB LDN</th><th>STC of Exterior Walls and Roof / Ceiling</th><th>STC of Doors / Windows</th></tr><tr><td><u>65-69</u></td><td><u>39</u></td><td><u>25</u></td></tr><tr><td><u>70-74</u></td><td><u>44</u></td><td><u>33</u></td></tr><tr><td><u>> 75</u></td><td><u>49</u></td><td><u>38</u></td></tr></table>	dB LDN	STC of Exterior Walls and Roof / Ceiling	STC of Doors / Windows	<u>65-69</u>	<u>39</u>	<u>25</u>	<u>70-74</u>	<u>44</u>	<u>33</u>	<u>> 75</u>	<u>49</u>	<u>38</u>																			
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<u>> 75</u>	<u>49</u>	<u>38</u>																																
NOV-1B	Zone	MCA 4	<div>Require Sound Attenuation Buildings Standards for Significant Expansion / Remodeling</div> <div>Significant (defined as an activity that modifies, alters, or expands an existing use by 50 percent) extension, enlargement, relocation, reconstruction, or substantial alteration of an existing residential use within the Noise MCA area shall include the implementation of sound attenuation materials designed to reduce interior noise</div>	2019			■							■																				

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			to 45 dB Ldn. This shall also apply to changes in a structure that result in an increase in the number of habitable units within the structure (with habitable units as defined by the 2010 U.S. Census).																		
NOV-1C	Plans	MCA 4	Develop Sound Attenuation Retrofit Program Develop a voluntary sound attenuation retrofit program for residential uses. Develop a program that provides guidance on sound attenuation standards for retrofitting existing residential and commercial facilities. The program could include grant opportunities available to assist property owners in retrofitting structures in noise sensitive areas. Other funding sources for retrofitting homes should be identified and provided within the program materials.	2019		■	■	■	■	■	■	■	■	■							
NOV-1D	Comm	MCA 1	Map Noise Complaints Noise complaints received by local jurisdictions / resource agencies in the JLUS Study Area should be provided to NAS Fallon, if resources allow. NAS Fallon shall map complaints and provide it to the JLUS Coordination Committee members	2016	■	■	■	■	■	■	■	■			■						

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			<p>annually, and shall follow up on complaints to determine if further action or coordination is needed.</p> <p>In addition to this, NAS Fallon should provide a phone number to all counties that can be provided when a complaint is received so that the complainant may contact the Navy directly.</p>																		
NOV-2	ISSUE	Noise from Flight Operations in FRTC. Training operations conducted within the FRTC create noise that is heard at locations in and near the FRTC.																			
NOV-2A	Comm	MCA 2	<p>Develop Noise Informational Brochure for FRTC Operations</p> <p>NAS Fallon should develop an informational/educational brochure about the noise generated from the operations that occur over the FRTC to include the large weapons noise contour and any low-level altitude operating areas. Points-of-contact should also be included in this brochure. Local jurisdictions will help in the distribution of these brochures by making these available to those that request information.</p>	2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						

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NOV-2B	Zone	MCA 4	Amend Development Code Local jurisdictions should amend their Development Codes to include the recommended guidelines from the Range Air Installations Compatible Use Zone (RAICUZ) Report for noise sensitive land uses associated with the FRTC.	2017			■	■	■	■	■	■	■	■	□						
NOV-3	ISSUE	<i>Supersonic Flight Operations.</i> Use of the Supersonic Corridor within the FRTC has the potential to create noise and vibrational impacts that could impact communities near this area, such as Crescent Valley.																			
NOV-3A	Comm	MCA 2	Notify Communities of Supersonic Training Exercises Supersonic training exercises have the potential to effect rural population centers in and near the Supersonic Operating Area. The Navy should: <ul style="list-style-type: none"> ■ identify affected communities in consultation with counties impacted by these operations, and ■ develop informational brochure about the supersonic flights that occur in the area, including a Navy point-of-contact and distribute them to counties and communities to enable notification of supersonic operations if notification cannot be given when or near the time the training event occurs. 	2019											■						

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			See also Strategies under COM-1.																		
NOV-4	ISSUE	<i>Flight Tracks Traverse Sensitive Wildlife Habitat.</i> Rotary- and fixed-wing aircraft perform flying training exercises over and near sensitive habitats within the FRTC. Concerns over balancing species protection and maintaining flight operations.																			
NOV-4A	Comm	MCA 2	Conduct Study to Determine if Military Operations Impact Species and their Habitat USFWS, BLM, and NDOW should collaborate to fund a study that seeks to determine if the species and their habitat are impacted by low-level military aviation operations and noise associated with the operations. This study should also identify critical timeframes to avoid certain areas due to breeding rituals or preservation of the habitat due to seasonal changes. Other Partners: Conservation Districts, County Advisory Boards	2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
NOV-4B	Plans	MCA 2	Conduct Habitat Trade-off Study If implementation of Strategy NOV-4A determines there is an impact, then USFWS, BLM, and NDOW should collaborate on funding a comprehensive study to identify areas outside of the FRTC that could be suitable for habitat trade-	2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>

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			offs or relocation of species to another habitat that could either be a natural adaptation or synthetically-modified to enable species relocation. Other Partners: Conservation Districts, County Advisory Boards																		
NOV-4C	Plans	MCA 2	Appropriate Mitigation Measures to Protect Sensitive Species and Habitat Upon completion of the study recommended in Strategy NOV-4A, NAS Fallon should work with USFWS, BLM, and NDOW to develop appropriate mitigation measures to avoid sensitive species and their habitats. Other Partners: Conservation Districts, County Advisory Boards	2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

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PUBLIC TRESPASSING (PT)																					
PT-1	ISSUE	<p><i>Public Trespassing onto Navy Managed Lands.</i> Public recreational shooting, horseback riding, and other recreational activities occurs in FRTC areas managed by the Navy (including near the B-16 range and areas near Division Road) which can interfere with the safety of military training and the safety of the general public.</p> <ul style="list-style-type: none"> ■ Lack of signage. ■ Fence line location and maintenance. 																			
PT-1A	Plans / CIPs	MCA 2 (adjacent to ranges)	<p>Perimeter Security – People</p> <ul style="list-style-type: none"> ■ Navy should continue to budget and maintain fencing around all target ranges to discourage trespassing. ■ Maintain monitoring of perimeter fencing to provide timely replacement or repair of damaged sections. ■ Ensure placement, maintenance, and visibility of perimeter signage is adequately placed and spaced along the perimeter fence. ■ In the instance of trespassing, work with Churchill County Sheriff's Office and other law enforcement to promptly apprehend the trespasser. 	On-going			<input type="checkbox"/>								■	<input type="checkbox"/>					
PT-1B	Comm	MCA 1	<p>Self-Policing Educational Brochure</p> <p>NAS Fallon should work with BLM to develop an educational brochure about</p>	2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

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			the ranges and other public lands within the FRTC to inform the general public of the sensitive areas and to avoid them. This brochure should be made available on all stakeholders' websites to ensure maximum awareness.																		
PT-2	ISSUE	Livestock Trespass. Grazing Management Plan lacks prescriptive monitoring and controls for livestock grazing area that traverses military operating and training areas.																			
PT-2A	Plans	MCA 2 (adjacent to ranges)	Perimeter Security – Livestock For range areas within the FRTC that are controlled by the Navy and leased by the Navy for livestock operations: <ul style="list-style-type: none"> ■ Improve monitoring of perimeter fencing to provide timely maintenance, replacement, or repair of damaged sections. This may involve modifications to lease agreements to ensure timely replacement or repair and provide appropriate remedies if these replacements / repairs are not completed in a timely manner. ■ In areas frequently damaged or in close proximity to concentrations of livestock, installation of enhanced perimeter fencing that prevents the 	2016 – On-going											■						

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			trespassing of livestock in these areas should be made (as a condition on future leases).																		
SAFETY ZONES (SA)																					
SA-1	ISSUE		Wildland Fires. Flare training and other training activities in the FRTC could ignite wildfires that could threaten wildlife and their management areas as well as impact ranching activities. Wildfires created by non-military use and natural causes could also impact Navy facilities.																		
SA-1A	Edu	MCA 1	Maintain Current Individual Fire Management Training While all staff members have completed the 40-hour BLM Advanced Wildland Fire Training Course, ensure that appropriate updates are available to keep individuals trained on the most current fire suppression techniques, and educated about the need for minimal impacts to the habitat and wildlife in the area. Other Partner: Nevada Division of Forestry	2016 - On-going	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
SA-1B	Plans	MCA 1	Determine Feasibility of Red Card System for NAS Fallon Fire Department NAS Fallon should determine the use and implementation of the Red Card System in their fire management organization. If staff is certified based on the Red Card	2016											<input checked="" type="checkbox"/>						

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			System, then funding may be increased or appropriated.																		
SA-1C	Plans	MCA 2 (adjacent to ranges)	Maintain Fire Monitoring of NAS Fallon and FRTC NAS Fallon uses aircrew reporting for early detection and communication of wildland fires in and around NAS Fallon. NAS Fallon should expand monitoring to the FRTC and maintain level of service during high risk periods of fire during the year over the range areas when active.	2016 — On-going											■						
SA-1D	Plans	MCA 2 (adjacent to ranges)	Update Churchill County Fire Plan The Churchill County Fire Plan only does a risk assessment and set of recommendations for areas near and on the installation. The Fire Plan should incorporate State level coordination of wildland fires including points-of-contact and maps of who to call when fires occur on the FRTC. Other Partners: Nevada Division of Forestry, Nevada Division of Emergency Management	2017			■														■

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SA-2	ISSUE	Bird and Wildlife Strike Hazards. The military operating areas for NAS Fallon and the FRTC traverse a rich natural resource environment where several wetlands, natural habitats, and farmlands provide the habitat and feeding grounds for numerous species that can impact flight safety.																			
SA-2A	Plans	MCA 2	Wildlife / Bird Hazard Assessment NAS Fallon, in collaboration with USFWS, BLM, and NDOW, should conduct a comprehensive Wildlife / Bird Hazard Assessment to determine the locations and types of birds / wildlife that are causing issues with aircraft in flight both near the airfield and the B-16, B-17, B-19, and B-20 ranges on the FRTC. This will enable NAS Fallon and the wildlife agencies to determine more suitable and effective techniques to deter birds and wildlife in the mission critical areas.	2016 – On-going	<input type="checkbox"/>		<input type="checkbox"/>								■	<input type="checkbox"/>		■		■	
SA-3	ISSUE	Portion of Clear Zone Lies off Installation Lands. The northeast corner of Runway 07/25 lies off lands controlled by NAS Fallon, which can allow for structures or objects to be placed in this area in violation of safety standards.																			
SA-3A	Acq	MCA 3	Secure Runway 07/25 Clear Zone through the Use of Readiness and Environmental Protection Initiative (REPI) Funding NAS Fallon should use REPI funds to establish an agreement with Reclamation and BLM regarding the property located within the Runway 07/25 Clear Zone.	2017											■	■	■				

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SA-3B	Acq	MCA 3	Secure Runway 07/25 Clear Zone Through a Buffer NAS Fallon, Churchill County and other resource agencies should collaborate to secure a buffer through alternative means if a REPI is not an option. The acquisition methods should include but not be limited to a Land Withdrawal or Transfer; Land Purchase; use TDR; rezone to limit development.	2017			<input type="checkbox"/>								<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
SA-4	ISSUE	<i>Portions of Range Compatibility Zone II and III of the B-16 Range Lie Off Navy Managed Lands.</i> Concern use or development of these lands and compatibility of such uses.																			
SA-4A	Acq	Churchill County	Retain Lands in this Area in Federal Ownership as Long as the B-16 Range is in Use The Navy should work with Churchill County or BLM to determine best way to retain the land affected by the B-16 range including the airspace under Federal ownership / management until the military use for the land is no longer needed. Such actions may include: <ul style="list-style-type: none"> ■ The use of REPI to secure the development rights from willing land owners. 	2017			<input type="checkbox"/>								<input checked="" type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/>

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			<ul style="list-style-type: none"> Conservation Easements with other willing landowners. Enact TDR program or encroachment partnering agreement for this land that is in rural resource zoning district. Other Partners: Nature Conservancy, Willing Landowners																		
SA-5	ISSUE	<i>Concern over Size / Use of B-17.</i> Ensure size and military uses of B-17 are appropriate to meet the needs of the Navy missions.																			
			The issue is adequately addressed through current programs for B-17. No further action needed.																		
SCARCE NATURAL RESOURCES (SNR)																					
SNR-1	ISSUE	<i>Sustainability of Water in Valley.</i> Transfers of water out of the valley or mandates for changes in distribution have direct impacts on lands around NAS Fallon and the sustainability of the installation.																			
			Refer to WQQ-1																		

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SNR-2	ISSUE		BLM Land Management / Recreational Use. Optimizing the use of public lands to allow a range of public and military uses. Work to design recreational activity sites that are compatible with military operations and work to avoid public access to areas of concern. Address increased use of off-highway vehicles (OHV) in range area.																		
SNR-2A	Comm / Plans	MCA 2	Incorporate JLUS Maps into RMPs BLM should incorporate the JLUS compatibility area maps into their RMPs and informational brochures to ensure maximum and appropriate management resources are allocated to specific areas.	2017											<input type="checkbox"/>	<input checked="" type="checkbox"/>					
SNR-2B	Comm / Edu	MCA 1	Develop and Distribute Informational Brochures Use JLUS maps and information to develop smaller educational brochures for the public to include OHV users and other recreationists, e.g., fishermen.	On-going	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	

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VERTICAL OBSTRUCTIONS (VO)																					
VO-1	ISSUE	<i>Building / Structure Height in Low-Level Flight Areas.</i> Concern about buildings or structures height that may interfere with aviation. Ensure plans, regulations, and requirements are appropriate for evaluating and assessing proposed structures or buildings in proximity to low level flight activities associated with NAS Fallon and FRTC.																			
VO-1A	Plans / Zone / Code	MCA 2	Ensure Federal Aviation Regulation (FAR) Part 77 Compliance For all new, redeveloped, or rehabilitated buildings or structures including transmission, communications, or energy generation structures (including electrical transmission towers/lines, cellular and radio transmission towers, wind generation towers, and other similar structures), ensure compliance with FAR Part 77 height limit requirements to minimize vertical obstructions. In addition, ensure the developments and structures are compatible with, and do not pose a safety hazard to, air operations in the region.	2017	■	■	■	■	■	■	■	■	■	■		■	■	■	■	■	
VO-1B	Plans / Zone	MCA 3	Building / Structure Height Limitations For all new, redeveloped, or rehabilitated buildings and structures including	2017		■	■	■	■	■	■	■	■	■							

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			transmission, communications, or energy generation structures planned or proposed within the boundaries of MCA 3, heights of structures shall not exceed 75 feet, to ensure navigable airspace for military training activities.																		
VO-1C	Comm	MCA 3	Share Proposals for Structures Exceeding 75 Feet in Height Ensure NAS Fallon is provided copies of any proposals for structures greater than 75 feet tall within MCA 3 and given the opportunity to comment prior to taking discretionary actions or issuance of permits. This shall apply to temporary and permanent facilities and structures.	2016			■							■	□						
WATER QUALITY / QUANTITY (WQQ)																					
WQQ-1	ISSUE	Concern about NAS Fallon Water Quality. General concern about protecting water quality and quantity in the area. <ul style="list-style-type: none"> ■ Water rights ■ Environmental degradation ■ Impact of reducing application, Impacts on quality and aquifer condition (quantity and quality) 																			
WQQ-1A	Comm / Plans	MCA 1	Conduct Studies to Determine a Redundant Source of Water The cities, counties, military, and the tribal	2017 – On-going		■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□

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			governments should collaborate regionally to conduct studies on the areas' water resources to determine a viable redundant water source option for contingencies. Other Partner: Central Nevada Regional Water Authority (CNRWA)																		
WQQ-1B	Comm / Plans	MCA 1	Regional Water Resources Studies The cities, counties, and tribal governments, and military should participate collaboratively in regional studies on the area's water resources. Other Partner: CNRWA	On-going	■	■	■	■	■	■	■	■	■	■							■
WQQ-1C	Comm / Plans	MCA 1	Continue Current Programs (TDR, Navy Water Quality Monitoring) The Navy and Churchill County should continue the programs such as the county's TDR program and the Navy's monitoring program. These programs are proactive in nature and promote the conservation and protection of water.	On-going			■								■						
WQQ-1D	Comm / MOA	MCA-1	Evaluate Cooperation on Flood Control and Response Churchill County, the City of Fallon and NAS Fallon will work cooperatively to	On-Going	■		■								■						

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			evaluate opportunities for joint approaches to flood control, including the use of Navy lands (such as Range B-16) for temporary spreading grounds, retention areas, or other concepts delineated in the B-16 Environmental Assessment in the event of a flood emergency. Based on this evaluation, Churchill County, the City of Fallon and NAS Fallon will establish the legal mechanisms required to cooperate in the management of flood waters to the benefit of the overall region.																		





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