

County of San Bernardino

Military Background Report

REPORT USE, INTENT, AND LIMITATIONS

This Background Report was prepared to inform the preparation of the Countywide Plan. This report is not intended to be continuously updated and may contain out-of-date material and information. This report is not intended to be comprehensive and does not address all issues that were or could have been considered and discussed during the preparation of the Countywide Plan. Additionally, many other materials (reports, data, etc.) were used in the preparation of the Countywide Plan. This report is not intended to be a compendium of all reference materials.

11/15/2018

Prepared by:

US Department of Defense*

In collaboration with the County of San Bernardino

* A joint effort of the following Department of Defense installations in the county: Marine Corps Air Ground Combat Center/Marine Corps Air Ground Task Force Training Command, Edwards Air Force Base, Fort Irwin National Training Center, Naval Air Weapons Station China Lake, and Marine Corps Logistics Base Barstow.

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1. INTRODUCTION

1.1 PURPOSE AND ORGANIZATION OF REPORT

The five military installations within San Bernardino County have a significant impact on the economic vitality of the region and shoulder some of their Service's most important testing, training, and operations missions, including the Marine Corps Air Ground Combat Center/Marine Corps Air Ground Task Force Training Command (MCAGCC/MAGTFTC), Edwards Air Force Base (AFB), Fort Irwin National Training Center (NTC), Naval Air Weapons Station (NAWS) China Lake, and Marine Corps Logistics Base (MCLB) Barstow.

The Department of Defense doctrine to *"train as we fight and fight as we train"* identifies the critical importance to protect and sustain military training areas to have a ready force for national defense.

Effective policies and partnerships can sustain military missions to support national defense while enhancing the quality of life of the residents of San Bernardino County. Principles in this Element encourage balanced and integrated approaches to economic development, compatible land use, energy development, conservation, open space, circulation and infrastructure planning, noise, and safety.

1.1.1 PURPOSE

This report provides a basis for the development of policies and guidelines that support long-term military sustainability and compatible economic development that protect the health, safety, and welfare of county residents. More specifically, this report intends to lead to the following, both in the Countywide Plan as well as other policy and implementation efforts:

- Policies for long-term military sustainability and compatible economic development
- Guidance for developing collaborative partnerships among military and community stakeholders
- A delineation of the Military Influence Area (MIA) within the county
- A framework for policies, ordinances, and other tools to promote compatible land use and renewable energy development within the MIA
- Strategies that protect residents' health, safety, and welfare from military operations, noise, and other impacts
- Policies to collaborate on mutual goals for conservation, infrastructure, research, and other topics

Representatives from all five military installations in the county provided the material in this report to inform the Countywide Plan, consistent with the following principles:

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- Ongoing coordination and collaboration among community and military stakeholders will strengthen San Bernardino County and build a more secure nation
- Supporting the long-term sustainability of military training areas in San Bernardino County is critical for local economies
- Effective compatible land use planning will sustain military missions, reduce risks to public health and safety, and enhance the quality of life for residents
- Partnerships with military installations provide valuable opportunities to share efforts and resources to achieve mutual goals
- Noise and safety concerns from military training, testing, or operations may affect individuals and can lead to pressure to restrict mission critical activities

1.1.2 ORGANIZATION

The Military Background Report is organized into two chapters:

- **Chapter 1, Introduction.** This chapter introduces the intent and purpose of the report and summarizes the military's role in San Bernardino County, and identifies legislative requirements related to planning and coordination, and summarizes issues and opportunities to consider.
- **Chapter 2, Topical Discussions.** This chapter presents relevant information on the topics of: economic development and military partnerships, compatible land use, renewable energy, conservation and open space, circulation and infrastructure, and noise and safety. Unless otherwise indicated, all information was provided by the Department of Defense installations.

1.2 CONTEXT

1.2.1 THE MILITARY IN SAN BERNARDINO COUNTY

Historically, the military played a key role in exploring travel routes, erecting camps near water resources, and protecting the travelers crossing the Mojave Desert. The desert routes and landscape in San Bernardino County have hosted military operations and training throughout the nineteenth and twentieth centuries. Today, San Bernardino County and the non-jurisdictional land within it continue to support military operations and force readiness as well as the research, development, testing, and evaluation of military hardware. The county is a hub within a larger integrated system of military ground and sea ranges with special use airspace and access to critical ground transportation networks.

The military is a critical stakeholder within San Bernardino County, and military installations perform a broad range of activities similar to civilian communities, with administrative offices, commercial, services, industrial and recreational land uses. Comprehensive plans that guide both civilian and military community growth offer opportunities for collaboration and long-term compatible development.

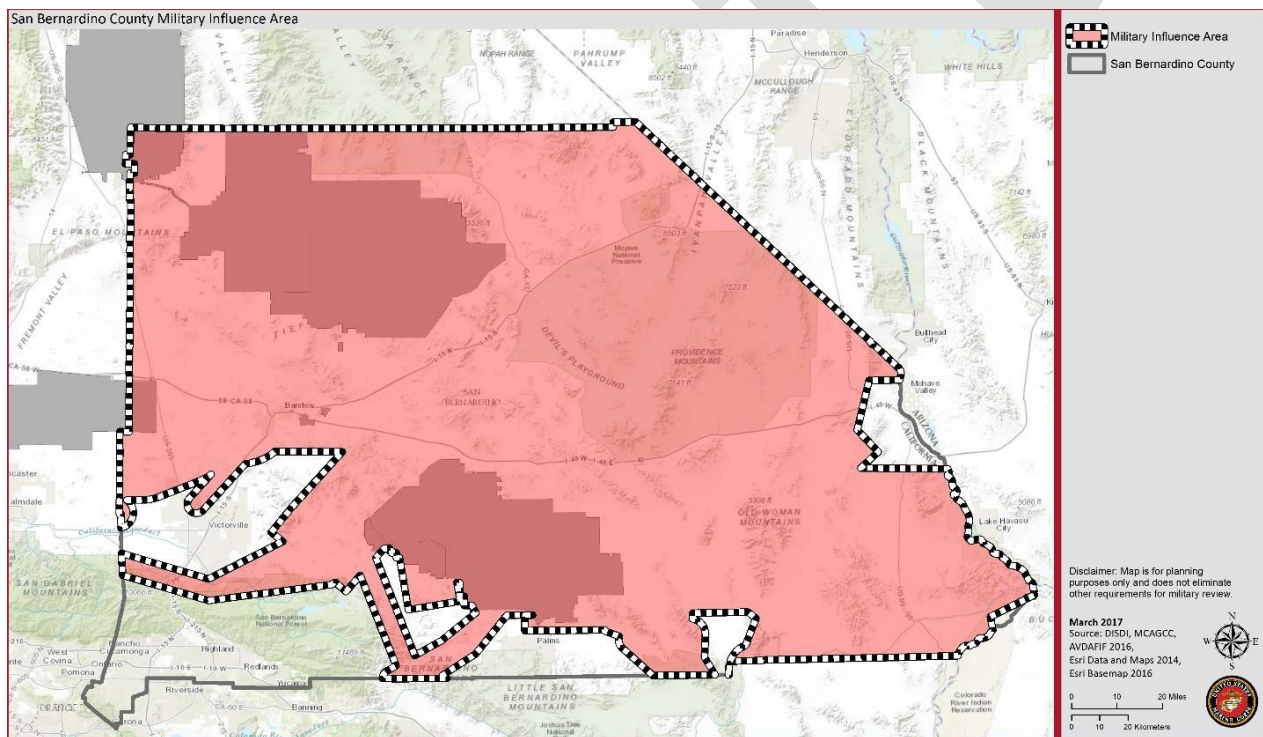
Effective communication strategies between military and community stakeholders will promote understanding of the strong economic and physical relationship between military installations and their

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neighbors. Ongoing communication provides improved mutual education of local planning processes and military mission needs. As diverse stakeholders learn about individual needs and collaborative goals, more effective strategies can be integrated into County and military planning processes. Mutually supported tools, activities, and procedures provide effective partnerships that identify and respond to collective opportunities and challenges.

A Military Influence Area (MIA) has been developed to identify areas that are critical to the military installations' ability to carry out their missions, as shown in Figure 1-1. This MIA identifies areas adjacent to installations; special use airspace (SUA) and land under SUA; low-level flight paths and military training routes (MTRs); areas external to the installations that may be affected by noise or safety concerns; spectrum use corridors; transportation corridors for military missions; and other geographies in which where military operations may affect local jurisdictions and, conversely, where local activities may adversely affect the military's ability to carry out its mission.

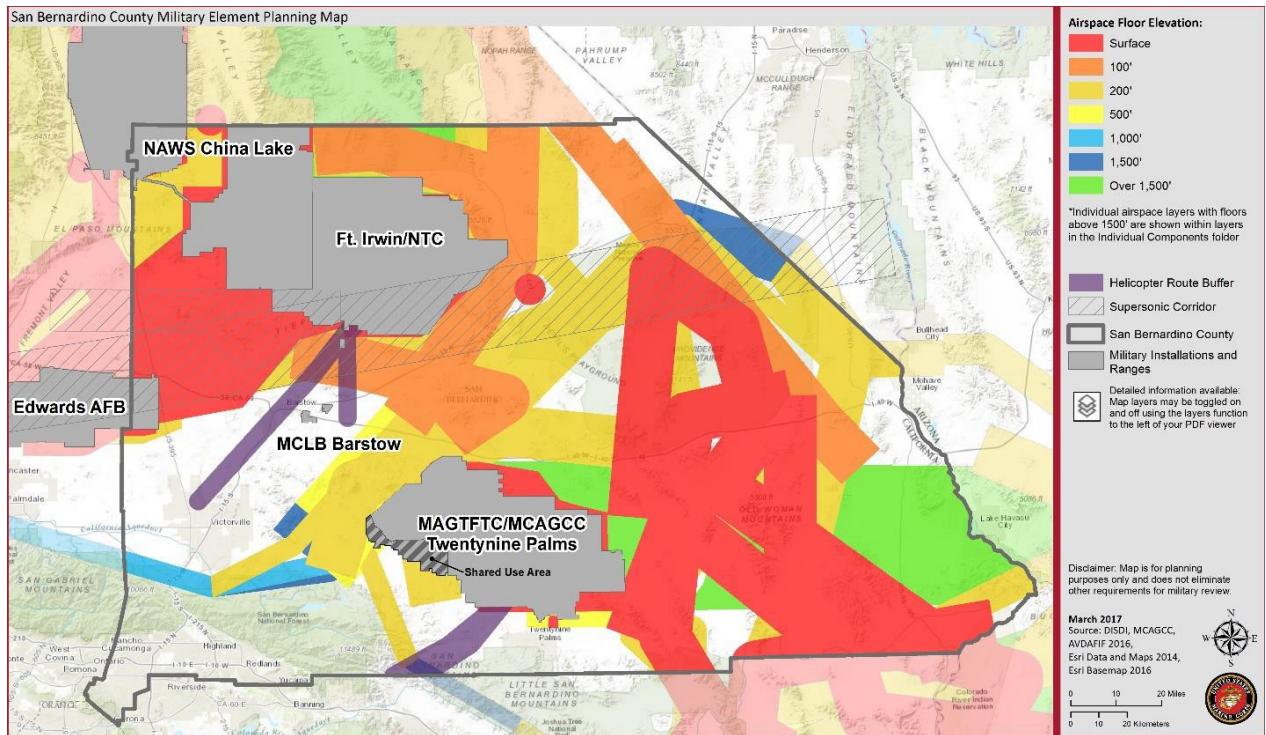
Figure 1-1 Military Influence Area



A significant component of the MIA is military airspace use within the county. Low-level flights can be influenced by many factors, but the degree of influence often relates to the airspace floor of the training area, which is the lowest altitude at which training occurs. San Bernardino County includes 51 unique airspace training areas, which have been merged together in a Military Airspace Overlay to identify the lowest elevation for training in any location, allowing effective engagement to denote geographic requirements for compatible land use. Figure 1-2 displays the various airspace floor elevations and other routes or corridors that make up the military airspace training areas.

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Figure 1-2 Military Airspace Overlay



1.2.2 LEGISLATIVE CONTEXT

The state of California has provided legislation and planning guidance for military compatibility to integrate balanced and compatible land use development in areas where military readiness activities occur. California Government Code 65202(a) defines “military readiness” as training, support, and operations that prepare the men and women of the military for combat; operation, maintenance, and security of any military installation; and testing of military equipment, vehicles, weapons, and sensors for proper operation or suitability for combat use.

In order to maintain readiness, military planning mirrors many aspects of county and community planning. Collaboration for military readiness is required to balance complementary and competing needs and resources as the communities in San Bernardino County grow in population. The goal of compatibility planning is to promote an environment where both community and military missions can coexist successfully. A summary of state requirements that are important to military and community planning are identified in Table 1-1.

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Table 1-1. State Requirements on Military Planning and Compatibility

California Code	Requirements
§21098(b)	Lead agencies shall provide notice to the military of projects within a low- level military flight path, military impact zone, or special use airspace boundaries if (1) the project includes a general plan amendment; (2) the project is of statewide, regional, or area- wide significance; or (3) the project is required to be referred to the airport land use commission, or an appropriately designated body.
§21676(b)	Airport Land Use Compatibility Plans must be consistent with Air Installations Compatible Use Area (AICUZ) compatibility guidelines for military installations.
§25519.5	Applicants to the Public Utilities Commission for certain electrical power facilities, who must already provide notice to various affected entities, must also inform the Department of Defense (DOD) of any proposed project "within 1,000 feet of a military installation, or [that] lies within special use airspace or beneath a low- level flight path." In addition, if the DOD provides the applicant with information regarding potential impacts on national security including impacts on land, sea, and airspace for conducting operations; training; research, development, testing, and evaluations of weapons, sensors, and tactics; the applicant must include the DOD's information in its application or, if the information is received after the application is filed, forward the information to the Public Utilities Commission upon receipt.
§65302 (SB 1468, 2002)	Local planning agencies shall consider the impact of new growth on military readiness activities carried out on military bases, installations, and operation and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land, or other territory adjacent to military facilities, or underlying designated military aviation routes and airspace.
§65352, §65404, §65940, §65944 (SB 1462, 2004)	Local planning agencies must notify the military whenever a proposed development project or general plan amendment meets one or more of the following conditions: is located within 1,000 feet of a military installation, is located within special use airspace, or is located beneath a low- level flight path
Code §65892.13(11)	Local agencies must forward a copy of an application to install a small wind energy system within the restricted airspace of "R- 2515" to the governing authority of that airspace if that authority has filed a "detailed diagram of that restricted airspace." The local agency shall consider written comments provided by the R- 2515 governing authority before acting on such applications.

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1.2.3 REPORT FINDINGS

The County of San Bernardino and representatives from all five local military installations coordinated over a span of two years to identify relevant information and appropriate direction for the Countywide Plan. Table 1-2 summarizes the recommended issues and opportunities to consider while developing the County Policy Plan and other policy and implementation efforts.

Table 1-2. Military Planning and Collaboration: Summary of Issues and Opportunities

Topic	Issue(s)	Opportunities to Consider
Military Partnerships	Effective partnerships among military and community stakeholders that provide long-term mutual benefits.	<p>Seek mutual partnerships on important local and regional planning issues among military stakeholders, municipalities, special districts, unincorporated communities, and federal agencies.</p> <p>Develop a framework for ongoing partnership discussion, coordination, and education on the mission, goals, and initiatives of military installations within San Bernardino County.</p> <p>Pursue joint projects that are mutually beneficial for communities and military installations for infrastructure, research, municipal services, environmental stewardship, economic development, and other activities</p>
Collaboration	Collaboration with military installations to promote compatible land use.	<p>Work with military stakeholders to define and designate compatible land uses in areas where military operations could affect public health and safety, or where private activities could have an impact on current or future military operations.</p> <p>Coordinate with military stakeholders to resolve land use conflicts and protect public safety in critical locations adjacent to military facilities or underlying designated military aviation routes or airspace.</p> <p>Identify consistent military notification, communication, and review methods of new or amended projects within 1,000 feet of a military installation or underlying designated military aviation routes or airspace, including projects for land development, renewable energy, communication towers, or other uses that may affect military readiness.</p> <p>Seek data updates from military installations to maintain an accurate MIA that reflects changes to military aviation routes or airspace.</p> <p>Incorporate safety, noise, and tall structure hazards in the County maps that are used for hazards and land use planning.</p> <p>Consider updates to guidelines as military missions change and new data is available.</p>
Compatible Land Use	Compatible land use policies and guidelines that sustain missions at San Bernardino County military installations.	<p>Design and implement a County planning review process to identify and characterize potential land use conflicts within the MIA.</p> <p>Identify and incorporate land use planning policies and guidelines that consider the impact of new growth on military readiness activities in the MIA.</p> <p>Incorporate guidelines and policies to support military readiness into the County Development Code, including, but not limited to: model development codes for vertical obstruction avoidance, real estate disclosures, noise attenuation standards, light glare and dark sky standards, requirements to avoid uses that affect military instruments, and policies for electromagnetic or frequency interference avoidance.</p> <p>Consider zoning ordinances and Military Influence Overlay Districts to promote compatible land use in locations adjacent to military facilities or underlying designated military aviation routes or airspace.</p> <p>Require administrative or use permits for all projects within the MIA that could penetrate the defined floor elevation of the military airspace, or that could encroach upon military operations based on the allowed uses of the project.</p> <p>Consider other policies, programs, and actions to mitigate incompatible development within the MIA.</p>

1. Introduction

Table 1-2. Military Planning and Collaboration: Summary of Issues and Opportunities

Topic	Issue(s)	Opportunities to Consider
Renewable Energy	Coordinate with the DOD for renewable energy planning and siting to reduce conflicts and promote compatibility with military operations.	<p>Develop a process between the County and military installations to coordinate and assist in resolving potential risk of adverse impact on military operations and readiness area (RAIMORA) renewable energy siting conflicts, specifically wind turbine siting.</p> <p>Work with renewable energy developers and military planners to maximize energy generation potential while assuring that military flight operations and ground maneuvers are addressed.</p> <p>Consider a frequency spectrum ordinance that encourages renewable energy and wireless communication developers to coordinate with military installations in preliminary planning, and that identifies military review processes within the planning life cycle.</p> <p>Encourage renewable energy development in areas that do not pose significant environmental or public health and safety hazards and that do not significantly affect military operations.</p> <p>Discourage renewable energy, transmission lines, or pipe line development on undisturbed natural areas that support state and federally protected plant and wildlife species.</p> <p>Encourage the development and upgrade of transmission lines and other facilities that are compatible with military operations and do not create significant environmental or public health and safety hazards.</p>
Conservation and Open Space	Coordination with military installations to protect air, water, and other natural resources.	<p>Develop coordinated planning policies for natural and cultural resource management and conservation that consider mutual community and military interests in the development of Habitat Conservation Plans, Natural Community Conservation Plans, or other similar efforts.</p> <p>Work with military stakeholders to encourage off-base recovery of threatened and endangered species and large, landscape-scale conservation goals.</p> <p>Collaborate with military installations to protect air quality to avoid impacts on military air training missions from pollution and haze.</p> <p>Coordinate with military installations to promote groundwater protection and sustainability, water efficiency and conservation, remediation of contaminated water sources, and water recycling.</p> <p>Promote the preservation of dark skies as a natural resource, and we will work with the military on implementation methods that support military testing, training, and operations.</p> <p>Incorporate appropriate mitigation measures into new development projects in the vicinity of military installations to ensure that habitat protection burdens are not inappropriately shifted to lands utilized by the military.</p> <p>Provide a framework for partnership mitigation opportunities among the military, nonprofits, and other groups.</p>
	Partnerships with military installations for conservation of land and natural resources.	<p>Identify and incorporate the military as a partner for shared conservation goals to increase the funding, resources, and capacity to achieve mutual outcomes for agricultural preservation or habitat and species conservation, restoration, and management.</p> <p>Engage the military in collaboration with existing work groups and agencies, such as the Conservation Land Acquisition Work Group and the United States Fish and Wildlife Service, to address regional challenges in development and habitat conservation.</p> <p>Pursue conservation partnerships with military installations to acquire funding for collaborative projects that protect natural resources or reduce incompatible development in support of military missions.</p> <p>Engage with military installations to pursue shared efforts for open space preservation.</p>
	Military engagement for open space preservation efforts.	Consider military training needs and buffering opportunities in development and improvement of open space areas and corridors.

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Table 1-2. Military Planning and Collaboration: Summary of Issues and Opportunities

Topic	Issue(s)	Opportunities to Consider
Circulation and Infrastructure	Achieve mutual goals for circulation and infrastructure.	<p>Coordinate with military planners to consider how military needs for infrastructure, logistics, transportation, and training activities can be integrated into County and regional transportation plans.</p> <p>Include military transportation corridors and infrastructure in the planning areas on County and regional circulation diagrams.</p> <p>As part of transportation and infrastructure planning, consider how development of roads and infrastructure within the MIA will promote urban growth that might lead to incompatible land use.</p>
Noise	<p>Minimized risk of injury, loss of life, property damage, and economic disruption caused by military operations.</p> <p>UAS use compatibility with military missions.</p>	<p>Identify standards to protect the health and safety of residents in military operational areas.</p> <p>Consider creation of Air Installation Safety Areas and development of a Safety Policy, including requirements for aviation easements within operational areas.</p> <p>Promote compatible land use to reduce noise impacts to residents.</p> <p>Promote increased awareness and education of how UAS operations can interfere with community and military operations, including identification of FAA and state requirements.</p> <p>Consider regulation of UAS operations through a countywide ordinance that addresses licensure requirements, trespass, prohibition of UAS use in certain locations, and restrictions for video and weapons use.</p> <p>Recommend airport master plans coordinate with all DoD installations.</p>

2. TOPICAL DISCUSSION

This chapter presents relevant information on the following topics: economic development and military partnerships, compatible land use, renewable energy, conservation and open space, circulation and infrastructure, and noise and safety.

2.1 ECONOMIC DEVELOPMENT AND MILITARY PARTNERSHIPS

A strong regional economy is best achieved through partnership and cooperation among military and community stakeholders. Military activities have an enormous positive impact on the economy of San Bernardino County, supporting thousands of direct and indirect jobs and generating millions of dollars in economic activity and tax revenue annually.

According to the most recent reports available at each installation, the five installations that operate within the county collectively employ over 26,000 military personnel and over 26,000 civilians, with an estimated total annual payroll of greater than \$2.1 billion and an additional estimated \$1.7 billion spent on contracts. While some of this activity includes adjacent counties, combined military investments provide an enormous impact on the San Bernardino County economy.

The Office of Economic Adjustment ranks San Bernardino third among California counties for number of military personnel and seventh in total defense spending. Military spending supports local communities by creating direct and indirect employment opportunities. Military and civilian personnel spend wages on goods and services produced locally, while pensions and other benefits provide retirees and dependents with a reliable source of income.

Table 2-1. Military and Civilian Personnel at San Bernardino County Military Installations

Installation	Military Personnel	Civilian Personnel	Total Personnel
NAWS China Lake	4,793	3,962	8,755
Edwards AFB	1,927	7,847	9,774
MCAGCC Twentynine Palms	14,500	2,500	17,000
Fort Irwin	5,170	9,985	15,155
MCLB Barstow	500	2,000	2,500
Total	26,890	26,294	53,184

Source: Office of Economic Adjustment, 2016.

Economic growth generated by these installations, however, must be effectively planned to sustain training missions and long-term military viability. Pressure for urban growth and other and incompatible development near military installations can negatively affect training operations. In some past experiences in the state, incompatible development has resulted in a restructuring of mission-critical components to other installations. It is imperative that military and community planners work together to prevent incompatible development in order to support the local economy.

2. Topical Discussion

Collaborative partnerships among military and community stakeholders provide many opportunities for mutual benefits. Collaboration will strengthen connections between installations and local communities, enhance County goals and implementation efforts, and foster compatible land uses that protect military operations. For example, an installation may look at connecting to a community's water system instead of operating an independent system of wells, storage, and treatment facilities on the installation. These and other partnership efforts for programs of shared interest will increase the economic resources and capacity available to provide municipal services, operate and maintain facilities, and expand research and development.

2.2 COMPATIBLE LAND USE

Compatible land use is a cornerstone component for effective military testing, training, and operations. Military installations in San Bernardino County utilize training areas that collectively form a three-dimensional hub of operations that includes training ranges, SUA, MTRs, and other resources that often occur far away from installation boundaries on, or above, public and private lands.

Many locations face increasing pressures on land and airspace resources necessary to sustain military readiness including, but not limited to, incompatible land uses resulting from commercial, industrial, and residential development; renewable energy generation and transmission emplacements; competition for frequency bandwidth and spectrum interference as well as potential frequency line-of-sight obstructions; insufficient SUA to support aircraft operations and ground-based weapons fires; pressures on existing SUA; and additional challenges resulting from natural and cultural resource management, water resource availability, air quality management, and others.

San Bernardino County supports compatible land use with military installations, leveraging tools and policies provided by the State of California and others. California Government Code Section §65302 (a)(2) states that jurisdictions shall “consider the impact of new growth on military readiness activities carried out on military bases, installations, and operation and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land, or other territory adjacent to military facilities, or underlying designated military aviation routes and airspace.”

In guiding growth and development in San Bernardino County, it is important to consider the critical role of military operating areas in support of national defense. California has specific requirements for low-altitude military aviation routes or airspace with floor altitudes of 1,500 feet or lower, including most operational areas used by military aircraft within the MIA. These areas provide for low-altitude training exercises and routes used to traverse between military installations. Any development or new construction that seriously affects or hinders the military operating areas' function and viability is considered an incompatible land use. Planning to ensure that future land uses are compatible is one of the primary goals of the Countywide Plan.

2. Topical Discussion

2.3 RENEWABLE ENERGY DEVELOPMENT

Improvements in renewable energy technologies provide growing opportunities in San Bernardino County for renewable energy development. However, significant adverse impacts on military test and training missions may occur if renewable energy development does not occur in a coordinated and compatible manner. Large-scale renewable energy developments can consume vast landscapes and have the potential to reduce military ground maneuver training areas. Wind turbines, transmission lines, and other alternative energy development facilities that use tall towers can create vertical obstructions that have negative impacts on low-level military aviation routes or airspace.

Wind turbine development can cause significant and unavoidable mission impacts due to signal scattering that may lead to data corruption for military radar systems, sensors, communications systems, and navigational aids. Interference within the radar line-of-sight for certain military systems can have significant adverse impacts on military testing and evaluation activities. Glint and glare effects from solar energy systems may affect visibility for military pilots, and high temperature signatures in solar thermal facilities may also negatively affect military aircraft and weapons sensors.

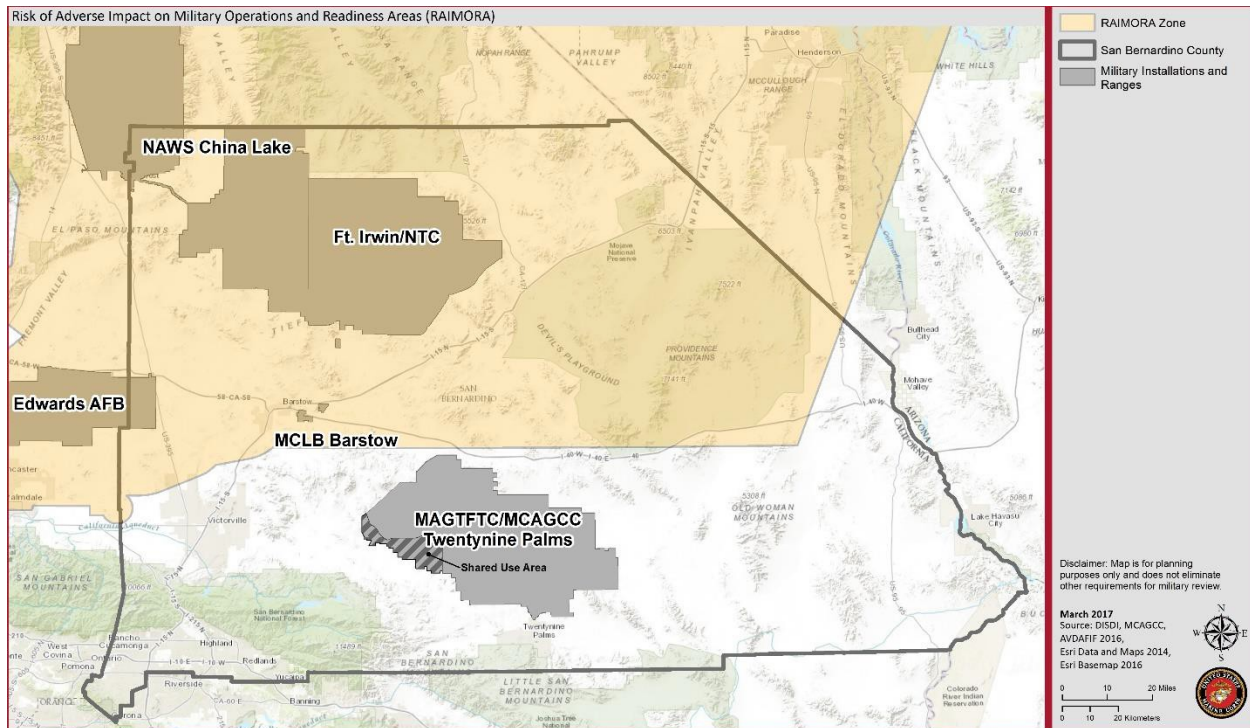
The military has identified a R-2508 Risk of Adverse Impact on Military Operations and Readiness Area (RAIMORA) within San Bernardino County. Introduction of structures associated with wind energy generation in this area could have an adverse impact to military operations and readiness. Avoiding incompatible renewable energy development in the RAIMORA is critical to military readiness. Renewable energy projects shall comply with applicable federal, state, and local regulations in this region, and developers are invited to consult with the DOD early in their development process to identify feasible and affordable solutions to compatibility challenges in this area.

Renewable energy development can also affect natural resources, wildlife, and habitat in ways that affect military stakeholders. Significant water consumption from renewable energy facilities may stress water supply resources used by military installations. Renewable energy development can have an impact on wildlife and plant populations by fragmenting or destroying habitat, or by altering behavior and migration patterns. These impacts can affect threatened or endangered species, or species that are, or may become, candidate species, and may cause them to migrate onto, or become isolated on, military installations and their ranges. This can result in further restrictions being placed on military test and training operations.

Under the framework of requirements from California Government Codes sections §65940, §65944, and §65892, San Bernardino County and local military installations will collaborate to plan wisely for renewable energy development and resource protection in areas that affect, or are affected by, military operations. Engagement among County, military, and external stakeholders on renewable energy development will provide awareness and education to promote compatibility with military operations while balancing economic prosperity, stewardship of the environment, and quality of life with collaborative goals, policies, and implementation strategies. Figure 2-1 displays the RAIMORA zone.

2. Topical Discussion

Figure 2-1 Risk of Adverse Impact on Military Operations and Readiness Area



2.4 CONSERVATION AND OPEN SPACE

Military and community stakeholders have many shared interests to protect, manage, and enhance natural resources that contribute to the quality of life within the county. Military installations have similar goals with the County to protect air and water resources. Air and water quality are important for military training activities and for the health of military personnel and their families. Degradation of air quality can minimize the ability to complete military training operations. Sufficient water quantity and quality is a requirement to sustain military installations, and degradation of the water supply can further affect other environmental resources. With increasing stresses on available aquifers, groundwater, and other water resources in the county, water sustainment planning is a collaborative issue where military, County, agency, and other stakeholders can work together to plan for long-term resource sustainment.

Many local species and habitats are of particular interest to the military, including threatened and endangered species under the Endangered Species Act, such as the *Gopherus agasazii* (Mojave Desert tortoise) and fringe-toed lizard, or species that are, or may become, candidate species. Military stakeholders manage species and habitats that occur within, or travel through, their boundaries. Adjacent development activities and land uses that fragment or destroy habitats are of particular concern to military installations because they can cause endangered species to migrate to similar managed habitats on military installations. This can cause military lands and training ranges to become

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disconnected habitats of last resort, which can subsequently reduce the land available for military testing and training, while increasing military requirements to manage that land.

DOD guidelines and programs promote shared efforts with local agencies and communities to support habitat conservation planning. The DOD supports conservation partnerships through programs like the Readiness and Environmental Protection Integration (REPI) program. REPI and other partnership programs may be available to provide resources to eligible partners of military installations for land conservation or habitat restoration and management to improve natural resources or avoid incompatible development affecting military testing and training. Partners may include the County, local cities, and/or private conservation organizations. Ongoing collaboration with military installations to achieve shared County, military, and agency goals can increase the capacity and resources available for mutual conservation goals.

Finally, open space is important to military missions because it is often compatible with military testing, training, and operations. County efforts to preserve and connect open space will coordinate with, and consider, the needs of military installations throughout the Countywide Plan and other policy and implementation efforts.

2.5 CIRCULATION AND INFRASTRUCTURE

Military operations integrate multiple circulation capabilities, including movements from the air, land, and sea. San Bernardino County contains a network of interstates, highways, railroads, streets, and off-road routes that traverse between installations and provide critical links to support military operations and training. Military use of these networks relies on avoiding traffic choke points and maintaining reliable routing to minimize the potential for interruptions.

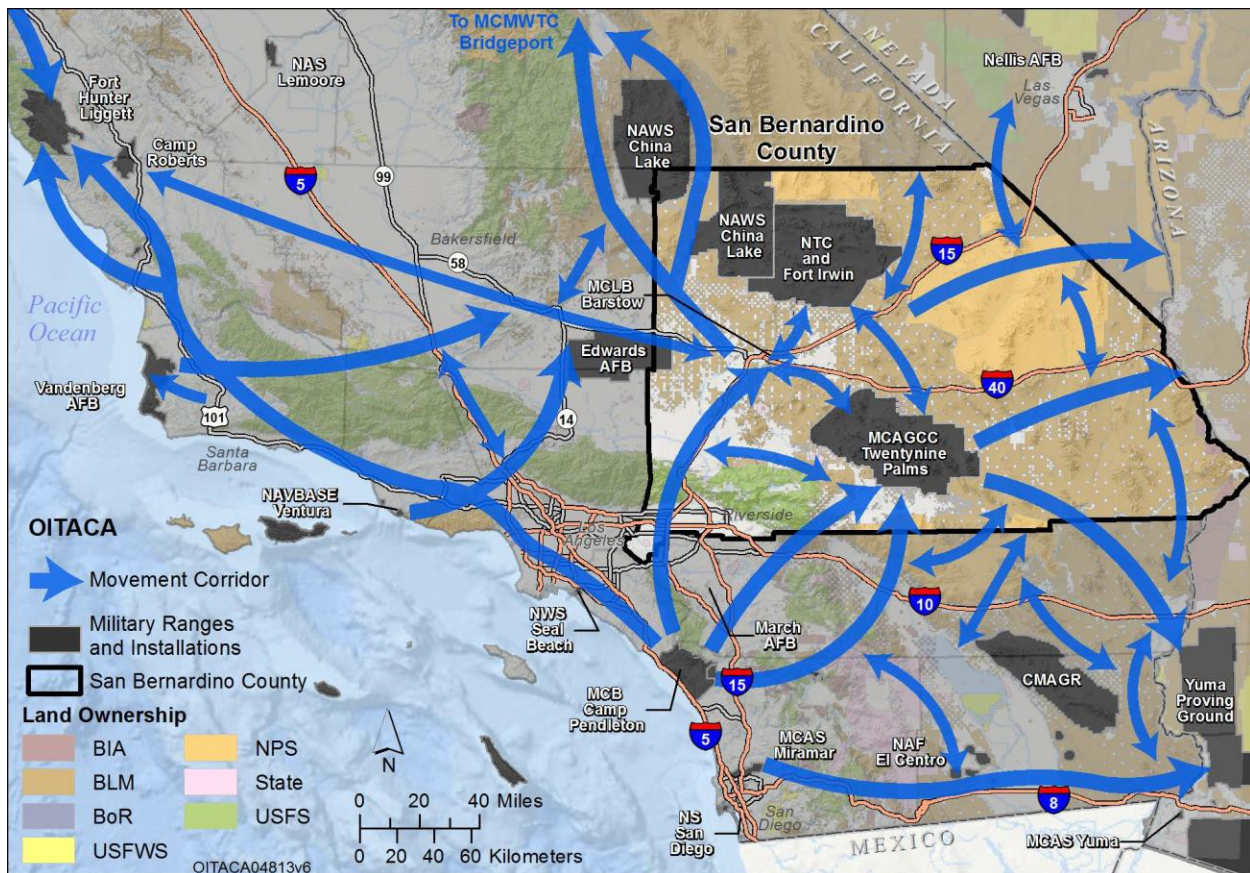
Accommodation of all modes of transportation is important for military missions, and land use impacts that seriously hinder military mobility are considered incompatible uses. Public transportation planning and management occur through multiple agencies, and military mobility in these systems can be affected by community development, new construction, and route planning. In addition, new roadway and utility infrastructure development directly influences future locations and density of urban growth, which can negatively affect military installations if development is incompatible. Coordinated circulation planning that incorporates military mobility needs and avoids incompatible development will help to sustain future military capabilities. Figure 2-2 on the next page displays the various corridors the military uses during training, operations, and other activities throughout San Bernardino County and its environs.

2.6 NOISE AND SAFETY

Military operations have varying levels of compatibility with different land uses. Incompatible land uses often create safety concerns to both military personnel and the public. For example, low- altitude corridors used by rotary wing aircraft may have increased safety challenges if required to fly around tall structures.

2. Topical Discussion

Figure 2-2 Military Mobility



Military training and operations can also cause noise impacts to the locations near training events or beneath training routes and low-level airspace. If noise complaints and other impacts are significant enough, it may require altering or removing military training missions and operations. Identification of Air Installation Safety Areas and other measures to support compatible land use will reduce risks for public health and safety. In addition, San Bernardino County Airport Land Use Compatibility Plans must be consistent with Air Installations Compatible Use Zone (AICUZ) compatibility guidelines for noise and safety.

Increasing use of unmanned aircraft systems (UAS) by the general public is occurring in proximity to military installations and training areas. This proliferating use has the potential to degrade military mission capabilities and cause additional safety concerns for the public. National airspace is largely regulated by the Federal Aviation Administration (FAA), but additional approaches by state and local governments to address public concerns about, and desires for, UAS use are evolving. Issues may include unauthorized aerial photography and filming, voyeurism, harassing wildlife, creating safety and flight concerns, and increasing the risk of armed UASs for terror purposes.