

MILITARY LAND USE COMPATIBILITY IN TEXAS: 2021

Protecting Military Readiness in Texas: Phase II
Texas A&M Natural Resources Institute

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ACRONYMS AND ABBREVIATIONS

LRR

MET

MSL

MTR MTF

NAAQS

NDAA

nm

NRI

NSA

OE OLDCC

PUC

RF

ROTHR

MIOD MOA **Long Range Radars**

Military Operations Area

Military Training Routes

Maintenance Test Flight

National Security Area

Obstruction Evaluation

Public Utility Commission

Military Influence Overlay District

National Ambient Air Quality Standards

Texas A&M Natural Resources Institute

National Defense Authorization Act

Office of Local Defense Community

Relocatable Over the Horizon Radar

Meteorological

Mean Sea Level

nautical miles

Cooperation

RAPCON Radar Approach Control

radio frequency

AAA	Airport Airspace Analysis	REPI	Readiness and Environmental Protection
AACOC	Alamo Area Council of Governments		Integration
AFB	Air Force Base	RCUP	Regional Compatibility Use Plans
AGL	Above Ground Level	SB	Senate Bill
AICUZ	Air Installation Compatible Use Zones	SIP	State Implementation Plan
AQCR	Air Quality Control Regions	SR	Slow Route
ASR	Airport Surveillance Radars	SUA	Special Use Airspace
ATC	Air Traffic Control	TCC	Texas Commanders Council
CAA	Clean Air Act	TCEQ	Texas Commission of Environmental
CUP	Compatible Use Plans	TENT	Quality
DoD	U.S. Department of Defense		Texas Early Notification Tool
DOI	U.S. Department of the Interior	TMMC	Texas Mayors of Military Communities
EMI	Electromagnetic Interference	TMPC	Texas Military Preparedness Commission
EPA	U.S. Environmental Protection Agency	USDA	U.S. Department of Agriculture
ERCOT	Electric Reliability Council of Texas	VFR	Visual Flight Rules
ESS	Electronic Scoring Site	VR	Visual Route
FAA	Federal Aviation Administration	WTA	Western Training Area
FCC	Federal Communications Commission		
ft	feet		
FY	fiscal year		
GIS	Geographical Information Systems		
HAMET	S High Altitude Mountainous		
	Environmental Training Site		
НВ	House Bill		
IFR	Instrument Flight Rules		
IR	Instrument Route		
JLUS	Joint Land Use Studies		
LATN	Low Altitude Tactical Navigation		



EXECUTIVE SUMMARY

Texas is home to valuable land and air assets used to train our military forces and test new technologies. The state and the military have a long history of working together to build a stronger Texas and a more secure nation. Despite the many shared goals and positive interactions among the state, local communities and military installations, certain actions (or inaction) by one entity can sometimes directly or indirectly impact the others and create conflict. As communities develop and expand in response to population growth, economic investment, and market demands, land use decisions can push incompatible land use development closer to military installations and operating areas.

The resulting land use conflicts, often referred to as encroachment, can have negative effects on sustainment of military activities and overall readiness, as well as on the quality of life, safety, and economic development of the state and local communities. This report serves as one component of a larger project that assesses current and potential conflicts that interfere or impede the military test and training efforts of Texas military installations and ranges. It addresses overlap among the various local and regional land use compatibility studies with a focus on potential statewide actions, such as legislation, that would reduce or eliminate the land use conflicts.

I. INTRODUCTION

A. BACKGROUND

Texas is home to 15 active-duty military installations and the headquarters of Army Futures Command, with a footprint totaling over 1.5 million acres across the state in associated facilities, ranges and training areas, and representing the Army, Navy and Air Force. With over \$123 billion in economic impact to the state economy, military operations rivals many of the leading industries in Texas. Military mission, while imperative to national defense and the Texas economy, is under mounting pressure from various encroachment challenges. Proactive land use planning to ensure the future capabilities of these installations is imperative. Military stakeholders recognize this need and are increasingly working with surrounding communities, neighboring landowners, and local industries to engage them as partners in forging innovative solutions to compatible land use issues. The success of such partnership building, however, requires an understanding of issues important to all stakeholders involved and, in many cases, a statewide approach.

In 2019, the Texas A&M Natural Resources Institute (NRI), in partnership with the Texas Military Preparedness Commission (TMPC), and with a grant from the Department of Defense (DoD) Office of Local Defense Community Cooperation (OLDCC; formerly the Office of Economic Adjustment), completed a project that addressed impacts of wind turbines on military testing and training and created an online tool that facilitates early engagement between developers and the military.

Expanding on this work, NRI obtained another grant from OLDCC to address land use compatibility around military assets by facilitating communication between military, industry and defense communities, and by developing meaningful products that assist planners in developing statewide strategies and solutions to combat potential land use conflicts. The project, titled *Protecting Military Readiness in Texas: Phase II*, includes four tasks:

- Annual military/wind energy stakeholder meeting
- Maintenance and update of the Texas Early Notification Tool
- Issue Reports
 - Land use compatibility and legislative considerations
 - Candidate species review
 - Land use change projections
- Additional web tool(s) to illustrate topics discussed in the issue reports

This report addresses land use compatibility and legislative considerations. Information was gathered from a variety of existing documents, primarily existing Joint Land Use Studies/
Compatible Use Plans and discussions with military and state/local officials.

B. MILITARY ASSETS IN TEXAS

Texas has more than 227,000 uniformed and Department of Defense civilian personnel at fifteen military installations around the state and the headquarters of Army Futures Command. In addition to installations, military assets include radars, airspace and operating areas. The following describes the military assets in Texas.

1. Military Installations

Texas installations are comprised of major military installations and auxiliary/outlying fields that encompass almost 600 square miles with boundary perimeter totaling more than 540 miles. Many military training flights and operations also occur at commercial and general aviation airports throughout the state of Texas, e.g. Corpus Christi International Airport.

2. Radars

There are radars at most of the installations, particularly those with airfields. In addition, there are other radars that aren't associated with an installation (Figure 1). Air traffic control radars are designated Airport Surveillance Radars (ASR) and air defense radars are designated Long Range Radars (LRR).

There is also a unique type of radar that works by refracting radar signals off the ionosphere, where they bounce to the ground and back up again to spot aircraft at any altitude or boats on the water. It's called the Relocatable Over the Horizon Radar (ROTHR) and is a critical national security asset. As stated by the U.S. Navy, the ROTHR mission is to provide wide-area air and sea surveillance to military and law enforcement agencies. Texas has two ROTHRs (transmitter and receiver) in the southern region of the state, one located in McMullen County and the other in Jim Wells County.

3. Airspace

There are large expanses of airspace set aside for military training, testing, and operations. Although there are other types of military airspace, this report addresses two primary categories: Special Use Airspace (SUA) and Military Training Routes (MTRs). These areas are important because they represent the only airspace where many types of critical military training and testing can be conducted. The vertical limits of SUA and MTRs are measured by designated altitude floors and ceilings expressed as flight levels or as feet above ground level (AGL) and mean sea level (MSL). Low-altitude flying training provides this realism. Pilots conduct numerous hours of realistic training to become skilled at low-altitude flight; and then must maintain flight hours to remain proficient.

a) Special Use Airspace

Special Use Airspace is an area designated for operations of a nature such that limitations may be imposed on aircraft not participating in those operations (Figure 2). There are seven types of SUA as follows:

- 1. An Alert area is an airspace wherein a high volume of pilot training activities or an unusual type of aerial activity is conducted, neither of which is hazardous to aircraft.
- 2. Military Operations Area (MOA) is airspace established outside of Class A airspace to separate or segregate certain non-hazardous military activities from Instrument Flight Rules (IFR) traffic and to identify for Visual Flight Rules (VFR) traffic where these activities are conducted. Examples of activities conducted in MOAs include, but are not limited to: air combat tactics, air intercepts, aerobatics, formation training, and low-altitude tactics.

FIGURE 1: TEXAS MILITARY INSTALLATIONS, AIR TRAFFIC CONTROL RADARS AND LONG RANGE RADARS, 2019.

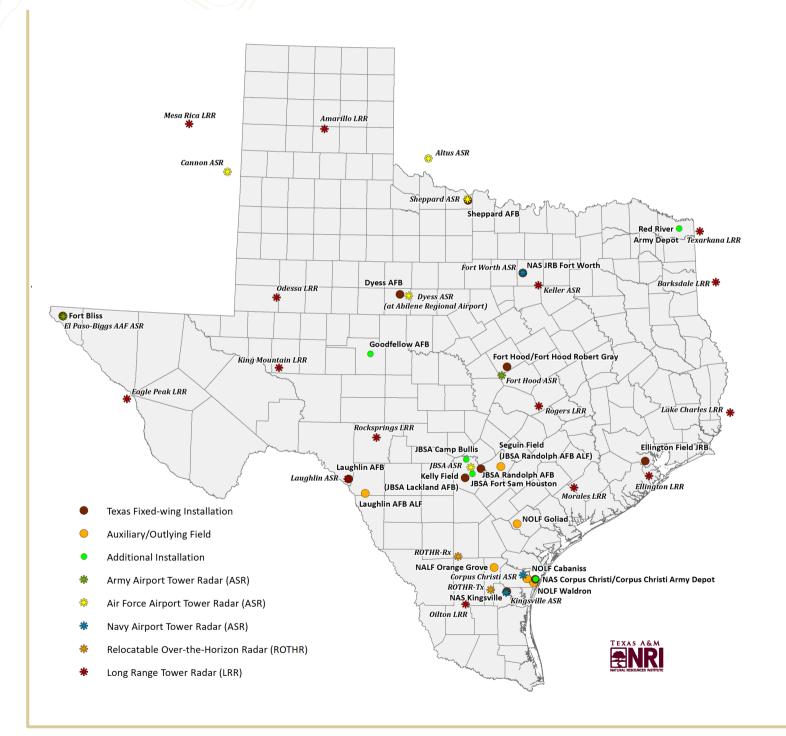
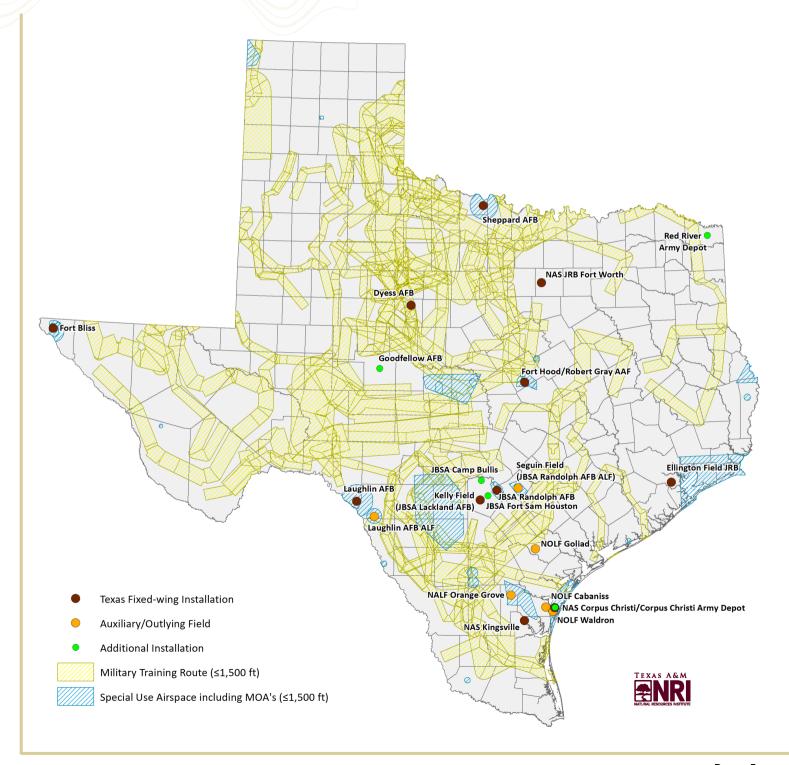


FIGURE 2: SPECIAL USE AIRSPACE (INCLUDES RESTRICTED AIRSPACE AND MILITARY OPERATIONS AREAS) AND MILITARY TRAINING ROUTES IN TEXAS, 2019.



B. MILITARY ASSETS IN TEXAS CONT.

- a) Special Use Airspace Cont.
- **3.** A Prohibited area is airspace established under 14 C.F.R. part 73 provisions, within which no person may operate an aircraft without permission of the using agency. Prohibited areas are established when necessary to prohibit flight over an area on the surface in the interest of national security and welfare. They normally extend from the surface upward to a specified altitude, with a "continuous" time of designation.
- **4.** A Restricted area is airspace established under 14 C.F.R. part 73 provisions, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use and IFR/VFR operations in the area may be authorized by the controlling Air Traffic Control (ATC) facility when it is not being utilized by the using agency.
- **5.** A Warning area is airspace extending from 3 nautical miles (nm) outward from the coast of the United States, designated to contain activity that may be hazardous to nonparticipating aircraft.
- **6.** A National Security Area (NSA) consists of airspace established at locations where there is a requirement for increased security of ground facilities.
- **7.** A Controlled Firing Area contains activities that, if not conducted in a controlled environment, could be hazardous to nonparticipating aircraft.

b) Military Training Routes

Military Training Routes are generally established below 10,000 feet MSL for operations at speeds in excess of 250 knots. There are three types of MTRs as follows:

- 1. Instrument Route (IR): Operations on these routes are conducted in accordance with IFR regardless of weather.
- **2.** Slow Route (SR): Operations on these routes are conducted at less than 250 knots and below 1,500 feet AGL.
- **3.** Visual Route (VR): Operations on these routes are conducted in accordance with VFR except flight visibility must be 5 statute miles or more; and flights must not be conducted below a ceiling of less than 3,000 feet AGL.

Since this effort is focused on land use compatibility, the primary concern is low-level SUA and MTRs, i.e. with lower altitudes, or floors, of 1,500 feet AGL.

4. Additional Operating Areas

The military also operates on or above other areas and has instrumentation located off installations including, but not limited to the following (Figure 3):

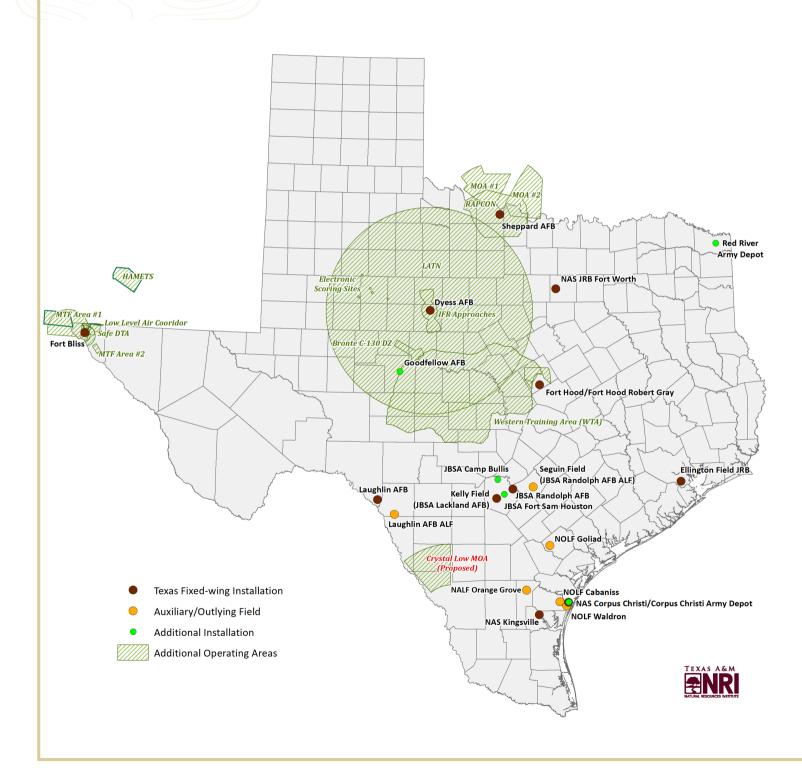
- 1. Dyess Air Force Base (AFB) Bronte C-130 Drop Zone: used to practice air drops in isolated/low light areas, similar to those in theater.
- **2.** Snyder Electronic Scoring Site (ESS) at Snyder Airport (Winston Field): replicates electronic threats that aircrews see in theater.
- **3.** Dyess AFB Remote Threat Emitter sites: send electronic signals to aircraft to simulate enemy weapons system threats.
- **4.** Dyess AFB Low Altitude Tactical Navigation (LATN) area: used for low-level flight training.

B. MILITARY ASSETS IN TEXAS CONT.

- 4. Additional Operating Areas Cont.
 - **5.** Sheppard AFB Radar Approach Control (RAPCON) airspace: approach control airspace for Sheppard AFB, Kickapoo Downtown Airport and Wichita Valley Airport.
 - **6.** Fort Bliss Maintenance Test Flight (MTF) areas: used to separate helicopters undergoing maintenance testing from busy air traffic.
 - **7.** Fort Bliss High Altitude Mountainous Environmental Training Site (HAMETS): used for training helicopter pilots and crews for high-altitude missions.
 - **8.** Fort Hood Western Training Area (WTA): used for individual aviator and unit collective training.
 - **9.** Proposed Crystal Low MOA: expansion of existing airspace to effectively meet the needs of evolving mission and technological advancements.



FIGURE 3: ADDITIONAL MILITARY OPERATING AREAS IN TEXAS, 2019.



C. COMPATIBILITY CHALLENGES¹

Compatibility challenges can be anthropogenic or natural. Anthropogenic issues originate from the civilian community that can impact military readiness and/or issues generated from military activities that can impact a community's development patterns and quality of life. Natural issues include those related to flora and fauna, air and water, etc. The following describes the primary challenges to military readiness in Texas.

1. Sensitive Land Uses

Sensitive land uses may include residential housing, schools, nursing homes, retirement communities, health care facilities, and others. The most common sensitivity relative to military activities are concerns about noise and safety in the vicinity of installations, ranges, airfields, SUA, and MTRs. As such land uses become more prevalent in a high-noise area and public complaints about military noise sources increase, impacts to military operations and readiness may include the creation of avoidance areas, prohibition of training events, restricted flight altitudes/airspeeds/timing, and suspensions or delays in conducting testing or training events.

2. Vertical Obstructions (Height of Structures)

The height of buildings and other structures may encroach into the navigable airspace used by military operations (airfield surfaces, SUAs, MTRs, radar operations), presenting a safety hazard to both the public and military personnel and potentially impacting military readiness. Designated airspaces defined by SUAs and MTRs are intended to give pilots safe, navigable airspace to conduct training while limiting potential harm to themselves or those on the ground. Tall structures limit the area in which military pilots can fly at low-levels, impacting their ability to train in realistic environments.

3. Light and Glare

Light sources from commercial, industrial, and residential uses at night can cause excessive glare and illumination, which impacts the use of military night vision devices, nighttime aircraft operations and other light sensitive activities. Conversely, nighttime military operations may disturb the community. Voluntary restrictions on military operations at night may foster better community relations, but they pose especially critical limits on essential military testing and training.

4. Noise

The central issue of noise is the impact, or perceived impact, on people, animals (wild and domestic), structures, and land use. Exterior noise can have a significant impact on human activity, health, and safety. The magnitude of the noise problem, resulting complaints, pressure to modify or suspend operations, and threats of litigation are directly related to the degree to which there are people, wildlife, and noise–sensitive land uses in the vicinity of military installations, ranges, airfields, SUAs, and MTRs. Impacts to operations may include the creation of avoidance areas, prohibition of training events, restricted flight altitudes/ airspeeds/ timing, and suspensions or delays in conducting testing and training events.

5. Alternative Energy Development

Renewable energy is a national imperative as well as a national security issue. However, renewable energy has the potential to negatively impact critical test and training missions.

Renewable energy comes in many forms including wind, solar, geothermal, hydrologic, and biomass.

¹ The description of Compatibility Challenges is based on the author's personal experience and knowledge and several reports and documents, which he either prepared or contributed to their preparation.

C. COMPATIBILITY CHALLENGES CONT.

5. Alternative Energy Development Cont.

Some forms of renewable energy have no mission impacts, but others have major impacts depending on location. Wind energy is the biggest alternative energy challenge in Texas, which leads the nation in wind generating capacity. The NRI Phase I effort addressed the challenges associated with wind energy development and the reader should refer to that report for more information.² The impacts of solar facilities are typically insignificant unless close to an airfield, where glint/glare could cause unwanted visual impacts to pilots from flash blindness to retinal burn. All renewable energy plants require transmission lines, which can limit the military's ability to fly at low altitude in those areas, create electromagnetic interference, and limit buffer zones.

6. Threatened and Endangered Species

Development near military installations or operating areas can cause the natural areas being managed by the military to become the last refuge for wildlife and native vegetation. The diminishing quantity and quality of habitat in a developing area increases the value of the habitat on the military lands. As development continues, regulations designed to protect species and habitat can reduce the military value of the installation, range, or special use airspace by limiting the types of permissible activities in terms of composition, magnitude, or timing. One of the other reports that is part of this effort is identifying species that are most likely to be listed as endangered in the next five years, and would then require the base to manage the species more intentionally.

7. Water Quality

Discharge permit requirements and prohibited or restricted access to wetlands or their buffer zones

can restrict existing mission training, preclude or restrict the integration of new technology and weapons systems into existing missions and training, or prevent the future growth and execution of new missions in amphibious, riverine, estuarine, and other salt and fresh water areas.

8. Air Quality

As a federal agency, the military is required to conform to the Clean Air Act (CAA). The U.S. Environmental Protection Agency (EPA) divided the country into geographical regions known as Air Quality Control Regions (AQCRs) to evaluate compliance with the National Ambient Air Quality Standards (NAAQS). The EPA has delegated enforcement of those standards to the Texas Commission of Environmental Quality (TCEQ). Air quality issues, such as dust and exhaust generated from testing and training operations, can impact adjacent communities. When these air impacts are generated by operational, training, and testing missions in non-attainment areas, conformance with the State Implementation Plan (SIP) can restrict existing mission requirements or preclude the execution of new missions or the deployment and use of new weapon platforms.

9. Frequency Spectrum Impedance and Interference

In carrying out readiness activities, the military relies on a range of frequencies for communications and support systems. Public uses also rely on a range of frequencies to support daily life. As the use of the frequency spectrum increases (such as the rapid increase in cellular phone technology) and as development expands near military installations and operating areas, the issue of frequency spectrum impedance, interference, and competition increases.

² Coordination of Wind Energy and Military Operations in Texas, Texas A&M Natural Resources Institute, November 2019. https://tent.nri.tamu.edu/static-files/Wind-Energy-and-Military-Activities-in-Texas.pdf

C. COMPATIBILITY CHALLENGES CONT.

9. Frequency Spectrum Impedance and Interference Cont.

Key issues to consider relative to frequency spectrum impedance include the construction of buildings or other facilities that block or impede the transmission of signals from antennas, satellite dishes, or other transmission/reception devices affected by line-ofsight requirements. Interference can result from a number of factors, including: new transmissions using a frequency that is near an existing frequency, moving an antenna transmitting on a similar frequency to a closer location, increasing the power of a similar transmission signal, use of poorly adjusted transmission devices that transmit outside their assigned frequency, or production of an electromagnetic signal that interferes with a signal transmission. As the potential for residential and commercial encroachment increases, so does the risk of increased radio frequency (RF) emitters and receivers that create Electromagnetic Interference (EMI) problems between military systems and public or commercial systems. For example, some low power consumer devices, such as remote controls, cordless phones, garage door openers, and baby monitors, utilize frequencies assigned to the military. These low power, short range systems operate under rules set out in Part 15 of the Federal Communications Commission (FCC). Given their low power output, these are not supposed to impact, or be impacted by, other devices in the assigned frequency ranges. But, as military and community uses have come in closer proximity, conflicts sometimes occur.



II. METHODOLOGY

A. DATA COLLECTION AND ANALYSIS

Information was gathered from a variety of existing documents, and discussions with military and state/local officials. Initially, NRI reviewed existing Joint Land Use Studies (JLUS)/ Compatible Use Plans (CUP) completed in Texas (Appendix A). Previously called JLUS and now CUP, these are cooperative planning efforts conducted as a joint venture between active military installations, surrounding jurisdictions, state and federal agencies, and other affected stakeholders to address compatibility around military installations. NRI developed a matrix of the issues that warranted a statewide approach, (Appendix B), and shared it with military and state/local officials to obtain their input. NRI made every effort to avoid duplication of previous efforts and burdening installation and communities with unnecessary requests for information.

After the initial review, NRI collected opensource information related to each issue to assess existing policies and regulations for land use compatibility planning, and reached out to subject matter experts whenever necessary. Members of the recently formed state-wide group of community and military representatives throughout the state involved in mission compatibly issues provided significant input. NRI then analyzed each issue, and modified several.



III. METHODOLOGY

B. RECOMMENDATION DEVELOPMENT

NRI developed recommendations to address those issues that warranted action that could enhance the military value statewide. The comprehensive recommendations, e.g., state-level policy and modifications to existing codes, to better protect Texas' military mission and, in some cases provide greater economic benefit. The goal of the report is to provide brief, important, and useful specifics about the opportunities and threats at the state-level.



III. ANALYSIS AND FINDINGS

A. LEGISLATION

The state of Texas has a long history of support for the military mission and there are several pieces of existing legislation that address compatibility issues. Most are effective but some could be improved and there are gaps that could be filled.

1. Real Estate Disclosure

House Bill 890, passed in 2017, amended Section 5.008(b) of the Texas Property Code to include disclosure that a property may be located near a military installation when that property is conveyed. The code reads as follows:

This property may be located near a military installation and may be affected by high noise or air installation compatible use zones or other operations. Information relating to high noise and compatible use zones is available in the most recent Air Installation Compatible Use Zone Study or Joint Land Use Study prepared for the military installation and may be accessed on the Internet website of the military installation and of the county and any municipality in which the military installation is located.

While disclosure is beneficial, Section 5 of the Property Code applies only to resale of existing homes. It does not apply to sales of new construction or rentals of houses or apartments, however, expanding the disclosure requirement to those transactions would expand the awareness.

2. Military Sustainability Commissions

Texas Local Government Code 397A calls for the establishment of Military Sustainability Commissions in certain counties and municipalities in the vicinity of military installations. It has never been implemented anywhere in eleven years since it became law.

The Texas Mayors of Military Communities (TMMC), a coalition of 16 Texas defense communities created to advocate on behalf of Texas' military, has recommended elimination of the Commissions. The following is a quote from a TMMC letter to representatives Donna Campbell and Dan Flynn.³

The TMMC recommends considering the elimination of Regional Military Sustainability Commissions, which have proven to be an ineffective tool in assisting Texas military installations and their host defense communities with protecting the missions, operations, readiness, and resiliency of military installations. The TMMC encourages both committees, with military and community participation, to identify new and enhanced strategies to replace the Commissions' with land/air use limitations or restrictions, regulatory strategies, or other tools to preserve military use areas inside or outside municipal boundaries.

The letter describes other concerns with this statute to support the recommendation.

³ Texas Mayors of Military Communities letter dated February 13, 2020.

3. Alternative Energy Development/Tall Structures

Tall structures have the potential to impact the military mission in several ways, primarily by limiting areas where the military needs to fly at low altitudes, e.g., near airfields or under low-level MTRs or SUA.

In addition, wind turbines can adversely affect air traffic control and weather radars. NRI published a report⁴ in 2019 that describes in detail the potential impacts of wind turbines. As part of the same project, NRI developed the Texas Early Notification Tool (TENT)⁵, a publicly available web-based tool that enables wind industry and other stakeholders to assess potential project locations in light of military mission compatibility and provide them with military points of contact to engage early in the planning process. Another type of alternative energy, solar, creates glint and glare, which could temporarily blind pilots, although normally only if the facility is located close to an airfield. The electromagnetic interference from cell towers can affect various types of military systems. There are several federal and state notification requirements a developer must follow prior to construction of tall structures

Federal

In accordance with 14 CFR Part 77.9, anyone proposing construction or alteration structures exceeding 200 feet, regardless of location, or in the vicinity of an airport, must file notice with the Federal Aviation Administration (FAA) at least 45 days prior to beginning construction. This is known as the Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) process. Upon completion of the process, the FAA will issue a Determination of Hazard to Air Navigation when the study concludes that the

proposed construction or alteration will exceed an obstruction standard and would have a substantial aeronautical impact, or a Determination of No Hazard to Air Navigation if it would not.

In January 2011, Congress directed the establishment of what is now called DoD's Military Aviation and Installation Assurance Siting Clearinghouse in Section 358 of the Ike Skelton National Defense Authorization Act (NDAA).

This legislation focused DoD's official engagement within the FAA OE/AAA process and set clear guidelines for when and how DoD may object to energy project proposals, including transmission. The legislation was codified in 32 CFR Part 211.32 Subsequent amendments strengthened the position of DoD and the states vis-à-vis developers. DoD reviews all OE/AAA applications for compatibility with the military mission. If DoD determines a structure is incompatible, FAA can issue a Determination of Hazard.

In addition to the formal review under the OE/AAA process, the Clearinghouse conducts informal reviews of proposed projects received from another Federal agency, State government, Indian tribal government, local government, landowner, or developer of an energy project. The Fiscal Year 2018 NDAA added a requirement to notify the Governor of the state a project is proposed to be located in that the project will have an adverse impact to military operations and readiness.

The Clearinghouse also has the authority to accept voluntary contributions by project proponents for mitigation of adverse effects on the military mission and, in 2017, that process was made easier.

⁴ Coordination of Wind Energy and Military Operations in Texas, Texas A&M Natural Resources Institute, November 2019.

⁵ https://tent.nri.tamu.edu/

3. Alternative Energy Development/Tall Structures Cont.

State

Texas Senate Bill (SB) 277, which took effect on September 1, 2017, established a prohibition on abatement of property taxes associated with wind turbines built within 25 nm of a military aviation facility. It states that an owner or lessee of a parcel of real property in that zone may not receive an exemption from taxation of any portion of the value of the parcel of real property or of tangible personal property located on the parcel of real property under a tax abatement agreement under Chapter 312 of the tax code that is entered into on or after September 1, 2017, if, on or after that date, a windpowered energy device is installed or constructed on the same parcel of real property at a location that is within 25 nm of the boundaries of a military aviation facility located in this state. The prohibition does not apply if the wind-powered energy device is installed or constructed as part of an expansion or repowering of an existing project.

Electric Reliability Council of Texas and Public Utility Commission of Texas

In 2017, the Office of the Governor pursued rule changes with Electric Reliability Council of Texas (ERCOT) and the Public Utility Commission of Texas (PUC). The new rules established that, before starting a study about a project tying into the electric grid, the company would have to prove contact had been made with the DoD's Military Aviation and Installation Assurance Siting Clearinghouse. The purpose is to ensure contact and discussion of compatibility before a project is approved.

ERCOT is subject to the oversight of the PUC. The PUC established similar rules to protect Texas military installations from missed opportunities for mitigation.

More specifically, the PUC rule change notes that, prior to transmission line approval, the requesting company has to contact the DoD's Military Aviation and Installation Assurance Siting Clearinghouse and provide proof of such contact.

The notifications described above are important but they don't apply to all tall structures and no federal or state agency has the authority to stop the construction of an alternative energy facility or tall structure.

The FAA can issue a Determination of Hazard but that does not stop construction. It can impact a developer's ability to get hazard insurance but self-insurance can be an option. The DoD can formally object but that doesn't preclude construction. In some cases, local jurisdictions have the authority to approve/disapprove these projects.

Several JLUS efforts in Texas, including ones associated with Joint Base San Antonio, Sheppard AFB, NAS Kingsville, Laughlin AFB, and JBSA Camp Bullis, include recommendations related to FAA Part 77 compliance for tall structures and alternative energy facilities. The recommendation in the JBSA-Randolph JLUS is the most far reaching. It states:

State should adopt Part 77 and any amendments to the law to ensure Part 77 compliance for local jurisdictions. For all new, redeveloped or rehabilitated transmission, communications, energy generation structures (including electrical transmission towers/lines, cellular and radio transmission towers, wind generation towers, and other similar uses) or any type of structures that have a proposed height of 99' or higher, ensure compliance with FAR Part 77 height limit

3. Alternative Energy Development/Tall Structures Cont. (State)

Recommendation in the JBSA-Randolph JLUS cont.

requirements to minimize vertical obstructions and congested airspace. In addition, ensure the developments and structures are compatible with, and do not pose a safety hazard to, air operations in the region.

House Bill (HB) 1210 was introduced in the Texas legislature and, if passed, would require notice to military bases of proposed meteorological towers (MET towers) within 50 nm of military bases, training routes or radars. Notification of proposed MET towers is important as they are precursors to wind turbines and early notification increases the military's ability to influence a project before a developer invests significant time and money. Electrical transmission lines are also an issue because their length/wires create much more of an obstruction issue than single towers, and they are usually under 200 ft. Currently, the DoD Clearinghouse process receives all obstructions to navigation filing through FAA over 200 ft in height and, as drafted, the bill would result in thousands of additional notices statewide, when it really only needs to address structures under 200 feet in height. FAA has a voluntary system for filing for obstructions under 200 ft, but few use it. A narrowed bill focusing on making the FAA voluntary system mandatory for MET towers and transmission lines under 200 ft in height and providing a mandatory notice and comment before leases and other real estate interests are entered to would enhance communications between the military and project proponents.

Related Legislation in Other States

Several states have enacted legislation and policies that address permitting of energy projects.

The report Wind Energy Permitting in North Carolina and Six Other States A Comparative Analysis⁶, prepared by the NC Clean Energy Technology Center, the North Carolina Coastal Resources Law, Planning and Policy Center, and North Carolina Sea Grant, provides an excellent summary of those laws and policies in seven states

4. Local Land Use Authority

There are recommendations in several JLUSs related to local land use authority changes that would help protect the military mission as follows:

- Grant authority to create multi-jurisdictional boards (Joint Zoning Boards) that would be responsible for the regulatory authority within a Military Influence Overlay District (MIOD) and other military mission footprints identified in air installation compatible use zone (AICUZ) or JLUS.
- Grant tax increment financing or tax investment funding authority to counties.
- Grant counties regulatory authority for military installation protection.
- Actively pursue state legislation that enables local governments to implement targeted land use controls on unincorporated land in specified proximity to military installations and training areas.

In addition, a bill (HB 623) allowing Val Verde County Commissioners some authority on siting of wind farms was introduced. A related bill, SB 595, would have allow the commissioners court of a county adjacent to an international border, in collaboration with the military aviation facility located in the county to: designate one or more appropriate locations for a person to install a wind-powered energy device in the unincorporated area

⁶ https://ncseagrant.ncsu.edu/ncseagrant_docs/products/2010s/NC_Wind_Analysis_Final.pdf

4. Local Land Use Authority Cont.

of the county, and prohibit the installation of a windpowered energy device in the county in an area other than a designated area.

5. School District Military Consultation

Schools in the vicinity of some installations can be considered as incompatible with DoD's operations primarily due to noise and the potential for aircraft accidents, but there is no requirement for school districts to coordinate development with the military. The Texas Military Commanders Council (TCC) has recommended that school districts be required to coordinate development in compatible use areas to help ensure new schools aren't built in areas in which they would be subject to high noise or accident potential.

6. Critical Infrastructure/Unmanned Aerial Vehicles

The military has concerns with unmanned aerial vehicles, i.e., drones, operating near or over installations. They could present a hazard to aircraft taking off and landing. There is also a security concern. Government Code Chapter 423 makes it unlawful to capture images of certain types of facilities including those designated as "critical infrastructure facilities," and adding installations would address the military concerns. A bill (SB 149) that adds installations has passed.

7. Potential Additional Actions

There are additional state policy and legislative actions that would facilitate communication, planning, coordination, and data sharing mechanisms in support of the military including:

- Providing model comprehensive plan policies and language regarding military compatibility for use in local Comprehensive Plans
- Promoting inclusion of cost-benefit analysis of military impacts in state-wide planning processes

Appendix C is a list of legislation related to military sustainability that has been passed in other states compiled, for the most part, by the National Conference of State Legislatures.⁷ In some cases, Texas has similar legislation but the list could provide ideas for new legislation.

⁷ https://www.ncsl.org/research/military-and-veterans-affairs/military-veterans-affairs-state-leg-database.aspx

B. READINESS AND ENVIRONMENTAL PROTECTION INTEGRATION / SENTINEL LANDSCAPES

The Readiness and Environmental Protection Integration (REPI) Program is a key tool for combating encroachment that can limit or restrict military training, testing, and operations. The REPI Program preserves and enhances these military missions by helping remove or avoid land-use conflicts near installations, ranges, and their associated facilities, range infrastructure, and airspace, as well as addressing regulatory restrictions that inhibit military activities.

A key component of the REPI Program is the use of encroachment management partnerships, referred to as REPI projects, among the Military Services, private conservation groups, and state and local governments, authorized by Congress at 10 U.S.C. § 2684a. Congress expanded the 2684a authority in the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2019 (Public Law 115-232) to include agreements that enhance or improve military installation resilience. The FY 2021 NDAA made it clear that maintaining or improving military installation resilience" is a permissible "stand alone" purpose for an agreement under 2684a, and not simply as a secondary purpose of an agreement under paragraph (a)(2) to "eliminate or relieve current or anticipated environmental restrictions." It also amended subsection (h) to expand the authority for partners under an agreement under 2684a or under section 103A of the Sikes Act (16 USC 670c-1) to, with regard to lands and waters within the scope of such an agreement, use funds received from DoD under either statute to "satisfy any matching funds or cost-sharing requirement of any conservation or resilience program of any federal agency." Previously, this "DoD funds as match" authority was limited to conservation programs administered by U.S. Department of Agriculture (USDA) or U.S. Department of the Interior (DOI).

Note that the use of the phrase "any federal agency" rather than "any other federal agency" was used specifically to ensure that this authority extended to the resilience programs of the Corps of Engineers, since the Corps is part of DoD.

The FY 2021 also made technical changes regarding "eligible entities." These changes clarify that easements acquired from willing sellers by partners (i.e., "eligible entities") using REPI funds may be held by another eligible entity, even if that other eligible entity is not a formal partner to the relevant REPI agreement. Each of the services may implement the legislation differently.

These win-win partnerships share the cost of acquisition of easements or other interests in land from willing sellers to preserve land uses that are compatible with military missions and natural habitats near installations and ranges that help sustain critical, military capabilities.

REPI projects contribute to the longevity of working farms, forests, and ranchlands; increase recreational and open space opportunities for nearby residents and military families; and protect against military relocations that would adversely affect the local economy.⁸

The REPI program has protected 19,432 acres in Texas through fiscal year 2019 and expended almost \$22 million with an additional \$7.5 million from the individual services plus over \$58 million in partner contributions. Texas installations that are participating in the REPI program include Camp Swift, Fort Bliss, Fort Hood, and Joint Base San Antonio - Camp Bullis, Lackland and Randolph.

⁸ www.repiprimers.org

B. REPI/SENTINEL LANDSCAPES CONT.

Sentinel Landscapes is an outgrowth of the REPI program that includes the USDA, DoD, and DOI. They define sentinel landscapes as areas in which natural and working lands are well suited to protect defense facilities from land use that is incompatible with the military's mission.

Once the Federal Coordinating Committee designates a location as a sentinel landscape, USDA, DoD, and DOI work with local partners to equip private landowners with the resources necessary to carry out sustainable management practices on their properties. Sustainable management practices such as farming, ranching, and forestry not only offer economic and ecological benefits but also protect defense facilities from incompatible development that can constrain the military's ability to carry out training and testing activities.

Sentinel landscape partners accomplish their objective by connecting private landowners with voluntary state and federal assistance programs that provide tax reductions, agricultural loans, disaster relief, educational opportunities, technical aid, and funding for conservation easements. By aligning these programs in sentinel landscapes, government agencies use taxpayer dollars more efficiently and accomplish more on the ground with fewer resources.

Over the past seven years, sentinel landscape partners have worked with private landowners to permanently protect over 467,000 acres of land and implement sustainable management practices on an additional 2.3 million acres around high-value military testing and training areas. These efforts have preserved wildlife habitat, bolstered agricultural and forestry production, and reduced land-use conflicts around military bases.⁹

There are currently no designated sentinel landscapes in Texas. However, a consortium of partner organizations was created to pursue and achieve Sentinel Landscape Designation at the state and federal levels around JBSA Camp Bullis. The Alamo Area Council of Governments (AACOG), with assistance from its partners, is planning to apply for federal designation in 2021. It is also seeking legislative sponsors for a state designation. Once achieved, the strategy will shift to focus on program collaboration within a designated landscape with all partners to maximize efforts.¹⁰

⁹ https://sentinellandscapes.org/landscapes

¹⁰ AACOG Sentinel Landscape Camp Bullis Information Paper 12/01/2020.

C. GIS/MAPPING

Several JLUSs contain recommendations related to creating maps and geographical information systems (GIS) that include areas related to military operations available to local and state officials, developers, and the public. As part of the JBSA Regional Compatibility Use Plan (RCUP), Regional Compatibility Maps that address preliminary regional compatibility assessment from a variety of perspectives have been prepared and made available on a public website. 11 The maps are being updated as the RCUP progresses.

The TENT, developed as part of NRI's Phase I effort, is an interactive, publicly accessible mapping website that includes layers for all the military areas in Texas described in Section II.B. above. However, it does not include local and regional compatibility assessments like the compatibility maps described above.

The REPI program sponsors a nationwide, publicly accessible mapping website¹² that includes a variety of compatibility and environmental layers including installations and ranges, MTRs, SUA, and AICUZ Clear Zones and Accident Potential Zones. It also includes REPI projects and Sentinel Landscapes. Leveraging one or more of the above could achieve the goal in the JLUS recommendations.

House Bill 1852 was passed to preserve the dark sky environment for military operations. The Bill grants each county "located immediately adjacent to the installation" the authority to regulate the use of lighting to mitigate interference with training activities, operations, or research within five miles of a military installation. Under this legislation, the county is provided with the authority to dictate the type of lighting allowed to control glare, setting shielding requirements and time of usage. However, there are counties that are close to installations, but not immediately adjacent, e.g. Comal County.

Some jurisdictions have orders and ordinances that apply to the fixtures installed during construction of newly platted subdivisions orders. However, they are not housed in the subdivision ordinances, and are not applied retroactively. They are triggered when an existing fixture is damaged and requires a certain amount of work to replace or if an entirely new fixture replaces an old fixture.

Amending HB 1852 to include all counties within five miles of a military installation would address the first issue. Developing a lighting retrofit program for businesses, agencies and homeowners would address the second one.

D. LIGHTING

As addressed earlier, light and glare have the potential to impact the use of military night vision devices, nighttime aircraft operations and other light sensitive military activities. Several JLUSs identify this as a concern and have recommendations to address it.

12 https://repimap.org/

¹¹ https://jbsacup.com/index.php/project-documents/regional-compatibility-maps

E. LAND USE UNDER LOW-LEVEL MILITARY TRAINING ROUTES AND SPECIAL USE AIRSPACE

At least one JLUS recommends that low-level military flight routes be reviewed for incompatible land uses. As noted in the introduction to this report, one portion of this overall project will analyze projected land use changes (i.e., development) throughout Texas over the next 30 years. This analysis takes into account historic growth trends, among other socioeconomic factors, to project where and what type of development will take place. Utilizing this information, NRI has created an interactive online tool and report that incorporates other spatial information, to include military training routes, special use airspace, military operating areas and tall obstructions. Through the integration of various data layers, users, such as military airspace managers and aviators, will be able to explore specific route segments to identify where development is likely to compromise airspace use. This information is valuable in light of planning community outreach and engagement efforts to avoid potential land use conflict, in addition to other mission planning requirements.

IV. RECOMMENDATIONS

The following recommendations, if implemented by the state, would promote compatible land use and resource planning by resolving or mitigating existing and potential incompatibility issues.

A. LEGISLATION

The following legislative actions include some that have already been proposed and are being considered as well as others that haven't been.

1. Real Estate Disclosure

Amend the Government Code to sales of new construction or rentals of houses or apartments.

2. Military Sustainability Commissions

Amend Texas Local Government Code 397A to eliminate the requirement to establish Regional Military Sustainability Commissions, and identify new and enhanced strategies to replace the Commissions as recommended by the TMMC.

Alternative Energy Development/ Structures

Require compliance with FAA Part 77 by state agencies and local jurisdictions. Specifically, require that any project for which an OE/AAA evaluation is required, obtain a No Hazard determination from the FAA.

Modify the introduced HB 1210 to make the existing FAA voluntary system mandatory for MET towers and transmission lines under 200 ft in height and provide a mandatory notice and comment before leases and other real estate interests are executed. This could be added to Subchapter C and Section 181 of the Texas Utility Code.

4. Local Land Use Authority

Promote changes to local land use authority that would help protect the military mission as follows:

- Grant authority to create multi-jurisdictional boards (Joint Zoning Boards) that would be responsible for the regulatory authority within a MIOD and other military mission footprints identified in AICUZ or JLUS.
- Grant tax increment financing or tax investment funding authority to counties.
- Grant counties regulatory authority for military installation protection.
- Actively pursue state legislation that enables local governments to implement targeted land use controls on unincorporated land in specified proximity to military installations and training areas.
- Modify HB 623 to include all counties, not just Val Verde County.

5. School District Military Consultation

Promote legislation that would require school districts to coordinate development with the military.

Critical Infrastructure/Unmanned Aerial Vehicles

No recommendations.

Tall

7. Potential Additional Actions

Consider legislation/policy that would provide model comprehensive plan policies and language regarding military compatibility for use in local Comprehensive Plans and promote inclusion of cost-benefit analysis of military impacts in statewide planning processes.

V. RECOMMENDATIONS

A. LEGISLATION CONT.

8. Potential Landowner Incentives

Instead of, or in addition to regulatory land use control, or other restrictive approaches, providing incentives to land owners is another approach that should be considered. Examples include changes to the Texas Wildlife Property Tax Exemption, some type of State tax credit associated with agreements to preserve compatible land use, and incentives available through Military Influence Overlay Districts, in addition to regulatory approaches.

B. REPI/SENTINEL LANDSCAPES

Promote state legislation that would designate the area that has been identified around JBSA Camp Bullis as a Sentinel Landscape. Support legislation for other Sentinel Landscapes that are identified in the future.

C. GIS/MAPPING

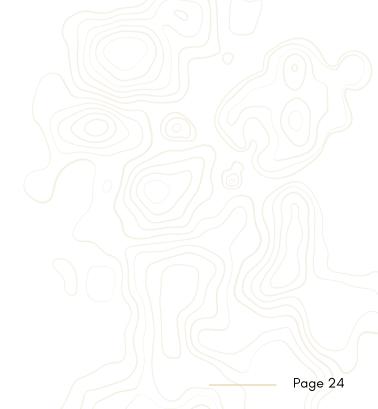
Identify funding to create a statewide GIS tool that would allow state officials, developers, and the public to access maps and data related to military operations, or modify an existing one. The tool should leverage data that is already available via the other systems described previously.

D. LIGHTING

Amend HB 1852 to include all counties within five miles of a military installation and develop a lighting retrofit program for businesses, agencies and homeowners.

E. LAND USE UNDER LOW-LEVEL MILITARY TRAINING ROUTES AND SPECIAL USE AIRSPACE

Complete development of the interactive online tool that will analyze projected land use changes in the vicinity of military installations, low-level MTRs and SUA, and other training areas, and identity funding for long-term maintenance.



MILITARY LAND USE COMPATIBILITY IN TEXAS

APPENDICES A-C

APPENDIX A.

Texas Joint Land Use Studies/Compatible Use Plans

TEXAS JOINT LAND USE STUDIES/COMPATIBLE USE PLANS

Main Installation	Report Year	URL	
Camp Bullis	2009	http://www.aacog.com/620/Compatible-Use-Program	
Camp Swift	2016	https://www.cityofbastrop.org/upload/page/0108/docs/Camp%20Swift%20Joint%20Land%20Use%20Study%20July%202016b.pdf	
Dyess AFB	2018	https://www.dyess.af.mil/Home/Joint-Land-Use-Study/	
Fort Hood	2016	https://www.forthood-jlus.org/project-documents	
JBSA – Randolph	2015	http://www.aacog.com/620/Compatible-Use-Program	
Lackland AFB	2011	http://www.aacog.com/620/Compatible-Use-Program	
Laughlin AFB	2008	http://dyessjlus.com/images/docs/del_rio_laughlin_afb_jlus.pdf	
NAS Corpus Christi	2014	https://www.cctexas.com/specificplans	
NAS Kingsville	2008	http://dyessjlus.com/images/docs/nas_kingsville_jlus.pdf	
Northern Texas Regional (NAS Fort Worth JRB)	2017	https://www.nctcog.org/nctcg/media/Transportation/DocsMaps/Plan/Military/Joining-Forces_Main-Report_1.pdf	
Sheppard AFB	2014	http://www.wichitafallstx.gov/1638/JLUS-Joint-Land-Use-Study	
Southern NM- El Paso (Fort Bliss)	2015	https://snmepjointlanduse.org/wp- content/uploads/2018/05/snmep_jlus_main_report.pdf	
JBSA	Underway	http://www.aacog.com/620/Compatible-Use-Program	

APPENDIX B.

Statewide JLUS/CUP Issues

STATEWIDE JLUS/CUP ISSUES

Installation	Document	Year	Issues	Actions					
Dyess AFB	JLUS	2018	GIS/Mapping	Develop web-based GIS portal to share GIS data, e.g. military footprints, existing land use, zoning					
			Incompatible Development	Update comprehensive plans for military compatibility					
			Easements	Assess the appropriateness of avigation easements					
			Real Estate Disclosure	Ensure follow on public disclosure activities procedures mandated by HB 890 are understood and implemented.					
			Solar Energy Development	Identify and map locations suitable for solar energy development					
				Develop guidelines for proper siting and use of appropriate solar technologies near airfields, flight corridors, and beneath military airspace that include:					
			Unmanned Aerial	Develop information on usage					
			Systems	Update the Dyess AFB and jurisdiction websites with information on requirements for unmanned aerial systems in the region, including FAA regulations and any local ordinances that may be adopted in the future.					

				•	Develop a Drone Hazard Plan. The plan would identify areas surrounding Dyess AFB and Abilene Regional Airport where unmanned aerial system operations could be detrimental to aircraft operations and illustrate these areas on a Drone Hazard Map.
			Vertical Obstructions	•	Create a cell tower siting awareness program
				•	Develop a "Red, Yellow, Green" Map for vertical obstruction concerns
Camp Swift	JLUS	2016	Alternative Energy Development	•	Develop a "Red, Yellow, Green" map in which the TXNG communicates specific locations where structures that exceed a mutually agreed upon height would be incompatible with frequency interference and helicopter flight routes.
			Lighting	•	Consider developing lighting ordinance for compatible lighting
Fort Hood	JLUS	2016	Alternative Energy Development/Vertical Obstructions	•	Regularly monitor ERCOT's application database for alternative energy project siting, as well as other tall structures, in the Western Training area and areas around Fort Hood.
				•	Develop a standard operating procedure for a regional response to applications that may impact Fort Hood's aviation training mission.

Legislation	exter composity of (ETJ) porti- distareas the a to pr arou auth- jurise such adop	k legislative approval for the nsion of military related patible use regulations into extraterritorial jurisdictions ls) and/or unincorporated ons of counties within a nace of Fort Hood that is onably necessary to ensure ability of local governments comote compatible growth and the installation. Once ority has been granted, dictions that currently lack a authority should consider oting regulations to promote patible growth.
GIS/Mapping	region mon and arou evalu for c	blish and maintain a conal GIS database for itoring land use changes development patterns and Fort Hood and uating land use proposals consistency with regional patible growth goals.
Legislation	strer auth appr Distr encr deve	k legislative action to ngthen local government ority with respect to the roval of Municipal Utility ricts within areas where roachment by civilian elopment around Fort Hood pose compatibility issues.
Real Estate Disclosure	requipote estat	k with the real estate stry to establish a irement for the disclosure of ntial military impacts in real te disclosure forms or at e other appropriate point in real estate transaction ess.

			Lighting	•	Prepare and adopt dark-sky compatible outdoor lighting regulations throughout the region.
Lackland AFB	JLUS	2011	REPI	•	Pursue opportunities to establish buffers on land to the west of the Training Annex
			GIS/Mapping	•	Bexar County to explore opportunities to create a standalone Interactive Mapping System Web Site for the JLUS or modify the existing Appraisal District's property search engine to provide compatibility information
			Lighting	•	Identify geographic area of applicability for light sensitive applications
				•	Prepare data and rationale for requesting establishment of a Military Lighting Overlay District
			Alternative Energy Development/Vertical Obstructions	•	Share data on flight corridors, communication needs and other information to support a regional review
			Sound Attenuation	•	Demonstrate support & need for state-level legislative changes that increase ability of local government to enact sound attenuation requirements in unincorporated areas in proximity to noise generating military activities
			Real Estate Disclosure	•	Explore mandatory disclosure as part of a state-wide modification of Texas Association of Realtors Forms 1506 to include military impact as a disclosure item

NAS Corpus Christi	JLUS	2014	FAA Part 77 Compliance	•	Ensure FAA Part 77 compliance when permitting for tall structures such as cell towers and wind turbines.
				•	The city of Corpus Christi and developer should ensure compliance with the Federal Aviation Administration's Part 77 for height limitations of structures within navigable airspace and/or a military compatibility area
				•	Ensure regulations remind applicants of the FAA requirement to prepare an Obstacle Evaluation (OE).
			Lighting	•	Amend the zoning code to include a lighting ordinance that applies to all properties within the Light Subzone.
				•	Monitor and maintain compliance with FAA Part 77 regulations regarding required Lighting on Cell Towers and/or Wind Turbines
JBSA – Randolph	JLUS	2015	Alternative Energy Development	•	Amend unified development codes and zoning ordinances to establish height limits, and siting for alternative energy development structures.
				•	Educate Utility Companies and Encourage Them to Adopt Non- Reflective Solar Panel Criteria.
				•	Update comprehensive plans to include policies and amend Unified Development Codes (UDCs) and zoning ordinances to require all proposed alternative energy development projects be submitted to the DOD Siting Clearinghouse to

	review each project for mission compatibility.
GIS/Mapping	 Create and maintain a regional portal GIS information clearinghouse for collecting and distributing updated GIS layers / maps related to military operations.
Real Estate Disclosure	 Facilitate legislative initiative to amend property seller's disclosure.
FAA Part 77	State to adopt Part 77 as state law to ensure Federal Aviation Regulation (FAR) Part 77 compliance.
Land Acquisition Grants	State to establish grant matching program to assist jurisdictions to acquire land in the CZs
VFR pop-up air traffic in MOAs	 Randolph Tower (RND) Airspace Manager and 12 FTW Safety Office should continue working with General Aviation groups and the FAA in reducing VFR pop-up traffic transiting Military Operating Areas (MOAS)
Land/Airspace Competition	Work with the FAA to identify and budget for specific NextGen improvements that have a regional benefit including System Wide Information Management (SWIM) program and Automatic Dependent Surveillance – Broadcast (ADS-B) technology.
	Advertise / Educate Mid-Air Collision Avoidance (MACA) Program

								Lighting	•	Conduct lighting study / screening. Bexar County should work with JBSA and the surrounding communities to conduct a lighting study / screening to determine areas where light pollution may adversely impact the base's mission.
			Noise and vibration	•	Adopt statewide building code requirements incorporating sound attenuation measures.					
				•	Assess the viability of the dedication of avigation/noise easements for discretionary development approvals.					
			Vertical obstructions	•	Site new utility lines within existing energy utility corridors / joint utility corridors					
Northern Texas Regional	JLUS	2017	Unmanned Aerial Systems	•	Conduct educational outreach with communities to increase awareness of the security and safety risks associated with UAS operations near airfields and military facilities and offer technical assistance to local law enforcement agencies to identify and prevent unauthorized or unsafe drone use in the community					
			Regional forum	•	Build on existing coordination bodies, such as NAS Fort Worth JRB's RCC and the state TCC, to create a region-wide forum for communication and advocacy of the military missions, installations, and training assets across North Texas					
			Legislation	•	Actively pursue state legislation that enables local governments to implement targeted land use controls on unincorporated land					

				in specified proximity to military installations and training areas				
						REPI	REPI	Explore REPI Program opportunities for military and conservation-based projects within areas around the main base or/and near off-base training areas
			Statewide Compatibility Initiatives	The Joining Forces regional compatibility menu identifies a series of statewide legislative actions to mandate, formalize, standardize, or enable coordination processes and regulatory tools for land use control in unincorporated areas; energy siting; UAS operations; and civilian-military consultation on proposed ordinances, rules, plans or structures. This action bundles support for these initiatives into a coordinated advocacy effort for increased statewide compatibility planning.				
Sheppard AFB	JLUS	2014	Easements	 Pursue acquiring easements on parcels in the clear zones of the runways that do not currently have any. 				
			Legislation	Approach lawmakers about legislation that would increase enforceability for airport zoning regulations and limit incompatible development that could impact military missions in areas around Sheppard AFB.				
			FAA Part 77 Compliance	For all new, redeveloped or rehabilitated structures (including electrical transmission towers/lines, cellular and radio transmission towers, etc.), ensure compliance with FAA Part 77 height limit requirements to				

				minimize vertical obstructions (i.e., buildings, telecommunications facilities, recreational facilities, energy transmission/generation towers, etc.). In addition, ensure the developments and structures are compatible with, and do not pose a safety hazard to, air operations in the region.
NAS Kingsville	JLUS	2008	REPI	Pursue conservation opportunities near the installation utilizing the Navy Encroachment Partnering (EP) Program and the DOD Readiness and Environmental Protection Initiative (REPI) Conservation Buffer Program to identify priority locations for acquisition programs (property purchase, land deed transfer, or easement purchase).
			Statewide Military Base Encroachment Study	Work with state legislators to request a study regarding military base encroachment for the state, with the outcome of legislation. Bexar County developed a letter to illustrate this strategy.
			Real Estate Disclosure	Modify subdivision regulations to require appropriate disclosures to be recorded as part of a property's deed upon sale of land and included as a Plat Note. Disclosure shall notify purchasing party of NAS Kingsville operations and potential compatibility issues.
			Lighting	Review existing Zoning Ordinance and incorporate distinctive light and glare regulations to protect the operational environment near NAS Kingsville. These controls

				should be designed to reduce the amount of light that spills into surrounding areas and impacts regional ambient illumination.
			FAA Part 77 Compliance	Review existing Wireless Telecommunications Facilities regulations (sections 15-6-45 to 15-6-47) and other pertinent components of the Zoning Ordinance to include height limitations for structures based on the development of a regional suitability map. Ensure regulations remind applicants of the FAA requirement to prepare an Obstacle Evaluation (OE).
Laughlin AFB	JLUS	2008	Compatible Development	Identify Priority Locations for Acquisition
				Establish a Voluntary Acquisition Program/Purchase of Development Rights
				Develop and Implement a Conservation Easement Education Program
				Leverage the DOD Encroachment Partnering Program
				Identify Areas for Deed Restrictions
				Develop a Voluntary Deed Restriction Program
			Wildlife Management	Include Laughlin AFB in Wildlife Management Legislation
			Legislation	Develop legislation to grant planning and zoning authority to the JAZBs and/or the counties to regulate land use within the MIAs in order to implement the JLUS.

				Extend the area of planning and zoning authority for the JAZB to include the entire MIA boundary.
			Real Estate Disclosure	Work with State Real Estate Board and local real estate representatives to develop and implement adequate language for inclusion in disclosure notices.
			Lighting	Develop light and glare controls to protect the operational environment near Laughlin AFB. These controls should be designed to reduce the amount of light that spills into surrounding areas and impacts regional ambient illumination.
			FAA Part 77 Compliance	For all structures, ensure compliance with FAA Part 77 requirements when establishing height regulations or restrictions.
Camp Bullis	JLUS	2009	REPI	Identify Critical Areas/Priority Properties for Acquisition that Support Preservation of Military Readiness
				Pursue Conservation Partnering Opportunities Utilizing REPI/ACUB
			Legislation	Grant authority to create a multi- jurisdictional board (Joint Zoning Board) that would be responsible for the regulatory authority within the MIOD
				Authorize and appropriate state funding for a joint land use plan for the MIOD
				Grant tax increment financing (TIF) or tax investment funding (TIF) authority to counties

	Require real estate disclosures at time of advertisement and purchase / conveyance of property, disclosing that the property is within a Military Influence Overlay District
	Require school districts to consult w/military installations for future school locations within an MIOD
	Grant Counties Regulatory Authority for Military Installation Protection
	Amend HB 1852 language to include all counties within 5 miles of a military installation which replaces the language that states only the counties that are adjacent to military installations
GIS/Mapping	Develop Comprehensive Land Use Maps that incorporate AICUZ.
Real Estate Disclosure	Amend the Texas Association of Realtors (TAR) Form 1506
	Require that the Texas Association of Realtors Form 1406 include Language that discloses if a property is within the MIOD
Lighting	Develop a lighting retrofit program for businesses, agencies and homeowners
	Develop lighting standards for exterior lighting as a component of their subdivision regulations
	Develop a Dark Sky Ordinance/Order

			Military Training Routes	Review low-level military flight routes for incompatible uses
			FAA Part 77 Compliance	State Adopt Part 77 and Any Amendments as State Law to Ensure FAA Part 77 compliance by developing a height restrictions zoning ordinance/order
Southern NM-El Paso	ern JLUS	2015	Legislation	 Increase Land Use Authority in El Paso County. Pursue legislation in the Texas State legislature to enable El Paso County to exercise land use authority in specified buffers around Fort Bliss.
			Vertical Structures	Establish a clear and voluntary process of coordination to minimize the aviation risks associated with vertical structures. As part of this action, cities, counties, state, and federal agencies would create an early process to notify the installations of the location of all existing and proposed structures between 75 and 200 feet AGL in MTRs or other areas vulnerable to aviation hazard
			Lighting	Outdoor lighting strategies seek to protect the dark sky environment as a training, testing research, and tourism asset for the region. Tools include adoption of city or county dark-sky ordinances that require the use of fully shielded cut-off outdoor lighting applications for major new developments.
			Real Estate Disclosure	Promote real estate disclosure for initial and subsequent transactions in noise-exposed

	areas, such as noise contours or accident potential zones.
Legislative Actions	Promote joint consultation procedures for developments or land use changes in specific areas around military installations
	 Provide model comprehensive plan policies and language regarding military compatibility for use in local Comprehensive Plans.
	Promote inclusion of cost- benefit analysis of military impacts in state-wide planning processes.
	Coordinate new energy development and recognize the importance of military missions and the economic development potential to the state and local economies from the development of wind and solar energy and energy infrastructure.

APPENDIX C.

Legislation Related to Military Sustainability in Other States

ALS 80

2014

Land Use Near Military Reservations

Status: Enacted - Act No. 2014-013

Date of Last Action:* 02/18/2014 - Enacted

Author: Dial (R)

Topics: Mission Sustainability

Associated Bills: AL H 94 - Companion Summary: Relates to land use near military reservations, requires local governments to notify certain military installations of certain proposed land use changes, provides certain military installations an opportunity to comment on certain proposed land use changes, provides for references to military installations in master plans adopted by municipal planning commissions.

CAS111

2015

School Facilities: Military Installations

Status: Enacted - Act No. 447

Date of Last Action:* 10/02/2015 - Enacted Author: Fuller (R) Additional Authors: Bates (R);

Mathis (R); Lackey (R); Wilk (R); Waldron (R); Maienschein (R); Chavez (R); Morrell (R); Grove (R); Nielsen (R); Huff (R); Wolk (D); Stone (R); Vidak (R)

Topics: Mission Sustainability

Summary: Expresses the intent of the Legislature that certain assistance be provided to school districts in the 2015-16 fiscal year to meet the matching share requirement of a school construction grant made by the Office of Economic Adjustment of the federal Department of Defense to construct, renovate, repair, or expand elementary and secondary public schools located on military installations. Requires the exploration of options, including loans available to districts, in meeting the federal grant matching share.

FLS1784

2013

Military Installations

Status: Enacted - Act No. 2013-222

Date of Last Action:* 06/27/2013 - Enacted

Author: Military and Vet Arrairs, Space & Domest Cmt

Additional Authors: Brandes (R) **Topics:** Mission Sustainability **Associated Bills:** FL H 7101 - Similar

Summary: Relates to military installations, authorizes the Board of Trustees of the Internal Improvement Trust Fund to acquire certain non-conservation lands to buffer a military installation against encroachment, provides functions of the Military Base Protection Program, authorizes the Department of Economic Opportunity to annually recommend non-conservation lands for acquisition through fee simple purchase or less-than-fee interest purchase.

FL H 7075

2012

Military Installations

Status: Enacted - Act No. 2012-98

Date of Last Action:* 04/06/2012 - Enacted **Author:** Community & Military Affairs Subcmte

Topics: Mission Sustainability

Summary: Relates to military installations, relates to changes in military installations and local governments under Community Planning Act, exchange of information between military installations and local governments, creates Military Base Protection Program to award grants for retention of military installations and the Defense Reinvestment Grant Program, deletes specified programs, establishes the Council on Military Base and Mission Support, relates to the Defense Support Task Force.

FL H 7129

2010

Military Support

Status: Enacted - Act No. 182

Date of Last Action:* 06/01/2010 - Enacted **Author:** Military & Local Affairs Policy Cmte Cmt Additional Authors: Evers (R); Tobia (R); Stargel (R); Plakon (R); Horner (R); Fresen (R); Eisnaugle (R); Drake (R); Dorworth (R); Weatherford (R); Holder (R);

Cannon (R); Hasner (R); Ambler (R); Wood (R) **Topics:** Education, Mission Sustainability, Tax

Credits/Exemptions, Military Spouse and Family **Associated Bills:** FL H 129 - Compare; FL H 713
Compare; FL S 274 - Similar; FL S 464 - Compare; FL

S 1126 - Compare; FL S 1330 - Compare

Summary: Relates to military support, provides applicability of provisions governing compatibility of land development with military installations under Local Government Comprehensive Planning and Land Development Regulation Act to specified local governments and associated military installations, relates to property assessment residence status for military personnel, authorizes temporary professional licensure for military member's spouse, relates to accreditation standards for schools under educational assistance.

IAS 2277

2010

Zoning Ordinance

Status: Failed - Adjourned - Senate Local Government

Committee

Date of Last Action: * 2/11/2010

Author: Warnstadt (D)

Topics: Mission Sustainability

Summary: Requires a city or county, as applicable, prior to the adoption of, amendment of, or variance from, a zoning ordinance, regulation, or restriction that affects property located within one half mile of the real property comprising Camp Dodge, to provide notice to the adjutant general of the state, requires the notice to include the same information required to be published in other public notices related to zoning.

KSH2445

2010

Land Use and Military Installations

Status: Enacted - Act No. 2010-21

Date of Last Action:* 03/24/2010 - Enacted

Author: Federal and State Affairs Cmt

Topics: Mission Sustainability

Summary: Concerns land use, military installations and adjacent areas, relates to a military air installation compatible use zone (AICUZ) study area, joint land use study (JLUS) area, army compatible use buffer (ACUB), or an environmental noise management plan (ENMP) of an active duty, national guard or reserve military installation which constitutes a state area of interest vital to national security and the economic well being of the state, requires municipal notification and coordination of land use changes.

MDS259

2014

Agricultural Easements and Energy Generation

Facilities

Status: Enacted - Act No. 287

Date of Last Action:* 05/05/2014 - Enacted

Author: Middleton (D)

Topics: Energy Development

Associated Bills: MD H 861 - Crossfiled

Summary: Requires a specified easement to authorize the landowner to use the land subject to an easement for renewable energy generation, authorizes a written request of a landowner to be approved by the State Agricultural Land Preservation Foundation to amend an easement to authorize use of the land for renewable energy generation, alters the composition of the State Agricultural Land Preservation Fund, prohibits the installation of wind turbines exceeding certain heights in specified areas.

MO H 1504

2018

Zoning Ordinances

Status: Enacted - Signed by Governor

Date of Last Action:* 06/01/2018 - Enacted

Author: Reiboldt (R)

Topics: Mission Sustainability

Summary: Requires certain counties to adopt ordinances regulating land use around National Guard training centers, provides that incompatible land uses and structures are determined by the county governing body or planning commission to be incompatible with noise, vibration, and other training impacts as identified, provides that county government may also provide for coordination with National Guard officials.

MT S 417

2011

Military Affected Areas

Status: Enacted - Act No. 354

Date of Last Action: * 05/06/2011 - Enacted

Author: Buttrey (R)

Topics: Mission Sustainability

Summary: Creates the military area compatibility act, allows a governing body to designate military affected areas, provides for military affected area regulations, requires maps and legal descriptions, requires a public hearing before designation of a military affected area, allows for prior nonconforming uses in a military affected area, allows regulations to be part of zoning ordinances, requires a permit system, establishes an appeals process, provides for a variance.

NEL140

2014

Airport Zoning Act

Status: Enacted - Signed by Governor

Date of Last Action:* 05/29/2013 - Enacted

Author: Krist (NP)

Topics: Mission Sustainability

Summary: Amends the Airport Zoning Act, provides airport hazard area dimensions, amends provisions relating to airport hazard area zoning regulations, the board of adjustment and judicial review, includes only public-use airports with state or federally approved airport layout plans and military airports with military service-approved military layout plans.

NEL279

2010

Land Use Planning

Status: Enacted - Signed by Governor

Date of Last Action:* 02/11/2010 - Enacted

Author: Avery (NP)

Topics: Mission Sustainability

Summary: Provides that when a city is considering the adoption or amendment of a zoning ordinance or the approval of the platting or re-platting of any development of real estate, the city shall notify any military installation which is located within the corporate boundary limits or the extraterritorial zoning jurisdiction of the city if the city has received a written request for such notification from the military installation, provides notification procedures for the planning board and the board's director.

NJS1992

2017

Land Use Coordination

Status: Enacted - Act No. 2016-21

Date of Last Action:* 08/01/2016 - Enacted

Author: Beach (D)

Additional Authors: Cruz-Perez (D); Sarlo (D);

Allen (R); Addiego (R)

Topics: Mission Sustainability

Associated Bills: NJ A 2518 - Identical

Summary: Facilitates coordination of land use planning between civilian and military interests to preserve viability of federal military installations within State, contains a provision requiring the land use plan element of a municipal master plan to show existing and proposed locations of military facilities and to incorporate strategies to minimize undue encroachment upon military installations and conflicts between civilian land uses and military land uses.

NJS1992

2016

Land Use Coordination

Status: Enacted - Act No. 2016-21

Date of Last Action:* 08/01/2016 - Enacted

Author: Beach (D)

Additional Authors: Cruz-Perez (D); Sarlo (D); Allen (R); Lampitt (D); Addiego (R); DeAngelo (D);

Tucker (D); Mosquera (D) **Topics:** Mission Sustainability

Associated Bills: NJ A 2518 - Identical

Summary: Facilitates coordination of land use planning between civilian and military interests to preserve viability of federal military installations within State, contains a provision requiring the land use plan element of a municipal master plan to show existing and proposed locations of military facilities and to incorporate strategies to minimize undue encroachment upon military installations and conflicts between civilian land uses and military land uses.

NYS198

2020

Location of Certain Wind Electric Generation

Facilities

Status: Pending - Senate Energy and

Telecommunications Committee **Date of Last Action:*** 1/9/2019

Author: Ortt (R)

Topics: Mission Sustainability, Energy Development

Associated Bills: NY A 3248

Summary: Amends the Public Service Law, prohibits the location of certain wind electric generation facilities within forty miles of an airfield or airbase under jurisdiction of any federal military department.

NC S 63

2018

Military Affairs

Status: Enacted - Act No. 2017-64

Date of Last Action:* 06/28/2017 - Enacted

Author: Davis D (D)

Additional Authors: Brown H (R); Sanderson (R);

Daniel (R)

Topics: Mission Sustainability

Summary: Requires the military affairs commission to adopt a comprehensive strategic plan to enhance state military installations and their missions.

NC S 106

2016

Agricultural Development

Status: Failed - Adjourned - Senate Appropriations/Base Budget Committee **Date of Last Action:*** 2/23/2015

Author: Brown H (R)

Additional Authors: Jackson B (R) **Topics:** Mission Sustainability

Summary: Provides that funds for the protection of military buffers appropriated to the agricultural development and farmland preservation trust fund for

the 2015-2016 fiscal year are non-reverting.

NCH254

2014

Land Use Planning and Zoning Change Notice

Status: Enacted - Act No. 2013-59

Date of Last Action:* 05/30/2013 - Enacted

Author: Glazier (D)

Additional Authors: Lucas (D); Lewis (R); Szoka (R); Speciale (R); Brody (R); Arp (R); Shepard (R); Moore R (D); Jordan (R); Hamilton (D); Floyd E (D); Harrison (D); Cleveland (R); Fisher (D); Whitmire (R)

Topics: Mission Sustainability

Summary: Amends the requirements related to notice of land-use planning and zoning changes to be given to a military base by counties or cities near the military base.

NCH 433

2014

Land Use Surrounding Military Installations

Status: Enacted - Act No. 2013-206

Date of Last Action:* 06/26/2013 - Enacted

Author: Bell J (R)

Additional Authors: Whitmire (R); McElraft (R); Stam (R); Pittman (R); Brown B (R); Fulghum (R); Martin S (R); McManus (D); Presnell (R); Speciale (R); Torbett (R); Shepard (R); Dixon Ja (R); Hall L (D); Avila (R); Wray (D); Harrison (D); Cleveland (R); Glazier (D); Johnson (R); Bell L (D)

Topics: Mission Sustainability

Summary: Supports the activities of the armed forces, provides to maintain and enhance the military's presence in North Carolina by regulating the height of buildings and structures located in areas that surround military installations in the state.

NCH484

2014

Wind Energy Facility Site and Operation Permits

Status: Enacted - Act No. 2013-51

Date of Last Action:* 05/17/2013 - Enacted

Author: Bell J (R)

Additional Authors: McElraft (R); Whitmire (R); Dixon Ja (R); Gill (D); Steinburg (R); Speciale (R); Graham G (D); Brody (R); Arp (R); Pittman (R); Floyd E (D); Jones B

(R); Jackson (D); Brown R (R); Moffitt (R)

Topics: Mission Sustainability, Energy Development

Associated Bills: NY A 3248

Summary: Establishes a permitting program for wind energy facilities, transmission facilities and expansion, requires a permit preapplication site evaluation meeting and notice of a scoping meeting, requires identification of property owners adjacent to the proposed facility or expansion and a description of civil air navigation or military air navigation routes, air traffic control areas, military training routes, specialuse air space, radar or other military operations that may be affected.

NC S 614

2014

Military Lands Protection Act Status: Enacted - Act No. 2014-79

Date of Last Action:* 07/22/2014 - Enacted

Author: Brown H (R)

Additional Authors: Jackson B (R)

Topics: Base Realignment and Closure, Mission

Sustainability

Summary: Directs the State Construction Office to maintain and make available to the public accurate maps of areas surrounding major military installations, including Military Training Routes and Military Operating Areas, provides for the withholding of documents and discussions related to the federal government's process to determine closure or realignment of military installations until a final decision has been made.

NCH254

2013

Land Use Planning and Zoning Change Notice

Status: Enacted - Act No. 2013-59

Date of Last Action:* 05/30/2013 - Enacted

Author: Glazier (D)

Additional Authors: Lucas (D); Lewis (R); Szoka (R); Speciale (R); Brody (R); Arp (R); Shepard (R); Moore R (D); Jordan (R); Hamilton (D); Floyd E (D); Harrison (D); Cleveland (R); Fisher (D); Whitmire (R)

Topics: Mission Sustainability

Summary: Amends the requirements related to notice of land-use planning and zoning changes to be given to a military base by counties or cities near the military base.

NCH 433

2013

Land Use Surrounding Military Installations

Status: Enacted - Act No. 2013-206

Date of Last Action:* 06/26/2013 - Enacted

Author: Bell J (R)

Additional Authors: Whitmire (R); McElraft (R); Stam (R); Pittman (R); Brown B (R); Fulghum (R); Martin S (R); McManus (D); Presnell (R); Speciale (R); Torbett (R); Shepard (R); Dixon Ja (R); Hall L (D); Avila (R); Wray (D); Harrison (D); Cleveland (R); Glazier (D); Johnson (R); Bell L (D)

Topics: Mission Sustainability **Associated Bills:** NC S 389

Summary: Supports the activities of the armed forces, provides to maintain and enhance the military's presence in North Carolina by regulating the height of buildings and structures located in areas that surround military installations in the state.

OK H 2118

2020

Corporation Commission Status: Enacted - Act No. 310

Date of Last Action:* 05/07/2019 - Enacted

Author: Ortega (R)

Additional Authors: Moore L (R); McBride (R); Bergstrom (R); Davis (R); Manger (R); Miller N (R)

Topics: Energy Development

Summary: Creates the Corporation Commission Reform Act, amends provisions relating to setback requirements for wind energy facilities, includes individual wind turbines and certain other individual structures in wind energy facility setback requirements.

OKS 1576

2018

Corporation Commission

Status: Act No. 179

Date of Last Action:* 05/02/2018 - Enacted

Author: Schulz (R)

Topics: Mission Sustainability, Energy Development

Associated Bills: NC S 389

Summary: Relates to the Corporation Commission, relates to setback requirements and notification of intent to build a facility, prohibits the construction of wind facilities in certain circumstances, provides exception to prohibition, requires certain filings, requires Corporation Commission to promulgate rules.

OK H 3561

2018

Corporation Commission
Status: Enacted - Act No. 4

Date of Last Action:* 04/03/2018 - Enacted

Author: Ortega (R)

Additional Authors: Perryman (D)

Topics: Mission Sustainability, Energy Development **Summary:** Relates to the Corporation Commission, relates to setback requirements and notification of intent to build a facility, prohibits the construction of certain facilities after certain date, provides exception to prohibition, requires certain filing, requires Corporation Commission to promulgate rules.

VAS1029

2013

Planning and Zoning

Status: Enacted - Act No. 149

Date of Last Action:* 03/12/2013 - Enacted

Author: Reeves (R)

Topics: Mission Sustainability

Associated Bills: VA H 1853 - Identical

Summary: Relates to planning and zoning, relates to effects of development on military installations, requires local planning commissions to include military installations in local planning, requires a local planning commission to consult with the commander of any military installation that may be adversely affected by development, includes airports, permits a governing body to appoint an additional nonvoting member to its planning commission to represent a local installation.

WYS36

2020

Large Scale Solar and Wind Energy Facilities

Status: Enacted - Act No. 106

Date of Last Action:* 03/13/2020 - Enacted **Author:** Joint Interim Corporations, Elections

Topics: Mission Sustainability

Summary: Relates to regulation of solar and wind energy facilities, requires permitting by Boards of County Commissioners of solar energy facilities, establishes minimum standards for solar and wind energy facilities, provides for referrals to the Industrial Siting Council, amends the Council's jurisdiction over wind and solar energy facilities, specifies issues to consider in the permitting of solar and wind energy facilities.

VIRGINIA § 55.1-704

Summary: Required disclosures pertaining to a military air installation.

The owner of residential real property located in any locality in which a military air installation is located shall disclose to the purchaser whether the subject parcel is located in a noise zone or accident potential zone, or both, if so designated on the official zoning map by the locality in which the property is located. Such disclosure shall be provided to the purchaser on a form provided by the Real Estate Board on its website. Such disclosure shall state the specific noise zone or accident potential zone, or both, in which the property is located according to the official zoning map.

MINNESOTA 2015 CHAPTER 24-H.F. NO.283

EFFECTIVE DATE. THIS SECTION IS EFFECTIVE THE DAY FOLLOWING FINAL ENACTMENT. PRESENTED TO THE GOVERNOR MAY 7, 2015 SIGNED BY THE GOVERNOR MAY 11, 2015. 11:43 A.M

Summary: An act relating to the military; designating certain lands around Camp Ripley as sentinel landscape; creating a coordinating committee; requiring a report; proposing coding for new law in Minnesota Statutes, chapter 190.

Section 1. [190.33] CAMP RIPLEY SENTINEL LANDSCAPE.

Subdivision 1. Designation of certain lands.

- (a) Camp Ripley shall be a sentinel landscape. By January 16, 2017, the coordinating committee established under subdivision 2 shall designate certain lands in the vicinity of Camp Ripley to be contained in the sentinel landscape of Camp Ripley. The purpose of this designation shall be to identify lands important to the nation's defense mission in an effort to preserve and enhance the relationship between willing landowners and Camp Ripley and to create incentives to encourage landowners' land management practices consistent with Camp Ripley's military missions.
- (b) Individuals who own land which is deemed part of the sentinel landscape shall be provided the opportunity to participate, on a voluntary basis, in various programs designed to encourage land uses compatible with Camp Ripley's military missions.

Subd. 2. Establishment of coordinating committee.

- (a) By March 1, 2016, the adjutant general shall establish a coordinating committee to address issues related to technical support services and appropriate financial assistance to landowners who voluntarily participate in the sentinel landscape program in subdivision 1.
- (b) The committee will be comprised of the following individuals:
 - (1) the adjutant general or a designee who will serve as the chair of the committee;
 - (2) the commissioner of agriculture or a designee;
 - (3) the commissioner of natural resources or a designee; and
 - (4) the executive director of the Board of Water and Soil Resources or a designee.

The committee may also seek input from federal agencies, including but not limited to the Department of Defense, the Department of the Army, the National Guard Bureau, the Department of the Interior, or the Department of Agriculture. The committee may also appoint members from other state agencies, county officials from any county where sentinel landscapes are located, and nongovernmental organizations that participate in land management activities within the sentinel landscape.

Subd. 3. Meetings.

The chair shall convene meetings as necessary to conduct the duties prescribed in this section. The chair shall convene the first meeting of the committee by March 1, 2016. *(cont. next)*

MINNESOTA 2015 CHAPTER 24-H.F. NO.283 CONT.

Subd. 4. Duties.

The committee shall identify sentinel land, and develop recommendations to encourage landowners within the sentinel lands to voluntarily participate in and begin or continue land uses compatible with Camp Ripley's military mission. In designating sentinel lands, the coordinating committee shall include all working or natural lands, wherever located, that the coordinating committee believes contribute to the long-term sustainability of the military missions conducted at Camp Ripley.

In determining which lands to designate, the coordinating committee shall seek input from the director of the Department of Defense Readiness and Environmental Protection Integration Program, the chief of the National Guard Bureau, the director of the Army Compatible Use Buffer Program, the commander of the Camp Ripley Training Center, the commissioner of agriculture, the commissioner of natural resources, the executive director of the Board of Water and Soil Resources, appropriate county commissioners from any county where designated lands are located, and any others the adjutant general deems appropriate.

Subd. 5. Compensation. Members of the committee will serve without compensation.

Subd. 6. Report.

By January 16, 2017, the adjutant general, with the assistance of the coordinating committee established in subdivision 2, shall submit a report to the governor and to the chairs of the committees in the house of representatives and senate with primary jurisdiction over the Department of Military Affairs. The report must summarize the committee's efforts to encourage landowners within the Camp Ripley sentinel landscape to voluntarily participate in and begin or continue land uses compatible with Camp Ripley's military mission. This report will include a map which geographically defines the boundaries of the sentinel landscape and may also provide recommendations for any further legislation the coordinating committee deems necessary to further the goals of this program.

END OF REPORT