

Final Environmental Impact Statement for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range, New Mexico

Volume 2: Appendices



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APPENDIX A
DRAFT FINAL LAND USE AND AIRSPACE STRATEGY PLAN

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DRAFT FINAL

WHITE SANDS MISSILE RANGE PROPOSED LAND USE AND AIRSPACE STRATEGY PLAN



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WSMR LUASP Acronyms

A/D	analog-to-digital	LUASP	Land Use and Airspace Strategy Plan
AAF	Army Airfield	MCA	Military Construction - Army
AAMRAM	Air-to-air medium range missile	MEADS	Medium Extended Air Defense System
ABL	Airborne laser	MHz	Megahertz
AFB	Air Force Base	MIDI	Miss Distance Indicating
AFSWC	Air Force Special Weapons Center	MOA	Memorandum of Agreement
ADZ	Airspace Danger Zone	MOU	Memorandum of Understanding
AMRAD	Anti-Missile Radar Defense	MRTFB	Major Range and Test Facility Base
ARL	Army Research Laboratory	NASA	National Aeronautics and Space Administration
ASP	Ammunition Supply Point	NEPA	National Environmental Policy Act
AT/FP	Anti-terrorism/Force protection	NHPL	National Historic Properties List
ATEC	Army Test and Evaluation Command	NOP	North Oscura Peak
ATL	Advanced tactical laser	NOTAM	Notice to Airmen
ATV	all-terrain vehicle	NPS	National Park Service
BCT	Brigade Combat Team	NRTF	National Radar Test Facility
CCM	Center for Countermeasures	OR	Organizational Request
C-RAM	Counter Rocket, Artillery, and Mortar	OU	Operational Unit
CRCC	J.W. Cox Range Control Center	P.L.	Public Law
D/A	digital-to-analog	PA	Programmatic Agreement
DARPA	Defense Advanced Research Projects Agency	PHETS	Permanent High Explosive Test site
DoD	Department of Defense	psi	pounds per square inch
DOI	Department of the Interior	QD	Quantity-distance
DOPAA	Description of Proposed Action Alternatives	R-	Restricted Area (airspace)
DOT	Department of Transportation	RAMS	Radar Cross Section Advanced Measurement System Site
DTC	Developmental Test Command	RCMP	Range Complex Master Plan
DTRA	Defense Threat Reduction Agency	RCS	Radar Cross Section
DU	Depleted uranium	RDT&E	research, development, test, and evaluation
EA	Environmental Assessment	REC	Record of Environmental Consideration
EIS	Environmental Impact Statement	RF	radio frequency
EMRE	Electromagnetic Radiation Effects	ROD	Record of Decision
EN BN	Engineering Battalion	RTFB	Major Range and Test Facility Base
EOD	Explosive Ordnance Disposal	RTLA	Range Training Land Assessment
FAA	Federal Aviation Administration	s.f.	square feet
FCS	Future Combat System	SANWR	San Andres National Wildlife Refuge
FL	flight level	SDZ	Surface Danger Zone
FTS	Flight Termination System		
GEODSS	Ground Based Electro-Optical Space Surveillance	SNA	Special Natural Area
GIG	Global Information Grid	SNM	Special nuclear material
GIS	Geographic Information System	SOP	Standard Operating Procedure
GPS	Global Positioning System	SoS	System-of-Systems
HBCT	Heavy Brigade Combat Team	SRA	Sustainable Range Awareness
HELSTF	High Energy Laser Systems Test Facilities	SRM	Sustainment, Restoration and Modernization
HMMWV	High Mobility Multi-purpose Wheeled Vehicle	STX	Situational training exercise
HPM	high-powered microwave	SVAD	Systems Vulnerability Assessment Directorate
HTA	Hazardous Test Area	SWF	Southwest Willow Flycatcher
HVM	High velocity missile	THAAD	Terminal High Altitude Area Defense
IBCT	Infantry Brigade Combat	THEL	Tactical High Energy Laser
ICRMP	Integrated Cultural Resource Management Plan	TRACS	Transportable Range Augmentation Control System
IED	Improvised explosive device	U.S.	United States
INRMP	Integrated Natural Resources Management Plan	UAS	unmanned aircraft system
ITAM	Integrated Training Area Management	USDA	U.S. Department of Agriculture
JDETS	Joint Directed Energy Test Site	USFWS	U.S. Fish and Wildlife Service
JER	Jornada Experimental Range	UXO	unexploded ordnance
JLENS	Joint Land Attack Cruise Missile Defense Elevated Netted Sensor	WIT	Weapons Impact Target
LC	Launch Complex	WSMR	White Sands Missile Range
LOSAT	Line-of-sight Anti-tank missile	WSTC	White Sands Test Center
LRAM	Land Rehabilitation and Maintenance	WSTF	White Sands Test Facility
LTA	Local Training Area		

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1.0 INTRODUCTION

This Land Use and Airspace Strategy Plan (LUASP) was prepared by the White Sands Test Center (WSTC) at White Sands Missile Range (WSMR) to support current and future planning at the installation in order to meet evolving mission requirements and facilitate user access to range resources. The LUASP is a capability-based land and airspace framework for defining the principal elements of the installation, associated mission activities, and a vision for future use and development to support current and future users and missions. This framework will function as the mission component foundation of the Range Complex Master Plan (RCMP). It also was used as the basis for describing proposed changes in land use and activities on WSMR addressed in the *2009 Environmental Impact Statement (EIS) for Development and Implementation of Range-wide Mission and Major Capabilities at White Sands Missile Range, New Mexico*.

1.1 INSTALLATION OVERVIEW

WSMR is a tri-service facility managed and operated by the United States (U.S.) Army for test, evaluation, research, and assessment of military systems and commercial products. WSMR is part of the Developmental Test Command (DTC), which reports to the Army Test and Evaluation Command (ATEC), and is designated as a Department of Defense (DoD) Major Range and Test Facility Base (MRTFB). Leadership at the installation is provided by the Director, the Test Center Commander, and the Garrison Commander. Day-to-day direction is provided under the auspices of Team WSMR, which is comprised of the leadership, the Deputies for Navy and Air Force, and members of the primary organizations located at the installation. **Appendix A** describes the main organizational components at WSMR.

WSMR was first established through a combination of land purchases and condemnations (810,400 acres) in 1941. Then known as White Sands Proving Grounds, this new site supported critical testing for the nations' nuclear bomb program in the 1940s. The area was significantly expanded in 1952 through withdrawal of approximately 1,350,500 acres of public land. Other minor acquisitions have also contributed to the compilation of land within the current boundary.

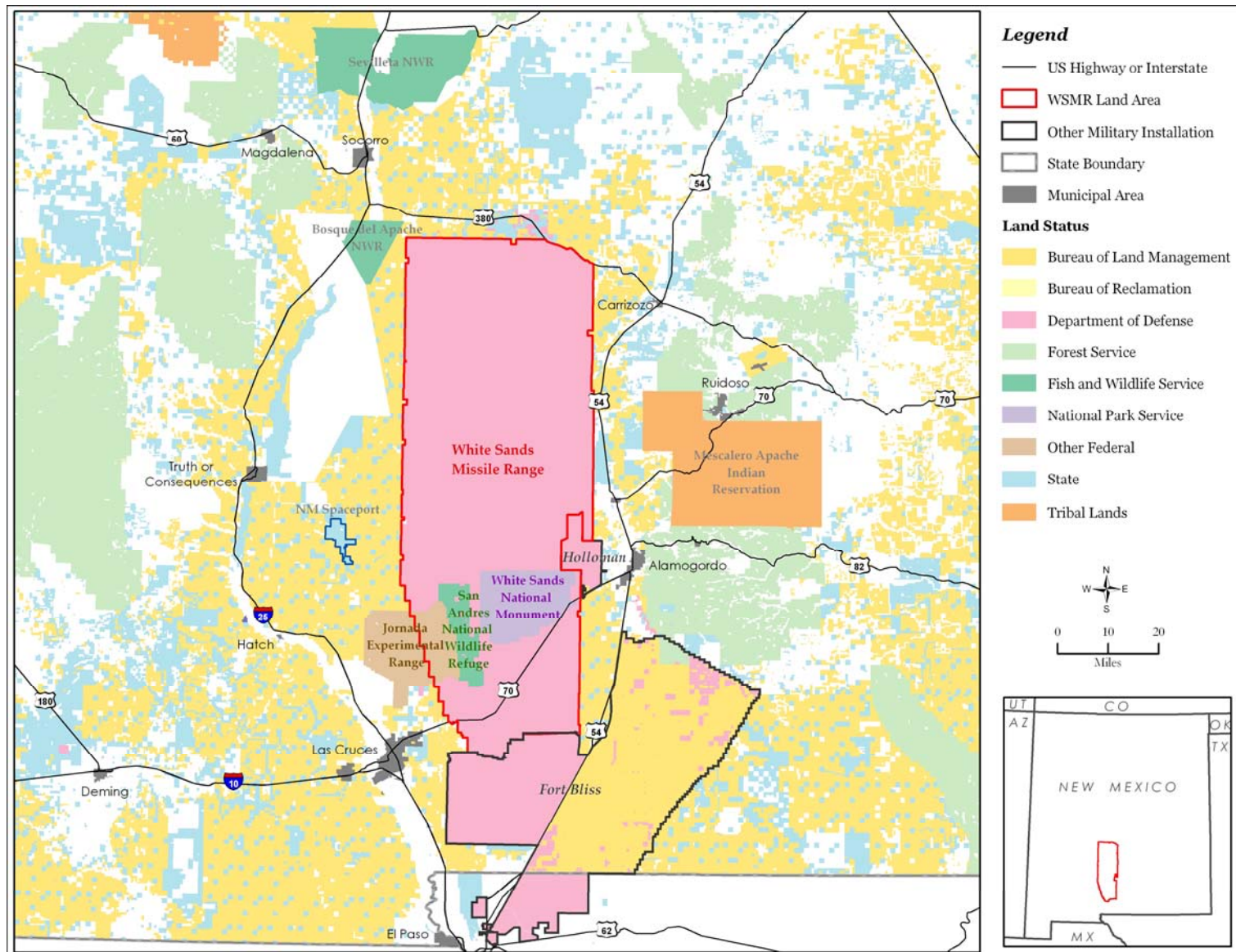
Today, WSMR (**Figure 1-1**) is comprised of approximately 2.2 million acres of land located in south-central New Mexico between the cities of Las Cruces and Alamogordo. The installation is the DoD's largest land-based test range, spanning approximately 40 miles from east to west, and 100 miles from north to south. The WSMR land area (see **Table 1-1**) encompasses two areas that fall under the jurisdiction of Department of the Interior (DOI): White Sands National Monument, operated and managed by the National Park Service (NPS), and San Andres National Wildlife Refuge (SANWR), operated and managed by the U.S. Fish and Wildlife Service (USFWS). Also partially encompassed by the WSMR land area, lies the U.S. Department of Agriculture's (USDA's) Jornada Experimental Range (JER). Co-use of these areas is governed by Memoranda of Agreement (MOA) between WSMR and the managing agency.

Table 1-1. WSMR Land Area (acres)

<i>Area</i>	<i>Acres¹</i>
WSMR (withdrawn) ²	1,926,300
White Sands National Monument	146,000
San Andres National Wildlife Refuge	56,800
Jornada Experimental Range ³	60,600
<i>Total</i>	2,189,700

1. Acres derived from geographic information system (GIS) data.
2. Includes NASA White Sands Test Facility; excludes about 12,000 acres owned by the Department of the Army in Mendiburu Ranch, between the northern boundary of the installation and NM 380.
3. Portion of JER within WSMR boundary.

Figure 1-1. White Sands Missile Range and Surrounding Areas – Land Ownership



In addition to this land, WSMR holds leases and partner agreements with surrounding land owners that allows WSMR to evacuate people in four adjacent “call-up” areas temporarily during some hazardous test events, effectively doubling the size of the land area when required (see **Figure 1-2**). These “call-up” areas total approximately 3,290,400 acres, effectively doubling the size of the land area when required. **Table 1-2** summarizes the acres of this contiguous functional surface area of DoD land and areas used through special agreements. WSMR also has non-contiguous restricted airspace and several non-contiguous parcels (either owned or leased) that support test activities (primarily missile programs) at WSMR. WSMR is bordered on the south by Fort Bliss, which is comprised of approximately 1.1 million acres. Adjacent to WSMR on the east is Holloman Air Force Base (AFB), which is comprised of approximately 59,700 acres. Together, WSMR, Fort Bliss, Holloman AFB, and the “call-up” areas provide nearly 6.6 million acres of contiguous land area to support DoD test and training missions

Table 1-2. WSMR and Surrounding Military Use Lands

<i>Area</i>	<i>Acres</i>
WSMR (plus inholdings)	2,189,700
Fort Bliss	1,112,000
Holloman AFB	59,700
Call-up areas ¹	3,290,400
Total	6,651,800

1. Non-DoD land with evacuation agreements.
2. Acres derived from GIS data. It should be noted that real property records may differ from GIS due to differences in the two systems.

WSMR-controlled Restricted Area airspace is approximately 6.4 million acres in extent. **Figure 1-3** illustrates the regional Restricted Areas overlying WSMR, Fort Bliss, Holloman and Cannon Air Force Bases. Combined, these restricted areas cover approximately 8.8 million acres surface area, providing a regional capability to support activities on WSMR.

Figure 1-4 shows the physiographic context of WSMR and surrounding land ownership within the focus area in more detail. WSMR is located in the Basin and Range physiographic province, characterized by north-south oriented mountains and intervening drainage basins. Approximately one-quarter of the installation is mountainous, and the remaining land is relatively flat high desert. WSMR is roughly bisected from the northeast to the southwest by the San Andres Mountains. Most of the installation lies in the Tularosa Basin, and northwest corner (about one-third of the land area) lies within the Jornada del Muerto valley. Notable land features include the gypsum sands of White Sands National Monument and basalt lava beds in the far north. Located on the northern edge of the Chihuahuan Desert, vegetation consists primarily of desert scrub and grasslands in the basins areas and juniper in the mountains, transitioning to montane coniferous woodlands in the higher elevations.

The southern part of WSMR is bisected by US 70, which connects Las Cruces and Alamogordo. WSMR has a Memorandum of Understanding (MOU) with the New Mexico DOT that allows this highway to be closed periodically during missile firings. The Main Post of WSMR is located on the south end of the installation nestled on the eastern slope of the Organ Mountains.

Figure 1-2. White Sands Missile Range LUASP Focus Area

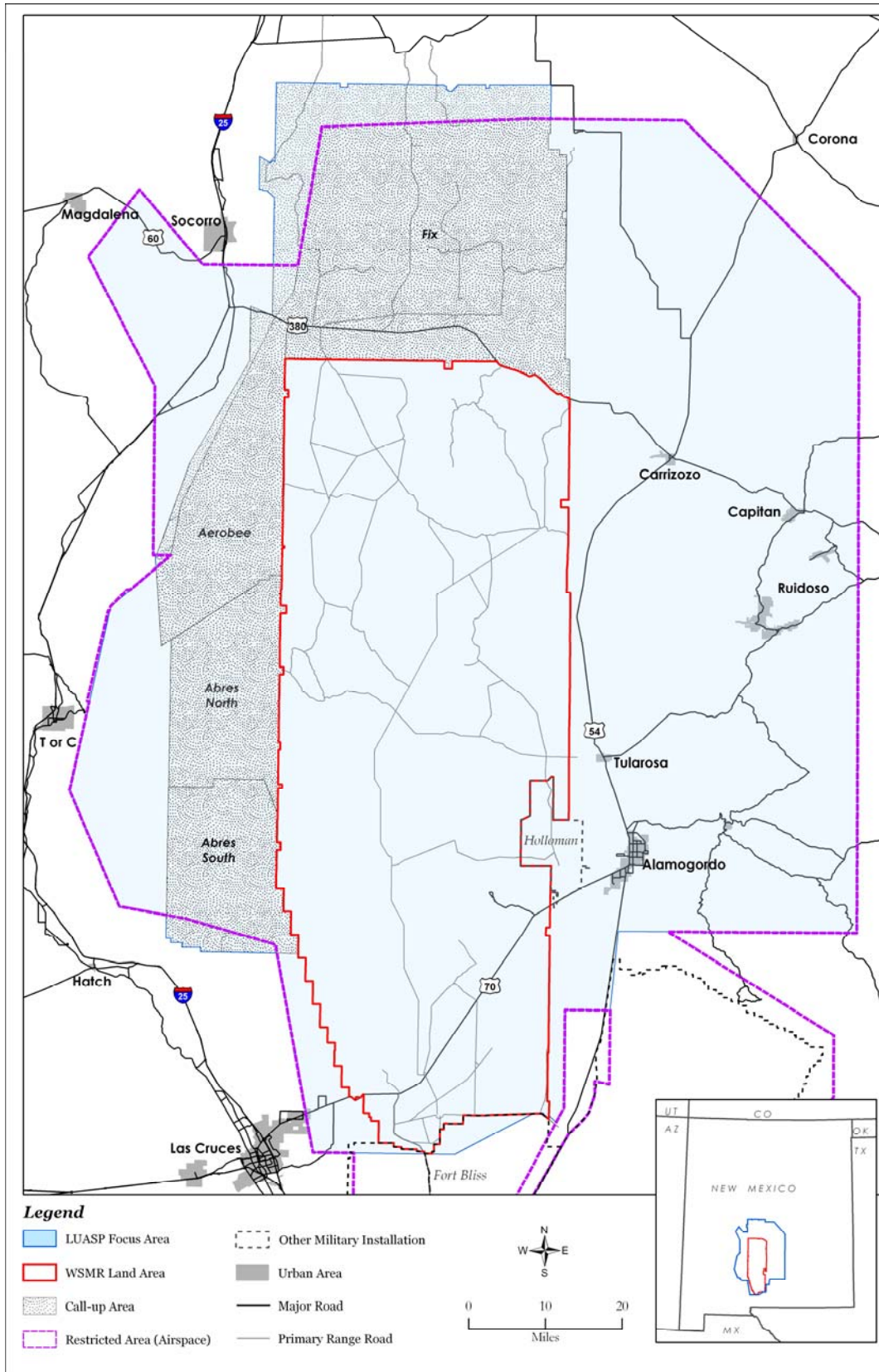


Figure 1-3. WSMR Airspace and Off-Range Regional Military Assets

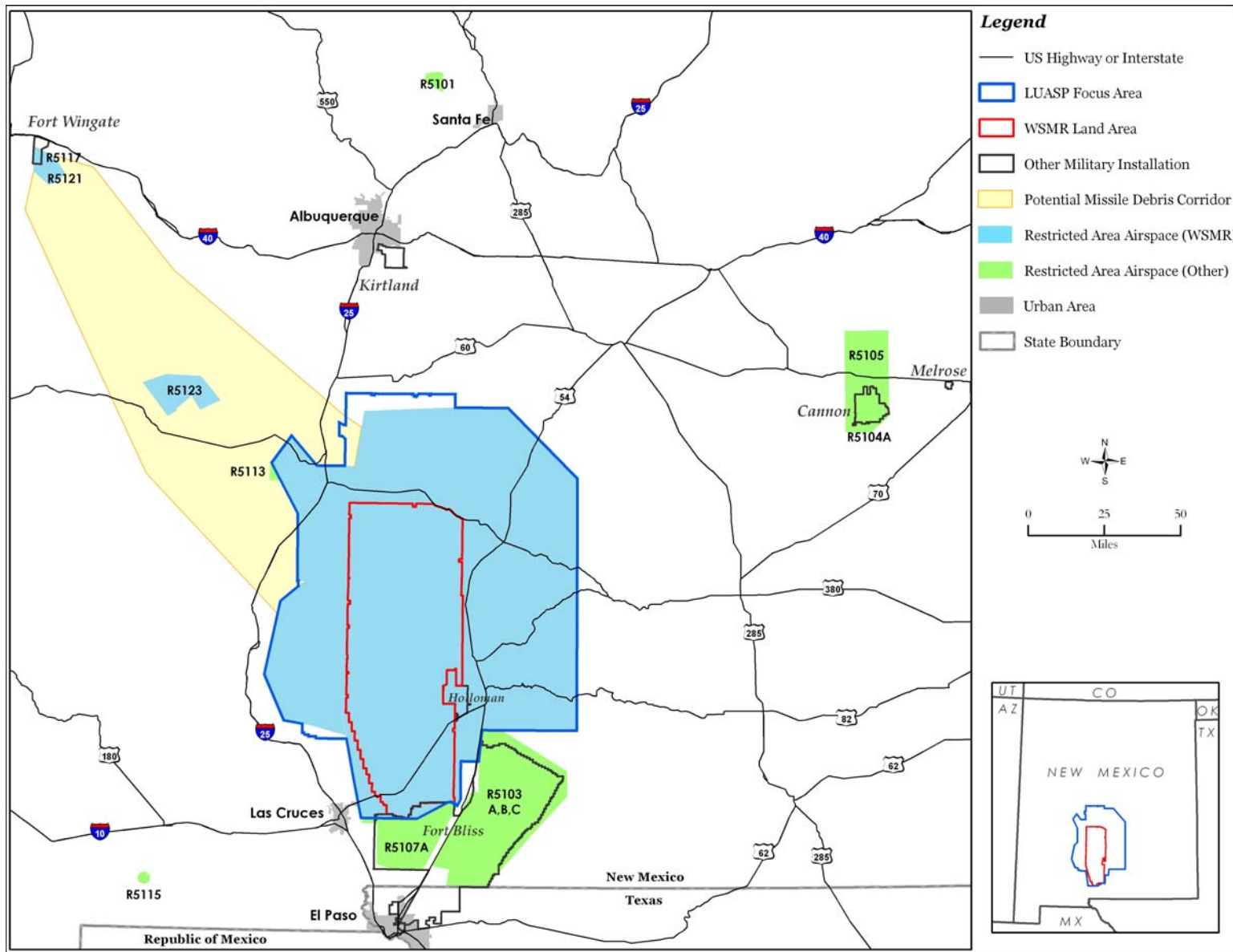
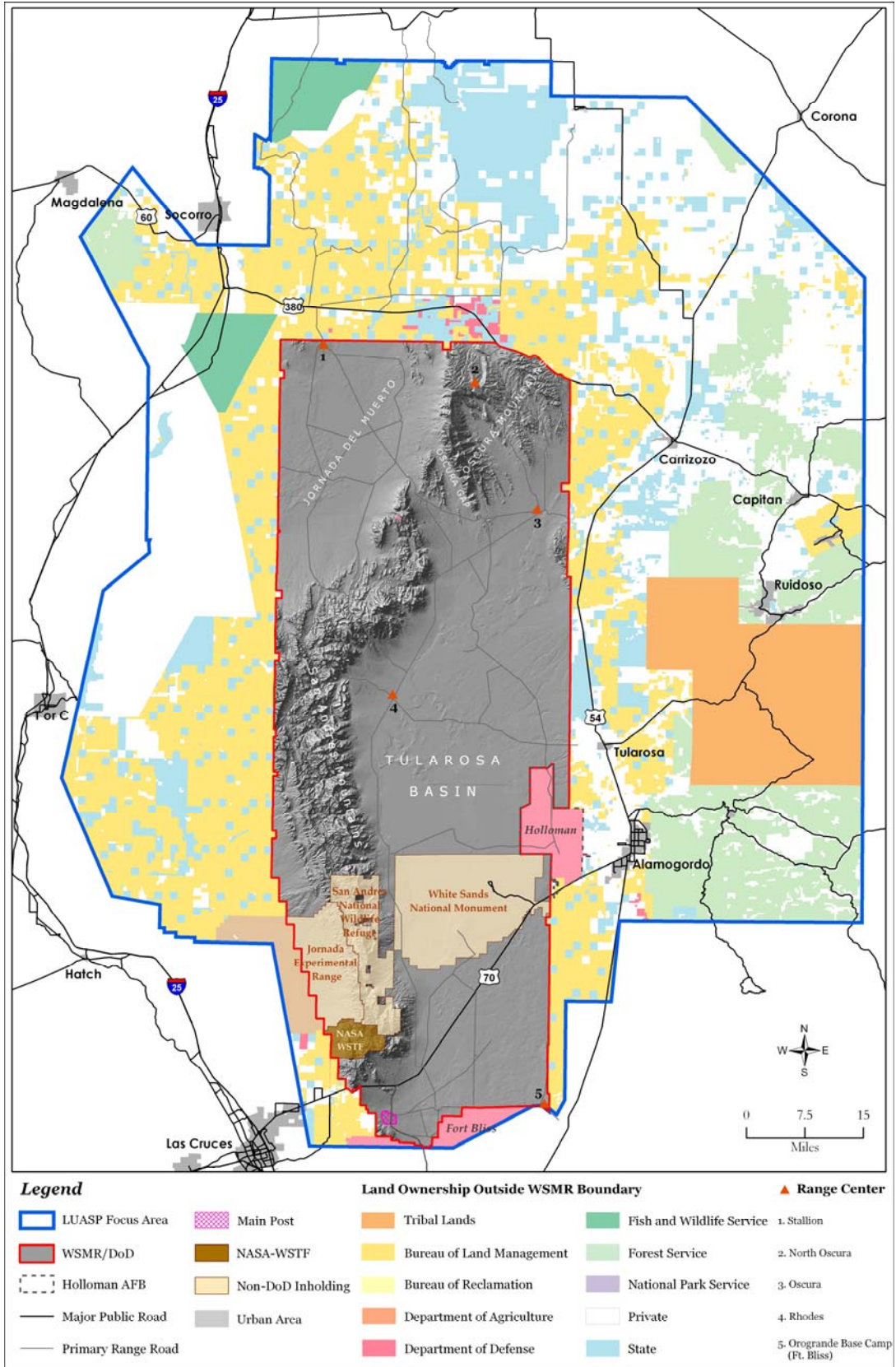


Figure 1-4. WSMR Physiographic Context and Surrounding Land Ownership



1.2 WSMR MISSION

The mission of WSMR as defined in DTC Regulation 10-6 (U.S. Army 2005a) is to “plan, conduct, analyze, and report the results of the developmental tests, production tests, and other tests ... to authorized customers with the DoD, outside the DoD, and to domestic and foreign governments and nongovernmental organizations.” DTC Regulation 10-6 lists the primary capabilities for which facility and technology investments will be made to maintain WSMR as a primary site for the following test programs:

- Aircraft systems-aircraft armaments fixed wing;
- Command, control, communications, computers, intelligence, surveillance and reconnaissance;
- Directed energy weapons (high-powered microwave [HPM], lasers);
- Air/missile defense systems (surface and air-launched platforms);
- Missiles/rockets (nonaviation, non-line-of-site);
- Systems of systems integration (Future Combat Systems, Brigade Combat team level);
- Electromagnetic environmental effects, electromagnetic interference and electromagnetic compatibility, and electromagnetic pulse; and
- Nuclear weapons effects.

WSMR provides Army, Navy, Air Force, DoD, and other domestic and international customers with high quality services for experimentation, test, research, assessment, development, and training through its land, airspace, laboratories, and other specialized capabilities. **Appendix B** provides more detailed descriptions for some of the recent past and current major test programs and activities performed at WSMR.

1.3 PURPOSE AND SCOPE OF THE LUASP

The purpose of the LUASP is to provide a capability-based framework for planning and conducting current and future activities on WSMR. The LUASP establishes a system of classifying the land and airspace components of the installation by delineating broad Land Use Classifications and describing mission activities allowed in each of those components. The LUASP is intended to provide a foundation for the RCMP. It also served as the basis for land use changes and activities analyzed in the 2009 *Development and Implementation of Range-Wide Mission and Major Capabilities Environmental Impact Statement* (EIS). As such, it provides conceptual direction for locating future facilities and improvements and assessing the environmental impacts of similar missions and activities.

The goals of the LUASP are to:

- Assist Team WSMR in making best use of the installation’s assets and resources;
- Preserve the predominance of WSMR’s developmental test, evaluation, research, and assessment mission;
- Ensure that program- and user-specific decisions are based on sound information and priorities;
- Streamline access to the installation for users;
- Maintain the flexibility and capacity to support future missions and users; and
- Ensure a sustainable land base.

The total area of influence addressed by the LUASP, as shown in Figure 1-3, comprises the land and airspace controlled and managed by WSMR and major adjunct areas supporting WSMR test programs. The main area addressed in the LUASP (the focus area shown in Figure 1-2) encompasses the contiguous land mass and airspace of WSMR, including the WSMR land area, non-DoD inholdings within the WSMR land area, overlying and adjacent Restricted Area airspace controlled by WSMR, and call-up areas to the north and west where the Army has leases and agreements for limited use of the land as a safety area during some missile firings. This combined area, referred to as the LUASP focus area, has a total surface footprint of approximately 6.9 million acres.

The LUASP focuses planning on the WSMR Range, defined as land outside the Main Post and other built-up areas (such as Condrion Field, Stallion Range Center, and a few discrete areas.) Planning for the built-up areas is governed by *AR 210-20 Real Property Master Planning for Army Installations* that emphasizes real property management and capital improvements and investment (U.S. Army 2005b). The emphasis of the LUASP is on land and airspace activities and the use of these assets. Adjunct areas considered on a limited basis include Fort Wingate and the intervening airspace used during missile firings (see Figure 1-3). Adjacent military installations of Fort Bliss and Holloman AFB provide limited potential to support an expanded operational area for selected purposes; however, each installation is responsible for the planning and maintenance of its own real estate and ground assets. As such, WSMR has no role in planning the use of land on Holloman AFB or Fort Bliss. Associated Restricted Areas are designated and used for military purposes in accordance with Federal Aviation Administration (FAA) regulations.

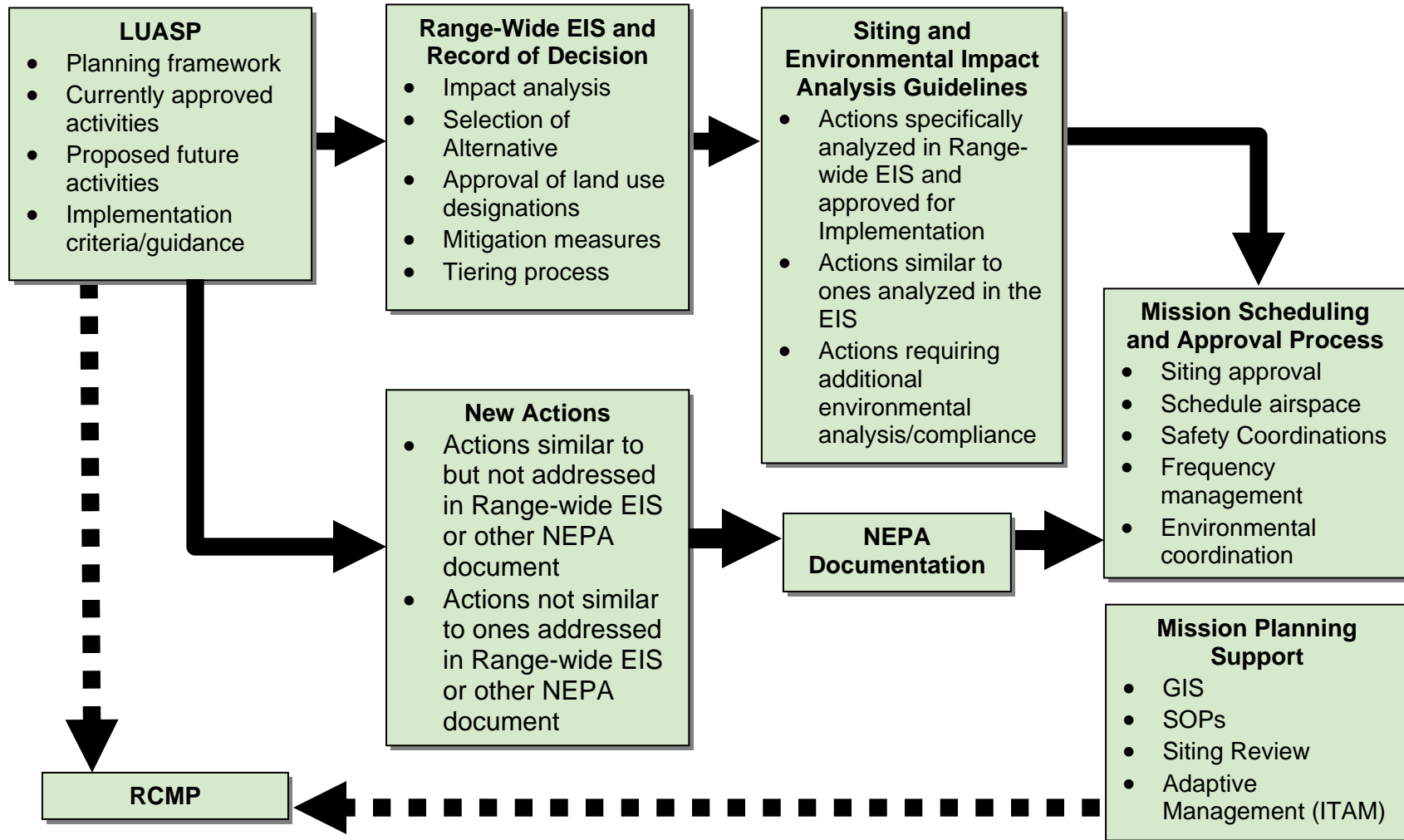
The LUASP is the first step in a four-step process, shown in **Figure 1-5**, to facilitate and streamline use of WSMR range areas and resources. The land use changes proposed in the LUASP have been included in Chapter 2 of the *2009 Range-wide EIS*, which assessed the environmental effects associated with the proposed LUASP framework, and adopted through the ensuing Record of Decision (ROD). Future use and development will follow a set of siting and environmental impact analysis guidelines derived from the EIS analysis. All requests for range use will continue to require review and approval, but the approval process will be substantially shortened for most activities because they will already have been analyzed in the *2009 Range-wide EIS*, or will be similar to activities analyzed in the EIS, requiring only a focused environmental review addressing only the activities and resources of concern. Ultimately, mission planning, siting, and scheduling will be facilitated with the availability of supporting data and documentation, including GIS maps and standard operating procedures (SOPs).

This document represents a compilation of information gathered from personal interviews, meetings, and work sessions with key Garrison, Test Center, and Team WSMR personnel. It includes activities at various stages of definition. As such, National Environmental Policy Act (NEPA) compliance for the activities will also be conducted in stages. The land use classifications and activities have been evaluated in the *2009 Range-wide EIS* at varying levels of specificity. Some of the infrastructure developments, activities, and Specialized Areas will need additional NEPA analysis when they are better defined. WSMR will coordinate its vision concepts with adjacent agencies to formulate compatible arrangements and expectations for implementing the final adopted plan.

The LUASP contains the following chapters and appendices:

- Chapter 2 presents the vision statement that guides the development of the LUASP.
- Chapter 3 defines the LUASP land use and activities classification system.
- Chapter 4 describes current conditions and authorized activities on WSMR using the LUASP classification system.
- Chapter 5 identifies proposed changes in the Land Use Classifications, authorized activities, and supporting facilities.
- Chapter 6 describes the process for implementing the LUASP and obtaining approval to conduct activities authorized in various areas of the installation.
- Chapters 7 and 8 provide a list of references and a glossary, respectively.
- Appendices A through C provide additional background information about organizations and activities at WSMR. Appendix D presents site selection criteria identified in the *2009 Range-wide EIS* that can reduce adverse environmental impacts to selected resources.

Figure 1-5. Range Planning and Environmental Analysis Process



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2.0 THE VISION STATEMENT

The vision of White Sands Missile Range is articulated in DTC's Strategic Plan (U.S. Army 2003) and described in the WSMR Strategic Plan (WSMR 2006a) and on the WSMR website (WSMR 2007a) as follows:

- Become the leading live and virtual range facility for component, integration, and joint system of system efforts in support of wartime efforts and transformation;
- Provide the best, most innovative, flexible services to customers and the most desirable place to live and work;
- Aggressively expand the customer base of traditional and nontraditional DoD, other government agencies, foreign military, and commercial programs;
- Become renowned for excellence as a solutions based organization as well as a capabilities based provider;
- By harnessing the combined power of all members of the diverse WSMR Team and regional partners, become a unique force with unlimited potential.

The Strategic Plan prepared by DTC in 2003 focuses on defining overarching values, goals, and mission objectives for the installation. It provides a framework for the "institutional environment" whereas, the LUASP is a translation of current and desired capabilities into a framework of land and airspace uses, based on multiple activities occurring on the installation. Core competencies identified for WSMR in DTC's Strategic Plan are closely aligned to the DTC 10-6 capabilities (see Section 1.2).

Based on this overall vision for WSMR, the following vision statement was developed to guide the LUASP:

Establish a flexible, capabilities based land and airspace framework able to adapt rapidly to evolving customer needs and support a full range of efforts from individual components up to major Joint programs employing a wide array of new and innovative technologies.

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3.0 RANGE LAND USE STRATEGY CLASSIFICATION SYSTEM

The basic approach to the LUASP classification system consists of three main steps:

1. Defining broad Activity Categories that encompass and group mission activities conducted at WSMR according to their effects on the land and the environment.
2. Establishing broad Land Use Classifications that subdivide components of the WSMR focus area according to land and airspace status, authorizations, and agreements.
3. Correlating Activity Categories and Land Use Classifications (using a matrix) to identify the types of activities that can be conducted in each component of the focus area, along with any restrictions and conditions of use that apply to specific activities within the broad Activity Categories or Land Use Classifications.

The Activity and Land Use Categories are based on current and projected user requirements and activities and existing capabilities and constraints.

3.1 ACTIVITY CATEGORIES

WSMR and the Team WSMR organizations support a very diverse spectrum of test and training activities. These have been grouped into 16 Activity Categories described in **Table 3-1**. Activities were identified through review of existing documents, interviews with key personnel from the TC, Garrison, and Team WSMR organizations, and through focused workshops. The categories represent both activities and physical augmentation on the installation (such as facilities or infrastructure that enable activities). Activities have a spatial context (i.e., where they occur), and a temporal context (e.g., continuous/intermittent, permanent/temporary, weekly/monthly). The focus of the LUASP is on the spatial context of activities.

The descriptions of activities in Table 3-1 are a synopsis of what is currently authorized at WSMR; however, most activities are subject to review and approvals, procedures, and conditions. These are found in WSMR regulations, permits, SOPs, mitigation measures defined in environmental documentation (such as EISs, Environmental Assessments [EAs], and Record of Environmental Considerations [RECs]), and test plans. Chapter 6 provides additional information on current measures and conditions used to manage resources and activities on WSMR.

Table 3-1. Activity Categories

<i>Activity Category</i>	<i>Description</i>
Mission Support Facility	Facilities, equipment, and infrastructure supporting missions and programs (such as instrumentation sites, roads, communication networks, missile assembly buildings, laboratory, block house). Includes the use/occupation of such amenities, construction and development of facilities, equipment, and infrastructure supporting test and training missions.
On-Road Vehicle Use	Travel on established roads and trails (both paved and unpaved) by wheeled and/or tracked vehicles within the design limitations of the roadway; may include parking of vehicles along shoulders or prepared surfaces (e.g., gravel, asphalt pad).
Off-Road Vehicle Use (lightweight) ⁽¹⁾	Off-road vehicle use for test, training, data acquisition, range management, or recovery operations involving vehicles with minimal environmental impact. Limited to vehicles with maximum loaded weight of 1,500 pounds; speed limited to maximum of 25 miles per hour.
Off-Road Vehicle Use (other)	Manned or unmanned off-road vehicle use involving either wheeled or tracked vehicles (greater than 1,500 pounds and over 25 miles per hour) for test, training, data acquisition, range management, or recovery operations.
Dismounted Operations	Pedestrian activities such as foot Soldier maneuvers, personnel in field for test set-up and breakdown, environmental conservation actions, recovery operations – without digging.
Field Operations	Dispersed activities (generally on foot or all-terrain vehicles) that may involve ground disturbance, for example, digging to place sensors, digging foxholes, bivouacking, post mission retrieval of weapons debris (outside of impact areas). Portions may be excluded from use due to environmental or other constraints such as slope, soil type, habitat sensitivity, cultural sites, unexploded ordnance (UXO) hazards.
Surface Weapons Firing (surface-to-surface, surface-to-air)	Firing/release of live or inert munitions or countermeasures. Includes use of direct and indirect fire weapons both at discrete firing ranges, or firing from fixed or moving platforms on the ground into a designated impact area. Includes use of munitions (bombs, grenades, artillery), missiles, rockets, approved chemical simulants, and smoke and obscurants. Firing can be accomplished via a fixed, mobile, or temporary launch site.
Airborne Weapons/Munitions Release (with evacuation)	Firing weapons (munitions, missiles) from airborne platform such as fixed or rotary wing aircraft, balloon, rocket, unmanned aircraft systems (UAS), or spacecraft at air or ground targets. Also includes carrying and release of air-launched targets, air-drop of sensors/equipment from air vehicles. Requires underlying land to be evacuated.
Airborne Weapons/Munitions Release (without evacuation)	Release from airborne platform of approved chaff and flare types, satellites, balloons, specified smoke and obscurants, and other weapons or munitions not requiring evacuation of underlying land. Includes carrying of weapons but not in armed mode.

Table 3-1. Activity Categories (Continued)

<i>Activity Category</i>	<i>Description</i>
Directed Energy Systems	Activities involving use of non-ionizing Radio Frequency (RF) radiation including directed energy threats (lasers, HPM, electromagnetic spectrum (to include wide-band, ultra wide band and narrow band RF sources); unconfined use of directed energy weapons, devices, and countermeasures; requiring frequency coordination. Uses may include tracking systems and radars, threat systems (red on blue, blue on red, or blue on blue) and jamming (including global positioning system [GPS] bands). May include ground-based or air platforms such as air-to-air airborne laser (ABL), and air-to-ground advanced tactical laser (ATL). Includes operations at indoor (confined) and outdoor directed energy test beds.
Instrumentation and Communication Systems	Use of electromagnetic and other systems (emitters, radars, microwave equipment, target control, telemetry, optical tracking, communication systems) that are non-hazardous due to either power output or distance; simulated target acquisition; signal intelligence operations that support mission activities.
Weapons Impact	Use of targets for munitions impact with potential for safety hazard during impact events and from UXO. Confined to specified areas. This category includes removal of all hazardous debris either immediately after mission or on periodic clean-up schedule. Includes Phase II Weapons Impact Target (WIT) sites ⁽²⁾ and Phase I WITs ⁽³⁾ . Limited access only for persons with requisite training in the hazards of UXO.
Surface Danger Zone (SDZ)	Creation of safety hazard within specified safety footprint requiring evacuation of personnel on the ground during mission/event. May be from ground-based (e.g., surface-to-surface or surface-to-air missile firing or other munitions) or airborne (air-to-ground bombing) activity.
Airspace Danger Zone (ADZ)	Creation of safety hazard to non-participating aircraft requiring Restricted Area airspace. Hazard may be created by ground-based or airborne weapon/system. Assumes no surface hazard but may be combined with SDZ if surface hazard also exists.
Air Vehicle Operations	Airspace use by fixed wing, rotary, UAS, full and sub-scale drones, space vehicles, or balloons requiring special-use airspace.

1. This definition of "lightweight" does not reflect any current Army formulas. Instead, it was devised by the LUASP working group as a way to distinguish between vehicle activities that are likely to cause environmental concern from those may not.
2. Phase II impact areas are designated as Warhead Impact Target (WIT) areas and are specifically designed for testing tactical configuration submunitions where the fusing system will detonate the lethal mechanism as intended in the productive configuration design. The submunitions tested in these impact areas are lethal (live). Recovery or any type of handling is normally not allowed, with dud munitions being exploded in place. These areas are maintained in a bare ground (bladed) condition. The Phase II impact areas are also used to conduct insensitive munitions testing in accordance with MIL-STD-2105 on special items, warheads with multi-cargo lethal payloads, smart munitions, or munitions exceeding specified total explosive weight limits.
3. Phase I impact areas are used exclusively to test submunitions that have live detonators in the fusing system, but contain an inert main charge, telemetry-type-submunitions, totally inert submunitions with no detonators in the fusing system, or mass model type submunitions. The submunitions tested in these impact areas are non-lethal; recovery and analysis are allowed. These areas are generally maintained in a mowed grassland condition.

3.2 LAND USE CLASSIFICATIONS

Land Use Classifications established under this LUASP primarily reflect the administrative status of land areas and overlying airspace and the associated limitations on use. Seventeen discrete Land Use Classifications involving various combinations of land status and airspace designation at WSMR are listed in **Table 3-2**.

Table 3-2. Land Use Classifications

<i>Land Use Classification</i>	<i>Title</i>	<i>Description</i>
A	Primary Test Zone	WSMR land used to support a variety of test and management activities; approved for light off-road vehicle use; divided into sub-areas for planning purposes, may include hazardous activities with scheduled deconfliction of other uses.
B	Range Centers and Built-Up Areas	Includes Main Post and Stallion, Rhodes Canyon, Oscura, North Oscura Range Centers and Orogrande Base Camp; physical development of the Main Post is addressed under a separate planning process from the LUASP.
C	Augmented Test Zone	Same uses as Classification A, plus off-road activity by tracked and wheeled vehicles, subject to archaeological survey and environmental approval. Portions may be excluded from use for environmental conditions such as slope, soil type, habitat sensitivity, cultural site.
D	Impact Area	Active impact area with UXO hazard. Entry limited to EOD or approved personnel.
E	Lava Flows	Uses limited by geologic context; not suitable for heavy vehicles.
F	Jornada Experimental Range	Uses governed by MOU for co-use; WSMR can use as safety area (or SDZ) for conducting testing mission. WSMR uses include fire protection, clearing mission-related debris and removal of UXO as needed, and scheduled evacuations for test missions. MOU may be revised based on WSMR mission needs and consultation process. JER uses primarily related to environmental stewardship and land management. Both parties may construct facilities and structures, roads, and infrastructure with mutual review; but WSMR has mission priority.
G	White Sands National Monument Co-Use Area	Uses governed by MOA and Interagency Agreement; military and test uses included temporary location of mobile instrumentation on existing roads, removal of debris, duds and UXO. New test-related development discouraged, and no planned (test) impacts permitted; WSMR adheres to National Park Service regulations; access by Monument personnel allowed except during missile test activity or for national security purposes
H	Conservation/Protected Area	Areas off-limits to ground activity; includes SANWR, White Sands National Monument (excluding WSMR Co-Use area-see Classification G). Access and use restricted by MOUs and agreements.

Table 3-2. Land Use Classifications (Continued)

<i>Land Use Classification</i>	<i>Title</i>	<i>Description</i>
I	Dedicated Use Area	Within WSMR boundary, reserved for exclusive use of one user. Includes NASA WSTF, NRTF, Nuclear Effects complex, and RAMS sites
J	Special Call-Up Area (within Restricted Area airspace)	Periodic evacuation during missile firings; limited ground use such as launch sites and impact areas subject to special agreements with land owners.
K	General Call-Up Area (within Restricted Area airspace)	Periodic evacuation during missile firings; subject to agreements with land owners.
L	Ground Only Call-Up Area (outside Restricted Area airspace)	Periodic evacuation during missile firings subject to agreements with land owners. No surface use.
M	Restricted Area Airspace Only (overlying DoD land outside WSMR and call-up areas – from surface)	Airspace use in accordance with FAA regulations, by NOTAM. WSMR conducts weapons firings using facilities at Holloman AFB and Fort Bliss following procedures, approvals, and restrictions of those installations.
N	Restricted Area Airspace Only (overlying non-DoD land and outside call-up areas – from surface)	Airspace use only, in accordance with FAA regulations, by NOTAM. No surface use.
O	High Altitude Restricted Area Airspace (outside DoD land and call-up areas)	Airspace use only above FL 240, in accordance with FAA regulations, by NOTAM.
P	Unrestricted Airspace (with approval)	Intermittent airspace use, in accordance with FAA regulations, for weapons fired from off-range (outside LUASP focus area).
Q	Non-Contiguous WSMR Land	Includes areas such as Green River, Fort Wingate, and leased areas that contain instrumentation sites (outside LUASP focus area).

DoD	Department of Defense	NOTAM	Notice to Airmen
EOD	Explosive Ordnance Disposal	NPS	National Park Service
FAA	Federal Aviation Administration	NRTF	National Radar Test Facility
FL	Flight Level	RAMS	Radar Cross Section Advanced Measurement System site
JER	Jornada Experimental Range	SANWR	San Andres National Wildlife Refuge
LUASP	Land Use and Airspace Strategy Plan	SDZ	Surface Danger Zone
MOA	Memorandum of Agreement	UXO	Unexploded Ordnance
MOU	Memorandum of Understanding	WSMR	White Sands Missile Range
NASA	National Aeronautics and Space Administration	WSTF	White Sands Test Facility

3.3 LAND USE-ACTIVITY MATRIX

Table 3-3 identifies the Activity Categories that occur in each Land Use Classification, subject to coordination, approval, and, in some cases, conditions or restrictions. For example, new test programs have a Range Sponsor who is the point of contact for a process involving test planning, review and coordination. The sponsor assists the test proponent with planning all aspects of the test so that all activities comply with WSMR procedures and regulations. Depending on the mission, this process may include a safety analysis, flight termination system [FTS] planning, frequency coordination, hazardous materials and waste management planning, construction and siting review. All missions require some level of environmental review.

Safety analysis considers any hazards associated with the mission and define the size of any area that needs to be cleared of non-participating persons and aircraft. The frequency coordination evaluates potential conflicts between wavebands (and power levels) used by the test mission with those used by WSMR range control, other users on the installation and commercial and public wavebands and uses. Areas of operation or activities may be limited due to ground safety concerns (such as UXO hazards) or due to environmental constraints. For example, critical protected habitat or cultural and archaeological sites may be off-limits to surface activities. Restrictions may also apply to reduce dust or emissions generated by mission activities.

For areas not managed by WSMR (including the non-DoD inholdings), only activities that are approved through existing agreements are specified in Table 3-2. These areas, such as Holloman AFB, may support a wide variety of activities that may be available to WSMR through appropriate coordination and permissions.

Table 3-3. Activity Categories Occurring in Each Land Use Classification

<i>Land Use Classification</i>	<i>On-Road Vehicle Use</i>	<i>Off-Road Vehicle Use (lightweight)</i>	<i>Off-Road Vehicle Use (other)</i>	<i>Dismounted Operations</i>	<i>Field Operations</i>	<i>Surface Weapons Firing</i>	<i>Airborne Weapons Release (evacuation)</i>	<i>Airborne Weapons Release (no evacuation)</i>	<i>Directed Energy Systems</i>	<i>Instrumentation & Communication Systems</i>	<i>Weapons Impact</i>	<i>SDZ</i>	<i>ADZ</i>	<i>Air Vehicle Operations</i>
A	●	●		●	●	●	●	●	●	●	●	●	●	●
B	●	●		●	●			●	●	●		●	●	●
C	●	●	●	●	●	●	●	●	●	●	●	●	●	●
D							●	●		●	●	●	●	●
E		●		●	●		●	●	●	●		●	●	●
F	●			●	●		●	●	●	●		●	●	●
G							●	●		●		●	●	●
H							●	●	●	●		●	●	●
I	●						●	●		●		●	●	●
J	●	●		●	●	●		●	●	●	●	●	●	●
K	●							●				●	●	●

Table 3-3. Activity Categories Occurring in Each Land Use Classification (Continued)

<i>Land Use Classification</i>	<i>On-Road Vehicle Use</i>	<i>Off-Road Vehicle Use (lightweight)</i>	<i>Off-Road Vehicle Use (other)</i>	<i>Dismounted Operations</i>	<i>Field Operations</i>	<i>Surface Weapons Firing</i>	<i>Airborne Weapons Release (evacuation)</i>	<i>Airborne Weapons Release (no evacuation)</i>	<i>Directed Energy Systems</i>	<i>Instrumentation & Communication Systems</i>	<i>Weapons Impact</i>	<i>SDZ</i>	<i>ADZ</i>	<i>Air Vehicle Operations</i>
L	●											●		
M						●		●		●		●	●	●
N								●					●	●
O								●					●	●
P													●	
Q	●					●				●		●		

Note: New Activities require review and approval process, through WSMR Environmental Division and may be subject to limitations or conditions of use to avoid environmental impacts.

4.0 CURRENT LAND USE

4.1 EXISTING CAPABILITIES

WSMR's primary resources as a MRTFB are its extensive land area and airspace, coupled with specialized facilities, range instrumentation, range infrastructure and technical support services. This package provides the capabilities to support a variety of test mission activities, focused on research, development, test, and evaluation (RDT&E), with limited training missions. The wide spectrum of physical assets, facilities, instrumentation and services available on WSMR are described in the WSMR Capabilities Handbook (WSMR 2001a), Developmental Test Command Regulation 10-6 (U.S. Army 2005a), the comprehensive WSMR guide (WSMR 2004a), various environmental documents prepared for test programs, and on the WSMR website (WSMR 2007a). The following section gives a brief overview of these capabilities derived from these existing sources.

4.1.1 Land Area

The 2.2 million acres within WSMR boundary is comprised a variety of physiographic types including: high desert valley floor above 3,000 feet (with low shrubby creosotebush vegetation), wooded mountains, shrubby mountains, barren dry lake beds, sand dunes, lava flows, grasslands, and rugged canyons. The different landscapes provide a variety of natural contexts to meet user needs. For example, mountainous areas provide steep and broken terrain, can serve as a backdrop or shield for munitions or radiating sources, provide upslope and down slope vantage points, or provide opportunities for either unobstructed or obstructed line-of-sight between distant locations.

WSMR is relatively remote, insofar that surrounding areas have extremely low population density, with isolated homesteads and small communities. Larger towns and cities, such as Alamogordo, Las Cruces, and Socorro in New Mexico, and El Paso in Texas, are close enough to provide services and amenities for temporary duty, contractor and resident personnel. These areas are accessible by road via major interstate and state highways.

4.1.2 Airspace

WSMR is the agency responsible for 14 contiguous Restricted Areas, while the U.S. Air Force 49th Fighter Wing operates the WSMR's FAA certified Air Route Traffic Control Center on a continual basis. For these areas, the Commanding General, WSMR, is the designated use agency. Figure 1-3 shows special use airspace that supports WSMR activities (FAA 2006).

Figure 4-1 shows the subdivisions of Restricted Areas within the LUASP focus area in more detail. **Table 4-1** provides the surface footprint of each of these airspace units and its altitude structure. In total, WSMR has 6.4 million acres of contiguous Restricted Area available for its customers. In most cases, there is a "parent" airspace extending from the surface to infinity, and within are layers of airspace blocks dividing the parent airspace into smaller components. This allows for flexibility to schedule airspace for low or high altitude activities simultaneously, when they are compatible. Also shown in Figure 4-1 are non-civilian airfields within the Restricted Areas, which include Holloman AFB, Condon AAF, Stallion Airfield, and White Sands Space Harbor. Underlying R-5111, within the Western Call-Up Area, is the new site of Spaceport America. The spaceport, operated by the New Mexico Spaceport Authority, is located on 18,000 acres of land acquired through agreements with the state of New Mexico, private owners and Sierra County. The Spaceport serves tenants who undertake research and development of commercial-sector space ventures.

Figure 4-1. WSMR Restricted Area Airspace

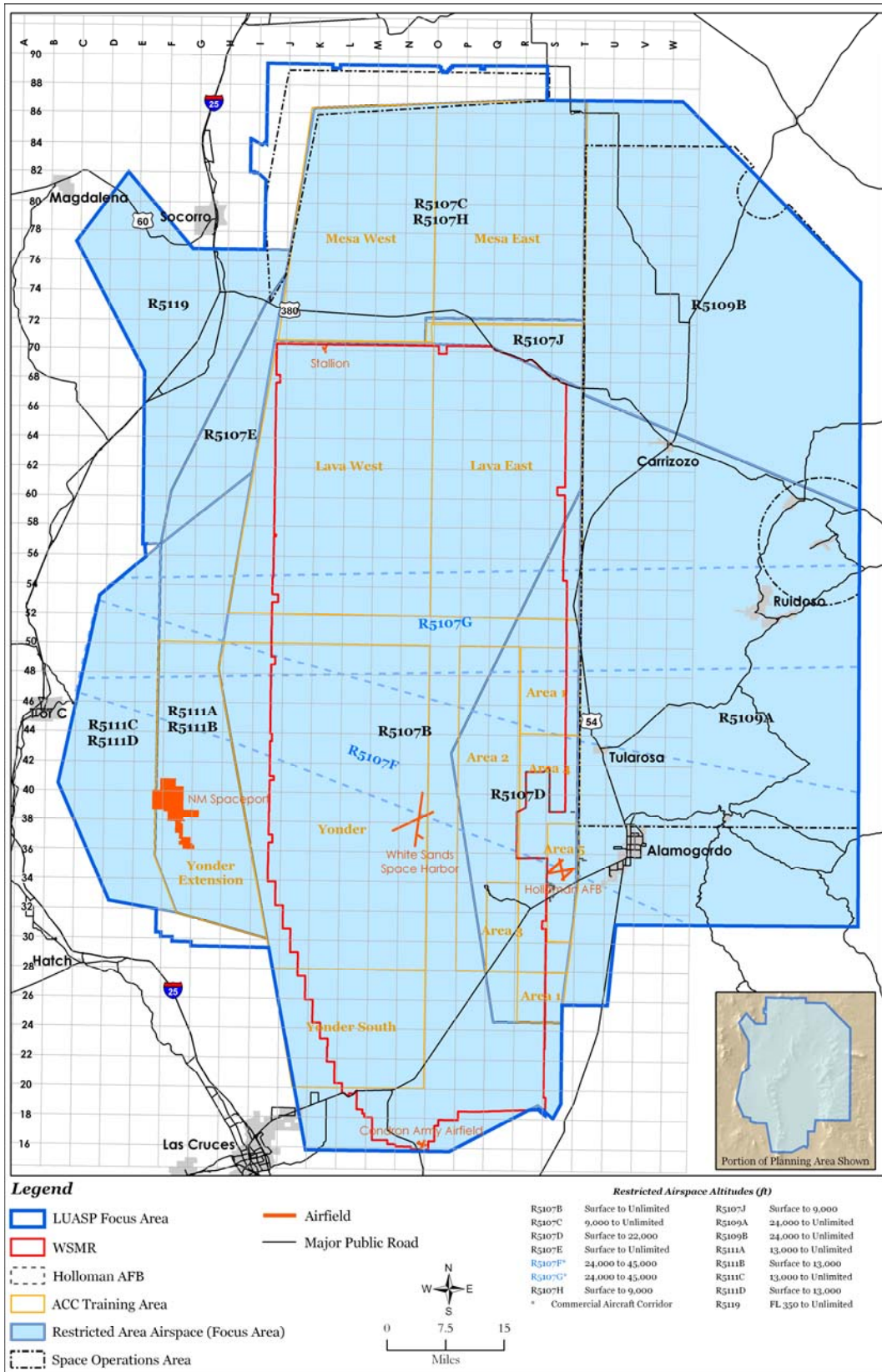


Table 4-1. WSMR Restricted Areas

<i>Restricted Area Description</i>	<i>Airspace Designation</i>	<i>Surface footprint</i>		<i>Altitude (feet Mean Sea Level)</i>	<i>Time of Use</i>
		<i>Square Nautical Miles</i>	<i>Square Miles</i>		
WSMR Range Contiguous Restricted Airspace					
Primary WSMR Restricted	R-5107B	3,140	4,158	Surface to Unlimited	Continuous
subset of primary	R-5107D ¹	552	730	Surface to 22,000	Continuous
subset of primary	R-5107F ²	1,196	1,584	24,000 to 45,000	Continuous Monday through Friday, other times by Notice to Airmen (NOTAM)
subset of primary	R-5107G ²	955	1,265	24,000 to 45,000	Continuous Monday through Friday, other times by NOTAM
Subtotal Primary Restricted Airspace		3,140	4,158		
Northern WSMR Call-Up	R-5107C	815	1,079	9,000 to Unlimited	Continuous Monday through Friday, other times by NOTAM
subset (complete to surface)	R-5107J ³	75	102	Surface to 9,000	Continuous Monday through Friday, other times by NOTAM
subset (complete to surface)	R-5107H ³	815	1,079	Surface to 9,000	By NOTAM
Subtotal Northern Call-up		815	1,079		
Western WSMR Call-Up	R-5111A	404	535	13,000 to Unlimited	By NOTAM
	R-5111B ⁴	404	535	Surface to 13,000	By NOTAM
	R-5111C	318	421	13,000 to Unlimited	By NOTAM
	R-5111D ⁵	318	421	Surface to 13,000	By NOTAM
	R-5107E	128	169	Surface to 60,000	By NOTAM

Table 4-1. WSMR Restricted Areas (Continued)

Restricted Area Description	Airspace Designation	Surface footprint		Altitude (feet Mean Sea Level)	Time of Use
		Square Nautical Miles	Square Miles		
Sub-total Western Call-up		850	1,125		
Northeast WSMR Call-Up ⁶	R-5109A	1,686	2,223	Surface to Unlimited	By NOTAM
Southeast WSMR Call-Up ⁶	R-5109B	1,004	1,330	24,000 to Unlimited	By NOTAM
Subtotal WSMR Call-Up		2,688	3,553		
Total Area (contiguous with WSMR)		7,569	9,915	6,415,089 acres	
OFF-RANGE (non-contiguous) WSMR Airspace					
Fort Wingate, New Mexico	R-5117	22	29	Surface to Unlimited	By NOTAM
Socorro, New Mexico	R-5119	425	563	35,000 to Unlimited	By NOTAM
Fort Wingate, New Mexico	R-5121	38	50	20,000 to Unlimited	By NOTAM
Magdalena, New Mexico	R-5123	152	201	Surface to Unlimited	By NOTAM
Green River, Utah	R-6413	204	270	Surface to Unlimited	By NOTAM
Total Off-Range WSMR Airspace		841	1,114		
TOTAL WSMR RESTRICTED AREA⁷		8,410	9,995	7,128,320 acres	

Source: FAA 2006; WSMR n.d. a

1. Surface footprint is overlain by higher altitude R-5107B and thus does not add to total surface footprint totals
2. Surface footprint is overlain by higher altitude R-5107B, R-5109A, R-5111A, and R-5111C and thus does not add to total surface footprint totals
3. Surface footprint is overlain by higher altitude R-5107C and thus does not add to total surface footprint totals
4. Surface footprint is overlain by higher altitude R-5111A and thus does not add to total surface footprint totals
5. Surface footprint is overlain by higher altitude R-5111C and thus does not add to total surface footprint totals
6. Limited to use for debris fall out, two per month, Holloman primary user as restricted >20,000ft
7. Excluding Fort Bliss Restricted Areas

Except for R-5107B, all the restricted areas are joint-use and provisionally released to the FAA for civilian aircraft under the terms of shared-use agreements. Civilian operations are restricted through Notice to Airmen (NOTAM) issued by FAA. For some, the hours of use by WSMR are specified, while others are requested intermittently for specific tests, upon which FAA issues the NOTAM. R-5107B is approved for continuous use by WSMR.

WSMR also has several smaller non-contiguous Restricted Areas, (i.e., R-5117, R-5119, R-5121, R-5123 and R-6413) that are used intermittently and are cleared of non-participating air vehicles by NOTAM (FAA 2006). These overlie a combined area of approximately 713,000 acres. Agreements are also in place between WSMR and the FAA for the occasional use of airspace during off-range missile firings. The airspace corridor between Fort Wingate and WSMR is an example of this type of airspace. FAA controls this airspace, and may issue NOTAMs to evacuate non-participating aircraft from this area during missile firings. During the initial take off and boost phase, the missile flies in restricted airspace. During the main part of its trajectory, it cruises well above altitudes used for commercial aircraft. The target impact is planned to take place in restricted airspace over WSMR.

During missile firings, large blocks of airspace are scheduled, usually precluding any other airspace or ground activities for the duration of the test. Smaller blocks of airspace can also be scheduled for activities not requiring an entire restricted area. WSMR uses a crash grid, (divided into six kilometer by six kilometer blocks), to designate and schedule smaller increments of land or airspace. This provides more flexibility to conduct simultaneous activities on the installation. The WSMR crash grid is shown in Figure 4-1.

Holloman AFB uses R-5107 C, D, F, G, H, and J, R-511A, and R-5109A and B extensively for training. The Air Force has designated three major airspace training areas—Lava, Mesa, and Yonder—each with subdivisions that are used for scheduling purposes. These areas also allow portions of the larger Restricted Areas to be scheduled simultaneously for different activities. In general, the 49th Fighter Wing at Holloman AFB reserves two-hour blocks of airspace every morning and every afternoon for training (USAF 2006). In addition to Restricted Areas, radar approach controlled airspace has been designated as Areas 1 to 5 around Holloman AFB (see Figure 4-1). WSMR routinely recalls Areas 1 to 3 for research and development mission. Areas 4 and 5 are seldom recalled for test purposes.

The Commanding General, Fort Bliss, is the using agency for four Restricted Areas (R-5107A, and R-5103A/B/C) directly south of WSMR (see Figure 1-3). Fort Bliss holds similar joint-use agreements with the FAA and WSMR.

4.1.3 Specialized Areas and Facilities

WSMR has a wide assortment of specialized test beds, laboratories, and facilities throughout the installation that serve specific functions that are integral to supporting test missions and programs. Different types of facilities and test beds found on WSMR include:

- Special target areas (e.g., Aerial Cable, penetrator warhead tunnels)
- Chemical and Materials Laboratories
- Climatic and Environmental Test facilities
- Dynamic Test Facilities
- Electromagnetic Test Facilities
- Electronic Warfare Test facilities
- High Energy Laser Systems Test Facilities (HELSTF) (for directed energy weapons)
- Information Operations Laboratory
- Launch Facilities

- Nuclear Effects Facilities
- Warheads Test Facilities
- Impact Areas

The WSMR Garrison is responsible for all real property on the installation. Many facilities are Garrison assets, and support the overall operations and management of the installation. DTC has control of several test support facilities. Test facilities are generally “owned” and operated by specific test organizations or test programs under the auspices of a Team WSMR or WSTC proponent. Generally, test facilities are accessible to outside customers under the sponsorship of a WSMR proponent entity. As such, these diverse facilities are part of the overall capability of WSMR.

The real property inventory accounts for approximately 4,200 structures, of which approximately 1,700 are structures (buildings), totaling approximately 5.4 million square feet (**Table 4-2**). The inventory accounts for approximately 7,100 acres of roads, pads, runway/apron and other pavements, of which 45 percent is unpaved (WSMR 2007b). Main Post has 850 structures and approximately 90 are located at one of the range centers. The highest concentration of facilities outside the Main Post is located along Nike Road in the south end of the installation. Some facilities are located outside the WSMR boundary.

Outside the Main Post, most structures are situated in small clusters. The clusters or “sites” have local names. Over 150 site names are used in the real property inventory; however, through review and elimination process during this planning process, 57 sites are considered active and in current use. These are shown in **Figure 4-2**. These sites occupy anywhere from a few acres up to several thousand acres. Several locations in the original data were considered small support sites, or are no longer in use.

Figure 4-2 includes several recently constructed or approved areas that are not yet included in the real property data (for example, the new Joint Directed Energy Test Site [JDETS] range and the Air Force’s Aero Acoustical towers). The current list (provided in Appendix C, Table C-1) has 58 Specialized Areas, covering approximately 257,000 acres of land. Most of these areas have several facilities, ranging from electromagnetic test facilities, missile assembly facilities, nuclear effects and electronic warfare facilities, laboratories, launch sites, munitions storage areas, and targets. Some of these sites can be used by multiple users of test programs, but support a very limited set of activities. In that regard they are more or less exclusive in function. Others can support various activities when not being used for its specialized purpose, such as the White Sands Space Harbor.

4.1.4 Range Instrumentation

WSMR is host to a suite of state-of-the-art range instrumentation equipment including radar, targets, optics, GPS, interferometry, telemetry systems, and other specialized instrumentation. In addition, WSMR has highly skilled personnel that can do data processing and analysis, or provide functional roles (such as simulated or operational threats) to support test programs. **Figure 4-3** shows the location of over 500 fixed instrumentation sites on WSMR. Some of these are co-located with “sites” described above, but others exist as part of a network, providing a support function for the installation. The highest concentration of instrumentation is in the south range (south of White Sands National Monument), and in the mid-range area, where most missile

tests plan their target impacts. More frequently, instrumentation is on mobile platforms that can be deployed in flexible configurations depending on the specific parameters of a given test.

Table 4-2. WSMR Real Property Statistics

<i>Real Property Category</i>	<i>Count</i>	<i>Area¹</i>	<i>Units</i>
WSMR Real Property statistics			
Land Area	–	2,623,000 ²	acres
Facilities	1,702	5,421,000	square feet
Paved – pads, roads, etc.	N/A	4,900	acres
Unpaved – pads, roads etc.	–	2,200	acres
Roads	–	nd	–
Tank Trails	–	15,800	square yards
Equipment items	2,010	–	–
Main Post			
Land Area	–	1,500 ³	acres
Facilities	847	4,000,000	square feet
Range Centers			
Land Area	nd	nd	–
Facilities	91	524,000	square feet
On-Range			
Land Area	–	2,1870,600 ³	acres
Facilities	–	1,399,100	square feet
Off-Range Sites			
Land Area	–	4,100	acres
Facilities	93	nd	–

Source: WSMR 2007b; WSMR 2007c

1. Quantities derived from real property inventory data unless otherwise noted. Figures are rounded to nearest hundred.
2. Derived from real property inventory, includes leased land (not including evacuation area), withdrawn, purchased and land used by permit.
3. Area from GIS calculations.

nd = no data (or insufficient for estimate)

Figure 4-2. WSMR Specialized Areas

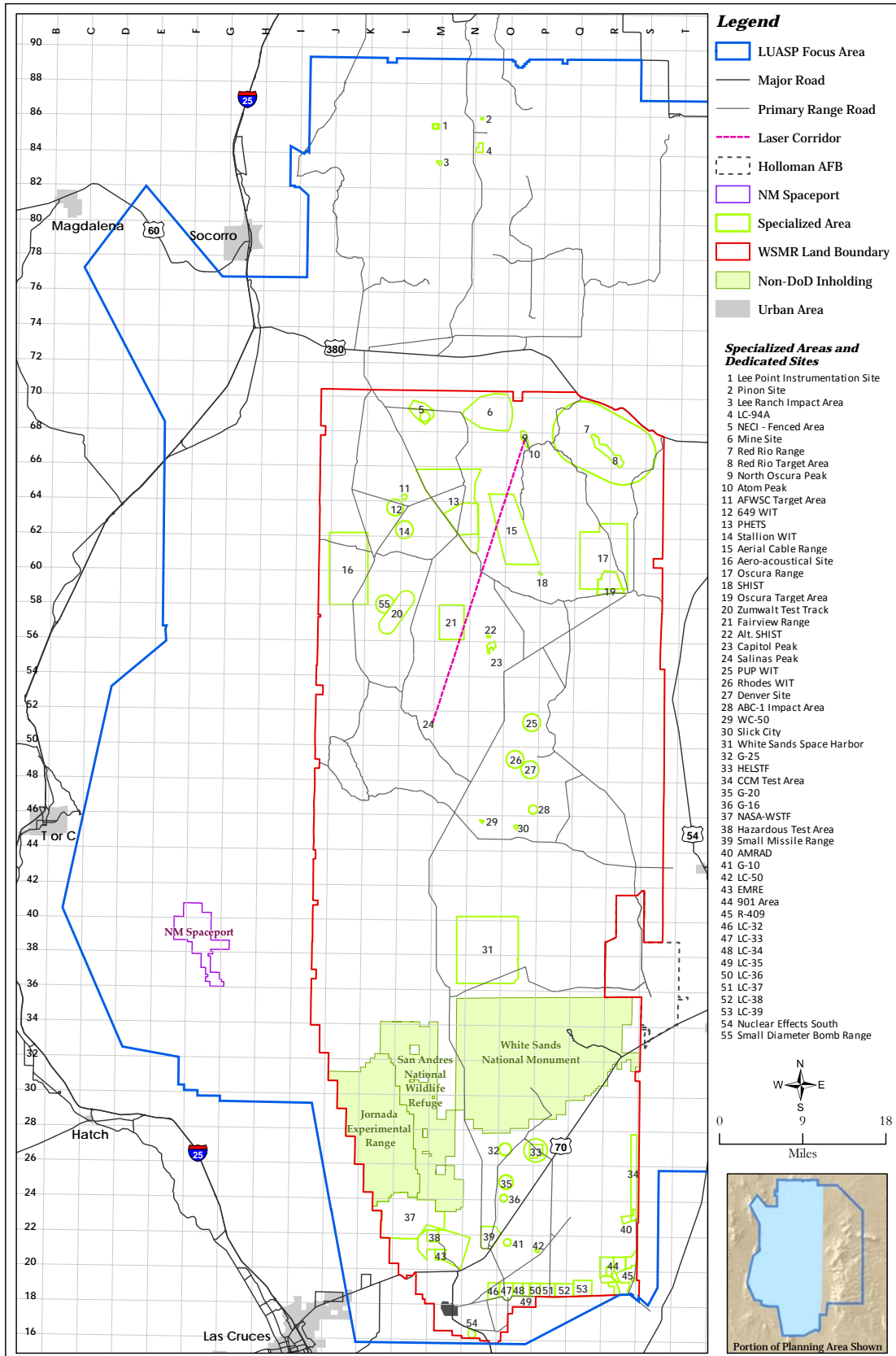
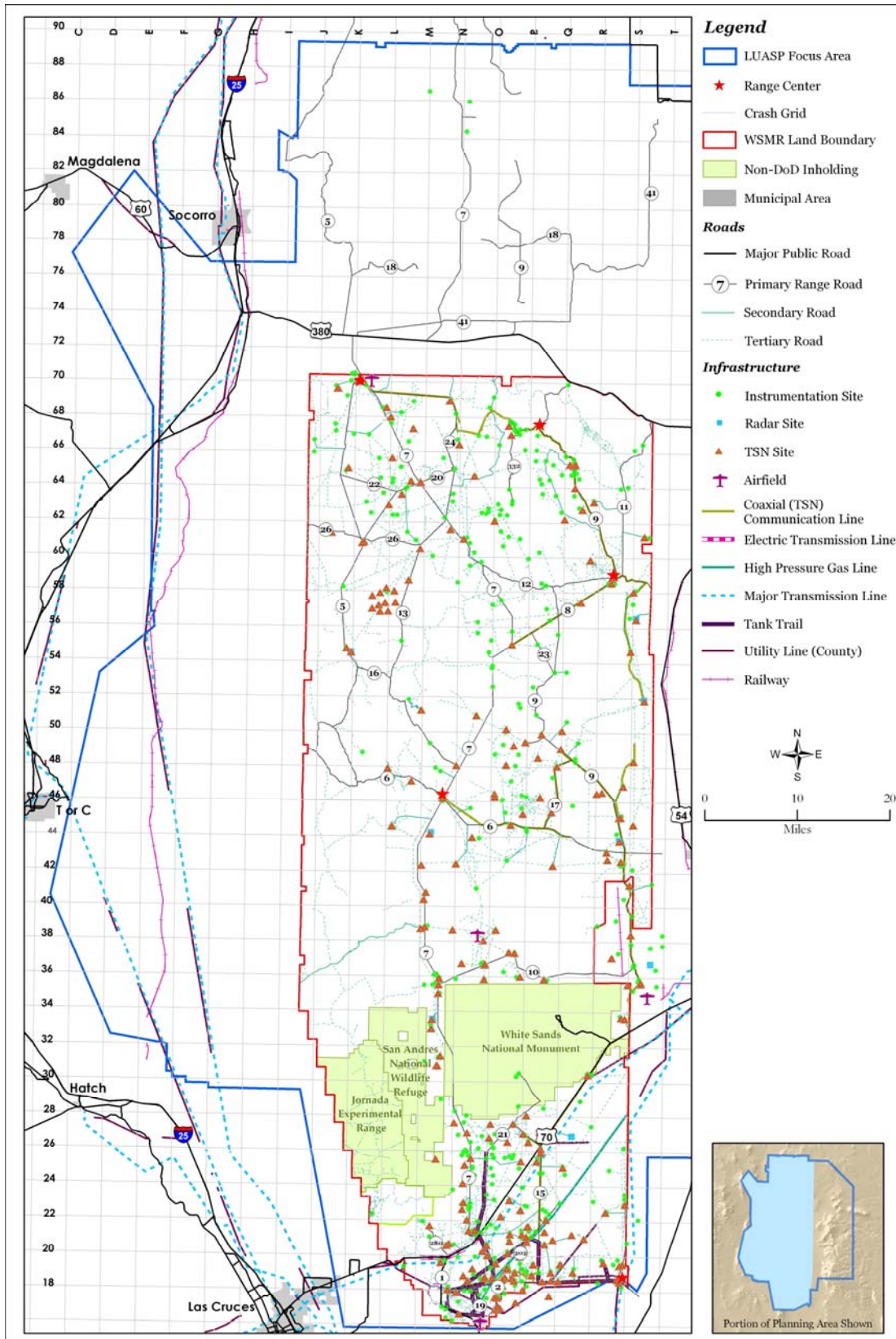


Figure 4-3. WSMR Roads and Infrastructure



A brief description of instrumentation capabilities on WSMR is provided below.

Radar. WSMR provides general range support utilizing instrumentation radars, air surveillance radars, and special purpose radars including a Miss Distance Indicating (MIDI) radar and a Doppler tracking radar. Air surveillance radar operates continually and includes three ASR-9 airport surveillance radars.

Targets. For many tests, WSMR employs the use of drones to test system capabilities and performance. Two system types are used to maintain accuracy and control of targets: the Drone Target Control System and the Drone Formation Control System. Several impact areas have fixed targets (such as military vehicles, wooden structures), several constructed to have the appearance of real-world facilities. The Zumwalt Test Track and Aerial Cable facilities both provide moving or dynamic target capabilities.

Optics. Optical instrumentation is one of the prime sources of data and data analysis for tests. WSMR operates and maintains the White Sands data collection instrumentation complex whose responsibilities include the collection of all real time and post mission data products. Optics instrumentation systems at WSMR include cinetheodolites, Multimode Automatic Tracking Systems, Versatile Tracking Mounts, Distant Object Altitude Measurement Systems, Launch Area Theodolite Systems, fixed cameras, telescopes, and closed circuit systems. WSMR maintains an inventory of approximately 300 cameras that can operate at frame rates from 20 to 2,000 frames per second.

Global Positioning System. WSMR GPS instruments provide a variety of tracking methods for a given target, including the White Sands Advanced Range Time Space Position Information suite. This system consists of two types of GPS tracking sensors: the GPS Advanced Range Data System and the Truth Data Acquisition, Reporting, and Display System. WSMR has the capacity to collect raw data from satellites on a fixed or mobile GPS reference receiver station for use in post-mission data processing. WSMR's GPS systems can also be used as a flight safety-tracking source.

Remote Data Acquisition System Interferometer. The Remote Data Acquisition System Interferometer is a passive system, used to track the position of missiles during flight. They do this by measuring the phase difference of the radiating carrier frequencies along a planned flight path. This system is a key component of the flight safety and the FTS.

Telemetry. WSMR possesses an extensive, optimally-placed system, both fixed and mobile to track and process telemetry data, including tracking and receiving systems, data relay, mobile measurement systems, and a data center. This telemetry system can receive, record, demultiplex, and format data to meet Inter Range Instrumentation Group 106 telemetry standards.

4.1.5 Range Infrastructure

Range infrastructure, comprised of the transportation, utility and communication networks, are shown on Figure 4-3 to the extent mapped.

Roads and Tank Trails. WSMR maintains access to much of the installation via a widespread network of primary and secondary range roads. Primary range roads are often paved and/or clearly defined. Secondary roads can be dirt, gravel, or two tracks. Other non-delineated roads may exist throughout the Range. US 70 cuts a line running roughly southwest to northeast though the southern portion of the Range and Interstate 25 roughly parallels the planning area for

much of its western edge. NM 380 runs parallel to the far northeastern boundary of the Range and NM 54 roughly parallels the eastern Range boundary. Some areas under special agreement (White Sands National Monument, JER, and SANWR) are not accessible for WSMR testing/operations via roads. A network of tank trails is located south of US 70. No known rail lines are maintained within the boundary of WSMR. Historic spur lines run to Orogrande Range Camp and Red Rio Bombing Range from the Southern Pacific rail line along US 54.

Communication Networks. In order to maintain communication to all portions of the Range, WSMR has a complex communications system in place. This includes standard telephone lines, coaxial communication lines, microwave equipment, RF, and other forms of transmission. As with other infrastructure, communication networks are more heavily concentrated in the southern portion of the installation.

Utilities. Electricity, water, sewage, and natural gas are necessary to maintain the residences of range personnel as well as support various missions. An extensive system supplies these to personnel stationed throughout the installation, with the highest concentration of infrastructure in the southern portion of the installation. In more remote areas of the installation, water is supplied either from wells, or is transported into the area by truck or obtained from a centralized distribution point. Mobile and remote operations use portable generators for power supply where no ground-based source is accessible.

Range Centers. WSMR maintains and operates four distinct range centers (Stallion, Oscura, North Oscura, and Rhodes) located in the central and northern portions of the installation. Each serves as a nerve center, planning area, or offers logistical support for ongoing range operations up to and including telemetry, instrumentation, radar, data, communications, supplies, and other mission-related support. Orogrande Range Center, at the southeast corner of the installation, is located on Fort Bliss property. New test programs are using this camp, situated close to major test facilities along Nike Road, for billeting Soldier test participants, and for staging test phases that require a built-up environment.

Airfields. Within the WSMR boundary three airfield facilities are available for test and training purposes. Though it is located adjacent to WSMR, Holloman AFB is also a primary user of WSMR airspace. In addition to the facilities listed below, a fixed-wing, dirt landing strip can be found at Oscura Range center and approximately 35 heliports are distributed on locations throughout WSMR.

- *Condrón AAF*, four miles SE of the Main Post area, supports an average of four fixed wing aircraft takeoffs and landings per day and supports up to 40 per day during major exercises. Condrón AAF utilizes two runways: 9/27, a 6,125 ft asphalt strip, and 1/19, a 4,250 ft gravel strip (AirNav 2007a).
- *Stallion AAF*, 18 miles SE of Socorro, is used to manage airborne assets in the northern portion of WSMR. Stallion AAF utilizes one primary runway, 14/32, which is a 4,000 ft asphalt landing strip (AirNav 2007b).
- *White Sands Space Harbor*, located approximately 20 miles west of Alamogordo, White Sands Space Harbor serves as a back up landing site for the Space Shuttle program. It consists of three hard-packed gypsum runways: two 35,000 ft strips (15,000 ft of usable runway with 10,000 ft of extension on either side) and a third, shorter runway used to simulate a transatlantic abort landing site. It occupies an area of approximately 31,000

acres. White Sands Space Harbor is also used as a training and test facility for space shuttle pilots (NASA 2002).

- *Holloman AFB (not part of WSMR, but within the LUASP focus area)* is located approximately 5 miles west of Alamogordo, New Mexico and 90 miles north of El Paso, Texas. Holloman AFB is home to the 49th Fighter Wing (currently transitioning from the F-117 to F-22 aircraft) and is a major customer of WSMR, sharing a common border with WSMR as well as White Sands National Monument. Holloman AFB missions fly in virtually all of WSMR restricted airspace and utilize the Red Rio and Oscura Target Ranges as well as the Yonder Impact Area. Holloman AFB has three primary runways (each of concrete/asphalt construction): runway 7/25 at 12,800 ft in length, runway 16/34, at 12,131 ft, and 4/22, at 10,575 ft (AirNav 2007c). Operations at the airfield have varied historically depending on the active missions at the installation, but 400 to 600 operations daily is the typical range of activity (USAF 2006).

Technical Support Services

Specialized Test Support personnel. WSMR employs a full staff of experts in disciplines including analysis, physics, engineering, and mathematics with a wide range of experience with the test and evaluation of sophisticated weapons systems.

Range Control. The J.W. Cox Range Control Center (CRCC) serves as the nerve hub for all missions conducted on the Range and contains all functions related to open air range testing. CRCC provides real-time tracking, data processing, airspace surveillance, system and range safety (such as flight termination control), meteorological information, simulation interface, real-time software development, drone and target control, global and inter-installation networking for virtual mission components. In addition, CRCC handles range scheduling, which involves overall program review, coordination of support needs, deconfliction of incompatible missions, and ultimately assignment of specific ground and air resources. Test services provided by Range Control also include communications networks, meteorology, real time data processing, recovery and disposal of explosive ordnance, system and range safety, and timing systems.

Frequency Surveillance. WSMR performs frequency surveillance, evaluation, and radiation analysis, and control of the use of all RFs. All frequencies used in connection with range missions are monitored and frequency scheduling is performed daily. Frequency surveillance (both fixed and mobile) is provided within 150 miles radius of WSMR as well as in portions of Colorado and Utah.

Flight Safety Design and Analysis. WSMR possesses extensive experience in the both the testing of weapons systems tests and analyses (having conducted approximately 50,000 such tests in the last 50 years). WSMR offers state-of-the-art analysis tools and facilities for determining flight risk and safety, including the high performance Computing Distributed Center. Flight safety analysis is actively performed for both catastrophic failure and flight control failures for trajectories over populated areas. Test support includes monitoring missiles and targets trajectories during tests to ensure that FTS are activated if needed.

Recovery and Explosive Ordnance Disposal. WSMR provides recovery of critical and hazardous hardware through use of airborne and land search teams. When possible, WSMR personnel will visually observe impact and then recover debris, as well as provide escort to the site. WSMR

provides EOD services for any contaminated, hazardous, or classified material associated with a test.

Test Processing. The WSTC Range Operations group is able to test and support very specific user-determined test parameters including missile, radar, and other mission critical computer resources, battle management, surveillance, guidance communications, command and control, safety, health hazard, and Soldier survivability.

4.2 CURRENT LAND USE CLASSIFICATIONS

Figure 4-4 shows the Land Use Classifications in the focus area (see Table 3-2 for Land Use Classification definitions). Table 3-3 identifies which Activity Categories are identified within each Land Use Classification. As Table 3-2 and 3-3 indicate, all authorized uses still require coordination and approval, and many may necessitate restrictions and/or conditions of use to ensure safety and preclude adverse impacts. **Table 4-3** provides the acres associated with each Land Use Classification within the focus area (Classifications A through O). Approximate acreage is also provided for Land Use Classifications outside the focus area (Classifications P and Q) that support WSMR mission activities.

A brief assessment of each Land Use Classification is provided below.

A - Primary Test Zone. The Primary Test Zone accounts for approximately 84 percent of the land area of WSMR. This large area is used for a wide range of activities support WSMR varied test mission goals. Missile testing has historically required large areas of airspace, and large areas of underlying land where access can be controlled due to safety hazards; however, between firings, these large areas can be used for a variety of other activities. Depending on the hazards associated with any given activity, they are separated either temporally or spatially. That is, their areas of operation do not overlap, or they occur at different times. The Specialized Areas shown in Figure 4-2 may activate a larger safety area when in use for a hazardous activity. These uses may impose temporary surface or airspace restrictions on other activities.

B - Range Centers and Built-Up Areas. This Land Use Classification includes the Main Post and other areas with concentrations of facilities that provide a wide range of vital services for the installation and for personnel (such as first aid services, dining, and billeting).

C - Augmented Test Zone. This Land Use Classification includes all the activities identified for the Primary Test Zone, with the addition of off-road vehicle operations. Portions of the area may be off-limits to protect species or to avoid archaeological sites. Other measures or conditions may also apply as defined through WSMR's Integrated Training Area Management (ITAM) Program or resource management plans. Currently, a small portion (6,250 acres) of the southeast part of the range has been approved for off-road operations by tracked and heavy vehicles.

D - Impact Area. This includes only existing impact areas that present extreme safety hazards, where only trained personnel may enter for the purpose of data collection, diagnostics efforts, and range clean-up. This category currently includes WSMR's four Phase II WIT areas.

Figure 4-4. Current Land Use in the LUASP Focus Area

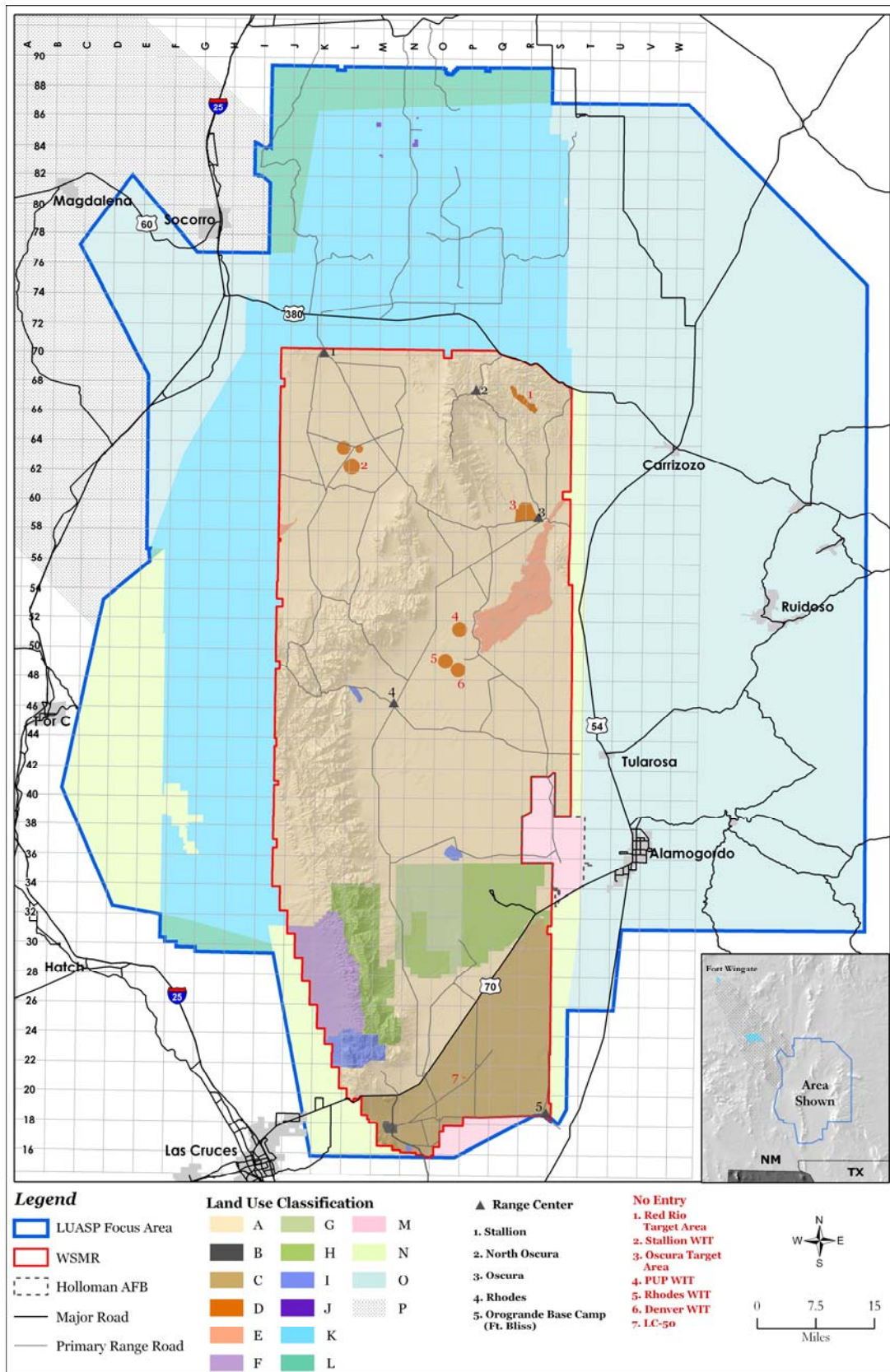


Table 4-3. Current Land Use Classifications within WSMR LUASP Focus Area

<i>Land Use Classification</i>	<i>Title</i>	<i>Acres¹</i>		
		<i>WSMR</i>	<i>LUASP Focus Area</i>	<i>Outside LUASP Focus Area</i>
A	Primary Test Zone	1,635,000	1,635,000	0
B	Range Centers and Built-Up Areas ²	1,500	1,500	0
C	Augmented Test Zone ³	207,200	207,200	0
D	Impact Area	15,400	15,400	0
E	Lava Flows	42,700	42,700	0
F	Jornada Experimental Range	60,600	60,600	0
G	White Sands National Monument Co-Use Area	57,100	57,100	0
H	Conservation/Protected Area	148,400	148,400	0
I	Dedicated Use Area	20,900	20,900	0
J	Special Call-Up Area (within Restricted Area airspace)	0	800	0
K	General Call-Up Area (within Restricted Area airspace)	0	1,337,600	0
L	Ground Only Call-Up Area (outside Restricted Area airspace)	0	201,300	0
M	Restricted Area Airspace Only (overlying DoD land outside WSMR and call-up areas – from surface)	0	71,800	0
N	Restricted Area Airspace Only (overlying non-DoD land and outside call-up areas – from surface)	0	498,400	0
O	High Altitude Restricted Area Airspace (outside DoD land and call-up areas)	0	2,642,400	0
P	Unrestricted Airspace (with approval)	0	0	4,001,000
Q	Non-Contiguous WSMR Land	0	0	Nd ⁴
<i>Total acres</i>		2,188,800	6,941,100	4,001,000

1. Acres derived from GIS data and may differ from real property inventory values due to variances in digitized boundaries and property record values.
2. Area of Main Post. Range Centers are not delineated; therefore, area not included in Land Use Classification B.
3. Identified for off-road use but currently only 6,250 acres have undergone archaeological review and clearance.
4. Comprised of several locations of varying sizes. These sites are leased for a specific purpose, primarily for instrumentation sites. Includes facilities at Fort Wingate.

E - Lava Flows. The lava flows coincide with a distinct geologic feature with a rough basaltic landscape. The lava areas are generally considered unsuitable for any type of construction, including roads, and therefore have limited accessibility. These areas are, in general, highly remote and have experienced little tampering or interference from man-made factors.

F - Jornada Experimental Range. The use of the portion of JER (USDA) within WSMR is governed by MOA (WSMR 2001b). The MOA provides for the priority of the military purposes for test missions and allows both WSMR and JER to construct facilities and infrastructure. Both entities are required to coordinate any construction or activities for mutual compatibility and safety. Currently, WSMR primarily uses the area as a SDZ during missile firings. The area lends itself to both dismounted activities and field operations. Although the agreement allows WSMR to construct infrastructure and facilities for test purposes, surface uses in the co-use area are very limited, and primarily limited to debris recovery efforts. The varied terrain may also provide some opportunities for ranges and test beds requiring a backdrop or shield. The area has few roads. There is limited access to this area via Jornada Road North off US 70 with no access from the east side within WSMR.

G - White Sands National Monument Co-Use Area. The White Sands National Monument Co-Use area provides for limited access for test activities, mostly as a SDZ during missile firings. The overlying airspace may also be used for hazardous air vehicle operations and weapons firing. Although the agreement allows WSMR to construct infrastructure and facilities for test purposes, surface uses in the co-use area are very limited, and it may not be used as a planned impact or target area (NPS 2006).

H - Conservation/Protected Area. This classification includes land that is off-limits to surface activities, and in some cases flight level restrictions, for the purpose of resource protection or conservation. The SANWR, and portions of White Sands National Monument outside the co-use area are included in this classification.

I - Dedicated Use Area. This Land Use Classification applies to land on WSMR that is dedicated to a specific user or use and is not available for other uses or decisions regarding future use. This classification currently includes the NASA WSTF site, Nuclear Effects complex (south), and the Air Force's NRTF and RAMS sites.

J - Special Call-Up Area (within Restricted Area airspace). Special Call-Up applies to non-DoD land where leases and agreements with land owners provide for occasional evacuation during missile firings and construction of mission support and specialized test facilities. The number of evacuations permitted is specified in the agreement. In recent years, evacuations in the northern call-up where this classification of land is located, have numbered between 10 to 20 times annually. Any proposed construction or mission-related uses of these facilities must be approved by the land owner and must comply with any applicable regulations (including environmental review and approval). Currently, this classification applies only to a few parcels in the Northern Call-Up Area (comprising 760 acres), where facilities have been developed to support target missile launching and impact areas.

K - General Call-Up Area (within Restricted Area airspace). General Call-Up applies to non-DoD land where leases and agreements with land owners provide only for occasional evacuation during missile firings. In recent years, evacuations in the Western Call-Up Areas have varied, occurring between five and 30 per year. General Call-Up Areas are located on the west and north side of WSMR and provide for intermittent and temporary expansion of the WSMR's SDZ. Launching and impact activities are not planned in these areas.

L - Ground Only Call-Up Area (outside Restricted Area airspace). This Land Use Classification comprises a small amount of land on the north and west side of WSMR that falls outside the Restricted Areas but within the SDZ for some missile firings. Agreements between landowners and WSMR provide for occasional evacuation during missile firing

M - Restricted Area Airspace Only (overlying DoD land outside WSMR and Call-Up areas – from surface). Both Holloman AFB and portions of Fort Bliss underlying WSMR Restricted Areas fall into this classification. While WSMR does not plan and manage the surface use of these areas, facilities at those installations support some test functions on WSMR, such as launch sites, and instrumentation sites. Table 3-3 only indicates those activities that WSMR currently are authorized to perform on Holloman AFB and Fort Bliss.

N - Restricted Area Airspace Only (overlying non-DoD land outside Call-Up Areas – from surface). This Land Use Classification is defined by the footprint of Restricted Area that extends outside DoD land and the call-up areas. Even though the airspace is restricted from the surface (allowing for airspace hazards), this classification does not provide for any surface danger or hazard, nor evacuation. It occurs on the edges of the LUASP focus area – on the east side of WSMR, at the northwest tip of the North and outside the southwest edge of WSMR (including portions of the JER, Bureau of Land Management, SANWR, State, and private land).

O - High Altitude Restricted Area Airspace (outside DoD land and Call-Up Areas). This area is currently defined by R-5109A to the east of WSMR. Ownership of the underlying land is a mixture of non-DoD Federal, state, and private. This Land Use Classification applies only to airspace use (which may be hazardous). Since this classification does not provide agreements for evacuation, uses may not cause surface hazards.

P - Unrestricted Airspace (with approval). This classification applies to an envelope of unrestricted airspace between Fort Wingate and the complex of WSMR Restricted Areas. WSMR notifies FAA when a missile firing is scheduled and FAA issues a NOTAM and usually clears the airspace of all civilian and commercial air traffic for the duration of the firing. The area is defined by the potential debris fallout area in the event that the flight termination system was activated at any point between the initial launch location and WSMR Restricted Areas. Debris from a flight termination can be hazardous to aircraft within the unrestricted airspace (either from collision or ingestion into engines).

Q - Non-Contiguous WSMR Land. This classification is comprised of non-contiguous property owned or leased by WSMR outside the focus area. Currently, WSMR has facilities at Green River, Utah, Fort Wingate, New Mexico, Shoofly, Idaho, and Granjean Island. Only Fort Wingate has supported missile tests at WSMR in recent years.

4.3 RANGE MANAGEMENT

Within an environment that has a diverse number of activities and types of land use, most of which are continually evolving and changing, management of a range becomes increasingly complex. Often times these activities and land uses conflict with each other and with existing environmental conditions. This section describes the role that ITAM Program plays in maintaining a sustainable range and describes current operational and environmental constraints.

4.3.1 ITAM Program

The ITAM Program is a component of the Army's Sustainable Range Program and is responsible for maintaining Army lands in order to meet its training requirements. The purpose of the ITAM Program is to achieve optimal sustainable use by implementing a program that includes:

- Training Requirements Integration
- Range and Training Land Assessment (RTLA)
- Land Rehabilitation and Maintenance (LRAM)
- Sustainable Range Awareness (SRA)

The ITAM and RTLA programs on WSMR began in 1989 and has evolved and expanded into the program it is today. WSMR recently completed updating their five year ITAM and RTLA plans through 2013, which develop a framework to integrate mission requirements with environmental sustainability. The ITAM plan incorporates all aspects of the four components and provides a roadmap on how to proceed (WSMR 2008a). The RTLA Monitoring Plan describes a process for inventory and monitoring of the natural resources on the installation. This information is in turn used within an adaptive management framework to assess range condition and promote sustainable use of the natural resources (U.S. Army 2008a). It is also the cornerstone for future siting of facilities, activities, and new Specialized Areas on WSMR.

4.3.2 Land Use Constraints

Current land use constraints include areas with either jurisdictional, environmental or operational constraints that restrict activities on WSMR land (See **Figure 4-5**). These primarily include areas that are not entirely off-limits, with the exception of portions of the jurisdictional areas, the Todsens's Pennyroyal Habitat and the White Sands pupfish Essential Habitat. **Table 4-4** summarizes amount of land where selected constraints exist. The degree of limitation on activities of any given constraint is variable, and in some cases surmountable. Therefore, this is a preliminary screening that can be revised based on further information or selected priorities for managing resources on WSMR. These constraints layers were developed using information from the Integrated Natural Resource Management Plan (INRMP) and Integrated Cultural Resource Management Plan (ICRMP) in addition to interviews with current land managers on WSMR. These constraints are dynamic and can be modified in the future as new information becomes available.

4.3.2.1 Jurisdictional Constraints

Jurisdictional constraints primarily include those areas that are not owned by WSMR but are partially or entirely contained within its boundaries, and include JER, White Sands National Monument, and SANWR. Activities within these areas are restricted to those detailed in each respective MOA or Interagency Agreement (See Section 4.2 for more details) (WSMR 2001b; NPS 1994; NPS 2006; U.S. Army 2006).

Figure 4-5. Land Use Constraints on WSMR

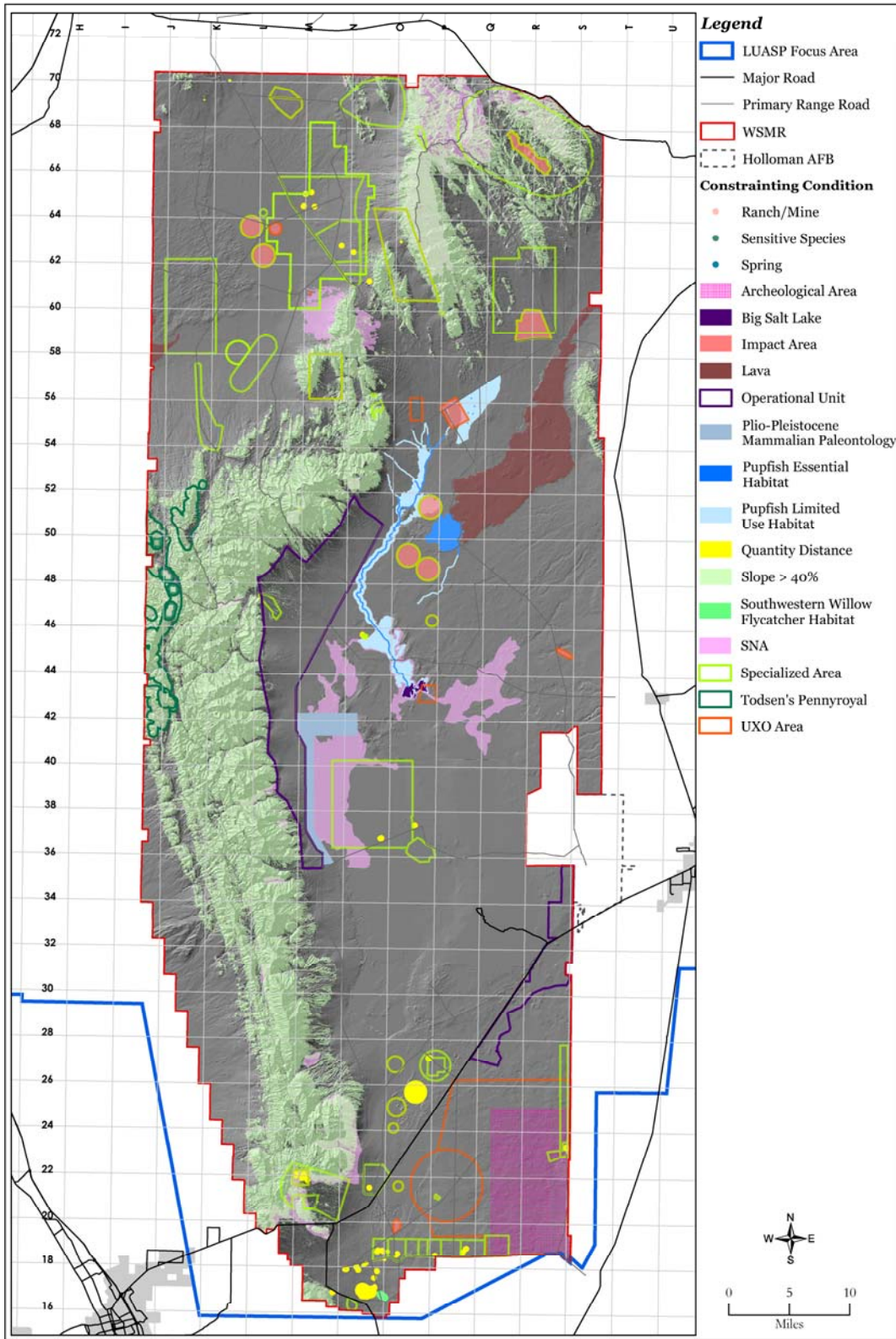


Table 4-4. Land Use Constraints on WSMR

<i>Constraint</i>	<i>Acres</i>	<i>%1</i>
Jurisdictional		
Jornada Experimental Range	60,603	2.7
White Sands National Monument	145,967	6.6
San Andres National Wildlife Refuge	56,775	2.6
Operational		
Dedicated use areas	20,860	1
Specialized areas	257,000	12
Unexploded Ordnance areas	177,210	8
Impact areas	18,070	1
Quantity-distances/Ammunition Supply Points	53,476	2
Environmental		
Special natural areas	80,663	4
Lava flows	43,230	2
Springs ³	323	N/A
Big salt lake	770	<1
Todsens' pennyroyal	21,910 ⁴	<1
Other rare plants ³	N/A	N/A
Essential White Sands pupfish Habitat	6,650	<1
Southwestern Willow Flycatcher	406	<1
Limited use White Sands pupfish habitat	22,240	1
Other sensitive wildlife ³	nd	N/A
Ranches and mines ³	319	N/A
Plio-Pleistocene mammalian Paleontology	11,230	<1
Protected cultural sites/areas	51,275	2
Greater than 40 percent slope	466,470	21
Trinity Site	49,278	2
Total area²	1,177,489	54

Source: WSMR 2008b

1. Percent of total WSMR land area (2.2 million acres).
2. Some areas overlap, therefore the total footprint of constraints may be less than the sum of the acres indicated.
3. Data for these items are point locations associated with populations or sitings of individual animals. This includes 75 "other rare plant" locations.
4. This acreage will decrease over time as new areas are surveyed and Todsens' Pennyroyal is determined to be absent.

N/A Not applicable
 nd no data

4.3.2.2 Operational Constraints

Operational constraints reflect non-environmental land use constraints that are related to historical and/or current mission activity. These constraints may vary geographically and/or temporally.

Dedicated Use Areas. This includes Land Use Classification I and applies to areas that are reserved for exclusive use. One example is the WSTF, which is located on WSMR and located in the southwest portion of the installation, is restricted entirely to NASA activities.

Specialized Areas. These are locations used for a specific purpose or user (see Section 4.1.3), and generally have some associated facilities. When in use, the surface area is not available to other users. When not in use, the surface area may support other activities (such as field operations). Some areas can support a range of activities when not in use for the “special” use. Specialized Areas that are not dedicated to one user can be an opportunity for other customers since they contribute to the overall range capabilities.

UXO Areas. UXO areas are considered a constraint due to the potential safety hazard for surface activities in these locations. WSMR is in the process of evaluating UXO in order to better understand the degree of risk associated with different areas of the range. This information will guide what activities and uses can occur in these areas.

Impact Areas. These locations represent existing impact areas that present extreme safety hazards, where only trained personnel may enter for the purpose of data collection, diagnostics efforts, and range clean-up. This currently includes WSMR’s four Phase II WIT areas.

Quantity-Distance (QD) and Ammunition Supply Point (ASP) Areas. QD areas reflect a relationship between the quantity of an explosive and the separation distance necessary to provide sufficient safety buffers. Currently there are 261 designated QDs areas on WSMR that total approximately 52,700 acres. ASPs are locations or facilities that are used for the distribution of ammunition, and often include a surrounding safety footprint. Currently, there are 35 designated ASPs that total approximately 776 acres. Both QDs and ASPs may be permanent (such as a storage facility) or temporary (such as a safety footprint that varies in time and space based on length and type of mission).

4.3.2.3 Environmental Constraints

These constraints reflect environmental and cultural resources that require coordination with a specialist in WSMR Environmental Division prior to mission activity in the area. The majority of these resources are protected by Federal and/or state laws and regulations and have been identified within the INRMP as resources that should be conserved (WSMR 2002). Changes in the status of any given species can change the constraint imposed on activities.

Special Natural Areas (SNA). SNAs are specific areas located within ecosystem management units that necessitate special management practices independent of other practices in effect for the unit (WSMR 2002). SNAs possess biological and/or physical elements considered important on local and regional scales and significant changes in land use may be required. Management practices and designations for SNAs are subject to modification on a case-by-case basis. SNAs on WSMR are divided into three categories: biologically sensitive, geologic, and stratigraphic type locality. There are currently 19 SNAs (16 established and three candidate) covering a total of 80,663 acres on WSMR.

Lava Flows. The Carrizozo lava flow is a large unique and isolated ancient lava flow located in the upper Tularosa Basin (WSMR 2002). This distinct geologic area comprises approximately 43,230 acres and is an extremely harsh and rough basaltic landscape. It is generally considered unsuitable for any type of construction, including roads, and therefore has limited accessibility.

Springs. At least 133 springs and seeps, the majority of which are perennial, have been identified on WSMR. The two most important spring areas occur in the Tularosa Basin: Malpais Spring and Mound Springs. These springs provide important habitat for wildlife species on WSMR.

Big Salt Lake. Big Salt Lake is a saline lake located downstream from Salt Springs and Salt Creek, which are essential habitat areas for the White Sands pupfish. Big Salt Lake is part of the largest system of playa lakes in the state of New Mexico and provides valuable habitat to numerous wildlife species on WSMR, including providing foraging and nesting habitat for the western snowy plover and the interior least tern (WSMR 2002).

Southwestern Willow Flycatcher (SWF). The SWF constraint area at Davies Tank (406 acres) for the endangered Southwestern Willow Flycatcher is in place to prevent potential adverse effects to the species. WSMR Environmental Division will conduct annual surveys for the flycatcher, and project-specific surveys (funded by the project proponent) will be required for any future proposed action that could affect the SWF. This includes, but is not limited to, any project at or near Davies Tank that could result in direct or indirect 1) modification of the vegetation or soils; 2) a change in the flow of water or effluent to Davies Tank; 3) affects to the insect community; 4) an increase in noise levels. WSMR Environmental will use survey results to make the appropriate Endangered Species Act Section 7 effects determinations, and will consult with the U.S. Fish and Wildlife Service for any potential effects to the species.

Cultural Resources. Cultural resources are protected under the National Historic Preservation Act and several other laws. WSMR has extensive cultural resources throughout the range, although the highest concentration of sites is in the southeast part of WSMR. Some areas have been surveyed, but for the most part, determinations about eligibility for listing on the National Historic properties list have not been made. Much of the range requires further survey and assessment of cultural resources. In the absence of clear delineation and designation of the resource, surface activities in cultural resource areas are limited and need approval and clearance by WSMR cultural resource specialist (WSMR 2004b). WSMR is in the process of defining a Programmatic Agreement with the New Mexico State Historic Preservation Office. This agreement will guide future requirements for managing and mitigating cultural (and archaeological) resources on WSMR.

Ranches and Mines. Prior to 1954, over 350,000 acres were withdrawn from private and public use and added to the WSMR land area. During this time WSMR acquired over 93 ranches, some of which are considered historic, and therefore culturally significant. One notable such site is the McDonald Ranch House. Currently several ranches require environmental coordination prior to mission activity.

WSMR is known to have a variety of precious metals, minerals, and rock materials, including barite, copper, dolomite, fluorite, gold, gypsum, iron, lead, magnesium, silver, sand and gravel, stone, talc, tungsten, and zinc. As a result, between the 1800s and the 1950s, numerous mines were active on what is now the WSMR land area (WSMR 2002). These mines are considered to have cultural value and therefore require environmental coordination. In addition, some of the

abandoned mines provide valuable wildlife habitat. Currently there are several former mines on WSMR that require environmental coordination prior to mission activity.

Plio-Pleistocene Mammalian Paleontology. This site contains fossil tracks of mammoth, camel, horse, and other species from the Plio-Pleistocene era. It is considered to be of state-wide importance for megafauna fossils. The fossils are subject to natural erosion and therefore the key management issue is protection of the tracks and fossils from military mission impact and erosion.

Todsen's Pennyroyal. The Todsen's Pennyroyal (*Hedeoma todsenii*) is the only Federally-listed species currently known to be located on WSMR, and is listed as endangered. It is known from only 18 locations, three of which are located on WSMR. It is a perennial plant found on sandy, gypsic soils on steep slopes within San Andres Mountains. No surface disturbing activity is allowed on or near the Todsen's Pennyroyal Critical Habitat (WSMR 2002). Coordination with WSMR Environmental Division is required for any activity in or near potential habitat to ensure compliance with the Endangered Species Act and terms negotiated with U.S. Fish and Wildlife Service.

Other Rare Plants. In addition to the pennyroyal, there are 18 other rare plants that require environmental coordination (**Table 4.5**). These plants are considered to be rare on a state, national, or global scale. Further details on each specific plant can be found in the INRMP (WSMR 2002) or on the New Mexico Rare Plant Technical Council's rare plant website (NMRPTC 2007).

White Sands Pupfish. The White Sands pupfish (*Cyprinodon tularosa*) is a Federal Category 2 candidate species that is endemic to the Tularosa Basin of New Mexico with a majority of the populations found on WSMR. Currently, all non-emergency military vehicular traffic and non-emergency military activities, with the exception of conservation and research and cultural resource management, are prohibited within Essential Habitat. Limited Use Areas, on the other hand, are adjacent lands where limited activities are allowed. All activities within these areas shall be coordinated with the WSMR Environmental Division (WSMR 2002).

Other Wildlife. In addition to the White Sands pupfish, 13 other sensitive wildlife species (10 birds and three mammals) require environmental coordination (**Table 4.6**). Two of these species, the inland least tern and the Northern Aplomado falcon, are Federally-listed as endangered.

Sloped Terrain. A preliminary categorization of land with slope of 40 percent or greater has been defined. This reflects potential limitations for activities such as off-road vehicular activity and constructability. All activities are not necessarily restricted in these areas, but instead require prior environmental coordination. It is used as a preliminary planning tool to assist with defining future activities on the range; however, this slope parameter may be refined based on soil type or other management priorities or operational considerations. With more definitive updated soil survey information, soil type may also be used as a constraining parameter for some future activities.

Trinity Site. The Trinity Site is where the first atomic bomb was tested on July 16, 1945. It is designated as a National Historic Landmark and encompasses approximately 49,000 acres. Details on the inventory and control of cultural resources within this site can be found in the 1988 MOU pertaining to the Trinity Site National Historic Landmark (WSMR 2004b).

Table 4-5. Rare Plants Located on WSMR Requiring Environmental Coordination Prior to Mission Activity

<i>Scientific Name</i>	<i>Common Names</i>	<i>Federal Status</i>	<i>State Status</i>	<i>Natural Heritage NM*</i>
<i>Agastache cana</i>	Grayish-white giant hyssop	SoC	SoC	S3
<i>Apacheria chiricahuensis</i>	Cliff brittlebush	NA	NA	S2
<i>Ayenia microphylla</i>	Dense ayenia	NA	NA	NA
<i>Coryphantha scheeri</i> var. <i>uncinata</i>	Scheer's pincushion cactus	SoC	E	S1
<i>Escobaria organensis</i>	Organ mountain foxtail cactus	SoC	E	S2
<i>Escobaria sandbergii</i>	Sandberg pincushion cactus	SoC	SoC	S2
<i>Hedeoma todsenii</i>	Todsens's pennyroyal	E	E	S2
<i>Hymenoxys vaseyi</i>	Vasey's bitterweed	SoC	SoC	S2
<i>Mentzelia perennis</i>	Blazingstar	NA	NA	NA
<i>Oenothera organensis</i>	Organ Mountains evening primrose	SoC	SoC	S2
<i>Opuntia arenaria</i>	Sand prickly-pear	SoC	E	S2
<i>Panicum mohavense</i>	Mohave panicum	SoC	SoC	S1
<i>Peniocereus greggii</i> var. <i>greggii</i>	Night-blooming cereus	SoC	E	S1
<i>Penstemon alamosensis</i>	Alamo beardtongue	SoC	SoC	S3
<i>Polygala rimulicola</i> var. <i>mescalerorum</i>	Mescalero milkwort	SoC	E	S1
<i>Pseudoclapia arenaria</i>	TransPecos false clappdaisy	NA	NA	S3
<i>Salvia summa</i>	Supreme sage	SoC	SoC	S3
<i>Silene plankii</i>	Plank's champion	SoC	SoC	S2
<i>Talinum longipes</i>	Pink flameflower	NA	NA	S2

Source: NHNM 2007

NA Data not available

SoC Species of Special Concern

E Endangered

* See NHNM 2007 for State and Global Ranking Definitions

Table 4-6. Sensitive Wildlife Species Located on WSMR Requiring Environmental Coordination Prior to Mission Activity

<i>Scientific Name</i>	<i>Common Name</i>	<i>Federal</i>	<i>NM State</i>
<i>Falco peregrinus anatum</i>	American Peregrine falcon	Delisted	T
<i>Ammodramus bairdii</i>	Baird's sparrow	SoC	T
<i>Haliaeetus leucocephalus</i>	Bald eagle	N/A	T
<i>Vireo bellii</i>	Bell's vireo	SoC	T
<i>Cynomys ludovicianus</i>	Black-tailed prairie dog	SoC	Delisted
<i>Pelecanus occidentalis</i>	Brown pelican	Delisted	E
<i>Calypte costae</i>	Costa's hummingbird	N/A	T
<i>Ovis canadensis mexicana</i>	Desert bighorn sheep	N/A	E
<i>Vireo vicinior</i>	Gray vireo	N/A	T
<i>Sterna antillarum athalassos</i>	Interior least tern	E	E
<i>Falco femoralis septentrionalis</i>	Northern Aplomado falcon	E	T
<i>Tamias quadrivittatus australis</i>	Organ mountains Colorado chipmunk	SoC	T
<i>Empidonax traillii extimus</i>	Southwestern willow flycatcher	E	E
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	Former Candidate (C3)	NA

Source: NMDGF 2007

N/A not available

SoC Species of Special Concern

E Endangered

T Threatened

4.4 PLANNING OPERATIONAL UNITS

The WSMR land area includes approximately 2.2 million acres used for various mission activities. The Primary Test Zone (Land Use Classification A) covers over 1.8 million acres, in which most of WSMR core programs and activities take place. With a variety of natural contexts, man-made features, and functional affinities, this area lends itself to subdivision into smaller areas. From a planning perspective, subareas are useful because they:

- Facilitate range planning and scheduling
- Provide easy reference terminology for discrete parts of the range
- Provide a framework for selecting sites for new facilities/uses based on type of activity and requirements
- Align with boundaries formed by that natural context and operation activities
- Facilitate transition to other categories (e.g., off-road vehicle area)
- Provide a basis for the 2009 Range-wide EIS analysis and subsequent environmental planning guidance

A preliminary division of the WSMR range into 18 planning subareas called “Operational Units” (OUs) is shown in **Figure 4-6**. These areas mirror those that are used by the ITAM Program and are described in more detail in the RTLA Monitoring Plan (U.S. Army 2008a; WSMR 2008a). This is based on a compilation of information from interviews with WSMR personnel and geospatial analysis considering:

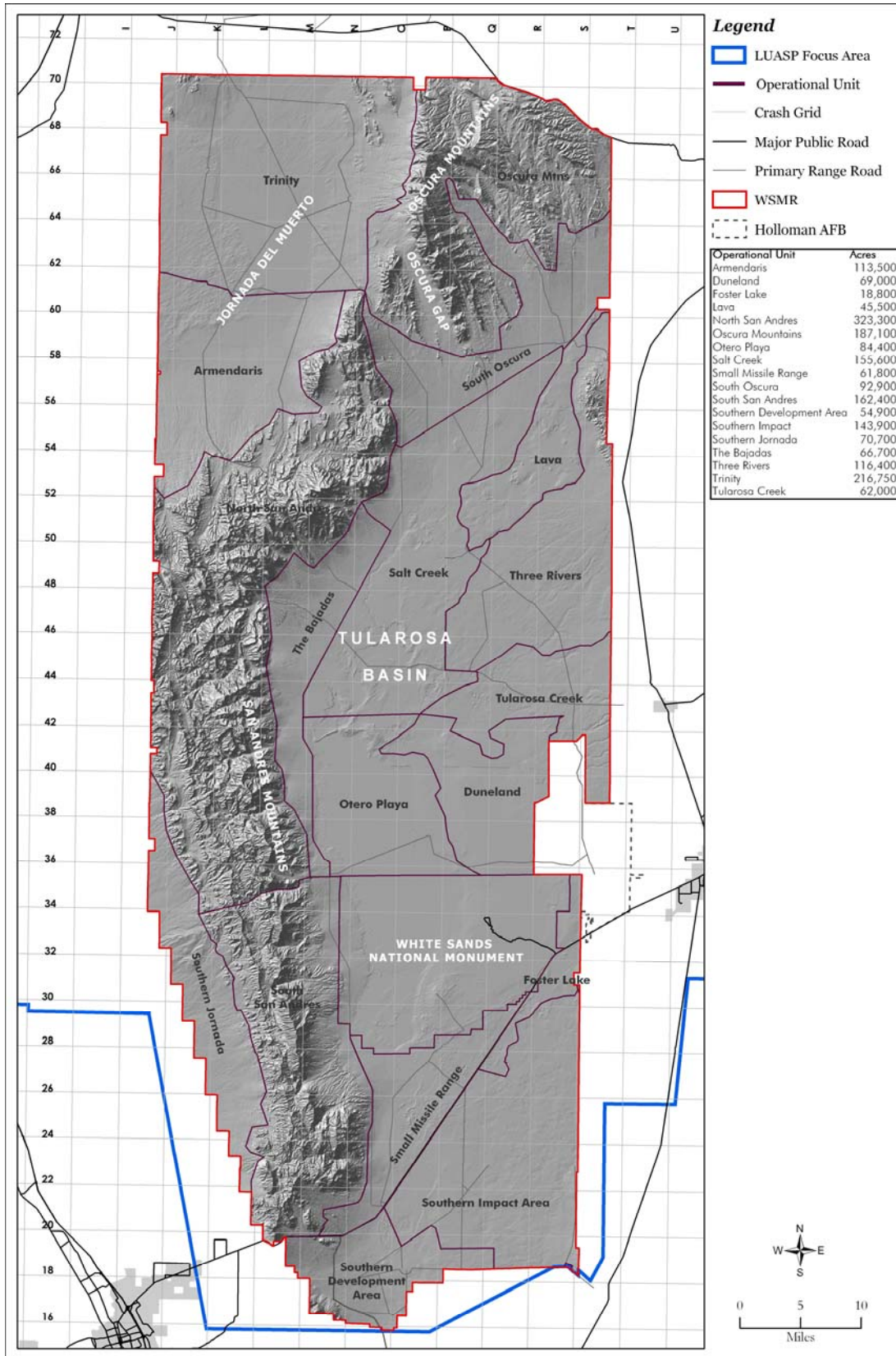
- Terrain and ecological areas
- Boundaries
- Adjacent land use designations
- Scheduling units (e.g., WSMR crash grid)
- Airspace units
- Current uses and infrastructure (such as roads)

Operational Units are listed in **Table 4-7**, and key attributes (both operational and geo-physical) for each area are described below.

Table 4-7. WSMR Planning Operational Units

<i>Operational Unit</i>	<i>Acres</i>
Trinity	216,750
Armendaris	113,500
Oscura Mountains	187,100
South Oscura	92,900
North San Andres	323,300
South San Andres	162,400
The Bajadas	66,700
Salt Creek	155,600
Lava	45,500
Three Rivers	116,400
Tularosa Creek	62,000
Otero Playa	84,400
Duneland	69,000
Foster Lake	18,800
Southern Impact Area	143,900
Small Missile Range	61,800
Southern Development Area	54,900
Southern Jornada	70,700

Figure 4-6. Operational Units in the WSMR Primary Test Zone



Trinity (216,750 acres). Trinity OU, in the northwestern corner of the installation, falls within the basin created by the Pleistocene-age Lake Trinity, which is part of the Jornada del Muerto. Duneland is also present along the western boundary. The rugged cliffs and the sharply rising western face of the Organ Mountains form the western boundary of this subarea. Crash Grid 62 forms the southern boundary. This OU includes the Stallion Range Center and is most accessible to Socorro and Albuquerque, New Mexico's largest city. It also includes the new Warrior Transition Course facility, the Air Force's Ground Based Electro-Optical Space Surveillance (GEODSS) facility and new Aircraft Aero Acoustic Measurement facility, and Defense Threat Reduction Agency's (DTRA) Permanent High Explosives Test Site (PHETS) area.

Armendaris (113,500 acres). Armendaris OU, along the western boundary of WSMR, also falls within the basin created by the Pleistocene Lake Trinity, which is part of the Jornada del Muerto. Duneland is present, as well as parts of a Holocene basalt flow. The northern boundary is defined by Range Road 26, the WSMR boundary defines the west boundary, and the southern and eastern boundaries are defined by slopes less than 20 percent, (18 degrees) of the San Andres Mountains. Armendaris is a popular area for siting special facilities. It is relatively remote, with no basic support facilities (Stallion being the closest range center). The Zumwalt test track and new test area for improvised explosive devices and directed energy tests are located in this area. Both of these sites support activities with large safety area that preclude other operations when activated.

North San Andres (323,300 acres). The North San Andres OU runs north-south through WSMR. It is by far the largest OU, encompassing much of the San Andres Mountains and the Mockingbird Mountains. The northern, western, and eastern boundaries are defined by slopes greater than 20 percent (18 degrees) or the WSMR administrative boundary. The southern boundary is defined by the northern boundaries of the SANWR and the JER co-use area. The primary military activities that occur in this area include the Air Force's Fair View gunnery range on the northwest part, instrumentation and line-of-site location on Salinas Peak for laser mission based at North Oscura Peak, and the DTRA's tunnel complex.

South San Andres (162,400 acres). The western, southern, and eastern boundaries of South San Andres Operational Unit are defined by slopes greater than 20 percent (18 degrees) and the WSMR administrative boundary. The northern boundary is defined by the northern boundaries of SANWR and JER co-use area. The predominant military activities in South San Andres are the Hazardous Test Area (HTA) and the Electromagnetic Radiation Effects (EMRE) site.

Lava (45,500 acres). The Carrizozo lava flows on WSMR are a distinct geological area. Bisected and cracked basaltic flows result in a rough landscape. The area is easily defined by extent of the lava flow. As a unique landscape, this area has qualities that may be suitable for some specialized activities. Except for SDZ, this area supports little ground activity. It is suitable for air operations (both non-hazardous and hazardous—provided recovery is not required). The lava surface is generally unsuitable for any type of construction, including roads, and therefore has limited accessibility. This gives the location a high degree of remoteness with little tampering or interference from man-made factors.

Southern Jornada (70,700 acres). The Southern Jornada OU is on the west side of both the installation and the San Andres Mountains. Alluvial fans typify this OU. This area is remote and inaccessible with little intrusion from man-made sources. The area is shielded from the RF and

directed energy sources in the main part of the range. Because it is isolated, the area supports little on-the-ground test activity. It is suitable for aircraft operations and weapons firing, and for dismantled activities seeking an isolated context.

Oscura Mountains (187,100 acres). The rough terrain of the Oscura Mountains and the Little Burro Mountains defines this OU. Other notable geographic features include Oscura Peak and Oscura Gap. The airspace and Red Rio Bombing Range is heavily used for air-to-ground training. Other military activities include the North Oscura Peak laser facility, the new Defense Advanced Research Projects Agency (DARPA) Space Surveillance telescope, and the Aerial Cable Range. The high altitudes and clear skies provide excellent atmospheric conditions for optical viewing. Varied terrain is a prime resource of this OU.

South Oscura (92,900 acres). The South Oscura OU includes the southern slopes of the Oscura Mountains. The northern and western boundaries are defined by slopes less than 20 percent (18 degrees) from Oscura, Little Burro, and Mockingbird Mountains. The eastern boundary is defined by the WSMR boundary and the southern boundary is defined by Range Road 8. The predominant military activities that occur in this OU are the Oscura Range Center and the Oscura Target areas.

The Bajadas (66,700 acres). The Bajadas (slopes) is an area of braided, intergrading, alluvial fans from the San Andres Mountains. The western boundary is defined by slopes greater than 20 percent (18 degrees). The southern boundary is defined by the White Sands National Monument and the nearest road and the eastern boundary is defined by Range Road 7. The area experiences substantial wind and water erosion throughout the year. The predominant military activities in the San Andres Foothills are the Rhodes Canyon Range Center and the RAMS.

Salt Creek (155,600 acres). Salt Creek OU lies within the larger Tularosa Valley watershed and includes most of the Salt Creek drainage, Malpais Spring and Mound Springs. The northern boundary of the OU is defined by Range Road 8, which delineates the northern extent of the White Sands Pupfish Habitat SNA. The western boundary is defined by the White Sands Pupfish Habitat SNA and Range Road 7. The predominant military activities in Salt Creek OU are several large WITs, which are consistently graded to remove surface vegetation.

Three Rivers OU (116,400 acres). The Three Rivers OU receives its name from the Three Rivers Spring located outside the WSMR boundary. The western boundary is defined by the watershed boundary for the Malpais spring drainage and WSMR roads. The southern boundary is defined by the Playa Lakes Candidate SNA, WSMR roads and watershed boundaries. There are no major military activities in this OU and there are very few constraints on military activities in this OU.

Tularosa Creek (62,000 acres). The Tularosa Creek drainage is the prominent feature within this OU. The northern boundary is defined by the Playa Lakes Candidate SNA, WSMR roads and watershed boundaries. The western boundary is defined by WSMR roads. The southern boundary is defined by the Playa Lakes Candidate SNA, WSMR roads, and the WSMR administrative boundary. The eastern boundary is defined by the WSMR administrative boundary. There are no major military activities in this OU.

Otero Playa (84,400 acres). Otero Playa OU encompasses the Otero ephemeral lake (playa) and the northern portion of a larger, Pleistocene dry lake. The southern boundary is defined by White Sands National Monument. The eastern boundary is defined by a 500-800 meter buffer zone around the Pleistocene shoreline where ancient, fossilized animal tracks can be found. The

major military activities are the NASA Space Harbor and landing strip and the National Radar Cross Section (RCS) Test Facility (formerly RATSCAT – Radar Advanced Technology Backscatter).

Duneland (69,000 acres). The Duneland OU contains a substantial portion of the largest gypsum dune field in the world. The western boundary is defined by a 500-800 meter buffer zone around a Pleistocene shoreline on which many fossilized mammalian tracks can be found. The southern boundary is defined by the White Sands National Monument administrative boundary and the eastern boundary is defined by the WSMR administrative border. There are no major military activities in this OU, with the exception of Army Special Forces, which occasionally uses the western portion of the Duneland for training exercises.

Foster Lake (18,800 acres). Foster Lake OU is the smallest operational unit on WSMR. It encompasses a playa, Foster Lake, and a relatively mesic zone with large swales of alkali sacaton grasses. The northern boundary of the OU is defined by the WSMR administrative boundary. The western boundary is defined by the White Sands National Monument and US 70. There are no major military activities in this OU.

Southern Impact Area (143,900 acres). The Southern Impact OU encompasses an UXO Contamination Area from an abandoned artillery range historically targeted by Fort Bliss, which lies to the south. The western boundary is defined by US 70. This area has a high concentration of archaeological sites. The predominant military activities in the Southern Impact OU are former Future Combat Systems (FCS) Program (now Brigade Combat Team [BCT] Modernization) test maneuver areas, the Terminal High Altitude Area Defense (THAAD) facility, the Anti-Missile Radar Defense (AMRAD) site with an associated QD safety zone and line of sight area, the missile Launch Complex 39, Launch Complex 50, and a short-range missile impact area. Fort Bliss shares the southern border of WSMR in this area and its Orogrande Range Center is located just outside the WSMR boundary in the southeast.

Small Missile Range (61,800 acres). Small Missile Range OU envelopes most of the short-range missile activity on WSMR. The northern boundary is defined by the White Sands National Monument administrative boundary. The western boundary is defined by slopes less than 20 percent (18 degrees) and Range Road 7. The southern and eastern boundaries are defined by US 70. The predominant military activities in this OU are the Tactical High Energy Laser (THEL) facility and QD safety zone, the HELSTF and QD safety zone, the Small Missile Range site and three short-range missile impact areas.

Southern Development Area (54,900 acres). The Southern Development OU encompasses WSMR Main Post and a high concentration of military activities. The northern boundary is defined by US 70. The southern boundaries are defined by the WSMR administrative boundary. This area has the highest density of special facilities on WSMR. Accessibility, good utility and power connections, proximity to the Main Post and vital mission control functions and support services, and large infrastructure of facilities and laboratories supporting core test programs, such as missile tests, nuclear effects and electromagnetic testing, make this a unique area for current and future mission activities on WSMR. The Organ Mountains provide a natural barrier on the west side. To the south, adjacent Fort Bliss land extends the DoD area of operations although Fort Bliss and WSMR support different programs and purposes.

5.0 FUTURE LAND USE

5.1 INPUT TO FUTURE VISION

Information about future activities on WSMR was collected through interviews with major Team WSMR organizations, key WSTC and Garrison personnel who are familiar with current and evolving mission requirements and range operations, test programs engineers, and major sponsors including the 46th Test Group and U.S. Navy liaison. Overall, inputs about future activities by these organizations fell into four categories:

- Continuation of current programs;
- Expansion of current programs through changes in technologies and test programs elements;
- Expansion of current capabilities that would require changes in land use;
- Expansion and/or additions of Specialized Areas to support future programs and activities.

Interviews also revealed some general concerns about WSMR's future, of which the following are highlights:

- Siting of specialized areas and their subsequent use throughout the range is beginning to constrain other users.
- Scheduling of missions is becoming more complex as more missions are competing for time on the schedule, and they involve hazardous activities, demands on range support and infrastructure, and use of RFs that are mutually incompatible.
- R&D is being accelerated to more rapidly field new innovative weapon systems for use in current combat theaters, requiring more rapid access to range resources.
- Several users have concerns about the potential blending of test programs and training that could add further demands on the schedule and limit flexibility for scheduling test missions.
- Specific concerns about opening up areas for off-road use with potential for impact on the natural environment, protected resources, and air quality. From an operations perspective, expanding capabilities that could support increased training on WSMR is viewed with caution.
- The environmental review process for new programs is not clearly defined, resulting in delays and preparation of documentation that may be unnecessary if a well-designed process were in place.

The following sections provide a synopsis of capabilities and new special areas that are currently envisioned for WSMR.

5.1.1 Future Capabilities

Table 5-1 lists major future capabilities that were identified through the LUASP process. The table identifies whether this capability is new or an expansion of an existing capability. New capabilities represent new activities that have not previously occurred on WSMR, or an expansion of current activities into new areas, either on the range or off range. They may also involve activities not previously undertaken, such as tests involving new test articles or technologies. The LUASP does not intend to address changes in activities per se, since these require further definition and evaluation.

Table 5-1. Future Capabilities – Land and Airspace Requirements

<i>Capability</i>	<i>Description of Requirement/Activities*</i>	<i>Type</i>	<i>Requirement</i>	<i>Deconfliction</i>	<i>Hazardous</i>	<i>Specialized</i>	<i>Dispersed</i>	<i>On-range</i>	<i>Off-range</i>	<i>Permitted Land Use Category</i>	<i>Activities Included</i>
Ground maneuver for test (manned, unmanned)	Areas for free maneuver of troops, heavy wheeled and track vehicles, manned and unmanned. Both flat and mountainous terrain. Sized for flexibility (10 x 10 kilometer operating area)	E	L	F	●		●	●		C	Off-Road Vehicle Use (lightweight); Off-Road Vehicle Use (other); Instrumentation & Communications Systems
Ground Maneuver and Field Operations for Training	Field operations, dismounted training, and off-road vehicle maneuvers in localized parts of WSMR would substantially increase. They would be concentrated in the southeast part of WSMR, performed regularly rather than intermittently (as for test events)	N	L			●	●	●		C	Off-Road Vehicle Use (other); Dismounted Training; Field Operations
High Power microwave weapons	Activities with dispersed effects radiating off-range (from surface locations or air platforms); expanded use of HPM on range outside of special areas	E	L/A /I/T /F	E/S/ F	●	●	●	●	●	A/C/E/ F/H/J	Surface Weapons Firing; Directed Energy Systems; Weapons Impact; SDZ; ADZ; Air Vehicle Operations

Table 5-1. Future Capabilities – Land and Airspace Requirements (Continued)

<i>Capability</i>	<i>Description of Requirement/Activities*</i>	<i>Type</i>	<i>Requirement</i>	<i>Deconfliction</i>	<i>Hazardous</i>	<i>Specialized</i>	<i>Dispersed</i>	<i>On-range</i>	<i>Off-range</i>	<i>Permitted Land Use Category</i>	<i>Activities Included</i>
High energy laser weapons	Use of long-range high energy laser weapons, radiating off-range; dynamic firing platforms and targets (both on the ground and in the air). May require emit within the National or International airspace; includes operations for North Oscura Peak, Both ABL and ATL systems. May emit hazardous energy outside existing authorized envelope	E	L/A /I/F	E/S/ F	●	●	●	●	●	A/C/E/ F/H/J/K /M/N/O	Surface Weapons Firing; Directed Energy Systems; SDZ; ADZ; Air Vehicle Operations
Electronic warfare/Signal intelligence/Jamming	Network operations with Global Information Grid (GIG)/ command, control, communications, computers, intelligence, surveillance, and reconnaissance	E	A/F	F	●	●	●	●		A/C/E/ F/G/J/ K/M/N/ O	Directed Energy Systems; ADZ; Air Vehicle Operations
Unmanned aircraft systems	Special use airspace for operating all classes of UASs/drones on and off-range; UASs/drones as targets and as weapon release platform on range; Use of experimental systems. Use uncontrolled airspace for UASs meeting FAA certification requirements. Operations following FAA policies and regulations	E	A/T /F	S/F	●	●	●	●	●	A/C/E/ F/J/K/ M/N/O	Airborne Weapons/Munitions Release (without evacuation); Weapons Impact; SDZ; ADZ; Air Vehicle Operations

Table 5-1. Future Capabilities – Land and Airspace Requirements (Continued)

<i>Capability</i>	<i>Description of Requirement/Activities*</i>	<i>Type</i>	<i>Requirement</i>	<i>Deconfliction</i>	<i>Hazardous</i>	<i>Specialized</i>	<i>Dispersed</i>	<i>On-range</i>	<i>Off-range</i>	<i>Permitted Land Use Category</i>	<i>Activities Included</i>
Liquid fuel aerial target intercept	Represents change in technology and materials associated with test articles (e.g., new propellants similar to Lance and Scud missiles)	N	L/A /I	S/F	●		●	●		A/C/J	Surface Weapons Firing; Weapons Impact; SDZ; ADZ
Lasers using solid propellants	Represents change in technology and materials associated with test articles	N	L/A /I	S/F	●		●	●		A/C/J	Surface Weapons Firing; Directed Energy Systems; SDZ; ADZ
Space systems	Launch and recover space vehicles, manned and unmanned, vertical or horizontal takeoff and recovery from WSMR location	E	L/A /I/U	S/F	●	●		●		A/C/J	Specialized Area; Surface Weapons Firing; SDZ; ADZ
Air defense tactical missiles launch from off-range	Launch long range tactical missiles from off-range (from Fort Wingate); longer distance launches in future possible, but requirement not yet defined	N	L/A /I/T	E/S/ F	●	●	●	●	●	K/M/P/ O/Q	Surface Weapons Firing; Weapons Impact; SDZ; ADZ
Weapon systems using special materials	Special Nuclear Material (SNM), depleted uranium, beryllium, hydrogen, fuels, chemical simulants, agent defeat – may require special areas, procedures, and/or permits	N	L/A /U	S/F	●	●		●		A/C/D	Specialized Area; Surface Weapons Firing; Weapons Impact; SDZ; ADZ

Table 5-1. Future Capabilities – Land and Airspace Requirements (Continued)

<i>Capability</i>	<i>Description of Requirement/Activities*</i>	<i>Type</i>	<i>Requirement</i>	<i>Deconfliction</i>	<i>Hazardous</i>	<i>Specialized</i>	<i>Dispersed</i>	<i>On-range</i>	<i>Off-range</i>	<i>Permitted Land Use Category</i>	<i>Activities Included</i>
Next generation missile programs on WSMR	Include types such as PAC-3, SM-6. Future new technologies, materials not known	E	L/A /I/T /U	E/S/ F	●	●		●		A/C/D	Surface Weapons Firing; Weapons Impact; SDZ; ADZ
Joint Test and Training battlespace	Arena for integrated maneuver, weapons firing (air-to-air and air-to-ground), networked systems, mobile instrumentation, integrated air and ground operations, off-road vehicle use, and use of test articles	N	L/A /I	S/F	●	●	●	●		C	Off-Road Vehicle Use (other); Field Operations; Airborne Weapons Release (without evacuation); Instrumentation & Communication Systems; Weapons Impact; SDZ; ADZ
Sub-surface targets	Tunnels, mock sewers, command posts for live-fire with reconnaissance	E	L/A /I/U	S/F	●	●		●		A/C/D	Mission Support Facilities; Specialized Area; Weapons Impact; SDZ
Non-lethal weapons	Areas for tests involving non-lethal bio/chemical weapons, high powered microwave, and other directed energies	E	L/A	S/F	●	●		●		A/C	Specialized Area; Directed Energy Systems; SDZ
Missiles launched from mobile/moving platforms	Surface-to-air, and surface-to-surface launch on range from moving platforms and vehicles	E	L/A /I/T	E/S/ F	●		●	●		A/C	Surface Weapons Firing; Weapons Impact;

Table 5-1. Future Capabilities – Land and Airspace Requirements (Continued)

<i>Capability</i>	<i>Description of Requirement/Activities*</i>	<i>Type</i>	<i>Requirement</i>	<i>Deconfliction</i>	<i>Hazardous</i>	<i>Specialized</i>	<i>Dispersed</i>	<i>On-range</i>	<i>Off-range</i>	<i>Permitted Land Use Category</i>	<i>Activities Included</i>
											SDZ; ADZ
Off-range mobile instrumentation	Expand areas for temporary siting of mobile equipment and instrumentation (outside WSMR); may require new agreements and approvals by land owners	N	L/A	F			●		●	J/K?/L? /M/N/O	Mission Support Facility; Instrumentation & Communication Systems
Distributed testing using Global Information test bed	May involve new infrastructure and equipment such as towers, buried cable; RF requirements	E	L/I/ U	F			●	●		Not applicable	Mission Support Facility
Hypersonic flight/projectiles originating off-range	Corridors/airspace blocks (dimensions not defined) for missiles, aircraft, spacecraft, guns.; guided and ballistic types; air-to-air and air-to-surface; typical types include High Velocity Missile, Line-of-sight Anti-tank Missile	N	L/A /I/F	E/S/ F	●		●		●	J/K/M/ N/O	Surface Weapon Firing; Airborne Weapons/Munitions Release (with evacuation); Instrumentation & Communication Systems; SDZ; ADZ; Air Vehicle Operations
Off-range airspace corridors	New airspace corridors from off to on-range, or on range to off range, for hazardous flight operations and weapons use (air-to-air, air-to-ground)	N	L/A	S/F	●	●	●		●	J/M/N/ O	Airborne Weapons/Munitions Release (without evacuation); ADZ;

Table 5-1. Future Capabilities – Land and Airspace Requirements (Continued)

<i>Capability</i>	<i>Description of Requirement/Activities*</i>	<i>Type</i>	<i>Requirement</i>	<i>Deconfliction</i>	<i>Hazardous</i>	<i>Specialized</i>	<i>Dispersed</i>	<i>On-range</i>	<i>Off-range</i>	<i>Permitted Land Use Category</i>	<i>Activities Included</i>
											Air Vehicle Operations
Air-to-air, air-to-ground weapons with long stand off	Long range restricted or controlled airspace for arming from long-range distance off range(using NOTAM corridors or special use airspace)	N	L/A	S/F	●		●		●	J/K/M/ N/O	Airborne Weapons/Munitions Release (without evacuation); ADZ; Air Vehicle Operations

Source: WSMR n.d. a; WSMR n.d. b; WSMR n.d. c;

Types:

E=Expansion of existing capability
N=New capability

Requirement:

L=Land
A=Airspace
I=Infrastructure (Range)

U=Utilities (power, water)

T=Targets
F=Frequency band

Deconfliction:

E=evacuation
S=Safety footprint
F=RF Interference

The table also indicates what is needed to support the capability (i.e., airspace, land, range infrastructure, utilities, a specific frequency band), and whether it involves a hazard that requires some level of deconfliction (e.g., evacuation outside WSMR, a safety footprint, or frequency coordination). Based on the type of activities that accompany the capability, the table indicates which land use categories would support the capability. The last column lists the Activity Categories from Table 3-1 that could be involved in meeting each of the capabilities.

Several capabilities are still notional or not well defined. Additional description of requirements will allow further evaluation of each capability and definition of any particular conditions, approvals, or changes in procedures. The following paragraphs describe the capabilities listed in Table 5-1 in more detail.

Ground Maneuver for Test (manned, unmanned.) This capability requires land for free maneuver of troops, heavy wheeled and track vehicles, manned and unmanned. Test events would require a range of terrain and geophysical conditions, with some areas sized for flexibility (some areas at least 10 by 10 kilometers in size [approximately 25,000 acres]). Initial FCS System-of-Systems (SoS) tests require this capability, with areas of operation spreading out over great distances (at least 90 miles) to test future networking and battlefield integration.

Testing of the first phase of the FCS program has occurred at WSMR. The BCT Modernization program will likely continue testing other systems at WSMR in the future. New components include Class IV UASs, Small Unmanned Ground Vehicle, Armed Robotic Vehicle, Infantry Combat Vehicle Mounted Combat System Non-Line of Site mortar system [manned], Medical and Evacuation Vehicle. As the program progresses, tests will require an expanded arena within which to operate, in order to replicate layers of command in battlefield reconnaissance, surveillance and engagement. Land (with a variety of terrain and ecological conditions) and airspace extending over the full extent of the range (at least 150 kilometers [93 miles]) is needed to allow separation between different nodes of activity, and movement of units in realistic offensive mission scenarios. Tests would need a variety of terrain, and use of terrain features to separate operational locations. On WSMR, this could include off-road operations in mountainous terrain, and areas of operations on the west side of the San Andres Mountains. Successful communication between different battlefield elements (using state-of-the art communication systems) and execution of appropriate offensive or defensive responses is a primary test objective in achieving a fully integrated combat system.

The Limited User Tests for the initial phase of FCS testing at WSMR represent a typical level for any given test event as the program progresses; however, these events could increase in frequency and may involve similar nodes of activity taking place on the range as dispersed locations at the same time. A current base of 200 permanent personnel may expand by 100 to 150 more persons over the next five years. Surges of personnel up to 600 persons would continue, but may become more frequent, representing a relatively constant temporary population. The BCT Modernization program will utilize the Army Evaluation Task Force stationed at Fort Bliss as the Soldier participants in all parts of the test program. These Soldiers would reside on Fort Bliss. During the fielding phase of the BCT Modernization programs, the Soldier participant role would evolve into a Soldier-student role as units rotate through to learn how to use the new systems. Their activities would replicate all those undertaken during the test phase as they practice with each component of the system. (It should be noted that the combat concepts and activities of the future BCT fighting force align closely with Infantry Brigade

Combat (IBCT) functions, with equipment serving foot Soldiers, supported by light to heavy equipment components.

For the continuation of this program, BCT Modernization would need to construct the following facilities to support expansion of future testing: Motorpool (approximately 15,000 s.f.) with fiber optics and other necessary utilities and communication systems; Urban test facility (140,000 s.f.) near the 901 Area; Mobile and temporary prefabricated industrial-type structures on range during testing; UAS hangers at Condron AAF for maintenance and linkage to the airfield.

Ground Maneuver and Field Operations for Training. In addition to off-road maneuvering for testing, off-road maneuver training and field training is proposed for a future Heavy Brigade Combat Team (HBCT) or equivalent unit and the Engineering Battalion (EN BN) currently training on Fort Bliss. All training in weapons and small arms would continue to be accomplished at firing ranges on Fort Bliss. It is anticipated that some portion of field training will also continue to occur on Fort Bliss to provide flexibility when test missions need access to the same areas. Training by the HBCT and EN BN at WSMR would substantially increase field operations, dismounted training, and off-road vehicle maneuvers in localized parts of WSMR. The level of use and intensity of maneuver training differs from the off-road activities for test programs. Field training and off-road training maneuvers would be concentrated in the southeast part of WSMR, performed regularly rather than intermittently (as for test events).

A HBCT (or similar units) and EN BN would train in a vastly more dynamic fashion, moving relatively constantly across land in tanks and other tracked and wheeled vehicles. Training Circulars 25-1, "Training Land," and 25-8, "Training Ranges," define the training requirements for different types and sizes of units, ranging from a crew (typically 4-10 Soldiers), platoon (16-44 Soldiers), company (62-190 Soldiers), and battalion (300-1,000 Soldiers).

The Southeast Multi-Use Area (approximately 120,000 acres) has been designated for multiple use to support both test and training off-road vehicle maneuvers, including levels typically required for a HBCT. Current test maneuvering that is taking place within this area primarily by FCS would continue under BCT modernization programs. Field Training by other types of units such as the EN BN would also use this area for training. In addition to ground maneuver, this area would continue to be used for all the other activities permitted within the Augmented Test Zone.

Army *Training Circular 25-1, "Training Land"*, is the Army's definitive source for defining maneuver training land requirements and specifies an optimal training space requirement for a BCT of approximately 10 miles by 38 miles. This configuration would allow the entire HBCT to train each maneuver task individually within this larger box, without stopping between each exercise to reposition forces, thereby maximizing training efficiency. A smaller maneuver area of 10 miles by 19 miles could also be used to support training of the HBCT, but would require the repositioning of forces between each exercise, decreasing training efficiency. The Southeast Multi-Use Area is sufficiently large to accommodate the larger maneuver boxes needed for brigade-level training.

Smaller subordinate elements of the HBCT would train on a specific event, breaking a training event down into situational training exercises (STX) or drills that are focused on a specific task and can be repeated until the unit achieves proficiency. A training area of 5 miles by 19 miles would accommodate this type of training, as these events would occur at no higher than the battalion task force level.

Prior to using these areas for regular maneuver training, archaeological clearance would be completed, according to terms and conditions specified in the Programmatic Agreement (PA). Similarly, the area would be appropriately cleared of UXO hazards prior to opening areas up for regular use. Some areas may be off-limits and delineated clearly in the field.

High Power Microwave (HPM) and High Energy Laser Weapons. This represents a continuation of ongoing capabilities to support directed energy activities. In the future, the footprints for directed energy and HPM are expected to increase. Test planning would require that emissions of hazardous non-ionizing radiation are contained within existing boundaries of land and airspace assets (according to current agreements and regulations). One example of this future capability includes the Directed Energy Test and Evaluation Capability program which is an extension of the Electromagnetic Environmental Effects testing done at the EMRE site. Part of this program uses specialized facilities to test the effects of HPM on DoD vehicles/components. Test equipment is transportable and could be conducted anywhere on range. Future tests would involve ATL (mounted on a C-130 aircraft uses high energy lasers to engage and destroy ground targets) and ABL, which operates at altitudes above the clouds where it can acquire and track missiles in boost flight, and then accurately point and fire the laser with such energy that the missile is destroyed before it can do any harm. Applicable activity categories for this capability include the use of Specialized Areas, Directed Energy Systems, Surface Weapons Firing, Airborne Weapons/Munitions (with evacuation), SDZ, ADZ, and Air Vehicle Operations.

Global Positioning System (GPS) Jamming Program. The U.S. Air Force, 746 Test Squadron (TS) at Holloman AFB conducts an array of GPS interference programs, which range from jamming to validation of both military and civilian navigation systems. The unit also supports testing of a wide variety of other electronic warfare equipment. These tests are conducted against both ground and airborne assets. Aircraft and ground vehicles (e.g., vans, buses, semi-trailers) used as targets or test beds. Most of the testing is done in the northwest area of WSMR using established sites. With the current level of activities increasing in the northwest part of the range, the program would need access to other parts of the range. Key program elements include: transmitting frequencies at power levels up to 200 watts into two types of antennas (transportable and mobile); radio transmissions at 1575.42 megahertz (MHz), 1227.6 MHz, and 1176.45 MHz frequencies. These tests are generally performed between the hours of 0200 and 0400 local time when potential conflicts with other frequency users is less. Program activities are closely coordinated with the WSMR Area Frequency and the FAA.

Electronic Warfare/Signal Intelligence/Jamming. This capability has airspace and RF requirements. Operations are potentially hazardous (to persons and electronic equipment) and requires frequency coordination. This capability is frequently used to support test programs as a threat element. The Air Force GPS Jamming program encapsulates this capability, with a need to extend to locations throughout the range. Activity categories that it could potentially encompass include directed energy systems, Instrumentation and Communication Systems, and may also involve airspace and SDZs.

Unmanned Air Systems (UASs). All classes of UASs/drones (including experimental systems) will use restricted airspace for on and off-range operations. UASs/drones are used as targets or as weapon release platforms (over DoD land only). Properly FAA-certified UASs can operate in uncontrolled airspace. All operations would follow FAA policies and regulations (FAA 2007). This capability uses restricted airspace and RF requirements (requiring coordination and approval). UASs used as targets in live-fire tests are a hazardous operation requiring exclusive use of scheduled SDZ and ADZs.

Liquid Fuel Aerial Target Intercept. Liquid fuel targets represent change in technology and materials associated with test articles (e.g., new propellants similar to Lance and Scud missiles). This capability has land and air and infrastructure requirements, requires RF deconfliction, and is potentially hazardous. Activity categories that it could potentially encompass include Surface Weapons Firing, Airborne Weapons/Munitions (with evacuation), Weapons Impact, SDZ, and ADZ.

Lasers using Solid Propellants. This capability represents change in technology and materials associated with test articles. This capability has land, air and infrastructure requirements, requires RF deconfliction and a significant footprint, and is potentially hazardous. Activity categories that it could potentially encompass include Directed Energy Systems, Surface Weapons Firing, Airborne Weapons/Munitions (with evacuation), Weapons Impact, SDZ, and ADZ.

Space Systems. Launch and recover space vehicles, manned and unmanned, vertical or horizontal takeoff and recovery from WSMR location. This capability has land, air, infrastructure and utility requirements, requires RF deconfliction and a significant safety footprint, and is potentially hazardous. NASA's Launch Abort System test program will begin at WSMR in the near future. NASA also has supported the Space Shuttle program with the large White Sands Space Harbor facility. The new commercial Spaceport America lies within WSMR restricted airspace and will support research and commercial space operations, with potential use of WSMR land and airspace capabilities.

Air Defense Tactical Missiles Launch from Off-Range. This capability includes launching long-range tactical target missiles from off-range (from Fort Wingate). These tests have taken place in the past but have tapered off in the last five years. An example of this future capability is the Medium Extended Air Defense System (MEADS) program that would test the PAC-3 missile. This is a mobile surface to air missile system designed to protect maneuvering forces and fixed installations against attack. Mostly existing renovated facilities would be used. This program would reuse existing launch sites and would construct two new launch sites comprised of several new pads for key test equipment with fiber optic connection. The tests would involve Surface Weapons Firing, Airborne Weapons/Munitions (with evacuation), Weapons Impact, SDZ, and ADZ.

MEADS would establish an integration facility near Main Post (approximately 15,000 s.f. with parking for 32 vehicles). Three sets of pads (two up range and one near the Small Missile Range) are planned, each comprised of approximately 10 to 15 pads for equipment and instrumentation. The arrangement of pads at each site is driven by test parameters, and includes a primary cluster of pads and remote pads for instrumentation set up at distances of 20 kilometers from the main cluster. All pads require fiber optic connection. Due to exposure hazards, radar pads would require controlled (gated) road access. Pad sites would each have a 3,000 s.f. blockhouse to protect personnel from PAC-3 debris in the event of a flight termination. Each pad site would have approximately ten 30-kilowatt field generators.

MEADS (Medium Extended Air Defense System) is a mobile surface to air missile system designed to protect maneuvering forces and fixed installations against attack. This program would take place from approximately 2008 to 2012. MEADS program will test the PAC3 Missile Segment Enhancement (MSE) missile, using several airborne targets including Lance missiles, UASs and drones, and a variety of missile types being phased out of the functional inventory.

The flight test program would consist of 10 missions (nine involving weapons firing). The first test would occur in 2010, with each subsequent test occurring once every three months. Each test would have a 16-19 day window that includes checkout of equipment, installation, dress rehearsal, readiness, mission, and return of equipment, for a total of 60-90 days of testing each year for the MEADS program.

Weapon Systems using Special Materials. Future weapons and test articles may contain an array of common and uncommon materials including, beryllium, hydrogen, fuels, chemical simulants, agent defeat that may require special areas, procedures, and/or permits. New materials (currently unspecified) may require future approval and special operating procedures. This capability has land, air, and utility requirements, requires RF deconfliction and a significant safety footprint, and is potentially hazardous.

Next Generation Missile Programs on WSMR. Include missile programs where the future new technologies and/or materials are not known. This capability has land, air, infrastructure, utility, and target requirements, requires RF deconfliction as well as evacuation and contains a significant safety footprint. One example of this capability could include changes to the PAC-3 surface-to-air guided missile. This missile has an upgraded AN/MPQ-65 radar to increase detection in high-clutter environments and to improve decoy recognition. This is a solid-propellant rocket-powered missile that has a range of 12 miles. Another example includes the Navy's Standard Missile-6 Extended-Range Active Missile, which is a surface-to-air missile that provides the Navy with ability to engage challenging targets at more extended ranges using advanced seeker and semi-active guidance technology. Activity categories that it could potentially encompass include Surface Weapons Firing, Airborne Weapons/Munitions (with evacuation), Weapons Impact, SDZ, and ADZ.

Joint Test and Training Battlespace. Tests will increasingly require an large arena for three-dimensional integrated maneuver, weapons firing (air-to-air and air-to-ground), networked systems, mobile instrumentation, integrated air and ground operations, off-road vehicle use, and use of test articles. This capability has land, air and infrastructure requirements, requires RF deconfliction and a significant footprint, and is potentially hazardous. To achieve this, WSMR and Fort Bliss are integrating the management of airspace, land resource, RF coordination, and scheduling with a state-of-the-art system using a three dimensional tool.

Sub-Surface Targets. Operations would continue using existing and expanded facilities on WSMR, such as tunnels, mock sewers, command posts for live-fire events (e.g., penetrator bombs) with reconnaissance. This capability has land, air, utility and infrastructure requirements, requires RF deconfliction and a significant footprint, and is potentially hazardous.

Non-lethal Weapons. Areas for tests involving non-lethal bio/chemical weapons, high-powered microwave, and other directed energies. This capability has land and air requirements, requires RF deconfliction and a significant footprint, and is potentially hazardous.

Missiles Launched from Mobile/Moving Platforms. This capability involves surface-to-air, and surface-to-surface launch on range from moving platforms and vehicles. This capability has land, air, infrastructure, and target requirements, requires RF deconfliction as well as evacuation and contains a significant safety footprint. From off-range restricted airspace (not overlying WSMR land) only simulated or dry-run operations would occur.

Off-range Mobile Instrumentation. Expand temporary siting of non-hazardous mobile equipment and instrumentation (outside WSMR); may require new agreements and approvals by landowners. This capability has land and air requirements and requires RF deconfliction. Activity categories that this could potentially encompass include Instrumentation and Communication Systems.

Distributed Testing using Global Information Grid (GIG) Test Bed. Establishing a future GIG test bed at WSMR would involve upgrading and adding new infrastructure and equipment such as towers, buried cable; RF requirements. This capability has land, infrastructure and utility requirements and requires RF deconfliction. The GIG is envisioned as a net-centric system operating in a global context to process, store, manage, and transport information to support all DoD and national security missions and functions in times of war and peace. To implement this, operational and function design concepts must be translated into specific architecture guidance, information assurance standards and protocols, technical requirements, and policy. Development of this system using WSMR as a test bed, would combine with other RDT&E efforts, such as BCT Modernization, in development efforts such as the Joint Tactical Radio System, Warfighter Information Network-Tactical, GIG Bandwidth Expansion (GIG-BE), Intelligence Community System for Information Sharing, Transformational Communications, and other programs supporting the GIG vision. At WSMR, supporting this future capability mostly involves upgrading computers and networking systems, and may involve extending the fiber optic network around Main Post and WSMR Range.

WSMR is not currently planning to support tests involving hypersonic flight and launching of tactical or target projectiles from off-range to interface with on-range test elements. These capabilities (the last three listed in Table 5-1) would require new restricted or special use airspace, which WSMR is not currently proposing.

5.1.2 Future Specialized Areas

Many test programs and tenants have needs for particular facilities to support broad test capabilities. Current concepts for facilities or test beds are listed in **Table 5-2**, below. These represent potential new Specialized Areas on WSMR and, therefore, need to undergo a siting process, considering the needs of the user and potential conflicts with existing uses and activities. Chapter 6 addresses a process for siting various activities on WSMR, and for identifying conditions pertaining to specific uses.

The majority of the future specialized areas are still conceptual, and are at various stages in process and development. Six new specialized areas proposed for WSMR have been evaluated in the *2009 WSMR Range-wide EIS*. Specific sites for these areas will likely require further environmental review and coordination. Others not covered by the EIS will require further NEPA analysis when they are more clearly defined and ripe for decision. The activities, construction, and disturbance associated with currently proposed development of specialized areas are described below.

Table 5-2. Future Specialized Areas

<i>Facility</i>	<i>Description of Requirement*</i>	<i>Type</i>	<i>Requirement</i>	<i>Deconfliction</i>	<i>Hazardous</i>	<i>Compatible Land Use Category</i>
Addressed in 2009 Range-wide EIS						
Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) System.	JLENS is a large, unpowered elevated sensor moored to the ground by a long cable. The radar sensors are held aloft in helium-filled balloons (known as “Aerostats”) to provide over-the-horizon surveillance for defense against cruise missiles.	N	L/A/I/F/U	F		A/C
Joint Urban RDT&E Environment.	Simulated urban context, with structures, varied materials, RF sources, and underground tunnel complex (e.g., like a sewer network)	N	L/U/I/F	F	●	A/C
Environmental Lab Complex	New 12-13 building complex along Nike Road; explosives tests (QD zone)	N	L/U	S	●	A/C
Individual Combat Skills Training Area.	An Individual Soldier Combat Skills Area is proposed in close proximity to the Future Development Area (HBCT Complex). This facility proficiency training in basic Soldier survivability skills Listed below are selected combat tasks considered essential for every Soldier.	N	L			A/C
.50 Caliber Test Range.	The Program Executive Office for Soldier Systems Electro-Optical Testing proposes a .50 caliber small arms range for testing weapon-mounted systems.	N	L/I/U/T	S	●	A/C/D
Local Training Area (LTA)	An area where the EN BN can perform field operations (digging), breaching, gap bridging, limited off-road maneuvering, Improvised Explosive Device (IED) route clearance training, dismounted operations, and training in the use of heavy equipment.	N	L			C

Table 5-2. Future Specialized Areas *Continued*

<i>Facility</i>	<i>Description of Requirement*</i>	<i>Type</i>	<i>Requirement</i>	<i>Deconfliction</i>	<i>Hazardous</i>	<i>Compatible Land Use Category</i>
Not Addressed in 2009 Range-wide EIS						
Consolidate new Systems Vulnerability Assessment Directorate (SVAD) facilities including new HPM test facilities	New facility/complex with up to 4,000-foot radius safety footprint; construct HPM complex on 25 acres near existing SVAD complex (in process); up to 10 nautical miles safety buffer for some tests	N	L/U	E/S/F	●	A/C
Mortar Range (longer range artillery indirect fire – howitzers)	Mortars technical and operational testing, networked fires and counter artillery and mortar, 15x30 kilometer	N	L/T	S/F	●	A/C/D
Space Surveillance Optical telescope	High terrain, line-of sight (Atom Peak) with tracking telescopes. This project is in progress.	N	L/U			A/C
Additional tunnels for penetrator warhead tests	Expand tunnel complex at Capital Peak, similar to existing tunnel complex.	E	L/A/I/U	E/S/F	●	A/C/D
Sub-surface target complex	Tunnels, construct mock sewers, and associated command post for live-fire. Recovery impact area.	N	L/A/I/T/	S/F		A/C/D
Depleted Uranium Range	Being developed by the National Nuclear Security Administration for air-to-surface weapons; located away from mountains (security), specific soil/geology requirement	N	L/A/I/T	S/F	●	A/C/D
UAS Center	Staging area for UASs/drones, runways, hangars, power and networks, could co-locate at existing airfield.	N	L/A/U			A/C
Directed Energy Weapons impact/target areas	Expand existing capabilities at HELSTF or other site using mountains as shield; safety area confined within WSMR	E	L/T	S/F	●	A/C
Facilities for Crew Exploration Vehicle program	Add facilities at NASA Space Harbor for next generation shuttle operations	E	L/A/I/U	E/S/F	●	A/C
Live-fire impact area (non recovery) for submunitions	New Phase II WIT for a/s and s/s weapons; range/impact area for explosive weapons systems, mortar, rockets, cannons, tank, intelligent munitions and counter IED, rockets, mortar, artillery	N	L/AI/U/T	S/F	●	D

Table 5-2. Future Specialized Areas Continued

<i>Facility</i>	<i>Description of Requirement*</i>	<i>Type</i>	<i>Requirement</i>	<i>Deconfliction</i>	<i>Hazardous</i>	<i>Compatible Land Use Category</i>
Launch complex revitalization	On Main Post - Safety area; warehouse, maintenance, hazardous material storage buildings and renovate existing missile assembly buildings, tank trails, access road, staging areas; 47,000 s.f. new facilities; 19,000 s.f. renovation; site SE Main Post		L/A/I/U/F	S/F	●	A/B/C
Laser test bed facility	Line of sight to distant high point for hazardous operations; mostly night-time use; North Oscura Peak to Salinas Peak possible site	N	L/A/I/U/F	E/S/F	●	A/C
New High Energy Laser facilities	Test facilities for next generation lasers within existing complex (HELSTF) or new site, radiating within WSMR	E	L/A/I/U/T	S/F	●	A/C
Single-use impact sites	Single-use impact site for missile firings, with full recovery	N	L/A/T	S/F	●	A/C
Small weapons range, pistol qualification ranges	Small weapons training ranges	N	L/U/T	S	●	A/C

Types:
 E=Expansion of existing facilities
 N=New facility

Requirement:
 L=Land
 A=Airspace
 I=Infrastructure (Range)
 F=Frequency band
 U=Utilities (power, water)
 T=Targets

Deconfliction:
 S=Safety footprint
 E=Evacuation requirements
 F=Frequency coordination

Source: WSMR 2006b

.50 Caliber Test Range

The Program Executive Office for Soldier Systems Electro-Optical Testing proposes a .50 caliber small arms range for testing weapon-mounted systems. This range would be used for testing sensors and lasers for use on the battlefield in all weather conditions. The range would be approximately 1.2 to 1.9 miles in length, with two lanes of targets set up across a width of 1,720 feet (approximately 118 acres). Within the range would be a cleared and graded 330 by 1,640 foot area (approximately 12 acres) and bullet firing impact berms would be built at 1,640, 3,820, and 6,560 feet (500, 1,000, and 2,000 meters). In addition, a compass rose target range area approximately 1,640 feet in radius (a 785,000-s.f. area) would also be constructed. Additional infrastructure required for the range includes approximately 6,400 s.f. of office space, an instrumentation room, laboratories, weapons storage and maintenance, and restrooms. Infrastructure such as water, power, internet, and telephone would also be required.

Activity categories for this capability include Mission Support Facility, Specialized Area, Dismounted Operations, Field Operations, On-Road Vehicle Use, Directed Energy Systems, Instrumentation and Communication Systems, SDZ, Weapons Impact.

Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) System

JLENS is a large, unpowered elevated sensor moored to the ground by a long cable. The radar sensors are held aloft in helium-filled balloons (known as “Aerostats”) to provide over-the-horizon surveillance for defense against cruise missiles. JLENS tests the ability of system radars to detect, locate, and identify intruding aircraft and relay information to surface-based defensive systems. Elevated sensors would allow detection, tracking, and engagement of incoming cruise missiles by surface-based air defense systems even before the targets could be seen by on-the-ground systems. Physical infrastructure for the system consists of an aerostat with a mobile mooring station and data processing stations. The system would require an airspace avoidance bubble.

One JLENS site is proposed for WSMR, requiring a fenced site encompassing a 1,000-by-1,200-foot area. There may be two additional sites supporting JLENS in the region, potentially on Fort Bliss. Within the fenced area, there would be a paved area for parking and facilities approximately four acres in size, and a concrete pad with a 450-foot radius (approximately 14 acres). The proposed JLENS site would require the construction of a total of 20 acres of impervious surface.

Test activity would involve daily equipment ground checks and radar radiation similar to the Patriot and THAAD radars (using X-band frequencies). Tests would use targets towed by aircraft and UASs, and would involve 30 drone operations each year (likely based from Holloman AFB). This program, supported by approximately 30 to 60 personnel, would begin in 2010. The size of the airspace bubble may vary depending on the length of the tether for specific tests¹.

Activity categories for this capability include Mission Support Facility, On-Road Vehicle Use, Air Vehicle Operations, Specialized Area, SDZ, Instrumentation and Communication Systems, Air Operations (non-hazardous), and ADZ (due to tethered balloon).

Environmental Laboratory Complex

¹ There is some flexibility to reel in the aerostat to avoid interference with other test programs, but this requires use of additional helium to re-inflate the balloon, so this practice would occur as infrequently as possible.

The proposed Environmental Laboratory Complex includes new and existing facilities with roads, parking, and utilities located in a development area of approximately 1,600 acres located on two parcels on either side of Nike Road. The facilities would support both non-hazardous and hazardous testing of missiles and components subjected to extreme conditions. The test facilities use a 1,500-foot radius safety footprint, all of which would be contained within the Complex boundary. The Complex is comprised of 14 buildings (two already existing, 12 to be constructed):

- Temperature Test Facility (Existing)
- Microbiological Chamber (Existing)
- Rain, Humidity and Salt Test Facility
- Solar Radiation and Dust Test Facility
- Acoustic and Burst Test Facility
- Radiographic Test Facility
- Large Force Hydraulic Test Facility
- Large Force Electrodynamical Test Facility
- Medium Force Electrodynamical Test Facility
- Medium Force Hydraulic Test Facility
- Administration and Control Test Facility
- Shock and Centrifuge Test Facility
- Rail and Road Support Building
- Rail and Road Courses

Activity categories for this capability include Mission Support Facility, Specialized Area, On-Road Vehicle Use, Directed Energy Systems, and Instrumentation and Communication Systems.

Joint Urban RDT&E Environment

The proposed Joint Urban RDT&E Environment specialized area would be sited within a two square mile area (approximately 1,300 acres), utilizing up to eight square miles, and could require up to 5,120-acre safety area (SDZ) for some test events. This project would create a mock urban environment composed of approximately 32 single and multi-story buildings (approximately 320,000 s.f., covering a 55,000 s.f. footprint). Construction would include a variety of types (such as steel, adobe, masonry, metal and glass cladding) in order to replicate a range of possible conditions found globally in urban environments. The complex would also have utilities (such as power and water), subsurface tunnels, parking areas, and passageways, cell phone tower and other emitters such as radar, microwave phone, and television and broadband generators—all intended to replicate the complexity of the RF interference encountered in diverse battlefield situations. Site infrastructure would include sewer lines, tunnels, street lights, overhead power lines, radio and television transmitters, cell towers, fences, vehicles, landscaping, household appliances and vehicles, in addition to test support communication and instrumentation infrastructure.

Activity categories for this capability include Mission Support Facility, On-Road Vehicle Use, Specialized Area, Directed Energy Systems, and Instrumentation and Communication Systems.

Individual Combat Skills Training Area

An Individual Soldier Combat Skills Area is proposed in close proximity to the Future Development Area (HBCT Complex). This facility proficiency training in basic Soldier survivability skills. Listed below are selected combat tasks considered essential for every Soldier.

Shoot, Move, and Communicate

- Engage targets with an M16A1 or M16A2 rifle (to be conducted on Fort Bliss)
- Move over, through, or around obstacles (except minefields)
- Navigate from one point on the ground to another point while dismounted
- Perform voice communications

Survive

- Evaluate a casualty
- Perform first aid for nerve agent injury
- React to chemical or biological hazard/attack
- Decontaminate self and personal equipment using chemical decontaminating kits
- React to indirect fire while dismounted
- React to direct fire while mounted
- Select temporary fighting positions

To ensure proficiency with individual skills, Soldiers are required regularly to accomplish prescribed tasks in a variety of courses and/or tests. These include obstacle and confidence courses, bayonet course, Army Physical Fitness Test, day and night land navigation course, gas chamber exercise, and long distance (12 mile) marches.

Individual skills courses require a relatively flat area not exceeding 60 total acres. Obstacles (primarily posts) are dug into or placed on the ground; however, there is relatively little ground disturbance involved, with the exception of a water obstacle, which requires the excavation of a small pit. Gas chamber exercises require a small building. EIB stations are typically marked by sandbags on the ground and covered by camouflage nets.

Activity categories for this capability include On-Road Vehicle Use, Specialized Area, Dismounted Operations, Field Operations, and Instrumentation and Communication Systems.

Army *Training Circular 25-1, "Training Land"* (U.S. Army 2004a), is the Army's definitive source for defining maneuver training land requirements and specifies an optimal training space requirement for a BCT of approximately 10 miles by 38 miles. This configuration would allow the entire HBCT to train each maneuver task individually within this larger box, without stopping between each exercise to reposition forces, thereby maximizing training efficiency. A smaller maneuver area of 10 miles by 19 miles could also be used to support training of the HBCT, but would require the repositioning of forces between each exercise, decreasing training efficiency. The Southeast Multi-Use Area is sufficiently large to accommodate the larger maneuver boxes needed for brigade-level training.

Smaller subordinate elements of the HBCT would train on a specific event, breaking a training event down into situational training exercises (STX) or drills that are focused on a specific task and can be repeated until the unit achieves proficiency. A training area of 5 miles by 19 miles would accommodate this type of training, as these events would occur at no higher than the battalion task force level.

Prior to using these areas for regular maneuver training, archaeological clearance would be completed, according to terms and conditions specified in the PA. Similarly, the area would be appropriately cleared of UXO hazards prior to opening areas up for regular use. Some areas may be off-limits and delineated clearly in the field.

Local Training Area (LTA)

Another specialized area proposed is the LTA in the vicinity of Main Post where the EN BN can perform field operations (digging), breaching, gap bridging, off-road maneuvering, IED route clearance training, dismounted operations, and training in the use of heavy equipment. Provision in the future PA for cultural resources would apply to operations in the local training areas for the EN BN. The final lay down of the LTA may occupy more than one site given the amount of existing development and constraints in this area.

5.1.3 Future Infrastructure and Support Requirements

Some input was gathered on the type of infrastructure needed to serve future activities on WSMR. While the LUASP focuses more on the land use framework for activities, the RCMP and Range Master Planning process will flesh out physical construction needed in the future. This could include further description, quantification, and conceptual siting of future range infrastructure. A preliminary list of improvements that could serve multiple users and overall range functioning (rather than a specific location or program) is provided below:

- Expansion of Main Post to support stationing of the EN BN, HBCT, and other potential actions
- Maintenance facilities for track and wheeled vehicles
- Runway/helipad expansion
- Expand Medical Evacuation / facilities capabilities
- Expanded Range Center facilities for dining, billeting and maintenance
- Tank trails (network linking south part of range to north range, network linking WSMR to Fort Bliss, and a network within the Southeast Multi-Use Area)
- Hardened tank crossings (over selected range roads, and US 70)
- Future instrumentation sites
- Expanded communication networks
- Range road improvements and upgrades

This list reflects the need to provide better access, field support, and infrastructure and instrumentation throughout the range. A level of development and support that exists in the southern range could occur in the mid-and north range as well, with connectivity from end-to-end.

5.2 FUTURE LAND USE MAP

The future vision for WSMR involves three main changes to the land use framework: 1) conversion of land from Land Use Classification A to C (to allow for off-road activity); 2) siting of additional special facilities (and test beds) to support specific programs and users; and 3) development of range infrastructure and Main Post to support increased needs throughout the range. Some of the future capabilities described in Section 5.1 would require additional off-range airspace; however, no proposals to meet this need are currently under consideration.

Figure 5-1 shows future land use for the LUASP focus area. The primary change reflected on WSMR is conversion of a large portion of the Primary Test Zone (Land Use Classification A) to Augmented Test Zone (Land Use Classification C), which would allow off-road use. Land Use Classification C does not imply unlimited access and would include conditions and restrictions on off-road use, similar to existing provisions. New impacts areas (for Phase I and II WIT activities) will increase the area of Land Use D (but are not currently sited). Existing built-up areas would increase by 7,000. This includes an expansion of the Main Post of approximately 6,500 acres (see **Figure 5-2**) and delineation of an area approximately 460 acres in size at Stallion Range Center. This land use classification will prevent mutual encroachment of mission functions and facilities on the operational range and cantonment areas. The build out of these areas are not currently planned, and may take decades. **Table 5-3** summarizes the acreage by Land Use Classification for the future land use map. Locations for the majority of the new Specialized Areas listed in Table 5-2 are conceptual and not yet sited. An exception is the proposed Southeast Multi-Use Area, which is located south of US 70 (see **Figure 5-3**). The area will need a tank trail network to facilitate movement between smaller training boxes within it. The layout shown is conceptual.

The concept of additional airspace for airborne operations involving higher than acceptable risks to non-participating aircraft and persons on the ground is not yet defined; therefore, no land use changes are reflected in Figure 5-2 for this requirement. It should be noted, that this would involve new areas outside the LUASP. These may later be conceived as corridors, or blocks of airspace used infrequently, likely through NOTAM protocols similar to those established for Fort Wingate operations.

Figure 5-1 also shows conceptual infrastructure for the range, including a tank trail corridor linking the north and south range, and built-up area development nodes. Any of these projects will require further investigation and a siting process, including coordination with any other affected land owners and managing agencies. **Table 5-4** provides a preliminary estimate of development that these improvements may represent.

Other changes at WSMR may cause increased level of use of airspace and surface areas. This is not a change in land use, but could represent degrees of intensity that have varying effects on both the environment and other users of the range. To the extent possible, anticipated increases can be quantified broadly, such as percent increases over current utilization.

Figure 5-1. Future Land Use in the LUASP Focus Area

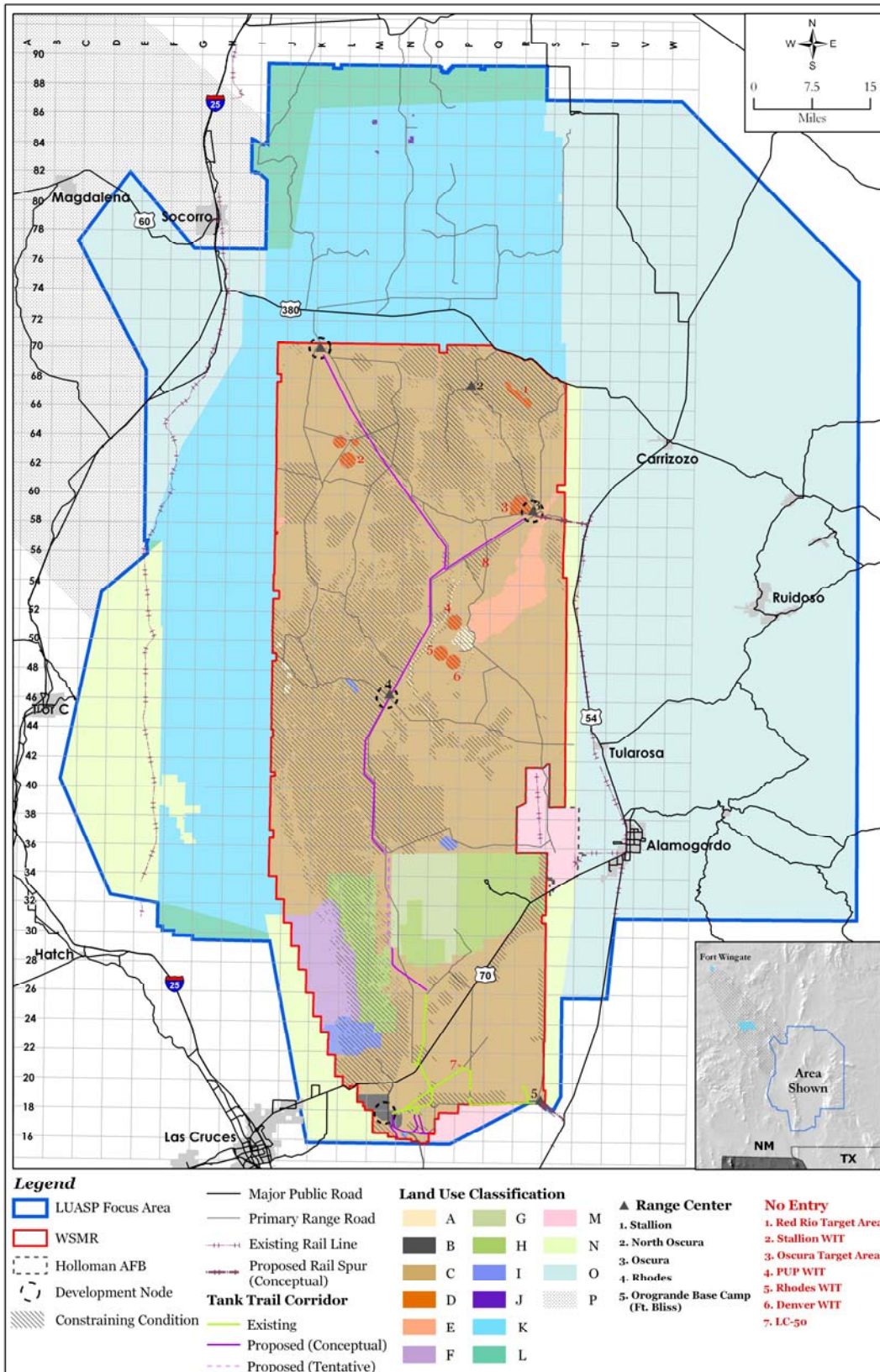


Figure 5-2. Main Post Expansion Area

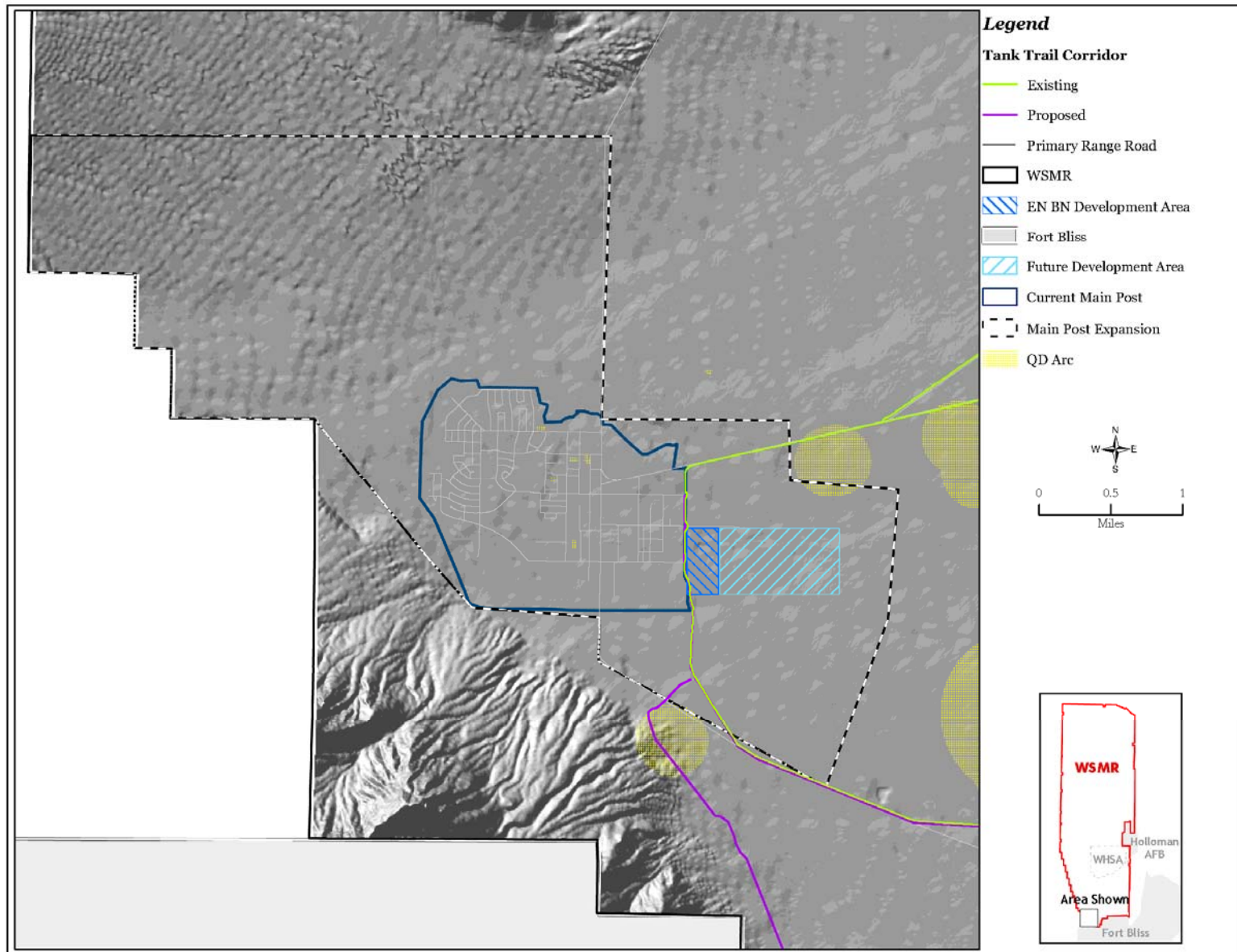


Figure 5-3. Proposed Specialized Area - Southeast Multi-Use Area

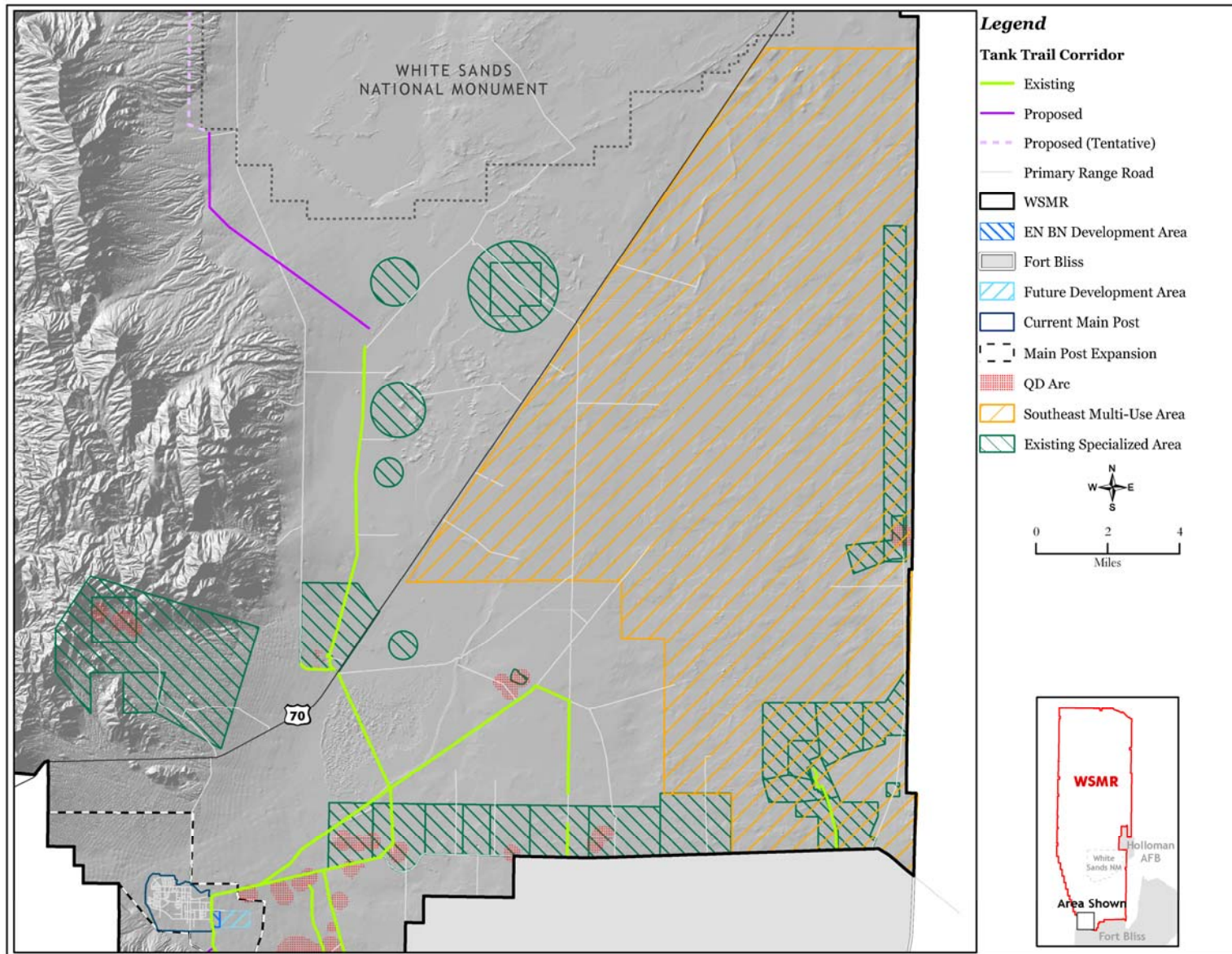


Table 5-3. Future Land Use within WSMR LUASP Focus Area

<i>Classification</i>	<i>Title</i>	<i>Acres</i>		
		<i>Current</i>	<i>Future</i>	<i>Change</i>
A	Primary Test Zone	1,635,000	8,000	-1,627,000
B	Range Centers and Built-Up Areas	1,500	8,500	+7,000
C	Augmented Test Zone	207,200	1,825,200	+1,618,000
D	Impact Area	15,400	17,400	+2,000
E	Lava Flows	42,700	42,700	0
F	Jornada Experimental Range	60,600	60,600	0
G	White Sands National Monument Co-Use Area	57,100	57,100	0
H	Conservation/Protected Area	148,400	148,400	0
I	Dedicated Use Area	20,900	20,900	0
J	Special Call-Up Area (within Restricted Area airspace)	800	800	0
K	General Call-Up Area (within Restricted Area airspace)	1,337,600	1,337,600	0
L	Ground Only Call-Up Area (outside Restricted Area airspace)	201,300	201,300	0
M	Restricted Area Airspace Only (overlying DoD land outside WSMR and call-up areas – from surface)	71,800	71,800	0
N	Restricted Area Airspace Only (overlying non-DoD land and outside call-up areas – from surface)	498,400	498,400	0
O	High Altitude Restricted Area Airspace (outside DoD land and call- up areas)	2,350,400	2,350,400	0
P	Unrestricted Airspace (with approval)	0	0	0
Q	Non-Contiguous WSMR Land	0	0	0
Total acres		6,649,100	6,649,100	0

Note: Land Use Classifications likely to expand with further delineation of requirements include B (Built-Up Areas) and D (Impact Areas). Classification P (Unrestricted Airspace [with approval]) will expand in the future with further definition of safety corridor for Green River launch site. No change for Land Classification J, P, or Q identified at this time.

Table 5-4. Future Physical Development—WSMR Range Area Infrastructure¹

<i>Requirement</i>	<i>Potential Land Area (acres)</i>	<i>Description</i>
Tank Trail Corridor	800	Up to 150 miles of tank trail (24 feet wide) parallel to existing range roads (to extend possible). Corridor width approximately 50 feet
Tank Trails in South Range	120	Tank trails connecting Main Post to maneuver training areas and within the new Southeast Multi-Use Area
Stallion Range Center	100	Double current development; include billeting and dining, maintenance areas, field offices and networked work stations; first aid station and cafeteria; possible Medical evacuation facility
Oscura Range Center	100	Double current development; vehicle maintenance, staging and storage areas, field offices and networked work stations; first aid station and cafeteria, possible billeting/dining facilities
Rhodes Range Center	100	Vehicle maintenance, staging and storage areas, field offices and networked work stations; first aid station and cafeteria, possible billeting/dining facilities
Main Post	6,500	Expand Main Post area for future development of mission, mission support, and community support facilities. Includes housing areas, schools, and mission critical facilities for new stationing
Other road improvements	TBD	Continue road maintenance activities throughout the network. New roads for access to new specialized areas and for test program configurations (tertiary roadway)
New buried networks (cables, pipelines)	TBD	Not yet determined
Expand electrical substations	6	Upgrade system capacity for additional population and increase in facilities (up to five million square feet)

1. The values in the table are preliminary and notional.

6.0 LUASP IMPLEMENTATION

The LUASP is designed to facilitate and streamline access to and use of WSMR lands, facilities, and airspace. This chapter describes the process for implementing the adopted land uses and activities in the LUASP, including the planning process for initiating new activities and missions, siting and application of other considerations that can reduce potentially adverse environmental and other impacts, and the WSMR review, approval, and scheduling process.

Portions of the LUASP, including the Land Use Classifications, Activity Categories, and some of the Specialized Areas have been analyzed in the *2009 Range-wide EIS*. That analysis identified potential adverse environmental impacts, along with siting considerations and other mitigation measures to avoid or reduce those impacts. Incorporation of these siting and other considerations in planning new activities can significantly reduce the time and effort required for review and approval.

All new activities require review to ensure compliance with applicable restrictions and safety requirements. This is accomplished through the WSMR review, approval, and scheduling process detailed below. During the review, additional documentation, analysis, or other information may be required from prospective users and may result in conditions of use to ensure adequate safety, regulatory compliance, and/or compatibility with other missions and users at WSMR. Some of those requirements apply to all activities performed on the range, while others are site-specific and depend on the location of the proposed activity.

Figure 6-1 illustrates the overall WSMR Activity Planning, Review, and Approval Process. This process varies depending on the complexity of the proposal and types of activities involved. It may include safety and frequency review and approval, site selection, archaeological clearance, and UXO review.

The LUASP is premised on RTLA and ITAM functioning (or similar Sustainable Range Program mechanisms) as the guiding management framework for achieving sustainable ecological conditions and meeting Army test and training mission requirements over the long term. Integrating ITAM goals and objectives into an accessible GIS will be key to future siting of facilities and activities on WSMR.

Table 6-1 summarizes current operational and mission focus of each of the Operational Units described in Section 4.4. These reflect priorities outlined in WSMR's RTLA Plan (U.S. Army 2008a), and may undergo further review and refinement.

Figure 6-1. WSMR Activity Planning, Review, and Approval Process

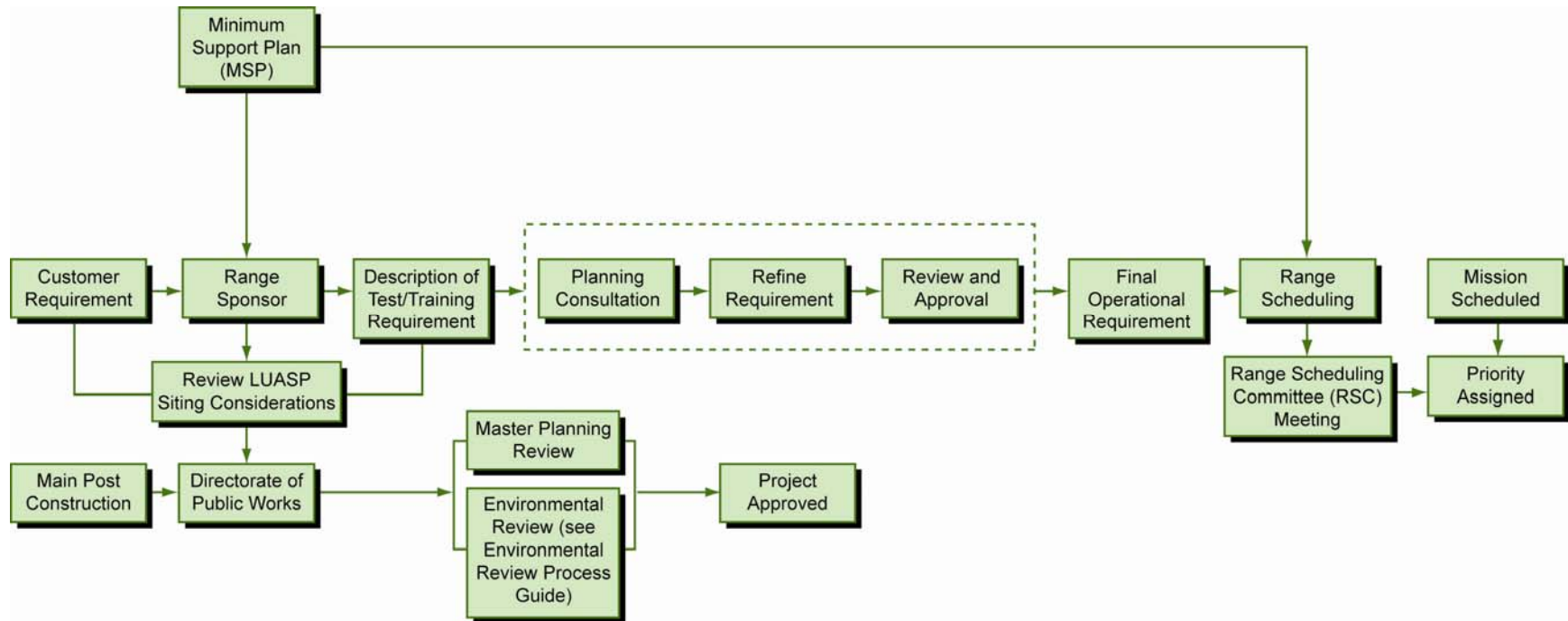


Table 6-1. Operational Units - Current and Desired Future Operational Focus

<i>Operational Unit</i>	<i>Current Emphasis</i>	<i>Desired Future Emphasis</i>
Trinity	Range Center DTRA tests PHETS area Impact areas SDZ	Current uses plus: Expand Stallion as support center for test and training operations
Armendaris	Aeroacoustic Research Complex Zumwalt test track JDETS range SDZ	Current uses plus: Expand JDETS and HPM activities
North San Andres	DTRA tunnel complex Fairview Helicopter Gunnery Range Salinas Peak Instrumentation Site SDZ	Current uses plus: Special Forces Weapons of Mass Destruction facilities
Lava	SDZ Dismounted desert mobility training – Special Forces	Current uses plus: Special missions or testbeds utilizing unique geologic and inaccessible context
Southern Jornada	SDZ NASA WSTF JER	Current uses plus: Dismounted operations Special operations Specialized Area with limited access
Oscura Mountains	Aerial Cable range Red Rio Bombing Range DARPA Space Surveillance Telescope Air-to-ground training North Oscura Peak High Energy Laser Facility SDZ	Current uses plus: Air-to-ground training Joint battlefield air and ground operations Dismounted and field operations Special Areas with terrain requirements Special Forces
South Oscura	Oscura Range Center Oscura Target Area SDZ	Current uses plus: Off-road use on non-interference basis
Three Rivers	SDZ Special forces desert mobility training Radar and instrumentation sites	Current uses plus: Preserve use for missile impact area Off-road use on non-interference basis
South Andres	Hazardous Test Area Electromagnetic Radiation Effects	Current uses plus: Limited off-road for test. Dismounted and field operations for test Special Areas with terrain requirements Special Forces
Salt Creek	WIT SDZ	Current uses plus: Limited off-road for test.
Bajadas	Rhodes Canyon Range Center RAMS	Current uses plus: Limited off-road for test Dismounted and field operations for test

Table 6-1. Operational Units - Current and Desired Future Operational Focus (Continued)

<i>Operational Unit</i>	<i>Current Emphasis</i>	<i>Desired Future Emphasis</i>
Tularosa Creek	Special forces desert mobility training Radar and instrumentation sites SDZ	Current uses plus: Limited off-road for test Dismounted and field operations for test
Otero Playa	NASA Space Harbor National Radar Cross Section Test Facility Special forces desert mobility training SDZ	Limited off-road for test Dismounted and field operations for test
Duneland	Special Forces SDZ	Limited off-road for test Dismounted and field operations for test Special Forces
Foster Lake	Static instrumentation	
Small Missile Range	THEL HELSTF Small Missile Range	
Southern Impact Area	THAAD AMRAD Launch Complex Off-road maneuvering Short-range missile impact	Expand off-road vehicle maneuver for test and training
Southern Development Area	Long-range missile Launch Complexes QD zones Condron Field Nuclear Effects Lab Army National Guard Warrior Transition Course	Expansion of Main Post Individual Combat Training Skills Local training area

6.1 PLANNING AND SITING PROCESS

6.1.1 Initiating a New Activity

The purpose of this section is to summarize the process that new customers follow in order to submit a request to conduct a test or training activity at WSMR. When customers first propose a new activity at WSMR, they are assigned a WSMR sponsor from one of the major organizations present at WSMR. The sponsor performs the following duties:

- Provides the customer with information about WSMR capabilities, policies, and procedures.
- Prepares customer documentation. All new requirements are submitted to Range Scheduling through the sponsor. The sponsor confirms all customer support requirements with the customer.
- Ensures that the services requested from WSMR by contractors are authorized under the terms of their contracts.
- Obtains and schedules WSMR services and interfaces with WSMR organizations on financial matters.

- Presents the customer's proposal to the Range Scheduling Committee.
- Provides updates of workload forecasts for each program.
- Places job orders directly with appropriate WSMR organizations to obtain non-scheduled support.

Prior to scheduling a new mission, customers and their sponsors prepare a Minimum Support Plan, which describes the basic information needed to determine the range resources required to support the mission (such as airspace, instrumentation, special RF uses, data processing, EOD removal). This initiates a long-range scheduling request. The sponsor provides support and coordination throughout the remainder of the planning process and works with the customer to identify operational requirements for the program.

A Test/Training requirements document is then developed which describes in detail the tasks and activities, operational elements, and information exchanges required to accomplish the mission. Test and training requirements such as location, land requirements, frequencies used, airspace, equipment, personnel, etc., are included in the description.

Selecting a location for the mission is driven primarily by operational factors, such as proximity to existing infrastructure, topography conducive to testing or training, and de-confliction with other ongoing testing/training programs. **Table 6-2** summarizes physical requirements for various military missions, based on information gathered through the WSMR ITAM program. The RTLA plan can be consulted in site selection for environmental preferences of typical military testing and training activities on WSMR.

Schedule is also a major factor, as the location selected can significantly affect the amount of additional analysis and documentation required and, thus, the time needed to complete required reviews and obtain approval for the mission. The first consideration is whether the proposed activities are authorized in the applicable Land Use Classification as indicated in Chapter 3 of this LUASP. Second is determining whether there are any special siting considerations for the activities involved in the proposed mission.

The Test Center at WSMR is the organization that reviews proposed activities for compliance with the LUASP. The Test Center's ITAM program is playing an increasingly important role in finding suitable locations for WSMR programs. With the increase in frequency and intensity of ground testing and training currently under way, the potential for long-term damage to the landscape increases. ITAM often works directly with project proponents to align project requirements with environmental considerations, making recommendations for best management practices or mitigations. In identifying a location that will best support sustainable testing or training, the ITAM program considers operational requirements, soils, vegetation, topography, and natural and cultural resources. Under the Sustainable Range Program, WSMR will use ITAM or a similar mechanism to assist proponents in selection of suitable locations for their activities.

Table 6-2. Physical Requirements for Military Missions

<i>Activity Type</i>	<i>Slope</i>	<i>Woody Vegetation Height</i>	<i>Terrain¹</i>	<i>Space²</i>	<i>Time³</i>
Air Vehicle Operations	NA	NA	NA	Airspace	Little to Extensive
Instrumentation and Communications	0-5%	0-2 m	Accessible	Minute	Zero
Dismounted Operations	0-80%	No Limit	Any	Small	Little to Moderate
Field Operations	0-20%	No Limit	Accessible	Minute	Little
Construction and Development	0-5%	Area Cleared	Smooth	Minute	Zero
Maintenance	0-50%	No Limit	No Limit	NA	Little
Nuclear Effects	0-50%	Area Cleared	Smooth	Small	Zero
Directed Energy	0-5%	0-1m	Smooth-Moderate	Medium - Large	Little to Extensive
Mounted Operations					
Level 1	0-40%	Area cleared	Smooth	NA	Little
Level 2	0-20%	No Limit	Any	Small	Little to Moderate
Level 3	0-20%	0-2 m	Smooth to Moderate	Medium	Little to Moderate
Weapons Test					
Surface to Surface	0-5%	Area Cleared	Smooth	Medium to Extra Large	Little to Moderate
Surface to Air	0-15%	0-1m	Smooth	Medium-Large	Little to Moderate
Air to Air	NA	NA	NA	Airspace	Little to Moderate
Air to Surface	0-15%	0-3m	Smooth	Small - Medium	Little to Moderate
Weapons Training					
Surface to Surface	0-15%	0-1m	Smooth	Minute – Small	Zero to Moderate
Surface to Air	0-15%	0-1m	Smooth	Small	Little
Air to Surface	0-5%	0-1m	Smooth	Minute - Small	Zero to Moderate

Source: WSMR 2008b

- Terrain categories are small-scale conditions of the ground surface
 - Any – No limit on terrain type
 - Accessible – Terrain can be smooth to rough as long as it is accessible via a road
 - Smooth – Surface rarely pitted, only low grade inclines, no arroyos or escarpments
 - Moderate – Surface commonly pitted, some high grade inclines, occasional arroyos or escarpments
 - Rough – Surface commonly pitted, mostly high grade inclines, common arroyos or Escarpments
- Space categories include the physical surface area and the ephemeral SDZ.
 - NA – Not applicable Minute – Roughly 0-500 acres
 - Small – Roughly 500-22,000 acres (up to 1% of the Range)
 - Medium – Roughly 22,000-220,000 acres (up to 10% of the Range)
 - Large – Roughly 220,000-550,000 acres (up to 25% of the Range)
 - Extra Large – Roughly >550,000 acres
- Time categories capture the amount of time scheduled for a military activity and the dynamic nature of the SDZ or airspace.
 - Zero – Testing/Training activity is static with a permanent, small QD zone
 - Little – <100 hrs/year
 - Moderate – <300 hrs/year
 - Great – <600 hrs/year
 - Extensive – >600 hrs/year

Siting and other considerations for each of the LUASP Activity Categories are presented in Section 6.4 in Tabs 1-7 at the end of this chapter. **Figure 6-2** indicates which tab to consult for each Activity Category. Missions and programs that involve multiple Activity Categories are subject to the considerations in all of the applicable tabs. The siting considerations in these tabs were derived from the analysis in the *2009 Range-wide EIS*. These siting criteria are also presented in Appendix D in relation to the applicable environmental resources evaluated in the Range-wide EIS.

All activities on WSMR are required to conform to the WSMR Standard Procedures and Requirements listed in **Table 6-3**.

Table 6-3. WSMR Standard Procedures and Requirements for Range Users

<i>Land Use and Aesthetics</i>	
Infrastructure	Infrastructure projects shall be sited through the WSMR master planning process.
	WSMR will continue to coordinate with the White Sands National Monument on new projects that are adjacent to or within the viewshed of the Monument that may affect visual resources.
Ground Operations	Prior to dismounted operations in the JER, coordination with USDA through the Public Works Environmental Division would occur.
	All activities shall be restricted to existing approved areas, unless authorized by the WSMR Environmental Division.
Hazardous Operations	SDZs shall not extend beyond the boundaries of WSMR or its call-up areas.
	Hunting activities are de-conflicted from missions through scheduling.
	All hazardous activities shall be restricted to existing approved areas, unless authorized by the WSMR Environmental Division.
<i>Air Quality</i>	
General	Customers shall coordinate with WSMR Environmental Division (Air Quality Manager) when using an emission source.
<i>Cultural Resources</i>	
Infrastructure/General	Personnel shall notify the WSMR Environmental Division immediately if any historic or archaeological resources are discovered during construction activities.
Ground Operations	WSMR shall designate sensitive areas by various methods approved by the WSMR Environmental Division.
	Comply with installation Section 106 compliance process prior to using any area for off-road vehicle maneuver.
<i>Earth Sciences</i>	
Infrastructure	Following construction, disturbed areas not covered with impervious surfaces like roofs and paved areas, will take into consideration methods to minimize erosion.

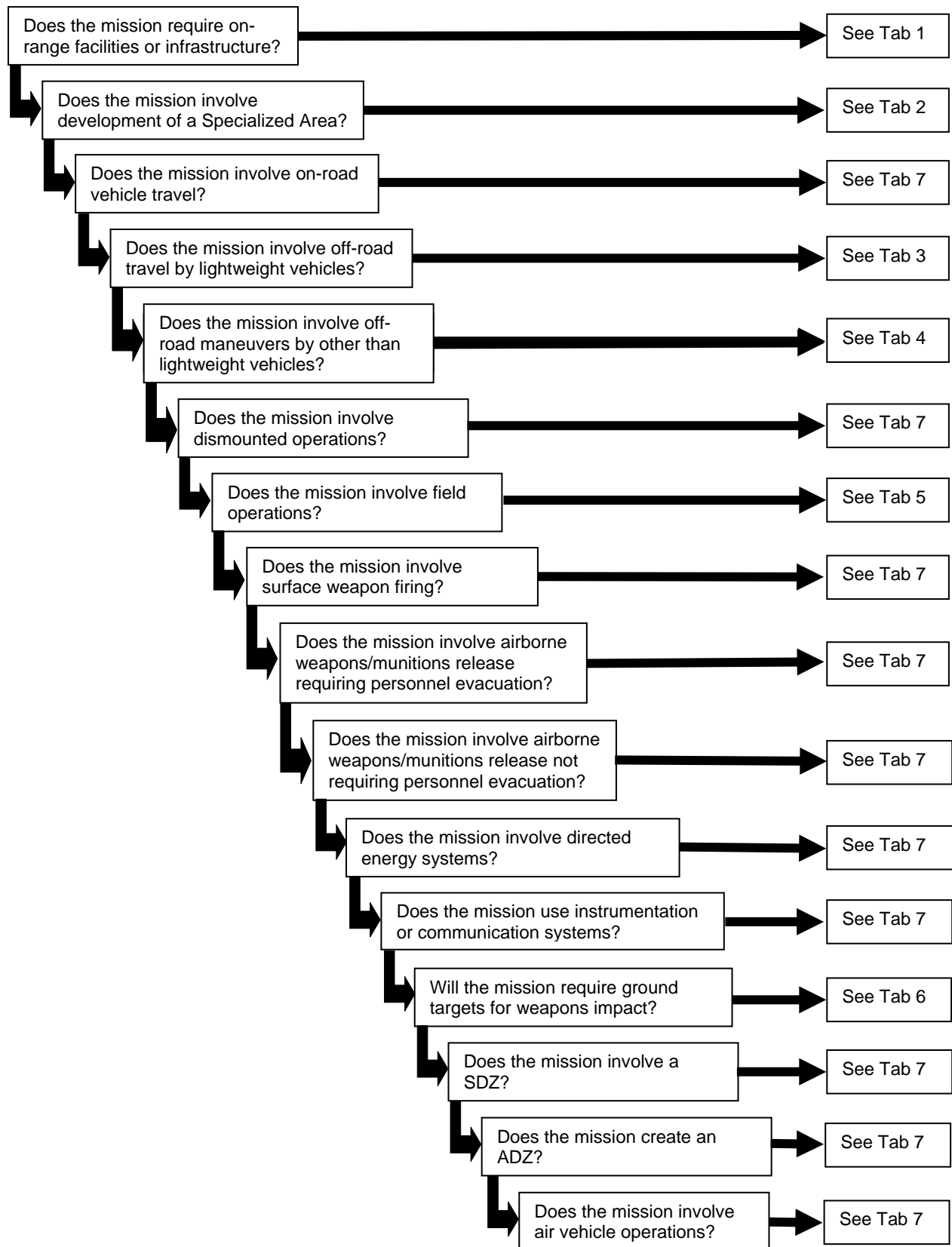
Table 6-3. WSMR Standard Procedures and Requirements for Range Users (Continued)

<i>Biological Resources</i>	
General	WSMR shall protect migratory birds, nest, eggs, and nestlings in accordance with the WSMR Commander’s Guidance on the MBTA (Ref# 014), the DoD/USFWS MOU to Promote the Conservation of Migratory Birds, and the Final Rule: Migratory Bird Permits; Take of Migratory Birds by the Armed Forces. The WSMR Environmental Division shall be contacted regarding any issues related to migratory birds.
	WSMR shall protect bald and golden eagles in accordance with the Bald and Golden Eagle Protection Act of 1940, as amended. WSMR is required (by permit) to report all eagle carcasses discovered to USFWS within 48 hours, and then be appropriately transferred to the USFWS. The WSMR Environmental Division shall be contacted regarding any issues related to eagles, their nests, eggs, or nestlings.
	Restrict ground operations from intercepting within the boundaries of Limited Use and Essential pupfish habitat. Coordination required otherwise.
	Todsens’ pennyroyal areas will not be used for construction or ground disturbing test or training activities.
	WSMR is required to conserve Threatened or Endangered species listed under the Endangered Species Act. By permit, WSMR is required to report observations of the Northern Aplomado falcon to the USFWS within 24 hours. WSMR Environmental Division shall be contacted regarding observations for follow-up by permitted biologists.
	Projects occurring within Chihuahuan desert grassland habitat will be coordinated with WSMR Environmental Division to ensure that appropriate surveys are conducted by permitted biologists for the Northern Aplomado falcon. If a Northern Aplomado falcon nest is observed, projects will be sited to avoid impacts to the falcons, nests, eggs, or nestlings.
	WSMR environmental shall be contacted when any bat roost or snake den site is discovered. Bat roosts are sensitive resources and will not be disturbed. Bats or snakes shall not be handled except by qualified WSMR biologists who are able to exclude bats from buildings or relocate snakes away from project sites.
<i>Water Resources</i>	
Infrastructure	Stormwater management strategies would be implemented as prescribed in the latest storm water management plan.
<i>Safety</i>	
Infrastructure	All residents, employees, and visitors requiring access to WSMR areas outside the Main Post must receive UXO awareness training. A statement shall be provided for each individual to sign, indicating that she/he has received the briefing, and the action proponent shall maintain the statement for follow-up monitoring.
Ground Operations	All government and contractor-owned vehicle and motorized heavy equipment shall be equipped with a portable fire extinguisher (minimum 2.5-pound dry chemical).
	Communication equipment is required when traveling beyond the Main Post.
General	The action proponent and the proponent’s contractors(s) shall comply with Occupational Safety and Health Act (OSHA) of 1970, 29 U.S.C. §§ 651-678 and 29 CFR Parts 1910 and 1926. All personnel (construction and operational) shall be briefed on the potential hazards and necessary precautions to be taken and procedures to be followed.
Hazardous Operations	An approved SOP shall be submitted to and approved by the Safety Office prior to any operation of any hazardous operation.

Table 6-3. WSMR Standard Procedures and Requirements for Range Users (Continued)

<i>Hazardous Materials and Hazardous Waste</i>	
General	All tactical vehicles in the field are required to use drip pans.
	The action proponent shall be responsible for spill prevention and cleanup.
	All project debris shall be removed from the project areas following the action. Cleanup and restoration of the area shall be coordinated with WSMR Environmental Division personnel, as determined necessary.
<i>Facilities and Infrastructure</i>	
Infrastructure	Prior to digging, construction contractors shall obtain a digging permit. All underground utilities in the work area must be positively identified by a private utility locating service in addition to any station locating service and coordinated with the station utility department. Any markings made during the utility investigation must be maintained throughout the contract.
Ground Operations	Digging associated with ground operations will also require a digging permit. WSMR will update its Standard Operating Procedure for the dig permit process to specifically address digging associated with military test and training events.
<i>Transportation</i>	
Infrastructure	Construction contractors shall conduct operations in a manner that will not close any thoroughfare or interfere in any way with traffic on roads except with written permission of the Contracting Officer.
Hazardous Operations	US 70, 54, and 380 roadblocks shall conform to notification and time constraints outlined in the 1972 State Highway Commission Resolution.
<i>Frequencies</i>	
General	Coordinate all frequency uses with the WSMR frequency manager.
<i>Wildland Fire</i>	
Ground Operations	All wildfires shall be reported immediately to the WSMR Fire Department.

Figure 6-2. Mission Planning and Siting Considerations Index



6.1.2 Planning Consultations

Once an initial Test/Training requirements documentation has been completed, the customer and its sponsor consult with the organizations that need to ultimately review and approve the activity. This facilitates the review and approval process by ensuring that each applicable reviewer's concerns and requirements have been taken into account and adequate information for the reviews is provided in the OR. As shown in Figure 6-1, consultations generally involve the Test Center and ITAM (or similar function, if not already consulted in siting) and can include:

- *Flight Safety* – Flight safety must be involved with any test/training program that requires flight test operations of missiles, rockets, bombs, weapons, targets, balloons, or other unmanned vehicles on WSMR or within WSMR's jurisdiction. Upon reviewing the description of requirements, the Flight Safety branch performs a detailed feasibility risk/hazard analysis associated with the program and publishes a Flight Safety Operation Plan. This plan serves as a general guide regarding flight safety management for the customer and must be approved prior to scheduling the mission. It describes the test/training scenario, evacuation areas, and flight termination system requirements and establishes real-time data and communication support requirements. In addition, this document establishes program-specific data requirements and processes to be followed by the Range customer.
- *Safety Engineering Branch* (for flight termination systems).
- *Ground Safety*.
- *Frequency Management* – Customers must fill out a Frequency Action Form for their specific programs. This form, along with the OR, must be approved by the Frequency Management Office prior to scheduling the mission.
- *Environmental* – The environmental review will identify any additional analysis needed and provide a list of conditions or mitigation measures that may be required. This will be based in large part on the extent to which the site selection and OR have incorporated the siting and other considerations listed in the tabs below. The additional environmental analysis can range from a simple documentation that all considerations have been met, to requiring specific surveys for archaeological or other sensitive resources, to preparation of a NEPA document such as an EA or EIS. Some of these requirements can include lengthy regulatory time frames, so early consultation will allow the additional analysis to be initiated immediately as other program components are developed.
- The procedures for identifying and completing additional NEPA analysis/documentation as described in Figure 6-1, in conjunction with Table 6-4 of this document. First, a review of existing environmental documentation is conducted to see if any actions similar to the proposed action have already been recently analyzed. If actions previously analyzed are found to be similar enough to the new proposed action, then the new action can be categorically excluded from further analysis, as per NEPA guidelines. If applicable documentation does not exist, a NEPA document may be prepared.
- The *2009 Range-wide EIS* analyzes impacts from proposed land use changes and activities in 17 resource areas. **Table 6-4** identifies projects and activities that have been assessed in the Range-wide EIS, indicating those that were fully implemented through the ROD and those that require further environmental review, which can include siting

approval, additional NEPA analysis, cultural or biological resource survey and/or mitigation, air quality permit review, erosion control, waste management, and/or other measures to prevent or reduce environmental damage. The categories of activities addressed in the EIS were derived from this LUASP.

Table 6-4. Activities Assessed in the Range-Wide EIS

<i>Activities Assessed by the Range-wide EIS¹</i>	<i>Activities Requiring Further Environmental Review²</i>
<ul style="list-style-type: none"> • Facilities construction projects with completed NEPA documentation • Infrastructure and facilities in future development areas and Range Centers • Ongoing surface-to-surface, surface-to-air, air-to-air activities, and air-to-ground activities in approved areas³ • On-road and off-road maneuver-to-test in Land Use Classification C • Proposed changes in Land Use Classification as defined in the LUASP and level of use as defined in the EIS • Construction of mission support facilities in existing disturbed/developed areas • On-road vehicle use on approved paved and unpaved trails and roadways • Off-road vehicle use with ultralight vehicles throughout the installation in approved areas³ • Dismounted operations in previously used or approved areas³ • Field operations in previously used or approved areas³ • Surface weapons firing from approved firing points • Hazardous airborne weapons/munitions release using existing target areas • Non-hazardous airborne weapons/munitions release • Use of directed energy systems • Use of existing weapons/munitions impact areas • Use of existing SDZs (may require evacuation) • Use of ADZ within existing restricted airspace (may require evacuation) • Training activities in approved areas³ • Non-hazardous air vehicle operations • Use of frequencies subject to WSMR's existing procedures and processes, to include GPS jamming, high-powered microwaves, and sensors • Use of non-hazardous instrumentation and communication systems 	<ul style="list-style-type: none"> • Ground-disturbing activities outside existing disturbed/developed areas • Facility and infrastructure construction in the expanded Main Post • Construction of mission support facilities outside existing developed areas • Siting and installation of range infrastructure • Development of new roads and tank trails • Activities above the level of use as defined in the EIS • Site selection and development of Specialized Areas • Off-road vehicle activities in Land Use Classification C outside approved areas³ • Heavy vehicle maneuver training in the Southeast Multi-Use Area • Dismounted operations in unapproved areas • Field operations in unapproved areas • New surface weapons firing locations • New target and impact areas • Use of previously unassessed directed energy systems

1. Although these activities may not require additional environmental review, they may still require airspace scheduling, safety review, frequency assignment, or other non-environmental approvals.

2. Environmental review may require cultural resources, survey, biological resources survey, erosion prevention, air quality permit, additional NEPA, and/or other environmental compliance.

3. Approved areas are defined as those reviewed and approved by WSMR Environmental Division.

6.2 REVIEW, APPROVAL AND SCHEDULING PROCESS

6.2.1 Review and Approval

The Test/Training requirements documentation is revised as needed based on the planning consultations and submitted by the sponsor for final review and approval. The final package undergoes an intensive formal review by the appropriate safety, frequency management, environmental, and other organizations that may be identified during the planning process. Each reviewing organization must formally signify its approval of the proposed activity and may include conditions of approval. If the consultations performed during the planning process have been thorough and all concerns addressed, no additional conditions should be required. If a reviewer requests additional information or imposes new conditions, the requirements documentation must be revised to reflect the change and resubmitted for review before it will be approved for final scheduling.

As part of the review, the White Sands Test Center will evaluate the requirements documentation for compliance with the LUASP. **Table 6-5** provides a checklist for the LUASP review. If the proposed activity is not currently authorized in the LUASP, it must be brought before Team WSMR for a variance, or the LUASP must be amended, and additional NEPA analysis will be required.

Table 6-5. LUASP Compliance Checklist

No.	Checklist Query	No	Yes
1	Is the proposed activity authorized in the selected Land Use Classification? <i>If no, a variance to the LUASP will be approved by WSMR and environmental review may be required.</i>		
2	Has the proposed activity been assessed in the 2009 Range-wide EIS or other NEPA document? <i>If no, further environmental review may be required.</i>		
3	Will the proposed activity involve ground disturbance? <i>If no, skip questions 4-8.</i>		
4	Has the proposed location been surveyed for archaeological resources? <i>If no, archaeological review is required and survey may be required.</i>		
5	If archaeological survey has been performed, will mitigation be required? <i>If yes, must comply with Programmatic Agreement.</i>		
6	Has the proposed location been surveyed for sensitive biological resources? <i>If no, biological survey may be required.</i>		
7	Are threatened or endangered species or critical habitat present at the proposed location? <i>If yes, the test or training requirement will include measures to avoid impact (defined in the INRMP or the Biological Assessment/Opinion).</i>		

Table 6-5. LUASP Compliance Checklist Continued

No.	Checklist Query	No	Yes
8	Has the proposed site been cleared of UXO? <i>If no, ground safety approval is required and UXO survey/clearance may be needed.</i>		
9	Are all avoidance areas listed in the LUASP complied with? <i>If no, the test or training requirement will include measures to minimize impact.</i>		
10	Does the proposed activity involve use of live ordnance? <i>If no, skip question 11.</i>		
11	Will the ordnance be used on an existing impact area? <i>If no environmental review and concurrence of the proposed impact point is required.</i>		
12	Does the proposed activity involve use of directed energy systems (laser, high-powered microwave, radar)? <i>If yes, the test or training requirement will address associated hazards.</i>		
13	Does the proposed activity involve use of ionizing radiation? <i>If no, skip question 14.</i>		
14	Will the proposed activity be conducted in an existing Nuclear Regulatory Commission licensed facility? <i>If no, WSMR approval and environmental review are required.</i>		
15	Does the proposed activity present a hazard to personnel? <i>If yes, the test or training requirement needs to specify the associated SDZ and coordinate with Range Scheduling.</i>		
16	Does the proposed activity require personnel evacuation? <i>If no, skip questions 17-18.</i>		
17	Will off-post call-up areas need to be evacuated? <i>If yes, Range Scheduling will need adequate advance notification.</i>		
18	Will closure be required of US Highway 54, 70, or 380? <i>If yes, roadblocks will conform to notification and time constraints in 1972 State Highway Commission Resolution.</i>		
19	Is airspace needed for the proposed activity? <i>If no, skip questions 20-21.</i>		
20	Is the proposed activity authorized in the affected airspace? <i>If no, WSMR Airspace Manager approval is required.</i>		
21	Will the proposed activity pose a hazard to airspace users? <i>If yes, the test or training requirement will specify the ADZ.</i>		
22	Does the proposed activity involve placing facilities or targets on or adjacent to or crossing streams, rivers, lakes, ponds, floodplains, or wells? <i>If yes, WSMR will review and may be subject to mitigation and permit requirements.</i>		
23	Does the proposed activity involve off-road vehicle travel near streams, rivers, lakes, ponds, floodplains, or wetlands? <i>If yes, WSMR will review and approval may be required.</i>		
24	Does the proposed activity require water, wastewater, power, or communications? <i>If yes, the test or training requirement will address how to meet requirements.</i>		

Table 6-5. LUASP Compliance Checklist *Continued*

No.	Checklist Query	No	Yes
25	Will the proposed activity include use of portable generators? <i>If yes, WSMR approval is required.</i>		
26	Will generators be furnished by WSMR? <i>If yes, skip question 27.</i>		
27	Does proposed generator use comply with WSMR air quality permit? <i>If no, permit modification may be required.</i>		
28	Does proposed activity involve off-road vehicle operations? <i>If yes, WSMR will review and approve location. Operations will follow established protocols to minimize impact.</i>		
29	Will the proposed activity involve use of hazardous materials? <i>If yes, the test or training requirement will include provisions for use, storage, and disposal of hazardous substances and hazardous waste.</i>		
30	Will the proposed activity generate excessive noise near an occupied facility or sensitive land use? <i>If yes, the test or training requirement will address noise levels at the receptors and mitigation may be required.</i>		
31	Is post-activity land restoration required? <i>If yes, restoration plan will be included in the test or training requirements.</i>		
32	Have all planning issues (e.g., safety, frequency management, operational concerns) been considered in the test requirement? <i>If no, the test or training requirement will be revised to resolve any outstanding issues.</i>		
33	Does the proposed activity involve the use of combustible materials, open flame, or high temperature elements in an outdoor area? <i>If yes, the activity will include measures to minimize fire risk.</i>		

6.2.2 Scheduling

Once the activity has been reviewed and approved by the appropriate WSMR organizations, the formal and specific Operations Requirement (OR) and associated documents are submitted to Range Scheduling no later than 20 working days prior to the mission. Scheduling requests may be submitted electronically through the Web Services Distribution Management scheduling software program at any time up to and including the day of the test, as long as the Universal Documentation System documentation exists. If these documents are submitted later than 20 days prior to the mission, the customer will lose its scheduling priority and will be worked in as the schedule permits. Missions requiring off-range evacuation must be scheduled at least 30 calendar days prior to the mission date, and missions are not permitted in the north FIX area between October 15th and November 15th.

In order to ensure adequate deconfliction and efficiency, all operations on the range are addressed during a weekly Range Scheduling Committee meeting. The Range Scheduling Committee is comprised of representatives from Optics, Telemetry, and any Army, Navy, or Air Force members that want to schedule a mission. These meetings are held every Wednesday in order to establish 30-day and 7-day scheduling forecasts.

Range user programs accepted by WSMR are assigned a priority for use of range time and range resources. These range priorities are as follows:

Priority Special Emphasis Programs - are programs that require written confirmation of priority over other DoD programs (Global War on Terrorism, Rapid Deployment Initiative).

Priority 1. Assigned to hot missions (missiles, research rockets, rockets guided and unguided), required dress rehearsals, and High Energy Laser research and development programs.

Priority 2. Assigned to drone missions, UASs, captive carry, and other research and development missions not associated with an upcoming hot mission.

Priority 3. Operations, recovery missions, range-paid missions such as VIP playbacks, and missions assigned to training including the Air Force 49th Fighter Wing at Holloman AFB.

Once these forecasts are established they are then input into Web Services Distribution Management. The 7-day scheduling forecast is published and sent to Range Operations, along with the ORs and safety footprints for the scheduled missions. If any changes are made to the schedule after the 7-day scheduling forecast, a Schedule Change Form is filled out. This is in turn reflected on the schedule and is communicated to Range Operations.

6.3 MAIN POST PROJECTS

The process for planning, reviewing, approving, and scheduling facility construction projects on the Main Post is different from the Range activity process described above. The requirement for a Main Post facility project is submitted to the Directorate of Public Works, Master Planning Division, which is tasked with developing a proposed site plan for the facility. Facility siting on the Main Post must be reviewed and approved by the Master Planning Review Board in accordance with AR 210-20.

Main Post projects also undergo an environmental review. The process for determining whether additional environmental analysis and documentation are required is similar to that described for Range activities. If the proposed site has not already been cleared for cultural and biological resources, additional survey and mitigation may be required. The need for additional NEPA analysis and documentation will be determined in accordance with the *WSMR Environmental Review Process Guide*.

6.4 MISSION PLANNING AND SITING TABS

The following Tabs 1 through 7 present siting and other considerations for each of the Activity Categories listed in Table 3-1 within each Land Use Classification listed in Table 3-2. These criteria are under development, as a tool for WSMR's Sustainable Range Program.

Tab 1 – Mission Support Facility

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
All authorized areas	<ul style="list-style-type: none"> ● Locate new facilities to maximize use of existing infrastructure to the extent practicable. ● Site new facilities and infrastructure to avoid locations of underground lines that could be damaged. ● To the extent practicable, locate new facilities to avoid affecting airspace users. ● Avoid locating permanent occupied facilities and activities in areas with frequent evacuations. ● Locate new roads to avoid stream crossings and arroyos to the extent practicable. ● Avoid crossing roads with new tanks trails to the extent practicable. ● Areas not previously surveyed for cultural or biological resources will require surveys. ● To the extent practicable, locate new facilities in areas previously surveyed and cleared for cultural resources. ● Avoid siting new facilities in locations with resources on or eligible for listing on the National Register of Historic Places. ● Ensure any SDZs do not extend beyond boundaries of installation and call-up areas. 	<ul style="list-style-type: none"> ● Use sustainable building practices. ● Use non-toxic and non-volatile paints. ● Use recycled and bio-based products when possible. ● Use long-life and energy efficient equipment. ● Use recycled water to the extent possible. ● Incorporate water conservation measures in facility designs. ● Incorporate indigenous colors in structures to help them blend into the landscape. ● Use light bulbs of less than 150 watts or shield outdoor lights to illuminate downwards. ● Construct above-ground power/communication lines in accordance with <i>Suggested Practices for Raptor Protection on Power Lines</i> guidance. ● Install orange obstruction balls on all guy lines. ● Stabilize inactive disturbed soils. ● Use erosion control structures, basins, and other methods to retard soil movement, stabilize runoff and control sedimentation. Inspect them for invasive species before implementation. ● When feasible, apply gravel or soil binders on unpaved roads and tank trails.
A	See Land Use Classification C	See Land Use Classification C
B	<ul style="list-style-type: none"> ● Provide separation and a buffer between active mission areas and community areas. ● Avoid wells. ● Provide adequate separation between facilities that generate noise, dust, or other nuisance and sensitive land uses. ● Locate facilities with hazards a safe distance from populated areas and facilities. ● Avoid land use changes within sensitive viewsheds of national historic landmarks. ● Locate on or adjacent to previously disturbed areas if practicable. ● Avoid streams, rivers, creeks, lakes, ponds, floodplains, and wells. 	<ul style="list-style-type: none"> ● If facilities that generate noise cannot be adequately separated from sensitive land uses, provide noise abatement. ● Bury utility lines a deep as possible to withstand heavy equipment. ● Use permeable materials for parking lots and walkways. ● Use drought-tolerant landscaping. ● Pave tank access trails with sufficient concrete to withstand heavy equipment use. ● Reestablish native vegetation in areas not covered with impervious surface after construction.

Tab 1 – Mission Support Facility (continued)

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
C	<ul style="list-style-type: none"> • Avoid vulnerable or sensitive grasslands (defined by WSMR Environmental Division and ITAM function). • Site new roads to avoid habitat disturbance and fragmentation. • Locate facilities at least 2 miles from occupied Northern Aplomado falcon habitat. • Locate facilities with hazards a safe distance from populated areas and facilities. • Locate in areas cleared of UXO. • Avoid land use changes within sensitive viewsheds of White Sands National Monument and national historic landmarks. • Avoid at-grade crossings of US 70 with new roads. • Avoid areas with high fuel loads and continuous fine fuels (e.g., grasslands, piñon juniper areas) when possible. • Also see Tab 1A for additional criteria for Operational Units. 	<ul style="list-style-type: none"> • Avoid impacts to large yucca trees. • Minimize use of exterior lighting. • Reclaim underutilized roads when new roads are constructed. • Also see Tab 1A for additional criteria for Operational Units.
D	Not authorized	Not authorized
E	Not authorized	Not authorized
F	<ul style="list-style-type: none"> • Use existing facilities/infrastructure to extent practicable. • Facilities and infrastructure improvements require consultation with Jornada Experimental Range. • Also see Tab 1A for additional criteria for Southern Jornada Operational Unit. 	<ul style="list-style-type: none"> • Reestablish native vegetation in areas not covered with impervious surface after construction. • Avoid use of exterior lighting if possible.
G	Not authorized	Not authorized
H	Not authorized	Not authorized
I	<ul style="list-style-type: none"> • Requires approval of primary user. 	Not specified at this time
J	<ul style="list-style-type: none"> • Use existing facilities/infrastructure to extent practicable. • Site new facilities/infrastructure in compliance with MOU with land owner. • Modification of MOU may be required. 	<ul style="list-style-type: none"> • Reestablish native vegetation in areas not covered with impervious surface after construction. • Minimize use of exterior lighting.
K	Not authorized	Not authorized
L	Not authorized	Not authorized
M	Not authorized	Not authorized
N	Not authorized	Not authorized
O	Not authorized	Not authorized

Tab 1 – Mission Support Facility (continued)

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
P	Not authorized	Not authorized
Q	<ul style="list-style-type: none"> ● Use existing facilities/infrastructure to extent practicable. ● Avoid sensitive resources and habitat. 	<ul style="list-style-type: none"> ● Reestablish native vegetation in areas not covered with impervious surface after construction.

Tab 1a – Mission Support Facility – Operational Unit Criteria

<i>Operational Unit</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
Trinity	Not specified at this time	Not specified at this time
Armedaris	<ul style="list-style-type: none"> ● Avoid Mockingbird Gap Piedmont Desert Grassland SNA. 	<ul style="list-style-type: none"> ● Provide a buffer/screen of natural vegetation between new facilities and roads and sensitive habitats.
North San Andres	<ul style="list-style-type: none"> ● Avoid locating within ½ kilometer of Todsens’s Pennyroyal populations. ● Avoid locating within Todsens’s Pennyroyal critical habitat. ● Avoid San Augustin Mountains Interior Chaparral Candidate SNA. 	<ul style="list-style-type: none"> ● Provide a buffer/screen of natural vegetation between new facilities and roads and sensitive habitats.
Lava	Not authorized	Not authorized
Southern Jornada	Not specified at this time	Not specified at this time
Oscura Mountains	<ul style="list-style-type: none"> ● Avoid Oscura Mountains and Chupadera Mesa Woodland SNAs. 	<ul style="list-style-type: none"> ● Provide a buffer/screen of natural vegetation between new facilities and roads and sensitive habitats.
South Oscura	Not specified at this time	Not specified at this time
Three Rivers	Not specified at this time	Not specified at this time
South San Andres	Not authorized	Not authorized
Salt Creek	<ul style="list-style-type: none"> ● Avoid White Sands Pupfish habitat. 	<ul style="list-style-type: none"> ● Provide a buffer/screen of natural vegetation between new facilities and roads and sensitive habitats.
Bajadas	Not specified at this time	Not specified at this time
Tularosa Creek	Not specified at this time	Not specified at this time
Otero Playa	<ul style="list-style-type: none"> ● Avoid Playa Lakes Candidate SNA. 	<ul style="list-style-type: none"> ● Provide a buffer/screen of natural vegetation between new facilities and roads and sensitive habitats.
Duneland	Not specified at this time	Not specified at this time
Foster Lake	Not specified at this time	Not specified at this time
Small Missile Range	Not specified at this time	Not specified at this time
Southern Impact	Not specified at this time	Not specified at this time
Southern Development	Not specified at this time	Not specified at this time

Tab 2 – Specialized Areas

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
All authorized areas	<ul style="list-style-type: none"> ● Locate new facilities to maximize use of existing infrastructure to the extent practicable. ● Site new facilities and infrastructure to avoid locations of underground lines that could be damaged. ● To the extent practicable, locate new facilities to avoid affecting airspace users. ● Avoid locating permanent occupied facilities and activities in areas with frequent evacuations. ● Areas not previously surveyed for cultural or biological resources will require surveys. ● To the extent practicable, locate new facilities in areas previously surveyed and cleared for cultural resources. ● Avoid siting new facilities in locations with resources on or eligible for listing on the National Register of Historic Places. ● Areas not previously surveyed and cleared of UXO will require clearance. ● Ensure any SDZs do not extend beyond boundaries of installation and call-up areas. 	<ul style="list-style-type: none"> ● Use sustainable building practices. ● Use non-toxic and non-volatile paints. ● Use recycled and bio-based products when possible. ● Use long-life and energy efficient equipment. ● Use recycled water to the extent possible. ● Incorporate water conservation measures in facility designs. ● Incorporate indigenous colors in structures to help them blend into the landscape. ● Use light bulbs of less than 150 watts or shield outdoor lights to illuminate downwards. ● Install barriers to dust transport during construction. ● Stabilize inactive disturbed soils. ● Use erosion control structures, basins, and other methods to retard soil movement, stabilize runoff and control sedimentation. Inspect them for invasive species before implementation. ● Develop Area Development Guide for groups of new buildings. ● Use natural wastewater treatment methods when feasible. ● Use energy-efficient (e.g., LEAD) design standards, natural light, and passive solar features when feasible.
A	See Land Use Classification C	See Land Use Classification C
B	<ul style="list-style-type: none"> ● Avoid wells. ● Locate noise generating activities away from sensitive land uses or provide noise abatement measures. ● Provide adequate separation between facilities that generate noise, dust, or other nuisance and sensitive land uses. ● Locate facilities with hazards a safe distance from populated areas and facilities. ● Avoid land use changes within sensitive viewsheds of national historic landmarks. 	<ul style="list-style-type: none"> ● If facilities that generate noise cannot be adequately separated from sensitive land uses, provide noise abatement. ● Use permeable materials for parking lots and walkways. ● Use drought-tolerant landscaping.

**DRAFT FINAL WHITE SANDS MISSILE RANGE
PROPOSED LAND USE AND AIRSPACE STRATEGY PLAN**

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
C	<ul style="list-style-type: none"> ● Locate on or adjacent to previously disturbed areas if practicable. ● Avoid streams, rivers, creeks, lakes, ponds, floodplains, and wells. ● Avoid grasslands. ● Site new roads to avoid habitat disturbance and fragmentation. ● Locate facilities at least 2 miles from occupied Northern Aplomado falcon habitat. ● Locate facilities with hazards a safe distance from populated areas and facilities. ● Locate in areas cleared of UXO. ● Avoid land use changes within sensitive viewsheds of White Sands National Monument and national historic landmarks. ● Avoid areas with high fuel loads and continuous fine fuels (e.g., grasslands, pinon juniper areas) when possible. ● Also see Tab 2A for additional criteria for Operational Units 	<ul style="list-style-type: none"> ● Minimize use of exterior lighting. ● Minimize the impact of perimeter security lighting in wildlife habitat by providing gaps along wildlife movement corridors, using infrared lighting, keeping intensity levels below 1.5 foot candles, and shielding lights at the top. ● Reestablish native vegetation in areas not covered with impervious surface after construction. ● Avoid impacts to large yucca trees. ● Also see Tab 2A for additional criteria for Operational Units.
D	Not authorized	Not authorized
E	Not authorized	Not authorized
F	<ul style="list-style-type: none"> ● Use existing facilities/infrastructure to extent practicable. ● Facilities and infrastructure improvements require consultation with Jornada Experimental Range. ● Also see Tab 1A for additional criteria for Southern Jornada Operational Unit. 	<ul style="list-style-type: none"> ● Reestablish native vegetation in areas not covered with impervious surface after construction. ● Avoid use of exterior lighting if possible.
G	Not authorized	Not authorized
H	Not authorized	Not authorized
I	<ul style="list-style-type: none"> ● Requires approval of primary user. 	Not specified at this time
J	<ul style="list-style-type: none"> ● Use existing facilities/infrastructure to extent practicable. ● Site new facilities/infrastructure in compliance with MOU with land owner. ● Modification of MOU may be required. 	<ul style="list-style-type: none"> ● Reestablish native vegetation in areas not covered with impervious surface after construction. ● Minimize use of exterior lighting.
K	Not authorized	Not authorized
L	Not authorized	Not authorized
M	Not authorized	Not authorized
N	Not authorized	Not authorized
O	Not authorized	Not authorized

**DRAFT FINAL WHITE SANDS MISSILE RANGE
PROPOSED LAND USE AND AIRSPACE STRATEGY PLAN**

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
P	Not authorized	Not authorized
Q	<ul style="list-style-type: none"> • Use existing facilities/infrastructure to extent practicable. • Avoid sensitive resources and habitat. 	<ul style="list-style-type: none"> • Reestablish native vegetation in areas not covered with impervious surface after construction.

Tab 2a – Specialized Areas – Operational Unit Criteria

<i>Operational Unit</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
Trinity		
Armandaris	<ul style="list-style-type: none"> • Avoid Mockingbird Gap Piedmont Desert Grassland SNA. 	<ul style="list-style-type: none"> • Provide a buffer/screen of natural vegetation between new facilities and sensitive habitats.
North San Andres	<ul style="list-style-type: none"> • Avoid locating within ½ kilometer of Todsens’s Pennyroyal populations. • Avoid locating within Todsens’s Pennyroyal critical habitat. • Avoid San Augustin Mountains Interior Chaparral Candidate SNA. 	<ul style="list-style-type: none"> • Provide a buffer/screen of natural vegetation between new facilities and sensitive habitats.
Lava	Not authorized	Not authorized
Southern Jornada	Not specified at this time	Not specified at this time
Oscura Mountains	<ul style="list-style-type: none"> • Avoid Oscura Mountains and Chupadera Mesa Woodland SNAs. 	<ul style="list-style-type: none"> • Provide a buffer/screen of natural vegetation between new facilities and sensitive habitats.
South Oscura	Not specified at this time	Not specified at this time
Three Rivers	Not specified at this time	Not specified at this time
South San Andres	Not authorized	Not authorized
Salt Creek	<ul style="list-style-type: none"> • Avoid White Sands Pupfish habitat. 	<ul style="list-style-type: none"> • Provide a buffer/screen of natural vegetation between new facilities and sensitive habitats.
Bajadas	Not specified at this time	Not specified at this time
Tularosa Creek	Not specified at this time	Not specified at this time
Otero Playa	<ul style="list-style-type: none"> • Avoid Playa Lakes Candidate SNA. 	<ul style="list-style-type: none"> • Provide a buffer/screen of natural vegetation between new facilities and sensitive habitats.
Duneland	Not specified at this time	Not specified at this time
Foster Lake	Not specified at this time	Not specified at this time
Small Missile Range	Not specified at this time	Not specified at this time
Southern Impact	Not specified at this time	Not specified at this time
Southern Development	Not specified at this time	Not specified at this time

Tab 3 – Off-Road Vehicle Use (lightweight)

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
All areas	<ul style="list-style-type: none"> ● To the extent practicable, locate in areas previously surveyed and cleared for cultural resources and UXO. ● Areas not previously surveyed for cultural or biological resources will require surveys. ● Areas not previously surveyed and cleared of UXO will require clearance. ● Avoid areas with soils that have high wind or water erosion limitations. ● To the extent possible, avoid grasslands, wetlands, and areas with biological crusts. ● Avoid areas within 2 miles of occupied Northern Aplomado falcon habitat between August 1 and January 31. 	<ul style="list-style-type: none"> ● Minimize crossing of streams, rivers, creeks, lakes, ponds, and wetlands. ● Avoid identified (mapped or demarcated) environmentally sensitive areas. ● To the extent practicable, use existing roads to access maneuver areas. ● Rotate areas used for off-road vehicle maneuvers when possible. ● Carry fire extinguishers during periods of high fire risk. ● Ensure equipment is available in the field to respond to fuel spills. ● Notify WSMR Environmental Division immediately of any archaeological or historic resources found during off-road vehicle operations.
A	See Land Use Classification C	See Land Use Classification C
B	<ul style="list-style-type: none"> ● Locate off-road vehicle maneuvers away from facilities and sensitive areas that would be adversely affected by noise. ● Locate off-road vehicle maneuvers to avoid blowing dust at occupied facilities, sensitive land use areas, and public roads. 	Not specified at this time
C	<ul style="list-style-type: none"> ● Avoid areas with high fuel loads and continuous fine fuels (e.g., grasslands, pinon juniper areas) when possible. ● Also see Tab 1A for additional criteria for Operational Units. 	Not specified at this time
D	Not authorized	Not authorized
E	Not specified at this time	Not specified at this time
F	Not authorized	Not authorized
G	Not authorized	Not authorized
H	Not authorized	Not authorized
I	Not authorized	Not authorized
J	Not specified at this time	<ul style="list-style-type: none"> ● Obtain land owner’s permission prior to use.
K	Not authorized	Not authorized
L	Not authorized	Not authorized
M	Not authorized	Not authorized
N	Not authorized	Not authorized

Tab 3 – Off-Road Vehicle Use (lightweight) (Continued)

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
O	Not authorized	Not authorized
P	Not authorized	Not authorized
Q	Not authorized	Not authorized

Tab 3a – Off-Road Vehicle Use (lightweight) – Operational Unit Criteria

<i>Operational Unit</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
Trinity	Not specified at this time	Not specified at this time
Armedaris	<ul style="list-style-type: none"> • Avoid Mockingbird Gap Piedmont Desert Grassland SNA. 	Not specified at this time
North San Andres	<ul style="list-style-type: none"> • Avoid locating within ½ kilometer of Todsens’s Pennyroyal populations. • Avoid locating within Todsens’s Pennyroyal critical habitat. • Avoid San Augustin Mountains Interior Chaparral Candidate SNA. 	Not specified at this time
Lava	Not specified at this time	Not specified at this time
Southern Jornada	Not specified at this time	Not specified at this time
Oscura Mountains	<ul style="list-style-type: none"> • Avoid Oscura Mountains and Chupadera Mesa Woodland SNAs. 	Not specified at this time
South Oscura	Not specified at this time	Not specified at this time
Three Rivers	Not specified at this time	Not specified at this time
South San Andres	Not authorized	Not authorized
Salt Creek	<ul style="list-style-type: none"> • Avoid White Sands Pupfish habitat. 	Not specified at this time
Bajadas	Not specified at this time	Not specified at this time
Tularosa Creek	Not specified at this time	Not specified at this time
Otero Playa	<ul style="list-style-type: none"> • Avoid Playa Lakes Candidate SNA. 	
Duneland	Not specified at this time	Not specified at this time
Foster Lake	Not specified at this time	Not specified at this time
Small Missile Range	Not specified at this time	Not specified at this time
Southern Impact	Not specified at this time	Not specified at this time
Southern Development	Not specified at this time	Not specified at this time

Tab 4 – Off-Road Vehicle Use (other)

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
A	Not authorized	Not authorized
B	Not authorized	Not authorized
C	<ul style="list-style-type: none"> ● Use previously disturbed areas when possible. ● To the extent practicable, locate in areas previously surveyed and cleared for cultural resources and UXO. ● Areas not previously surveyed for cultural or biological resources will require surveys. ● Areas not previously surveyed and cleared of UXO will require clearance. ● When possible, restrict off-road vehicle operations to areas with slight wind and water erosion potential and good trafficability. ● Avoid areas with severe wind or water erosion limitations and low trafficability. ● Avoid slopes over 30 degrees. ● To the extent possible, avoid grasslands, wetlands, and areas with biological crusts. ● Avoid areas within 2 miles of occupied Northern Aplomado falcon habitat between August 1 and January 31. ● Plan off-road operations to minimize crossing of range roads. 	<ul style="list-style-type: none"> ● Minimize crossing of streams, rivers, creeks, lakes, ponds, and wetlands. ● Avoid identified (mapped or demarcated) environmentally sensitive areas (delineated by WSMR Environmental Division or ITAM program). ● Rotate areas used for off-road vehicle maneuvers when possible. ● Avoid conducting intensive off-road vehicle operations in areas with clay soils during wet periods. ● To the extent practicable, modify off-road training missions during periods of high wind. ● Ensure vehicles are properly tuned and maintained and turned off when not in use. ● To the extent practicable, use existing roads to access maneuver areas. ● Use lowest practicable vehicle speed in unpaved areas when traveling to maneuver areas. ● Avoid crossing range roads when possible. ● Carry fire extinguishers during periods of high fire risk. ● Ensure equipment is available in the field to respond to fuel spills. ● Apply dust suppressants in areas of concentrated off-road vehicle maneuvers when practicable. ● Notify WSMR Environmental Division immediately of any archaeological or historic resources found during off-road vehicle operations. ● Wash tactical vehicles and heavy equipment after use to reduce the risk of spreading invasive plant species. ● Do not cross property boundaries unless approved for the specific activity ● Provide adequate signage and markers to clearly identify location of areas that are off-limits to this activity

Tab 4 – Off-Road Vehicle Use (other) (Continued)

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
D	Not authorized	Not authorized
E	Not authorized	Not authorized
F	Not authorized	Not authorized
G	Not authorized	Not authorized
H	Not authorized	Not authorized
I	Not authorized	Not authorized
J	Not authorized	Not authorized
K	Not authorized	Not authorized
L	Not authorized	Not authorized
M	Not authorized	Not authorized
N	Not authorized	Not authorized
O	Not authorized	Not authorized
P	Not authorized	Not authorized
Q	Not authorized	Not authorized

Tab 4a – Off-Road Vehicle Use (other) – Operational Unit Criteria

<i>Operational Unit</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
Trinity	Not specified at this time	Not specified at this time
Armendaris	<ul style="list-style-type: none"> ● Avoid Mockingbird Gap Piedmont Desert Grassland SNA. 	Not specified at this time
North San Andres	<ul style="list-style-type: none"> ● Avoid locating within 0.5 kilometer (0.3 mile) of Todsen’s Pennyroyal populations. ● Avoid locating within Todsen’s Pennyroyal critical habitat. ● Avoid San Augustin Mountains Interior Chaparral Candidate SNA. 	Not specified at this time
Lava	Not authorized	Not authorized
Southern Jornada	Not specified at this time	Not specified at this time
Oscura Mountains	<ul style="list-style-type: none"> ● Avoid Oscura Mountains and Chupadera Mesa Woodland SNAs. 	Not specified at this time
South Oscura	Not specified at this time	Not specified at this time
Three Rivers	Not specified at this time	Not specified at this time
South San Andres	Not authorized	Not authorized
Salt Creek	<ul style="list-style-type: none"> ● Avoid White Sands Pupfish habitat. 	Not specified at this time

Tab 4a – Off-Road Vehicle Use (other) – Operational Unit Criteria (*Continued*)

<i>Operational Unit</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
Bajadas	Not specified at this time	Not specified at this time
Tularosa Creek	Not specified at this time	Not specified at this time
Otero Playa	• Avoid Playa Lakes Candidate SNA.	Not specified at this time
Duneland	Not specified at this time	Not specified at this time
Foster Lake	Not specified at this time	Not specified at this time
Small Missile Range	Not specified at this time	Not specified at this time
Southern Impact	Not specified at this time	Not specified at this time
Southern Development	Not specified at this time	Not specified at this time
J	Not specified at this time	• Obtain land owner’s permission prior to use.
K	Not authorized	Not authorized
L	Not authorized	Not authorized
M	Not authorized	Not authorized
N	Not specified at this time	Not specified at this time
O	Not specified at this time	Not specified at this time
P	Not specified at this time	Not specified at this time
Q	Not specified at this time	Not specified at this time

Tab 5 – Field Operations – Operational Unit Criteria

<i>Operational Unit</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
Trinity	Not specified at this time	Not specified at this time
Armendaris	<ul style="list-style-type: none"> ● Avoid Mockingbird Gap Piedmont Desert Grassland SNA. 	Not specified at this time
North San Andres	<ul style="list-style-type: none"> ● Avoid operations within ½ kilometer of Todsens’s Pennyroyal populations. ● Avoid operations within Todsens’s Pennyroyal critical habitat. ● Avoid San Augustin Mountains Interior Chaparral Candidate SNA. 	Not specified at this time
Lava	Not specified at this time	Not specified at this time
Southern Jornada	Not specified at this time	Not specified at this time
Oscura Mountains	<ul style="list-style-type: none"> ● Avoid Oscura Mountains and Chupadera Mesa Woodland SNAs. 	Not specified at this time
South Oscura	Not specified at this time	Not specified at this time
Three Rivers	Not specified at this time	Not specified at this time
South San Andres	Not authorized	Not specified at this time
Salt Creek	<ul style="list-style-type: none"> ● Avoid White Sands Pupfish habitat. 	Not specified at this time
Bajadas	Not specified at this time	Not specified at this time
Tularosa Creek	Not specified at this time	Not specified at this time
Otero Playa	<ul style="list-style-type: none"> ● Avoid Playa Lakes Candidate SNA. 	Not specified at this time
Duneland	Not specified at this time	Not specified at this time
Foster Lake	Not specified at this time	Not specified at this time
Small Missile Range	Not specified at this time	Not specified at this time
Southern Impact	Not specified at this time	Not specified at this time
Southern Development	Not specified at this time	Not specified at this time

Tab 6 – Weapons Impact

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
A	See Land Use Classification C	See Land Use Classification C
B	Not authorized	Not authorized
C	<ul style="list-style-type: none"> ● Ensure SDZs associated with impact areas remain within Restricted airspace and the boundaries of the installation and call-up areas. ● Locate impact areas a safe distance from population centers. ● Ensure impact area SDZs are located outside airfield SDZs. ● Locate impact areas away from sensitive land uses and occupied facilities that may be adversely affected by noise, dust, or other nuisances. ● Locate temporary impact areas at sites clear of UXO. ● To the extent practicable, locate impact areas at sites previously surveyed and cleared for cultural resources. ● Sites not previously surveyed for cultural or biological resources will require surveys. ● Avoid locating impact areas and associated SDZs in no-entry areas demarcated on maps or in the field. 	<ul style="list-style-type: none"> ● Remove all debris from temporary impact areas after use. ● Within the bounds of safety, avoid unnecessary site disturbance during explosive ordnance clearance and disposal operations. ● Avoid use of temporary impact areas closer than 2 miles to occupied Northern Aplomado falcon habitat between August 1 and January 31. ● To the extent practicable, restrict use of munitions, pyrotechnics, and other ignition sources during periods of high fire danger. ● Notify WSMR Environmental Division immediately of any archaeological or historic resources found during construction, use, or clearance of impact areas.
	<ul style="list-style-type: none"> ● Locate impact areas at sites with slight wind and water erosion potential. ● Avoid locating impact areas at sites with severe wind or water erosion limitations. ● Avoid placing targets in streams, rivers, lakes, ponds, floodplains, wells and ephemeral channels. ● Avoid locating impact areas in grasslands, wetlands, and areas with biological crusts. ● Avoid sensitive habitat areas, including Todsens’ Pennyroyal populations and critical habitat, White Sands pupfish habitat, and all Special Natural Areas. ● Locate permanent impact areas at least 2 miles from occupied Northern Aplomado falcon habitat. ● Avoid siting impact areas in locations where the associated SDZs overlap highways and range roads. ● Avoid areas with high fuel loads and continuous fine fuels (e.g., grasslands, pinon juniper areas) when possible. 	

Tab 6 – Weapons Impact (Continued)

<i>Land Use Classification</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
	<ul style="list-style-type: none"> • Avoid buried utility and communication/instrumentation lines in siting impact areas. • Avoid areas with high fuel loads and continuous fine fuels (e.g., grasslands, pinon) 	Not specified at this time
D	<ul style="list-style-type: none"> • Use existing or previously used impact areas when possible. • Avoid locating temporary and recovery impact areas in existing or previously used live-fire impact areas with potential UXO. 	Not specified at this time
E	Not authorized	Not authorized
F	Not authorized	Not authorized
G	Not authorized	Not authorized
H	Not authorized	Not authorized
I	Not authorized	Not authorized
J	<ul style="list-style-type: none"> • Ensure SDZs associated with impact areas remain within the boundaries of the installation and call-up areas. • Locate impact areas a safe distance from occupied structures. • Avoid placing targets in streams, rivers, lakes, ponds, floodplains, wells and ephemeral channels. • Avoid locating impact areas in grasslands and wetlands. • Avoid siting impact areas in locations where the associated SDZs overlap public roads and highways. • Avoid siting impact areas in the vicinity of utility lines. • Avoid areas with high fuel loads and continuous fine fuels (e.g., grasslands, pinon juniper areas) when possible. 	<ul style="list-style-type: none"> • Obtain land owner’s permission prior to use. • Remove all debris from temporary impact areas after use. • Within the bounds of safety, avoid unnecessary site disturbance during explosive ordnance clearance and disposal operations. • Restrict use of munitions, pyrotechnics, and other ignition sources during periods of high fire danger.
K	Not authorized	Not authorized
L	Not authorized	Not authorized
M	Not authorized	Not authorized
N	Not authorized	Not authorized
O	Not authorized	Not authorized
P	Not authorized	Not authorized
Q	Not authorized	Not authorized

Tab 7 – Other Activities

<i>Activity</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
On-Road Vehicle Use	<ul style="list-style-type: none"> ● Use existing roads and trails to the extent possible and reclaim underutilized roads when new roads are constructed. 	<ul style="list-style-type: none"> ● Use lowest practical speed on unpaved roads. ● Maintain active communication with Range Scheduling Office. ● Carry fire extinguisher during periods of high fire risk. ● Avoid roads near schools and housing areas with heavy vehicles and equipment. ● Avoid at-grade crossing of US 70 with operational vehicles. ● Avoid impeding traffic or causing excessive road surface wear or degradation. ● Avoid heavy vehicle traffic on unpaved roads that have high water erosion potential when raining. ● Avoid heavy vehicle travel on unpaved roads with low trafficability soils and/or steep slopes. ● Limit heavy vehicle travel within the Main Post and near residential areas to daylight hours. ● Ensure all vehicle and equipment engines are tuned and maintained. ● Turn vehicles and equipment off when not in use. ● Use low-sulfur diesel fuel when possible.
Dismounted Operations	<ul style="list-style-type: none"> ● Locate dismounted operations in areas previously cleared for UXO. Areas not previously cleared will require clearance prior to use. ● Avoid areas with known UXO. ● To the extent practicable, locate in areas previously surveyed and cleared for cultural resources. ● Avoid conducting intensive dismounted operations in areas with biological crusts. ● Avoid conducting intensive dismounted operations in grasslands. 	<ul style="list-style-type: none"> ● Rotate areas used for intensive troop use when possible. ● Avoid no-entry areas demarcated on maps or in the field. ● Maintain communications capability with Range Scheduling Office while in the field in the event of an emergency. ● Notify WSMR Environmental Division immediately of any archaeological or historic resources found during off-road vehicle operations. ● Obtain land owner’s permission prior to use of non-DOD land.

Tab 7 – Other Activities (Continued)

<i>Activity</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
	<ul style="list-style-type: none"> • Avoid sensitive habitat areas, including Todsens’ Pennyroyal populations and critical habitat, White Sands pupfish habitat, and all Special Natural Areas. • Locate operations at least 2 miles from occupied Northern Aplomado falcon habitat. 	<ul style="list-style-type: none"> • Dismounted operations in the Jornada Experimental Range require coordination with the USDA.
Surface Weapon Firing	<ul style="list-style-type: none"> • Site new firing points to ensure associated SDZs remain within the boundaries of the installation and existing call-up areas. • Avoid placing targets in streams, rivers, lakes, ponds, floodplains, wells and ephemeral channels. • Locate a safe distance from population centers. • Avoid areas with high fuel loads and continuous fine fuels (e.g., grasslands, pinon juniper areas).Locate activities with high fire hazard away from facilities and infrastructure. • For temporary fixed firing locations, also see Tab 6, Field Operations. • For mobile firing locations, also see Tab 4, Off-Road Vehicle Use (other). • For new fixed firing locations, also see Tab 1, Mission Support Facility. 	<ul style="list-style-type: none"> • Restrict live fire activities during periods of high fire danger. • Notify Fire Department and have suppression equipment on hand during weapon firing activities in the field. • Maintain communication ability to contact Range Scheduling in the event of emergency.
Airborne Weapons Release (evacuation)	<ul style="list-style-type: none"> • Select release locations to ensure associated SDZs remain within the boundaries of the installation and existing call-up areas. • Ensure ADZs remain within existing Restricted airspace. 	<ul style="list-style-type: none"> • Coordinate on-post evacuation requirements through Range Scheduling. • Restrict use of tracer rounds, chaff, and flares during periods of high fire danger.
Airborne Weapons Release (no evacuation)	Not specified at this time	<ul style="list-style-type: none"> • Restrict use of tracer rounds, chaff, and flares during periods of high fire danger.

<i>Activity</i>	<i>Siting Criteria</i>	<i>Other Criteria</i>
Directed Energy Systems	<ul style="list-style-type: none"> • Ensure hazard areas associated with directed energy systems remain within Restricted airspace and the boundaries of the installation and call-up areas. • Locate directed energy operations a safe distance from population centers. • Ensure directed energy facilities and operations and any associated hazard areas are located outside airfield SDZs. • Locate operations to avoid affecting other airspace users to the extent possible. • Avoid using high intensity lasers and other hazardous directed energy systems in the direction of sensitive wildlife areas, including bighorn sheep habitat and raptor perches. • Avoid placing targets in streams, rivers, lakes, ponds, floodplains, wells and ephemeral channels. • Avoid conducting laser and infrared operations in areas with high fuel loads and continuous fine fuels (e.g., grasslands, piñon juniper areas) when possible. 	<ul style="list-style-type: none"> • Ensure personnel who may be exposed to laser or other directed energy hazards are evacuated prior to use. • Use of call-up areas requires 30-day advance notification for evacuation.
Instrumentation & Communication Systems	<ul style="list-style-type: none"> • Position radars to avoid placing raptor perches in the hazard area. • For new instrumentation or communications infrastructure, see Tab 1, Mission Support Facility. 	
SDZ	<ul style="list-style-type: none"> • Ensure SDZ remains within the boundaries of the installation and existing call-up areas. 	<ul style="list-style-type: none"> • Evacuation of off-post call-up areas requires 30 days advance notice. • Ensure evacuation of US Highways 70 and 395 do not exceed 25 times per year and one hour per event. • Coordinate on-post evacuation requirements through Range Scheduling.
ADZ	<ul style="list-style-type: none"> • Ensure ADZs remain within existing Restricted airspace. 	Not specified at this time
Air Vehicle Operations	Not specified at this time	<ul style="list-style-type: none"> • Consider using less-utilized airspace units or teaming with other airspace users.

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8.0 GLOSSARY

Activity Categories – Categories defined as part of the range land use strategy classification system. They encompass and group mission activities conducted at WSMR according to their effects on the land and the environment. They represent both activities and physical augmentation on the range.

Airspace Danger Zone (ADZ) – Airspace that is hazardous for the duration of a particular activity. This activity requires some type of controlled airspace or notification in order to maintain safety for non-participating air vehicles.

Augmented Test Zone- This includes the area identified for the Primary Test Zone with the addition of off-road vehicle operations.

Call-up area – This includes non-WSMR properties that have evacuation agreements.

Conditions of use – Locally-defined (by WSMR) conditions that apply to a specific use in a specific location. These generally respond to safety or environmental conditions.

Controlled airspace – Controlled airspace is an area within which Air Traffic Control (ATC) service is provided to flights in accordance the airspace classification. FAA designates the following types of controlled airspace: Class A, B, C, D, and E. Controlled airspace is subject to certain pilot qualifications, operating rules, and equipment requirements.

Conservation/Protected Area – Land that is off-limits to surface activities for the purpose of resource protection or conservation of a given resource.

Crash Grid – Six kilometer by six kilometer blocks that overlay WSMR land area, used to designate and schedule smaller increments of land or airspace.

Dedicated Use Area – Land on WSMR that is dedicated to a specific user or use and is not available for other uses or decisions regarding future use (e.g., NASA White Sands Test Facility Site, New Mexico Spaceport).

Evacuation Agreement – Agreement between WSMR and a non-WSMR landowner wherein the landowner agrees to evacuate all persons on their property for safety purposes during a WSMR mission.

Focus Area – Encompasses the contiguous land mass and airspace of WMR, including the WSMR land area, non-DoD inholdings within the WSMR land area, overlying and adjacent Restricted Area airspace controlled by WSMR, and call-up areas to the north and west of WSMR (see Figure 1-2).

Impact Area – Active impact area with UXO hazard. Entry is limited to Explosive Ordnance Division or approved personnel.

Inholding – A privately owned parcel of land within the boundaries of a Federal preserve, especially within a national park.

Land Use Classification – Geographical boundaries defined as part of the range land use strategy classification system that subdivide components of the WSMR planning area according to land and airspace status, authorizations, and agreements.

Memorandum of Agreement (MOA) – A cooperative agreement is a document written between parties to cooperatively work together on an agreed upon project or meet an agreed

upon objective with the expressed purpose of establishing a written understanding of the agreement between parties.

Memorandum of Understanding (MOU) – A legal document describing an agreement parties expressing a consensus of will between the parties, indicating an intended common course of action, but does not always imply legal commitment.

Notice to Airmen (NOTAM) – A notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations. NOTAMs are distributed either through telecommunications (Class I) and/or postal services (Class II).

Planning Sub Area – Division of the Primary Test Zone based on terrain, boundaries, adjacent land use designations, scheduling units, airspace units, and current uses and infrastructure.

Primary Test Zone – This is a Land Use Classification that covers most of the WSMR (approximately 1.8 million acres) land area in which the majority of the WSMR core programs and activities take place (See Figures 4-4 and 4-6).

Range – The entire area of WSMR that is used for conducting training, research, development, testing or evaluation of military munitions, ordnance, or weapons systems, not including the Main Post built-up area and Stallion Range Center. The LUASP distinguishes between “on-range” (land within the WSMR boundary) and “off-range” (land outside the WSMR boundary). The term “range” may also be applied to a discrete area used for a particular purpose (such as small arms range).

Record of Decision (ROD) – A document produced at the end of the NEPA process that outlines the decisions made, other alternatives considered, the basis for the decision, the environmentally preferable or overall preferable alternative, and the measures developed to avoid or minimize potential environmental harm.

Restricted Areas – Airspace areas defined by the FAA or DoD as specified for one purpose at a given time, to the exclusion of other aircraft and air-based activities.

Specialized Areas – Facilities or areas used for a specific purpose, mission or customer; may include safety buffer for day-to-day activities.

Standard Operating Procedure (SOP) – A procedure or set of procedures designed to perform a given operation in response to a given event. SOPs often offer guidance where official doctrine is lacking or lacks specific instruction for a given situation.

Submunitions – Weapons used to destroy or neutralize an enemy in place. Submunitions are classified as either bomblets, grenades, or mines. They are small explosive-filled or chemical-filled items designed for saturation coverage of a large area. They may be antipersonnel, antimateriel, antitank, incendiary, or chemical. Submunitions may be spread by dispensers, missiles, rockets, or projectiles.

Surface Danger Zone (SDZ) – Areas where there is a surface danger from a weapon firing. These areas are evacuated for short periods of time when the hazard exists.

Uncontrolled airspace – Uncontrolled airspace is an area that has no ATC service, but has certain visibility and cloud clearance minimums, allowing pilots to operate under FAA Visual

Flight Rules (VFR). Uncontrolled airspace is subject to certain pilot qualifications, operating rules, and equipment requirements.

Unexploded Ordnance (UXO) – Explosive weapon that did not explode when they were first deployed and thus pose a risk of detonation, potentially many decades after they were used or discarded. UXO can include bullets, grenades, landmines, missiles, etc.

Withdrawal – The act of acquiring land from the public and private domain for the purpose of military use. This usually included purchasing the land at fair market value.

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DRAFT FINAL
WHITE SANDS MISSILE RANGE
PROPOSED LAND USE AND AIRSPACE STRATEGY PLAN

APPENDIX A

White Sands Missile Range Organizations

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Appendix A

White Sands Missile Range Organizations

Organizations

White Sands Missile Range (WSMR) is comprised of several organizations, each with specific responsibilities, but together function as a team (known as “Team WSMR”) to give WSMR a unique set of capabilities. Figure A-1 shows the organizational structure of these elements. The WSMR Chief of Staff, White Sands Test Center (WSTC) and several tenant and support organizations report to the WSMR Director. WSMR Garrison Command reports to the Army Installation Management Command–West Region. The primary roles for each of these entities are described below.

White Sands Missile Range, Commanding General

Leadership at the installation is provided by the Commanding General, the Test Center Commander, and the Garrison Commander. Working directly with the Commanding General, is the Command Sergeant Major and Deputy Technical Director, and reporting to the Commanding General, is the Chief of Staff (including the Resource Management, Strategic Planning, Public Affairs, and Secretary General) and the Range Commander’s Council. Also reporting to the Commanding General, are the Test Center and Team WSMR members. Day-to-day direction is provided under the auspices of Team WSMR, which is comprised of the leadership, the Deputies for Navy and Air Force, and members of the primary organizations located at the installation.

Garrison Commander

The Garrison Commander at WSMR is responsible for the administration of many of the day-to-day and ongoing functions for the entire range, including administration, human resources, public works, resource management, planning, and infrastructure maintenance. The Garrison Commander is also responsible for maintaining compliance with military requirements in areas including equal opportunity employment, on-range law enforcement/fire services, religious services, and legal services.

White Sands Test Center (WSTC)

The White Sands Test Center (WSTC) is responsible for the planning and operation of tests at White Sands Missile Range. WSTC is directly supported by the Range Safety Office and the Operations Office. Test Center personnel schedule tests, control range operations, operate range instrumentation, process collected data, manage the Range communications system, the flight termination transmission systems, and provide frequency surveillance. Organizationally, WSTC is comprised of five directorates that perform the complex functions and services that support all test programs on WSMR. These include:

- **Material Test Directorate.** The Material Test Directorate provides support for several major Missile and Rocket test programs. The Material Test Directorate also coordinates between the test proponent, the various WSTC directorates, and Garrison to plan and schedule all range assets and processes needed for each test mission. The Material Test Directorate serves as the primary customer liaison with all services available at WSMR and meeting all the requirements associated with range procedures and protocols.
- **Range Operations (RO) Directorate.** The Range Operations Directorate is responsible for safety of weapons test slights at WSMR, including planning flight safety and approving flight termination systems for all test programs. The Range Operations Directorate manages and operate the instrumentation assets that collect test data such as telemetry, radar, optics, GPS, and meteorology. The Operations Control division provides direct support to test program customers through Range Control during test events, providing real-time monitoring of targets and test

articles from launch to impact or termination. RO also manages range scheduling, reviews all user requests and deconflicts all range activities through the scheduling process. .

- Data Sciences Directorate. The Data Sciences Directorate manages information and data intake from test activities. This branch interfaces with all aspects of range operations to gather data from test activities. This includes interface with the Inter-Range Control Center, range support for different sections of the range, communications, visual information, and data processing directly supporting test missions. The handle the data and information collected from the Range Operations hardware.
- Survivability, Vulnerability Assessment Directorate (SVAD) (formerly, Nuclear Test Directorate). The SVAD is responsible for testing the effects of nuclear weapons on military systems. Its mission has expanded to include testing the performance of military weapons in the electronic warfare environment, and electro-optical, and electromagnetic effects, including high-powered microwaves (HPM) and lightning on military systems.
- Systems Engineering Directorate. This Directorate is responsible for critical technical support systems that support tests on WSMR. This includes range integration functions, sensors and networks systems and scientific software.

Air Force

Air Force operations at WSMR are primary conducted by the 46th Test Group (TG), stationed at Holloman Air Force Base. WSMR provides the 46th TG with land and airspace necessary to conduct radar signature measurements, navigation and guidance system testing, and weapons system testing. The 46th Test Group is also the sponsor and liaison for all Air Force testing at WSMR. It assists Air Force users in preparing documentation for supporting services and obtaining WSMR logistic and support resources. Other Air Force users of WSMR facilities/airspace include the 586th Flight Test Squadron, which is responsible for all Air Force flight test activity over WSMR, the 746th Flight Test Squadron, which tests GPS equipment and navigation systems, the 846th Flight Test Squadron, which operates the Holloman High Speed Test Track, and the National Radar Cross Section Test Facility (NRTF). In addition to testing, the 49th Fighter Wing) out of Holloman has a long history of using WSMR for training. The F-117 aircraft currently conducts about 10,000 sorties annually in WSMR airspace and performs air-to-ground training at Red Rio and Oscura bombing ranges. Soon, the F-22 will replace the F-117 and continue to use WSMR airspace, mostly at higher altitudes, and with supersonic operations.

Naval Air Systems Command (NASC)

The Navy has conducted activities at WSMR since 1946, when it was used to assist in the research and testing of captured German V-2 rockets. Today, Navy activities at WSMR are concentrated on the Naval Air Systems Command, whose primary functions involve the land-based testing of naval weapon systems. WSMR offers facilities and personnel supporting the storage, assembly, integration, live-fire testing, and recovery of missile, gun, rocket systems and directed energy weapons. The Navy also supports research rocket launches by NASA and partner academic institutions.

Team WSMR Organizations

National Aeronautics and Space Administration (NASA)

Established in 1958 by the National Aeronautics and Space Act, NASA is responsible for the nation's public space program as well as for conducting long-term civilian and military aerospace research. NASA maintains and operates the White Sands Test Facility (WSTF) on White Sands Missile Range, which is used to test and evaluate potentially hazardous materials, space flight components, and rocket propulsion systems. NASA also maintains and operates the White Sands Space Harbor located on WSMR, and is capable of providing a landing site for the Space Shuttle Program (one shuttle mission, STS-3 landed

there in 1982). The Space Harbor is also the primary training area for potential Shuttle pilots to practice approaches and landings in shuttle training aircraft.

TRADOC Analysis Center (TRAC)

The U.S. Army TRADOC (Training and Doctrine Command) Analysis Center at WSMR is a sub element of the TRADOC Center at Fort Leavenworth, Kansas. The parent element is the TRADOC Center at Fort Monroe, Virginia. TRAC's central mission is to conduct research studies of Army systems and organizations. TRAC is responsible for modeling the personnel, weapons, decision-making processes, threat and environments in which units operate for Army tactical organizations up to and including the brigade level. TRAC also participates in joint multi-branch military and combined multinational projects.

High Energy Laser Systems Test Facility (HELSTF)

Managed by the U.S. Army Space and Missile Defense Command (SMDC), the HELSTF at WSMR is the Department of Defense National Test Range for high energy laser test and evaluation. HELSTF is the most comprehensive site in the United States capable of supporting research, industry, and domestic and foreign government testing for high energy laser systems, as well as providing the capability to test for laser lethality, damage, and vulnerability. HELSTF is located on White Sands Missile Range, roughly 70 miles north of El Paso, Texas on the north side of US 70. It operates several specialized facilities that can support a comprehensive suite of laser systems, instrumentation, and testing needs.

Defense Threat Reduction Agency (DTRA)

Established in 1998, the Defense Threat Reduction Agency's primary function is to assist in safeguarding the United States and its allies from weapons of mass destruction. DTRA evaluates the ability to counteract and defeat chemical, biological, radiological, nuclear, and high explosives weapons. DTRA maintains a number of test beds and target types on White Sands Missile Range for use by DoD agencies, other U.S. government organizations, researchers, and allied governments. At WSMR, DTRA also conducts tests to evaluate warhead penetration through bedrock and deep soil against fortified target structures and conducts numerous large and smaller scale high explosives testing.

Army Research Laboratory (ARL)

The Army Research Laboratory is the Army's basic and applied research laboratory whose mission is to supply science, technology, and analysis innovation in order to enable full-spectrum operations of all Army capabilities. ARL consists of the Army Research Office and six Directorates - Weapons and Materials, Sensors and Electron Devices, Human Research and Engineering, Computational and Information Sciences, Vehicle Technology, and Survivability/Lethality Analysis. With headquarters in Adelphi, Maryland, the ARL has two major elements located on White Sands Missile Range - the Survivability/Lethality Analysis Directorate (SLAD), which conducts experiments and simulations and provides analysis for the survivability, lethality, and vulnerability of major army systems, and the Battlefield Environment Division of the Computational and Information Sciences Directorate (CISD), which is the primary Army organization for research and development in computational and information sciences.

Center for Counter Measures (CCM)

The Center for Countermeasures is responsible for the analysis and testing of precision guided weapons, their related components, and countermeasure systems. The Center provides the Department of Defense with data relating to precision guided weapons systems for use by both U.S. and foreign entities. The CCM is located on White Sands Missile Range, but is capable of conducting operations worldwide. CCM supports and piggy-backs on several test programs to provide a countermeasure environment as part of the research and system development process.

National Geospatial-Intelligence Agency (NGA)

The National Geospatial-Intelligence Agency is a federal agency that provides geospatial intelligence in support of national security objectives through the collection, analysis and distribution of geospatial intelligence in various forms and from multiple sources. NGA manages the National System for Geospatial Intelligence, which integrates technology, policies, capabilities and doctrine necessary to conduct geospatial intelligence.

Test, Measurement, and Diagnostic Equipment (TMDE)

Test, Measurement, and Diagnostic Equipment develops, acquires, deploys, and supports standardized, general-purpose, measurement, test, diagnostic, and calibration equipment that supports all levels of maintenance for multiple weapon systems. TMDE includes all devices used to measure, gauge, test, inspect, or otherwise determine compliance with existing Army technical requirements.

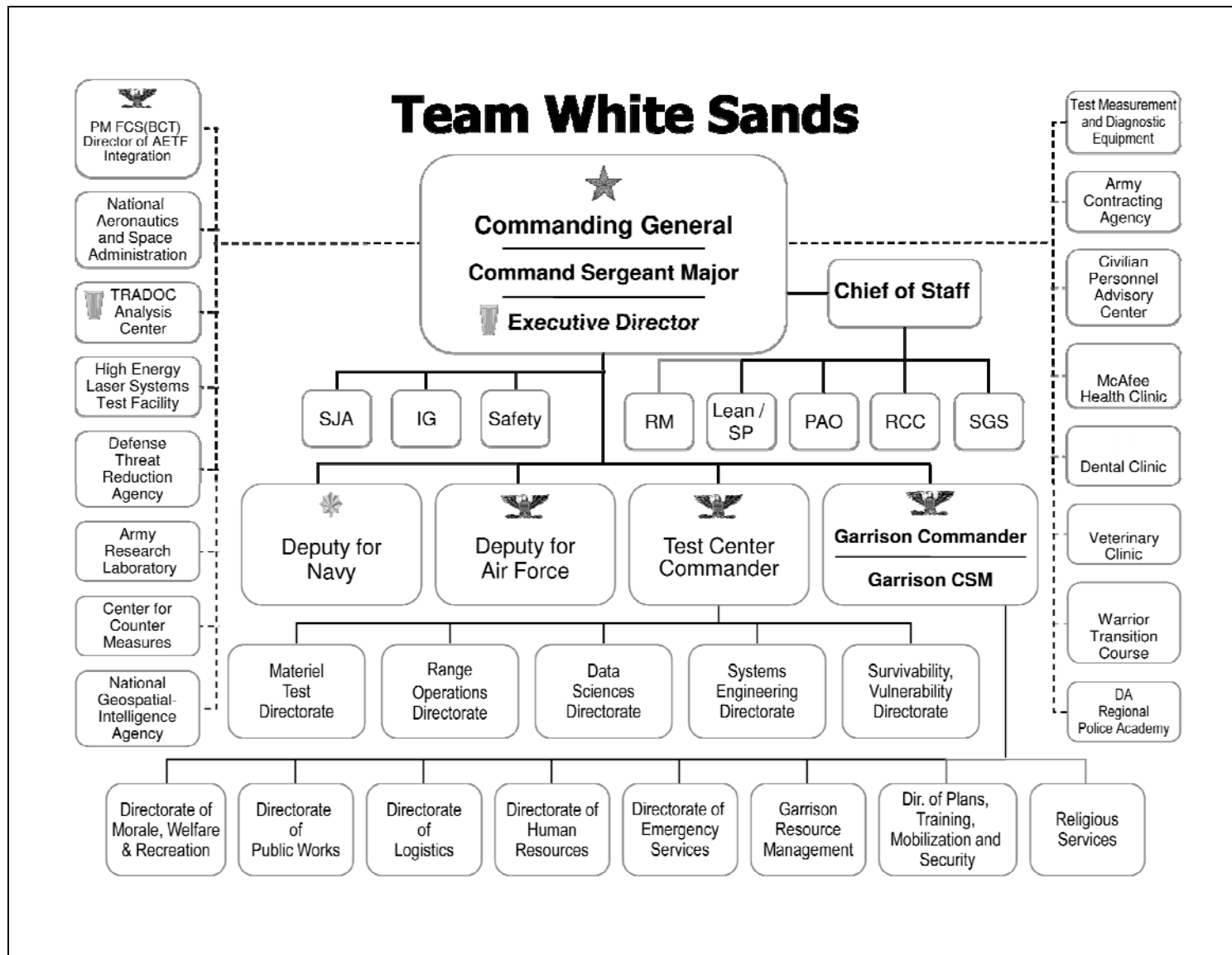
Army Contracting Agency (ACA)

The Army Contracting Agency was created in 2002 in order to provide streamlined delivery of installation-level services and supplies, mission support, and common-use information technology, hardware, software and services. The Army Contracting Agency maintains a Directorate of Contracting on White Sands Missile Range that purchases equipment, consumable supplies, minor construction materials, and offers base operations and mission support services.

Civilian Personnel Advisory Center (CPAC)

The Civilian Personnel Advisory Center provides personnel advisory services to military management teams and provides assistance to the commanding general, managers, supervisors, and employees on all personnel management issues, including but not limited to: labor-management negotiations, employee benefits, management employee relations, recruitment strategies, and local training. CPAC is responsible for developing, promoting, and monitoring civilian personnel policies to meet the needs of management, supervisors, and the general workforce.

Figure A-1. Team White Sands Organization



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PROPOSED LAND USE AND AIRSPACE STRATEGY PLAN

APPENDIX B

Major Test Programs

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Appendix B Major Test Programs

Core Competencies and Major Test Programs

Missile Defense Systems

WSMR is one of the nation's primary test ranges for missile testing. Missile programs include both air-launched and surface-launched missiles. WSMR has developed an extensive capability to support complex test involving several simultaneous launches (both test articles and targets) with planned impacts over the WSMR land area. Some of the major programs using WSMR include the following:

Air to Air/Surface Missile Programs

Brilliant Anti-Armor (BAT) – BAT is a self-guided submunition system that uses infrared sensors to locate and destroy tanks and other armored vehicles, either via air launch, Army Tactical Missile System, or other delivery vehicle launched from a Multiple Launch Rocket System.

Air-to-air medium range missile (AMRAAM) – AMRAAM replaced the AIM-7 Sparrow missile and is designed to allow for missile deployment within and beyond visual range and either with or without the assistance of aircraft radar. AMRAAM is compatible with the F-14, F-15, F-16, F/A-18, F-22, German F-4, and British Sea Harrier. AAMRAM testing at WSMR include captive-carry tests, "dress rehearsal" tests, and live fire/drone tests.

Surface-to-Air Missile Programs

Extended Range Intercept Technology (ERINT) – ERINT utilizes an interceptor missile and a target system missile, each carrying a non-hazardous simulated chemical payload. The purpose of ERINT is intercept and destruction of offensive ballistic missiles.

Forward Area Air Defense System (FAADS) – FAADS involves a suite of integrated defensive weapons designed to provide airborne protection from threats from fixed and rotary winged aircraft, as well as ground vehicles.

Phased-array Tracking to Intercept of Target (PATRIOT) – The PARTIOT is a modular, mobile, guided missile system designed to provide protection from high performance and tactical missile targets. PATRIOT testing on WSMR occurs under WSMR airspace and over approved impact areas, utilizing subsonic and supersonic missiles and aircraft.

THAAD (Theatre High Altitude Area Defense) missile system is an easily transportable defensive weapon system to protect against hostile incoming threats such as tactical and theatre ballistic missiles at ranges of approximately 125 miles (200 kilometers) and at altitudes up to 93 miles (150 kilometers).

Medium Extended Air Defense System (MEADS) – Designed to replace Patriot and Hawk systems worldwide, MEADS is a mobile surface-to-air missile system that will protect moving ground forces as well as fixed installations. The system includes a hit-to-kill Patriot Advanced Capability-3 missile system, management/communication systems, and the mobile launchers themselves.

Navy Standard Missiles – Standard missile is a medium-long range shipboard surface-to-air missile. Several generations of the Standard Missile program have been tested at WSMR.

Navy Tomahawk Missile – Tomahawk is an all-weather submarine or ship-launched long-range subsonic cruise missile for attacking land targets. After launch, a solid propellant propels the missile until a small turbofan engine takes over for the cruise portion of flight. Radar detection is difficult because of the missile's small cross-section, low altitude flight. Similarly, infrared detection is difficult because the turbofan engine emits little heat.

Surface-to-Surface Missile Programs

Army Tactical Missile System (ATACMS) – ATACMS are generally deployed against targets beyond the normal range of Multiple Launch Rocket Systems. ATACMS is a solid-propellant, internally guided missile capable of delivering a range of warheads. Testing at WSMR occurs from a launch complex to an established and approved WIT/impact area.

Line of Sight Anti-Tank (LOSAT) – LOSAT is an armored vehicle launched solid-propellant, hypervelocity missile that utilizes a kinetic energy (non-explosive) penetrator designed to disable threats. LOSAT conducts test at the Small Missile Range on WSMR, using tanks, armor plates, specially instrumented targets (including a helicopter on poles).

Navy Tactical Tomahawk, Standard Missile – The Tomahawk is a long-range, low altitude, all-weather, subsonic cruise missile, commonly launched from battleships or submarines. The Tomahawk is capable of using data from multiple sources, including aircraft, satellites, UAV, tanks, ships, and ground observers to acquire its target.

Navy Gun Program – The Navy Gun Program tests new propulsion systems for 5 to 8 inch guns.

Rockets

NASA Sounding Rockets – Sounding rockets are instrument-carrying, suborbital rockets that collect a range of measurements and perform experiments for the duration of flight. Sounding rockets are often used to collect data in areas not accessible to either research balloons or satellites.

Single State Rocket Test (SSRT) program – SSRT provides the Missile Defense Agency with a vertical-launch, suborbital, recoverable rocket capable of lifting a 3,000 lb payload to an altitude of approximately 265 miles. SSRT vehicles also possess the capability of launch site return for a soft vertical landing, with possibility of relaunch within a three to seven day window.

Missile Hardness/life cycle testing

Environmental laboratory tests –Facilities equipped to simulate climatic and environmental factors (such as heat, cold, vibration, shock/impact) in order to test and assess the hardness of test articles.

Dispenser and Bomb Drop Missions

Air Force Training at Red Rio and Oscura – Daily pilot training on fixed ground targets.

Penetrator and Unitary Bombs

Destructive Testing – WSMR conducts diagnostic testing including explosive train propagation, warheads/explosives downloading, cutting and steaming of explosive components, explosives core sampling, and assembly/disassembly checkouts of warheads. WSMR also engages in the remote disassembly of components and the recovery of special materials from impact areas.

Arena Tests – WSMR operates a fully instrumented 200 square foot detonation area outfitted with fixed high-speed camera mounts and witness panels, designed for the purpose of determining fragment dispersion and velocity.

Large Scale Conflagration Tests – Large scale conflagration tests are used to conduct destructive and/or functional tests of warheads and other explosive devices. WSMR operates such a site – a pit with the dimensions of 150 feet long by 95 feet wide by 20 feet deep.

Drop Testing – Drop testing is conducted to measure the durability of equipment when dropped from specified heights. WSMR operates an 80 ft drop tower used to test warheads, rocket motors, missiles, and other devices, both in and out of container/shell.

High Speed Sled Testing – The High Speed Test Track is a 10 mile long track is located at Holloman AFB, organized under the 846th Test Squadron, and used for the simulation of trajectories of aircraft and missiles under stringent scientific conditions. Sled speeds can range up to 8,900 ft/sec and sled weights can range from 100 to 30,000 lbs.

Target System Programs

Sub and Full-scale Drones - both target and non-target UAV programs

Missiles as Targets - Missile systems such as HAWK, Stinger, Chaparral, Hera/Storm, Lance, and other variants are used as targets in several missile test programs.

System of Systems Integration (SoS)

Distributed and integrated testing of all elements of the battlefield is one of the major new RDT&E areas. The Future Combat System is an example of a current program that includes both component and full-system integration phases. The program follows both life cycle tests of all component pieces as well as the development of the networks and communication between the hardware elements (cannons, unmanned and manned air and ground vehicles, sensors, intelligent munitions systems). Included in this is the soldier that operates and controls the elements through feedback and information. FCS testing includes live user tests where realistic scenarios are enacted to test the integration of elements in battle scenarios. The spectrum of testing for a SoS program includes:

- Component and system integration from development through field testing in test-to-train environment
- Unmanned systems, sensors, munitions systems, delivery systems
- Battlefield communication networks and live user tests
- Command, control, communications, computers, intelligence, surveillance, and reconnaissance

Meteorological and upper atmosphere probes

Small rockets and balloons carry a suite of instruments to collect data on atmospheric, chemical, and meteorological conditions.

Space Programs

NASA White Sands Test Facility (WSTF) – WSTF is operated under an Interagency Agreement between WSMR and NASA and is considered a filed test installation under NASA’s Johnson Space Center. Its primary purpose is to provide support to the U.S Space Program via the development and testing of spacecraft systems.

White Sands Space Harbor (WSSH) – WSSH maintains a usable runway and landing facility for the Space Shuttle Program. During Shuttle operations, WSSH provides support to NASA. WSSH is also home to a shuttle pilot training program, where pilots use Gulfstream II aircraft to provide a realistic simulation for Shuttle approach and landing.

Space Surveillance telescope and GEODSS – these programs are perform an active mission of observing and gathering strategic information from space.

Directed Energy

Directed energy weapons includes all classes of non-ionizing radiation systems, including lasers and high-powered microwave. Both surface-based and air launch platforms are included in this category. WSMR has several special test beds and laboratories support confined and unconfined testing of Directed energy weapons. The High Energy Laser Systems Test Facility (HELSTF) is able to support a wide variety of laser developmental and operational tests for not only combat and materiel developers, but also for industry and academia.

Mobile Tactical High Energy Laser (MTHEL) – MTHEL is a chemical laser designed to protect personnel from artillery, mortars, and rockets, with the eventual goal of full deployment from only one vehicle.

Center for Countermeasures (CCM) – use of lasers as countermeasure to disable unfriendly systems. Test activity mostly at AMRAD facility and new CCM range.

Mid-InfraRed Advanced Chemical Laser (MIRACL) – The United States' most powerful DF laser (megawatt class). Operational since 1983 at HELSTF, it provides a great national asset for directed energy testing.

Airborne Laser (ABL) – The ABL is an aircraft-deployed (primarily a modified Boeing 747) chemical oxygen iodine laser designed to destroy ballistic missiles during the boost phase of flight by weakening the skin of the missile, resulting in failure due to flight stresses.

Advanced Tactical Laser (ATL) – The ATL is similar to the ABL (chemical oxygen iodine laser) but can be deployed from a variety of aircraft (Boeing C-130, V-22 Osprey, other helicopters and cargo aircraft) but employs a different output range for use against specific ground targets.

High Powered Microwave (HPM) – new test programs for both lethal and non-lethal HPM weapons, using both indoor (confined) test cells, and outdoor ranges.

Nuclear Weapons Effects

The SVAD operates several facilities to test and evaluate nuclear weapons effects on military systems, using the Fast Burst Reactor (FBR), Linear Electron Accelerator (LIJNAC), Relativistic Electron Beam Accelerator (REBA), Gamma radiation activity, solar furnace, electromagnetic pulse and radiation facilities, and Large Blast Thermal Simulator (LBTS).

Lightning effects – This program assesses the effects of lightning strikes on nuclear weapons and other military systems.

Aircraft systems-aircraft armaments fixed wing

The U.S. Air Force performs many test programs at WSMR that evaluate missile launch capabilities of aircraft including the hardware (such as dispenser mechanisms) and peripheral components and the integration of the guidance and software packages on the aircraft.

National Radar Test Facility (NRTF) – Facilities on WSMR provide state-of-the-art testing of radar and signal referencing on aircraft both in static and operation modes. A new Aero Acoustical facility will measure and develop sound profiles for various aircraft during flight, to aid in detection and surveillance.

Special Programs and Training

Ground-Based Electro-Optical Deep Space Surveillance (GEODSS) system –This facility tracks objects as small as a basketball more than 20,000 miles in space, plays a vital role in tracking space objects, particularly those in deep space. The facility on WSMR is one of three locations worldwide that report to the 21st Space Wing, headquartered at Peterson Air Force Base, Colorado. A similar program is now functioning on Atom Peak where a Space Surveillance Telescope has been sited.

ANG Warrior Transition Training. The purpose of the Warrior Transition Course is to transition active and prior service Navy and Air Force enlisted personnel to the Army, as well as retrain prior service Army personnel who are not required to attend Basic Combat Training Soldiers are trained in core tasks (drills, communication), weapons proficiency, fitness, survival, and Army tactics.

49th Fighter Wing – Perform F-117 (to be F-22) operational training in WSMR airspace. German Air Force trains in Tornado aircraft, also use WSMR airspace and the Yonder, Mesa, Lava airspace. Air-to-ground training performed at Red Rio and Oscura bombing ranges in northeast part of WSMR.

Air Force Special Operations Command (AFSOC) training with insertion and extraction missions, dismounted, paradrops of personnel and equipment

Joint military training exercises (e.g. Roving Sands)

Special operations training (live and blank ammunition, helicopters and gunnery training)

Dismounted operations in mountains

Test Beds

WSMR has established several test beds and facilities to support a wide range of tests, from antenna characterization tests to fabrication of prototype equipment.

The following are types of tests beds that are available at WSMR:

- Analog & Digital
- Arena Tests
- Bullet Impact Testing
- Centrifuge Testing
- Data Acquisition System
- Data Reduction
- Destructive Testing
- Drop Testing
- High Speed Sled Testing
- Intermediate Joint Interoperability
- Large Scale Conflagration Tests
- Microbiological Effects
- Missile Assembly Facility
- Mobile Facilities
- Propulsion Testing
- Rate Table Laboratory
- Rocket Motor Static Fire Testing
- Tactical Radio
- Virtual Battle Field Environment Facility

Facilities and Laboratories

WSMR has several special facilities and laboratories supporting both a variety of test programs and for specific programs. These expand and augment the range of services and opportunities available to test customers. The following is a list of major facility and laboratory assets.

- Aerial Cable Range Facility
- Chemical Laboratory
- Analytical Chemistry Laboratory
- Certified Chemistry Laboratory
- Climatic Test Facility
- Dynamic Test Facilities
- Electromagnetic Test Facilities
- Electronic Warfare
- High Energy Laser Systems Test Facilities
- Information Operations Laboratory
- Launch Facilities
- Metallurgy Laboratory
- Nuclear Effects Facilities
- Warheads Test Facilities and Impact Areas

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APPENDIX C

Descriptions of Specialized Areas

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Appendix C Descriptions of Specialized Areas

Table C-1. Specialized Areas – Use and Facilities

<i>Map ID</i>	<i>Specialized Area</i>	<i>Acres</i>	<i>Primary User(s)</i>	<i>Primary Use/Activities</i>	<i>Notes</i>
12	649 WIT	1,593	multiple	Impact area	
47	901 AREA	328	FCS	Labs, workshops, offices	
30	ABC-1 Impact Area	451	multiple	Impact area	
16	Aero-acoustical Site	20,852	Air Force	Aircraft operation, test measurement	
15	Aerial Cable Range	15,140	multiple	Target and impact area	
11	AFSWC Target Area	173	Air Force	Target and impact, aircraft operations, air weapons firing	
22	Alt SHIST	21	DTRA	Bedrock penetration tests	
43	AMRAD	755	CCM, ARL	Laser use/testing, EM jamming	
10	Atom Peak	1	Air Force	Space surveillance	Optical telescope
24	Capitol Peak	389	DTRA	Explosives testing, impact area, hardened tunnel testing	
37	CCM Test Area	3,705	CCM, ARL	Laser use/testing, EM jamming	
28	Denver WIT	1,802	multiple	Impact area	
46	EMRE	737	SVAD	Electromagnetic effects, nuclear effects	
21	Fairview Range	6,299	Air Force	Impact area, helicopter gunnery	
44	G-10	318	multiple	Impact area	
39	G-16	318	multiple	Impact area	
38	G-20	1,153	multiple	Impact area	
35	G-25	883	multiple	Impact area	
41	Hazardous Test Area	10,574	multiple	High explosive munitions testing and impact areas	Previously used for open burn/open detonations
36	HELSTF	1,224	Navy, multiple	High energy laser testing	
23	JDETS	4,396	JEDDO	IED Range	10 nm safety buffer

Table C-1. Specialized Areas – Use and Facilities *Continued*

<i>Map ID</i>	<i>Specialized Area</i>	<i>Acres</i>	<i>Primary User(s)</i>	<i>Primary Use/Activities</i>	<i>Notes</i>
49	LC-32	1,330	multiple	Missile launch site	
50	LC-33	1,569	multiple	Missile launch site	
51	LC-34	937	multiple	Missile launch site	
52	LC-35	682	Navy	Missile launch site	
53	LC-36	1,012	multiple	Suborbital rocket launch site	
54	LC-37	1,506	multiple	Gun munitions test site	
55	LC-38	1,791	multiple	Missile launch site	
56	LC-39	2,167	multiple	Missile launch site	
45	LC-50	76	multiple	Missile launch site	
4	LC-94 A	382	Target launch site	Missile launch site	
1	Lee Point Instrumentation Site	164	Target launch site	Missile launch site	
3	Lee Ranch Impact Area	108	Impact Area	Impact area	
6	Mine Site	10,359	ANG	Warrior training course, small arms range, safety area	
40	NASA-WSTF	17,561	NASA	Rocket testing, Space Shuttle Program support	
5	NECI	2,684		Former impact areas	
9	North Oscura Peak	564	AFRL	Directed energy weapons tests (Airborne laser)	Laser facility; billeting quarters
34	National Radar Test Facility (NRTF)	1,956	Air Force – 46 th TG	Outdoor static radar cross-section measurement	
57	Nuclear Effects South	388	SVAD	E3, EMI, EMC, nuclear effects	Dedicated site.
17	Oscura Range	21,886	Air Force – 49 th FW	Surface and airspace danger zone	
19	Oscura Target Area	3,467	Air Force – 49 th FW	Impact area (air-to surface bombing range)	
13	PHETS	22,399	DTRA	High explosives testing, hardened target testing	
2	Pinon Site	39			
26	PUP WIT	1,802	multiple	Impact area	
48	R-409	87	multiple	THAAD radar site, missile	

Table C-1. Specialized Areas – Use and Facilities *Continued*

<i>Map ID</i>	<i>Specialized Area</i>	<i>Acres</i>	<i>Primary User(s)</i>	<i>Primary Use/Activities</i>	<i>Notes</i>
				tests	
29	RAMS	957	Air Force – 46 th TG	Air Force test special area	Radar Cross-Section Advanced Measurement System
7	Red Rio Range	44,798	Air Force – 49 th FW	Safety area, surface and airspace danger zone	
8	Red Rio Target Area	2,161	Air Force – 49 th FW	Impact area (air-to-surface bombing range)	
27	Rhodes WIT	1,802	multiple	Impact area	
25	Salinas Peak	1	Air Force	Instrumentation and communication, laser use/testing	Instrumentation
18	SHIST	56	DTRA	Bedrock penetration tests	
32	Slick City	93	Air Force	Impact area	
58	Small Diameter Bomb Range	Unknown	Air Force	Impact area for submunitions	Adjacent to Zumwalt Test Track
42	Small Missile Range	2,635	multiple	Launch and impact	
14	Stallion WIT	1,802	multiple	Impact area	
31	WC-50	49		Launch site	
33	White Sands Space Harbor	30,769	NASA	Shuttle landing/training	
20	Zumwalt Test Track	5,635	DTC	Impact area for Smart munitions (submunitions) tests	Test track for moving target arrays

AFSWC Air Force Special Weapons Center
 ARL Army Research Laboratory
 CCM Center for Countermeasures
 DTC Developmental Test Command
 DTRA Defense Threat Reduction Agency
 NASA National Aeronautics and Space Administration
 NRTF National Radar Test Facility

PHETS Permanent High Explosive Test Site
 RAMS Radar Cross Section Advanced Measurement System
 THAAD Theater High Altitude Area Defense
 SHIST Seismic Hardrock In-situ Source Test
 SVAD Survivability, Vulnerability Assessment Directorate
 WIT Warhead Impact Target

**DRAFT FINAL WHITE SANDS MISSILE RANGE
PROPOSED LAND USE AND AIRSPACE STRATEGY PLAN**

The following list of sites was part of the GIS data provided from WSMR. There is high correlation (but not one-to-one correspondence) between these data and the real property facility “local name” index. Several sites without geographic reference that were identified during the LUASP process are listed at the end of this table.

Table C-2. Original List of Sites

<i>OBJECT ID</i>	<i>AREA_SIZE (acres)</i>	<i>USER_FLAG</i>	<i>FACIL_ID</i>	<i>Status List Code</i>	<i>Feature Name</i>
26	6.4	FIRING RANGE	24180	ACTIVE	.3 MI N TREE
27	2.0	FIRING RANGE	25801	ACTIVE	.4 MI E HASKINS
28	10.5	FIRING RANGE	25470	ACTIVE	.4 MI NW JAMES
105	13.2	FIRING RANGE	29300	ACTIVE	.5 MI NE PHIL
89	64.6	FIRING RANGE	30399	ACTIVE	.5 MI NE SW50
29	33.0	FIRING RANGE	25475	ACTIVE	.5 MI NE VAL
4	3.3	FIRING RANGE	20920	ACTIVE	.5 MI S RUSH
30	5.0	FIRING RANGE	20896	ACTIVE	.5 MI W RON
22	8.3	FIRING RANGE	24184	ACTIVE	.6 MI E TREE
106	23.8	FIRING RANGE	29110	ACTIVE	.6 MI NW EC30
31	3.2	FIRING RANGE	25802	ACTIVE	.6 MI NW HASKINS
107	4.1	FIRING RANGE	34979	ACTIVE	.7 MI E MINE
32	3.4	FIRING RANGE	25116	ACTIVE	.8 MI SE ALEX
33	9.4	FIRING RANGE	25810	ACTIVE	.8 MI SE T. FLATS
148	22.1	FIRING RANGE	30381	ACTIVE	.9 MI SW SHOT
9	3.1	FIRING RANGE	25015	ACTIVE	1.1 MI NE KEN
5	7.4	FIRING RANGE	20618	ACTIVE	1.2 MI NE NANPRIME
88	3.0	FIRING RANGE	30369	ACTIVE	1.3 MI NW SHOT
108	3.5	FIRING RANGE	30985	ACTIVE	1.4 MI NW NW50
109	5.2	FIRING RANGE	32005	ACTIVE	1.5 MI NE RAMS
110	1.0	FIRING RANGE	31060	ACTIVE	1.5 MI NW BECKAGE
24	20.3	FIRING RANGE	25255	ACTIVE	1.5 MI SE DON
100	20.4	FIRING RANGE	30221	ACTIVE	1.5 MI SW NW30
76	4.2	FIRING RANGE	32820	ACTIVE	1.6 MI NE GILMORE
69	6.1	FIRING RANGE	34076	ACTIVE	1.6 MI SE TIFF
147	5.7	FIRING RANGE	28910	ACTIVE	1.7 MI S CHILE
111	6.4	FIRING RANGE	34077	ACTIVE	1.8 MI NE TIFF
64	8.8	FIRING RANGE	34955	ACTIVE	1.8 MI S ZURF
95	29.6	FIRING RANGE	34845	ACTIVE	1.9 MI W SOTIM3
34	29.1	FIRING RANGE	19305	INACTIVE	100K SITE
35	35.6	FIRING RANGE	19479	ACTIVE	300K SITE
6	50.8	FIRING RANGE	19260	INACTIVE	500K SITE
66	1,593.2	RDTE IMPACT	34282	ACTIVE	649 WIT
87	450.7	RDTE IMPACT	31050	ACTIVE	ABC-1 IMPACT AREA
54	214,892.2	RDTE IMPACT	40010	ACTIVE	ABRES EXT AREA NORTH
55	206,503.5	RDTE IMPACT	40011	ACTIVE	ABRES EXT AREA SOUTH
112	3,622.8	FIRING RANGE	33522	ACTIVE	AERIAL CABLE
157	272,048.7	RDTE IMPACT	40012	ACTIVE	AEROBEE EXT AREA
113	172.7	RDTE IMPACT	32830	ACTIVE	AFSWC TARGET

Table C-2. Original List of Sites *Continued*

<i>OBJECT ID</i>	<i>AREA_SIZE (acres)</i>	<i>USER_FLAG</i>	<i>FACIL_ID</i>	<i>Status List Code</i>	<i>Feature Name</i>
11	153.2	FIRING RANGE	40020	ACTIVE	ALAMO PEAK
19	755.2	FIRING RANGE	25909	ACTIVE	AMRAD
158	0.2	FIRING RANGE	33160	ACTIVE	ATOM PEAK
36	102.0	FIRING RANGE	22105	ACTIVE	B STATION
114	20.3	FIRING RANGE	29010	ACTIVE	BALZAR SITE
67	6.9	FIRING RANGE	31065	ACTIVE	BECKAGE SITE
115	7.5	FIRING RANGE	32995	ACTIVE	BEN SITE
116	79.4	FIRING RANGE	30165	ACTIVE	BRILLO SITE
117	481.6	FIRING RANGE	32543	ACTIVE	BURRIS WELL
57	134.6	FIRING RANGE	21945	ACTIVE	C STATION
37	1,092,577.7	RDTE IMPACT	40014	ACTIVE	CENTRAL IMPACT AREA
90	315.6	FIRING RANGE	29020	ACTIVE	CHAS SITE
70	81.2	FIRING RANGE	28909	ACTIVE	CHILE SITE
118	697.6	RDTE IMPACT	35593	ACTIVE	COMA SITE
12	771.6	OTHER RANGE	21300	ACTIVE	CONDON DZ
119	9.7	FIRING RANGE	33474	ACTIVE	D-10
159	19.5	FIRING RANGE	27945	ACTIVE	DART SITE
86	139.5	FIRING RANGE	31853	ACTIVE	DATE SITE
120	67.2	FIRING RANGE	31111	ACTIVE	DEADHORSE SITE
79	13.4	FIRING RANGE	33250	ACTIVE	DEER HORN
71	6.3	FIRING RANGE	31020	ACTIVE	DENVER SITE
80	1,802.8	RDTE IMPACT	31021	ACTIVE	DENVER WIT
81	63.4	FIRING RANGE	33501	ACTIVE	DERA SITE
13	189.8	FIRING RANGE	20465	ACTIVE	DOG SITE
58	75.5	FIRING RANGE	20488	ACTIVE	DUD RANCH
72	43.2	FIRING RANGE	29295	ACTIVE	DUST SITE
82	6.5	FIRING RANGE	29111	ACTIVE	EC-30
85	94.3	FIRING RANGE	29077	ACTIVE	EC-50
8	737.3	FIRING RANGE	28305	ACTIVE	EMRE
83	39,669.0	FIRING RANGE	33161	ACTIVE	FAADS VALLEY
101	3.5	FIRING RANGE	34499	ACTIVE	FAIR SITE
14	1.0	FIRING RANGE	01303	ACTIVE	FIRING RANGE A
15	0.7	FIRING RANGE	01306	ACTIVE	FIRING RANGE B
16	0.9	FIRING RANGE	01307	ACTIVE	FIRING RANGE C
53	876,438.6	RDTE IMPACT	40013	ACTIVE	FIX EXT AREA
99	317.9	RDTE IMPACT	25820	ACTIVE	G-10
149	318.0	RDTE IMPACT	25821	ACTIVE	G-16
84	1,153.9	RDTE IMPACT	25822	ACTIVE	G-20
75	883.4	RDTE IMPACT	25823	ACTIVE	G-25
59	72.0	FIRING RANGE	34045	ACTIVE	GRANJEAN SITE
121	24.6	FIRING RANGE	34689	ACTIVE	GREEN SITE
20	9,590.5	FIRING RANGE	28262	ACTIVE	HAZARDOUS TEST AREA
10	1,224.0	FIRING RANGE	26007	ACTIVE	HELSTF
38	60,829.0	RDTE IMPACT	40015	ACTIVE	JORNADA

Table C-2. Original List of Sites *Continued*

<i>OBJECT ID</i>	<i>AREA_SIZE (acres)</i>	<i>USER_FLAG</i>	<i>FACIL_ID</i>	<i>Status List Code</i>	<i>Feature Name</i>
39	8.5	FIRING RANGE	01308	ACTIVE	KNOWN DISTANCE RANGE
40	1,330.7	FIRING RANGE	20585	ACTIVE	LC-32
41	1,569.8	FIRING RANGE	20899	ACTIVE	LC-33
42	937.4	FIRING RANGE	23030	ACTIVE	LC-34
2	682.7	FIRING RANGE	22855	ACTIVE	LC-35
25	1,012.5	FIRING RANGE	23324	ACTIVE	LC-36
21	1,506.5	FIRING RANGE	23505	ACTIVE	LC-37
56	1,791.8	FIRING RANGE	23604	ACTIVE	LC-38
43	2,167.9	FIRING RANGE	24305	ACTIVE	LC-39
18	76.2	FIRING RANGE	25099	ACTIVE	LC-50
145	382.1	FIRING RANGE	36010	ACTIVE	LC-94 A
103	39.1	FIRING RANGE	36011	ACTIVE	LC-94 B
104	164.6	RDTE IMPACT	34325	ACTIVE	LEE RANCH IMPACT AREA A
102	107.8	RDTE IMPACT	34326	ACTIVE	LEE RANCH IMPACT AREA B
96	125.3	FIRING RANGE	34880	ACTIVE	MILLERS WATCH
122	196.8	FIRING RANGE	34992	ACTIVE	MINE SITE
155	1,252.8	RDTE IMPACT	32040	ACTIVE	MONROE DZ
44	13.9	FIRING RANGE	28176	ACTIVE	NANCY II SITE
91	2,337.9	RDTE IMPACT	34970	ACTIVE	NECI WIT
123	564.2	FIRING RANGE	33122	ACTIVE	NOP
124	3.3	FIRING RANGE	34779	ACTIVE	NORMA
45	766,229.1	RDTE IMPACT	31660	ACTIVE	NORTHERN IMPACT AREA
46	388.5	FIRING RANGE	21260	ACTIVE	NUCLEAR EFFECTS SOUTH
47	11.4	FIRING RANGE	25073	ACTIVE	ORTHO SITE
77	415.5	RDTE IMPACT	31732	ACTIVE	OSCURA DZ
125	21,895.4	RDTE IMPACT	31731	ACTIVE	OSCURA RANGE
60	3,746.1	FIRING RANGE	31730	ACTIVE	OSCURA RANGE CENTER
126	6,251.1	FIRING RANGE	34734	ACTIVE	PHETS
92	20.9	FIRING RANGE	29301	ACTIVE	PHIL SITE
127	18.8	FIRING RANGE	28903	ACTIVE	PONY SITE
61	1,803.0	RDTE IMPACT	31305	ACTIVE	PUP WIT
128	2.1	FIRING RANGE	29342	ACTIVE	QUEEN 15
129	22.8	FIRING RANGE	30770	ACTIVE	R.C. SUBSCALE LAUNCH
97	15.0	FIRING RANGE	28867	ACTIVE	RAD SITE
48	648.7	FIRING RANGE	25863	ACTIVE	RAMPART
130	957.1	FIRING RANGE	25864	ACTIVE	RAMS
156	1.7	FIRING RANGE	29302	ACTIVE	RAS SITE
98	1,956.6	FIRING RANGE	29034	ACTIVE	RATSCAT
78	387.8	RDTE IMPACT	33565	ACTIVE	RED CANYON DZ
131	44,817.6	DUDDDED IMPACT	33880	ACTIVE	RED RIO RANGE
152	135.4	RDTE IMPACT	29303	ACTIVE	RED ROAD DZ
93	1,803.0	RDTE IMPACT	30710	ACTIVE	RHODES WIT
23	40.6	FIRING RANGE	29886	ACTIVE	SAC PEAK

Table C-2. Original List of Sites *Continued*

<i>OBJECT ID</i>	<i>AREA_SIZE (acres)</i>	<i>USER_FLAG</i>	<i>FACIL_ID</i>	<i>Status List Code</i>	<i>Feature Name</i>
65	0.9	FIRING RANGE	32299	ACTIVE	SALINAS PEAK
62	6.3	FIRING RANGE	32810	ACTIVE	SCENIC SITE
132	16.6	FIRING RANGE	30380	ACTIVE	SHOT SITE
7	3.2	FIRING RANGE		ACTIVE	SKEET RANGE
17	2,635.7	FIRING RANGE	27064	ACTIVE	SMALL MISSILE RANGE
133	5.2	FIRING RANGE	34171	ACTIVE	SOTIM I
134	6.2	FIRING RANGE	34983	ACTIVE	SOTIM II
49	279,782.9	RDTE IMPACT	28800	ACTIVE	SOUTHERN IMPACT AREA
135	14.6	FIRING RANGE	34518	ACTIVE	SPEC SITE
154	226.0	DUDDED IMPACT	34150	ACTIVE	STALLION DZ
68	6.8	FIRING RANGE	34151	ACTIVE	STALLION FIRING RANGE A
136	6.0	FIRING RANGE	34152	ACTIVE	STALLION FIRING RANGE B
63	6.6	FIRING RANGE	34153	ACTIVE	STALLION FIRING RANGE C
73	7.3	FIRING RANGE	34154	ACTIVE	STALLION FIRING RANGE D
137	1,803.0	RDTE IMPACT	34155	ACTIVE	STALLION WIT
138	10.9	FIRING RANGE	30711	ACTIVE	STUCK SITE
139	102.6	FIRING RANGE	34075	ACTIVE	SULF SITE
140	86.3	FIRING RANGE	31320	ACTIVE	SW-70
160	5.0	FIRING RANGE	27631	ACTIVE	T-193
94	8.7	FIRING RANGE	29011	ACTIVE	TAC-1
50	0.8	FIRING RANGE	29012	ACTIVE	TAC-3
74	28.5	RDTE IMPACT	29325	ACTIVE	TOBY TOWN
153	259.2	DUDDED IMPACT	34792	ACTIVE	TRINITY DZ
150	42,624.5	FIRING RANGE	34791	ACTIVE	TRINITY SITE
141	82.4	FIRING RANGE	29287	ACTIVE	TULA-G
3	26.0	FIRING RANGE	23052	ACTIVE	VEGA SITE
51	27.0	FIRING RANGE	23054	ACTIVE	VIVIAN SITE
151	49.3	FIRING RANGE	30910	ACTIVE	WC-50
142	30,782.4	FIRING RANGE	30248	ACTIVE	WHITE SANDS SPACE HARBOR
52	16,896.6	FIRING RANGE	28200	ACTIVE	WHITE SANDS TEST FACILITY
143	199,336.6	RDTE IMPACT	30790	ACTIVE	YONDER IMPACT AREA
146	5,637.2	RDTE IMPACT	34607	ACTIVE	ZUMWALT TEST TRACK
144	92.0	FIRING RANGE	34925	ACTIVE	ZURF SITE
Following sites not included in GIS data:					
				ACTIVE	901 AREA
				ACTIVE	FORT WINGATE LC 96
				ACTIVE	MCGREGOR SOUTH
				ACTIVE	MCGREGOR RM1
				ACTIVE	COKER
				ACTIVE	HARD TARGET DEFEAT (HTD) TEST BED

Table C-2. Original List of Sites *Continued*

<i>OBJECT ID</i>	<i>AREA_SIZE (acres)</i>	<i>USER_FLAG</i>	<i>FACIL_ID</i>	<i>Status List Code</i>	<i>Feature Name</i>
				ACTIVE	LIMOR SITE
				ACTIVE	SHIST
				ACTIVE	ALT SHIST
	50.0			ACTIVE	LB/TS
				ACTIVE	SALT SITE
				ACTIVE	MARIETTA SITE
				ACTIVE	BEACHHEAD
				ACTIVE	W. OF CHURCH SITE
				ACTIVE	VANDAL SITE
				ACTIVE	FAIR VIEW RANGE
				?	50-MILE AREA
				ACTIVE	MAGAZINE AREA (SO.
				ACTIVE	EOD DISPOSAL AREA
				ACTIVE	ETA
				?	RICHARDSONS RANCH TRAINING COMPLEX
				ACTIVE	RHODES CANYON RANGE CENTER
				ACTIVE	STALLION RANGE CENTER
				ACTIVE	NORTH OSCURA RANGE CENTER
				?	RADIOLOGICAL HAZARD AREA
				ACTIVE	Small arms range (near Main Post)
				NEW	ARL tower site
				NEW	Aircraft Noise Measurement site
				ACTIVE	CHOLLA

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WHITE SANDS MISSILE RANGE
PROPOSED LAND USE AND AIRSPACE STRATEGY
PLAN

APPENDIX D

Activity-Specific Siting Criteria by Resource

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Appendix D – Activity-Specific Siting Criteria by Resource

Resource/Siting Criteria	Mission Support Facility	Specialized Area	On-Road Vehicle Use	Off-Road Vehicle (lightweight)	Off-Road Vehicle (other)	Dismounted Operations	Field Operations	Surface Weapon Firing	Airborne Weapons Release (evacuation)	Airborne Weapons Release (no evacuation)	Directed Energy Systems	Instrumentation & Communications Systems	Weapons Impact	Surface Danger Zone	Airspace Danger Zone	Air Vehicle Operations
<p>Land Use</p> <ul style="list-style-type: none"> • Facilities that generate noise, dust, and/or other nuisances should provide adequate separation from sensitive land uses. • Permanent occupied facilities and activities should not be located in areas with frequent evacuations. • Active mission areas and community areas should be separated by a buffer. • Ground operations should avoid areas with UXO. • Off-road vehicle maneuver training should be located away from facilities and sensitive areas that would be adversely affected by noise and dust. • Dismounted operations in the Jornada Experimental Range should be coordinated with the U.S. Department of Agriculture. • Hazardous activities should be sited to ensure associated Surface Danger Zones remain within the boundaries of the installation and existing call-up areas. • New facilities and operations should be located outside airfield surface danger zones. • Land use changes should be avoided within sensitive viewsheds of White Sands National Monument and national historic landmarks. 	<ul style="list-style-type: none"> • • • • • • • • • • • • • • • • 	<ul style="list-style-type: none"> • • • • • • • • • • • • • • • • 	<ul style="list-style-type: none"> • • • • • • • • • • • • • • • • 	<ul style="list-style-type: none"> • • • • • • • • • • • • • • • • 	<ul style="list-style-type: none"> • • • • • • • • • • • • • • • • 	<ul style="list-style-type: none"> • • • • • • • • • • • • • • • • 	<ul style="list-style-type: none"> • • • • • • • • • • • • • • • • 	<ul style="list-style-type: none"> • • • • • • • • • • • • • • • • 	<ul style="list-style-type: none"> • • • • • • • • • • • • • • • • 							

**DRAFT FINAL WHITE SANDS MISSILE RANGE
PROPOSED LAND USE AND AIRSPACE STRATEGY PLAN**

Resource/Siting Criteria	Mission Support Facility	Specialized Area	On-Road Vehicle Use	Off-Road Vehicle (lightweight)	Off-Road Vehicle (other)	Dismounted Operations	Field Operations	Surface Weapon Firing	Airborne Weapons Release (evacuation)	Airborne Weapons Release (no evacuation)	Directed Energy Systems	Instrumentation & Communications Systems	Weapons Impact	Surface Danger Zone	Airspace Danger Zone	Air Vehicle Operations
Airspace																
<ul style="list-style-type: none"> New facilities and permanent operations should be located to avoid affecting other airspace users. 	•	•									•					
Air Quality																
<ul style="list-style-type: none"> Existing roads and trails should be used to the extent possible and underutilized roads should be reclaimed when new roads are constructed. Off-road vehicle maneuvers should be sited to avoid blowing dust at occupied facilities, sensitive land use areas, and public roads. 	•		•	•	•											
Cultural Resources																
<ul style="list-style-type: none"> To the extent practicable, new facilities and activities should be located in areas previously surveyed and cleared for cultural resources. New facilities should not be sited in locations with resources on or eligible for listing on the National Register of Historic Places. Operations must avoid no-entry areas demarcated on maps or in the field. 	•	•		•	•	•	•	•					•			
Earth Resources																
<ul style="list-style-type: none"> Areas used for off-road vehicle maneuvers and intensive troop use should be rotated when possible. Areas with soils that have high erosion potential should be avoided. 				•	•	•	•						•			

Resource/Siting Criteria	Mission Support Facility	Specialized Area	On-Road Vehicle Use	Off-Road Vehicle (lightweight)	Off-Road Vehicle (other)	Dismounted Operations	Field Operations	Surface Weapon Firing	Airborne Weapons Release (evacuation)	Airborne Weapons Release (no evacuation)	Directed Energy Systems	Instrumentation & Communications Systems	Weapons Impact	Surface Danger Zone	Airspace Danger Zone	Air Vehicle Operations
<ul style="list-style-type: none"> • Areas with soils that have low trafficability should be avoided. • Areas with biological crusts should be avoided. • Intensive off-road activity should avoid areas with clay soils during wet periods. 				• •	• •	•	• •					•				
Biological Resources																
<ul style="list-style-type: none"> • Ground disturbing activities should avoid grasslands. • New facilities should be located within or adjacent to existing disturbed areas. • New roads should be sited to avoid habitat disturbance and fragmentation. • New roads should avoid stream crossings and arroyos to the extent practicable. • Radars should be positioned to avoid placing raptor perches in the hazard area. • High-power lasers should not be pointed in the direction of bighorn sheep habitat. • Facilities and operations should be located at least 2 miles from occupied aplomado falcon habitat. • New facilities and infrastructure should avoid streams, rivers, lakes, ponds, floodplains, and wells. • Facilities and operations should avoid sensitive habitat areas, including Todsen’s Pennyroyal populations and critical habitat, White Sands pupfish habitat, and all Special Natural 	• • • • • • • •	• • • • • • • •		• • • • • • • •	• • • • • • • •	• • • • • • • •	• • • • • • • •					• • • • • • • •				

**DRAFT FINAL WHITE SANDS MISSILE RANGE
PROPOSED LAND USE AND AIRSPACE STRATEGY PLAN**

Resource/Siting Criteria	Mission Support Facility	Specialized Area	On-Road Vehicle Use	Off-Road Vehicle (lightweight)	Off-Road Vehicle (other)	Dismounted Operations	Field Operations	Surface Weapon Firing	Airborne Weapons Release (evacuation)	Airborne Weapons Release (no evacuation)	Directed Energy Systems	Instrumentation & Communications Systems	Weapons Impact	Surface Danger Zone	Airspace Danger Zone	Air Vehicle Operations
Areas.																
Water Resources																
<ul style="list-style-type: none"> • New roads should avoid stream crossings and arroyos to the extent practicable. • Equipment maintenance, fueling areas, and potential sources of contamination (e.g., septic tanks, chemical storage) should be located away from potable water wells. • New facilities and infrastructure should avoid streams, rivers, lakes, ponds, floodplains, and wells. • Existing roads and trails should be used to the extent possible. • Target placement should avoid streams, rivers, lakes, ponds, floodplains, wells and ephemeral channels. • Intensive and frequent off-road vehicle maneuvers and ground disturbing activities should avoid areas with erosive soils. 	•	•	•	•	•	•	•	•			•		•			
Safety																
<ul style="list-style-type: none"> • Facilities and operations that generate high levels of noise and/or dust should be located away from sensitive land uses. • Hazardous facilities and operations should be located a safe distance from population centers. • Ground operations should be located in areas previously cleared for UXO. 	•	•		•	•	•	•	•			•		•			
Noise																

Resource/Siting Criteria	Mission Support Facility	Specialized Area	On-Road Vehicle Use	Off-Road Vehicle (lightweight)	Off-Road Vehicle (other)	Dismounted Operations	Field Operations	Surface Weapon Firing	Airborne Weapons Release (evacuation)	Airborne Weapons Release (no evacuation)	Directed Energy Systems	Instrumentation & Communications Systems	Weapons Impact	Surface Danger Zone	Airspace Danger Zone	Air Vehicle Operations
<ul style="list-style-type: none"> Facilities that generate high levels of noise should provide adequate separation from sensitive land uses. 	•	•			•			•					•			
Facilities and Infrastructure																
<ul style="list-style-type: none"> New facilities should be located to maximize use of existing infrastructure to the extent practicable. New facilities and infrastructure should avoid locations of underground lines that could be damaged. 	•	•														
Transportation																
<ul style="list-style-type: none"> New roads and trails should avoid at-grade crossings of US 70. New tanks trails should avoid crossing roads to the extent practicable. Vehicle operations should avoid at-grade crossings of US 70. Off-road vehicle training maneuvers should avoid crossing range roads. 	•	•			•	•										
Energy																
<ul style="list-style-type: none"> New facilities should be sited to maximize existing power and/or natural gas infrastructure. 	•	•														
Wildland Fire																
<ul style="list-style-type: none"> Areas with high fuel loads and continuous fine fuels (e.g., grasslands, pinon juniper areas) should be avoided when possible. Locate activities with high fire hazard away from facilities and infrastructure. 		•		•	•		•	•			•		•			

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APPENDIX B
ENVIRONMENTAL STATUTES, REGULATIONS, AND EXECUTIVE ORDERS

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APPENDIX B. ENVIRONMENTAL STATUTES, REGULATIONS AND EXECUTIVE ORDERS – FEDERAL, STATE AND DEPARTMENT OF DEFENSE

B.1 Regulatory Framework

White Sands Missile Range (WSMR) is subject to regulation by several Federal, State, and local agencies pursuant to a number of Federal environmental laws and Executive Orders (E.O.s) as well as Army Regulations (ARs), which are listed in Table B-1 on page B-4. The table provides a brief description of laws, regulations, orders, and policies that are most relevant to the National Environmental Policy Act (NEPA) process, protection of environmental resources, and mission activities at WSMR.

B.2 Management Framework

In addition to regulations that govern Federal actions, several plans and procedures are in place that form the foundation for land use management at WSMR and are common to all the alternatives considered in this EIS. Table B-2 (page B-10) lists and briefly describes the Army and the WSMR regulations and directives that lay the foundation for planning and management of land resources.

If adopted, following the Record of Decision (ROD) for this Environmental Impact Statement (EIS), the Land Use and Airspace Strategy Plan will become part of the management framework for WSMR, along with any specific guidelines for conditions of use that are incorporated into the plan through the EIS process. The Land Use and Airspace Strategy Plan may also provide guidelines for siting temporary activities or permanent facilities according to the operational and environmental characteristics of different parts of the range. As the Real Property Master Plan (RPMP) focuses on the development of the Main Post, the Land Use and Airspace Strategy Plan can serve as the initial definition of program needs for a future Range Complex Master Plan.

WSMR has an active environmental management program aimed at ensuring that operations, physical development, and test and training activities are performed in compliance with all applicable laws and regulations and managed to provide a sustainable land base to support national security. WSMR manages installation natural and cultural resources to provide the best possible environment that sustains the military mission. This objective is met through developing plans and programs for land management that maintain, protect, and improve environmental quality, aesthetic values, and ecological relationships. The goals for these initiatives are reduced environmental damage, effective land rehabilitation, reduced costs for land management and environmental compliance, and enhanced land stewardship. Environmental resource management is coordinated with all planning efforts on WSMR, including the RPMP, Integrated Natural Resource Management Plan (INRMP) (Ref# 074), Integrated Cultural Resource Management Plan (ICRMP) (Ref# 009), Integrated Training Area Management (ITAM) (Ref#221), and other compliance plans and agreements. All these elements facilitate land and resource management decisions on the installation. The subsections below describe the primary plans that are currently in place.

Real Property Master Plan

AR 210-20 “Real Property Master Planning for Army Installations” establishes policies for implementing a master planning process on Army installations. The WSMR RPMP serves as a guide for current land use and future physical growth of the installation, focusing primarily on the Main Post area and other selected development areas such as the Stallion Range Center. WSMR strives to provide “continuing support for its Research, Development, Testing and Evaluation (RDT&E) mission” while “providing for the morale and welfare of the personnel who work and/or live on WSMR”. This Master Plan is updated

as needed, and lays out three major goals for the installation: 1) Promote the most efficient and cost effective land use plan; 2) Plan and coordinate development to ensure compatible land use growth and change; and 3) Enhance and preserve the installation's visual, aesthetic and natural resources.

Integrated Natural Resource Management Plan

The Sikes Act (16 U.S.C. 670a et seq.)¹ requires that all military installations in the US that have significant natural resources prepare and implement an INRMP. The INRMP acts as the installation's adaptive plan for integrating natural resource management and the military mission. Its purpose is to ensure that the natural resources are being managed for multiple use, sustainable use, and biological integrity while complying with Federal stewardship requirements and current legal mandates. The WSMR INRMP (Ref# 074) has 18 goals for the installation, shown in Table B-3 on page B-11.

Integrated Cultural Resource Management Plan

An ICRMP (Ref# 009) is required by Department of Defense (DoD) Instruction 4715.3 Environmental Conservation Program and AR 200-1, Environmental Protection and Enhancement, Chapter 6. The purpose of this document is to integrate mission activities with cultural resource programs (including historic buildings, artifacts, archeological sites, and sites of sacred or cultural interest to Native Americans) while at the same time complying with legal requirements under Federal law. The foundation for the management of the WSMR cultural resource management is detailed in the Programmatic Memorandum of Agreement (PMOA) (Ref# 248) established in 1985 between WSMR, the New Mexico State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP). Standard Operating Procedures (SOPs) detailed in the ICRMP (Ref# 009) specify internal and external coordination procedures that help to ensure compliance with these cultural resources laws and the PMOA (Ref# 248). These include the following SOPs:

- SOP 1: Internal Coordination / When to Consult with WSMR Environmental Division
- SOP 2: NEPA Compliance
- SOP 3: Section 106 of the NHPA Compliance
- SOP 4: Archaeological Resources Protection Act (ARPA) Compliance
- SOP 5: Native American Graves Protection Act (NAGPRA) Compliance
- SOP 6: Accidental Discovery Procedure
- SOP 7: Reporting Damage to Historic Properties
- SOP 8: Paleontological Resources

The PMOA is currently being updated to address the activity analyzed in the EIS. Any subsequent agreement with the SHPO will be incorporated into a revised ICRMP along with new SOPs and goals.

Integrated Training Area Management

ITAM is a component of the Army's Sustainable Range Program and is responsible for maintaining Army lands in order to meet its training requirements. The purpose of the ITAM program is to achieve optimal sustainable use by implementing a program that includes:

- Training Requirements Integration
- Range and Training Land Assessment
- Land Rehabilitation and Maintenance
- Sustainable Range Awareness

¹ et sequens (et seq.) meaning the following to include numbered list, pages, or sections.

The ITAM (Ref# 221) program on WSMR began in 1989 and has evolved and expanded into the program it is today. WSMR recently completed updating their five year ITAM and Range and Training Land Assessment plans through 2013 which develop a framework to integrate mission requirements with environmental sustainability. The ITAM plan incorporates all aspects of the four components and provides a roadmap on how to proceed. The Range and Training Land Assessment Monitoring Plan describes a process for inventory and monitoring of the natural resources on the installation. This information is in turn used within an adaptive management framework to assess range condition and promote sustainable use of the natural resources.

Other Environmental Compliance Plans

WSMR maintains a number of other various compliance plans. Key plans are described in Chapter 3, Affected Environment, within their respective resource sections.

Table B-1. Major Environmental Statutes, Regulations, and Executive Orders – Federal, State, and Department of Defense

Act or Executive Order	Description
Environmental Planning	
National Environmental Policy Act of 1969 (42 U.S.C 4321)	Provides a national charter for protection of the environment and requires Federal agencies to prepare a statement of environmental impact in advance of each major action that may significantly affect the quality of the human environment. This information must in turn be made available for public review and comment prior to implementation.
E.O. 11991, Protection and Enhancement of Environmental Quality	Amends E.O. 11514 (March 5, 1970) to require the Council on Environmental Quality (CEQ) to issue regulations to make environmental impact statements more effective.
E.O. 13148, Greening the Government through Leadership in Environmental Management	Directs the Federal government to ensure actions are taken to integrate environmental accountability into agency day-to-day decision-making and planning processes, including missions, activities, and functions.
Defense Appropriations Act of 1991 Legacy Program (Public Law [P.L.] 101-511)	Establishes a program for the stewardship of biological, geophysical, cultural, and historic resources on DoD lands.
President's Council on Environmental Quality, NEPA Regulations (40 CFR 1500-1508)	Coordinates Federal environmental efforts, including NEPA regulations.
DoD Instruction 4715.1, Environmental Security	Establishes policies on environment, safety, and occupational health to sustain and improve the DoD mission.
DoD Instruction 4715.3, Environmental Conservation	Implements policy and assigns responsibilities for management of natural and cultural resources on DoD land.
DoD Commander's Guide to Biodiversity	Provides Commanders with a summary of important biodiversity conservation issues.

Table B-1. Major Environmental Statutes, Regulations, and Executive Orders – Federal, State, and Department of Defense (continued)

Act or Executive Order	Description
Air Quality	
Clean Air Act (CAA) and Amendments of 1990 (42 U.S.C. 7401-7642)	Establishes air quality and emission standards to provide for the protection and enhancement of the quality of the nation's air resources so as to promote public health and welfare.
National Emission Standards Act, 1990 (42 U.S.C. 7521-7554)	Amendment to the CAA and sets standards for Federal vehicle emissions.
New Mexico Air Quality Control Act, Title 74-2-5	Establishes New Mexico requirements for meeting Federal emissions standards and protecting air quality to promote public health and welfare.
Airspace	
Federal Aviation Regulation, 14 CFR, Part 73, Special Use Airspace	Regulates the designation and use of Special Use Airspace.
Federal Aviation Regulation, 14 CFR, Part 91, General Operating and Procedures and Flight Rules	Provides for general flight rules for all pilots.
Federal Aviation Regulation, Part 71, Designation of Class A, B, C, D, and E airspace areas, air traffic service routes and reporting points	Provides for Federal designation, management, and use of controlled airspace.
Federal Aviation Administration (FAA) FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge	Provides general information for all pilots relevant to flight operations in the national airspace.
FAA Order 7400.2E, Procedures for Handling Airspace Matters	Federal provisions for the development and processing of special use airspace, covers aeronautical matters governing the efficient planning, acquisition, use and management of airspace.
DoD Directive 5030.19, DoD Responsibilities on Federal Aviation and National Airspace System Matters	Addresses the development and processing of special use airspace, covers aeronautical matters governing the efficient planning, acquisition, use and management of airspace required to support DoD flight operations.
Cultural Resources	
National Historic Preservation Act of 1966 (16 U.S.C. 470aa-470mm)	Expands the NRHP provides a list of significant historic and prehistoric sites and districts, and gives them formal protection.
Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001 et seq.)	Provides requirements for treatment, determination of ownership, control of, and repatriation of human remains and cultural items on Federal or Tribal lands.
Historic Sites Act of 1935 (16 U.S.C. 461-467)	Establishes as national policy the preservation for public use of historic resources by giving the Secretary of the Interior the power to make historic surveys and to document, evaluate, acquire, and preserve archaeological and historic sites across the country.

Table B-1. Major Environmental Statutes, Regulations, and Executive Orders – Federal, State, and Department of Defense (continued)

Act or Executive Order	Description
Cultural Resources (continued)	
E.O. 11503, Protection and Enhancement of the Cultural Environment	Directs Federal agencies to take a leadership role in preserving, restoring, and maintaining the historic and cultural environment of the nation. Federal agencies must locate, inventory, and nominate to the National Register all historic resources under their jurisdiction or control.
Archaeological Resources Protection Act of 1979 (16 U.S.C. 470)	Protects archaeological resources on public lands and Indian lands, and for other purposes.
Antiquities Act of 1906 (16 U.S.C. 431)	Inhibits the excavation, injury, or destruction of any historic or prehistoric ruin or monument, or any object of antiquity located on lands owned by the government of the U.S.
Curation of Federally Owned and Administered Archaeological Collections (36 CFR 79)	Establishes procedures and guidelines to manage and preserve collections. Includes terms and conditions for Federal agencies to include in MOAs with non-Federal repositories.
E.O. 13007, Indian Sacred Sites	Federal lands must accommodate access to and ceremonial use of Indian sacred site by Indian religious practitioners and avoid adversely affecting sacred sites.
Preservation of American Antiquities of 1906 (43 CFR 3)	Gives jurisdiction over American antiquities to respective Federal departments.
DoD 4710.1, Archaeological and Historic Resources Management	Provides policy and procedures and assigns responsibilities for the management of archaeological and historic resources located on lands under DoD control.
Soils and Erosion	
Soil Conservation Act of 1935 (16 U.S.C. 3B)	Provides for application of soil conservation practices on Federal lands.
E.O. 11644, as amended by E.O. 11989, Use of Off-road Vehicles on Public Lands	Establishes policies and provides for procedures to control use of off-road vehicles on public lands.
Soil Conservation and Domestic Allotment Act of 1935 (16 U.S.C. 590a-590q-3)	Allows the government to pay farmers to reduce production so as to conserve soil, prevent erosion and to accomplish minor goals.
Soil and Water Resources Conservation Act of 1977 (16 U.S.C. 2001)	Ensures that the U.S. Department of Agriculture possesses information and expertise to assist to assist land uses with respect to soil and water conservation.
Biological Resources	
Federal Insecticide, Fungicide, and Rodenticide Act, 1996 (7 U.S.C. 136 et seq.)	Governs the use and application of pesticides in natural resource management programs.
Federal Environmental Pesticide Control Act of 1972 (7 U.S.C. 136-136y)	Controls the sale, distribution, and application of pesticides through a registration process.

Table B-1. Major Environmental Statutes, Regulations, and Executive Orders – Federal, State, and Department of Defense (continued)

Act or Executive Order	Description
Biological Resources (continued)	
Conservation and Rehabilitation Program on Military and Public Lands (16 U.S.C. 2901-2911)	Provides for fish and wildlife habitat improvements, range rehabilitation, and control of off-road vehicles on Federal lands.
Federal Noxious Weed Act of 1974 (7 U.S.C. 2801 et seq.)	Establishes control and eradication of noxious weeds and regulates them in interstate and foreign commerce.
Endangered Species Act of 1973 (16 U.S.C. 35)	Provides for the identification and protection of Federally listed threatened and endangered species of animals, plants, and their critical habitats.
Fish and Wildlife Conservation Act of 1980 (16 U.S.C. 2901-2911)	Mandates that wildlife conservation receive equal consideration and be coordinated with other features of water resource development.
Migratory Bird Treaty Act (MBTA) of 1918, amended (16 U.S.C. 703)	Protects migratory birds through various migratory bird conventions with other countries. The DoD will consult with the U.S. Fish and Wildlife Service (USFWS) as per a 2006 Memorandum of Understanding (MOU) to ensure that actions result in minimal loss (or take) of migratory birds.
Migratory Bird Permits; Take of Migratory Birds by the Armed Forces, 2007 (50 CFR Part 21)	The USFWS finalized a rule in 2007 allowing the Armed Forces to "take" migratory birds in the course of military readiness activities, as directed by the 2003 National Defense Authorization Act.
Bob Stump National Defense Authorization Act of 2002, P.L. 107-314, Sec 315	States that the MBTA does not apply to the incidental taking of a migratory bird by a member of the Armed Forces during a military readiness activity.
E.O. 13186, Migratory Birds	Directs executive departments/agencies to take actions to further implement the MBTA.
E.O. 11990, Protection of Wetlands	Directs the preservation and enhancement of wetlands.
E.O. 13112, Invasive Species	Requires executive agencies to restrict the introduction of exotic organisms into natural ecosystems. Establishes Federal agency responsibilities for the identification and management of invasive species.
E.O. 11987, Exotic Organisms	Restricts the use of exotic plant species in landscape and erosion control measures.
Fish and Wildlife Coordination Act of 1934 (16 U.S.C. 661)	Provides a mechanism for wildlife conservation to receive equal consideration and be coordinated with water resource development programs.
Sikes Act of 1997 (16 U.S.C. 670a et seq.)	Provides for INRMPS to be developed and implemented on military installations.
New Mexico Wildlife Conservation Act, 17-2-37	Protects State-listed endangered and threatened animals.
Bald Eagle Protection Act of 1940, as Amended (16 U.S.C. 668 et seq.)	Provides for protection of the Bald Eagle and the Golden Eagle. Prohibits the taking or possession of and commerce in bald and golden eagles, as well as, nest tree protection and protection from harassment.

Table B-1. Major Environmental Statutes, Regulations, and Executive Orders – Federal, State, and Department of Defense (continued)

Act or Executive Order	Description
Biological Resources (continued)	
Lacey Act of 1900 (18 U.S.C. 43-44) and Amendments of 1981(16 U.S.C., P.L. 97-79)	Aids in restoration of game and other wild birds in parts of the U.S. where they have become scarce or extinct and to regulate the introduction of American or foreign birds or animals in localities where they have not previously existed.
National Forest Management Act of 1976 (16 U.S.C. 1600 et seq.)	Amended the Forest and Rangeland Renewable Resources Planning Act of 1974, which called for the management of renewable resources on national forest lands.
DoD 4150.7, Pest Management Program	DoD Instruction on Pest Management.
Land Use	
Military Construction Authorization Act-Leases; Non-excess Property (10 U.S.C. 2667)	Provides for the out-leasing of public lands.
Military Construction Authorization Act-Military Reservations and Facilities-Hunting, and Fishing, Trapping (10 U.S.C. 2671)	Establishes requirements for regulating hunting, fishing, and trapping on military lands.
National Trails Systems Act of 1968 (P.L. 90-543, P.L. 110-229 , May 2008, 16 U.S.C. 1241)	Promotes development of recreational, scenic, and historic trails for persons of diverse interest and abilities.
Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.)	Requires that the Bureau of Land Management (BLM) executes its management powers under a land use planning process that is based on multiple use and sustained yield principles. It provides for public land sales, withdrawals, acquisitions and exchanges.
Taylor Grazing Act of 1934(43 U.S.C. 315)	Regulates grazing on Federal public lands.
New Mexico Night Sky Protection Act, 74-12-1	Regulates outdoor night lighting fixtures to preserve and enhance the State's dark sky while promoting safety, conserving energy and preserving the environment for astronomy.
Hazardous Materials and Hazardous Wastes	
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601)	As amended by the Superfund Amendments and Reauthorization Act (SARA), CERCLA establishes a series of programs for the cleanup of hazardous waste disposal and spill sites nationwide. It requires protection of human health and the environment. Work under this legislation is conducted through the Navy Installation Restoration Program.
Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.)	Establishes a comprehensive program that manages solid and hazardous waste.
Federal Facilities Compliance Act of 1992	Subjects Federal agencies to civil and administrative penalties for noncompliance with Federal, State, interstate, or local solid and hazardous waste requirements.
New Mexico Hazardous Waste Act,1978 (NMSA Chapter 74-4)	Establishes standards for hazardous waste generators and treatment, storage, and disposal facilities in New Mexico.
Low-Level Radioactive Waste Policy Act of 1980, as Amended (42 U.S.C. 2021)	Requires States to take responsibility of their own radioactive waste.

Table B-1. Major Environmental Statutes, Regulations, and Executive Orders – Federal, State, and Department of Defense (continued)

Act or Executive Order	Description
Hazardous Materials and Hazardous Wastes (continued)	
Asbestos Hazard Emergency Response Act of 1986 (15 U.S.C. 2641-2656)	Establishes regulations which require inspection for asbestos-containing material.
Residential Lead-Based Paint Hazard Reduction Act of 1992 (42 U.S.C. 4851 et seq.)	Requires disclosure of known information on lead-based paint and lead based hazards before the sale or rental of housing built before 1978.
Toxic Substances Control Act of 1976 (42 U.S.C. 2601-2629)	Gives U.S. Environmental Protection Agency (EPA) the ability to track the industrial chemicals produce or imported into the US.
Hazardous Materials Transportation Uniform Safety Act of 1990 (49 U.S.C. 5101)	Provide protection against the risks inherent in the transportation of hazardous material.
Hazardous and Solid Waste Amendments of 1984 (42 U.S.C. 6917)	Amended the Solid Waste Disposal Act of 1965 and provides regulations for hazardous and solid wastes.
Community Environmental Response Facilitation Act of 1992 (42 U.S.C. 9620)	Requires the Federal government to identify real property where no hazardous substance was stored, released, or disposed of prior to termination of Federal activities.
New Mexico Radiation Control Act, 1973 (NMSA 74-3-1 et seq.)	Establishes standards for the use of ionizing radiation.
New Mexico Solid Waste Act, 1978, (NMSA 74-3-1)	Establishes standards for non-hazardous solid, liquid, or contained gaseous refuse generated by industrial, commercial, and residential sources.
Noise	
Noise Control Act of 1972 (42 U.S.C. 4901)	Establishes a policy to promote an environment free from noise that jeopardizes their health and welfare.
Water Resources	
Clean Water Act (Federal Water Pollution Control Act as amended in 1977) (33 U.S.C. 1251)	Provides for standards and regulations to restore and maintain the chemical, physical, and biological integrity of the nation’s waters. Requires each State to establish water quality standards for its surface waters based on designated uses.
Rivers and Harbors Act of 1899 (Section 10) (33 U.S.C. 401)	Regulates work in navigable waters of the US.
Safe Drinking Water Act of 1974, (42, U.S.C., 300, P.L. 93-523) amended 1986 and 1996 (P.L. 104-182)	Requires the EPA to set national primary drinking water standards and provides for the direct control of underground injection of fluids that could potentially affect groundwater supplies.
Outdoor Recreation–Federal/State Programs Act (16 U.S.C. 460 P-3)	Defines a program for managing lands for outdoor recreation.
E.O. 11988, Floodplain Management	Provides direction regarding actions of Federal agencies in floodplains (pertains to most coastal installations and those with streambeds).
Federal Flood Disaster Prevention Act of 1973 (42 U.S.C. 4001 et seq.)	Established the Federal Flood Insurance Program, which has provided some incentives for construction outside flood-prone areas.

Table B-1. Major Environmental Statutes, Regulations, and Executive Orders – Federal, State, and Department of Defense (continued)

Act or Executive Order	Description
Water Resources (continued)	
New Mexico Water Quality Act, 1978 (MNSA 74-6-1 et seq.)	Establishes water quality standards for ground and surface water in the State of New Mexico.
Watershed Protection and Flood Prevention Act (16 U.S.C. 1001 et seq.)	Authorizes the Natural Resources Conservation Service (NRCS) to cooperate with States and local agencies to carry out works of improvement for soils conservation and for other purposes including flood prevention, utilization and disposal of water and conservation and proper utilization of land.
Socioeconomics and Environmental Justice	
American Indian Religious Freedom Act, as Amended 1994 (42 U.S.C. 1996)	Pledges to protect and preserve the traditional religious right of American Indians.
E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	Focuses attention of Federal agencies on human health and environmental conditions in minority and low-income communities to ensure that disproportionately high and adverse human health or environmental effects on these communities are identified and addressed.
E.O. 13045, Protection of Children from Environmental Health Risks and Safety Risks	Requires Federal agencies to identify and assess environmental health risks and safety risks that may affect children.
Energy Demand	
E.O. 13123, Greening the Government through Efficient Energy Management	Directs the Federal government to improve energy management and efficiency through building design, construction and operation, water conservation, use of renewable technologies, and fostering markets for emerging technologies.
Geology	
Mineral Leasing Act Revision of 1960 (30 U.S.C. 181-287)	Governs leasing of public lands for development of deposits of coal, oil, gas and other hydrocarbons, sulfur, phosphate, potassium and sodium.
Federal Cave Resources Protection Act of 1988 (16 U.S.C. 4301-4309)	Secures and protects significant caves on Federal lands.
Frequency Management	
Institute of Electrical Engineers (IEEE), Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz (IEEE C. 95.1, amended 1999 (C95.1-2005)	Provides recommendations to prevent harmful effects in human beings exposed to electromagnetic fields in the frequency range from 3 kHz to 300 GHz. (not regulatory)

Table B-1. Major Environmental Statutes, Regulations, and Executive Orders – Federal, State, and Department of Defense (continued)

Act or Executive Order	Description
Wildland Fire	
Federal Wildland Fire Management Policy, 2001 (21, Chapter 3-2001)	First chartered in 1994, later updated in 2001, this policy aims to present fundamental principles of fire management and a cohesive set of Federal fire policies. Key points described in this policy include: protection of human life is first priority; role of Federal, State, and local agencies in urban interface wildland firefighting; use of prescribed fire or other fuel treatment to reduce wildfire hazard; and education of the public.
DoD Instruction 6055.6, DoD Fire and Emergency Services Program	Establishes a DoD Fire and Emergency Services Working Group and authorizes publications such as guides, handbooks, and manuals such as the DoD Wildland Fire Management Program, DoD Fire and Emergency Services Fitness and Wellness Program, etc.
AR 200-90, Fire and Emergency Services	Sets policies for fire and emergency services on Army lands.
Other	
Federal E.O. 12088, Compliance with Pollution Control Standards	States that the head of each Executive agency is responsible for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with respect to Federal facilities and activities.
Occupational Safety and Health Act of 1970 (29 U.S.C. 651-678)	Assures a safe and healthy working environment.

Table B-2. Army and WSMR Regulations and Directives Governing Range Planning and Management

Regulation or Directive	Description
Army Commander's Guide to Environmental Management	This guide is intended as a "primer" on environmental issues likely to be faced by commanders.
AR 200-1, Environmental Protection and Enhancement	This regulation encompasses environmental protection and enhancement and provides a framework for the Army Environmental Management System. Includes natural resources – land, forest, and wildlife management, cultural resources management, and pest management.
32 CFR 651, Environmental Effects of Army Actions	This regulation sets policies for integrating environmental considerations into Army planning and decision making including establishing criteria for determining categorical exclusions.
AR 200-90, Fire and Emergency Services	Sets policies for fire and emergency services on Army lands.
AR 210-20, Real Property Master Planning	This AR describes the land use planning process for Army installations. These are periodically updated to keep pace with new requirements in the context of planning goals and objectives and existing physical assets.
AR 350-19, The Army Sustainable Range Program	The Sustainable Range Program goal is to maximize the capability, availability, and accessibility of ranges and training lands to support doctrinal requirements, mobilization, and deployments under normal and surge conditions. Key components of the Sustainable Range Program at the installation are the RCMP, Range Development Plan, and the ITAM program.
AR 420-70, Buildings and Structures	This regulation covers policies and guidelines for the Public Works and Engineering and Housing Directorates related to maintenance and repair of buildings and structures.
Developmental Test Command (DTC) Regulation 385-1, Safety Training Conducted at Ranges, Areas, and Facilities Controlled by DTC Test Centers	Assigns responsibilities and prescribes policies and procedures for training operations conducted at ranges, areas, and facilities controlled by a DTC test center.
Air Force Instruction 13-201, Air Force Airspace Management	This instruction describes processes and procedures for how the Air Force manages airspace, and implements Air Force Planning Document, Air Traffic Control, Airspace, Airfield, and Range Management.
WSMR Regulation 70-8, Security, Recovery, and Disposition of Classified and Unclassified Test Materiel Impacting On-Range and Off-Range	Prescribes policies, responsibilities, and procedures for the security, recovery, and disposition of classified and unclassified materiel impacting on and off WSMR.

Table B-3. Integrated Cultural Resources Management Plan Goals that Apply to the Entire Installation

#	INRMP Goal
1	Apply ecosystem management tools in the context of the current military mission to preserve, maintain, and/or restore where appropriate the native biodiversity and ecological integrity of natural biotic communities, in sufficiently large blocks to avoid ecological fragmentation.
2	Preserve and restore where necessary unique natural ecological communities and landscape features.
3	Protect migratory bird resources in accordance with the WSMR Commander's Guidance on the MBTA.
4	Conserve species listed by the USFWS as threatened or endangered, as well as their designated critical habitats, by using all methods and procedures necessary to bring them to the point where protections provided pursuant to the Endangered Species Act are no longer necessary.
5	Document the distribution of Federal candidate species on the installation and monitor their status.
6	Conserve all species on the installation listed by the State of New Mexico as threatened or endangered in accordance with State laws, ARs, and guidance.
7	Maintain sustainable quantities of high quality surface water and groundwater resources.
8	Preserve and, where necessary, restore soil stability and productivity in developed and natural areas, and in areas with mission activities, to ensure long-term ecosystem health.
9	Preserve and maintain unique non-soil geologic resources and natural landscape features.
10	Conserve cultural and historical resources and their values commensurate with their significance as determined in coordination with the SHPO, and during natural resource management planning consider the effects of natural resource management on cultural/historical resources.
11	Facilitate opportunities for educational awareness about the natural resources unique to WSMR among the public and the research and academic communities.
12	Develop and facilitate opportunities for WSMR Environmental Division staff and the research and academic communities to conduct scientific observation and study of natural resources.
13	Maintain existing and develop additional cooperative partnerships to better fund, research, manage, and restore biodiversity and natural resource condition on WSMR and under WSMR jurisdiction.
14	Integrate environmental stewardship and natural resource protection practices throughout WSMR and tenant chains of command, and include these in all planning for and implementation of mission-related test, evaluation, and research activities.
15	Facilitate opportunities for WSMR Environmental Division to maintain state-of-the-art skills and knowledge.
16	Maintain the quality of the recreational hunting experience consistent with the military mission, and support non-consumptive recreation when it does not conflict with the mission.
17	Prevent spread of noxious plants and nonnative animals, decrease existing acreage of noxious plants and distribution of nonnative animals, and minimize lethal control of nuisance wildlife species not covered in the WSMR Pest Management Plan.
18	Avoid impacts on the natural resources of neighboring jurisdictions from WSMR mission and natural resource management activities.

Source: Ref# 009.

APPENDIX C
PUBLIC SCOPING REPORT

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C.1.1 Introduction

On June 19, 2008, the Army issued a NOI to prepare the WSMR Range-Wide EIS. The NOI initiated the public scoping period where members of the public (including Federal, State, and local agencies, affected federally recognized Indian tribes, and other interested persons) were invited to comment on the proposed scope and content of the EIS (see Attachment C-1). As part of the NOI, comments and suggestions were requested to be received within the 30-day scoping period or no later than 15 days following the last scoping meeting, whichever is later. The NOI stated that public scoping meetings would be held in the WSMR vicinity and that dates and locations would be announced in the local media.

The NOI announced the alternatives identified for evaluation and analysis in the EIS. WSMR mailed letters and sent emails to potential interested parties on July 18, 2008. A list of those who received letters and emails is provided in Attachment C-2 and the letters and emails are provided in Attachment C-3.

WSMR conducted the public scoping meetings in which Federal agencies, private-sector organizations, and the general public were invited to present verbal comments regarding the alternatives and impacts to be considered in the WSMR Range-Wide EIS.

C.1.2 Public Scoping Meetings

WSMR held three public scoping meetings for the WSMR Range-Wide EIS; the dates and locations of these meetings are shown in Table C-1. The meeting locations were in the vicinity of WSMR.

Table C-1. Public Scoping Meeting Locations and Dates

Location	Date
Court Youth Center 402 West Court Avenue, Las Cruces, New Mexico	July 22, 2008
The Macey Center 801 Leroy Place, New Mexico Tech Campus, Socorro, New Mexico	July 23, 2008
Otero County Administration 1000 New York Avenue, Alamogordo, New Mexico	July 24, 2008

In addition to the NOI published in the *Federal Register*, WSMR published notices in five local newspapers during the week of July 14, 2008, as shown in Table C-2. Copies of the Affidavits of Publication are provided in Attachment C-4. The public scoping period ended on August 8, 2008.

Each meeting began with an informal open house from 6:00 to 7:00 pm, during which attendees were given informational handouts about the Proposed Action and alternatives and were able to view project-related posters. WSMR and the Potomac-Hudson Engineering (PHE) Team personnel were available to answer questions. The informal open house was followed by a formal presentation that explained the NEPA process, the Purpose and Need for Agency Action, the Proposed Action and Alternatives, the proposed Land Use and Airspace Strategy Plan, and the ways in which the public could submit comments on the scope of the EIS. All meetings adjourned at 9:00 pm. During the formal portion of each meeting, Mr. Dan Hicks, Chief of Staff of WSMR welcomed participants, provided a brief explanation of the purpose of the meeting, and explained the importance of public participation in the scoping process. Ms. Dorothy Peterson of Potomac-Hudson Engineering (PHE) and Ms. Susan Goodan of Science Applications International Corporation (SAIC) then gave a presentation that covered: the NEPA process, the purpose and need for agency action, the Proposed Action and Alternatives, the proposed Land Use

and Airspace Strategy Plan, the poster stations around the room, the EIS schedule, and the public scoping comment process. After the formal presentation, the public was invited to give verbal comments at the microphone. A court reporter was present at each meeting to ensure that anyone who gave verbal comments was recorded and legally transcribed. Transcripts of each meeting are provided as Attachment C-7.

Table C-2. Dates and Publications for Advertisements

Meeting Location/Newspaper	Dates of Publication
Regional Newspaper	
El Paso Times	Sunday (7/20/2008)
Las Cruces, New Mexico (July 22, 2008)	
Las Cruces Sun News	Wednesday (7/16/2008)
	Saturday (7/19/2008)
	Sunday (7/20/2008)
Las Cruces Bulletin	Friday (7/18/2008)
Socorro, New Mexico (July 23, 2008)	
Defensor Chieftain	Wednesday (7/16/2008)
	Saturday (7/19/2008)
Alamogordo, New Mexico (July 24, 2008)	
Alamogordo Daily News	Wednesday (7/16/2008)
	Sunday (7/20/2008)

Collectively, 16 members of the public attended the public scoping meetings; see Table C-3 and Attachment C-5.

Table C-3. Attendance at Public Scoping Meetings

Meeting Location	Number of People in Attendance ¹
Las Cruces, New Mexico	10
Socorro, New Mexico	1
Alamogordo, New Mexico	5
Total	16

1. Based on individuals who signed the attendance sign-in sheets.

All attendees were invited to provide comments, either written or verbal, on the proposed scope of the EIS. Those attendees wishing to provide oral comments were given an opportunity to sign up to do so. Comment sheets were made available for all attendees to provide written comments either at the meeting, or to be faxed or mailed after the meeting. An email address, a postal address, and a fax number were provided. In addition, individuals could request to receive the Draft EIS and/or the Final EIS or Summary (hard copy of the full EIS or a hard copy summary plus a compact disk (CD) that contains the entire EIS).

While no verbal comments were received at any of the three public scoping meetings, a total of 11 written comments were received during the scoping period (Table C-4). Copies of all comments received on the scope of the EIS are provided in Attachment C-6.

Table C-4. Number of Individuals/Agencies Who Submitted Comments or Comment Forms During the Scoping Period

Meeting Location	Number of Individuals/Agencies Who Submitted Comments ¹
Las Cruces, New Mexico	2
Socorro, New Mexico	2
Alamogordo, New Mexico	0
Submitted outside the public meetings	7
Total	11

1. Includes comments received at public scoping meetings, by email, facsimile, U.S. Postal Service, or telephone. Also includes comment forms or letters that requested receipt of the Draft or Final EIS.

C.1.3 Public Comments and Concerns

Comments were received about natural and human environmental resources. The comments on the scope of the WSMR EIS are consolidated, summarized, and provided in Table C-5. The majority of respondents expressed concerns about impacts to birds, other wildlife, plants, and plant communities. One commenter mentioned the aplomado falcon, Todsen’s pennyroyal, White Sands pupfish, oryx, and Mule deer, among others. One commenter called for the continued implementation of the current WSMR INRMP. Another commenter was concerned that the project alternatives were developed to “green light” all future projects. The Piro-Manso-Tiwa Indian Tribe asked that potential impacts to burial grounds be analyzed.

Table C-5. Summary of Comments Received

Comment Number	Commenter (name, title)	Date of Comment	Comment Summary
1	Mr. Mark R. Spencer, AICP State Planning & Env. Coord., BLM, New Mexico State Office Division of Resources	July 10, 2008	Requested that two BLM representatives be added to the project mailing list.
2	Mr. David Bastos, Holloman Air Force Base	July 22, 2008	Requested a CD/Summary of the Draft EIS.
3	Piro-Manso-Tiwa Indian Tribe, Pueblo of San Juan De Guadalupe, Las Cruces	July 22, 2008	<ul style="list-style-type: none"> • Would like the EIS to examine the potential impacts to human remains. • In addition, the Tribe has not received a response from its letter to White Sands National Monument dated July 15, 2008 requesting use of Camping Area 19 and waiver of the use fee for its Annual Fall ceremonies this year.

Table C-5. Summary of Comments Received (continued)

Comment Number	Commenter (name, title)	Date of Comment	Comment Summary
4	Mr. Pat Mathis Habitat Specialist, New Mexico Department of Game and Fish, Las Cruces	July 23, 2008	Requested a hard copy of the Draft and Final EIS.
5	Mr. Mark Watson Habitat Specialist, New Mexico Department of Game and Fish, Santa Fe	July 23, 2008	Requested a hard copy of the Draft and Final EIS.
6	Ms. Lorraine Schulte, Mesilla Valley Audubon Society	July 30, 2008 & August 7, 2008	Concerned about impacts to birds, other wildlife, plants, plant communities, erosion, time of year/seasons, and roads, etc.
7	Mr. David J. Griffin President, Mesilla Valley Audubon Society	August 7, 2008	<ul style="list-style-type: none"> Concerned that alternatives were developed to “green light” all future projects. Feels that when projects are identified and areas are selected, that should be the point at which impacts should be determined. Commenter encouraged WSMR to consider natural resources when making decisions about the EIS. Mesilla Valley Audubon Society’s (MVAS’s) concern is with the potential impacts to birds and other wildlife, plants, plant communities and habitats that support those species, and the function of natural ecosystems on WSMR. The commenter encouraged WMSR to consider bird and other wildlife habitat protection for species other than only those listed under the Endangered Species Act, as many of these are representative parts of functioning communities or ecosystems.
8	Ms. Eleanor G. Wootten President, T&E, Inc., Gila, NM	August 7, 2008	<ul style="list-style-type: none"> Concerned for Holloman Lakes and associated areas due to the importance of wetlands to migrating and nesting birds. The MVAS has historically performed bird counts in the area under an agreement with BLM. There is a need for reclamation of native vegetation around the lakes and in the general area. Consider wildlife and need for habitat improvement by revegetating with native plants and protecting nesting areas from the public.

Table C-5. Summary of Comments Received (continued)

Comment Number	Commenter (name, title)	Date of Comment	Comment Summary
9	Mr. Wally Murphy Field Supervisor, U.S. Department of the Interior, Fish and Wildlife Service New Mexico Ecological Services Field Office	August 8, 2008	<ul style="list-style-type: none"> • Provided comments and outlined recommended practices relating to threatened and endangered species, project planning and documentation, and land management. • Requested that WSMR continue the implementation of the current WSMR INRMP.
10	Mr. Matt Wunder, Chief, Conservation Services Division, State of New Mexico Department of Game & Fish, Santa Fe	August 8, 2008	<p>The Department of Game & Fish conducts wildlife management and conservation activities on WSMR that could be affected by the proposed action. The Draft EIS should analyze the potential for negative direct, indirect and cumulative impacts to wildlife and fish species, associated habitats, and Department management and conservation activities, including, but not limited to the following: White Sands pupfish (<i>Cyprinodon Tularosa</i>) and its aquatic habitats; the state-listed desert bighorn sheep (<i>Ovis Canadensis mexicano</i>), specifically the population that occurs on and around WSMR; oryx (<i>Oryx gazelle</i>) population reduction hunts and associated management activities; and mule deer (<i>Odocoileus hemlonus</i>) populations and their habitat.</p> <p>Requested the Draft EIS analyze cumulative effects regarding: habitat fragmentation, disturbance to wildlife, disturbance to vegetation, and water quality and abundance in the Tularosa Basin.</p>
11	Mr. Kevin Schneider Superintendent, U.S. Department of the Interior, National Park Service White Sands National Monument	August 11, 2008	<p>Pleased to see that WSMR has considered the sensitive nature of White Sands National Monument. The Park Service is interested to learn of any additional buffer zones or signage that might be placed along Range Road 10. Hopes that the increased activity at WSMR would not preclude the Park Service from being able to offer visitors the opportunity to participate in the ranger-led Lake Lucero tours. These ranger-led tours, offered once a month, require visitors to transit through WSMR lands.</p>

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**PUBLIC SCOPING REPORT
ATTACHMENTS**

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**ATTACHMENT C-1
NOTICE OF INTENT**

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DEPARTMENT OF DEFENSE

Department of the Air Force

Notice of Intent to Prepare an Environmental Impact Statement for the Eligible Fort Kamehameha Historic District Alternatives at Hickam Air Force Base, HI

AGENCY: Pacific Air Forces, Department of the Air Force.

ACTION: Notice of Intent.

SUMMARY: In accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [U.S.C.] §§ 4321–4347), the Council on Environmental Quality (CEQ) NEPA Regulations (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the United States Air Force's (Air Force) Environmental Impact Analysis Process (EIAP) (32 CFR Part 989), the Air Force is issuing this notice to advise the public of its intent to prepare an Environmental Impact Statement (EIS).

The EIS will assess the potential environmental consequences of a proposal to define final disposition of housing units and associated structures known as the "Fort Kamehameha Historic District"; an area on Hickam AFB, O'ahu, Hawai'i, eligible for listing on the National Register of Historic Places (NRHP) in accordance with Section 110(a)(2) of the National Historic Preservation Act (NHPA).

Alternatives currently identified for evaluation would include various options that fall under the five categories of: adaptive-use; relocation; deconstruction and salvage; demolition; and the No Action alternative. Any Proposed Action could include a single action, or combination of actions, under the five categories above. Sub-actions under these categories may include: leasing; sale; transfer to another government agency; and retention by the Air Force. Compliance with the NHPA will be done through consultation under Section 106 of 36 CFR Part 800.

DATES: The Air Force will hold a scoping meeting to solicit public input concerning the scope of the Proposed Action and alternatives, as well as to help identify other concerns and issues to be addressed in the environmental analysis.

The scoping meeting will be held Thursday, July 8, 2008 from 5 to 8 p.m. at the Aliamanu Elementary School, 3265 Salt Lake Boulevard, Honolulu, HI.

ADDRESSES: Federal, state, and local agencies, and interested groups and persons are invited to attend the scoping meeting. All are encouraged to provide

comments on the proposed action either at the scoping meeting or by mail, postmarked by July 21, 2008 to ensure proper consideration in the environmental impact analyses.

FOR FURTHER INFORMATION: Direct written comments or requests for further information to: Ms. Tiffany Patrick, 15 CES/CEVP NEPA Program Technical Support, 75 H Street, Bldg. 1202, Hickam AFB, HI 96853, Ph: (808) 449–3197.

Bao-Anh Trinh,

Air Force Federal Register Liaison Officer.

[FR Doc. E8–13845 Filed 6–18–08; 8:45 am]

BILLING CODE 5001–05–P

DEPARTMENT OF DEFENSE

Department of the Army

Preparation of an Environmental Impact Statement (EIS) for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range (WSMR), NM

AGENCY: Department of the Army.

ACTION: Notice of intent.

SUMMARY: The Department of the Army announces its intent to prepare an EIS for expanded activities on WSMR. This EIS will analyze the impacts of new mission requirements and development of new test and training capabilities and associated land use changes to support Army Transformation, the Army Campaign Plan, Future Combat Systems, Grow the Army, and other Army initiatives. This includes the stationing of a Heavy Brigade Combat Team (HBCT) of approximately 3,800 Soldiers at WSMR. This action also supports WSMR as a test bed for rapid development and deployment of new systems in response to rapidly changing world conditions and long-term Department of Defense, U.S. Army Developmental Test Command, and Army planning. Specifically, this EIS will assess environmental impacts associated with changing land uses to allow for expanded off-road maneuver in some areas, to support new testing capabilities and requirements, and continuing off-post to on-post tests. It will also address new weapons firing ranges and capabilities, as well as Soldier and Family housing, schools, infrastructure, utilities, and administrative and related facilities needed to support stationing of the HBCT at WSMR. The proposed action would result in a flexible, capabilities-based airspace and land use plan able to accommodate rapidly evolving customer

needs, support current and future mission activities, and support a full range of test and training efforts from individual components up through major joint and multinational programs.

ADDRESSES: Written comments should be forwarded to: White Sands Test Center, Operations Office, Attention: Catherine Giblin, 124 Crozier Street, Building 124, White Sands Missile Range, NM 88002; faxed to (575) 678–4082; or e-mailed to: WSMREIS@conus.army.mil.

FOR FURTHER INFORMATION CONTACT: Monte Marlin, Public Affairs Office, Building 1782, Headquarters Avenue, White Sands Missile Range, NM, 88002; (575) 678–1134; or e-mail: monte.marlin@us.army.mil.

SUPPLEMENTARY INFORMATION: The EIS will assess the environmental impacts associated with WSMR's development and implementation of an airspace and land use plan to support Army Transformation, Grow the Army and the Army Campaign Plan initiatives by more fully realizing and integrating the capabilities of the WSMR primacy mission—research, development, testing, and evaluation (RDTE)—and impacts associated with new training capabilities and stationing decisions. Testing typically involves activities such as missile flight tests, aerial intercepts, air-delivered munitions tests against ground targets, directed energy and various weapons systems tests. Training involves military personnel using the land and airspace for maneuver and weapons firing, as well as for field evaluation of weapons, equipment, communication systems, or other objectives. Stationing involves the establishment of infrastructure such as barracks, motor pools, and administrative buildings for Soldiers of the HBCT and their equipment. Requirements for new use of test and training capabilities would result in changing land use designations within the current installation boundaries. These changes would support current and future requirements and allow off-road vehicle maneuver on designated portions of the installation. WSMR will maintain its current RDTE mission and continue to support joint testing objectives.

The EIS will evaluate and disclose the impacts of two alternatives as well as a no action alternative.

No Action Alternative: This alternative includes current test capabilities and land use designations with current levels of operations and activities.

Alternative 1: This alternative includes those activities described in

the No Action alternative plus changes in land use to expand testing and maneuver capabilities to include Future Combat Systems and supporting infrastructure. This alternative supports the Grow the Army decision to station an HBCT at WSMR that requires main cantonment expansion and additional supporting infrastructure. Training for the newly stationed units, to include the HBCT and the 2nd Engineer Battalion, will leverage the considerable range modernization that is taking place at Fort Bliss.

Alternative 2: This alternative includes those activities described in Alternative 1 and also includes the construction and operation of training ranges and the identification of maneuver areas for testing and training on WSMR.

The EIS will evaluate the environmental effects associated with the varying testing, training, maneuver and facility requirements of each alternative on the natural, cultural, and man-made environments at WSMR and in the southern New Mexico region.

Federal, State, and local agencies, affected federally recognized Indian tribes, and other interested persons are invited to participate in the scoping process for the preparation of this EIS. Public scoping meetings in the vicinity of the installation will be held to facilitate input to the EIS process from interested parties. Dates for the meetings will be announced in the local media and will be at times and locations convenient to the public. To ensure scoping comments are fully considered in the Draft EIS, comments and suggestions should be received within the 30-day scoping period or no later than 15 days following the last scoping meeting, whichever is later.

Dated: June 11, 2008.

Addison D. Davis, IV,

Deputy Assistant Secretary of the Army
(Environment, Safety, and Occupational Health).

[FR Doc. E8-13622 Filed 6-18-08; 8:45 am]

BILLING CODE 3710-08-M

DEPARTMENT OF EDUCATION

Submission for OMB Review; Comment Request

AGENCY: Department of Education.

SUMMARY: The Acting Leader, Information Collection Clearance Division, Regulatory Information Management Services, Office of Management invites comments on the submission for OMB review as required by the Paperwork Reduction Act of 1995.

DATES: Interested persons are invited to submit comments on or before July 21, 2008.

ADDRESSES: Written comments should be addressed to the Office of Information and Regulatory Affairs, Attention: Education Desk Officer, Office of Management and Budget, 725 17th Street, NW., Room 10222, Washington, DC 20503. Commenters are encouraged to submit responses electronically by e-mail to cira_submission@omb.eop.gov or via fax to (202) 395-6974. Commenters should include the following subject line in their response, "Comment: [insert OMB number], [insert abbreviated collection name, e.g., "Upward Bound Evaluation"]". Persons submitting comments electronically should not submit paper copies.

SUPPLEMENTARY INFORMATION: Section 3506 of the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 35) requires that the Office of Management and Budget (OMB) provide interested Federal agencies and the public an early opportunity to comment on information collection requests. OMB may amend or waive the requirement for public consultation to the extent that public participation in the approval process would defeat the purpose of the information collection, violate State or Federal law, or substantially interfere with any agency's ability to perform its statutory obligations. The Acting Leader, Information Collection Clearance Division, Regulatory Information Management Services, Office of Management, publishes that notice containing proposed information collection requests prior to submission of these requests to OMB. Each proposed information collection, grouped by office, contains the following: (1) Type of review requested, e.g. new, revision, extension, existing or reinstatement; (2) Title; (3) Summary of the collection; (4) Description of the need for, and proposed use of, the information; (5) Respondents and frequency of collection; and (6) Reporting and/or Recordkeeping burden. OMB invites public comment.

Dated: June 13, 2008.

Kate Mullan,

Acting Leader, Information Collection Clearance Division, Regulatory Information Management Services, Office of Management.

Institute of Education Sciences

Type of Review: Revision.

Title: FRSS Educational Technology in Public Schools.

Frequency: One time.

Affected Public: State, Local, or Tribal Gov't, SEAs or LEAs.

Reporting and Recordkeeping Hour Burden:

Responses: 2,000.

Burden Hours: 1,000.

Abstract: This fast response survey will collect information from a sample of 2,000 public schools. It will provide national data on technology access and use. The survey will cover topics such as ratio of students to instructional computers in the school, hardware, network and Internet access, teacher training and support for technology in the schools.

Requests for copies of the information collection submission for OMB review may be accessed from <http://edicsweb.ed.gov>, by selecting the "Browse Pending Collections" link and by clicking on link number 3729. When you access the information collection, click on "Download Attachments" to view. Written requests for information should be addressed to U.S. Department of Education, 400 Maryland Avenue, SW., LBJ, Washington, DC 20202-4537. Requests may also be electronically mailed to ICDocketMgr@ed.gov or faxed to 202-401-0920. Please specify the complete title of the information collection when making your request.

Comments regarding burden and/or the collection activity requirements should be electronically mailed to ICDocketMgr@ed.gov. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339.

[FR Doc. E8-13817 Filed 6-18-08; 8:45 am]

BILLING CODE 4000-01-P

DEPARTMENT OF EDUCATION

Notice of Proposed Information Collection Requests; Comment Request

AGENCY: Department of Education.

ACTION: Correction Notice.

SUMMARY: On June 16, 2008, the Department of Education published a comment period notice in the *Federal Register* (Page 33994, Column 2) for the information collection, "Generic Application Package for Discretionary Grant Programs." This notice hereby corrects the responses to 10,236 and the burden hours to 360,550. The IC Clearance Official, Regulatory Information Management Services, Office of Management, hereby issues a correction notice as required by the Paperwork Reduction Act of 1995.

**ATTACHMENT C-2
SCOPING DISTRIBUTION LIST**

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U.S. SENATORS FOR NEW MEXICO

Office of the Honorable Jeff Bingaman (D-NM)
148 Loretto Towne Centre
Las Cruces, New Mexico 88001

Office of the Honorable Pete Domenici (R-NM)
505 S. Main St., Loretto Towne Centre, Ste. 118
Las Cruces, New Mexico 88001

U.S. REPRESENTATIVES FOR NEW MEXICO

Office of the Honorable Steve Pearce (R-NM)
400 North Telshor, Suite E
Las Cruces, New Mexico 88011
(District 2-Las Cruces/Roswell)

Office of the Honorable Tom Udall (D-NM)
811 St. Michael's Drive
Suite 104
Santa Fe, New Mexico 87505
(District 3 – Santa Fe/ Clovis/ Farmington/Gallup/
Las Vegas/ Rio Rancho)

Office of the Honorable Heather Wilson (R-NM)
20 First Plaza
Suite 603
Albuquerque, New Mexico 87102
(District 1 - Albuquerque)

**U.S. REPRESENTATIVE FOR TEXAS
(WEST)**

Office of the Honorable Silvestre Reyes
1527 Longworth House Office Bldg.
Washington, DC 20515

**TRIBAL GOVERNMENT / AGENCIES /
NATIONS**

Mescalero Apache Tribe
Office of the President
P. O. Box 227
Mescalero, NM 88340

Dr. Adolph Greenberg
13 Tamara Court
Oxford, Ohio 45056

Governor Arturo Senclair
Ysleta del Sur Pueblo
119 S. Old Pueblo Road
El Paso, Texas 79907

Pueblo of Acoma
Governor Jason Johnson
PO Box 309
Acoma, NM 87034

Pueblo of Isleta
Office of the Governor
PO Box 1270
Isleta Pueblo, NM 87022

Pueblo of Laguna
Governor John Antonio, SR
PO Box 194
Laguna Pueblo, NM 87026

Ohkay Owingeh
Governor Earl Salazar
PO Box 1099
San Juan Pueblo, NM 87566

Pueblo of Cochiti
Government Ray Trujillo
PO Box 70
Cochiti Pueblo, NM 87072

Pueblo of Jemez
Government of Raymond Gachupin
PO Box 100
Jemez Pueblo, NM 87024

Pueblo of Nambe
Government Dennis F. Vigil
Route 1, Box 117-BB
Santa Fe, NM 87506

Pueblo of Taos
Governor Gilbert Suazo, SR
PO Box 1846
Taos, NM 87571

Pueblo of Zia
Governor Rudy Shue
135 Capital Square Dr.
Zia Pueblo, NM 87053-6013

Jicarilla Apache Nation
President Levi Pesata
PO Box 507
Dulce, NM 87528

Navajo Nation
President Joe Shirley, JR
PO Box 9000
Window Rock, AZ 86515

Navajo Nation Council
Interim, Speaker of the Navajo Ervin Keeswood
Office of the Speaker
PO Box 3390
Window Rock, AZ 86515

NEW MEXICO GOVERNOR

Office of the Governor
490 Old Santa Fe Trail (Room 400)
Santa Fe, New Mexico 87501

DOÑA ANA COUNTY COMMISSIONERS

Doña Ana County Government
845 N. Hotel Blvd.
Las Cruces, New Mexico 88007

EL PASO COUNTY COMMISSIONERS

El Paso County Government
500 East San Antonio
Suite 301
El Paso, Texas 79901

LINCOLN COUNTY COMMISSIONERS

County of Lincoln
PO Box 711
300 Central Avenue
Carrizozo, New Mexico 88301

OTERO COUNTY COMMISSIONERS

Otero County Government
1000 New York Avenue, (Room 101)
Alamogordo, New Mexico 88310

SIERRA COUNTY COMMISSIONERS

Sierra County Government
100 North Date Street
County Courthouse
Truth or Consequences,
New Mexico 87901

SOCORRO COUNTY COMMISSIONERS

Socorro County
PO Box 1
Socorro, New Mexico 87801

ALAMOGORDO MAYOR

Alamogordo City Administration
Office of the Mayor
1376 E. 9th Street
Alamogordo, New Mexico 88310

CARRIZOZO MAYOR

Office of the Mayor of Carrizozo
P.O. Box 247
Carrizozo, New Mexico 88301

EL PASO MAYOR

Office of the Mayor of El Paso
2 Civic Center Plaza
10 Floor
El Paso, Texas 79901

LAS CRUCES MAYOR

Office of the Mayor of Las Cruces
P.O. Box 20000
Las Cruces, New Mexico 88004

SOCORRO MAYOR

Office of the Mayor of Socorro
111 School of Mines Road
P.O. Box K
Socorro, New Mexico 87801

TRUTH OR CONSEQUENCES MAYOR

Office of the City Manager of Truth or Consequences
505 Sims
Truth or Consequences, New Mexico 87901

FEDERAL REGULATORS

Mr. Richard Greene, Regional Administrator
U.S. Environmental Protection Agency
Region VI (6PD-N)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Ms. Susan MacMullin
U.S. Fish and Wildlife Service
New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, New Mexico 87113

Department of the Interior
1849 C Street, NW
Washington, DC 20240

NEW MEXICO REGULATORS

Ms. Lisa Kirkpatrick
Conservation Services Division
New Mexico Department of Game and Fish
P.O. Box 25112
Santa Fe, New Mexico 87504

Mr. Robert Sivinski
New Mexico Energy, Minerals, and Natural
Resources Department
Forestry Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

Mr. Gedi Cibas, Management Analyst
New Mexico Environment Department
Border and Environmental Reviews
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, New Mexico 87502-6110

Ms. Katherine Slick
State Historic Preservation Officer
State Historic Preservation Division
Bataan Memorial Building
407 Galisteo St. Suite 236
Santa Fe, New Mexico 87501

Mr. Ned Farquhar
New Mexico SPOC
Energy and Environmental Policy Advisor
State Capitol Building, Suite 400
Santa Fe, New Mexico 87501

**INTERESTED FEDERAL, STATE, AND
LOCAL AGENCIES**

Mr. John Barrera
ATZC-DOE-C
B624, Pleasonton Road
Fort Bliss, Texas 79916-6812

Mr. Rich Wareing
49 CES/CEVA
550 Tabosa Avenue, Building 55
Holloman Air Force Base, New Mexico 88330-8458

Ms. Jennifer Montoya
BLM Las Cruces District Office
1800 Marquess T.
Las Cruces, NM 88005-3371

Clarence Sykes
BLM Las Cruces District Office
1800 Marquess T.
Las Cruces, NM 88005-3371

Mr. Ed Roberson
Las Cruces Field Office
U. S. Bureau of Land Management
1800 Marquess Street
Las Cruces, New Mexico 88005

Mr. John Moreno
Socorro Field Office
U.S. Bureau of Land Management
901 S. Highway 85
Socorro, New Mexico 87801-4648

Mr. Steve Henke
Farmington Field Office
U.S. Bureau of Land Management
1235 La Plata Highway, Suite A
Farmington, New Mexico 87401

Ms. Mara Weisenberger
San Andres National Wildlife Refuge
U.S. Fish and Wildlife Service
PO Box 756
Las Cruces, New Mexico 88004

Ms. Nancy Rose, Forest Supervisor
Cibola National Forest
2113 Osuna Road NE, Suite A
Albuquerque, New Mexico 87113

Mr. S.E. "Lou" Wolterting, Forest Supervisor
Lincoln National Forest
1101 New York Avenue
Alamogordo, New Mexico 88310

Mr. Harv Forsgren, Regional Forester
Southwestern Region (3)
USDA Forest Service
333 Broadway SE
Albuquerque, New Mexico 87102

Mr. Cliff Spencer, Superintendent
White Sands National Monument
U. S. National Park Service
P.O. Box 1086
Holloman Air Force Base, New Mexico 88330

PUBLIC LIBRARIES

Alamogordo Public Library
920 Oregon Avenue
Alamogordo, New Mexico 88310-5835

Angel Montoya
Senior Field Biologist
The Peregrine Fund
Las Cruces, NM

El Paso Public Library
501 North Oregon
El Paso, Texas 79901-1103

Nicole Rosmarino
Wildlife Program Director
WildEarth Guardians
Santa Fe, NM

Farmington Public Library
100 W Broadway
Farmington, New Mexico 87401

Luis R. Rios, Patrick A. Baca, Patrick Mathis, and
Kevin Rodden
State of NM, Department of Game and Fish
Las Cruces, NM

Octavia Fellin Public Library
115 West Hill
Gallup, New Mexico 87301

Jennifer Montoya
NEPA Coordinator
Bureau of Land Management
Las Cruces, NM

Socorro Public Library
401 Park St., SW
Socorro, New Mexico 87801

Thomas Branigan Memorial Library
200 E. Picacho Avenue
Las Cruces, New Mexico 88001

Truth or Consequences Public Library
325 Library Lane
Truth or Consequences, New Mexico 87901

WSMR Post Library
Building 465
WSMR, New Mexico 88002

E-MAIL NOTIFICATIONS SENT TO:

Santiago Gonzales
Federal Projects Liaison
US Fish and Wildlife Service
Albuquerque, NM

Patricia Zenone
Ecological Services
US Fish and Wildlife Service
Albuquerque, NM

James N. Stuart, Rachel Jankowitz, Mark Watson,
and Hira Walker
State of NM, Department of Game and Fish
Santa Fe, NM

Administrative Offices
The Peregrine Fund
Las Cruces, NM

**ATTACHMENT C-3
SCOPING LETTER NOTIFICATION**

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DEPARTMENT OF THE ARMY
U.S. ARMY GARRISON WHITE SANDS
100 Headquarters Avenue
WHITE SANDS MISSILE RANGE, NEW MEXICO 88002-5000
July 17, 2008

REPLY TO
ATTENTION OF

Directorate of Public Works

Office of the Honorable Steve Pearce (R-NM)
400 North Telshor, Suite E
Las Cruces, New Mexico 88011

Dear Sir/Madam:

The Department of the Army announced its intent on June 19, 2008, in the Federal Register to prepare an Environmental Impact Statement (EIS) for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range (WSMR), New Mexico. This EIS will analyze the impacts of new mission requirements and the development of new test and training capabilities. The purpose of the EIS is to assess land use changes within WSMR that may be required to support current and future missions, Army Transformation, the Army Campaign Plan, Future Combat Systems, Grow the Army, and other Army initiatives.

The proposed federal action to be addressed in the EIS is to adopt an airspace and land use strategy that would support current and future testing, Army stationing actions, training of maneuver elements to include a Heavy Brigade Combat Team (HBCT), and provide expanded maneuver capability for Future Combat Systems. It will also address new weapons firing ranges and capabilities, as well as Soldier and Family housing, schools, infrastructure, utilities, and administrative and related facilities needed to support stationing of an HBCT of approximately 3,800 Soldiers. Several alternatives will be considered in the EIS reflecting choices in capabilities to support various types of tests and military training activities.

The EIS will evaluate and disclose the impacts of two alternatives as well as the no action alternative. Alternative 1 would support the stationing of an HBCT and the 2nd Engineer Battalion at WSMR and expanded testing and maneuver capabilities to include Future Combat Systems. Training for newly stationed units would leverage considerable range modernization that is taking place at Fort Bliss. Alternative 2 would include activities described in Alternative 1 and also include the construction and operation of training ranges and the identification of maneuver areas for testing and training on WSMR.

We are conducting three public scoping meetings to gather the views of other governmental agencies, private organizations, and the public. The scoping process will help identify possible alternatives, potential environmental impacts and key issues of concern to be analyzed. You are invited to attend any of these meetings.

The meetings will be held between 6:00 p.m. and 9:00 p.m. at:

Tuesday, July 22, 2008
Court Youth Center
402 W. Court Ave
Las Cruces, NM

Wednesday, July 23, 2008
The Macey Center
801 Leroy Place
Socorro, NM

Thursday, July 24, 2008
Otero County Administration
1000 New York Avenue
Alamogordo, NM

Written and oral comments will be accepted at these meetings. A brief presentation on the EIS will begin at 7 p.m., and the public comment session will follow.

Written comments may also be submitted by mail, e-mail, or fax from now until August 8, 2008, to:

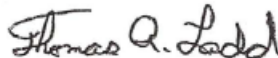
Ms. Catherine Giblin
White Sands Test Center, Operations Office
124 Crozier Street, Building 124
White Sands Missile Range, NM 88002
Fax: (575) 678-4082; Email: WSMREIS@conus.army.mil

An additional opportunity for public comment will be provided later in the process when the Draft EIS is distributed for public review.

For further information, contact Monte Marlin, Public Affairs Office, Building 1782, Headquarters Avenue, White Sands Missile Range, NM, 88002; (575) 678-1134; or e-mail: monte.marlin@us.army.mil.

Thank you for your participation in this important decision-making process.

Sincerely,



Thomas A. Ladd
Director, Public Works



DEPARTMENT OF THE ARMY
U.S. ARMY GARRISON WHITE SANDS
100 Headquarters Avenue
WHITE SANDS MISSILE RANGE, NEW MEXICO 88002-5000

JUL 17 2008

REPLY TO
ATTENTION OF

Directorate of Public Works

Dear Interested Party:

The Department of the Army announced its intent on June 19, 2008, in the Federal Register to prepare an Environmental Impact Statement (EIS) for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range (WSMR), New Mexico. This EIS will analyze the impacts of new mission requirements and the development of new test and training capabilities. The purpose of the EIS is to assess land use changes within WSMR that may be required to support current and future missions, Army Transformation, the Army Campaign Plan, Future Combat Systems, Grow the Army, and other Army initiatives.

The proposed federal action to be addressed in the EIS is to adopt an airspace and land use strategy that would support current and future testing, Army stationing actions, training of maneuver elements to include a Heavy Brigade Combat Team (HBCT), and provide expanded maneuver capability for Future Combat Systems. It will also address new weapons firing ranges and capabilities, as well as Soldier and Family housing, schools, infrastructure, utilities, and administrative and related facilities needed to support stationing of an HBCT of approximately 3,800 Soldiers. Several alternatives will be considered in the EIS reflecting choices in capabilities to support various types of tests and military training activities.

The EIS will evaluate and disclose the impacts of two alternatives as well as the no action alternative. Alternative 1 would support the stationing of an HBCT and the 2nd Engineer Battalion at WSMR and expanded testing and maneuver capabilities to include Future Combat Systems. Training for newly stationed units would leverage considerable range modernization that is taking place at Fort Bliss. Alternative 2 would include activities described in Alternative 1 and also include the construction and operation of training ranges and the identification of maneuver areas for testing and training on WSMR.

We are conducting three public scoping meetings to gather the views of other governmental agencies, private organizations, and the public. The scoping process will help identify possible alternatives, potential environmental impacts and key issues of concern to be analyzed. You are invited to attend any of these meetings.

-2-

The meetings will be held between 6:00 p.m. and 9:00 p.m. at:

Tuesday, July 22, 2008	Wednesday, July 23, 2008	Thursday, July 24, 2008
Court Youth Center	The Macey Center	Otero County Administration
402 W. Court Ave	801 Leroy Place	1000 New York Avenue
Las Cruces, NM	Socorro, NM	Alamogordo, NM

Written and oral comments will be accepted at these meetings. A brief presentation on the EIS will begin at 7 p.m., and the public comment session will follow.

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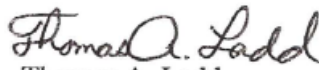
Ms. Catherine Giblin
White Sands Test Center, Operations Office
124 Crozier Street, Building 124
White Sands Missile Range, NM 88002
Fax: (575) 678-4082; Email: WSMREIS@conus.army.mil

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For further information, contact Monte Marlin, Public Affairs Office, Building 1782, Headquarters Avenue, White Sands Missile Range, NM, 88002; (575) 678-1134; or e-mail: monte.marlin@us.army.mil.

Thank you for your participation in this important decision-making process.

Sincerely,


Thomas A. Ladd
Director, Public Works

-----Original Message-----

From: Griffin, Patricia L CIV USA IMCOM
Sent: Thursday, July 17, 2008 1:47 PM
To: Santiago_Gonzales@fws.gov; 'Patricia_Zenone@fws.gov'
Subject: Rangewide EIS public scoping meetings (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Santiago and Pat,

FYI, scoping meetings for our upcoming Rangewide EIS are next week (one in Socorro Wed night). An announcement is attached, and I've also attached the NOI published in June.

Thanks,
Trish

Trish Griffin
Wildlife Biologist
Environmental Stewardship Branch
White Sands Missile Range, NM

Office: (505) 678-2029
DSN: 258-2029
Fax: 678-4028

Mailing Address:
ATTN: IMWE-WSM-PW-E-ES (T. Griffin)
U.S. Army Garrison White Sands
100 Headquarters Avenue
White Sands Missile Range, NM 88002-5000 (Physical address for
packages: Springfield St., Bldg 163)

-----Original Message-----

From: Griffin, Patricia L CIV USA IMCOM

Sent: Thursday, July 17, 2008 1:52 PM

To: Stuart, James N., DGF; 'Jankowitz, Rachel J., DGF'; 'Watson, Mark L., DGF'; 'Walker, Hira, DGF'

Subject: FW: WSMR Rangewide EIS public scoping meetings (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

FYI...

-----Original Message-----

From: Griffin, Patricia L CIV USA IMCOM

Sent: Thursday, July 17, 2008 1:47 PM

To: Santiago_Gonzales@fws.gov; 'Patricia_Zenone@fws.gov'

Subject: Rangewide EIS public scoping meetings (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Santiago and Pat,

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Thanks,

Trish

Trish Griffin

Wildlife Biologist

Environmental Stewardship Branch

White Sands Missile Range, NM

-----Original Message-----

From: Griffin, Patricia L CIV USA IMCOM
Sent: Tuesday, July 22, 2008 9:52 AM
To: 'tpf@peregrinefund.org'
Cc: 'Angel Montoya'
Subject: WSMR Public Scoping Meetings for upcoming Rangewide EIS
(UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Please note there is a public meeting tonight in Las Cruces, NM, for the upcoming White Sands Missile Range Rangewide EIS. The announcement is attached.

Thank You,

Trish Griffin
Wildlife Biologist
Environmental Stewardship Branch
White Sands Missile Range, NM

Office: (505) 678-2029
DSN: 258-2029
Fax: 678-4028

Mailing Address:
ATTN: IMWE-WSM-PW-E-ES (T. Griffin)
U.S. Army Garrison White Sands
100 Headquarters Avenue
White Sands Missile Range, NM 88002-5000 (Physical address for
packages: Springfield St., Bldg 163)

White Sands Missile Range: <http://www.wsmr.army.mil/>
Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----

From: Griffin, Patricia L CIV USA IMCOM
Sent: Wednesday, July 23, 2008 11:04 AM
To: 'Nicole Rosmarino'
Subject: WSMR Rangewide EIS Public Scoping Meetings (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Nicole,

Thought I'd send this to you in case you haven't seen it. There is a public meeting in Socorro tonight. You can submit scoping comments to WSMR until 8 August.

Thanks,
Trish

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----

From: Rodden, Cristina L Ms CIV USA IMCOM

Sent: Wednesday, July 23, 2008 9:02 AM

To: Rios, Luis R., DGF; Baca, Patrick A., DGF; Mathis, Patrick L., DGF; Rodden, Kevin, DGF

Cc: Griffin, Patricia L CIV USA IMCOM

Subject: Dates, Locations, and Times of Range wide EIS Scoping meetings
(UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

All,

Our public scoping meeting for our range wide EIS was held last night in Las Cruces. Some of the WSMR folks noticed there was no representative from NMGF.

We are unsure if you were sent an announcement, so I'm sending it as an attachment to let you know there is still time to provide NMGF input.

The next scoping meeting is in Socorro (tonight, 23rd July) and then Alamogordo (tomorrow, 24th July).

Thanks,
Cristina

Cristina Rodden
Wildlife Biologist
Pest Mgmt. Coordinator

Environmental Stewardship Branch
White Sands Missile Range, NM
Office: 575-678-4438 Cell: 993-6043
Dsn: 258-4438 Fax: 678-4028

-----Original Message-----

From: jatchley@zianet.com [mailto:jatchley@zianet.com]
Sent: Tuesday, July 22, 2008 3:08 PM
To: Griffin, Patricia L CIV USA IMCOM
Subject: Re: WSMR Rangewide EIS public scoping meetings (UNCLASSIFIED)

Hi Trish- I've been having email trouble at home so am checking this from work. I plan to go and I'll see you there!

Oh, my work email is Jennifer_Montoya@nm.blm.gov

Jennifer

Griffin, Patricia L CIV USA IMCOM writes:

> Classification: UNCLASSIFIED
> Caveats: NONE
>
> Jennifer,
> Here's the information...
> Thanks!!!!
> - Trish
> -----Original Message-----
> From: Griffin, Patricia L CIV USA IMCOM
> Sent: Thursday, July 17, 2008 1:47 PM
> To: Santiago_Gonzales@fws.gov; 'Patricia_Zenone@fws.gov'
> Subject: Rangewide EIS public scoping meetings (UNCLASSIFIED)
>
> Classification: UNCLASSIFIED
> Caveats: NONE
>
> Santiago and Pat,
>
> FYI, scoping meetings for our upcoming Rangewide EIS are next week
> (one in Socorro Wed night). A draft announcement is attached, and
> I've also attached the NOI published in June.
>
> Thanks,
> Trish
>
>
> Trish Griffin
> Wildlife Biologist
> Environmental Stewardship Branch
> White Sands Missile Range, NM

**ATTACHMENT C-4
AFFIDAVITS OF PUBLICATION**

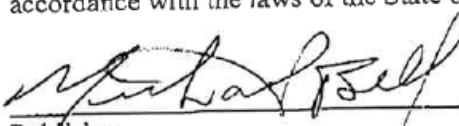
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AFFIDAVIT OF PUBLICATION

ALAMOGORDO,
STATE OF NEW MEXICO **SS.**
COUNTY OF OTERO.

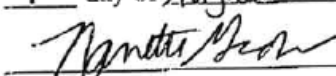
I, MICHAEL BELL, being duly sworn, on my oath say that I am the Publisher of the Alamogordo Daily News, a Newspaper of daily circulation, published and printed in the English language at the City of Alamogordo, Otero County, State of New Mexico. That the Alamogordo Daily News has been regularly published and issued for more than nine months prior to the date of the first publication hereinafter mentioned.

That the attached notice for Potomac-Hudson Engineering was published 2 time(s) in 2 issue(s) of said newspaper, and not in any supplement thereof, the first publication being July 16th, 2008 and subsequent publications being on July 20th, 2008. That said notice was published in accordance with the laws of the State of New Mexico.



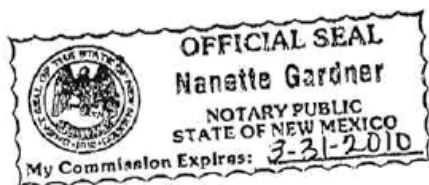
Publisher

Subscribed in my presence and sworn before me this the
4th day of August 2008.



Notary Public

My commission expires 3-31-2010 ___



Public/Special Notices 114

The Department of the Army will prepare an Environmental Impact Statement (EIS) and Record of Decision for expanded activities on White Sands Missile Range (WSMR), NW. This EIS will analyze the impacts of new mission requirements and the development of new test and training capabilities. The purpose of the EIS is to assess land use changes within WSMR that may be required to support current and future missions, Army Transfer of Mission, the Army Campaign Plan, Future Combat Systems, Grow the Army, and other Army initiatives.

The proposed federal action to be addressed in the EIS is to adopt an airspace and land use strategy that would support current and future testing, Army stationing actions, training of maneuver elements to include a Heavy Brigade Combat Team (HBCT), and provide expanded maneuver capability for Future Combat Systems. It will also address new weapons firing ranges and capabilities, as well as Soldier and Family housing, schools, infrastructure, utilities, and related facilities needed to support stationing of an HBCT of approximately 3,800 Soldiers. Several alternatives will be considered in the EIS reflecting choices in capabilities to support various types of tests and military training activities.

Federally recognized Indian tribes, federal, state, and local agencies and the public are invited to participate in the scoping process for the preparation of this EIS. The scoping process will help identify possible alternatives, potential environmental impacts, and key issues of concern to be analyzed. All interested individuals and organizations are invited to attend and submit comments on the alternatives and the environmental issues to be analyzed in the EIS. Written and oral comments will be accepted at the following public meetings:

- Tuesday, July 22, 2008:
Las Cruces, NM
Court Youth Center
402 W. Court Ave
- Wednesday, July 23, 2008:
Socorro, NM
The Macey Center
801 Leroy Place
- Thursday, July 24, 2008:
Alamogordo, NM
Otero County
Administration
1000 New York
Avenue

All meetings will be held from 6:00 to 9:00 p.m. Doors open at 6:00 p.m. A brief presentation on the EIS will begin at 7:00 p.m., and the public comment session will follow.

PUBLISHERS AFFIDAVIT

STATE OF TEXAS
COUNTY OF EL PASO

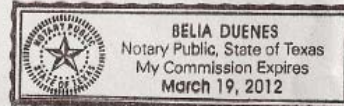
Before me, a Notary Public in and for El Paso County, State of Texas, on this day personally appeared Terrie Carter who state upon oath that he is the classified supervisor of the El Paso Times, a daily newspaper published in the City and County of El Paso, State of Texas, which is a newspaper of general circulation and which has been continuously and regularly published for the period of not less than one year in the said County of El Paso, and that he was such upon the dates herein mentioned:

That the Public Notice copy was published in the El Paso Times for the 1 day July 20, 2008. The dates of such publication being as follows, to wit July 20, 2008

Subscribed and sworn to before me, Signed Jamie A. Carter

This the 20th day of July 2008

Belia Duenes

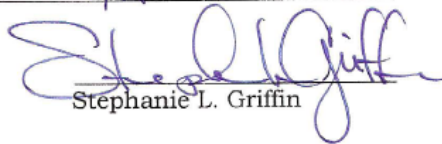


Legal Advertising Affidavit

Stephanie L. Griffin, who, being duly sworn as the Assistant to the Publisher of the Las Cruces BULLETIN, a weekly newspaper of general distribution published in the City of Las Cruces, County of Doña Ana, State of New Mexico, disposes and states that the legal advertising for

Potomac-Hudson Engineering
1/1/0 The Department of the
Army; Preparation of an
Environmental Impact Statement
re: White Sands Missile
Range, NM

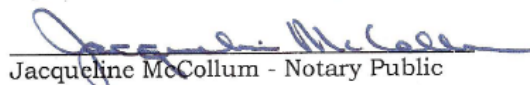
In accordance with the laws of the State of New Mexico, the attached was published in its entirety one time(s) in the Las Cruces BULLETIN, the first publication date being 7/18/08 and subsequent publications being N/A.


Stephanie L. Griffin

Sworn to and subscribed
before me this July 25 day
of July 2008
in the

CITY OF LAS CRUCES
COUNTY OF DOÑA ANA
STATE OF NEW MEXICO

My Commission expires: **August 11, 2011**


Jacqueline McCollum - Notary Public

The Department of the Army will prepare an Environmental Impact Statement (EIS) and Record of Decision for expanded activities on White Sands Missile Range (WSMR), NM. This EIS will analyze the impacts of new mission requirements and the development of new test and training capabilities. The purpose of the EIS is to assess land use changes within WSMR that may be required to support current and future missions, Army Transformation, the Army Campaign Plan, Future Combat Systems, Grow the Army, and other Army initiatives.

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Tuesday, July 22, 2008:
Las Cruces, NM - Court Youth Center
402 W. Court Ave

www.lcsun-news.com


LAS CRUCES SUN-NEWS

PROOF OF PUBLICATION

Lou Hendren, being duly sworn, deposes and says that he is the Classified Manager of the Las Cruces Sun-News, a newspaper published daily in the county of Dona Ana, State of New Mexico; that the notice 40551 is an exact duplicate of the notice that was published once a week/day in regular and entire issue of said newspaper and not in any supplement thereof for 3 consecutive week(s) (day(s)), the first publication was in the issue dated July 16, 2008 and the last publication was July 20, 2008.

Respondent further states this newspaper is duly qualified to publish legal notice or advertisements within the meaning of Sec. Chapter 167, Laws of 1937.

Signed


Classified Manager
Official Position

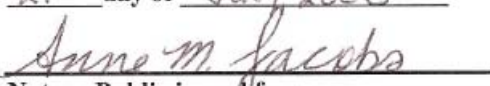
STATE OF NEW MEXICO

ss.

County of Dona Ana

Subscribed and sworn before me this

21st day of July 2008


Notary Public in and for

Dona Ana County, New Mexico

March 23, 2011

My Term Expires

The Department of the Army will prepare an Environmental Impact Statement (EIS) and Record of Decision for expanded activities on White Sands Missile Range (WSMR), NM. This EIS will analyze the impacts of new mission requirements and the development of new test and training capabilities. The purpose of the EIS is to assess land use changes within WSMR that may be required to support current and future missions, Army Transformation, the Army Campaign Plan, Future Combat Systems, Grow the Army, and other Army initiatives.

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LAS CRUCES SUN-NEWS

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For further information, contact Monte Marlin, Public Affairs Office, Building 1782, Headquarters Avenue, White Sands Missile Range, NM, 88002; (575) 678-1134; or e-mail: monte.marlin@us.army.mil.

Pub No. 40551
Pub Date July 16, 19, 20, 2008

**ATTACHMENT C-5
PUBLIC SCOPING MEETING ATTENDEE LISTS**

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White Sands Missile Range EIS
Public Scoping Meeting

SIGN IN SHEET

Las Cruces, NM

Name	Title	Address	Telephone	Fax	E-mail
* Martin Salgado	Pres.	205 W Bunch	525-8050	525-8638	salgadoconstructo @hotmail.com
Monte Martin	WSMR PAD Biog N&D	WSMRL 6807	678-1134	678-6903	monte.martin@ us.army.mil
FRANK CHAVEZ	Exe Dir TC	Bldg 100		678-0023	
Russ Koch	WSMR PW-EC	B163		678-8615	Russ.Koch@us.army.mil
Debbie Nethers	WSMR ITAM	B124	678-2298		Deborah.L.Nethers@us.army.mil
* DAVID GRIFFIN	President Mesilla Valley Aud Soc.		382-2080		GriffinBio@gmail.com
Trish Griffin	Wildlife Biologist	WSMR-PW-E-ES	678-2029		trish.griffin@us.army.mil
* Jim Echles		4071 Sotal Dr. 8804	521-8771		echlesj1950@gmail.com
* Debbie Hartell	Chief Environmental Ht	40CES/CEV 550 Tabo St Holloman AFB NM	575-5723931		deborah.hartell@holloman.af.mil
Miriam Rodriguez		WSMR		628-2216	
* Hagop Urbe				312-479-4132	
David Dantas	Biologist	WSNM	579-2999		david-dantas@nps.gov

July 22, 2008

* Member of the Public



White Sands Missile Range EIS
Public Scoping Meeting

SIGN IN SHEET

Las Cruces, NM

Name	Title	Address	Telephone	Fax	E-mail
INDIA Nicholson	Attorney-Advisor	WSMR	575 678 4341		india.s.nicholson@us.army.mil
Bob Huckok	DGC	WSMR	678-1436		Bob.huckok@us.army.mil
Cathy Giblin	Env Engineer	WSMR	575 678-3541		Cathy.giblin@us.army.mil
Jim Bowman	Archaeologist	WSMR	575-678-925		james.bowman3@us.army.mil
Junior D Kerus	Ch. Env Stewardship	WSMR	575 678 8731		junior.kerus@us.army.mil
* Ed Roykaal	-	P.O. Box 16242	KCNM 88004		575-639-0227
* LTC Shane Fullmer	FCS Rep	WSMR	575-993-0204		Shane.Fullmer@us.army.mil
* STEVE RAMIREZ	Reporter	POB 1749, LAM 88004	575-541-5452		sramirez@lcsun-news.com
* Angel Montoya	The Penguin Fund	100 E. Halley	575-523-5550		abmontora@ziact.com
Dorothy Peterson	Env Engineer	PHEMS	732-747-0024 ext 4204		Dorothy.Peterson@nps.net

July 22, 2008

* Member of the Public



White Sands Missile Range EIS
Public Scoping Meeting

SIGN IN SHEET

Las Cruces, NM

Name	Title	Address	Telephone	Fax	E-mail
* Dara Parker	Senator Bingaman Field Rep.	505 S. Main St. Las Cruces, NM 88001	575-523-6561	575-523-6584	dara-parker@bingaman.senate.gov
* Jennifer Montoya	Enl. BUM Planner	1800 Marguessa Las Cruces, NM 88011	575-525-4316		Jennifer.Montoya@n.m.blm.gov
Blanca Ceniceos	WSMR Test Center		678-3015		blanca.ceniceos@us.army.mil
Joel Giblin	WSMR-DPW-EC		678-0918		joel.giblin@us.army.mil

July 22, 2008

* Member of the Public



White Sands Missile Range EIS
Public Scoping Meeting

SIGN IN SHEET

Socorro, NM

Name	Title	Address	Telephone	Fax	E-mail
* MARK WATSON	NMGE	PO Box 25112 SF NM	87501	476-8115	mark.watson@state.nm.us
Fullmer Shane N	LTC	WSMR	575-993-6204		Shane.N.Fullmer@us.army.mil
Summerlin Blak	SFC	WSMR	575-993-6363		David.Summerlin@us.army.mil
frank CHAVEZ		WSMR	575-678-0023		
Cathy Giblin	TC-00	WSMR	575-678-3541		cathy.giblin@us.army.mil
DAN HICKS	CSG	WSMR	575-678-1480		Dhicks@us.army.mil
POW HICKOK	DGC	WSMR	575-678-1436		Rpowhickok@us.army.mil
Robert Peter	SNU	WSMR	575-678-1007		robert.peter@us.army.mil
INDIA NICHOLSON	JAG	WSMR	575-678-4341		India.s.nicholson@us.army.mil
Jim Bowman	DPW	WSMR	575-678-7925		james.bowman3@us.army.mil
Monte Martin	PAO	WSMR	575-678-1134		monte.martin@us.army.mil

July 23, 2008



White Sands Missile Range EIS
Public Scoping Meeting

SIGN IN SHEET

Socorro, NM

Name	Title	Address	Telephone	Fax	E-mail
JUNIOR D KERNS	Ch. Env Stewardship	WSMR	575 678 8731		junior.kerns@us.army.mil
RENEE BLOTSKE	Sustainability	WSMR	575 678 5029		RENEE.BLOTSKE@US.ARMY.MIL
Debbie Nethers	WAM coordinator	WSMR	575 678 2898		Deborah.L.Nethers@us.army.mil

July 23, 2008

* Member of the Public



White Sands Missile Range EIS
Public Scoping Meeting

SIGN IN SHEET

Alamogordo, NM

Name	Title	Address	Telephone	Fax	E-mail
Patrick Morrow	Biologist	WSMR, N	678-7095		patrick.c.morrow@usarmymil
Peter Bullode	Archaeologist, NETA	WSMR	678-0792		peter.y.bullode@us.army.mil
Cathy Giblin	PM	WSMR	678-3541		Cathy.giblin@us.army.mil
Don Hicks	Cos	WSMR	678-1980		daniel.a.hicks@usarmy.mil
Frank Chavet	EDTC	WSMR	678-0023		
Jerry Tyree	Deputy	PM FCS (ECT)	678-2812		Jerry.tyree@us.army.mil
Lisa Blains	PAO	WSMR	678-1134		lisa.blains@us.army.mil
RENEE BLOTSKE	Sustainability	WSMR	678 5029		renee.blotske@us.army.mil
* Glen Schickel	Alamogordo Winelisa		434-4401		
* Bill Burt	Alamo C-50	PO Box 1548	434-1414		bburt@bbiradio.net
* Mary Preiser	Chamber of Commerce		434-6770		casamarypp@quest.n
Tom Fuller	PAO	WSMR	678-1134		tommy.fuller@us.army.mil

July 24, 2008

* Member of the Public



White Sands Missile Range EIS
Public Scoping Meeting

SIGN IN SHEET

Alamogordo, NM

Name	Title	Address	Telephone	Fax	E-mail
* Kathy Fullox	Registrar	NMSU-A 2400 N. Science	439-3703	439-3760	k.fullox@nmsu.edu
* Sharon Fischer	VP Student Services	NMSU-A " " "	439-3717	439-3760	sfischer@nmsu.edu sfischer@nmsu.edu

July 24, 2008

* Member of the Public

ATTACHMENT C-6
COMMENTS RECEIVED DURING PUBLIC SCOPING PERIOD

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-----Original Message-----

From: Mark_Spencer@blm.gov [mailto:Mark_Spencer@blm.gov]
Sent: Thursday, July 10, 2008 8:51 AM
To: WSMR EIS
Cc: Tim_Sanders@nm.blm.gov; Jennifer_Montoya@nm.blm.gov; Clarence_Sykes@blm.gov;
Stephen_Spencer%DOI@blm.gov
Subject: ER 08/635: Preparation of an Environmental Impact Statement
(EIS) for Development and Implementation of Range-Wide Mission and Major Capabilities at
White Sands Missile Range (WSMR), NM

Thank you for notifying the Bureau of Land Management, New Mexico of the above referenced

project, ER 08/635.

Please place the following individuals on your mail list for all future notifications regarding this
project, including Federal agency review of the preliminary Draft and Final EISs.

Jennifer Montoya
Clarence Sykes
BLM Las Cruces District Office
1800 Marquess T.
Las Cruces, NM 88005-3371

Thank you.

Mark R. Spencer, AICP
State Planning & Env. Coord.
BLM, New Mexico State Office
Division of Resources
1474 Rodeo Rd.
PO Box 27115
Santa Fe, NM 87502
Office: (505) 438-7402
Mobile: (505) 660-7495

Current policy limits use of government e-mail to official government business.

Classification: UNCLASSIFIED
Caveats: NONE



White Sands Missile Range EIS

Public Scoping Meeting

Las Cruces, NM

**Environmental Impact Statement for the Development and Implementation of
Range-Wide Mission and Major Capabilities at White Sands Missile Range
(WSMR), NM.**

Scoping Process Comment Form

(Please print clearly)

Must be received on or before 08-08-2008.

I would like to receive a copy of:

DRAFT WSMR EIS **Hard Copy** OR **CD/Summary**
FINAL WSMR EIS **Hard Copy** OR **CD/Summary**

Name: David Baston
Address: P.O. Box 1026
Holloman AFB, NM 88330

Comment forms may be mailed to: Ms. Catherine Giblin White Sands Test Center, Operations Office, 124 Crozier Street, Building 124, White Sands Missile Range, NM 88002	Comment forms may be faxed to: Ms. Catherine Giblin (575) 678-4082 (Fax) Or sent by electronic mail to: WSMREIS@conus.army.mil
--	--

July 22, 2008



White Sands Missile Range EIS

Public Scoping Meeting

Las Cruces, NM

Environmental Impact Statement for the Development and Implementation of
Range-Wide Mission and Major Capabilities at White Sands Missile Range
(WSMR), NM.

Scoping Process Comment Form

(Please print clearly)

Must be received on or before 08-08-2008.

E I F. - on human Remains - and objects
Indian Burial -

No letter Received to date

I would like to receive a copy of:

DRAFT WSMR EIS Hard Copy OR CD/Summary
FINAL WSMR EIS Hard Copy OR CD/Summary

Name: Piro - Manso - Tuvia Toike
Address: Pueblo San Juan De Guadalupe
P.O. Box 16243
Las Cruces, New Mexico
88004

Comment forms may be mailed to: Ms. Catherine Giblin White Sands Test Center, Operations Office, 124 Crozier Street, Building 124, White Sands Missile Range, NM 88002	Comment forms may be faxed to: Ms. Catherine Giblin (575) 678- 4082 (Fax) Or sent by electronic mail to: WSMREIS@conus.army.mil
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July 22, 2008



White Sands Missile Range EIS

Public Scoping Meeting

Socorro, NM

**Environmental Impact Statement for the Development and Implementation of
Range-Wide Mission and Major Capabilities at White Sands Missile Range
(WSMR), NM.**

Scoping Process Comment Form

(Please print clearly)

Must be received on or before 08-08-2008.

*Will submit formal comments for NMGF by
deadlines.*

I would like to receive a copy of:

DRAFT WSMR EIS Hard Copy OR CD/Summary
FINAL WSMR EIS Hard Copy OR CD/Summary

Name: PAT MATHIS 532-2108
Address: HABITAT SPECIALIST
NM GAME & FISH
2715 NORTHRISE DR.
LAS CRUCES NM 88011

Comment forms may be mailed to: Ms. Catherine Giblin White Sands Test Center, Operations Office, 124 Crozier Street, Building 124, White Sands Missile Range, NM 88002	Comment forms may be faxed to: Ms. Catherine Giblin (575) 678-4082 (Fax) Or sent by electronic mail to: WSMREIS@conus.army.mil
--	--

July 23, 2008

-----Original Message-----

From: Lorraine Schulte [mailto:mljs@zianet.com]
Sent: Wednesday, July 30, 2008 10:37 AM
To: WSMR EIS
Subject: Information

Attention: Ms. Catherine Gibbin

I am a member of Mesilla Valley Audubon Society. I would like more information on "Development and Implementation of Range-Wide Mission and Major Capabilities at WSMR, NM.

My concern is for the bird and other wildlife habitat protection for species other than only those under the ESA.

Lorraine Schulte
mljs@zianet.com
Classification: UNCLASSIFIED
Caveats: NONE

August 7, 2008

Mesilla Valley Audubon Society
P.O. Box 1645
Las Cruces, NM 88004

Ms. Catherine Giblin
White Sands Test Center, Operations Office
124 Crozier Street, Building 124
White Sands Missile Range, NM 88002

Re: Comments for the Environmental Impact Statement for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range (WSMR), New Mexico

Dear Ms. Gilpin:

On behalf of the Mesilla Valley Audubon Society with approximately 400 chapter members in Las Cruces, Alamogordo, and Truth or Consequences, and as a professional wildlife biologist, I submit the following comments and concerns regarding the Environmental Impact Statement for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range (WSMR), New Mexico (hereafter referred to as: WSMR EIS).

The Mesilla Valley Audubon Society (MVAS) is a conservation and natural history organization based in southern New Mexico. Our objectives are to promote appreciation and conservation of birds, other wildlife, and their habitats through environmental education, issue advocacy and natural history experiences. On July 22, 2008 I attended the public scoping meeting in Las Cruces where I was briefed about the WSMR EIS. You answered my questions regarding the maps and other displays, and the proposed alternatives and what each would entail (as far as was known at that time). The way I interpreted your answers was that there is no Preferred Alternative at this point and part of the reason for holding the scoping meetings was to generate interest to help direct the process and develop the alternatives.

Our comments are concerned mostly with the fact that we perceive the proposed alternatives (other than Alternative 1, the "no action" alternative) as an attempt to "Green Light" all future projects on WSMR without fully or in some instances even partially knowing what those projects may be, and where they might be implemented. The maps you provided at the public scoping meeting under two of the alternatives displayed nearly 75% or more of WSMR as the area to be covered by this WSMR EIS. And while we understand and appreciate in these times the U.S. Army's and WSMR's need to be flexible and proactive rather than reactive with future training, testing, tactics and research/ development, each future project will have its' own specific potential impacts to

natural resources. This would be dependent on many variables including but not limited to: type of project, the site chosen, current conditions, the terrain and topography, vegetation community/communities present, wildlife and plant species present or expected at the site, time of year, duration of project or number of repetitions of training, to name a few. We feel that when those future projects are indentified and areas selected for testing, training, or construction, only at that point should the impacts be determined and methods of lessening those impacts be developed or mitigation measures be implemented.

Due to WSMR's large size and diverse ecosystems from lower elevation salt pans and playa lakes to Ponderosa pine forest and wetland riparian zones, it provides habitat for numerous species of plants and wildlife as well as some of the most intact and representative plant communities in the northern Chihuahuan Desert. And while the U.S. Army's mission does not directly include protecting these natural resources, we encourage WSMR to consider them when making decisions about the WSMR EIS. MVAS's concern is with the potential impacts to birds and other wildlife, plants, and the plant communities and habitats that support those species, as well as the function of natural ecosystems on WSMR. We also encourage you to consider bird and other wildlife habitat protection for species other than only those listed under the Endangered Species Act, as many of these are representative parts of functioning communities or ecosystems.

We look forward to being a part of this WSMR EIS process and as it progresses we will be better able to provide more detailed comments and suggestions. Thank you for the opportunity to comment on this important process.

Sincerely,

David J. Griffin – President, Mesilla Valley Audubon Society
P.O. Box 1645
Las Cruces, NM 88004
1-575-382-2080
GriffinBio@mail.com

7 August 2008

RE: White Sands Missile Range, EIS for the Development and Implementation of
Range-Wide Mission and Major Capabilities at White Sands Missile Range, NM

To Whom It May Concern:

Holloman Lakes have long been a concern to me and I played an active roll along with other members of Mesilla Valley Audubon Society (MVAS) in these lakes and associated areas being adopted by MVAS during the 1980s as a wetland of importance to migrating and nesting birds. The chapter signed a written agreement with BLM (one of the first of its kind for BLM) wherein MVAS members agreed to do bird counts there for several years. We did this as a labor of love knowing the importance of this area to the birds using it for nesting, for resting during migration, and to birds of prey as a food source. All of this to say, I believe I have some standing as the EIS is written.

There needs to be reclamation of native vegetation around the lakes and in the general area. At one time Senator Jeff Bingaman was instrumental in making the area a constructed wetland. For reasons I do not know to me that project was later abandoned. Now the vegetation is removed. This area is a naturally occurring playa that wildlife depends upon for survival.

Please take all forms of wildlife using this area into consideration as you write the EIS and call for habitat improvement by revegetating by using native plants and keeping the public away from nesting areas of the birds using the area

Thank you for considering my comments.

Sincerely,

Eleanor G. Wootten

President T&E, Inc.

PO Box 190

Gila, NM 88038



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

August 13, 2008

Cons. # 22420-2008-FA-0038

Ms. Catherine Giblin
White Sands Test Center
Operations Office
124 Crozier Street, Building 124
White Sands Missile Range, New Mexico 88002

Dear Ms. Giblin:

Thank you for your request to the U.S. Fish and Wildlife Service (Service) for participation in the scoping process for the preparation of an Environmental Impact Statement (EIS) for expanded activities on White Sands Missile Range (WSMR), New Mexico. We received your Notice of Intent to prepare an EIS and information about the public comment period for scoping by electronic mail on July 17, 2008. The EIS would analyze the impacts of new mission requirements and the development of new test and training capabilities. The purpose of the EIS is to assess land use changes within WSMR that may be required to support current and future missions, Army Transformation, the Army Campaign Plan, Future Combat Systems, Grow the Army, and other Army initiatives.

The proposed Federal action to be addressed in the EIS is to adopt an airspace and land use strategy that would support current and future testing, Army stationing actions, training of maneuver elements to include a Heavy Brigade Combat Team (HBCT), and provide expanded maneuver capability for Future Combat Systems. It would also address new weapons firing ranges and capabilities, as well as soldier and family housing, schools, infrastructure, utilities, and administrative and related facilities needed to support stationing of a HBCT of approximately 3,800 soldiers.

Several alternatives would be considered in the EIS, reflecting choices in capabilities to support various types of tests and military training activities. They are briefly described here:

No Action Alternative – This alternative would include current test capabilities and land use designations with current levels of operations and activities.

Alternative 1 – This alternative would include those activities described in the No Action Alternative plus changes in land use to expand testing and maneuver capabilities to include Future Combat Systems and supporting infrastructure. This alternative would support the Grow the Army decision to station a HBCT at WSMR that would require main cantonment expansion and additional support infrastructure.

Ms. Catherine Giblin

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Alternative 2 – This alternative would include those activities described in the No Action Alternative and Alternative 1 and also include the construction and operation of training ranges and the identification of maneuver areas for testing and training on WSMR.

The Service manages three national wildlife refuges (NWR) in and near WSMR. One of these refuges is the San Andres NWR, located within WSMR's boundaries and occupies portions of the Jornada Experimental Range co-use area. A second is the Bosque del Apache NWR, located immediately adjacent to WSMR's northwestern boundary. Third is the Sevilleta NWR, just north of WSMR's northern boundary. The Service plays a role in the implementation of WSMR's Integrated Natural Resources Management Plan (INRMP) and is responsible for assuring compliance with the Endangered Species Act (ESA), the Migratory Bird Treaty Act, the Bald Eagle and Golden Eagle Protection Act, and other statutes and directives.

The Service has the following recommendations and comments on the effects to terrestrial species from implementing any of the three Alternatives described in the Army's June 19, 2008, Notice of Intent to prepare an EIS for major capabilities at WSMR.

General Recommendations

Continue the implementation of the current WSMR INRMP until a new INRMP is developed.

Apply ecosystem management tools—in the context of the current military mission—to preserve, maintain, and/or restore, where appropriate, the native biodiversity and ecological integrity of natural biotic communities, in sufficiently large blocks to avoid ecological fragmentation.

Conserve ecologically important vegetation communities in sufficiently large blocks to minimize habitat fragmentation while supporting mission requirements.

Locate new roads and close unnecessary roads to minimize habitat fragmentation and adverse impacts to ecological integrity.

Preserve and restore, where necessary, unique natural ecological communities and landscape features.

Protect migratory bird resources in accordance with the WSMR Commander's Guidance on the Migratory Bird Treaty Act.

Conserve all species on the installation listed by the State of New Mexico as threatened or endangered in accordance with state laws and Army regulations and guidance.

Continue managing developed and natural water sources for wildlife to support viable wildlife populations and to minimize conflict with mission-related activities.

Minimize military use and access to delineated Special Natural Areas to authorized essential military requirements.

Ms. Catherine Giblin

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Continue protecting all caves and mines supporting wildlife and geologic and geomorphic features from unauthorized entry and to protect and maintain ecological integrity. For all new construction of power lines, implement guidelines for protecting raptors from electrocution.

Bury, where appropriate, all new construction of power lines to avoid bird collisions or electrocutions.

Continue corrective action for existing power poles or transformers where bird electrocution has occurred or may occur.

Monitor to determine whether project activities are causing exotics or undesirable plant invasion, and if so, implement a strategy for control.

Security/stadium lighting along fences and other facilities should be designed to minimize light beyond the designated security zone. Providing either gaps in lighting or utilizing infrared lights in suspected wildlife movement corridors will be important to facilitate these animals natural use of the landscape. Where security lights shine on any habitat areas, keep the intensity level less than 1.5 foot candles. All lights should be shielded from the top to prevent up-lighting.

General Recommendations for Threatened and Endangered Species

Conserve species listed by the Service as threatened or endangered, as well as their designated critical habitats, by using all methods and procedures necessary to bring them to the point where protections provided pursuant to the ESA are no longer necessary.

Document the distribution of federally listed and candidate species and the nonessential experimental population of the northern aplomado falcon (*Falco femoralis septentrionalis*) on the installation and monitor the status of each.

The New Mexico Department of Game and Fish (wildlife) and New Mexico Department of Natural Resources (plants) have responsibilities to address effects to native fauna, including federally listed species, and should be a partner in planning activities.

Continue to consult or conference with the Service on any Federal action (funded, permitted, or authorized) that may affect federally listed species or proposed for listing as threatened or endangered or their designated critical habitats.

Ensure that federally listed species are not "jeopardized" (i.e., actions are avoided that would be expected to directly or indirectly reduce appreciably the likelihood of the survival and recovery of a listed species by reducing its reproduction, numbers, or distribution).

Ensure that federally listed fish or wildlife species are not "taken," nor federally listed plant species destroyed, without a biological opinion from the Service.

Ms. Catherine Giblin

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Conduct a 100 percent inventory of suitable habitat using scientifically accepted methodologies for federally listed, proposed, and candidate species that may occur on the installation.

If a listed, proposed, or candidate species or their designated critical habitat occurs on the installation, prepare and implement an Endangered Species Management Plan (ESMP) in accordance with current Army guidelines and in consultation with the Service.

Access routes into and out of project areas should be laid out to minimize federally listed species habitat disturbance or fragmentation and clearly flagged. No travel outside of those boundaries should occur. The use of existing roads and trails should be maximized in planning site access. All new roads will be designed to avoid stream crossings and/or arroyos and to minimize the risk of erosion or adverse effects to aquatic or floodplain habitats. To the extent possible, areas already disturbed by past activities or those that will be used later in construction should be used for staging, parking, and equipment storage.

Noise levels for day or night construction and maintenance will be minimized for all projects affecting federally listed animals. All generators will be in baffle boxes (a sound-resistant box that is placed over or around a generator), have an attached muffler, or use other noise-abatement methods in accordance with industry standards.

Recommendations for Todsen's Pennyroyal

Todsen's pennyroyal (*Hedeoma todsenii*) is a federally listed endangered plant with critical habitat, and populations are known to occur on WSMR.

Maintain known populations of Todsen's pennyroyal at present or increased numbers to help ensure their conservation.

Protect Todsen's pennyroyal populations from both existing and future threats.

Conduct surveys for additional populations that may exist within the boundaries of WSMR.

Facilitate research that seeks to further knowledge of the ecological requirements, reproductive biology, and life-history of Todsen's pennyroyal and the ecosystems within which the species occurs.

Recommendations for the Northern Aplomado Falcon

The northern aplomado falcon was listed as an endangered species on February 25, 1986 (51 FR 6686). On July 26, 2006 (71 FR 42298), the reintroduced northern aplomado falcon population in New Mexico and Arizona was designated "nonessential experimental," a classification that reduces land management requirements for northern aplomado falcons in these two States. When nonessential experimental populations are located outside a National Wildlife Refuge or in a unit of the National Park System, the Service treats the population as proposed for listing and only two provisions of the ESA apply: section 7(a)1 and section 7(a)4. Section 7(a)1 requires Federal agencies to use their authorities to further the conservation of listed species. Section

Ms. Catherine Giblin

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7(a)4 requires Federal agencies to confer (rather than consult) with the Service on actions that are likely to jeopardize the continued existence of a proposed species. The results of a conference are advisory in nature and do not restrict agencies from carrying out, funding, or authorizing activities.

The historic range of the northern aplomado falcon encompassed WSMR, and there are currently extensive, unfragmented areas of suitable breeding habitat on WSMR for this rare subspecies. The Service greatly appreciates your staff's continuing efforts to fund and help reintroduce northern aplomado falcons on the base beginning in 2007, as well as your coordination with adjoining land managers in this effort. We were pleased to hear in 2008 that a banded northern aplomado falcon was observed several times on WSMR's Stallion Range, and we hope this observation is an indicator of the possible occurrence of breeding pairs of northern aplomado falcons on the base in the near future. The following list describes some of our recommended conservation measures for northern aplomado falcons:

- As soon as possible, prepare and implement a Northern Aplomado Falcon Management Plan in accordance with current Army guidelines and in consultation with the Service. Some of the objectives of this plan should include: a) Conserve suitable northern aplomado falcon breeding habitat in large, contiguous areas; b) limit fragmentation and human disturbance of occupied and unoccupied suitable falcon breeding habitat; and c) restore and protect native grasslands and aplomado falcon nest trees. This plan should also include an Aplomado Falcon Nest Management protocol for the base.
- Low-level aircraft routes (less than 500 feet above ground level), including helicopter and light planes, should avoid northern aplomado falcon nests by at least 2 miles whenever possible to reduce potential noise and human disturbance effects. Maintaining a distance of at least 1,500 feet above ground level would improve protection of northern aplomado falcons from this potential disturbance.

Project Planning and Documentation

Identification of suitable habitats and surveys for the northern aplomado falcon should be conducted during project planning. Surveys typically include systematic observations in suitable habitat for territorial aplomado falcons and/or nest sites. Pre-activity surveys should be conducted by qualified, permitted individuals.

In coordination with Service biologists, avoid locating projects and/or activities within 2 miles of suitable unoccupied and occupied habitat for the northern aplomado falcon to the greatest extent possible.

Avoid impacts to large, tall yucca trees that can be utilized by northern aplomado falcons for nesting. Locate facilities and activities as far from tall yucca trees as possible.

Facilities and activities should be planned in coordination with Service biologists to minimize potential impacts to falcon movements within or adjacent to their territories.

Ms. Catherine Giblin

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If an active northern aplomado falcon territory is discovered during the planning phase of a proposed facility or activity, consider alternate locations at least 2 miles away from the nest and/or center of the territory when feasible.

During Activities, Construction and/or Maintenance

To the maximum extent possible, schedule activities and/or construction and maintenance for roads, fences, or other facilities that must be built closer than 2 miles to occupied northern aplomado falcon habitat between August 1 and January 31 to avoid the falcon breeding season. Staging areas for equipment and supplies should be as far away as practicable from northern aplomado falcon habitats.

For activities, and /or construction and maintenance closer than 2 miles to occupied northern aplomado falcon habitat, activities should be conducted during daylight hours to avoid noise and lighting issues. If construction or maintenance work activities will continue at night, all lights should be shielded to direct light only onto the work site, the minimum wattage needed should be used, and the number of lights should be minimized.

To prevent drowning of northern aplomado falcons, do not use open top liquid storage containers on job sites or provide Service-approved escape ramps.

The Service can provide additional technical assistance on northern aplomado falcon conservation measures as you proceed in planning and developing your Alternatives. We encourage you to analyze potential effects from your project on both northern aplomado falcons and on their suitable breeding habitat for this EIS.

Thank you for the opportunity to participate early in the scoping process for the preparation of the EIS for expanded activities on WSMR. We appreciate the analyses WSMR has provided in the past and your current and future efforts to protect fish and wildlife species. In future communication regarding this project, please refer to Consultation #22420-2008-FA-0038. If you have any questions, please contact Santiago Gonzales or Dr. Patricia Zenone of my staff at the letterhead address or at (505) 761-4720 or (505) 761-4718, respectively.

Sincerely,


Wally Murphy
Field Supervisor

cc:

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry
Division, Santa Fe, New Mexico

AUG-08-2008 13:25 From:

5054768128

To: 678 4082

P. 2/3

GOVERNOR
Bill Richardson



DIRECTOR AND SECRETARY
TO THE COMMISSION
Bruce C. Thompson, Ph.D.

Robert S. Jenks, Deputy Director

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

One Wildlife Way
Post Office Box 25112
Santa Fe, NM 87504
Phone (505) 476-8100
Fax (505) 476-8128

Visit our website at www.wildlife.state.nm.us
For information call 505/476-8000
To order free publications call 1-800-863-9310

STATE GAME COMMISSION

Dr. Tom Arvas, Chairman
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Oscar Simpson, Commissioner
Albuquerque, NM

Leo V. Sims, II, Commissioner
Hobbs, NM

August 8, 2008

Ms. Catherine Giblin
White Sands Test Center, Operations Office
124 Crozier St., Building 124
White Sands Missile Range, NM 88002

Re: Scoping for Development and Implementation of Range-Wide Mission and Major
Capabilities at WSMR, Development of Draft Environmental Impact Statement
NMGF Doc. No. 12190

Dear Ms. Giblin:

The New Mexico Department of Game and Fish (Department) attended the 23 July 2008 public scoping meeting in Socorro for the above-referenced project. Information provided at the public meeting states that the Department of the Army will prepare an Environmental Impact Statement (EIS) and Record of Decisions for expanded activities on White Sands Missile Range (WSMR). The EIS will analyze impacts of new mission requirements and the development of new test and training capabilities. The purpose of the EIS is to assess land use changes within WSMR that may be required to support current and future missions, Army Transformation, the Army Campaign Plan, Future Combat Systems, Grow the Army, and other Army initiatives.

Furthermore, the proposed federal action to be addressed in the EIS is to adopt an airspace and land use strategy that would support current and future testing, Army stationing actions, training of maneuver elements to include a Heavy Brigade Combat Team (HBC T), and provide expanded maneuver capability for Future Combat Systems. It will also address new weapons firing ranges and capabilities, as well as soldier and family housing, schools, infrastructure, utilities, and administrative and related facilities needed to support stationing of an HBC T of approximately 3,800 soldiers. Several alternatives will be considered in the EIS reflecting choices in capabilities to support various types of tests and military training activities.

The Department conducts wildlife management and conservation activities on WSMR that could be affected by these proposed expanded activities. We request that the Draft EIS analyze the potential for negative direct, indirect and cumulative impacts to wildlife and fish species, associated habitats, and Department management and conservation activities including, but not limited to the following:

- The State-listed and endemic (to the Tularosa Basin) White Sands pupfish (*Cyprinodon tularosa*), its aquatic habitats, and Department access to conduct semi-annual monitoring activities conducted in part to preclude the need for federal listing under the federal Endangered Species Act, and as provided for within the multi-agency *Cooperative Agreement for Protection and Maintenance of White Sands Pupfish between U.S. Army White Sands Missile Range, U.S. Air Force Holloman Air Force Base, National Park Service White Sands National Monument, U.S. Fish and Wildlife Service, and New Mexico Department of Game and Fish* (2006).
- The State-listed desert bighorn sheep (*Ovis canadensis mexicana*) population that occurs on and around WSMR, its habitat, and Department access for aerial surveys. Also, the Department has requested an opportunity to work with WSMR to implement cougar control on the Range to directly benefit desert bighorn sheep conservation.

AUG-08-2008 13:25 From:

5054768128

To: 678 4082

P.3/3

Ms. Catherine Giblin

2

August 8, 2008

- Oryx (*Oryx gazelle*) population reduction hunts and associated management activities, including access by Department employees for hunt management and investigations, and aerial surveys.
- Mule deer (*Odocoileus hemionus*) populations and their habitats.

Further, we request that the Draft EIS also adequately analyze direct, indirect and cumulative effects for implementing the proposed actions on:

- Habitat fragmentation and disturbance to wildlife from increased roads, pads, traffic (both on roads and off), noise; and other human activities in currently relatively undisturbed areas, including increased wildlife mortalities from these activities;
- Disturbance to vegetation, primarily from training activities associated with the HIBCT, including the use of tracked vehicles across the landscape, and the associated potential for increased spread of non-native and invasive plant species;
- Water quality and abundance with the Tularosa Basin, especially White Sands pupfish habitats, and impacts to groundwater aquifers and connected surface waters from the large increase in personnel expected.

We appreciate the opportunity to comment on the scoping phase for this project. Should you have any questions regarding our comments, please contact Mark Watson, Habitat Specialist, of my staff at (505) 476-8115, or <mark.watson@state.nm.us>.

Sincerely,



Matt Wunder, Chief
Conservation Services Division

MW/MLW

CC: Wally Murphy (Ecological Services Field Supervisor, USFWS)
Bob Jenks (Deputy Director, NMGF)
David Propst (Native Fishes Biologist, NMGF)
Stephanie Carman (Native Fishes Biologist, NMGF)
Pat Mathis (Southwest Area Habitat Specialist, NMGF)
Eric Rominger (Bighorn Sheep Biologist, NMGF)
Elise Goldstein (Bighorn Sheep Biologist, NMGF)
Mark Watson (Conservation Services Habitat Specialist, NMGF)



United States Department of the Interior

NATIONAL PARK SERVICE
White Sands National Monument
P.O. Box 1086
Holloman AFB, NM 88330



IN REPLY REFER TO:

L7619

August 11, 2008

Ms. Catherine Giblin
White Sands Test Center
124 Crozier Street, Building 124
White Sands Missile Range, NM 88002

Dear Ms. Giblin,

Thank you for the opportunity to provide comments on the Environmental Impact Statement (EIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities for White Sands Missile Range (WSMR).

White Sands Missile Range has had incredible achievements and success through its testing and developmental projects, and these successes will certainly increase with this expansion. In the past, WSMR has been a good neighbor to White Sands National Monument and has been very supportive of the preservation, management, and visitor enjoyment of monument resources.

In review of the scoping information, and the activities map provided at your Las Cruces public meeting, we are pleased to see that WSMR has taken into consideration the sensitive nature of White Sands National Monument. As activity on WSMR increases, the potential for military or contractor heavy equipment and personnel to inadvertently come onto White Sands National Monument lands increases. To prevent this, we would be interested to learn of any additional buffer zones or signage that might be placed along Range Road 10. In addition, we hope that the increased activity would not preclude us from being able to offer visitors the opportunity to participate in the ranger-led Lake Lucero tours. These ranger-led tours, offered once a month, require visitors to transit through WSMR lands.

We look forward to reviewing the EIS when it becomes available. Please don't hesitate to contact David Bustos, White Sands National Monument's Chief of Natural and Cultural Resources, at 575-679-2599, ext 225 if you have any questions.

Sincerely,

Kevin Schneider
Superintendent

**ATTACHMENT C-7
SCOPING MEETING TRANSCRIPTS**

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1 STATE OF NEW MEXICO

2 COUNTY OF DONA ANA

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6 IN RE: Preparation of an Environmental
7 Impact Statement (EIS) for Development and
8 Implementation of Range-Wide Mission and Major
9 Capabilities at White Sands Missile Range (WSMR), New Mexico

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TRANSCRIPT OF PROCEEDINGS

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15 On the 22nd day of July, 2008, beginning at 7:00 p.m., a
16 Public Scoping Meeting was held at 402 West Court Avenue, Las
17 Cruces, New Mexico.

18 At which time, the following proceedings were had:

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1 MS. PETERSON: Hello, my name is Dorothy Peterson,
2 I'm with Potomac-Hudson Engineering. Along with SAIC, we're the
3 lead consultants for the Environmental Impact Statement at White
4 Sands Missile Range. Thank you all for attending tonight's public
5 scoping meeting. You should have all received an agenda at the
6 front of the room. And if you haven't signed in yet, please sign in
7 before you leave tonight. First I'm going to introduce Mr. Dan
8 Hicks, who is from White Sands Missile Range. Then I will give a
9 brief overview of the Environmental Impact Statement. And then
10 lastly we'll hear any comments that you have and ask you to come up
11 to the mike and we have a court reporter who will take down your
12 comments. With that, Mr. Dan Hicks, Chief of Staff, White Sands
13 Missile Range.

14 MR. HICKS: Thank you, Dorothy. Hello, I'm Dan
15 Hicks, Chief of Staff out at White Sands Missile Range and I want to
16 welcome and thank you all for attending this public scoping meeting
17 of the Environmental Impact Statement for the development and
18 implementation of the range-wide EIS for the White Sands mission and
19 some of our key capabilities. This EIS is very important to our
20 future at White Sands.

21 Let me point your attention to all the poster boards there
22 on the back, I'd like you to please take the time to visit the
23 poster boards and talk with Potomac-Hudson staff, that'll help us
24 all get through the NEPA process. You're going to receive a short
25 briefing from Potomac-Hudson right after I get off the stage. And

1 again, I encourage you to, at the end of the presentation, make
2 comments and at the end of that, your input, of course, is very
3 important to the preparation of the EIS and I thank you for your
4 participation in tonight's event. Thank you.

5 MS. PETERSON: Okay. So tonight, I'm going to
6 briefly introduce the project team, some of you have already met
7 them at the poster stations. I'll discuss the process for the
8 National Environmental Policy Act or NEPA. I'll go over the purpose
9 and need for the proposed action, the proposed action and
10 alternatives. SAIC, Susan Goodan, will come up and talk about the
11 proposed land use and airspace strategy plan. I'll discuss the
12 posters that you see around the room. Talk about the schedules of
13 the EIS. And then lastly, go over the ways in which the public can
14 comment on the scope of the EIS.

15 I'm going to ask this person to stand: Ms. Cathy
16 Giblin, who is the EIS project manager for White Sands Missile
17 Range. Mr. Eric Wolters of the Army Environmental Center.
18 Ms. Monty Marlin, White Sands Public Affairs. Mr. Russ Koch,
19 Environmental Branch. Of course myself. And then Ms. Susan Goodan
20 from SAIC.

21 The National Environmental Policy Act of 1969 was
22 enacted to require federal agencies to consider the environmental
23 consequences of their actions and to study those impacts in a way
24 that they can make informed decisions. Public involvement is a key
25 aspect of the National Environmental Policy Act and it begins with

1 public scoping meetings like tonight's meeting.

2 Scoping is the process in which we define the issues of
3 importance that will be analyzed in the EIS. It allows the public
4 and agencies to provide input on specific topics of concern as it
5 relates to the proposed action. After the scoping process, a Draft
6 EIS will be published and the public will again have an opportunity
7 to review the draft EIS and provide comments.

8 This is an overview of the milestones that are typically
9 found in the EIS process. As you can see, we are at the very
10 beginning of a 30-day scoping period. From there, we're going to
11 take your comments, incorporate them into the Draft EIS and then
12 that will be published. From there, we'll publish a Notice of
13 Availability of the EIS and you'll have again, another opportunity
14 to comment. From there, we incorporate your comments into the Final
15 EIS. The Army will publish a Notice of Availability of the final
16 EIS. And afterwards, the Army will publish a Record of Decision
17 outlining the preferred alternative.

18 The NEPA process begins with the agency defining the
19 purpose and need for action. For this particular EIS, the Army
20 needs to support Army transformational initiatives. The Army
21 campaign plan, future combat systems, Grow the Army and other Army
22 initiatives. And in order to do that at White Sands Missile Range,
23 the range decided that it needed a flexible capabilities-based
24 airspace and land use plan. And that was determined because there
25 were rapidly evolving customer needs and that they needed to support

1 current and future missions and also support a full range of test
2 and training activities on the base. In the EIS they will analyze
3 three alternatives. The No Action Alternative, which includes
4 current test capabilities and land uses at the current levels of
5 operation. Alternative 1 includes the No Action but also expands
6 testing and maneuver capabilities and also expansion of the main
7 cantonment area to provide infrastructure necessary to station the
8 Heavy Brigade Combat Team which was decided through the Grow the
9 Army EIS. And also station a Second Engineer Bat, the Second
10 Engineer Battalion. And these needs will leverage considerable
11 range modernization that is taking place at Fort Bliss.

12 And for Alternative 2, all the actions in Alternative 1
13 would take place but it would also include the construction and
14 operation of training ranges and the identification of maneuver
15 areas for testing and training on White Sands. I'm going to ask
16 Susan Goodan to talk about the land use and airspace strategy plan.

17 MS. GOODAN: Good evening. I'll give you a brief
18 background to the land use and airspace plan and we can talk more
19 later at the work stations. A few years ago it became clear that
20 different requests were coming to White Sands for new kinds of
21 programs and these were quite different to those in the past. So
22 Cathy wanted some -- she had foresight in thinking well, what can we
23 do to get a handle on what changes need to take place to allow all
24 these different new programs to come here. And we decided to create
25 a land use airspace strategy plan, it needed to have a lot of

1 flexibility.

2 So the first look we took at the 2.1, 2.2 million
3 acres of land that White Sands boundary goes around, plus the
4 extended airspace so there's six million acres or more. So we
5 divided this up in more or less a geopolitical way, it includes
6 areas like the National Monument, the Joronado Experimental Range,
7 Holloman, lands outside the boundary where there's airspace, they
8 call some of these call-up areas. So these became our building
9 blocks for land use. At the same time we started to look at what
10 activities occur currently at White Sands and we defined several
11 categories of activities. Then we kind of created a matrix where we
12 took each of the land use areas and said what collection of
13 activities occur in each one of those areas.

14 So land use is not one single activity but a bundle
15 of them and we have handouts where you can see what the scheme is.
16 And this becomes the kind of building, the basis for allowing White
17 Sands to say well, what if we change activities in a certain area or
18 what if we need to adjust a boundary or an intensity of activity.
19 So it's kind of the framework and it's also going to be aligned with
20 some of their management, the sustainable range and the I-10 program
21 so that we are looking at the landscape and we can make kind of
22 management decisions that function both environmentally to sustain
23 the range and allow the operational needs to meet the missions of
24 the future.

25 MS. PETERSON: Thank you. Next, the poster stations,

1 if you haven't been by to see them, they're in a particular order,
2 we start off with the NEPA process and you can ask people from the
3 environmental branch and also Potomac-Hudson more about the process.
4 Also next is project alternatives and there'll be staff from White
5 Sands to answer your questions. And then lastly, SAIC will be
6 available to go over the land use maps that are associated with
7 Alternative 1 and 2.

8 This is the current schedule for the EIS. Right now
9 we are in the scoping period which ends on August 8th. If you have
10 comments, that's when we need them by. The Draft EIS is expected to
11 be available in January 2009. And we will have meetings similar to
12 this in January to go over your comments to the Draft. The Final
13 EIS is scheduled to be published in April 2009 and a Record of
14 Decision is expected in May 2009.

15 There are handouts at both of the front desk and each
16 of the tables by the poster stations, which are comment forms but
17 also give this address of where to provide comments. You may also
18 fax comments or e-mail comments to this address. If you have
19 comments tonight, you may fill out the form and then drop them in
20 the box on your way out. If you want to give your comments orally
21 tonight, we're going to ask commenters to come up to the microphone.
22 We have a stenographer here who will record your comments. When you
23 come up, please state and then spell your name for her. And then
24 provide your affiliation, what organization you're from. We ask
25 that you limit your remarks to five minutes so that everyone has an

1 opportunity to speak. And after -- well, we don't actually have a
2 list tonight but if we did, others would come up later. And then we
3 do have a Spanish translator available for those who need one.

4 Thank you again for your participation. If there's
5 anyone who would like to give a comment to the mike, please come up
6 now. Okay, then, this is a very easy public meeting for us all. We
7 will have our people go back to the poster stations in case you have
8 some questions but with that, we're going to adjourn. Thank you
9 very much and again, if you haven't signed in, please sign in on
10 your way out and please take a comment card, thank you.

11 (Proceedings concluded at 7:13 p.m.)

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1 IN RE:
2 EIS for Development and Implementation
3 of Range-Wide Mission and Major Capabilities
4 at White Sands Missile Range, New Mexico.

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REPORTER'S CERTIFICATE

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7 I, R. JAN WIMBERLY, NM CCR #13, DO HEREBY CERTIFY that I did,
8 in stenographic shorthand, transcribe the proceedings set forth
9 herein, and the foregoing pages are a true and correct transcript to
10 the best of my ability.

11 I FURTHER CERTIFY that I am neither employed by nor related to
12 nor contracted with (unless excepted by the rules) any of the
13 parties in this matter, and that I have no interest whatsoever in
14 the final disposition of this matter.

15 DATED at Alamogordo, New Mexico this 4th day of August, 2008.

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JAN WIMBERLY, CCR
NEW MEXICO CCR #13
DAMA'S REPORTING SERVICE
P.O. Box 2022
Alamogordo, New Mexico 88311

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Public Scoping Meeting
for the
Environmental Impact Statement for
Development and Implementation of
Range-Wide Mission and Major
Capabilities at White Sands
Missile Range, New Mexico

Wednesday, July 23, 2008
Socorro, New Mexico

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A P P E A R A N C E S

- Dorothy Peterson, PHE, Project Manager
- Dan Hicks, WSMR, Chief of Staff
- Susan Goodan, SAIC, Project Manager

Also present:

- Amanda Stevens
- Mark Watson
- Shane Fullmer
- Blake Summerlin
- Frank Chavez
- Cathy Giblin
- Ron Hickok
- Robert Peters
- India Nicholson
- Jim Bowmen
- Monte Marline
- Junior Kerns
- Renee Blotske
- Debbie Nethers

1 Ms. Peterson: Hello. Welcome. My name is
2 Dorothy Peterson. I'm with Potomac-Hudson Engineering,
3 along with SAIC. We are the lead consultants for the
4 Environmental Impact Statement at White Sands Missile
5 Range.

6 Thank you all for attending tonight's public
7 scoping meeting. You should have signed in when you
8 came in at the front and if you haven't done so, please
9 do so before you leave tonight.

10 First, tonight we will be introducing
11 Mr. Dan Hicks, Chief of Staff at White Sands Missile
12 Range, and then I will give a brief overview of the EIS.
13 And then lastly, we will ask the public to come up to
14 the mic and give any comments that they might have to
15 the court reporter.

16 With that, let me introduce Mr. Dan Hicks, White
17 Sands Missile Range.

18 MR. HICKS: Thank you, Dorothy.

19 Also, other leaders with me here tonight are:
20 Ron Hickok, the Deputy Garrison Commander from White
21 Sands; Frank Chavez, the Executive Director for White
22 Sands Test Center, and Colonel Shane Fullmer and
23 Sergeant Summerlin from the FCS, Future Combat System
24 Program.

25 Welcome and thank you all for attending this

1 Public Scoping Meeting of our Environmental Impact
2 Statement for the future development and implementation
3 of the mission-wide EIS and the capabilities that we're
4 using to try to get a place for our future growth. This
5 EIS that we have is very important to our future of the
6 installation.

7 If you haven't had time yet to look at the
8 posterboards in the back of the room, please do so. I
9 invite you to take the time to go through that and talk
10 to some of the staff that we have here. Dorothy from
11 Potomac-Hudson will follow me with a brief overview of
12 our actions that we're proposing and also the process
13 that you can use to provide comments into our
14 Environmental Impact Statement. And, again, your input
15 into this is very important to us and to the preparation
16 of our EIS, and I thank you for your participation here
17 tonight.

18 MS. PETERSON: So briefly I'm going to
19 introduce the project team, and then I'll discuss the
20 NEPA Process, the purpose and need for agency action,
21 the proposed action and alternatives. I'll bring up
22 SAIC to talk about the Land Use and Airspace Strategy
23 Plan. I'll go over the poster stations that are in the
24 back, and I'll discuss the EIS schedule and then lastly,
25 indicate the ways in which the public can comment on the

1 scope of the EIS.

2 First, we have Ms. Cathy Giblin. She is the
3 project manager for the EIS White Sands. Then we have
4 Mr. Eric Wolters. He's with the Army Environmental
5 Center. Ms. Monte Marlin, she's with White Sands Public
6 Affairs. Mr. Russ Koch, is he --

7 UNIDENTIFIED SPEAKER: He's not here.

8 MS. PETERSON: Okay. Of course, myself, and
9 then Susan Goodan from SAIC.

10 The National Environmental Policy Act of 1969 was
11 enacted to require federal agencies to consider the
12 environmental consequences of their actions and to
13 evaluate the impacts of their actions and use that
14 information in their decision-making process. Public
15 involvement is a key aspect of the NEPA Process, and it
16 begins with public scoping meetings like tonight.

17 Scoping is the process in which the public helps
18 define the issues that will be analyzed in the EIS. It
19 allows the public and agencies to provide input on
20 specific topics of concern as it relates to the proposed
21 action. The public has an opportunity later, after the
22 draft is published, to comment on the Draft EIS.

23 As you can see, we are very early in the process.
24 As you can see, this is the arrow that is the start of
25 the comment period. It's a 30-day comment period, and

1 our particular comment period ends on August 8th. After
2 we receive your comments, we will begin the preparation
3 of the Draft EIS. That will be made available to the
4 public, and there will be a Notice of Availability
5 followed by meetings on the draft. Based on the
6 comments we receive on the draft, we will incorporate
7 those into the Final EIS. The Army will draft a Notice
8 of Availability of the Final EIS. There will be a
9 30-day waiting period, and then the Army will publish
10 the Record of Decision outlining the decisions made from
11 the EIS.

12 The purpose and need for the agency action is to
13 support Army initiatives, including Army Transformation,
14 the Army Campaign Plan, Future Combat Systems and Grow
15 the Army. White Sands determined that they needed a
16 flexible, capabilities based airspace and land uses plan
17 to accommodate new customer needs, support current and
18 future missions, and support a range of test and
19 training efforts.

20 The alternatives that are outlined in the notice
21 of intent are: the No Action Alternative, which
22 includes the current test capabilities and land use
23 designations with current levels of operations and
24 activities. This allows the Army to establish a
25 baseline in which to evaluate the other alternatives.

1 Alternative 1 includes the No Action Alternative,
2 but also expands testing and maneuver capabilities to
3 support Future Combat Systems and provide supporting
4 infrastructure for the Heavy Brigade Combat Team, which
5 also requires main cantonment expansion. Newly
6 stationed units would use the considerable range
7 modernization that is taking place at Fort Bliss.

8 Alternative 2 includes Alternative 1, but also
9 includes construction and operation of training ranges
10 and identification of maneuver areas for testing and
11 training on White Sands.

12 Now I'll bring up Susan Goodan who will talk
13 about the Land Use and Airspace Strategy Plan.

14 MS. GOODAN: Good evening. Without -- I
15 think, a year and a half ago Cathy had the foresight to
16 realize that there were test customers requesting access
17 to the range that were bringing totally new land uses
18 than they'd had historically in the past, and to get our
19 arms around this, she wanted to create a Land Use and
20 Airspace Strategy Plan, and we started to do this by
21 looking at are there -- is there some way to break up
22 the huge area that White Sands encompasses, 2.2 million
23 acres of land within its -- inside its boundaries, and
24 then further extended airspace area. And there is the
25 geopolitical boundaries of different entities that have

1 blend within that. It became a natural way to divide
2 the land up.

3 We also looked at what activities are taking
4 place at White Sands today. We talked to many of the
5 test programs and the Garrison, a full range of people
6 who have management activities, as well as mission
7 activities on the range, and we defined these
8 activities. Then we took each of the land use areas,
9 the geopolitical areas that we identified and figured
10 out what activities take place in each of those. So it
11 was kind of like a matrix.

12 This is a very broad framework, and it gives
13 White Sands the flexibility that it's going to need in
14 the future to continue to support missions. One of the
15 primary changes that they're considering right now is to
16 allow access to more parts of the range for off-road
17 activity. So that's the biggest change at this point in
18 time.

19 Another thing that's happening is the expansion
20 of what we've called built-up areas in key locations on
21 the range, primarily the main cantonment, and some of
22 the existing outlying range camp areas. They're
23 anticipating some expansion. So that is the basis of
24 the Land Use and Airspace Strategy Plan at the moment.
25 It allows us to also make changes in the future. If

1 they need to change activities, they can have a basis
2 for doing that and considering it in the future, as
3 well.

4 If you'd like more information, please come and
5 talk to us at the boards later, and you can see it
6 illustrated, as well.

7 MS. PETERSON: As Susan said there are
8 posters around the back. As you are facing the back to
9 the right is a poster of the NEPA Process, and we'll
10 have people back there that can talk about the process.
11 Ms. Cathy Giblin from White Sands is available to talk
12 about the project alternatives. And lastly, SAIC will
13 be able to address the land use maps that are in the
14 back of the room.

15 This is our current schedule for the EIS. As I
16 said previously, the scoping period ends on August 8th.
17 We expect the Draft EIS to be out in January of 2009.
18 The Final EIS will be published in April of 2009, the
19 Record of Decision in May of 2009.

20 Again, written comments can be mailed, faxed, or
21 e-mailed by August 8th to the following address. There
22 are handouts with -- that are comment forms that provide
23 this address at each of the tables in the back and,
24 also, at the sign-in desk. You may also fill out the
25 comment form tonight and just place it in the box by the

1 sign-in desk.

2 We are also taking verbal comments tonight. If
3 you wish to come up to the microphone, basically raise
4 your hand, and we'll bring you up here. Please state
5 and spell your name first for the stenographer and
6 indicate if you're with any agencies or any groups at
7 all. Please limit your remarks to five minutes so that
8 others may have an opportunity to speak. We do not have
9 a list tonight. And if you need a Spanish translator,
10 one is available.

11 Thank you again for your participation. Now,
12 I'll ask if anyone wants to come up and give any
13 comments?

14 [No response.]

15 MS. PETERSON: Okay. Well, again, if you
16 want to provide written comments, you can e-mail, fax,
17 or send them in tonight. You can mail them in before
18 August 8th. Thank you again for your participation.
19 We'll have people in the back to answer your questions
20 at the poster stations and have a good night.

21 [Proceedings concluded at 7:11 PM.]

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REPORTER'S CERTIFICATE

I, Andrea M. Smith, CCR, a Certified Court Reporter, do hereby certify that the proceedings of the above-entitled cause were reported by me stenographically on July 23, 2008, and that the within transcript is a true and accurate transcription of my shorthand notes.

I FURTHER CERTIFY that I am neither an attorney nor counsel for, nor related to or employed by any of the parties to the action, and that I am not a relative or employee of any attorney or counsel employed by the parties hereto, or financially interested in the action.

Andrea M. Smith, RPR
Certified Court Reporter #127
License Expires: 12/31/2008

1 STATE OF NEW MEXICO

2 COUNTY OF OTERO

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6 IN RE: Preparation of an Environmental
7 Impact Statement (EIS) for Development and
8 Implementation of Range-Wide Mission and Major
9 Capabilities at White Sands Missile Range (WSMR), New Mexico

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TRANSCRIPT OF PROCEEDINGS

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15 On the 24th day of July, 2008, beginning at 7:00 p.m., a
16 Public Scoping Meeting was held at 1000 New York Avenue, Alamogordo,
17 New Mexico.

18 At which time, the following proceedings were had:

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1 MS. PETERSON: Hello, my name is Dorothy Peterson,
2 I'm with Potomac-Hudson Engineering. And along with SAIC, we are
3 the lead consultant for the Environmental Impact Statement for White
4 Sands Missile Range. Thank you all for attending tonight's meeting.
5 You should have received an agenda when you signed in at the
6 beginning. If you haven't signed in, please do so before you leave
7 tonight. This is tonight's agenda: First I'm going to introduce
8 Mr. Dan Hicks, Chief of Staff at White Sands Missile Range, who will
9 give a few brief remarks. Then I will give an overview of the EIS.
10 And then lastly, we'll hear your public comments. Mr. Dan Hicks,
11 White Sands Missile Range, Chief of Staff.

12 MR. HICKS: Thank you, Dorothy. Also with me tonight
13 are some other leaders I'd like to point out, Mr. Frank Chavez,
14 Executive Test Director of the Test Center at White Sands Missile
15 Range. And we have Jerry Tyree here with us from the Future Combat
16 System. Welcome and thank you for participating in tonight's open
17 public scoping session for the Environmental Impact Statement for
18 the development and implementation of the range-wide mission and
19 major capabilities at White Sands Missile Range.

20 This EIS is very important to the future of White
21 Sands. Some of you have had the opportunity to look at some of the
22 poster boards in the back and the side of the room and I encourage
23 you, after this presentation to please take some time and look at
24 those poster boards. Also I'll be followed by Dorothy from
25 Potomac-Hudson again and she'll give a brief outline of our proposed

1 actions that we went to pursue and also the process of how you can
2 provide comment into this Environmental Impact Statement. And
3 again, just in summary, I want to thank you all for being with us
4 this evening and participating in this important event.

5 MS. PETERSON: First I'll give, I'll briefly
6 introduce the project team, then I'll go over the National
7 Environmental Policy Act process, discuss the purpose and need for
8 agency action, the proposed action and alternatives. Susan Goodan
9 from SAIC will talk about the proposed land use and airspace
10 strategy plan. I'll go over the posters that are around the room,
11 talk about the EIS schedule, and lastly, go over the ways in which
12 the public can comment on the scope of the EIS.

13 First we have Ms. Cathy Giblin, White Sands Missile
14 Range EIS project manager. Mr. Eric Wolters, Army Environmental
15 Center. Ms. Monty Marlin, is she here? I'm sorry, White Sands
16 Public Affairs.

17 MR. HICKS: Lisa Blevin is with us tonight.

18 MS. PETERSON: Lisa. Mr. Russ Koch, White Sands
19 Environmental Scientist, myself, and Ms. Susan Goodan from SAIC.
20 The National Environmental Policy Act of 1969 was enacted to require
21 federal agencies to consider the environmental impacts of their
22 proposed actions and evaluate alternatives so that they could make
23 informed decisions. Public involvement is a key aspect of the NEPA
24 process and it begins with public scoping meetings like tonight's.

25 Scoping is the process in which the public helps

1 define the issues that will be analyzed in the EIS. It allows the
2 public and agencies to provide input on topics of concern to them as
3 it relates to the proposed action. The public will also have an
4 opportunity, later in the process when the Draft EIS is available
5 for comment.

6 As you can see, we're early in the process. We
7 recently issued a Notice of Intent for the EIS. We began a 30-day
8 public comment period which ends on August 8th. Then after we
9 receive your comments, we'll review them and incorporate them into
10 the EIS and prepare a Draft EIS. We'll publish a Notice of
11 Availability of the draft and again have a comment period on that
12 draft for 45 days. We'll then prepare the Final EIS using your
13 input. A Notice of Availability of the Final EIS will be published.
14 And after a 30-day waiting period, the Army will publish a Record of
15 Decision.

16 The purpose and need for agency action is to support
17 many Army initiatives, including Army transformation, the Army
18 campaign plan, future combat systems, Grow the Army and other
19 initiatives. White Sands realized that it needed a flexible
20 capabilities-based airspace and land use plan. Because there were
21 rapidly evolving customer needs they needed to support current and
22 future mission activities and they needed to support a full range of
23 test and training efforts.

24 The EIS will evaluate three alternatives. The first
25 being the No Action Alternative, which includes current test

1 capabilities and land use designations with their current levels of
2 operations and activities. This establishes a baseline in which to
3 evaluate the impacts of the other alternatives. Alternative 1
4 includes the No Action Alternative but also has changes in land uses
5 to expand testing and maneuver capabilities. It supports the Grow
6 the Army decision to station a Heavy Brigade Combat Team and to
7 expand the main cantonment area with infrastructure necessary to
8 support that team. There will also be -- also stationed will be a
9 Second Engineer Battalion. These units will leverage a considerable
10 range modernization that is taking place at Fort Bliss.

11 Alternative 2 includes Alternative 1, however, it
12 includes the construction and operation of training ranges and the
13 identification of maneuver areas for testing and training on White
14 Sands. Now I'll bring up Ms. Susan Goodan, who will talk about the
15 land use plan.

16 MS. GOODAN: Good evening. About a couple of years
17 ago, Cathy had the foresight to realize that the test customers that
18 were coming to White Sands and needing to get, or would like to get
19 access to the range had totally new requirements. And so to get her
20 arms around that and to allow White Sands to get their arms around
21 that, we started a process of land use and airspace strategy plan.
22 And the first thing we did in this was tried to understand well,
23 what happens, how is the land and airspace being used now? And we
24 looked at the boundaries of the installation and the boundaries of a
25 lot of existing really geopolitical units that are there. Like the

1 National Monument is within the boundary of White Sands, they have a
2 National Wildlife Refuge, Joronado Experimental Range. And then
3 outside their boundaries, airspace extends over BLM and private land
4 as well.

5 So we use these to define basic land units. At the
6 same time, we started talking to various test program operators on
7 the range and the environmental staff, people who manage the range,
8 and talked about well, what activities occur. And we came up with
9 several activities, we have a handout over here that describes the
10 activity categories that we came up with. So we took all the land
11 pieces, the surface footprint that we had broken down and we matched
12 what activities occur in each of those.

13 This is really just a framework but what it does is
14 it gives White Sands a way of knowing what's going on in what parts
15 of the range. And if they choose in the future to consider a
16 different type of activity, they can say okay, well, in this area we
17 would like to also do this or we'd like to expand how we do this
18 activity. Or in the case of what's happening now, the main changes
19 that they're looking at are some of the main cantonment expansion,
20 the area there, the built-up areas, they're going to need to expand
21 those. And also to meet the needs of some of the programs, a big
22 program that's interested in testing at White Sands, they would need
23 to be able to support more off-road vehicle activity.

24 So with this framework, the intention is that they're
25 also, we're trying to align this land use and airspace strategy plan

1 with some of the management that the environmental people are doing
2 out at White Sands. They have, we're dividing the area up kind of
3 ecologically and based on some of the operational activities as
4 well. So we're trying to make these two work together. And out of
5 the EIS we'll be developing more information about what the
6 resources are on the range. And in some cases, what they may need
7 to find out more about.

8 So this is to help provide, as I said, a framework and
9 it's to help them be able to manage and sustain the environment, as
10 well as to support the future mission. Thank you very much.

11 MS. PETERSON: If you haven't had an opportunity yet,
12 there are posters around the room. One is describing the NEPA
13 process that I went over earlier. There's a poster about project
14 alternatives and Ms. Cathy Giblin from White Sands will be available
15 to answer your questions about the alternatives. And then there are
16 four land use posters that members from SAIC will be able to address
17 your concerns about.

18 This is the current EIS schedule. As stated
19 previously, the scoping period ends on August 8th. The Draft EIS is
20 expected out in January of 2009, with the public comment meetings
21 happening in that same time frame. The Final EIS is scheduled to be
22 published in April 2009, with a Record of Decision in May 2009.

23 Written comments may be mailed, faxed or e-mailed by
24 August 8th to this address, or a fax or e-mail address shown here.
25 There are several comment forms around the room, if you pick one of

1 those up, it will have the same address and e-mail and fax number.
2 You may also fill out a form tonight and leave it in the box where
3 you signed in.

4 We are also taking oral comments tonight here at the
5 microphone. If you've signed up, we'll ask you to come in, I don't
6 know if anyone's signed up. A stenographer is here to record your
7 comments for the record. If you come up, please state and spell
8 your name first and then identify any organization you're with. We
9 ask you to limit your remarks to five minutes so that others may
10 have an opportunity to speak. After the list is finished, others
11 may line up. And if you need a Spanish translator, we can provide
12 one.

13 Thank you again for your participation. And we are
14 here to hear your comments so we'll also be around the room at the
15 poster stations if you have additional questions and want to talk to
16 people one-on-one, thank you. Okay, no one has signed up to speak
17 so I'm going to open up the floor. Is there anyone here that would
18 like to come to the mike and express some concerns or identify
19 anything that they want analyzed in the EIS? Okay, I'll take that
20 as a no. Again, we will be at the poster stations and there are
21 plenty of folks from White Sands to talk to about various things, so
22 thank you again for attending.

23 (Proceedings concluded at 7:19 p.m.)

24

25

1 IN RE:
EIS for Development and Implementation
2 of Range-Wide Mission and Major Capabilities
at White Sands Missile Range, New Mexico.
3

4

5

REPORTER'S CERTIFICATE

6

7 I, R. JAN WIMBERLY, NM CCR #13, DO HEREBY CERTIFY that I did,
8 in stenographic shorthand, transcribe the proceedings set forth
9 herein, and the foregoing pages are a true and correct transcript to
10 the best of my ability.

11 I FURTHER CERTIFY that I am neither employed by nor related to
12 nor contracted with (unless excepted by the rules) any of the
13 parties in this matter, and that I have no interest whatsoever in
14 the final disposition of this matter.

15 DATED at Alamogordo, New Mexico this 4th day of August, 2008.

16

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JAN WIMBERLY, CCR
NEW MEXICO CCR #13
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Alamogordo, New Mexico 88311

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APPENDIX D
PUBLIC COMMENT SUMMARY

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APPENDIX D
PUBLIC COMMENT REPORT

on the

**Environmental Impact Statement for Development
and Implementation of Range-Wide Mission and
Major Capabilities at White Sands Missile Range, New Mexico**

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- ATTACHMENT D-1 – Notice of Availability
- ATTACHMENT D-2 – Draft EIS Distribution List
- ATTACHMENT D-3 – Letters and E-Mail Notification
- ATTACHMENT D-4 – Affidavits of Publication
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- ATTACHMENT D-6 – Public Meeting Transcripts
- ATTACHMENT D-7 – Public Comments and Responses

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D.1.1 Introduction

On May 8, 2009, the Army issued a Notice of Availability (NOA) for the Draft Environmental Impact Statement (EIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range (WSMR). The NOA initiated the public comment period where members of the public (including Federal, State, and local agencies, affected Federally-recognized Indian tribes, and other interested persons) were invited to comment on the content of the Draft EIS (Attachment D-1). As part of the NOA, comments and suggestions were requested to be received within the 45-day public comment period, which was later extended by two weeks to July 6 due to technical problems with the WSMR website that temporarily denied public access to the Draft EIS via the internet. The NOA stated that public meetings would be announced in advance in local news media.

WSMR mailed letters to potential interested parties on May 5, 2009 and on June 2, 2009 a second mailing was performed to announce the extension of the comment period. The mailing distribution list is provided in Attachment D-2 and the letters and emails in Attachment D-3.

WSMR conducted the public meetings in which Federal agencies, private-sector organizations, and the general public were invited to present written and/or oral comments on the WSMR Draft EIS.

D.1.2 Public Meetings

WSMR held three public meetings for the WSMR Draft EIS; the dates and locations of these meetings are shown in Table D-1. The meeting locations were in the vicinity of WSMR.

Table D-1. Public Meeting Locations and Dates

Location	Date
Otero County Administration 1101 New York Avenue, Alamogordo, New Mexico	June 2, 2009
Hotel Encanto 705 South Telshor Boulevard, Las Cruces, New Mexico	June 3, 2009
The Macey Center 801 Leroy Place, New Mexico Institute of Mining and Technology Campus, Socorro, New Mexico	June 4, 2009

In addition to the NOA published in the *Federal Register*, WSMR published notices in five local newspapers during the weeks of May 4, 2009 and June 1, 2009, as shown in Table D-2. The May advertisements announced the availability of the Draft EIS and the public meetings; the June advertisements announced the extension of the comment period by two weeks. Copies of the Affidavits of Publication are provided in Attachment D-4. The public comment period ended on July 6, 2009.

Table D-2. Dates and Publications for Advertisements

Meeting Location/Newspaper	Dates of Publication
Regional Newspaper	
El Paso Times	Friday (5/8/09) Wednesday (6/3/09)
Las Cruces, New Mexico	
Las Cruces Sun News	Friday (5/8/09) Wednesday (6/3/09)
Las Cruces Bulletin	Friday (5/8/09) Friday (6/5/09)
Socorro, New Mexico	
Defensor Chieftain	Friday (5/8/09) Wednesday (6/3/09)
Alamogordo, New Mexico	
Alamogordo Daily News	Friday (5/8/09) Wednesday (6/3/09)

Each meeting began with an informal poster session from 6:00 pm to 7:00 pm, during which attendees were given informational handouts regarding the Proposed Action and Alternatives and were able to view project-related posters. WSMR and the Potomac-Hudson Engineering (PHE) Team personnel were available to answer questions. The informal open house was followed by a formal presentation that explained the NEPA process, the Purpose and Need for Agency Action, the Proposed Action and Alternatives, the proposed Land Use and Airspace Strategy Plan, notable impacts of the alternatives, potential mitigation measures, and the ways in which the public could submit comments on the Draft EIS. All meetings were adjourned when the oral public comment session ended.

Mr. Frank Chavez, Executive Director of the White Sands Test Center, welcomed attendees, provided a brief explanation of the purpose of the meeting, and explained the importance of public participation in the NEPA process. Ms. Dorothy Peterson, Project Manager and Ms. Susan Goodan then gave presentations covering: the NEPA process, the Purpose and Need for Agency Action, the Proposed Action and Alternatives, the proposed Land Use and Airspace Strategy Plan, notable impacts of the alternatives, potential mitigation measures, the poster display stations, the EIS schedule, and the public comment process. Full transcripts of the formal presentations are provided in Attachment D-7. After the formal presentation, the public was invited to give oral comments. A court reporter was present at each meeting to ensure that any oral comments were recorded and legally transcribed.

Collectively, 15 members of the public attended the public meetings (Table D-3). The meeting sign-in sheets are located in Attachment D-5.

Table D-3. Attendance at Public Meetings

Meeting Location	Number of People in Attendance ¹
Alamogordo, New Mexico	3
Las Cruces, New Mexico	7
Socorro, New Mexico	5
Total	15

1. Based on individuals who signed the attendance sign-in sheets.

Comment sheets were made available for all attendees to provide written comments at the meeting, or to be faxed or mailed to WSMR. An email address, a postal address, and a fax number were provided. The comment form allowed individuals to request a copy of the Final EIS (hard copy and/or a compact disk [CD]).

Two members of the public provided oral comments at the three public meetings; a total of 10 written comments were received during the comment period (Table D-4). Copies of all comments received on the Draft EIS are provided in Attachment D-6.

Table D-4. Number of Individuals/Agencies Who Submitted Comments or Comment Forms

Types of Comments	Number of Individuals/Agencies Who Submitted Comments ¹
Oral Comments, Alamogordo, New Mexico	1
Oral Comments, Las Cruces, New Mexico	1
Oral Comments, Socorro, New Mexico	0
Written Comments	10
Total	12

1. Includes comments received at public comment meetings, by email, facsimile, U.S. Postal Service, or telephone. Also includes comment forms or letters that requested receipt of the Final EIS.

D.1.3 Public Comments and Concerns

Comments on the Draft EIS are consolidated, summarized, and are listed in Table D-5. The majority of the commenters were concerned either with the decision not to station a HBCT at WSMR or the protection of natural resources in general. The U.S. Fish and Wildlife Service (USFWS) provided several recommendations for mitigation measures, Best Management Practices, and management actions that they would like to be included in the Final EIS. White Sands National Monument expressed concerns about several potential issues that could affect the monument including erosion, additional groundwater use, accidental off-road vehicle incursions onto monument land, and the preservation of the monument's viewshed. The Bureau of Land Management (BLM) provided several comments primarily concerned with describing BLM-administered lands accurately and addressing the potential impacts to those lands. BLM also expressed concern for impacts to oryx populations and management strategies from a decreased availability of WSMR land for hunting. The New Mexico Department of Game and Fish (NMDGF) provided several comments primarily concerned with protection of vegetation and habitat, White Sands pupfish, migratory birds, and mitigation.

D.1.4 Native American Consultation

The Draft EIS was sent to the Native American Tribes in New Mexico and Texas whom may have an interest in activities at WSMR for their review and comment. The following Tribal Nations received copies of the Draft EIS: the Mescalero Apache, Ysleta del Sur Pueblo, Navajo, Comanche, Kiowa, and the Isleta Pueblo. No comments were received from the Mescalero Apache, Ysleta del Sur Pueblo, Comanche and Kiowa Nations. The Navajo Tribe stated that they had no interest in the region and did not wish to review the EIS. The Isleta Pueblo Tribes' Governor responded that they had no concerns with the Draft EIS.

Table D-5. Summary of Comments Received

Comment Number	Commenter (name, title)	Date of Comment	Comment Summary
1	Will McWhorter, Las Cruces Resident	June 3, 2009	<ul style="list-style-type: none"> During the Las Cruces public meeting expressed concern that something has already been done on the WSMR land south of US 70 (i.e., the Southeast Multi-Use Area), which has removed the vegetation and caused desertification.
2	Mark Watson, Habitat Specialist, New Mexico Division of Game and Fish	June 2, 2009	<ul style="list-style-type: none"> Asked questions during the Alamogordo Public Meeting about how the decision not to station a HBCT at WSMR would affect the EIS, particularly the impacts presented in the document, as well as the Southeast Multi-Use Area.
3	Dan Spiegelberg, Environmental Engineer, Missile Defense Agency	July 10, 2009	<ul style="list-style-type: none"> The Missile Defense Agency would like to retain the capability to launch missiles into WSMR from Fort Wingate and conduct additional testing within WSMR to support the Ballistic Missile Defense System and the Aegis Program. They also suggested updating the EIS to indicate the current operational status of the High Energy Laser System Test Facility. They asked to change their name from Ballistic Missile Defense Organization to “Missile Defense Agency” in the Final EIS.
4	Wally Murphy, Field Supervisor, USFWS NM Ecological Services Field Office 2105 Osuna NE Albuquerque, NM 87113	June 9, 2009	<p>In written comments made the following recommendations:</p> <ul style="list-style-type: none"> The DoD shall provide compensation for loss of habitat in the form of White Sands Pupfish Habitat and/or Northern Aplomado falcon habitat. Best Management Practices for construction of tank trail crossings over surface waters connected to Essential and Limited Use pupfish habitat should ensure no direct or indirect degradation of pupfish habitat through contaminant runoff or excessive soil erosion. Off-road vehicle maneuvers should be restricted to and confined within predetermined areas. In off-road vehicle areas where ground disturbance is substantial, surface restoration should occur in coordination with the WSMR Environmental Division. Restoration should consist of re-contouring, reseeding, installing cross drains for erosion control, placing water bars in the road, and filling ditches. Where applicable, roads should be at right angles to arroyos to the extent practicable. Culverts should be installed where needed. Construction and maintenance activities should minimize disturbance to vegetation, drainage channels, and intermittent stream banks. All existing roads should be left in a condition equal to or better than their condition prior to off-road activities. DoD should monitor the effects of off-road vehicular activities and noise on wildlife to determine if there are significant effects. Hazardous materials should not be drained onto the ground or into washes or drainage areas. Solid waste and

Table D-5. Summary of Comments Received

Comment Number	Commenter (name, title)	Date of Comment	Comment Summary
			<p>potentially hazardous materials should be removed to applicable disposal facilities and all trash should be in totally enclosed containment.</p> <ul style="list-style-type: none"> • Federally-listed and special status species should be considered during project construction and operation in accordance with provisions set by the Draft EIS. In cases where such species are identified action should be taken to avoid adverse impacts to those species and their habitats. • Recommends that WSMR continues to implement and enforce all applicable requirements, conducts reviews for all range activities, implements action-specific restrictions and operating conditions and recommends that WSMR continues to implement and enforce all applicable requirements, conducts reviews for all range activities, implements action-specific restrictions and operating conditions and educate all range users on potential impacts to fish, wildlife, and plant resources prior to Endangered Species Act Section 7 consultation and NEPA related reviews.
5	Lynn Gemlo, USFWS	July 1, 2009	<ul style="list-style-type: none"> • Asked that the term “opinion” be replaced by “assessment” in the cumulative effects section of the Biological Assessment. Also suggested to point out potential dispersing habitat.
6	Kevin Schneider, Superintendent White Sands National Monument (DOI-NPS)	July 2, 2009	<p>In written form made the following comments:</p> <ul style="list-style-type: none"> • Expressed appreciation for the recognition White Sands National Monument received in the Draft EIS. • Stated that the proposed tank trail along Range Road 7, a portion of which runs through monument land, could not be allowed per regulations prohibiting off road vehicle use on NPS areas. Stated that a proposed land exchange, which would make the monument’s western boundary adjacent to Range Road 7, would have to occur for the tank trail to be developed. • Stated the Draft EIS does not show how erosion from proposed tank trails would be controlled and eroded soils and unnatural debris could wash down arroyos near Range Road 7 onto monument land. • Requested a buffer zone be established around monument land in which off road vehicle use is prohibited, thus preventing accidental vehicle incursions. • Requested WSMR use sensitivity in considering visual impacts to the monument when siting facilities. • Suggested a mitigation measure that any development near the monument utilize shielded lights approved by the International Dark Sky Association. • Stated that, in several locations, the Draft EIS incorrectly references Lake Lucero as being within the White Sands National Monument co-use area.

Table D-5. Summary of Comments Received

Comment Number	Commenter (name, title)	Date of Comment	Comment Summary
			<ul style="list-style-type: none"> Expressed concern that the development of additional groundwater sources at WSMR could affect the dunes of White Sands, which are maintained by a perched aquifer.
7	Bill Childress, District Manager, BLM, Las Cruces District Office	July 8, 2009	<p>In written form made the following comments:</p> <ul style="list-style-type: none"> Suggested adding a more detailed discussion of the oryx population and hunting strategies south of US 70, including discussing impacts to the NMDGF and WSMR oryx Management Plan as well as impacts from oryx displacement onto adjacent public lands. Suggested adding to the Biological Assessment what would occur if a Northern Aplomado falcon nest were found on WSMR. Stated that mitigation measures in Biological Resources were “pretty weak” and suggested adding more specific responses to measurable impacts. Corrected mistakes in the Draft EIS with respect to the organization of local BLM districts. Asked what the impact to BLM-administered public lands would be from the increased use of call-up areas. Suggested that a mitigation measure should be considered for the loss of recreation user days from the proposed increase in call-up area closures. Corrected mistakes in how “animal unit months” are explained in the Draft EIS. Suggested revisions to the description of the Organ and Franklin Mountains Area of Critical Environmental Concern. Stated that Dripping Springs Natural Area is incorrectly identified on Figure 3.2-2. Recommended a reorganization of Section 3.2.5.1.
8	Stephen R. Spencer, Regional Environmental Officer, US Department of Interior	June 24, 2009	<ul style="list-style-type: none"> Stated that his office had no comment on the Draft EIS.
9	Cathy Gilmore, Chief, Office of Planning and Coordination, USEPA, Region 6, Dallas, Texas	June 22, 2009	<ul style="list-style-type: none"> EPA classifies the Draft EIS and Proposed Action as “LO”, i.e., EPA has “Lack of Objections” to the selection of the Preferred Alternative. Their classification will be published in the Federal Register.
10	Matt Wunder, Chief, New	July 6, 2009	<p>In written form made the following comments:</p>

Table D-5. Summary of Comments Received

Comment Number	Commenter (name, title)	Date of Comment	Comment Summary
	Mexico Dept. of Game and Fish, Conservation Services Division		<ul style="list-style-type: none"> • Noted that even in the absence of a HBCT the Draft EIS correctly states significant adverse impacts to natural resources from Alternative 1. • Questioned the estimated annual disturbance footprint of an Future Combat Systems (FCS) (now referred to as BCT Modernization) type event in Chapter 2. • Noted contradictory statements in the EIS concerning significant impacts to land cover versus statements about WSMR being committed to maintaining environmental quality and ecological sustainability. • Noted the implementation of Alternative 1 would be contradictory to several goals in the WSMR INRMP and DoD commitments to support state wildlife action plans. • Noted contradictory statements in the EIS concerning the use of adaptive management as a means of allowing land resources to recover and retain ecological conditions versus statements about irreversible and irretrievable commitments of resources in Section 4.22. Also notes that similar examples occur throughout the EIS. • Suggested a new alternative, which would direct EN BN and activities to the Southeast Multi-Use Area. If WSMR elects not to do so, expressed support for USFWS’s 6/9/09 comment concerning limiting off-road maneuvers to predetermined areas. • Requested the “Cooperative Agreement for the Protection and Maintenance of the White Sands Pupfish” be included in the Final EIS. Requested the proposed north-south tank trail be re-sited to avoid White Sands Pupfish Limited Use Habitat and that chemical dust suppressants not be used near White Sands pupfish limited use or essential habitats. • Stated that to comply with applicable regulations concerning protection of migratory birds off-road vehicle maneuvers should be limited to the migratory bird non-breeding season. • Questioned the use of adaptive management as a mitigation strategy and expressed support for recommendations provided in USFWS comments dated 6/9/09.
11	Mrs. Schuster, Director, Heart to Heart Animal Society, P.O. Box 653. Alamogordo, NM 88311	June 30, 2009	<ul style="list-style-type: none"> • Expressed concern about the negative impacts of increased operations at WSMR as well as existing operations. Stated that the military always wants more land for testing and training and they not destroy more land. Requested copies of the Draft EIS and Final EIS.
12	Michael Shyne, Alamogordo resident	June 2, 2009	<ul style="list-style-type: none"> • In a written comment expressed support for the completion of the EIS even though the HBCT is no longer planned to be stationed at WSMR. Requested a CD of the Final EIS.

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**PUBLIC COMMENT REPORT
ATTACHMENTS**

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**ATTACHMENT D-1
NOTICE OF AVAILABILITY**

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DEPARTMENT OF DEFENSE

Department of the Army

**Notice of Availability for the Draft
Environmental Impact Statement
(DEIS) for Development and
Implementation of Range-Wide Mission
and Major Capabilities at White Sands
Missile Range (WSMR), New Mexico**

AGENCY: Department of the Army, DoD.

ACTION: Notice of Availability (NOA).

SUMMARY: The Department of the Army announces the availability of a DEIS that assesses environmental impacts associated with new mission requirements and new test and training capabilities at WSMR. It analyzes the impacts of land use changes that provide for increased research, development, and testing activities. The impacts of expanded off-road maneuver and facilities needed to support increased Future Combat Systems testing and the stationing and training of a Heavy Brigade Combat Team (HBCT) of approximately 3,800 Soldiers is also analyzed.

DATES: The public comment period will end 45 days after publication of an NOA in the *Federal Register* by the U.S. Environmental Protection Agency.

ADDRESSES: For specific questions regarding the DEIS, please contact the White Sands Test Center; Operations Office, Attention: Catherine Giblin, 124 Crozier Street, Building 124, Room B-15, White Sands Missile Range, NM 88002. Written comments may be mailed to the above address, faxed to (575) 678-4082, or e-mailed to: wsmreis@conus.army.mil.

FOR FURTHER INFORMATION CONTACT: Monte Marlin, Public Affairs Office, Building 1782, Headquarters Avenue, White Sands Missile Range, NM 88002; (575) 678-1134; or e-mail monte.marlin@us.army.mil.

SUPPLEMENTARY INFORMATION: The proposed action would result in a flexible, capabilities-based land use and airspace plan able to accommodate rapidly evolving customer needs, support current and future mission activities, and support a full range of test and training efforts from individual components up through major joint and multinational programs. The DEIS assesses the environmental impacts associated with the testing, training, and stationing activities under the proposed plan. Testing typically involves activities such as missile flight tests, aerial intercepts, air-delivered munitions tests against ground targets, directed energy and various weapon

systems tests. Training involves military personnel using the land for maneuver as well as for field evaluation of weapons, equipment, communication systems, or other objectives. Testing, training and stationing require additional infrastructure such as barracks, motor pools, and administrative buildings. Implementation of the Proposed Action is anticipated in 2009 and would begin following the completion of a Final EIS and signing of a Record of Decision (ROD).

The stationing of an HBCT at WSMR and other force structure realignment actions across the Army were analyzed in the 2007 Final Programmatic Environmental Impact Statement for Army Growth and Force Structure Realignment. The ROD determined that WSMR would receive an HBCT in 2013. The development and implementation of a land use plan and airspace is intended to more fully realize and integrate the capabilities of the WSMR primary mission (research, development, testing, and evaluation (RDTE)) with new training capabilities and Army stationing decisions. Establishing new test and training capabilities requires changing land use designations within the current installation boundaries. These changes would support current and future requirements and allow off-road vehicle maneuver on designated portions of the installation. WSMR will maintain its current RDTE mission and continue to support testing objectives of all military services and federal agencies.

The DEIS evaluates and discloses the environmental effects associated with two alternatives and a no action alternative on the natural, cultural, and man made environments at WSMR and in the southern New Mexico region. The no action alternative includes current test capabilities and land use designations with current levels of operations and activities. It also provides the baseline conditions for comparison to the other alternatives. Alternative 1 changes land use to expand testing and maneuver capabilities to include Future Combat Systems or similar programs. It supports the Grow the Army decision to station an HBCT at WSMR by expanding the cantonment area and adding additional supporting infrastructure. Alternative 2 includes those activities described in Alternative 1 and adds additional off-road maneuver areas for testing and training on WSMR.

The Army invites full public participation to promote open communication and better decision making, including comment on the DEIS

and participation in public meetings, which will be announced in advance in local news media. The DEIS is available at local libraries surrounding WSMR and may also be accessed at <http://www.wsmr.army.mil>. A Preferred Alternative has not been selected at this time. Comments from the public will be considered before any decision is made regarding the Preferred Alternative or implementation of the Proposed Action.

Dated: April 27, 2009.

Addison D. Davis, IV,

Deputy Assistant Secretary of the Army
(Environment, Safety, and Occupational Health).

[FR Doc. E9-10603 Filed 5-7-09; 8:45 am]

BILLING CODE 3710-08-M

DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

**Amended Notice of Intent To Prepare
an Environmental Impact Statement for
the Proposed Regional Watershed
Supply Project, Notice of Additional
Public Scoping Meetings and
Extension of Scoping Period**

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice; extension of comment period; additional public scoping meetings.

SUMMARY: The public scoping comment period for the Intent to Prepare an Environmental Impact Statement for the Regional Watershed Supply Project by Million Conservation Resource Group, published in the *Federal Register* on Friday, March 20, 2009 (74 FR 11920), required comments be submitted by May 19, 2009 following publication in the *Federal Register*. The comment period has been extended to July 27, 2009. In addition, the COE will be conducting two additional public scoping meetings to describe the Project, preliminary alternatives, the NEPA compliance process, and to solicit input on the issues and alternatives to be evaluated and other related matters.

Scoping meetings will be held on:

1. June 10, 2009, 6:30 to 9 p.m., Center of Craig, 601 Yampa Ave, Craig, CO.
2. June 11, 2009, 6:30 to 9 p.m., Mesa County Fairgrounds, 2785 US Hwy 50, Grand Junction, CO.

FOR FURTHER INFORMATION CONTACT:

Questions and comments regarding the proposed action and EIS should be addressed to Ms. Rena Brand, Project Manager, U.S. Army Corps of Engineers, Denver Regulatory Office, 9307 S.

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**ATTACHMENT D-2
DRAFT EIS DISTRIBUTION LIST**

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The following list of individuals and entities received a notice that the Draft EIS was available for comment. Additionally, hardcopies of the Draft EIS were provided for public review at public libraries listed in this section. Notifications of the availability of the Final EIS will also be made to these individuals and entities. To respect individuals' privacy concerns, names and addresses of private individuals who requested copies of the Draft EIS have not been included in this distribution list. Tribal Government/Agencies/Nations were contacted individually by the WSMR Cultural Resources Manager.

U.S. Congress

Office of the Honorable Jeff Bingaman
U.S. Senate
505 S. Main Street
Las Cruces, New Mexico 88001

Office of the Honorable Tom Udall
U.S. Senate
505 S. Main St., Suite 118
Las Cruces, New Mexico 88001

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Attn: Pablo Duran
110 Hart Senate Office Building
Washington, D.C. 20510

Office of the Honorable Martin T. Heinrich
U.S. House of Representatives
(District 1 - Albuquerque)
20 First Plaza NW
Suite 603
Albuquerque, New Mexico 87102

Office of the Honorable Harry Teague
U.S. House of Representatives
(District 2 – Las Cruces/Roswell)
135 W. Griggs
Las Cruces, NM 88001

Office of the Honorable Ben R. Luján
U.S. House of Representatives
(District 3 – Santa Fe/
Clovis/Farmington/Gallup/Las Vegas/
RioRancho)
811 St. Michael's Drive
Suite 104
Santa Fe, New Mexico 87505

Office of the Honorable Silvestre Reyes
U.S. House of Representatives
(District 16- Texas)
310 N. Mesa, Suite 400
El Paso, Texas 79901

Governor, New Mexico

Office of the Governor, Bill Richardson
490 Old Santa Fe Trail (Room 400)
Santa Fe, New Mexico 87501

**Tribal Government/Agencies/Nations,
Federally Recognized**

Mescalero Apache Tribe
President Mark Chino
P.O. Box 227
Mescalero, New Mexico 88340

Ms. Holly Houghten
Tribal Historic Preservation Officer
Mescalero Apache Tribe
P.O. Box 227
Mescalero, NM 88340

Governor Arturo Senclair
Ysleta del Sur Pueblo
119 S. Old Pueblo Road
El Paso, Texas 79907

Navajo Nation
President Joe Shirley, JR
PO Box 9000
Window Rock, AZ 86515

Pueblo of Isleta
Office of the Governor
PO Box 1270
Isleta Pueblo, NM 87022

Mr. Wallace Coffey, Chairman
Comanche Indian Tribe
PO Box 908
Lawton, OK 73502

New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, New Mexico 87113

Mr. Billy Evans Horse, Chairman
Kiowa Tribe of Oklahoma
PO Box 369
Carnegie, OK 73015

Mr. Bill Howe, Non-game Migratory Bird
Coordinator
U.S. Fish and Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87103

Federal Agencies

Mr. Michael Jansky
Regional NEPA Coordinator
USEPA Region 6
1445 Ross Ave
Dallas, TX 75202
Mail code: 6ENXP

Ms. Jennifer Montoya, Planning and
Environmental Coordinator
BLM Las Cruces District Office
1800 Marquess Street
Las Cruces, New Mexico 88005-3371

Office of Federal Activities (2251A)
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20044

Mr. Bill Childress, District Manager
BLM Las Cruces District Office
1800 Marquess Street
Las Cruces, New Mexico 88005-3371

Federal Aviation Administration
Attn: MSGT McKay, Army Liaison
2601 Meachan Blvd, ASW 920
Fort Worth, Texas 76137

Mr. Ed Roberson
BLM, Las Cruces Field Office
1800 Marquess Street
Las Cruces, New Mexico 88005

Ms. Stacey M. Zee
Environmental Specialist
Commercial Space Transportation
Federal Aviation Administration
800 Independence Ave SW, Suite 331
Washington, DC 20591

Mr. Clarence Sykes
BLM Las Cruces District Office
1800 Marquess T.
Las Cruces, New Mexico 88005-3371

Mr. Wally Murphy
U.S. Fish and Wildlife Service
New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, New Mexico 87113

Mr. Steve Henke
BLM, Farmington Field Office
1235 La Plata Highway, Suite A
Farmington, New Mexico 87401

Ms. Patricia Zenone
U.S. Fish and Wildlife Service
New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, New Mexico 87113

Mr. John Moreno
BLM, Socorro Field Office
901 S. Highway 85
Socorro, New Mexico 87801-4648

Mr. Santiago Gonzales
U.S. Fish and Wildlife Service

Ms. Mara Weisenberger
U.S.D.I., U.S. Fish and Wildlife Service
San Andres National Wildlife Refuge
5686 Santa Gertrudis Drive
Las Cruces, New Mexico 88012

Mr. Kevin Cobble, Refuge Manager
San Andres National Wildlife Refuge
U.S. Fish and Wildlife Service

5686 Santa Gertrudis Drive
Las Cruces, New Mexico 88012

Ms. Nancy Rose, Forest Supervisor
Cibola National Forest
2113 Osuna Road NE, Suite A
Albuquerque, New Mexico 87113

Ms. Jacque Buchanan, Forest Supervisor
Lincoln National Forest
3463 Las Palomas Road
Alamogordo, New Mexico 88310

Mr. Harv Forsgren, Regional Forester
Southwestern Region (3)
USDA Forest Service
333 Broadway SE
Albuquerque, New Mexico 87102

Mr. Frank Covington, Project Manager
U.S. Army Corps of Engineers
Fort Worth District
819 Taylor Street, Room 4A17
ATTN: CESWF-EC-AM
Fort Worth, Texas 76102-0300

Mr. Kevin Schneider, Superintendent
White Sands National Monument
U. S. National Park Service
P.O. Box 1086
Holloman Air Force Base, NM 88330

Mr. David Bustos
White Sands National Monument
U. S. National Park Service
P.O. Box 1086
Holloman Air Force Base, NM 88330

Mr. John Barrera, NEPA Manager
IMWE-BLS-PWE
Bldg 624 S. Taylor Rd
Fort Bliss, Texas 79916-6812

Mr. Walter Christensen
IMWE-BLS-PWE
Bldg 624 S. Taylor Rd
Fort Bliss, Texas 79916-6812

Mr. Wesley Westphal, Environmental
49 CES/CEVA
550 Tabosa Avenue, Bldg 55
Holloman Air Force Base, NM 88330-8458

Cannon Air Force Base
27 SOW/PA 110 East Sextant, Suite 1150
Cannon Air Force Base, NM 88103

U.S. Department of the Interior
1849 C Street, NW
Washington, DC 20204

Mr. Tim Davis
NASA-White Sands Test Facility
P.O. Box 20
Las Cruces, NM 88004

State Elected Officials

New Mexico Representatives

Ms. Joni Marie Gutierrez (District 33)
Box 842
Mesilla, NM 88046

Ms. Mary Helen Garcia (District 34)
5271 State Highway 28
Las Cruces, NM 88005
Mr. Antonio Lujan (District 35)
429 ½ San Pedro
Las Cruces, NM 88001

Mr. Andy Nunez (District 36)
Box 746
Hatch, NM 87937

Mr. Jeff Steinborn (District 37)
Box 562
Las Cruces, NM 88004

Ms. Dianne Miller Hamilton (District 38)
4132 North Gold St.
Silver City, NM 88061

Mr. Don L. Tripp (District 49)
Box 1369
Socorro, NM 87801

Ms. Rhonda S. King (District 50)
Box 6
Stanley, NM 87056

Ms. Gloria Vaughn (District 51)
503 East 16th St.
Alamogordo, NM 88310

Mr. Joseph Cervantes (District 52)
2610 South Espina
Las Cruces, NM 88001

Mr. Nathan P. Cote (District 53)
15475 Space Murals Lane
Las Cruces, NM 88011

Mr. William Gray (District 54)
1503 West Dallas Ave
Artesia, NM 88210

Mr. Zachary J Cook (District 56)
100 Sarah Lane
Ruidoso, NM 88435

Mr. Dennis J. Kintigh (District 57)
1205 San Juan Dr.
Roswell, NM 88201

Ms. Nora Espinoza (District 59)
608 Golondrina
Roswell, NM 88201

Mr. Richard D. Vigil (District 70)
Box 456
Ribera, NM 87560

New Mexico Senators

Mr. Pete Campos (District 8)
500 Raynolds Ave.
Las Vegas, NM 87701

Mr. Howie C. Morales (District 28)
4285 North Swan
Silver City, NM 88061

Mr. David Ulibarri (District 30)
1629 Chaco

Grants, NM 87020

Ms. Cynthia Nava (District 31)
3002 Broadmoor
Las Cruces, NM 88001

Mr. Timothy Z. Jennings (District 32)
Box 1797
Roswell, NM 88202-1797

Mr. Rod Adair (District 33)
Box 1796
Roswell, NM 88202

Mr. Vernon D. Asbill (District 34)
1502 Mountain Shadow
Carlsbad, NM 88220

Mr. John Arthur Smith (District 35)
Box 998
Deming, NM 88031

Ms. Mary Jane M. Garcia (District 36)
Box 22
Dona Ana, NM 88032

Mr. Stephen H. Fischmann (District 37)
Box 2580
Mesilla Park, NM 88047

Ms. Mary Kay Papen (District 38)
904 Conway Ave.
Las Cruces, NM 88005

Ms. Dianna J. Duran (District 40)
909 8th St.
Tularosa, NM 88352

Texas Representatives (El Paso County)

Ms. Norma Chavez
6070 Gateway East, Suite 300
El Paso, Texas 79905

Ms. Marisa Marquez
1444 Montana, Suite A
El Paso, Texas 79901

Mr. Joseph Moody
PO Box 920827

El Paso, Texas 79902

Mr. Joseph C. Pickett
1790 Lee Trevino #307
El Paso, Texas 79936

Mr. Chente Quintanilla
120 North Horizon, Suite A-112
El Paso, Texas 79927

State Agencies

Mr. Scott Hanson
Brigadier General, USAF (Ret)
Director, Office of Military Base Planning and
Support, c/o Economic Development
Department Joseph M. Montoya, Building 1100
St. Francis Ave Santa Fe, NM 87505

Mr. Matt Wunder, Division Chief Conservation
Services Division
New Mexico Department of Game and Fish
P.O. Box 25112
Santa Fe, New Mexico 87504

Mr. Patrick Mathis, Habitat Specialist
New Mexico Department of Game and Fish
2715 Northrise Drive
Las Cruces, New Mexico 88011

Mr. Patrick Baca, Assistant Chief of Operations
New Mexico Department of Game and Fish
2715 Northrise Drive
Las Cruces, New Mexico 88011

Mr. Robert Sivinski
New Mexico Energy, Minerals, and Natural
Resources Department
Forestry Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

Mr. Gedi Cibas, Management Analyst
New Mexico Environment Department
Border and Environmental Reviews
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, New Mexico 87502-6110

Ms. Katherine Slick

State Historic Preservation Officer
State Historic Preservation Division
Bataan Memorial Building
407 Galisteo St. Suite 236
Santa Fe, New Mexico 87501

Mr. Ned Farquhar
New Mexico SPOC
Energy and Environmental Policy Advisor
State Capitol Building, Suite 400
Santa Fe, New Mexico 87501

Mr. Kris Havstad, Supervisory Range Scientist
Jornada Experimental Range
P.O. Box 30003m MSC 3JER
New Mexico State University
Las Cruces, NM 88003-8003

County Governments

Dona Ana County Commissioners
c/o Mr. Brian D. Haines, County Manager
Mr. Oscar Vasquez Butler (District 1)
Ms. Deloris Saldana-Caviness (District 2)
Ms. Karen Perez (District 3)
Mr. Scott Krahling (District 4)
Ms. Leticia Duarte Benevidez (District 5)
845 N. Motel Blvd.
Las Cruces, New Mexico 88007

Socorro County
PO Box 1
Socorro, New Mexico 87801

Lincoln County Commissioners
Ms. Eileen M. Sedillo (District 1)
Mr. Donald Williams (District 2)
Mr. Tom Battin (District 3)
Mr. Dave Parks (District 4)
Ms. Jackie Powell (District 5)
PO Box 711
300 Central Avenue
Carrizozo, New Mexico 88301-0701

Otero County Commissioners
Mr. Doug Moore (District 1)

Ms. Clarissa McGinn (District 2)
Mr. Michael Nivison (District 3)
1000 N. New York Avenue
Alamogordo, New Mexico 88310

P.O. Box 247
Carrizozo, New Mexico 88301

Office of the Mayor of Socorro, Ravi Bhasker
111 School of Mines Road
P.O. Box K
Socorro, New Mexico 87801

Sierra County

Chairman Bill Nunez
100 North Date Street
Courthouse Square, Suite 11
Truth or Consequences, New Mexico 87901

Office of the City Manager of Truth or
Consequences, Jaime Aguilera
505 Sims Street
Truth or Consequences, New Mexico 87901

Torrance County Commissioners

Mr. Jim Frost (District 1)
Mr. Paul M (Tito) Chavez (District 2)
Ms. Vanessa Chavez-Gutierrez (District 3)
PO Box 48, 205 9th St.
Estancia, New Mexico 87016

Office of the Mayor of El Paso, John Cook
2 Civic Center Plaza, 10 Floor
El Paso, Texas 79901-2421

Las Cruces Chamber of Commerce

Mr. Jim Berry, President and CEO
760 W. Picacho Ave.
Las Cruces, NM 88005

El Paso County

500 East San Antonio, Suite 301
El Paso, Texas 79901

Honorable Garrey Carruthers, Chair
P.O. Box 30001, MSC 3AD
Las Cruces, NM 88002

City Governments

Council Members, City of Las Cruces
P.O. Box 20000
Las Cruces, NM 88004

Walter Miller
Government Relations Chair
The Greater El Paso Chamber of Commerce
2211 East Missouri, Suite N227
El Paso, Texas, 79902

Office of the Mayor of Las Cruces,
Ken Miyagishima
P.O. Box 20000
Las Cruces, New Mexico 88004

David Garcia
Past-Chairman
El Paso Hispanic Chamber of Commerce
500 Texas, Room 313
El Paso, Texas 79901

Office of the Mayor of Mesilla,
Michael M. Cadena
Box 10
Mesilla, NM 88046

Non-Government Organizations

Alamogordo City Administration
Office of the Mayor, Steve Brockett
1376 E. 9th Street
Alamogordo, New Mexico 88310

Ms. Lorraine Schulte
Mr. David Griffin
Mesilla Valley Audubon Society
PO Box 1645
Las Cruces, New Mexico 88004

Office of the Mayor of Carrizozo,
Robert Hemphill

Mr. Angel Montoya

The Peregrine Fund
100 E Hadley
Las Cruces, New Mexico

P.O. Box 1848
Alamogordo, New Mexico 88310

Ms. Mary Preper
Alamogordo Chamber of Commerce and
Otero County Economic Development Council
1301 N. White Sands Boulevard
Alamogordo, New Mexico 88310

Public Libraries

Alamogordo Public Library
920 Oregon Avenue
Alamogordo, New Mexico 88310-5835

Ms. Kelly Fuller
NMSU Alamogordo Registrar
2400 N. Scenic Drive
Alamogordo, New Mexico 88310

Socorro Public Library
401 Park St., SW
Socorro, New Mexico 87801

Ms. Sharon Fisher, VP Student Services
NMSU Alamogordo
2400 N. Scenic Drive
Alamogordo, New Mexico 88310

Thomas Branigan Memorial Library
200 E. Picacho Avenue
Las Cruces, New Mexico 88001

Ms. Nicole Rosmarino
WildEarth Guardians
312 Montezuma Ave
Santa Fe, New Mexico 87501

WSMR Post Library
Building 465
WSMR, New Mexico 88002

Mr. Greg Lacy
Gulf South Research Corporation
8081 GSRI Ave
Baton Rouge, LA 70820

Bill Burt
Alamo C-50/ Kqel Cool FM 107.9

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**ATTACHMENT D-3
LETTERS AND E-MAIL NOTIFICATION**

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WHITE SANDS MISSILE RANGE, NEW MEXICO

**Notice of Availability, Draft Environmental Impact Statement (DEIS) for Development and
Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile
Range (WSMR)**

May, 2009

The Department of the Army announces the availability of the Draft Environmental Impact Statement (DEIS) for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range, New Mexico. This DEIS, prepared under the requirements of the National Environmental Policy Act (NEPA), assesses the environmental impacts associated with new mission requirements and new test and training capabilities at WSMR. The DEIS analyzes the impacts of land use changes that provide for increased research, development, and testing activities. The DEIS also analyzes the impacts of expanded off-road maneuver and facilities needed to support increased Future Combat Systems testing and the stationing and training of a Heavy Brigade Combat Team of approximately 3,800 Soldiers.

Copies of the DEIS are available for review at the Thomas Branigan Memorial Library (Las Cruces, NM), Alamogordo Public Library, Socorro Public Library, and White Sands Missile Range Post Library. The document will also be available electronically for download at www.wsmr.army.mil.

WSMR is hosting three public meetings to present an overview of the proposed project and DEIS followed by an opportunity for members of the public to provide oral and written comments for the record. Public meetings will begin at 6 pm with a one hour poster session followed by a presentation at 7 pm and public comment session. All comments will be transcribed and meetings will adjourn after all public comments are recorded. The meetings will be held on the following dates and locations:

Tuesday, June 2, 2009	Wednesday, June 3, 2009	Thursday, June 4, 2009
Otero County Administration 1101 New York Avenue Alamogordo, New Mexico	Hotel Encanto 705 South Telshor Boulevard Las Cruces, New Mexico	The Macey Center 801 Leroy Place Socorro, New Mexico

Public comments and the Army's responses will be included as part of the Final EIS. Comments on the DEIS will be accepted during the 45-day public comment period which begins on the date it appears in the Federal Register (May 8, 2009). Correspondence may be faxed to (575) 678-4082; or e-mailed to wsmreis@conus.army.mil. Written comments can also be mailed to:

Ms. Catherine Giblin
Test Center Operations
124 Crozier Street, Bldg. 124 (Room B15)
White Sands Missile Range, New Mexico 88002

For additional information, please contact Ms. Monte Marlin, Chief, WSMR Public Affairs Office at (575) 678-1134.

**WHITE SANDS MISSILE RANGE, NEW MEXICO
PRESS RELEASE**

**Notice of Availability, Draft Environmental Impact Statement (DEIS) for Development and
Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile
Range**

May 28, 2009

The Department of the Army has extended the public comment period to **July 6, 2009** on the Draft Environmental Impact Statement (DEIS) for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range (WSMR), New Mexico. This extension is in response to technical problems with the WSMR website that did not allow the public or agencies to access the document electronically. The website (www.wsmr.army.mil) access has been corrected and an electronic copy of the DEIS became accessible on the website on May 27, 2009. The DEIS is also now available for viewing and download at <http://aec.army.mil/usaec/nepa/topics00.html>.

Print copies of the DEIS continue to be available for review at the Thomas Branigan Memorial Library (Las Cruces, NM), Alamogordo Public Library, Socorro Public Library, and White Sands Missile Range Post Library.

Three public meetings to present an overview of the proposed project and DEIS will remain as originally scheduled and will be followed by an opportunity for members of the public to provide oral and written comments for the record. Public meetings will begin at 6:00 pm with a one hour poster session followed by a presentation at 7:00 pm and a public comment session. All comments will be transcribed and meetings will adjourn after all public comments are recorded. The meetings will be held on the following dates and locations:

Tuesday, June 2, 2009	Wednesday, June 3, 2009	Thursday, June 4, 2009
Otero County Administration 1101 New York Avenue Alamogordo, New Mexico	Hotel Encanto 705 South Telshor Boulevard Las Cruces, New Mexico	The Macey Center 801 Leroy Place Socorro, New Mexico

Public comments and the Army's responses will be included as part of the Final EIS. Comments on the DEIS will be accepted during the 45-day public comment period which begins on the date it appears in the Federal Register. Correspondence may be faxed to (575) 678-4082; or e-mailed to wsmreis@conus.army.mil. Written comments can also be mailed to:

Ms. Catherine Giblin
Test Center Operations
124 Crozier Street, Bldg. 124 (Room B15)
White Sands Missile Range, New Mexico 88002

For additional information, please contact Ms. Monte Marlin, Chief, WSMR Public Affairs Office at (575) 678-1134.

**ATTACHMENT D-4
AFFIDAVITS OF PUBLICATION**

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LAS CRUCES SUN-NEWS

PROOF OF PUBLICATION

I, being duly sworn, Lou Hendren deposes and says that he is the Classifieds Manager of the Las Cruces Sun-News, a newspaper published daily in the county of Dona Ana, State of New Mexico; that the notice 41807 is an exact duplicate of the notice that was published once a week/day in regular and entire issue of said newspaper and not in any supplement thereof for 1 consecutive week(s)/day(s), the first publication was in the issue dated May 08, 2009 and the last publication was May 08, 2009 ____.

Deposent further states this newspaper is duly qualified to publish legal notice or advertisements within the meaning of Sec. Chapter 167, Laws of 1937.

Signed


 Advertising Manager
 Official Position

STATE OF NEW MEXICO

ss.

County of Dona Ana

Subscribed and sworn before me this

18 day of May 2009


 Notary Public in and for

Dona Ana County, New Mexico

September 22, 2012
 My Term Expires



White Sands Missile Range (WSMR) announces Public Meetings on the Draft Environmental Impact Statement (DEIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities at WSMR

On Friday, May 8, 2009, the Army published a Notice of Availability in the Federal Register for the release of a Draft Environmental Impact Statement (DEIS). The DEIS assesses the environmental impacts associated with new mission requirements and new test and training capabilities at WSMR. The DEIS analyzes the impacts of land use changes that provide for increased research, development, and testing activities. The DEIS also analyzes the impacts of expanded off-road maneuver and facilities needed to support increased Future Combat Systems testing and the stationing and training of a Heavy Brigade Combat Team of approximately 3,800 Soldiers. Copies of the DEIS are available for review at the Thomas Branigan Memorial Library (Las Cruces, NM), Alamogordo Public Library, Socorro Public Library, and White Sands Missile Range Post Library. The document is also be available electronically for download at www.wsmr.army.mil. WSMR is hosting three public meetings to present an overview of the proposed project and DEIS followed by an opportunity for members of the public to provide oral and written comments for the record. Public meetings will begin at

www.lcsun-news.com

LAS CRUCES SUN-NEWS

6 pm with a one-hour poster session followed by a presentation at 7 pm and public comment session. All comments will be transcribed and meetings will adjourn after all public comments are recorded. Public meetings will be held: Tuesday, June 2, 2009 - Otero County Administration, 1101 New York Avenue, Room 123, Alamogordo, NM Wednesday, June 3, 2009 - Hotel Encanto, 705 South Telshor Boulevard, Las Cruces, NM Thursday, June 4, 2009 - The Macey Center, 801 Leroy Place, Socorro, NM Comments on the DEIS will be accepted during the 45-day public comment period which begins on May 8, 2009. Written comments may be mailed to: Ms. Catherine Giblin, Test Center Operations, 124 Crozier Street, Bldg. 124 (Room B-15), White Sands Missile Range, NM 88002. Comments may also be faxed to (575) 678-4082; or e-mailed to wsmreis@conus.army.mil. For further information, please contact Ms. Monte Marlin, Chief, WSMR Public Affairs Office at (575) 678-1134.

Pub No. 41807
Pub Date: May 08,09

www.lcsun-NEWS.com


LAS CRUCES SUN-NEWS

PROOF OF PUBLICATION

I, being duly sworn, Lou Hendren deposes and says that he is the Classifieds Manager of the Las Cruces Sun-News, a newspaper published daily in the county of Dona Ana, State of New Mexico; that the notice 42598 is an exact duplicate of the notice that was published once a week/day in regular and entire issue of said newspaper and not in any supplement thereof for 1 consecutive week(s)/day(s), the first publication was in the issue dated June 03, 2009 and the last publication was June 03, 2009.

Despondent further states this newspaper is duly qualified to publish legal notice or advertisements within the meaning of Sec. Chapter 167, Laws of 1937.

Signed


Advertising Manager
Official Position

STATE OF NEW MEXICO

ss.

County of Dona Ana

Subscribed and sworn before me this

8th day of July 2009



Notary Public in and for

Dona Ana County, New Mexico

March 29, 2011

My Term Expires

White Sands Missile Range (WSMR) announcement on the Draft Environmental Impact Statement (DEIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities at WSMR

DEIS Availability and Comment Period Extension

On Friday, May 8, 2009, the Army published a Notice of Availability in the Federal Register for the release of a Draft Environmental Impact Statement (DEIS).

Copies of the DEIS are available for review at the Thomas Branigan Memorial Library (Las Cruces, NM), Alamogordo Public Library, Socorro Public Library, and White Sands Missile Range Post Library. The document is also available electronically for download at www.wsmr.army.mil and <http://aec.army.mil/usaec/nepa/topics00.html>. Comments on the DEIS will now be accepted through July 6, 2009. Written comments may be mailed to: Ms. Catherine Giblin, Test Center Operations, 124 Crozier Street, Bldg. 124 (Room B-15), White Sands Missile Range, NM 88002. Comments may also be faxed to (575) 678-4082; or e-mailed to wsmreis@conus.army.mil. For further information, please contact Ms. Monte Marlin, Chief, WSMR Public Affairs Office at (575) 678-1134.

Pub No. 42598

Pub Date: June 3, 2009



OFFICIAL SEAL
JUDY M. LUNA
NOTARY PUBLIC, STATE OF NEW MEXICO
My commission expires: 3/29/2011

PUBLISHERS AFFIDAVIT

POTOMAC-HUDSON ENGINEERING

STATE OF TEXAS
COUNTY OF EL PASO

Before me, a Notary Public in and for El Paso County, State of Texas, on this day personally appeared TERRIE CARTER who state CLASSIFIED SUPERVISOR upon oath that he is the of the El Paso Times, a daily newspaper published in the City and County of El Paso, State of Texas, which is a newspaper of general circulation and which has been continuously and regularly published for the period of not less than one year in the said County of El Paso, and that he was such upon the dates herein mentioned:

That the LEGAL copy was published in the El Paso Times for the ONE DAY. The dates of such publication being as follows, to wit MAY 08, 2009.

Subscribed and sworn to before me,

Signed

[Handwritten signature of Terrie Carter]

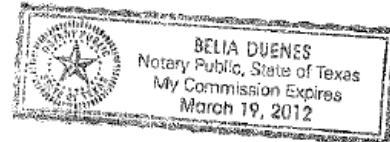
This the 8th day of MAY 2009

[Handwritten signature of Belia Duenes]

White Sands Missile Range (WSMR) announces Public Meetings on the Draft Environmental Impact Statement (DEIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities at WSMR

On Friday, May 8, 2009, the Army published a Notice of Availability in the Federal Register for the release of a Draft Environmental Impact Statement (DEIS). The DEIS assesses the environmental impacts associated with new mission requirements and new test and training capabilities at WSMR. The DEIS analyzes the impacts of land use changes that provide for increased research, development, and testing activities. The DEIS also analyzes the impacts of expanded off-road maneuver and facilities needed to support increased Future Combat Systems testing and the stationing and training of a Heavy Brigade Combat Team of approximately 3,800 Soldiers.

Copies of the DEIS are available for review at the Thomas Branigan Memorial Library (Las Cruces, NM), Alamogordo Public Library, Socorro Public Library, and White Sands Missile Range Post Library. The document is also available electronically for download at www.wsmr.army.mil.

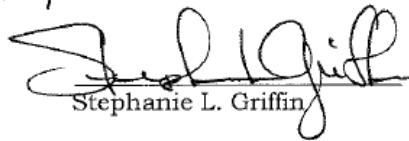


Legal Advertising Affidavit

Stephanie L. Griffin, who, being duly sworn as the Assistant to the Publisher of the Las Cruces BULLETIN, a weekly newspaper of general distribution published in the City of Las Cruces, County of Doña Ana, State of New Mexico, disposes and states that the legal advertising for

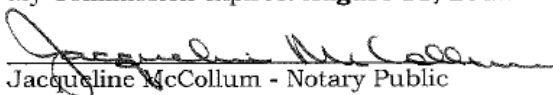
Potomac-Hudson Engineering
Public Meetings on the Draft
Environmental Impact Statement
(DEIS) for the Development and
Implementation of Range-Wide
Mission and Major Capabilities at WSMR

In accordance with the laws of the State of New Mexico, the attached was published in its entirety one time(s) in the Las Cruces BULLETIN, the first publication date being 5/8/09 and subsequent publications being N/A.


Stephanie L. Griffin

Sworn to and subscribed before me this 8 day of May 2009

in the
CITY OF LAS CRUCES
COUNTY OF DOÑA ANA
STATE OF NEW MEXICO
My Commission expires: **August 11, 2011**


Jacqueline McCollum - Notary Public

\$122.69
Advertising Costs

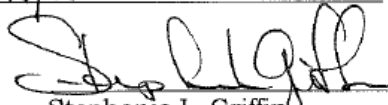
<p>White Sands Missile Range (WSMR) announces Public Meetings on the Draft Environmental Impact Statement (DEIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities at WSMR</p>	<p>On Friday, May 8, 2009, the Army published a Notice of Availability in the Federal Register for the release of a Draft Environmental Impact Statement (DEIS). The DEIS assesses the environmental impacts associated with new mission requirements and new test and training capabilities at WSMR. The DEIS analyzes the impacts of land use changes that provide for increased research, development, and testing activities. The DEIS also analyzes the impacts of expanded off-road maneuver and facilities needed to support increased Future Combat Systems testing and the stationing and training of a Heavy Brigade Combat Team of</p>	<p>approximately 3,800 Soldiers. Copies of the DEIS are available for review at the Thomas Braugan Memorial Library (Las Cruces, NM), Alamogordo Public Library, Socorro Public Library, and White Sands Missile Range Post Library. The document is also available electronically for download at www.wsmr.army.mil.</p>	<p>New York Avenue, Room 123, Alamogordo, NM Wednesday, June 3, 2009 - Hotel Encanto, 705 South Talabor Boulevard, Las Cruces, NM Thursday, June 4, 2009 - The Messy Center, 801 Lermy Place, Socorro, NM</p>	<p>Comments on the DEIS will be accepted during the 45-day public comment period which begins on May 8, 2009. Written comments may be mailed to: Ms. Catherine Ghiblin, Test Center Operations, 124 Oberon Street, Bldg. 124 (Room 3-5), White Sands Missile Range, NM 88002. Comments may also be faxed to (575) 678-4052, or e-mailed to wsmris@onus.army.mil. For further information, please contact Ms. Monte Martin, Chief, WSMR Public Affairs Office at (575) 678-1134</p>
<p>WSMR is hosting three public meetings to present an overview of the proposed project and DEIS followed by an opportunity for members of the public to provide oral and written comments for the second. Public meetings will begin at 6 pm with a one-hour poster session followed by a presentation at 7 pm and public comment session. All comments will be transcribed and meetings will adjourn after all public comments are recorded. Public meetings will be held:</p>	<p>WSMR is hosting three public meetings to present an overview of the proposed project and DEIS followed by an opportunity for members of the public to provide oral and written comments for the second. Public meetings will begin at 6 pm with a one-hour poster session followed by a presentation at 7 pm and public comment session. All comments will be transcribed and meetings will adjourn after all public comments are recorded. Public meetings will be held:</p>	<p>Tuesday, June 2, 2009 - Otero County Administration, 1101</p>	<p>Pub #8688 Dates 6/6, 2009</p>	<p>Pub #8688 Dates 6/6, 2009</p>

Legal Advertising Affidavit

Stephanie L. Griffin, who, being duly sworn as the Assistant to the Publisher of the Las Cruces BULLETIN, a weekly newspaper of general distribution published in the City of Las Cruces, County of Doña Ana, State of New Mexico, disposes and states that the legal advertising for

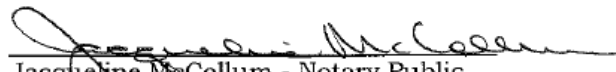
Potomac-Hudson Engineering Public Meetings on the Draft Environmental Impact Statement (DEIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range

In accordance with the laws of the State of New Mexico, the attached was published in its entirety one time(s) in the Las Cruces BULLETIN, the first publication date being 6/5/09 and subsequent publications being N/A.


Stephanie L. Griffin

Sworn to and subscribed before me this 5 day of June 2009 in the

CITY OF LAS CRUCES
COUNTY OF DOÑA ANA
STATE OF NEW MEXICO
My Commission expires: **August 11, 2011**


Jacqueline McCollum - Notary Public

White Sands Missile Range (WSMR) announcement on the Draft Environmental Impact Statement (DEIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities at WSMR
DEIS Availability and Comment Period Extension
On Friday, May 8, 2009, the Army published a Notice of Availability in the Federal Register for the release of a Draft Environmental Impact Statement (DEIS).
Copies of the DEIS are available for review at the Thomas Brannigan Memorial Library (Las Cruces, NM), Alamogordo Public Library, Socorro Public Library, and White Sands Missile Range Post Library. The document is also available electronically for download at www.wsmr.army.mil and <http://sec.army.mil/usaece/neps/topics00.html>.
Comments on the DEIS will now be accepted through July 6, 2009. Written comments may be mailed to: Ms. Catherine Giblin, Test Center Operations, 124 Crozier Street, Bldg. 124 (Room B-15), White Sands Missile Range, NM 88002. Comments may also be faxed to (575) 678-4082; or e-mailed to wsmraus@conus.army.mil. For further information, please contact Ms. Monte Marlin, Chief, WSMR Public Affairs Office at (575) 678-1134.
Pub #8755
Dates 6/2, 2009

PUBLISHERS AFFIDAVIT

STATE OF TEXAS
COUNTY OF EL PASO

POTOMAC_HUDSON
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Before me, a Notary Public in and for El Paso County, State of Texas, on
this day personally appeared TERRIE CARTER who state
CLASSIFIED SUPERVISOR
upon oath that he is the _____ of the El Paso Times, a daily
newspaper published in the City and County of El Paso, State of Texas, which is
a newspaper of general circulation and which has been continuously and
regularly published for the period of not less than one year in the said County of
El Paso, and that he was such upon the dates herein mentioned:

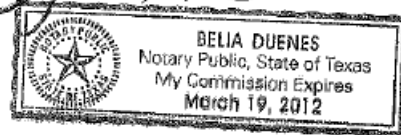
That the PUBLIC NOTICE copy was published in the
ALAMOGORDO DAILY
~~Paso Times~~ for the ONE DAY. The dates of such
publication being as follows, to wit JUNE 3, 2009

Subscribed and sworn to before me, Signed _____

This the 3rd day of JUNE 2009

Belia Duenes

TERRIE CARTER



100-152

Public/Special Notices 114

★ ★ ★ ★

La Mission In Door Swap Meet to Open in North East El Paso
8200 Dyer
GRAND OPENING
July 11 - 12 7a-4p

NEED VENDORS
for more info:
Call 915-758-9192
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LOST!

Reward! Male Yorkshire Terrier tail not docked, goes by of Griffey. Beige, black & gray body. Call Roger 915-799-9757

Short hair black female cal orange collar Missing since May 12 near Reslar and Redd Rd 707-363-8544 or 915-581-2566

LOST!

Weimaraner, gray collar lost in Riverside HS area. **REWARD!** Call 915-850-3533

LOST!

Young Female Dog Toywhite, short hair, 50 lbs. color/age. Dee Dee. **REWARD!** 373-526-9363

Found Pets

2 medium sized dogs-NE. Contact Bruce: 383-4525

Blond M Cocker Sp int of low/tit 755-0865

Brown/White cat, blue eyes, damage to end of tail, looking for his loving family. 755-2957

Chihuahua found near Alto Rey on Westside. Callite is 915-204-2903

Female Chihuahua mix black w/white & brown eyes 373-2992

Found black & white puppy near Crestmont park 820-6042

Found dog fem blond shepard with pink collar 915-526-4492

Meeting Notices

128

White Sands Missile Range (WSMR) announcement on the Draft Environmental Impact Statement (DEIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities at WSMR

DEIS Availability and Comment Period Extension

On Friday, May 8, 2009, the Army published a Notice of Availability in the Federal Register for the release of a Draft Environmental Impact Statement (DEIS). Copies of the DEIS are available for review at the Thomas Branson Memorial Library (Lee-Cruces, NM), Alamosa Public Library, Socorro Public Library, and White Sands Missile Range Post Library. The document is also available electronically for download at www.wsmr.army.mil and <http://bac.army.mil/usace/nepa/topics06.html>.

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**ATTACHMENT D-5
PUBLIC MEETING ATTENDEE LISTS**

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White Sands Missile Range
DEIS Public Meeting

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White Sands Missile Range
DEIS Public Meeting

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June 3, 2009



White Sands Missile Range
DEIS Public Meeting

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June 3, 2009



White Sands Missile Range
DEIS Public Meeting

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June 3, 2009



White Sands Missile Range
DEIS Public Meeting

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Jean Donaldson	Rancher	Mountain	575-423-3257		

June 4, 2009

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**ATTACHMENT D-6
PUBLIC MEETING TRANSCRIPTS**

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PUBLIC MEETING
for the
Draft Environmental Impact Statement (DEIS)
for Development and Implementation
of Range-Wide and Major Capabilities
at White Sands Missile Range (WSMR), New Mexico
Alamogordo, New Mexico
June 2, 2009
7:00 p.m.



APPEARANCES

1
2
3 Dorothy Peterson, Potomac-Hudson Engineering Project Manager
4 Susan Goodan, SAIC Project Manager
5 Frank Chavez, Executive Director White Sands Test Center
6

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1 MS. PETERSON: I guess we'll get started. Welcome to
2 tonight's public meeting for the Draft Environmental Impact
3 Statement for the White Sands Missile Range EIS. We actually only
4 have two folks from the public, from New Mexico Game and Fish. And
5 I think you indicated that you would like to see the presentation?

6 MR. WATSON: Yeah. Has it changed from the scoping
7 presentation?

8 MS. PETERSON: Actually quite a bit, so we'll talk a
9 little bit about the analysis and the impact and mitigation
10 measures. So all right, with that, my name is Dorothy Peterson, I'm
11 with Potomac-Hudson Engineering. We're the lead contractor for the
12 EIS. This is tonight's agenda. First I'll welcome Mr. Frank
13 Chavez, who will give some introductory remarks. Then myself and
14 Susan Goodan, from SAIC, will go over the EIS. And lastly, we'll
15 open the floor to public comments, so with that...

16 MR. CHAVEZ: Well, it's an advantage to come to
17 Alamogordo. You know I was sitting here thinking about what to say
18 to the folks, and I was hoping that more folks from Alamogordo would
19 show up because I'm getting, I'm going to digress a little bit,
20 because the folks in Alamogordo are some of the biggest supporters
21 of the mission at White Sands Missile Range, as well as Holloman Air
22 Force Base, and it would have given me an opportunity to thank them
23 for their support.

24 That being said, I still would like to welcome those
25 of us who are here from White Sands and from Fort Bliss and from the

1 Game and Fish. This is a very important part of our mission, is to
2 redo the current documentation that we have at White Sands to
3 include some of the things for the future. And hopefully address
4 some of the issues that may crop up as far as questions from the
5 public. We have all the experts here to answer your questions and
6 I'm glad to be here, so I'm going to turn it back over to you.
7 Thank you for coming.

8 MR. WATSON: Is it possible to have introductions and
9 what everybody's role is in that regard?

10 MR. CHAVEZ: Okay. I'm the Executive Director of the
11 White Sands Test Center.

12 MS. PETERSON: Dorothy Peterson, I am the project
13 manager for the EIS from Potomac-Hudson Engineering.

14 MS. BLOTSKE: Renee Blotske. I'm from the Business
15 Development Office and Work Sustainability Issues.

16 MS. PETERSON: Oh, and please speak up because we
17 don't have an audio here and she has to hear what's being said.

18 MS. MARLIN: Hi, I'm Monte Marlin, I'm the Public
19 Affairs Officer.

20 MS. HAY: I'm Karen Hay, I'm Garrison Customer
21 Support Chief.

22 MR. KIPP: John Kipp, Zia Engineering, contracted to
23 the White Sands Test Center.

24 MS. GOODAN: Susan Goodan, SAIC, and I'm Project
25 Manager on the SAIC side of the EIS, we're working together.

1 MR. THOMPSON: Jim Thompson, White Sands Test Center,
2 Environmental Engineer.

3 MR. WOLTERS: Eric Wolters, Army Environmental
4 Command.

5 MS. BENNER: Rayanne Benner, Region IMCOM rep.

6 MR. CHRISTENSEN: Can you tell us who you folks
7 are?

8 MS. CORMAN: Yeah. I'm Stephanie Corman, I'm the
9 Aquatic Species Recovery Coordinator for the New Mexico Department
10 of Game and Fish, and I'm the White Sands pupfish team lead.

11 MR. WATSON: Mark Watson, I'm a Habitat Specialist
12 with the Conservation Services Division of the New Mexico Game and
13 Fish in Santa Fe. I comment on a lot of the military proposals
14 throughout the state and also review and comment on the INRMPS.

15 MR. CHRISTENSEN: I'm Walter Christensen out of Fort
16 Bliss, I'm running the EIS that we're doing for our Grow the Army
17 Support Actions.

18 MS. PETERSON: Anthony, do you want to introduce
19 yourself?

20 MR. BECKER: Hi, I'm Anthony Becker, I work with
21 Potomac-Hudson Engineering on the EIS.

22 MS. SHENKLE: I'm Debbie Shenkle, I work for
23 Potomac-Hudson Engineering, I'm the GMF specialist.

24 MS. PETERSON: Okay.

25 MR. WATSON: Thank you.

1 MS. PETERSON: No problem.

2 MS. GOODAN: And we have Heather --

3 MS. PETERSON: Oh.

4 MS. GOODAN: -- at the front desk. She's SAIC.

5 MR. WATSON: Waiting for the public.

6 MS. PETERSON: This is sort of the way things are
7 going to be presented tonight. We actually did introductions
8 already, so I guess we'll skip that. We're going to talk about the
9 NEPA process, proposed action and alternatives, the key elements of
10 the alternatives, measures to reduce impacts. Then go over some of
11 the impact and mitigation measures. Discuss the poster stations
12 around the room. Talk about the EIS schedule. And then lastly,
13 we'll afford public comment.

14 You met most of the people here. Cathy Giblin is the
15 EIS project manager, she couldn't be here tonight. She will be at
16 the meeting tomorrow in Las Cruces and Jim Thompson's standing in
17 for her today. Russ Koch is the, I guess environmental team leader
18 and Karen Hay is standing in for him.

19 Okay, I guess we're all familiar with what NEPA is.
20 It's the National Environmental Policy Act of 1969. It's a federal
21 law that requires agencies to consider the environmental aspects of
22 their project so that we can make informed decisions. And public
23 participation is obviously a key portion of the NEPA law and that's
24 why we're all here today.

25 We had the scoping meetings in July 2008 and we

1 received some comments regarding the scope. And the Notice of
2 Availability for the draft was published on May 8. And this gives
3 the public the opportunity to provide comments on the draft. And
4 this is just a graph of where we are. As you can tell, the public
5 meetings are June 2nd to 4th.

6 The NEPA Process starts by the agency defining their
7 need for an action. And in this case the need is to support an
8 earlier decision by the Army to station an HBCT at White Sands, a
9 Heavy Brigade Combat Team. We found out, actually today, that this,
10 from the Secretary of the Army, a memo, or I guess a press release
11 was released that an HBCT will not be coming to White Sands. We
12 plan to carry this option or alternative through the EIS but this
13 change will be reflected in the Record of Decision.

14 MR. WATSON: How does that not -- I'm sorry. How
15 does that not affect this entire EIS? I mean if you leave it in
16 there, that's sort of presupposing that that's an alternative and
17 that really doesn't give us much to comment on. We don't know for
18 sure that's gonna happen or not.

19 MS. PETERSON: Yes, and we're going to have to revise
20 the Final EIS to some degree. What started this EIS was actually
21 the need for White Sands to expand their capabilities for test
22 customers. And so the ability to bring in additional troops and
23 some type of combat team in the future, that is a capability that we
24 probably want to keep in the EIS to cover potential changes down the
25 road. And obviously, there would have to be a supplemental analysis

1 or EIS at that point. Eric, do you want to address this question?

2 MR. WOLTERS: The Army, the Army continues to look at
3 White Sands as a place not only for a test missions but also to do
4 possible training events. The engineer battalion is still here and
5 will still be training, so that needs further documentation. And
6 it's entirely possible that other units of some type could come
7 here. And it doesn't foreclose a future decision by the Army to
8 station a different type of unit here, or a similar type of unit
9 here.

10 And so I think the team feels that it's worth looking
11 at this in terms of a capability, even though this particular BCT
12 might not be here, to carry that alternative through so that we can
13 assess the impacts of a similar type unit which will be stationed
14 here in the future.

15 MR. CHAVEZ. It gives us the flexibility for future
16 planning, is what it does.

17 MR. WATSON: But it changes your entire impacts
18 analysis, I would think, because that's gotta be a large component
19 of the environmental impacts that you analyze for the action
20 alternatives. And all of a sudden that component isn't gonna
21 happen.

22 MS. PETERSON: The way the EIS is structured, as you
23 go through Chapter 4, which is the impact section, the stationing of
24 the HBCT is broken out as a subset and analyzed separately. There's
25 also impacts related to the Land Use and Airspace Strategy Plan that

1 they wish to adopt, and some of the overall capabilities-based
2 expansion that will hopefully occur. So it may be a little tricky
3 at times but you'll see when you read the EIS that the HBCT impacts
4 are separated out so you will be able to tell what the impacts are
5 for each component.

6 MR. WATSON: Should we disregard those impacts?

7 MS. GOODAN: No. No, I think what Mr. Wolters is
8 trying to explain is it's just that, it's a capability. We're kind
9 of diverging but this might be the way to do the presentation. But
10 the original intent of the Land Use and Airspace Plan was to kind of
11 provide a framework of what activities occur where on White Sands.
12 And one of the main changes that they were looking at is to allow
13 off-road in a lot of the land, but for testing. But the HBCT
14 training is only looked at in Alternative 2. What that really
15 represents is just a higher intensity of that type of activity in a
16 certain part of the range. But as a land use per se, it's still
17 being covered in the proposed action, but there are degrees, from
18 just covering it for tests versus all the way to training of an
19 HBCT. And White Sands would like to keep that envelope of
20 possibility because at some point in the future they could get a
21 mission that requires that.

22 MR. CHAVEZ: An example is that FCS is redefining the
23 vehicle and --

24 THE REPORTER: I can't hear you, Frank, I'm sorry.

25 MR. CHAVEZ: FCS is redefining their whole concept as

1 well. And one of the things they're redefining is the vehicle that
2 they're using, the platform. So at the present time, we're not sure
3 what that vehicle is. So that's something that is for the future
4 that could be possibly covered under this part of the EIS.

5 MR. CHRISTENSEN: White Sands also has a neighbor --

6 MALE VOICE: Fort Bliss.

7 MR. WATSON: Does this decision that came out today
8 affect Fort Bliss in a similar way?

9 MR. CHRISTENSEN: It does, sir. Fort Bliss has also
10 indicated that it's losing a brigade. What that just means is we're
11 going to grow a whole heck of a lot instead. And there could still
12 be crossover opportunities between Fort Bliss and White Sands for a
13 unit on Fort Bliss that has a particular element of White Sands
14 that's attracted to it, such as the Army Evaluation Task Force
15 that's playing in a future combat system game right now on Fort
16 Bliss. They may still end up doing something on White Sands with
17 some vehicle type that's not yet defined.

18 MS. HAY: We're also housing a battalion that right
19 now that do their training missions at Fort Bliss but you know,
20 they're going to get crowded so they've been asking us for areas to
21 train. We also have areas set up for WTC, the National Guard.
22 We've done Roving Sands Special Ops, we've also done a certain
23 amount of training in the past.

24 MR. CHRISTENSEN: And I, as a matter of course, put
25 growth alternatives in the EISs at Fort Bliss. And that's proven to

1 be wise, as we found with the Grow the Army Decision, adding
2 additional units beyond what BRAC and the Global Defense Posture of
3 the Army were doing at Fort Bliss. So there's nothing that says an
4 EIS can't have, can't look at a future action that's not identified
5 as something that the Army will execute immediately.

6 MS. MARLIN: And so essentially, we have advanced
7 planning for something --

8 FEMALE VOICE: That's right.

9 MR. CHRISTENSEN: We actually do advanced planning --

10 REPORTER'S NOTE: (Multiple people speaking at once.)

11 MS. MARLIN: But it is good to look at it as a test
12 and training situation so it can be assessed for both operations.

13 MR. WATSON: Thanks for clarifying, it's just a curve
14 ball.

15 MR. PETERSON: Yes.

16 MR. CHAVEZ: That's true, yes.

17 MS. PETERSON: And also, I only found out about this
18 like three hours ago, so yeah, we're still trying to figure that one
19 out. But getting back to the presentation. Okay, so we talked a
20 little bit about purpose and need and the need for
21 capabilities-based land use planning. I guess we'll go to the next
22 one.

23 The proposed action alternatives: The no action
24 alternative is obviously the baseline in which we evaluate the
25 impacts of the other alternatives. Alternative 1 includes changes

1 in land use to expand testing and maneuver capabilities, includes
2 main post expansion for the HBCT and the infrastructure. And
3 Alternative 2 allows for a specialized area for intensive off-road
4 maneuver training for an HBCT-type activity and that's called the
5 Southeast Multi-Use Area.

6 MR. WATSON: Is that south of 70?

7 MS. PETERSON: It's south the 70.

8 MR. WATSON: Does it link Bliss to White Sands?

9 MR. CHRISTENSEN: Yes, sir.

10 MS. PETERSON: Yes. In fact, the next slides are
11 about the land use and airspace strategy plans and Susan Goodan's
12 going to expand on that a bit.

13 MS. GOODAN: The idea of the Land Use and Airspace
14 Plan, it started before the EIS was really conceived. It was seen
15 as a precursor, how are we going to describe activities that occur
16 on White Sands. And what was done, we created a framework and we
17 divided White Sands and the area surrounding it that in some way
18 support the mission into discrete, we put boundaries around discrete
19 areas. And they mostly had geopolitical relevance. For example,
20 the Monument, further on up, the boundary of White Sands itself
21 versus the boundary of the extended airspace that overlies White
22 Sands.

23 Then we looked at the mission and the types of
24 activities that occur on White Sands to support the mission,
25 interviewed lots of users and personnel of White Sands and distilled

1 it down to 14 types of activities. It was a difficult process but
2 we looked at all the different land use areas that we had and we
3 said well, which activities occur in which areas, because that was
4 defined sometimes through agreements, some of it's private property.
5 So there's a different kind of combination of land uses in the
6 different land use areas.

7 The biggest chunk is what we defined as the primary
8 test zone, which is most of the White Sands managed lands, which
9 allow most of the activities that they perform throughout the range.
10 So it became a framework and a way of being able to describe what
11 happens and a way to describe changes. And at this point in time,
12 the future combat system, which Frank mentioned, it was a big test
13 program and one of the main things that they needed was to be able
14 to use, to drive vehicles off-road.

15 So we're looking, we already knew that this is one of
16 the main changes in land use that White Sands wants to investigate.
17 We came up with a few more through interviewing. There was
18 potentially a need to have another type of impact area. The
19 built-up areas around the main cantonment, if in the future there
20 were going to be more troops and more, more personnel, it was highly
21 likely that the key areas for development were going to expand in
22 the future. So we kind of allowed for them to expand in the plan.

23 We also considered the fact that if there is more
24 activity, there could be more key infrastructure, either in radar or
25 cable or tank road trails so we looked at what could this layout be.

1 No exact locations but what are the types of infrastructure there
2 could be. And about approximately what's the mileage or the size of
3 this infrastructure. Another thing that we came up with, new
4 specialized areas. Throughout White Sands there are specialized
5 areas now, there are over 50 of them that we could determine that
6 are in active use now which support discrete types of activities.

7 So in interviewing, and in our next slide down a ways
8 we will discuss these in more detail, but additional specialized
9 areas were conceived. So the area which is the bulk of the range
10 which supports the typical mission tests of the past we're now
11 considering could support off-road vehicle use. What it does not
12 include are areas such as the National Monument, the Wildlife
13 Refuge, Jornada Experimental Range, the lava areas and things like
14 the pupfish habitat. Areas that are specifically protected are not
15 included in that land use.

16 Aside from that, it's a very large area and there are
17 different types of sensitivities in it, both environmental and
18 operational. So not all areas are likely to have a high degree of
19 off-road vehicle use. So we wanted a way to start defining what
20 land is the least constrained for those types of activities, where
21 we can anticipate that those activities are more likely to take
22 place. And we defined an area that didn't have slopes greater than
23 40 percent, was not a specialized area for some other activity, was
24 not part of the potential habitat. We also have the pennyroyal
25 habitat that's not in here. And so we were able to carve out of

1 this the least constrained land versus land which might have some
2 kind of constraints.

3 This is a plan and as soon as you've done a plan, the
4 plan's out of date. That is to say that White Sands won't be able
5 to actively continue to use its GIS to kind of modify this overlay.
6 So that as they learn more about their resource, that overlay can
7 change. And what it allows them to do then is to work with users
8 and say well, you are proposing an activity that's in a sensitive
9 area, you are going to need to do certain types of things to avoid
10 impact. It gives them a way to manage in the future. So that was
11 the concept.

12 Some of the kind of numeric ideas behind Alternative
13 1 were they know certain types of tests are going to increase in the
14 future, one of the main categories is Directed Energy Testing. They
15 anticipate a four-fold increase in that type of testing compared to
16 what they do today. Missile and rocket firings, bomb drops, there
17 could be some increase in those tests, not a lot, it's not as, it's
18 not seeing as much increased activity as directed energy.

19 There's also a four-fold increase projected for
20 things they called non-hot missions. Just because activity, per se,
21 is increasing, they're going to have more customers on the ground.
22 If you've got a test like future combat, you might have people in on
23 an infield setting it up or tearing it down. You might have 2nd
24 Engineering Battalion doing things that are not considered hot,
25 which in layman's terms would be hazardous, not doing a hazardous

1 activity.

2 Specialized areas: Six new areas are proposed at
3 this time. And these included an electro-optical range which is
4 located close to the main cantonment. A Joint Land Area Cruise
5 Missile Defense Elevated Netted Sensor, it's known as JLENS, which
6 is like your aerostats, you might be familiar with these kind of
7 balloons which house a radar and it's on a tether. An environmental
8 laboratory complex.

9 An area that's about 1,300 acres for joint urban
10 research, development, test and evaluation environment. It's where
11 you would be able to simulate an urban environment so that you're
12 using equipment and it could be subject to the kind of jamming that
13 is typical now in urban combat where you get the materials of the
14 building and the different things going on in them, people have
15 their own equipment that they needed an environment to be able to
16 test and train in those conditions. An individual combat skills
17 training area and a local training area. Those last two are more
18 geared towards the 2nd Engineering Battalion. Dorothy.

19 MS. PETERSON: And we talked about this a little bit,
20 the HBCT stationing. In the EIS, we evaluate additional 3,800
21 military; over 6,000 family members accompanying them and
22 additionally increases in contractor and civilian personnel to
23 support both the HBCT mission and increase in test missions Sue
24 talked about. The enclave or the main area where their buildings
25 would be located would be 300 acres adjacent to the existing main

1 post. And there would be over three million square feet of new
2 construction in the form of the family housing, on-post schools,
3 recreation facilities, etcetera.

4 For Alternative 2, the Southeast Multi-Use Area, it's
5 been carved out as a 120,000 acre area southeast of US 70. This is
6 where intensive off-road vehicle use would occur, including both
7 wheeled and tracked vehicles. We envision 100 miles of new tank
8 trails within that area. Some discrete sites where they could do
9 command and control operations. And because there is historically
10 unexploded ordnance and potentially cultural resources in that area,
11 use of that area would be contingent on doing surveys and mitigating
12 for those resources. So they're not allowed off-road vehicle use
13 until those items were addressed.

14 White Sands has incorporated a variety of measures to
15 reduce impacts as part of the proposed action. These are not
16 mitigation but these are things that they would do up front and
17 commit to. These include a variety of -- sir, could you sign in?

18 MR. SHYNE: Sure.

19 MS. PETERSON: These include a variety of measures to
20 address off-road maneuver areas, things like Section 106 compliance
21 with cultural resources; avoid Pennyroyal habitat; restricting
22 ground operations, and limited use of essential pupfish habitat or
23 else doing coordination with US Fish and Wildlife Service to gain
24 some type of permission. And because of the types of actions that
25 would occur, there would be safety plans that would be needed to

1 address these types of operations. And also there was a commitment
2 that the roadblocks that would occur, even under the increased
3 testing, the duration and the notification requirements would still
4 be the same.

5 Under Alternative 1, there are a variety of impacts.
6 Obviously the increase of military and civilian personnel would
7 incur impacts in the community, things like increased housing
8 demand, potential strain on local schools, there would be positive
9 impacts in terms of personal income and sales tax revenue in the
10 region. Things like utility usage would increase, solid waste
11 disposal. And there are also concerns about traffic on US 70 and
12 54.

13 With regard to just off-road vehicle use within WSMR,
14 this would result in adverse impacts to vegetation/biological
15 resources and it would also increase soil erosion and airborne dust.
16 And also increase the potential for wildfires. With regard to hot
17 missions, these could result in safety impacts, as well as
18 disturbances to wildlife. And again, the number of roadblocks would
19 increase and there would be greater waste generation associated with
20 these tests.

21 Under Alternative 2 within the proposed Southeast
22 Multi-Use Area, because of the intensive off-road vehicle use, there
23 would be localized soil erosion, dust generation and wildlife
24 disturbance. There would also be increased potential for accidental
25 fuel spills and wildfires.

1 And based on these impacts that were identified,
2 there are several mitigation measures that are considered. Several
3 measures would reduce dust generation and soil erosion, adaptive
4 management would be used for most of those cases. And White Sands
5 is also developing an agreement with, a programmatic agreement with
6 the State Historic Preservation Office and that is underway. And
7 they're also developing measures to prevent and reduce impacts to
8 biological resources.

9 In addition, White Sands is also completing studies
10 and will request funding for infrastructure and utility projects to
11 address the additional personnel. They'll generate new standard
12 operating procedures for off-road activities. And they're exploring
13 a recycling program. They've also developed mitigation measures to
14 address transportation and traffic impacts as well as shortfalls in
15 off-post schools and housing. And they will continue to coordinate
16 with the other military installations in the region to reduce
17 cumulative impacts.

18 As you can see behind you, there are a variety of
19 posters. After the comment period, you're welcome to visit these
20 stations and talk to all our experts and subject matter experts.
21 The EIS schedule: Because of some difficulties with the White Sands
22 website, the public comment period has actually been extended two
23 weeks. It was June 22nd, it is now July 6th. We anticipate the
24 Final EIS to be published in August, that might be pushed to
25 September, given the two-week extension for the public comment

1 period. And we anticipate a Record of Decision in October.

2 Again, written comments can be faxed, mailed,
3 e-mailed by July 6th. The address is shown here. We also have a
4 handout of a comment form and you can fold that in half, it actually
5 has the address, you can just staple it. And that has all the
6 e-mail and other information as well.

7 MR. WATSON: I'm sorry, could you go back to those
8 dates again?

9 MS. PETERSON: Sure. July 6th is the magic date.
10 And that date is also on the handout, it's been updated.

11 MR. WATSON: Thank you.

12 MS. PETERSON: Okay. We don't have anyone signed up
13 to give oral comments, but if you would like to, the stenographer
14 will take down your comments and they'll be made by administrative
15 record. Giving comments tonight does not give it more weight than
16 mailing or e-mailing or any other form of comment. So if you wish
17 to comment tonight, we encourage it; if not, we'll anticipate some
18 written comments. And that is it.

19 MR. WATSON: Thank you.

20 MS. PETERSON: Would you like to come up here and
21 give comments?

22 MR. WATSON: No.

23 MS. PETERSON: Well, that concludes tonight's
24 session, we'll be available to answer questions one-on-one with you
25 and thank you for coming tonight.

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PUBLIC MEETING
for the
Draft Environmental Impact Statement (DEIS)
for Development and Implementation
of Range-Wide and Major Capabilities
at White Sands Missile Range (WSMR), New Mexico
Las Cruces, New Mexico
June 3, 2009
7:00 p.m.

APPEARANCES

1
2
3 Dorothy Peterson, Potomac-Hudson Engineering Project Manager
4 Susan Goodan, SAIC Project Manager
5 Frank Chavez, Executive Director White Sands Test Center
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1 MS. PETERSON: Hello, and welcome to tonight's public
2 meeting for the Draft Environmental Impact Statement for the White
3 Sands Missile Range EIS. My name's Dorothy Peterson and I am -- I'm
4 sorry, can you hear me okay? Okay, this is not a good mike
5 situation but okay. My name is Dorothy Peterson, I'm with
6 Potomac-Hudson Engineering and I am the project manager for the EIS.
7 And tonight we're going to get some welcoming remarks from Mr. Frank
8 Chavez, the White Sands Test Center Executive Director. Then myself
9 and Susan Goodan, from SAIC, will give an overview of the EIS and
10 then we'll open the floor for public comments. So with that, Mr.
11 Frank Chavez.

12 MR. CHAVEZ: I want to thank everybody for being here
13 tonight. This is the second of three meetings that we're having on
14 the Draft EIS and we're appreciative that you would take your time
15 to come to tonight's meeting and give us your comments and your
16 observations on the Draft EIS.

17 It's critical that we have the public involved with
18 us because this is part of the future of White Sands Missile Range.
19 And as such, White Sands is changing a little bit as far as the, you
20 might say the mission, with the advent of the engineering battalion
21 arriving at White Sands, in addition to the testing that we do at
22 White Sands. So with that, we'd like to go ahead and start the
23 process with the briefings. Thank you very much for coming again.

24 MS. PETERSON: Okay. First order of the night is
25 some introductions, then I'll go over the National Environmental

1 Policy Act process, followed by the purpose and need for agency
2 action, a description of the proposed action alternatives, some of
3 the key elements of the alternatives, measures that White Sands will
4 undertake to minimize impacts as part of the proposed action. Then
5 we'll go over the impacts of the alternatives, mitigation measures.
6 We'll talk about the poster stations you see around the room. The
7 schedule for the EIS. And then lastly, we'll open up for public
8 comment.

9 Ms. Cathy Giblin, over here, she is our project
10 manager for the White Sands Missile Range. Mr. Eric Wolters is from
11 the Army Environmental Center. Ms. Monte Marlin in the back is
12 Public Affairs Officer. Russ Koch couldn't be here. Is Karen Hay
13 here?

14 MR. GALLEGOS: No, she's not. I'm representing them.

15 MS. PETERSON: Oh, okay. Jose Gallegos?

16 MR. GALLEGOS: Gallegos.

17 MS. PETERSON: He's representing the Environmental
18 Department. Myself. And then Susan Goodan from SAIC, she's the
19 team lead for the subconsulting team and the group authoring the
20 Land Use and Airspace Strategy Plan.

21 All right. First is the NEPA process. NEPA is a
22 federal law enacted to require federal agencies to evaluate the
23 environmental impact of their actions so that they can make informed
24 decisions. And public participation is a key element of this law
25 and it allows the public to provide input on the range of

1 alternatives, the types of analyses conducted, as well as the
2 measures to reduce impacts.

3 Back in July 2008, we had the public scoping
4 meetings. This was the opportunity for the public to first hear
5 about the EIS and provide input on the types of things that they
6 would like to see analyzed.

7 The Notice of Availability for the Draft EIS was
8 published on May 8th and began a 45-day public comment period on the
9 draft. The public comment period has been extended two weeks and
10 I'll go over that later. And tonight is your opportunity to provide
11 comments orally and we also have comment forms in the front of the
12 room that you can mail in, and I'll go over that as well.

13 This is a graph of where we are in the NEPA process.
14 As you can see, we had the scoping, we are now at the public comment
15 period for the DEIS. And after this, we'll prepare a Final EIS,
16 followed by the waiting period and then the Army will issue a Record
17 of Decision outlining the alternative that is preferred.

18 The NEPA process begins by the agency defining the
19 need for their action. And in this case the EIS is supporting an
20 earlier decision to station an HBCT, a Heavy Brigade Combat Team at
21 White Sands. As you may have seen in the newspapers, that decision
22 has been changed. The Secretary of the Army came out with a
23 decision yesterday saying that an HBCT would not be coming to White
24 Sands. And we'll talk about that in a little bit as well.

25 Also White Sands has encountered numerous customer

1 requests for different types of testing programs and training in
2 order to support different test programs as well. And so they
3 decided that they needed a planning tool to address these change in
4 customer requests and use their facility in a more efficient way.

5 The next step in the NEPA process is to develop a
6 range of alternatives to meet the needs. For this EIS, Alternative
7 1 would adopt a Land Use and Airspace Strategy Plan which would
8 provide a framework for planning and accommodating new missions.
9 It would also provide for main post expansion to accommodate the
10 troops anticipated under that Heavy Brigade Combat Team. And under
11 Alternative 2, White Sands evaluated the need for an HBCT to do
12 maneuver training and this would be more intensive off-road training
13 than you would see as a regular customer at the installation.
14 Susan Goodan is going to come up and talk about the Land Use and
15 Airspace Strategy Plan.

16 MS. GOODAN: Good evening. This plan started a few
17 years ago. Cathy Giblin had had different customers coming to her
18 and it was obvious that their needs are different than a lot of the
19 testing that had gone on in the past. One of the main changes was a
20 need to do more on-the-ground activity. So backing up, we decided
21 that there needed to be a way to describe what activities go on out
22 at White Sands and start getting arms around that to be able to look
23 at different ways of using the land and the airspace resources.

24 So what was done, we undertook a way of trying to
25 describe the various areas of land and the land underlying the

1 extended restricted airspace that's surrounding White Sands. And
2 that was divided up, more or less reflecting geopolitical, not
3 constraints but maybe jurisdictions. And there is a handout over on
4 a chair over there that describes the 17 areas that we divided the
5 landscape up into for their land and airspace.

6 At the same time, we were also trying to get an idea
7 of what kind of activities take place at White Sands to support
8 their mission. And through talking to the various test programs and
9 the staff who are managing the land and the airspace, we defined 14
10 areas. It's a difficult process because there's obviously a lot of
11 things that you have to start bundling together to describe
12 categories of activities. We have a handout of the activities that
13 we came up with to describe what we described.

14 We also then matched activities to each of the land
15 use areas and that was done in a matrix format. Let's see if I can
16 demonstrate that handout here for you, show and tell here, you can
17 get one of these for yourself. So we have the land use areas and we
18 have the activities and for any given area you can see what
19 activities are currently undertaken in that area. One of the
20 largest pieces of land that we were dealing with was the primary
21 test zone, it's the land that White Sands actually manages itself
22 and has historically supported the missile test program. And it
23 extends from the south way to the north.

24 One of the main changes that was needed for future
25 tests was to allow for more access for off-road vehicles. So that's

1 the primary land use change that we conceived for the future for the
2 land managed by White Sands, is to allow off-road vehicle use to
3 support tests. We also identified a need in the future possibly for
4 a new impact area for different types of, just really to increase
5 their capacity to support tests.

6 With the growth in test plans and also possibly
7 training at White Sands there was a need to anticipate future growth
8 of the cantonment areas or the areas where we have concentrations of
9 buildings, so we built that into the future land use for White Sands
10 as well. And as described before, this is really just a framework
11 for being able to say what happens on White Sands.

12 For the Environmental Impact Statement, we then
13 wanted to look at, okay, we have activities, another way of defining
14 action is the amount of it. And one of the things that could happen
15 in the future is an increase in directed energy tests. There may be
16 some increase in rocket and missile firings. And there is also a
17 lot of activities on the range that are not hazardous at all, which
18 are known as non-hot. They support basic communication checks, any
19 environmental management or range management activities, it could be
20 unmanned flight that is not taking place with a hazardous mode,
21 training activities by the 2nd Engineering Battalion.

22 The increase in use of these types of actions could
23 be four-fold in the future. White Sands currently has much of its,
24 throughout its landscape many areas that are used for specific
25 programs or tests or activities. We've used the same specialized

1 area for these and there are over 50 active specialized areas on
2 White Sands. Through talking to users and through some of the
3 proposals that are coming online, there is a need for, at this
4 point, about six new specialized areas at White Sands. These are
5 being considered in the EIS and they are: An Electro-optical .50
6 Caliber Range. A Joint Land Attack Cruise Missile Defense Elevated
7 Netted Sensor System, it's known colloquially as the JLENS system.
8 And you may be familiar, it's one of those balloon or aerostat
9 systems which is tethered to the earth and has radars and components
10 in it for sensing.

11 An Environmental Laboratory Complex. A Joint Urban
12 Research, Development, Test and Evaluation Environment. This is an
13 area which would simulate a small urban area so that activities,
14 tests or training could be undertaken. And any of the equipment is
15 going to have to engage and deal with the type of interference that
16 they encounter in a real urban environment. This has been known to
17 be a problem that equipment gets into these contacts and they
18 sometimes got blocked and they need to be able to work out some of
19 those issues in the testing environment. An Individual Combat
20 Skills Training Area and a Local Training Area are also being
21 proposed. And these would basically support the 2nd Engineering
22 Battalion that is at White Sands. Dorothy is going to resume here.

23 MS. PETERSON: Thank you. Okay. The HBCT
24 stationing, as I said earlier, there's been a recent decision to not
25 bring an HBCT to White Sands. However, as Susan explained before,

1 the whole idea behind the Land Use and Airspace Strategy Plan was to
2 enhance the capabilities of White Sands. And so after some initial
3 discussions, we feel that we will carry forth an HBCT-like unit, it
4 may not be a specific HBCT but it may be a unit of similar size,
5 strength and maneuver capability, and carry that through in the
6 Final EIS. Even if it's not implemented, it would give the Army
7 flexibility in the future, should decisions change yet again. So
8 that's how we plan to address it.

9 Again, right now the EIS addresses an increase of
10 military of 3,800, associated family members of over 6,000. And
11 also a civilian and contractor personnel increase to support both
12 the HBCT and these increases in missile and other testing that would
13 occur. They've carved out a 300-acre area for an HBCT enclave
14 adjacent to the existing main post. And there would also be over
15 three million square feet of new construction to support that type
16 of increase, including things like new schools on post, family
17 housing, recreation facilities, fire and police facilities,
18 etcetera.

19 Alternative 2 includes all the things that you've
20 heard about for Alternative 1. Plus it gives White Sands the
21 capability to support intensive off-road maneuver and ground troop
22 maneuvers at White Sands. And they looked at a 120,000 acre area
23 southeast of Route 70. And this is where the activity would take
24 place. It would include up to 100 miles of new tank trails, it
25 would have some discrete sites for command and control operations.

1 And it's important to note that there is unexploded ordnance known
2 to be in this area and there's also a potential for cultural sites
3 in this area. And White Sands has committed that no off-road
4 maneuvers would take place without first conducting surveys and
5 clearing for those items.

6 Again, White Sands has proposed several measures as
7 part of the proposed action that they would commit to reduce adverse
8 impacts to the environment. And in particular, there are several
9 related to off-road maneuvers. Like I said, doing some clearing for
10 cultural resources and conducting a programmatic agreement with the
11 State Historic Preservation Office, which is underway right now.

12 They've committed to not allowing maneuvers in
13 Todsens's Pennyroyal areas and also restricting maneuvers in limited
14 and essential pupfish habitat, or else consulting heavily with US
15 Fish and Wildlife Service. And also clearing any debris that would
16 occur during additional testing or off-road maneuvers. And they
17 would also conduct additional safety plans to address these new
18 activities. One of the things that they've also committed to is
19 that the Memorandum of Agreement with the Highway Department for
20 roadblocks would still be in place, the existing notification and
21 time constraints would still remain.

22 The impacts that are outlined in the EIS, there's a
23 table in the executive summary, it's Table S-3, that gives a good
24 overview. I'm going to go over some of these but if you want to get
25 the full range of impacts, we encourage you to read the executive

1 summary. As can be expected with an increase of personnel and
 2 military families in the region, there will be several adverse
 3 impacts. These include things like housing shortfalls; strain on
 4 community services, such as law enforcement, fire services and even
 5 schools.

6 A positive aspect would be increased personal income
 7 and revenue and tax revenue in the region. Obviously there would be
 8 additional consumption of utilities. And also more generation of
 9 solid waste. And there are also issues related to traffic,
 10 especially during rush hours on US 70 and 54. With regard to
 11 off-road vehicle use in particular there are several adverse effects
 12 that can be anticipated. Within White Sands off-road activity would
 13 result in adverse impacts to vegetation and biological resources and
 14 would also increase soil erosion and airborne dust. There's also a
 15 potential for increase in wildfires.

16 With regard to increases in "hot missions", things
 17 like missile firings, obviously safety would be a concern, as well
 18 as disturbance to wildlife. And also the number of roadblocks
 19 occurring annually would increase.

20 For Alternative 2, within the Southeast Multi-Use
 21 Area that's proposed, this intensive off-road activity would result
 22 in localized soil erosion, dust generation, wildlife disturbance.
 23 There would also be increased potential for accidental fuel spills
 24 and wildfires.

25 Now to address these range of impacts, the Army has

1 proposed several mitigation measures. Many of these measures are to
 2 reduce dust generation and soil erosion from off-road activities.
 3 They are also developing an agreement with the State Historic
 4 Preservation Office to protect cultural resources. And they've also
 5 developed measures to prevent impacts to biological resources as
 6 well.

7 Again, because of the increased population, White
 8 Sands is conducting studies and will develop measures to address
 9 infrastructure needs, particularly in terms of utilities. They
 10 would generate new standard operating procedures for off-road
 11 activities. And they're looking at expanding a recycling program.
 12 Mitigation measures to address transportation and traffic impacts
 13 will be developed, as well as working with the local communities to
 14 address any shortfalls in off-post schools and housing. And they
 15 will continue to coordinate with the other military installations to
 16 reduce cumulative impacts in the region.

17 As discussed before, we do have posters around the
 18 room that discuss primarily the Land Use and Airspace Strategy Plan
 19 and they indicate areas of off-road maneuver of various intensities.
 20 So we encourage you to visit those stations and there will be folks
 21 from the EIS team and White Sands to answer your questions.

22 The public comment period was extended. It was June
 23 22nd, it's been extended two weeks to July 6th. The Final EIS is
 24 anticipated to be published in August and a Record of Decision
 25 published in October. On the comment form, you can either drop

1 these off tonight, you can mail them in, there's an address on the
2 back, as well as information about faxing and e-mailing comments as
3 well.

4 If you have questions or comments tonight that you
5 would like to present up here at the mike, the court reporter will
6 take them down and put them in our official record of today's
7 meeting. We'll ask you to come up and speak at the mike. We ask
8 you to limit your comments to five minutes. When you come up here,
9 please spell your name for the court reporter and list any agencies
10 that you're with. And then if you need more than five minutes,
11 after everyone else has had an opportunity to speak, you're invited
12 to come back up again. And if you need a Spanish translator, we do
13 have one tonight. So with that, thank you for attending. Is there
14 anyone from the audience that would like to come up and present
15 comments on the DEIS? Last call. Okay. Well, again -- do you
16 want to say something? Okay. Come up, Will.

17 MR. MCWHORTER: My name is William McWhorter,
18 M-c-W-h-o-r-t-e-r, but call me Will. Because I'm a troublemaker.
19 What happened if we don't adhere to the law, we ignore the law and
20 then do it and then try to get the thing done? This is troubling to
21 me, is Alternate 2 said there's 120,000 acres south of Highway 70
22 that would turn into a desert for vehicles. I go over this thing
23 and I tell you in April I went over it four times, back and forth.
24 And I got to the mountain up there and looked south of Highway 70,
25 all the way to Holloman Air Force Base is already a desert.

1 And I asked Senator Teague's office to find out if
2 anything is and word came back, Suzie called me yesterday and said
3 it was because of a drought. I don't believe it. Highway 70 don't
4 stop the drought north of there. So something's already been done.
5 I don't know what it is, don't have any idea but I believe maybe it
6 affected something in the vegetation all the way from SMR all the
7 way down Highway 70 to Holloman Air Force Base. That's my belief.
8 And somebody needs to check into it and see if it's true or not.
9 Because if you look there, I went over there and have been going
10 over there for 45 years and I said my goodness, what has happened
11 from the SMR below the launch pods all the way to Holloman Air Force
12 Base. If you look on one side of the highway, I've been over there
13 four times and I've seen the same thing four times. Thank you.

14 MS. PETERSON: Anyone else want to give a comment
15 tonight? Okay. Well, thank you for your participation. Again,
16 there will be people from White Sands and our EIS team here to
17 answer questions one-on-one at the poster stations, and thank you,
18 and good night.

19 (Proceedings concluded at 7:28 p.m.)

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PUBLIC MEETING
for the
Draft Environmental Impact Statement
(DEIS)
for Development and Implementation
of Range-Wide Mission and Major
Capabilities at White Sands Missile Range
(WSMR), New Mexico

June 4, 2009
7:00 PM
The Macey Center
801 Leroy Place
Socorro, New Mexico

REPORTED BY: Jenifer L. Russin, RDR
NM CCR #182
RUSSIN WILLIAMS REPORTING
1608 5th Street, NW
Albuquerque, New Mexico 87102

A P P E A R A N C E S

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Ms. Dorothy Peterson,
Potomac-Hudson Engineering,
EIS Project Manager

Ms. Cathy Giblin, WSMR EIS Project Manager

Ms. Susan Goodan, SAIC

Mr. Frank Chavez, Executive Director,
White Sands Test Center, WSMR

Ms. Monte Marlin, WSMR DAO

Mr. John Kipp, Environmental Scientist, WSMR

Ms. Renee Blotske, WSMR, BDO

Mr. Walter K. Christenson, NEPA Planner,
Ft. Bliss

Ms. Karen Hay, WSMR, PW-E-C

Mr. Anthony Becker, WSMR

Mr. Wallace Ferguson, Rancher

Mrs. Anne Ferguson, Rancher

Mr. Joel Ferguson, Rancher

Ms. Joan Donaldson, Rancher

1 MS. PETERSON: Welcome, everyone. My name is
2 Dorothy Peterson. I am a project manager for the White
3 Sands EIS.

4 Tonight we are going to go over the EIS. First,
5 we're going to have some welcoming remarks from
6 Mr. Frank Chavez, who is the executive director from
7 White Sands Test Center. Next, myself and Susan Goodan,
8 who is on the EIS team, will go over the alternatives
9 and impacts associated with EIS, and then we'll open the
10 floor to public comments.

11 So, with that, Mr. Frank Chavez.

12 MR. CHAVEZ: Good evening, everybody, and
13 welcome to the final public scoping meeting for the
14 Draft EIS. Just to let you know, this is a very
15 important document for White Sands, considering that
16 some of our scope is changing, you know, with the
17 addition of the Engineer Battalion at White Sands. So
18 things are a little bit different from just our normal
19 testing mission.

20 So we have some good people here to answer your
21 questions, and please feel free to ask the questions.
22 That's what we're here for. This is a very important
23 part of the process for us to get this approved. So,
24 please.

25 Thank you very much.

1 MS. PETERSON: Okay. This is tonight's
2 agenda. First, we're going to introduce the team. Then
3 we'll go over what the National Environmental Policy Act
4 is, and we'll talk about the purpose and need and
5 alternatives, the environmental impacts, measures to
6 reduce impacts, mitigation measures, and then we'll go
7 over the poster stations that are around the room, which
8 you're already familiar with, then the schedule, and
9 then the public comment process.

10 Okay. The project manager at White Sands is
11 Ms. Kathy Giblin. Eric Wolters from the AEC could not
12 be here tonight. We have Monte Marlin, public affairs
13 officer, who you already know. Russ Koch couldn't be
14 here, but we have Karen Hay, whose phone is going off
15 right now, and then myself and Susan Goodan from SAIC.

16 Okay. What is NEPA? The National Environmental
17 Policy Act is federal law enacted in 1969, and it
18 requires federal agencies to consider the environmental
19 impacts of their proposed actions, so that they can make
20 informed decisions before they go forth. Public
21 participation is a key tenet of NEPA, and it allows the
22 public to provide input on the range of alternatives,
23 the scope of analysis, and measures to reduce impacts.
24 And it looks at impacts in terms of both the environment
25 and impacts to the community.

1 There were public scoping meetings held at the
2 same locations as tonight, and the other two meetings,
3 back in July of 2008. And at that time, we received
4 some comments on the scope of analyses and issues that
5 the public wanted to see addressed in the EIS. And as
6 of May 8th, we had the Notice of Availability of the
7 Draft EIS, and this begins a 45-day public comment
8 period on the draft. And tonight's meeting is another
9 opportunity to provide comments on the draft.

10 Okay. This is sort of a graphical representation
11 of the time line and where we're at in the process. As
12 you can see, we're at the 45-day public comment period.
13 Following that, there will be a Final EIS produced, a
14 Notice of Availability of the Final, a 30-day waiting
15 period, and then the Army will reach a Record of
16 Decision.

17 So the NEPA process begins by an agency defining
18 the need for action, and in this case, part of what is
19 analyzed was the need to support an earlier decision by
20 the Army to station a Heavy Brigade Combat Team at White
21 Sands.

22 Now, there was a press release by the Army this
23 past Tuesday saying that the HBCT would not be coming to
24 White Sands, and I'll talk about that in terms of the
25 alternatives a little bit later.

1 White Sands also found that they had increased
2 customer requests for land and space to conduct various
3 missions. And so in order to facilitate their planning,
4 they developed a Draft Land Use and Airspace Strategy
5 Plan, and that would open up the range to things like
6 off-road maneuvers and ground-troop maneuvers, as well.
7 And we're going to go over that, as well. Actually,
8 Susan is going to address what is in the Land Use and
9 Air Space Strategy Plan.

10 Okay. The No-Action Alternative provides a
11 baseline in which the other alternatives are compared in
12 terms of their impacts. And Alternative 1 includes the
13 adoption of a Land Use and Air Space Strategy Plan
14 allowing things like off-road maneuvers. It also
15 includes the support of the stationing of the HBCT,
16 including expanding the main post and adding a variety
17 of infrastructure of projects to support the influx of
18 personnel. Under Alternative 1, HBCT training would
19 occur primarily at Fort Bliss.

20 Alternative 2 allows an HBCT to do heavy-maneuver
21 training on White Sands property in something called the
22 Proposed Southeast Multi Use Area.

23 Now, Susan is going to talk about the Land Use
24 Plan.

25 MS. GOODAN: Good evening. So we kind of

1 have to back up a couple of years to about 2007. As
2 Dorothy was saying, White Sands was getting requests
3 from test customers to do different types of activities
4 and a different type than they had in the past. The
5 missile tests tended to be a launch site, you know, a
6 projectile in the air, and sometimes an impact on the
7 ground or in the air. But the new tests we're looking
8 at are ground-based activities, including off-road
9 vehicles.

10 So between that and different types of directed
11 energy tests, Kathy was thinking, well, you know, how
12 can we get our arms around this? And we felt, well,
13 let's future some tools in place, first of all, for
14 understanding what it is you do here, and then we can
15 look at how to describe what some of the changes are.

16 And this is why we started developing this Land
17 Use and Airspace Plan, and it's really a framework, a
18 management framework, for White Sands. And we started
19 that by looking at how to divide the land up that
20 supports White Sands and the airspace area that supports
21 it, and we did this mostly through kind of geopolitical
22 boundaries, such as the monument itself and the
23 wilderness area, and -- I mean, the wildlife refuge and
24 Jornada, and then land outside their boundary, which is
25 underneath the airspace that they're using. And using

1 all these different kind of layers to divide it up, we
2 then turned our attention to what kind of activities are
3 done, and we came up with about 14 different activities.
4 We needed to clump certain things together. And then we
5 kind of coupled all the land use areas and said, well,
6 within each one is a different mix of activities that
7 they undertake.

8 So this has become a kind of a way of describing
9 what goes on at White Sands. And you've looked at the
10 maps at the back, and you can see that one of the
11 largest areas is kind of a pale brown area, kind of the
12 primary test zone that supports most of the activities
13 on White Sands. And right now, one of the main changes
14 that they're looking at is allowing more off-road use of
15 this area, meaning you'd have either tanks or Humvees or
16 test vehicles that they're developing, being able to be
17 out on the land, and this is a different use than
18 they've had in the past.

19 Another thing we identified through talking to
20 some of the test proponents is that there's an increased
21 volume of directed-energy tests, and there's different
22 types of munitions being tested. So in the future, they
23 may need another impact area.

24 And then, with the notion of an HBCT coming to
25 White Sands, they knew that there might be some

1 expansion of the built-up areas, particularly the main
2 cantonment, but also Stallion Range Camp. You know,
3 there might be more soldiers being up there or more test
4 crews needing to be -- you know, staying up there for
5 short periods of time, and then a few other isolated
6 areas that are now supporting activities throughout the
7 range. They've got a few camps -- basically, they call
8 them camps, but those could need a little bit more
9 facilitization in order to support future activities.

10 Another idea was that there would need to be more
11 support of infrastructure, if they are going to have
12 more activity happening, and especially more
13 ground-based testing. They may need to transport
14 material or troops up and down the range. So the idea
15 of a tank trail came up, of linking the North Range to
16 the South Range.

17 Another thing we've identified was the need for
18 more very specialized areas, where they do certain types
19 of activities. And right now, White Sands has over 50
20 areas on it that we've identified are currently being
21 used by either a specific user or for a specific person,
22 and we gave that the name Specialized Area, and they
23 range in size from a few acres to several thousand
24 acres, and they are throughout the range.

25 So, as I mentioned, one of the main changes is to

1 look at allowing some level of off-road vehicle use
2 throughout the range, and we call that the Augmented
3 Test Zone.

4 For the purposes of analyzing the impacts of
5 those activities with EIS, we wanted to say, well, you
6 know, it's not -- all land is not the same. And so
7 there are going to be areas where there are more likely
8 to be operating off road than others. And to come up
9 with some idea of how much of this large area is more
10 likely to be used than the others, we excluded certain
11 areas, like of higher slope, areas that we know have
12 special protection that have endangered species or a
13 protected species, such as the pupfish habitat and the
14 Pennyroyal habitat; and, in fact, areas that they would
15 not want off-road activity happening because they have
16 some types of facilities already, the Specialized Areas,
17 for example.

18 By removing that area from the footprint of the
19 augmented test zone, we were able to say it's likely
20 that off-road activity will be more concentrated in some
21 areas than others. So we aren't going to be looking at
22 equal distribution of those activities all over the
23 range.

24 So Alternative 1 is mostly about increased test
25 uses and the types of activities that are coming down

1 the line, and one of those is a potential four-fold
2 increase in what they call directed-energy tests, and
3 most of these are focused on specific facilities north
4 of US 70 right now, but they're also taking place
5 throughout the range already in some locations. And
6 they can -- they will be increasing the number of tests
7 that they do of this nature, and it involves both land
8 and airspace. Yet they are not planning to change any
9 of the existing kind of rule sets that they use. They
10 would meet the same safety criteria that they've had in
11 the past, and they will not be extending out of their
12 existing airspace envelopes in a way that's different
13 than they have in the past.

14 There could be in the future an increase in
15 missile and rocket firings, and so we included that in
16 this alternative, as well.

17 There's also expected to be basically a four-fold
18 increase of all the non-hot, the nonhazardous activities
19 that are currently undertaken on the range. This goes
20 anywhere from range maintenance activities to training
21 that's already going on by the Engineering Battalion.
22 Any of the missions that are using the airspace that are
23 not hazardous at all, they aren't expanding munitions or
24 anything. So those events, they could have a four-fold
25 increase at White Sands in the future.

1 I mentioned that they have specialized areas
2 throughout White Sands; and at the moment, six new areas
3 are being proposed. Let's see. As noted here, they are
4 primarily south of US 70:

5 There's an Electro-Optical .50-caliber Test
6 Range. An exact site is not known for this, but it's
7 likely to be closer to the main cantonment area.

8 The Joint Land Attack Cruise Missile Defense
9 Elevated Netted Sensor System. It's known as JLENS, and
10 you may be familiar with the aerostat systems where they
11 have the radars within the balloon that's tethered.
12 Well, they are anticipating having that facility.

13 An environmental laboratory complex. It's
14 basically a new facility. They have an existing one,
15 but this would provide them another area for conducting
16 tests where they're looking at how equipment responds in
17 different environmental contexts: Being shaken or
18 subjected to freezing temperatures or whatever, how it
19 survives.

20 A Joint Urban Research Development Test and
21 Evaluation Environment. Really what this is is an area
22 where they build a very small mock urban environment so
23 that they've got buildings and walls and wiring and the
24 things that would interfere in a normal urban context
25 with some of the equipment that soldiers are using, and

1 they need to be able to do tests, and possibly in the
2 future training, so that the soldiers are able to use
3 their equipment and -- or develop the equipment, first
4 of all, so that it can operate even within the kind of
5 mixture of all the signals that are getting thrown at
6 it.

7 They would also propose an Individual Combat
8 Skills Training Area, which is about 60 acres near the
9 main post, mostly for the Engineering Battalion and a
10 local training area for them, as well.

11 With that, I'll hand it back to Dorothy.

12 MS. PETERSON: Okay. All right. As
13 discussed before, part of the action under the original
14 intent of the EIS was to support the stationing of an
15 HBCT. And as the EIS is called Development and
16 Implementation of Range-Wide Mission and Major
17 Capabilities, even in light of this week's announcement,
18 the plan is to retain the analysis of an HBCT in the EIS
19 as a capability that could be used in the future. And
20 it could be in the form of maybe they put a different
21 HBCT there within the next few years or maybe a similar
22 program that brings similar numbers of individuals to
23 the station.

24 Analyzed in the EIS under this framework is the
25 addition of 3,800 military, over 6,000 family members,

1 by 2013; and there would be an associated increase in
2 civilian and contractor personnel to support both the
3 HBCT mission and also the increase in test missions that
4 Susan talked about.

5 And part of the alternative is an enclave of 300
6 acres, and that would be where the HBCT would have most
7 of its primary facilities. But to support that number
8 of personnel, there would be over three million square
9 feet of new facilities, things like on-post housing,
10 on-post schools, fire and police facilities, commissary,
11 that type of thing.

12 Under Alternative 2, as discussed before, they
13 looked at off-road intensive training for an HBCT in
14 something called the Southeast Multi-Use Area. It's
15 southeast of US 70, consists of 120,000 acres, and this
16 would consist of training of infantry with both light
17 and heavy vehicles, tracked and wheeled. They also
18 envision up to 100 miles of new tank trails within that
19 area and a few small sites for command and control
20 operations. However, this is an area known for
21 unexploded ordnance and potential cultural sites. And
22 so White Sands as made the commitment in the EIS that
23 there would not be any off-road activity allowed within
24 that area until there were surveys for both UXO and
25 culture sites and that appropriate mitigation occurred

1 beforehand.

2 All right. White Sands has also, as part of the
3 proposed action, incorporated measures to reduce
4 impacts, and this is considered part of the proposed
5 action, not necessarily mitigation. And a variety of
6 these relate to things like the ground operations, like
7 only conducting them in approved areas and having them
8 subject to cultural compliance, avoiding Todsens'
9 Pennyroyal habitat areas, as well, and then also
10 avoiding areas of limited and essential pupfish habitat.

11 In addition, they would guarantee that all
12 project debris would be removed following action, that
13 safety plans would be developed, and that roadblocks
14 would conform to the existing agreements.

15 In the summary of the EIS is a table describing
16 impacts, and I recommend that you look at that first;
17 and if you have more questions, then go to the body of
18 the EIS. I'm going to talk about some of the notable
19 impacts. This doesn't cover nearly all of them, but it
20 will give you a sense of what you'll see in the EIS.

21 Obviously an increase of personnel and military
22 families would have a large degree of impact, and this
23 would be in the area of things like housing, schools in
24 the community, law enforcement. On the positive side,
25 there would be obviously increased personal income and

1 sales tax revenue.

2 Within White Sands, utility consumption would
3 increase quite a bit, and the solid waste generation and
4 disposal rates would increase, and there would be
5 traffic issues along US 70 and 54.

6 With regard to increased off-road vehicle use,
7 that has another set of impacts: Obviously impacts to
8 vegetation, biological resources, and also increased
9 soil erosion and airborne dust.

10 The "hot mission" increase would also have
11 different impacts, as well, mostly related to safety,
12 but also the disturbance of wildlife in the area would
13 increase. The number of roadblocks annually would
14 increase, but again, they would adhere to the same
15 stipulations as currently in place.

16 Within the Southeast Multi Use Area under
17 Alternative 2, the type of off-road activity that would
18 occur would result in localized soil erosion and dust
19 generation, greater disturbance to wildlife, and there
20 would be increased potential for accidental fuel spills
21 and wildfires. The type of off-road impact in that area
22 would be much more concentrated than what you would see
23 under the Land Use Plan for the Augmented Test Zone.

24 So based on these impacts, White Sands proposes
25 several mitigation measures. They propose measures to

1 reduce dust generation and soil erosion related to
2 off-road vehicle use. They're also currently developing
3 an agreement with the State Historic Preservation Office
4 to protect the cultural resources, and they would also
5 develop measures to reduce and mitigate impacts to
6 biological resources.

7 And also with regard to utilities, they are
8 currently conducting several studies with regard to
9 water use and other utilities, and they would complete
10 those studies and request funding for necessary
11 projects. They would also generate new standard
12 operating procedures for off-road activities, as well as
13 look at a recycling program to minimize solid waste
14 generation.

15 Obviously, the increase in personnel would have
16 implications for transportation and traffic, and there
17 are several mitigations, as listed above, things like
18 carpooling, staggered work hours, telecommuting, and
19 also things like gate improvements and working closely
20 with the State Department of Transportation to develop
21 other mitigation measures.

22 They're also working with local communities to
23 address things like schools and housing, and they'll
24 continue to coordinate with the other military
25 installations to reduce cumulative impacts of all the

1 different DOD activities.

2 As discussed earlier there are posters in the
3 back, and we encourage you to visit them and speak to
4 the experts and ask questions.

5 This is the schedule for EIS. Public comments
6 are due on July 6th. They were originally due on
7 June 22nd. There's been a two-week extension.

8 We expect that the final EIS will be completed in
9 August, and the Record of Decision will be reached in
10 October.

11 Okay. When you came in, there were comment
12 forms, and this lists all the different ways that you
13 can submit your comments. You can fill these out and
14 leave them with us tonight. You can fill these out at
15 home, fold them in half and mail them -- there's an
16 address on the back -- as well as e-mail or fax your
17 comments before July 6th.

18 Okay. Now, we will begin the public comment
19 process. Because there's so few of you tonight, I
20 imagine that we're not going to need people to come up
21 for a second time after their five minutes, but we do
22 have a Spanish translator. And when you do come up,
23 please give your name, spell your name for the court
24 reporter, and list any affiliations that you have.

25 So with that, thank you for your participation

1 and attending tonight, and I will open the floor to
2 public comment.

3 So is there anyone that would like to come up
4 here and give a comment?

5 Last call.

6 All right. Well, that's what I like to see.
7 Thank you very much. And again, we'll all be around
8 here to answer your questions one-on-one if you have any
9 more. So thank you very much.

10 [Proceedings concluded at 7:27 PM.]

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REPORTER'S CERTIFICATE

I, Jenifer L. Russin, CCR #182, a Certified Court Reporter, do hereby certify that the proceedings of the above-entitled cause were reported by me stenographically on June 4, 2009, and that the within transcript is a true and accurate transcription of my shorthand notes.

I FURTHER CERTIFY that I am neither an attorney nor counsel for, nor related to or employed by any of the parties to the action, and that I am not a relative or employee of any attorney or counsel employed by the parties hereto, or financially interested in the action.

Jenifer L. Russin, RDR
Certified Court Reporter #182
License Expires: 12/31/2009

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**ATTACHMENT D-7
PUBLIC COMMENTS AND RESPONSES**

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Public Comments and Responses on the Draft EIS for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range, New Mexico

This attachment contains the comments submitted to the Army on the Draft EIS and presents the Army's responses to those comments. The comment documents are organized by commentator type and each is assigned a unique document number:

- Transcripts (T);
- DoD (D);
- Federal Agencies (FA);
- State Agencies (SA); and
- Individuals (I)

Responses for each document are presented following the original comment and are presented numerically according to the multiple comments within each document. One document may contain multiple comments. Each comment is assigned a sub-number that follows numerically from the beginning to the end of the document (see Table G-1). Responses to the individual comments identified within each document are presented at the conclusion of each of each commentator's document.

Table G-1. Commentor Index

Commentor Number	Commentor
Public Meeting Transcripts	
T-1	Mr. William McWhorter
T-2	Mr. Mark Watson, New Mexico Department of Game and Fish
DoD Agencies	
D-1 through D-4	Mr. Dan Spiegelberg, Missile Defense Agency
Federal Agencies	
FA-1 through FA-9	Mr. Wally Murphy, US Fish and Wildlife Service
FA-10	Ms. Lynn Gemlo, US Fish and Wildlife Service
FA-11 through FA-17	Mr. Kevin Schneider, White Sands National Monument
FA-18 through FA-30	Mr. Bill Childress, Bureau of Land Management
FA-31	Mr. Stephen R. Spencer, US Department of Interior
FA-32	Ms. Cathy Gilmore, US Environmental Protection Agency, Region 6
State Agencies	
SA-1 through SA-7	Mr. Matt Wunder, State of New Mexico Department of Game and Fish
Individuals	
I-1	Mrs. Schuster, Heart To Heart Animal Society
I-2	Mr. Michael Shyne, Alamogordo resident

Transcript Excerpt from the Las Cruces Public Meeting, June 3, 2009

T-1

17 MR. MCWHORTER: My name is William McWhorter,
18 M-c-W-h-o-r-t-e-r, but call me Will. Because I'm a troublemaker.
19 What happened if we don't adhere to the law, we ignore the law and
20 then do it and then try to get the thing done? This is troubling to
21 me, is Alternate 2 said there's 120,000 acres south of Highway 70
22 that would turn into a desert for vehicles. I go over this thing
23 and I tell you in April I went over it four times, back and forth.
24 And I got to the mountain up there and looked south of Highway 70,
25 all the way to Holloman Air Force Base is already a desert.

1 And I asked Senator Teague's office to find out if
2 anything is and word came back, Suzie called me yesterday and said
3 it was because of a drought. I don't believe it. Highway 70 don't
4 stop the drought north of there. So something's already been done.
5 I don't know what it is, don't have any idea but I believe maybe it
6 affected something in the vegetation all the way from SMR all the
7 way down Highway 70 to Holloman Air Force Base. That's my belief.
8 And somebody needs to check into it and see if it's true or not.
9 Because if you look there, I went over there and have been going
10 over there for 45 years and I said my goodness, what has happened
11 from the SMR below the launch pods all the way to Holloman Air Force
12 Base. If you look on one side of the highway, I've been over there
13 four times and I've seen the same thing four times. Thank you.

Response:

T-1 The Army believes that any vegetation loss south of US 70 is attributable to drought over the last few years.

Transcript excerpt from Alamogordo Public Meeting, June 2, 2009 - includes questions from Mark Watson (New Mexico Department of Game and Fish) and answers provided by the Army at that meeting.

T-2

The NEPA Process starts by the agency defining their
7 need for an action. And in this case the need is to support an
8 earlier decision by the Army to station an HBCT at White Sands, a
9 Heavy Brigade Combat Team. We found out, actually today, that this,
10 from the Secretary of the Army, a memo, or I guess a press release
11 was released that an HBCT will not be coming to White Sands. We
12 plan to carry this option or alternative through the EIS but this
13 change will be reflected in the Record of Decision.

14 MR. WATSON: How does that not -- I'm sorry. How
15 does that not affect this entire EIS? I mean if you leave it in
16 there, that's sort of presupposing that that's an alternative and
17 that really doesn't give us much to comment on. We don't know for
18 sure that's gonna happen or not.

19 MS. PETERSON: Yes, and we're going to have to revise
20 the Final EIS to some degree. What started this EIS was actually
21 the need for White Sands to expand their capabilities for test
22 customers. And so the ability to bring in additional troops and
23 some type of combat team in the future, that is a capability that we
24 probably want to keep in the EIS to cover potential changes down the
25 road. And obviously, there would have to be a supplemental analysis

1 or EIS at that point. Eric, do you want to address this question?

2 MR. WOLTERS: The Army, the Army continues to look at
3 White Sands as a place not only for a test missions but also to do
4 possible training events. The engineer battalion is still here and
5 will still be training, so that needs further documentation. And
6 it's entirely possible that other units of some type could come
7 here. And it doesn't foreclose a future decision by the Army to
8 station a different type of unit here, or a similar type of unit

T-2,
continued

9 here.

10 And so I think the team feels that it's worth looking
11 at this in terms of a capability, even though this particular BCT
12 might not be here, to carry that alternative through so that we can
13 assess the impacts of a similar type unit which will be stationed
14 here in the future.

15 MR. CHAVEZ. It gives us the flexibility for future
16 planning, is what it does.

17 MR. WATSON: But it changes your entire impacts
18 analysis, I would think, because that's gotta be a large component
19 of the environmental impacts that you analyze for the action
20 alternatives. And all of a sudden that component isn't gonna
21 happen.

22 MS. PETERSON: The way the EIS is structured, as you
23 go through Chapter 4, which is the impact section, the stationing of
24 the HBCT is broken out as a subset and analyzed separately. There's
25 also impacts related to the Land Use and Airspace Strategy Plan that

9

1 they wish to adopt, and some of the overall capabilities-based
2 expansion that will hopefully occur. So it may be a little tricky
3 at times but you'll see when you read the EIS that the HBCT impacts
4 are separated out so you will be able to tell what the impacts are
5 for each component.

6 MR. WATSON: Should we disregard those impacts?

7 MS. GOODAN: No. No, I think what Mr. Wolters is
8 trying to explain is it's just that, it's a capability. We're kind
9 of diverging but this might be the way to do the presentation. But
10 the original intent of the Land Use and Airspace Plan was to kind of
11 provide a framework of what activities occur where on White Sands.
12 And one of the main changes that they were looking at is to allow
13 off-road in a lot of the land, but for testing. But the HBCT

**T-2,
continued**

14 training is only looked at in Alternative 2. What that really
15 represents is just a higher intensity of that type of activity in a
16 certain part of the range. But as a land use per se, it's still
17 being covered in the proposed action, but there are degrees, from
18 just covering it for tests versus all the way to training of an
19 HBCT. And White Sands would like to keep that envelope of
20 possibility because at some point in the future they could get a
21 mission that requires that.

22 MR. CHAVEZ: An example is that FCS is redefining the
23 vehicle and --

24 THE REPORTER: I can't hear you, Frank, I'm sorry.

25 MR. CHAVEZ: FCS is redefining their whole concept as

10

1 well. And one of the things they're redefining is the vehicle that
2 they're using, the platform. So at the present time, we're not sure
3 what that vehicle is. So that's something that is for the future
4 that could be possibly covered under this part of the EIS.

5 MR. CHRISTENSEN: White Sands also has a neighbor --

6 MALE VOICE: Fort Bliss.

7 MR. WATSON: Does this decision that came out today
8 affect Fort Bliss in a similar way?

9 MR. CHRISTENSEN: It does, sir. Fort Bliss has also
10 indicated that it's losing a brigade. What that just means is we're
11 going to grow a whole heck of a lot instead. And there could still
12 be crossover opportunities between Fort Bliss and White Sands for a
13 unit on Fort Bliss that has a particular element of White Sands
14 that's attracted to it, such as the Army Evaluation Task Force
15 that's playing in a future combat system game right now on Fort
16 Bliss. They may still end up doing something on White Sands with
17 some vehicle type that's not yet defined.

18 MS. HAY: We're also housing a battalion that right

**T-2,
continued**

19 now that do their training missions at Fort Bliss but you know,
20 they're going to get crowded so they've been asking us for areas to
21 train. We also have areas set up for WTC, the National Guard.
22 We've done Roving Sands Special Ops, we've also done a certain
23 amount of training in the past.

24 MR. CHRISTENSEN: And I, as a matter of course, put
25 growth alternatives in the EISs at Fort Bliss. And that's proven to
11

1 be wise, as we found with the Grow the Army Decision, adding
2 additional units beyond what BRAC and the Global Defense Posture of
3 the Army were doing at Fort Bliss. So there's nothing that says an
4 EIS can't have, can't look at a future action that's not identified
5 as something that the Army will execute immediately.

6 MS. MARLIN: And so essentially, we have advanced
7 planning for something --

8 FEMALE VOICE: That's right.

9 MR. CHRISTENSEN: We actually do advanced planning --

10 REPORTER'S NOTE: (Multiple people speaking at once.)

11 MS. MARLIN: But it is good to look at it as a test
12 and training situation so it can be assessed for both operations.

13 MR. WATSON: Thanks for clarifying, it's just a curve
14 ball.

Response:

T-2 See responses provided within the transcript of the public meeting (Attachment F).

Comment Response Matrix					
Draft EIS for Development and Implementation of Range-Wide Mission and Major Capabilities at WSMR, New Mexico					
February, 2009					
#	Location			Comment	Reviewer
	Page	Line	Section		
D-1	1		General	The Missile Defense Agency (MDA) appreciates the opportunity to review this Draft EIS. The Ballistic Missile Defense System (BMDS) being developed by MDA is a complex “system of systems” that has evolved steadily and likely will continue to evolve in the future. MDA wishes to retain the capability to launch target missiles into WSMR from Fort Wingate and conduct additional testing within WSMR to meet future needs. This capability may prove vital to the development of weapon systems already planned (e.g., MEADS, p. 5-8 of Draft EIS) and new technologies in the future. To minimize the likelihood of future conflicts, MDA would appreciate the opportunity to review plans and schedules for HBCT training and related activities that may affect proposed missile testing at WSMR.	Dan Spiegelberg, Environmental Engineer MDA/DPW
D-2	2	1-4 3-97	1.2.2 3.9.5.2.2	We understand that the high energy laser systems test facility will be closing. Suggest updating the EIS to indicate the current status and plans for this unique facility.	Dan Spiegelberg, Environmental Engineer
D-3	3	3-8	3.2.3.10	MDA and the Army have plans to launch two target missiles from Fort Wingate in 2009 for attempted intercepts over WSMR. Additional tests associated with MDA’s Aegis program are planned for 2011 and 2012. MDA urges WSMR to continue to make this installation and associated off-range airspace available for future missile tests and to fully coordinate training plans with the missile testing community at WSMR.	Dan Spiegelberg, Environmental Engineer
D-4	4	B-2	Rockets	Suggest changing the name “Ballistic Missile Defense Organization” to “Missile Defense Agency.” BMDO became MDA in January 2002 when Secretary of Defense Rumsfeld established the agency and enhanced the authority of the Director.	Dan Spiegelberg, Environmental Engineer

Responses:

- D-1 As described in Chapters 1 and 2 of this Final EIS, the HBCT is no longer planned to arrive at WSMR. WSMR’s Preferred Alternative includes the capability to support increased hot-missions, that could also support Missile Defense System programs. However, capabilities to support additional testing from Fort Wingate are not within the scope of this EIS.**
- D-2 WSMR has no plans to close the High Energy Laser Systems Test Facility.**
- D-3 See response to comment D-50.**
- D-4 We have revised “Ballistic Missile Defense Organization” to “Missile Defense Agency” per your comment.**



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

June 9, 2009

Cons. # 22420-2008-FA-0038

Ms. Catherine Giblin
Test Center Operations
124 Crozier Street, Building 124 (Room B15)
White Sands Missile Range, New Mexico 88002

Dear Ms. Giblin:

Thank you for your request to the U.S. Fish and Wildlife Service (Service) for comments on the *Draft Environmental Impact Statement (DEIS) for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range (WSMR)* in compliance with its responsibilities under the National Environmental Policy Act (NEPA) to assess the direct, indirect, and cumulative environmental and socioeconomic effects of implementing new mission requirements and the development of new test and training capabilities at WSMR. This action includes, under a Programmatic EIS for Army Growth and Force Structure Realignment decision, supporting the stationing of a Heavy Brigade Combat Team (HBCT) of approximately 3,800 Soldiers at WSMR. Additionally, WSMR proposes changes in land use throughout the installation to support these new testing and training requirements, including expanding the Main Post to support the HBCT.

On August 13, 2008, the Service participated in the scoping process for the preparation of an Environmental Impact Statement (EIS) for expanded activities on WSMR, New Mexico. The WSMR responded to our concerns and recommendations in the referenced DEIS. The Biological Assessment (Appendix B of the DEIS) for Development and Implementation of the Range-Wide Mission and Major Capabilities at White Sands Missile Range, New Mexico will be analyzed and consulted under a separate cover for the Endangered Species Act (ESA) section 7.

The DEIS examines the environmental effects of developing new test and training capabilities to meet current and future mission requirements at WSMR. The DEIS evaluates proposed changes in land use and activities to support future Army needs associated with Army Transformation, the Army Campaign Plan, Future Combat Systems (FCS) programs, Army Growth and Force Structure Realignment, Global Defense Posture Realignment, and other Army initiatives. This action supports WSMR as a facility for rapid development and deployment of new systems in response to rapidly changing world conditions and national defense priorities. These represent changes and expansions in capabilities at WSMR that have evolved since the preparation of the WSMR Range-Wide EIS and Record of Decision (ROD) in 1998. This action also assesses the site-specific effects of implementing the decision of the ROD for the *Programmatic EIS for Army Growth and Force Structure Realignment* to station a Heavy Brigade Combat Team (HBCT) at WSMR.

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The Proposed Action is to expand testing and training capabilities needed to support WSMR as a test range for rapid development and deployment of new systems in response to dynamic world conditions and national defense priorities. The Proposed Action is also needed to support Army growth by using WSMR land, airspace, and facilities more fully. This includes use of WSMR's extensive land for more off-road vehicle maneuvers for test and training purposes. Over the long term, WSMR needs to continue supporting the evolving operational, infrastructure, training, and testing requirements of the Army and DoD to solidify its role as a Major Range and Test Facility Base into the future.

Three alternatives were considered in the DEIS, reflecting choices in capabilities to support various types of tests and military training activities. They are briefly described here:

No Action Alternative – The No Action Alternative provides a baseline of on-going and previously approved test, training, and infrastructure/facilities construction activities at WSMR for comparison with the two alternatives under consideration for accomplishing the Proposed Action (Alternatives 1 and 2). The No Action Alternative differs from existing conditions and operations at WSMR in that it includes actions that have been evaluated and approved recently, but have not yet been fully implemented. It includes all ongoing test and training operations at WSMR that have undergone NEPA evaluation. The previous NEPA analyses of those activities are incorporated by references in the DEIS. A list of NEPA documents and previously approved activities is provided in section 1.8 of the DEIS.

Alternative 1 – Alternative 1 would include those activities described in the No Action Alternative, plus changes in land use to support new and evolving test and training requirements throughout the installation, including providing field training capability for the Combat Engineer Battalion (EN BN). This alternative implements the Programmatic EIS for Army Growth and Force Structure Realignment decision to station a HBCT at WSMR that requires Main Post expansion and additional supporting infrastructure. Training for the HBCT would occur at Fort Bliss, using the considerable assets from the training range modernization taking place there.

Under Alternative 1 WSMR would:

- Change land uses to allow off-road use for testing by wheeled and tracked vehicles on an additional 1.6 million acres (for a total of 1.8 million acres designated Augmented Test Zone), expand Range Centers and Built-Up Areas by 7,000 acres, and convert 2,000 acres to Impact Areas.
- Expand current test operations, such as missile firing, directed energy weapons, and FCS testing, and support for next generation programs using the full extent of WSMR land and airspace resources. FCS provides a fully integrated combat capability encompassing manned and unmanned ground and air vehicles and munitions that are tied together by a network. Tests would need a variety of terrain and use of terrain features to separate operational locations, which could include off-road operations in mountainous terrain. For purposes of analysis, the EIS assumes about 1,053,000 acres of "least constrained" land within the "Augmented Test Zone", would support the majority off-road maneuver for FCS test activities and other customers with similar ground operation requirements.

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- Increase test-related ground and airspace missions during the next five years. It would be anticipated that hot missions would increase from 254 events in 2007 to 318 events in 2013. Non-hot missions would be expected to increase from 3,181 events in 2007 to 12,724 in 2013. Airspace use for test and training programs may increase 25 percent by 2013.
- Support the arrival of a HBCT with 3,800 soldiers and over 5,000 family members in 2013. Expand the Main Post and construct mission critical facilities, housing, and other mission and community support facilities comprising about 3.2 million square feet (s.f.) of new construction in and around the Main Post by 2013 (primarily as a result of the HBCT stationing, including a new site up to 300 acres in size adjacent to the Main Post). Additionally, installation-wide, about 1.4 million s.f. of new construction would be built to support proposed infrastructure and facilities, such as additional instrumentation and new field support nodes at range centers.
- Development of new Mission Support Facilities and infrastructure throughout WSMR to support future tests and training, including reconstruction of 75 miles of existing tank trails, construction of up to 170 miles of a new tank trail network connecting the Main Post to Fort Bliss training areas and the south range to the north range area, range center expansion, and construction of utilities and communication infrastructure.
- Develop six new Specialized Areas, the specific locations of which have not yet been determined; including an Electro-Optical 0.50 Caliber Test Range; a Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) System; an Environmental Laboratory Complex; a Joint Urban RDT&E Environment; an Individual Combat Skills Training Area; and a Local Training Area for the EN BN.

Alternative 2 – Alternative 2 would provide capability for the HBCT to conduct off-road vehicle maneuver training at WSMR in a newly designated Southeast Multi-Use Area, in addition to the ability to train on Fort Bliss. In all other respects, Alternative 2 would be the same as Alternative 1, incorporating the same changes in land use, activities, and infrastructure at the range and for the HBCT, as well as continuation of ongoing and previously approved activities described under the No Action Alternative. Land and airspace uses, test capabilities, development areas, personnel levels, and equipment levels would remain the same as those described for Alternative 1. In addition to all the actions described for the No Action Alternative and Alternative 1, Alternative 2 would include:

- Designating a new Specialized Area – the Southeast Multi-Use Area (approximately 120,000 acres on the south side of US 70 along the eastern WSMR boundary) – for intensive off-road use involving light to heavy tracked or wheeled vehicle training activities for the HBCT, as well as Improvised Explosive Device route clearance training and dismounted operations for the EN BN, among other possible uses.

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- Development of approximately 100 miles of a new tank trail network of south of US 70 within the Southeast Multi-Use Area. Specific locations of these tank trails have not yet been identified.
- Within the Southeast Multi-Use Area, five sites would be designated for logistics and command and control operations in the maneuver areas ranging from one to two acres in size. Some sites may require a gravel surface and may have temporary structures, such as tents.

The Service believes that the established standard requirements used by WSMR for approval and execution of all programs and activities will further address our concerns. These standard requirements are common to all alternatives, including the No Action Alternative. Table 2.5-1 (pages 2-40 – 2-42) of the DEIS lists the standard procedures and requirements of all range users. In addition, as needed or appropriate, WSMR requires coordination, review, and approval for different activities undertaken on the range.

The proposed mitigation was: 1) to offset and prevent significant adverse biological impacts, WSMR would adopt a mitigation strategy involving adaptive management. WSMR would then be able to determine what type and location of specific mitigation measures are needed to protect or restore biological resources through biological monitoring of lands subject to off-road vehicle use; and 2) WSMR would request funding for additional monitoring studies and for Integrated Natural Resource Management Plan (INRMP) and Integrated Training Area Management (ITAM) projects to reduce impacts of testing and training throughout the 1,825,000 acres having the potential for off-road activities

ITAM is a component of the Army's Sustainable Range Program and is responsible for maintaining Army lands in order to meet its training requirements. The ITAM program's purpose is to achieve optimal sustainable use by implementing a program that includes:

- Training Requirements Integration;
- Range and Training Land Assessment;
- Land Rehabilitation and Maintenance; and
- Sustainable Range Awareness.

WSMR recently completed updating the five-year ITAM and Range and Training Land Assessment plans through 2013, which develop a framework to integrate mission requirements with environmental sustainability. The ITAM plan incorporates all aspects of the four components and provides a roadmap on how to proceed. The Range and Training Land Assessment Monitoring Plan describes a process for inventory and monitoring of the natural resources on the installation. This information is in turn used within an adaptive management framework to assess range condition and promote sustainable use of the natural resources.

Alternatives 1 and 2 propose an adaptive management process so that off-road test activities would undergo a review process. This would include vetting through the Range Master Planning office, Flight Safety Office, Environmental Division, Radiation Protection and range scheduling

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office to ensure compatibility with existing operations, infrastructure, and facilities. This review process would identify specific sites that must be avoided (either for safety, or for resource management purposes). Approved areas would either avoid these or create avoidance zones within the area in order to achieve compatibility with existing land use. Overall, land use flexibility on WSMR would increase with the conversion of 1.6 million acres to Augmented Test Zone. Proposed ground maneuver for test purposes has flexibility to adapt to spatial constraints and meet mission requirements given the extent and variety of land on WSMR. Additional noise and dust may result from off-road operations and construction in built-up areas in the Augmented Test Zone.

Future test events may use large areas (up to 61,800 acres) throughout the range for off-road uses involving up to 600 troops, as well as manned and unmanned heavy wheeled and tracked vehicles at dispersed locations. These areas would be subjected to increased erosion, vegetation loss, and increased risk of fire, all of which could indirectly impact land use, if they were to cause the area to cease to be a viable operating location. Monitoring and adaptive management would allow land resources to recover and retain ecological conditions (defined by the WSMR Environmental Division with ITAM support) to sustain testing over the long term.

Alternatives 1 and 2 in the DEIS include ground disturbances during off-road vehicle maneuvers that would cause losses and conversions of vegetation cover types as well as changes in landform and topography. Though these changes are not considered completely irreversible, the length of time required to recover soil, vegetation, and ultimately, wildlife habitat, could be long enough for the impact to be considered nearly irreversible.

The Service has the following recommendations and comments on the effects to terrestrial and aquatic species from implementing Alternative 1 or 2 described in the Army's February 2009 DEIS at WSMR.

General Recommendations

FA-1

1. The DoD shall provide compensation for loss of habitat. The compensation for the loss of habitat could be in state listed threatened White Sands pupfish (*Cyprinidon tularosa*) habitat and/or to the federally endangered northern aplomado falcon (*Falco femoralis septentrionalis*) and its habitat. White Sands pupfish recovery activities to consider include but are not limited to: creating a pupfish refugia with special emphasis on the Malpais Spring pupfish population; removing existing obstacles that restrict movement of pupfish within Essential Habitat; and removing military testing debris from occupied pupfish habitat; and developing and implementing an incident response program for accidental chemical spills, impacts from military activities debris, and vehicle accidents. For the northern aplomado falcon recovery activities could include constructing artificial nest structures placed on ridges in habitat that consists of open terrain with scattered trees, yuccas, or shrubs.
2. A tank trail would cross two permanent streams which are tributaries to Salt Creek (pupfish habitat) and would cross several intermittent streams, which could cause minor impacts through sedimentation, contamination, and alteration of stream flow

Ms. Catherine Giblin

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- FA-2 | characteristics; however, the use of BMPs during construction would minimize the potential for these impacts to occur. Those BMPs should include Limited Use areas adjacent to existing pupfish habitat, which must be managed to ensure that degradation of Essential Habitat does not occur through direct or indirect effects such as contaminant runoff and excessive soil erosion. Similar restrictions of use to Essential Pupfish Habitat should apply.
- FA-3 | 3. The DoD should limit off-road vehicle maneuvers to predetermined areas, with activity restricted to and confined within those areas. To reduce soil erosion, off-road vehicle maneuver areas should not be moved but should be used over and over. Because of the length of time required to recover soil, vegetation, and ultimately, wildlife habitat off-road vehicle maneuvers should be restricted and confined to limited designated areas only.
- FA-4 | 4. In off-road vehicle areas where ground disturbance is substantial or where re-contouring may be required, surface restoration should occur in coordination with WSMR's Environmental Division Office. The method of restoration should normally consist of returning disturbed areas back to their natural contour, reseeding, installing cross drains for erosion control, placing water bars in the road, and filling ditches.
- FA-5 | 5. Where applicable, roads would be at right angles to the washes (arroyos) to the extent practicable. Culverts would be installed where needed. All construction and maintenance activities would be conducted in a manner that minimize disturbance to vegetation, drainage channels, and intermittent stream banks. All existing roads would be left in a condition equal to or better than their condition prior to off-road activities.
- FA-6 | 6. The DoD should continue to monitor studies to determine the effects of off-road vehicular activities and audible noise on wildlife species in order to ascertain whether these effects are significant.
- FA-7 | 7. Hazardous materials should not be drained onto the ground or into washes or drainage areas. Totally enclosed containment should be provided for all trash. All waste including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous material should be removed to a disposal facility authorized to accept such materials.
- FA-8 | 8. Federally-listed species and special status species should continue to be considered during project construction and operation in accordance with provisions set by the DEIS and that include but are not limited to potential management practices, recommended management actions, and mitigation measures. In cases where such species are identified, appropriate action should be taken to avoid adverse impacts on the species and their habitats and may include altering the placement of roads or towers as practicable and monitoring construction and operations activities.
- FA-9 | 9. In DEIS section 2.5 Measure Incorporated in the Proposed Action to Reduce Adverse impacts, WSMR has established standard requirements for approval and execution of all programs and activities. These requirements are common to all alternatives, including the No Action Alternative and are standard procedures and requirements of all range users. In addition, WSMR requires coordination, review, and approval for different

Ms. Catherine Giblin

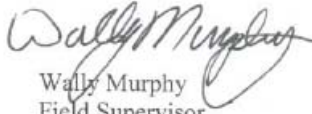
7

FA-9
continued

activities undertaken on the range (as needed or appropriate). The Service recommends that WSMR continues to implement and enforce all applicable requirements, conducts reviews for all range activities, implement action-specific restrictions and operating conditions and educate all range users on potential impact to fish, wildlife, and plant resources prior to ESA section 7 consultation and NEPA related reviews.

Thank you for the opportunity to participate early in the NEPA process for the final preparation of the EIS for expanded activities on WSMR. We appreciate the analyses WSMR has provided in the past and your current and future efforts to protect fish and wildlife species. In future communication regarding this project, please refer to Consultation #22420-2008-FA-0038. If you have any questions, please contact Santiago Gonzales of my staff at the letterhead address or at (505) 761-4720.

Sincerely,



Wally Murphy
Field Supervisor

cc:

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry
Division, Santa Fe, New Mexico

Responses:

- FA-1 **Section 4.7 (Biological Resources) was revised to state that WSMR would aim to re-route the proposed North-South tank trail outside of Limited Use pupfish habitat. Consequently, WSMR does not foresee any direct loss or alteration of habitat for White Sands pupfish. WSMR will continue to adhere to the provisions of the *Cooperative Agreement for Protection and Maintenance of White Sands Pupfish between US Army White Sands Missile Range, US Air Force Holloman Air Force Base, National Park Service White Sands National Monument, US Fish and Wildlife Service, and New Mexico Department of Game and Fish, dated 1 May 2006.***
- FA-2 **With the re-routing of the North-South tank trail described in the response to FA-1, the tank trail would still cross one permanent and two intermittent streams that may flow towards Limited Use pupfish habitat. WSMR would include Best Management Practices to minimize the potential for sedimentation or alteration of stream flow.**

- FA-3** **The EIS identifies “Least Constrained” areas for off-road maneuvers within Land Use Classification C, as those areas that further avoid sensitive environmental features. While WSMR would strive to contain off-road vehicle use to the extent possible to limit disturbance, the areas used will be dictated by mission requirements. Therefore, it would not be practicable to set predetermined off-road activity areas, although WSMR would outline approved off-road areas on a case-by-case basis depending on the specific mission requirements.**
- FA-4** **WSMR would monitor areas of ground disturbance and determine where surface restoration is necessary and feasible. Where reseeding is considered feasible, native species matched to the existing substrate and elevation would be utilized.**
- FA-5** **Section 4.8 (Water Resources) was revised to include your recommendation as a Best Management Practice.**
- FA-6** **Comment noted.**
- FA-7** **WSMR will continue to follow existing policies and practices to prevent spills of hazardous materials and dispose of all hazardous waste and solid waste appropriately.**
- FA-8** **During WSMR’s environmental review process, project-specific measures would be taken to protect Federally-listed and special status species. WSMR will continue to follow its existing agreements and policies for protecting these species, as well as the measures outlined in the Final Biological Assessment.**
- FA-9** **WSMR will continue to follow its standard requirements for approval and execution of all its programs and activities.**

-----Original Message-----

From: Lynn_Gemlo@fws.gov [mailto:Lynn_Gemlo@fws.gov]

Sent: Wednesday, July 01, 2009 3:13 PM

To: Griffin, Patricia L CIV USA IMCOM

Subject: comments on draft BA

FA-10

Hi Trish, I reviewed your draft BA for development and implementation of range-wide mission and major capabilities at White Sands. In the cumulative effects sections on pg 19 and 33, replace opinion with assessment. So it should read biological assessment. My other comment is since there is no breeding habitat but potentially dispersing habitat, you may want to point that out, if you feel it helps, as more information to support your NLAA call for disturbance to MSO. My final comment is, once again, good job on the BA. Thanks for making it complete and easy to follow your logic.....

Lynn.

Lynn Gemlo

US Fish and Wildlife Service

New Mexico Ecological Services Field Office

2105 Osuna NE

Albuquerque, NM 87113

phone: 505-761-4726, fax: 505-346-2542

Classification: UNCLASSIFIED

Caveats: NONE

Response:

FA-10 Comments on the Draft Biological Assessment have been incorporated into the Final Biological Assessment.



United States Department of the Interior

NATIONAL PARK SERVICE
White Sands National Monument
P.O. Box 1086
Holloman AFB, NM 88330



IN REPLY REFER TO:
L7616

July 2, 2009

Ms. Catherine Giblin
Test Center Operations
124 Crozier Street, Bldg. 124 (Room B15)
White Sands Missile Range, NM 88002

Dear Ms. Giblin,

Thank you for the opportunity to provide comments on the Environmental Impact Statement (EIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities for White Sands Missile Range (WSMR).

First and foremost, we commend WSMR for its environmental stewardship commitment. Furthermore, we appreciate WSMR's commitment to White Sands National Monument. Our cooperative working relationship has allowed both of our agencies to meet our separate mission requirements successfully. WSMR has consistently been supportive of preserving the natural and cultural resources of White Sands National Monument, while allowing visitors to enjoy this special place.

Please accept the following specific comments on the EIS:

- We appreciate the recognition WSMR has given to the sensitivity of White Sands National Monument lands, as expressed in land use classifications G and H.
- The EIS proposes a tank trail to be constructed along Range Road 7. Currently, a section of Range Road 7 lies within White Sands National Monument. We could not permit the development of a tank trail within the boundaries of White Sands National Monument, since these vehicles travel off road (or on an unpaved yet to be constructed road). Off road vehicle use is specifically prohibited by regulations governing all National Park Service areas (36 CFR § 4.10). Construction of a tank trail alongside Range Road 7 would be impossible if the lands were within White Sands National Monument.

However, Range Road 7 runs through an area that is proposed to be exchanged with WSMR. This exchange would adjust the boundaries of White Sand National Monument so that the monument's western boundary would be adjacent to Range Road 7, with Range Road 7 located immediately outside the monument on WSMR lands. Thus, it is critical to complete this land exchange before tank trails in this area could be authorized.

FA-11

FA-11 continued	<p>We are happy to work with you to take the steps necessary to complete this land exchange. If the land exchange cannot happen, then the tank trail would need to be located outside of White Sands National Monument.</p>
FA-12	<ul style="list-style-type: none">• The document does not state how erosion from the proposed tank trails would be controlled. Flash floods washing down the arroyos near Range Road 7 could cause significant erosion, which could enter White Sands National Monument as it moves downstream. If stream crossings were hardened with concrete, large flash flood events could wash unnatural debris fields into the monument.
FA-13	<ul style="list-style-type: none">• Alternatives 1 and 2 change land use classifications to allow wheeled and tracked off road vehicle use on an additional 1.6 million acres of WSMR. To prevent any accidental incursions by heavy equipment or off road vehicles into the monument, we would like to request a small buffer zone placed around White Sands National Monument. Specifically, we would request that the WSMR lands between Range Road 7 and the monument, and the WSMR lands between Range Road 10 and the monument, remain unchanged as land use classification A (Primary Test Zone, which does not allow for heavy equipment or tracked vehicles to travel off road). This would keep all heavy off road vehicle traffic occurring west of Range Road 7 and north of Range Road 10. For the south and east boundaries of the monument, we would request a 1-mile buffer zone with land remaining classified as land use classification A. In addition, we would like to continue working with WSMR to insure that the monument's boundary fence is adequately signed to prevent incursions. Together, these buffers would prevent vehicles from inadvertently traveling into White Sands National Monument during exercises, while allowing them to utilize the bulk of the terrain and land assets available on WSMR.
FA-14	<ul style="list-style-type: none">• We appreciate the recognition of White Sands National Monument as an area of aesthetic concern, as identified in Section 3.2.5.1.1. In light of this, we request that WSMR use sensitivity in considering the visual impacts of facilities and development that might occur near the monument. Development from activities proposed in the EIS, such as the specialized areas called for in Section 2.3.1.4, could be visible from prominent visitor use areas within the monument, depending on exactly where the development is ultimately decided to be located and its size/scope. Most visitor activity takes place within the Dunes Drive and nearby areas, the Alkali Flats Trail, and Lake Lucero. Currently, facilities at RATSCAT are visible to hikers on the Alkali Flats Trail. While this impact is not currently considered to be significant, we would appreciate your sensitivity concerning future development at this location or other new sites, and we are happy to work with you as appropriate in the future.
FA-15	<ul style="list-style-type: none">• As a mitigating measure to any development near the monument, we would request that consideration be given to maintaining the spectacular night skies of the region. Specifically, we request that shielded lights, approved by the International Dark Sky Association, at the minimum levels necessary, be used.
FA-16	<ul style="list-style-type: none">• The document incorrectly references Lake Lucero as being within the White Sands National Monument co-use area in several locations (for instance, see sections 3.2.3.7

FA-16 continued

and 3.14.6.1.2). Lake Lucero and the nearby archeological sites are specifically excluded from the co-use area by the agreement with WSMR (see Article II 1b and 1c of the agreement). The maps throughout the EIS appear to be correct in noting that these areas are outside of the co-use area.

FA-17

- The dunes of White Sands are maintained by the presence of a perched aquifer. Throughout the dunes, groundwater is present only 18-36 inches below the surface. The dunes wick water up to their crest, with moisture present immediately below the surface at the tops of the dunes. This high water table holds the dunes together, preventing them from rapidly eroding. We do not know the nature of the underground hydrology and whether or not the perched aquifer may be related to the deeper aquifers of the Tularosa Basin. Thus, we are concerned about the potential for this perched aquifer to be disrupted through the development of groundwater resources outside the monument. We would be interested in collaborating with WSMR in the future to better understand the underground hydrology of the Tularosa Basin.

We recognize that this EIS is a broad-based, programmatic document and that future development activities could tier from this and have their own NEPA compliance. As such, we would be interested in reviewing those future, site-specific NEPA documents. Please keep us on your mailing list for NEPA documents. In addition, we are happy to consult with you anytime about Record of Environmental Considerations that may affect White Sands National Monument.

We sincerely appreciate your consideration of our comments. If you have any questions, please do not hesitate to contact me directly at (575) 679-2599, ext 210.

Sincerely,

Kevin Schneider
Superintendent

Responses:

- FA-11** The EIS was revised to state that WSMR would attempt to relocate the tank trail outside the White Sands National Monument. However, due to the location of the boundaries of the Monument and the San Andres National Wildlife Refuge, the tank trail would need to travel through at least one of these areas. Section 4.2 (Land Use) was revised to state: “Due to the narrowing of the WSMR land area between White Sands National Monument and the SANWR, the alignment of the new travel corridor may be required to make use of a small strip of land owned by either the Monument or the SANWR. If land not owned by WSMR were to be required for the tank trail, WSMR would enter into negotiations with the current landowner regarding acquisition of the land in question. The tank trail would be designed such that additional erosion and the likelihood of “washouts” would be minimized to the extent practicable. Nuisance effects (such as dust, additional erosive debris, noise, and higher levels of activity in a natural area) could result. Potential land use impacts could be minimized through early coordination between WSMR and the applicable land management agency on a mutually acceptable alignment for this corridor, and possible changes to the existing agreements that govern their respective activities. If mutually acceptable provisions can be reached for the location, construction practices, maintenance and operation of the tank trail, land use impacts could be mitigated to less than significant.”
- Section 4.20 (Mitigation) was also revised to state: “WSMR would coordinate with the applicable land management agency(s) to develop mutually acceptable provisions for the location, construction practices, maintenance and operation of the North-South tank trail where it traverses non-WSMR land.”
- FA-12** Section 4.8 (Water Resources) and Section 4.20 (Mitigation) have been revised to state that: “WSMR would coordinate with the White Sands National Monument on any trail or road improvements in the vicinity of the Monument to develop methods to prevent flash flood events from washing unnatural debris into the Monument.”
- FA-13** WSMR would coordinate proposed activities adjacent to the Monument with the National Park Service and consider operational buffers for each project or program on a case by case basis. WSMR would also aim to maintain or add boundary signs as funding and manpower allow.
- FA-14** Table 2.5-1, “WSMR Standard Procedures and Requirements for Range Users” was revised to include the following statement: “WSMR will continue to coordinate with the White Sands National Monument on new projects that are adjacent to or within the viewshed of the Monument that may affect visual resources.”
- FA-15** WSMR will continue to comply with the New Mexico Night Sky Protection Act as stated in Section 4.2.5.1 (Land Use).
- FA-16** Sections 3.2.3.7 and 3.14.6.1.2 were corrected as requested.
- FA-17** WSMR will continue to share information on groundwater resources in the basin, including the April 2009 draft report that addresses groundwater levels in the area of the Main Post.



IN REPLY REFER TO

1792 (L0000)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Las Cruces District Office

1800 Marquess

Las Cruces, New Mexico 88005

www.nm.blm.gov



JUL 08 2009

Commander,
White Sands Test Center
Operations Office
Attn: Catherine Giblin
124 Crozier Street, Bldg 124
White Sands Missile Range, NM 88002

Dear Ms. Giblin;

Thank you for the opportunity to comment on the Draft Environmental Impact Statement for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range, New Mexico. Our comment form is attached to this e-mail.

If you have specific questions regarding our comments, please direct them to Jennifer Montoya, Planning & Environmental Coordinator, at (575) 525-4316.

We look forward to continued participation in this process.

Sincerely,

Bill Childress
District Manager

REVIEW COMMENTS						
White Sands DEIS				Project Manager:		
				Preliminary Draft	<input checked="" type="checkbox"/>	Final Draft
						Final
Reviewer Name: Ray Lister				Phone number:575-525-4367		Action on Comments
Organization: BLM						
Comment #	Page & Section	G	T	S	Comments	
FA-18 1	Page 3-68			x	The EIS has a discussion of overall Oryx numbers and historical management on WSMR. I would suggest a more detailed discussion of the Oryx numbers and hunting/harvest strategies south of Hwy 70. An analysis of what the expected impact to the Oryx harvest strategy will be as a result of the proposed action would be appropriate. BLM has a policy to not manage exotic species. If the proposed actions result in a decrease in hunting opportunity for Oryx on WSMR, the population of Oryx could increase and expand onto adjacent public land. There should be some discussion of how this might impact the current NMDGF and WSMR Oryx management plan, which identifies target numbers for WSMR and states that off-range management strategies are to reduce Oryx numbers to the maximum extent possible. One other suggestion would be to include a discussion as to the potential for increased military training activity to simply displace Oryx onto adjacent public lands and the subsequent management implications.	
FA-19 2	3-70			x	The BA states that surveys will be conducted for Aplomado Falcons, however, it doesn't identify what happens when a falcon nest is found. The USFWS has always advocated preparing Nest Site Plans in the event a nest is found which would identify any need for	

FA-20	3	4-82			x	avoidance mitigations. The mitigations section seems pretty weak for Biological Resources, in that it simply says adaptive management would be utilized to identify needed mitigations and continued requests for funding would be made to implement mitigations. These are in fact not mitigation but rather methods of understanding impacts (adaptive management) and methods for implementation (funding). A more specific response to measurable impacts would be appropriate for the reader to understand the suitability of mitigation.	
FA-21	4	4-82			x	Suggest considering off-site mitigations (i.e. partnering with BLM on grassland restoration projects) to address impacts to key habitats, particularly grasslands.	

G = Grammar comment
T = Technical/factual comment
S = Substantive comment

REVIEW COMMENTS							
White Sands DEIS				Project Manager:			
				Preliminary Draft	<input checked="" type="checkbox"/>	Final Draft	Final
Reviewer Name: Mark Hakkila				Action on Comments			
Organization: BLM Las Cruces District				Phone number: (575)525-4341			
Comment #	Page & Section	G	T	S	Comments		
FA-22 Hakkila-1	3-10 Section 3.2.4.3	x			Paragraph 1, line 1 should read "Las Cruces, Albuquerque, and Pecos Districts". Socorro is no longer a District, and the Roswell district has been renamed.		
FA-23 Hakkila-2	3-10 Section 3.2.4.3			x	Paragraph 2. Since the EIS proposes an increase in closures of the call-up areas, WSMR should consider some sort of mitigation to the public for the loss of recreation user days, either through enhancing public land recreation opportunities, habitat improvements, or similar mitigation on-site or off-site.		

FA-24	Hakkila-3	3-10 Section 3.2.4.3		x	Paragraph 3 should say "where an animal unit is the amount of forage necessary to feed a 1,000 pound cow (with or without a calf)." Once a female bovine has a calf, she is no longer a heifer, but a cow.
FA-25	Hakkila-4	Page 3-10 Section 3.2.4.3		x	Paragraph 5, replace sentences 2-4 with "The Organ/Franklin Mountains Area of Critical Environmental Concern (ACEC) includes all BLM-managed public lands within the Organ Mountains adjacent to WSMR. The area is managed to protect Recreation, Scenic, Wilderness, Biological, and Cultural values. The Aguirre Spring Campground and Dripping Springs Natural Areas are intensive recreation sites within the ACEC. There are also three Wilderness Study Areas, the Organ Mountains, Organ Needles, and Peña Blanca WSAs within the ACEC." The Nature Conservancy no longer jointly manages the Dripping Springs Natural Area with the BLM. You could also delete paragraph 6.
FA-26	Hakkila-5	Figure 3.2.2.2		x	The map incorrectly locates the Dripping Springs Natural Area within the boundaries of Fort Bliss.
FA-27	Hakkila-6	Page 3-14 Section 3.2.5.1.5		x	I recommend combining all the WSAs in this one section, and just tabulate them. See comment Hakkila-5 for three more WSAs.
FA-28	Hakkila-7	Page 3-15 Section 3.2.5.1.7		x	I recommend combining all the BLM recreation sites into one section and a table.
FA-29	Hakkila-8	Section 3.14.6.2		x	BLM-administered public lands adjacent to WSMR are open yearlong to a variety of uses including hunting, camping, hiking, bird watching, rock hounding, off-highway vehicle use, and mountain biking.
FA-30	Hakkila-9	Section 4.3		x	What would be the impact to BLM-administered public lands from the increased use of the call-up areas?

Responses:

FA-18 Sections 4.7.3.1.2 and 4.7.4.2 were revised to indicate that WSMR would continue hunting activities as they currently do or would increase hunting rates if oryx numbers warrant this action.

FA-19 As stated in the Draft Biological Assessment, WSMR would report any siting of Northern Aplomado falcons or their nests within 24 hours to the US Fish and Wildlife Service and coordinate with the Service to minimize disturbance to nests and/or roost sites.

FA-20 As a programmatic EIS to address future capabilities, WSMR intends to conduct environmental reviews of all new programs and projects so that specific mitigation measures can be developed on a case by case basis. However, as vegetation loss would be a major concern for the off-road activities proposed, Section 4.7.3.5.1 was revised to provide a goal of limiting vegetation loss to 30 percent from man-made disturbance in those areas approved for off-road uses.

FA-21 Comment noted.

FA-22 Section 3.2.4.3 was revised as suggested.

- FA-23** **Although the numbers of evacuations would increase under Alternative 1, the annual number would still comply with the terms of the current agreements with landowners. If, in the future, evacuations would need to be increased outside the terms of these agreements, WSMR would consider possible mitigation for loss of recreation user days on BLM-managed land at that time.**
- FA-24** **Section 3.2.4.3 was revised as suggested.**
- FA-25** **Section 3.2.4.3 was revised as suggested.**
- FA-26** **Figure 3.2-2 was revised as suggested.**
- FA-27** **Section 3.2.5.1.5 was revised to include the Wilderness Study Areas.**
- FA-28** **Text remains as presented in the Draft EIS.**
- FA-29** **Section 3.14.6.2 was revised as suggested.**
- FA-30** **See response to comment FA-23.**



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
1001 Indian School Road NW, Suite 348
Albuquerque, New Mexico 87104



ER 09/552
File 9043.1

June 24, 2009

Catherine Giblin
White Sands Test Center
Operations Office
Building 124, Room B-15
124 Crozier Street
White Sands Missile Range, NM 88002

Dear Ms. Giblin:

Subject: Draft Environmental Impact Statement (DEIS) for the White Sands Missile Range
and Major Capabilities, New Mexico

FA-31

The U.S. Department of the Interior has reviewed the subject DEIS. In this regard, we have NO COMMENT.

Thank you for the opportunity to review this document.

Sincerely,

Stephen R. Spencer
Regional Environmental Officer

Response:

FA-31 **Comment noted.**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

Ms. Catherine Giblin
Test Center Operations
124 Crozier Street, Bldg. 124 (Room B15)
White Sands Missile Range, NM 88002

Dear Ms. Giblin:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA, the Region 6 Office of the U.S. Environmental Protection Agency (EPA) has completed the review of the Draft Environmental Impact Statement (DEIS) for the development and implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range, New Mexico. The DEIS assesses the impacts associated with expanded off-road development and testing activities needed to support increased Future Combat Systems testing and the stationing and training of a Heavy Brigade Combat Team.

FA-32

EPA classifies your DEIS and proposed action as "LO" i.e., EPA has "**Lack of Objections**" to the selection of the preferred alternative. Our classification will be published in the Federal Register according to our responsibility under Section 309 of the Clean Air Act, to inform the public of our views on proposed Federal actions. If you have any questions please contact Mike Jansky of my staff at 214-665-7451 or by e-mail at jansky.michael@epa.gov for assistance.

We appreciate the opportunity to review the Draft EIS. We request that you send our office one (1) copy of the Final EIS at the same time that it is sent to the Office of Federal Activities (2251A), EPA, 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20044.

Sincerely yours,

A handwritten signature in cursive script that reads "Cathy Gilmore".

Cathy Gilmore
Chief, Office of Planning
and Coordination

Response:

FA-32

Thank you.

GOVERNOR
Bill Richardson



DIRECTOR AND SECRETARY
TO THE COMMISSION
Tod Stevenson

Robert S. Jenks, Deputy Director

STATE OF NEW MEXICO
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Silver City, NM

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Hobbs, NM

July 6, 2009

White Sands Test Center
Operations Office
Ms. Catherine Giblin
124 Crozier Street
Building 124, Room B-15
White Sands Missile Range, NM 88002

Re: Draft Environmental Impact Statement for Development and Implementation of Range-
Wide Mission and Major Capabilities at White Sands Missile Range
NMDGF Doc. No. 12719

Dear Ms. Giblin:

The Department of Game and Fish (Department) has reviewed the *Draft Environmental Impact Statement for the Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range* (DEIS). According to the 08 May 2009 Federal Register announcement, the DEIS assesses the environmental impacts associated with new mission requirements and test and training capabilities at WSMR, including expanded off-road maneuver areas and facilities needed to support increased Future Combat Systems (FCS) testing and the stationing and training of a Heavy Brigade Combat Team (HBCT) of approximately 3,800 soldiers. The DEIS also addresses new weapons firing ranges and capabilities, as well as soldier and family housing, schools, infrastructure, utilities, and administrative and related facilities needed to support stationing of an HBCT.

Proposal

The No Action Alternative provides a baseline of ongoing and previously approved test, training, and infrastructure/facilities construction activities at WSMR for comparison with the two alternatives under consideration for accomplishing the Proposed Action (Alternative 1 and 2). It includes all ongoing test and training operations at WSMR that have undergone NEPA evaluation. The No Action Alternative differs from existing conditions and operations at WSMR in that it includes actions that have been evaluated and approved recently, but have not yet been fully implemented. In particular, the stationing of a Combat Engineering Battalion (EN BN) at WSMR began with the first soldiers arriving in summer 2008; however, the full complement of soldiers and their families will not arrive until 2012.

Alternative 1 changes land use to expand testing and maneuver capabilities to include Future Combat Systems or similar programs. Alternative 1 would:

Ms. Catherine Giblin

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July 6, 2009

- Change land use designations to authorize off-road maneuvers by wheeled and tracked vehicles on an additional 1.6 million acres (for a total of 1.8 million acres designated as Augmented Test Zone), expand Range Centers and Built-up areas by 7,000 acres, and convert 2,000 acres to Impact Areas.
- Expand current test operations, such as missile firing, directed energy weapons, and FCS testing, and support for next generation programs using the full extent of WSMR land and airspace resources. FCS provides a fully integrated combat capability encompassing manned and unmanned ground and air vehicles and munitions that are tied together by a network. Tests would need a variety of terrain and use of terrain features to separate operational locations, which could include off-road operations in mountainous terrain. For purposes of this analysis, the DEIS assumes about 1,053,000 acres of "least constrained" land within the "Augmented Test Zone" would support the majority of off-road maneuver for FCS test activities and other customers with similar ground operation requirements.
- Increase test-related ground and airspace missions during the next five years.
- Support the arrival of a HBCT with 3,800 soldiers and over 5,000 family members in 2013. Expand the Main Post and construct mission critical facilities, housing, and other mission and community support facilities comprising about 3.2 million square feet of new construction in and around the main post by 2013 (primarily as a result of the HBCT stationing, including a new site of up to 300 acres in size adjacent to the Main Post). Additionally, installation-wide, about 1.4 million square feet of new construction would be built to support proposed infrastructure and facilities, such as additional instrumentation and new field support nodes at range centers.
- Development of new Mission Support Facilities and infrastructure throughout WSMR to support future tests and training, including reconstruction of 75 miles of existing tank trails, construction of up to 170 miles of new tank trail network connecting the Main Post to Fort Bliss training areas and the south range to the north range area, range center expansion, and construction of utilities and communication infrastructure.
- Development of six new Specialized Areas, the specific locations of which have not yet been determined; including an Electro-Optical 0.50 Caliber Test Range, a Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) System, and Environmental Laboratory Complex, a Joint Urban RDT&E Environment, an Individual Combat Skills Training Area, and a Local Training Area for the stationing of a Combat Engineering Battalion.

Alternative 2 would provide capability for the HBCT to conduct off-road vehicle maneuver training at WSMR in a newly designated Southeast Multi-Use Area, in addition to the ability to train on Fort Bliss. In all other respects, Alternative 2 would be the same as Alternative 1, incorporating the same changes in land use, activities, and infrastructure at the range and for the HBCT, as well as continuation of ongoing and previously approved activities described under the No Action alternative. Land and airspace uses, test capabilities, development areas, personnel levels, and equipment levels would remain the same as those described for Alternative 1. In addition to all the actions described for the No Action alternative and Alternative 1, Alternative 2 would include:

- Designating a new Specialized Area: the Southeast Multi-Use Area (approximately 120,000 acres on the south side of U.S. 70 along the eastern WSMR boundary), for intensive off-road use involving light to heavy tracked or wheeled vehicle training activities for the HBCT, as well as Improvised Explosive Device route clearance training and dismounted operations for the EN BN, among other possible uses.
- Development of approximately 100 miles of a new tank trail network south of US 70 within the Southeast Multi-use Area. Specific locations of these tank trails have not yet been identified.
- Within the Southeast Multi-use Area, five sites would be designated for logistics and command and control operations in the maneuver areas ranging from 1 to 2 acres in size. Some sites may require a gravel surface and may have temporary structures, such as tents.

Ms. Catherine Giblin

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July 6, 2009

General Comments

SA-1

Department staff attended the 02 June 2009 public meeting regarding this DEIS in Alamogordo. We were advised that a decision had just been made by the administration to cancel the HBCT component of this proposal, but that the DEIS would not be revised to reflect this major change. We were also advised that the analyses of HBCT direct, indirect and cumulative effects in the DEIS are essentially distinct, so a reviewer could easily understand how effects from implementation of an action alternative would be different without the inclusion of the HBCT.

Even without the arrival of a HBCT, which would have trained on Fort Bliss under Alternative 1, and trained on WSMR at a newly created Southeast Multi-Use Area under Alternative 2, off-road tracked and wheeled vehicle maneuvers will cause extensive disturbance to soils, vegetation and wildlife with implementation of Alternative 1. Page S-6 states that "Equipment levels at WSMR would increase under the No Action Alternative, primarily in response to the arrival of the EN BN, which by 2012 would add 315 wheeled/tracked vehicles and generator sets to the 2007 inventory of about 1,920 pieces (for a total of approximately 2,235).

Even in the absence of the HBCT, the DEIS correctly identifies significant, and potentially irreversible (P. 4-211) adverse impacts to natural resources from the implementation of Alternative 1, which would greatly expand the area allowed for off-road maneuvers for wheeled and tracked vehicles for EN BN and Future Combat System (FCS) training.

Page 2-22 states that for FCS types of events, "If every event used a different operational area, up to 390,000 acres of land would be used during any given year, or 36% of Land Use C. Based on estimated FCS needs and simulated events up to battalion-size events, the estimated disturbance footprint caused by the vehicle wheels and tracks would be up to 14,800 acres per year. This area of disturbance represents about 1.4 percent of the least constrained land in the Augmented Test Zone [Land Use C], and less than 1 percent of the entire Augmented Test Zone. The largest event may involve up to 65 vehicles (comprised of a mixture of wheeled and tracked vehicles) operating for periods of 14 days, using an operational area of about 62,000 acres."

It is not clear how the DEIS determined the "estimated disturbance footprint caused by the vehicle wheels and tracks" of up to 14,800 acres per year, when, as stated, if every event used a different operational area, "up to 390,000 acres of land would be used during any given year, or 36% of Land Use C, which under Alternative 1 would be 1.8 million acres. This disturbance analysis clearly does not take into account the cumulative effect of such maneuvers with regard to habitat fragmentation, water and soil erosion, vegetation loss, and wildlife disturbance.

SA-2

Table S-3, Summary of Environmental Impacts (for Alternative 1), page S-19 states "The high frequency and density of projected maneuvers by wheeled and tracked vehicles, as well as the concentration of troops on foot, would be likely to lead to increasing areas of bare ground or mesquite coppice dunes in areas where they do not currently exist." Furthermore, Table S-3 states: "Impacts to vegetation from Ground Operations could be localized significant adverse impacts in terms of vegetation loss and desertification; particularly in disturbed areas containing higher erosive soils such as grasslands." These statements and others throughout the DEIS that identify that planned activities are likely to create ecologically unsustainable conditions; i.e., desertification by off-road vehicle maneuvers converting desert grasslands and shrublands into mesquite coppice dunes, is directly contradictory to other statements throughout the DEIS that WSMR is committed to maintaining the environmental quality and ecological sustainability of WSMR.

Ms. Catherine Giblin

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SA-2 continued

For example, page C-3 of the DEIS states: "The Sikes Act (16 U.S.C. 670a et seq.) requires that all military installations in the U.S. that have significant natural resources prepare and implement an Integrated Natural Resources Management Plan [INRMP]. The INRMP acts as the installation's adaptive plan for integrating natural resource management and the military mission. Its purpose is to ensure that the natural resources are being managed for multiple use, sustainable use, and biological integrity, while complying with Federal stewardship requirements and current legal mandates." The implementation of Alternative 1 would be directly contradictory to the goals for the WSMR INRMP, which include (Table C-3, P. C-12):

- Apply ecosystem management tools in the context of the current military mission to preserve, maintain, and/or restore where appropriate the native biodiversity and ecological integrity of natural biotic communities, in sufficiently large blocks to avoid ecological fragmentation.
- Preserve and, where necessary, restore soil stability and productivity in developed and natural areas, and in areas with mission activities, to ensure long-term ecosystem health.
- Prevent spread and decrease existing acreage of noxious plants.

Unsustainable impacts from implementing Alternative 1, even without the HBCT, are also directly contradictory to commitments made by the Department of Defense (DOD) to support state wildlife action plans. The Department's Comprehensive Wildlife Conservation Strategy for New Mexico (2006; CWCS), identifies Chihuahuan semi-desert grasslands as a key habitat in need of conservation in New Mexico to protect Species of Greatest Conservation Need (SGCN) to preclude the need for federal listing of these SGCN under the Endangered Species Act. Page 154 of the CWCS states that WSMR contains extensive areas of Chihuahuan semi-desert grasslands, and identifies that military maneuvers and infrastructure development may destroy and fragment these grasslands. Alternative 1 would increase desert grasslands authorized for overland tracked and wheeled vehicle maneuvers from 7,200 acres to 557,000 acres (Table 4.7-4, P. 4-72).

Section 4.2.3.1.2.1 states: "Monitoring and adaptive management would allow land resources to recover and retain ecological conditions (defined by the WSMR Environmental Division with ITAM support) to sustain testing over the long term." However, Section 4.22 *Irreversible or Irrecoverable Commitments of Resources*, states: Ground disturbances during off-road vehicle maneuvers would cause losses and conversions of vegetation cover types as well as changes in landform and topography. Though these changes are not considered completely irreversible, the length of time required recovering soil, vegetation, and ultimately, wildlife habitat, could be long enough for the impact to be considered nearly irreversible." These two statements are contradictory, and similar examples of irreconcilable statements such as these occur throughout the DEIS.

The Department strongly recommends that DoD and WSMR consider selecting a "hybrid" alternative from this DEIS analysis that greatly reduces the potential for off-road tracked and wheeled vehicle maneuver damage to important desert grasslands and White Sands pupfish habitat by redirecting EN BN and Future Combat Systems ground activities, to the extent possible, to a newly designated Southeast Multi-Use Area south of U.S. Highway 70. This area is already composed primarily of mesquite-coppice dune systems, and will be available for overland maneuvers due to the cancellation of the HBCT. If WSMR elects not to do so, then we support the U.S. Fish and Wildlife Service's recommendation No. 3 in their 09 June 2009 comments on this DEIS to limit off-road vehicle maneuvers to predetermined, restricted areas, rather than spreading these maneuvers out over the 1.8 million acres of Land Use C. The low precipitation, erosive soils, and fragile grasslands on WSMR are not likely to recover with rotational off-road maneuvers, particularly with the increasing potential for drought and more rapid run-off events predicted for the Southwest under a warming climate scenario.

Ms. Catherine Giblin

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July 6, 2009

- SA-3 **White Sands Pupfish**
The Department requests that the *Cooperative Agreement for the Protection and Maintenance of the White Sands Pupfish* (Cooperative Agreement) be included in the Final EIS, and that a statement be made in the Record of Decision that the Cooperative Agreement will be followed throughout the implementation of this initiative.
- Table S-3 (P. S-20) states: "The proposed tank trail has the potential to impact "limited use" White Sands pupfish habitat, although this could be avoided during the siting process. New trails within "limited use" pupfish habitat could create localized adverse impacts at and adjacent to stream crossings." This statement is in conflict with the apparent commitment in Table S-2 (P. S-12) *WSMR Standard Procedures and Requirements for Range Users* that states: "Restrict ground operations from intercepting within the boundaries of Limited Use and Essential pupfish habitat."
- According to the Cooperative Agreement, Limited-Use Areas are lands adjacent to existing habitat where activities must be managed to ensure that degradation of Essential Habitat does not occur through direct or indirect effects such as contaminant runoff and excessive soil erosion. All reasonable precautions shall be taken in coordination with USFWS and NMDGF, as appropriate, to avoid or minimize degradation of Essential Habitat due to activities on Limited-Use Areas.
- The Table S-3 statement above does not make a commitment to re-site the tank trail to avoid the White Sands pupfish limited use habitat, but based on the commitment of WSMR as a cooperator in the Cooperative Agreement, we request that WSMR do so, and that the FEIS be modified to reflect this commitment.**
- SA-4 Table S-4 (P. S-29) identifies that WSMR has begun pre-planning for the possible construction of a desalination plant to assist in the creation of additional potable water. Additional groundwater pumping to meet the needs of increased personnel, and the deposition of waste salt material from a desalination plant, may pose significant risk to persistence of White Sands pupfish on WSMR, and would warrant further NEPA review and analysis so adverse effects to White Sands pupfish could be avoided.
- Page 4-31 states: "Dust suppressants should include vegetative cover, mulch, spray-on adhesives, calcium chloride, and water spraying. Over the large areas of used for test, maneuvering, and training such techniques would be impracticable, but should be deployed along tank trails and during repair activities that may expose surfaces of soils known to generate non-point fugitive dust emissions." Chemical dust suppressants should not be used near White Sands pupfish limited use or essential habitats, and the FEIS should clearly state this concern.
- SA-5 **Migratory and Breeding Birds**
Table S-3 (P. S-20) identifies impacts from off-road vehicle maneuvers to include vegetation loss and displacement of wildlife and interruptions to nesting and breeding birds. Table 4.7-2, *Types of Biological Impacts* (for Alternative 1), identifies tracked and wheeled off-road vehicle maneuvers as interrupting nesting/breeding birds and ground nest/burrow destruction. The authorization and implementation of these activities that manifest these effects are contradictory to the commitment in Table S-2 (P. S-12) that WSMR will protect migratory birds, nests, eggs and nestlings in accordance with the WSMR Commander's Guidance on the Migratory Bird Treaty Act; the DoD/U.S. Fish and Wildlife Service MOU to Promote the Conservation of Migratory Birds, and the Final Rule: Migratory Bird Permits, and the Take of Migratory Birds by the Armed Forces.
- We believe, based on the widespread area of off-road vehicle maneuvers that would be authorized by implementation of Alternative 1 for EN BN and FCS, off-road vehicle maneuvers would need to be limited to the non-breeding season for migratory birds to avoid take of birds, nests, eggs and nestlings.

Ms. Catherine Giblin

6

July 6, 2009

SA-6

Adaptive Management

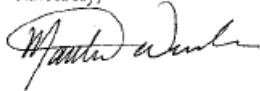
Table S-4, *Summary of Potential Mitigation Measures*, for Biological Resources, states that to offset and prevent significant biological impacts from off-road vehicle maneuvers, WSMR would adopt a mitigation strategy involving "adaptive management," which would allow WSMR to determine what type and location of specific mitigation measures are needed to protect or restore biological resources through biological monitoring of lands subject to off-road vehicle use. The Department is concerned that with the scope of actions proposed for implementation under Alternative 1, even considering the exclusion of the HBCT, adopting "adaptive management" would not be sufficient to mitigate for the ecological damage that the DEIS identifies is likely to incur, which includes vegetation loss and soil damage that could create mesquite-coppice dune systems from Chihuahuan semi-desert grasslands, as has occurred on the Jornada Experimental Range and Fort Bliss. "Adaptive Management" is also identified as the primary strategy for addressing the cumulative impacts of implementing an action alternative. We believe this strategy to be inadequate for mitigating the adverse ecological effects that are likely to occur from the broad expansion of off-road tracked and wheeled vehicle maneuvers, even in the absence of the HBCT. Furthermore, no monitoring plan or discussion of ongoing biological and ecological monitoring activities is included in the DEIS to support this assumption that adaptive management will be adequate to address these ecological impacts.

SA-7

However, with regard to mitigation, the Department supports the general recommendations provided by the U.S. Fish and Wildlife Service in their 09 June 2009 comments on this DEIS, including that the DoD and WSMR provide compensation for loss of habitat, including, but not limited to White Sands pupfish (WSP) conservation activities such as 1) creating a WSP refugia with special emphasis on the Malpais Spring pupfish population; 2) removing existing obstacles that restrict movement of pupfish within Essential Habitat; 3) removing military testing debris from occupied pupfish habitat (with Department and USFWS oversight); and 4) developing and implementing an incident response program for accidental chemical spills, impacts from military activities debris, and vehicle accidents.

We appreciate the opportunity to comment on this DEIS. Should you have any questions regarding our comments, please contact Mark Watson, Habitat Specialist, of my staff at (505) 476-8115, or <mark.watson@state.nm.us>.

Sincerely,



Matt Wunder, PhD
Chief, Conservation Services Division

MW/mlw

CC: Wally Murphy (Ecological Services Field Supervisor, USFWS)
Robert S. Jenks (Deputy Director, NMDGF)
Pat Mathis (Southwest Area Habitat Specialist, NMDGF)
George Farmer (Southeast Area Habitat Specialist, NMDGF)
Stephanie Carman (Aquatic Species Recovery Coordinator, NMDGF)
Hira Walker (Conservation Services Ornithologist, NMDGF)
Mark Watson (Conservation Services Habitat Specialist, NMDGF)

Responses:

- SA-1** **The 390,000 acres refers to an operational area used during an event whereas the 14,800 acres refers to the direct disturbance caused by the tire widths of the vehicles over the entire event. These values are assumptions provided in the description of Alternative 1 as the basis for the analysis in Chapter 4, where considerations such as habitat fragmentation, water and soil erosion, vegetation loss, and wildlife disturbance are addressed.**
- SA-2** **See comment response to FA-3. A recommended management action was added to the EIS under Section 4.7.5.2 to address grasslands: “Identify vulnerable/sensitive grasslands In Land Use Classification C and the proposed Southeast Multi-Use Area as an environmental constraint. Any off-road uses in these areas would require coordination and approval with WSMR Environmental Division prior to operations. Limitations may define duration or level of activity, vehicle types and numbers, speed of vehicles, seasonal or weather restrictions, for example.”**
- Given the needs of programs to test military hardware and communication systems over large distances, it would not be possible to limit all off-road vehicle use to the proposed Southeast Multi-Use Area.**
- SA-3** **See response to comment FA-1.**
- SA-4** **After additional analysis, WSMR found that a desalination plant would not be required, even under the scenario of stationing a HBCT or equivalent unit. Text describing the potential desalination plant was removed.**
- Table 2.5-1, “WSMR Standard Procedures and Requirements for Range Users” was revised to state that chemical dust suppressants will not be used near Limited Use or Essential White Sands Pupfish Habitat.**
- SA-5** **As stated in Table 2.5-1, “WSMR Standard Procedures and Requirements for Range Users”, WSMR shall protect migratory birds, nests, eggs, and nestlings in accordance with the WSMR Commander’s Guidance on the Migratory Bird Treaty Act.**
- SA-6** **See responses to comments FA-20 and SA-2.**
- SA-7** **See response to comment FA-1.**

To: WSMR EIS
Sent: Tue Jun 30 17:03:28 2009
Subject:

I-1

It is my understanding that the comment period for this EIS has been extended to 6 July 2009. I therefore ask that my comment be included for the EIS.

I would like to comment regarding the EIS WSMR, regarding "Development and Implementation Range-Wide Missions and Major Capabilities White Sands Missile Range, (WSMR), New Mexico".

I am concerned over the negative effects both to the overall environment, wildlife, other animals, and humans due to the proposed increases in hazardous and other operations being planned for the future of WSMR, NM. Furthermore, I am also concerned regarding current operations, for the same reasons.

This increase in Missions, should it go forth, will continue to have direct, indirect, and cumulative effects for all involved much of it negative. It appears no matter how many millions of acres of training and test space the military has in our area, they always want more. WSMR should use what it has already and not contaminate and destroy yet more acreage. Furthermore, it also appears that regardless of the negative factors involved, these proposed projects go forth at the expense of whatever effects it may have on human and animal life and the environment as a whole.

I would like to request a copy of the EIS Draft and the Final EIS when that is compiled. Please send to address below. Thank you.

Sincerely,

Mrs. Schuster,
Director, Heart To Heart Animal Society

Heart To Heart Animal Society
P.O. Box 653
Alamogordo, NM 88311

Response:

I-1

WSMR needs to support new and existing testing and training missions, including those that require off-road vehicle use over large expanses of land to test communication systems. Therefore, the EIS addresses the potential for biological impacts (impacts to animal life) and other environmental impacts from these expanded activities. Thank you for your concerns. WSMR will provide you a copy of the Final EIS when it becomes available.



PUBLIC MEETING COMMENT FORM

Public Meeting for the Draft Environmental Impact Statement (DEIS)
for Development and Implementation for Range-Wide Mission and Major Capabilities
at White Sands Missile Range (WSMR), New Mexico

Must be received on or before July 6, 2009.

(Please print clearly)

I-2

WSMR'S future would best be served
by thoroughly completing this EIS,
even in the presence of a Florida
HBCT.

I would like to receive a copy of:

FINAL WSMR EIS Hard Copy CD Only Hard Copy and CD

Name: Michael Skye

Response:

I-2 The Army retained the analysis of a HBCT or equivalent unit stationed at WSMR under
Alternative 2.

APPENDIX E
BIOLOGICAL ASSESSMENT AND U.S. FISH AND WILDLIFE SERVICE
CONCURRENCE

- 1. U.S. Fish and Wildlife Service Concurrence Letter**
- 2. Final Biological Assessment**

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

September 24, 2009

Cons. #22420-2009-I-0087

Thomas A. Ladd, Director, Public Works
Department of the Army
U.S. Army Garrison White Sands
100 Headquarters Avenue
White Sands Missile Range, New Mexico 88002-5000

Dear Mr. Ladd:

Thank you for your September 2, 2009, letter requesting section 7 consultation and conference under the Endangered Species Act (Act) for the development and implementation of range-wide mission and major capabilities at White Sands Missile Range (WSMR). Your updated, final biological assessment was received in the New Mexico Ecological Services Field Office (NMESFO) by electronic mail on September 16, 2009. It analyzes effects likely to result from implementing new mission requirements and developing new test and training capabilities at the installation. You have requested concurrence from the NMESFO with your determinations that the proposed project "may affect, but is not likely to adversely affect" the endangered Todsens pennyroyal (*Hedeoma todsenii*), the endangered southwestern willow flycatcher (*Empidonax trailii extimus*), and the threatened Mexican spotted owl (*Strix occidentalis lucida*), and "is not likely to jeopardize the continued existence of" the nonessential experimental population of the northern aplomado falcon (*Falco femoralis septentrionalis*). You also determined that the proposed action "may affect, but is not likely to adversely affect" the critical habitat of either the Todsens pennyroyal or Mexican spotted owl.

Your proposed action expands WSMR's capabilities and focuses on the types of activities, land uses, and physical development that are needed to support the range-wide requirements of users. The elements of your proposed action include:

- Changes in land use, including expansion of the Main Post and alterations in authorized uses of range areas to allow for off-road activities;
- Development of new and expanded infrastructure throughout the installation and increase in the level of test activities;
- Development of six new specialized areas, four for test operations and two to support Engineering Battalion training;

- Establishment of a Land-Use and Airspace Strategy Plan and siting process for facilitating future tests and training activities at WSMR;
- Construction of facilities on the Main Post for a Heavy Brigade Combat Team or equivalent unit, including new soldier and family housing, schools, infrastructure, administrative facilities, other garrison support facilities, and expanded utilities; and
- Development of the Southeast Multi-use Area, encompassing 120,000 acres, for intensive off-road maneuvers for tests and training.

The scope of this assessment is limited to the land and airspace in Socorro, Torrance, Lincoln, Sierra, Otero, and Doña Ana counties in New Mexico. Your biological assessment states that activities conducted on Fort Bliss in support of WSMR programs, including training of the Heavy Brigade Combat Team, are addressed in the Final Supplemental Programmatic EIS, Fort Bliss Texas and New Mexico Mission and Master Plan, 2007. Fort Bliss completed section 7 consultation for this project, Consultation #22420-2007-I-0061, on April 17, 2007, with Ecological Services offices in New Mexico and Texas.

The NMESFO concurs with your determinations that the proposed development and implementation of range-wide mission and major capabilities at WSMR “may affect, but are not likely to adversely affect” Todsens pennyroyal and its critical habitat, the Mexican spotted owl and its critical habitat, and the southwestern willow flycatcher, and “are not likely to jeopardize the continued existence of” the northern aplomado falcon for the reasons listed below:

Todsens pennyroyal and critical habitat

Most of the proposed activities are prohibited from occurring in the WSMR Designated Pennyroyal Habitat area, which includes all known populations, designated critical habitat, and unsurveyed suitable habitat. Activities may occur in unsurveyed suitable habitat only after the habitat has been adequately surveyed and Todsens pennyroyal is determined to be absent. All known populations and critical habitat will remain protected, including an additional 0.5 km buffer zone around each population. Airborne releases over or adjacent to the WSMR Designated Pennyroyal Habitat area will only occur if: (1) WSMR makes a “no effect” determination for the activity; or (2) NMESFO concurs with a “may affect, but not likely to adversely affect” determination for the activity. Adverse effects from implementation of the Land Use Airspace Plan are not anticipated. Should an adverse effect determination result, the activity will only occur according to the terms of a biological opinion.

Mexican spotted owl and critical habitat

There are no confirmed records of the Mexican spotted owl occurring on WSMR, and the owl is not expected to occur on WSMR due to lack of breeding habitat. In addition, there will be no construction or ground-disturbing activities associated with the proposed action that may affect the primary constituent elements of Mexican spotted owl critical habitat. Studies have shown that noise associated with aircraft above 3,000 feet has minimal impacts on the Mexican spotted owl. WSMR’s proposed over-flight activities would be conducted at 14,600 feet above the owl’s habitat.

Southwestern willow flycatcher

Air-vehicle operations at Condron Airfield do not occur in close proximity to the suitable Southwestern willow flycatcher habitat at Davies Tank. There is also an activity constraint area around Davies Tank to avoid or minimize adverse effects to the subspecies. WSMR will conduct three-visit surveys annually for the flycatcher. Project-related five-visit surveys will be required for any proposed action that may affect the flycatcher. This includes, but is not limited to, any project at or near Davies Tank that could affect the flycatcher due to direct or indirect effects due to: (1) modification of the vegetation or soils; (2) change in the flow of water or effluent to Davies Tank; (3) effects to the insect community; or (4) an increase in noise levels. WSMR will use survey results to make the appropriate section 7 effect determinations and will consult with the NMESFO regarding any project that may affect the species. Surveys will also help determine if WSMR has resident flycatchers that would warrant development of a management plan specific to this subspecies.

Northern aplomado falcon

Proposed uses of northern aplomado falcon habitat will include measures to reduce adverse environmental impacts, in accordance with WSMR plans, permits, and regulations. Project siting includes measures for minimizing impacts to and fragmentation of grasslands, and for preserving large, complex yucca trees. New proposed actions, or actions not covered by this Environmental Impact Statement, will go through an environmental review process where potential effects to the falcon will be considered. WSMR has implemented conservation measures to ensure that: (1) personnel understand where northern aplomado falcons are located on WSMR; (2) all northern aplomado falcon sightings and nests are reported to the NMESFO; (3) intentional or unintentional take of northern aplomado falcons, nests, eggs, and nestlings is prevented; (4) incidental take is minimized through best management practices and coordination with NMESFO; (5) impacts to, and fragmentation of, grassland habitats is minimized; and (6) northern aplomado falcon recovery will be supported through WSMR's participation in the reintroduction program and restoration of grasslands when feasible and funds are available.

This concludes section 7 consultation and conference on the proposed development and implementation of range-wide mission and major capabilities at WSMR. As provided in 50 CFR Sec. 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this consultation; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this consultation; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

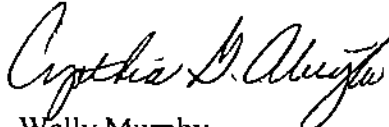
We appreciate your concern for endangered species in New Mexico and your commitment to coordination with the NMESFO on issues involving listed and rare species. In future communications regarding this project, please refer to Consultation #22420-2009-1-0087. If you

Thomas A. Ladd, Director, Public Works

4

have any questions about this letter, please contact Dr. Patricia Zenone of my staff at the letterhead address or at (505) 761-4718.

Sincerely,


for Wally Murphy
Field Supervisor

cc:

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico

Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division,
Santa Fe, New Mexico

Director of Environment, Fort Bliss Garrison Command, Department of the Army, Fort Bliss,
Texas (Attn. Dr. Brian Locke)

**FINAL
BIOLOGICAL ASSESSMENT**

FOR

**DEVELOPMENT AND IMPLEMENTATION OF RANGE-WIDE
MISSION AND MAJOR CAPABILITIES AT
WHITE SANDS MISSILE RANGE, NEW MEXICO**

REGARDING

**Todsens's pennyroyal (*Hedeoma todsenii*), Northern aplomado falcon (*Falco
femoralis septentrionalis*), Southwestern willow flycatcher (*Empidonax traillii
extimus*) and Mexican spotted owl (*Strix occidentalis lucida*)**



August 2009



ACRONYM LIST

ACC	Air Combat Command
AR	Army Regulation
BA	Biological Assessment
BLM	Bureau of Land Management
BO	Biological Opinion
cm	Centimeters
DA	Department of the Army
DDT	Dichlorodiphenyltrichloroethane
DoD	Department of Defense
EIS	Environmental Impact Statement
EN BN	Engineering Battalion
ESA	Endangered Species Act
ESMP	Endangered Species Management Plan
FAA	Federal Aviation Administration
FIX	Firing-In-Extension
ft	Feet
g	Grams
HBCT	Heavy Brigade Combat Team
IED	Improvised Explosive Device
IMCOM	Installation Management Command
in	Inches
INRMP	Integrated Natural Resource Management Plan
JCS	Joint Chiefs of Staff
km	Kilometers
LNF	Lincoln National Forest
LTA	Local Training Area
LUASP	Land Use Airspace Strategy Plan
m	Meters
mm	Millimeters
MBTA	Migratory Bird Treaty Act
MSL	Mean Sea Level
MSO	Mexican spotted owl
NEP	Nonessential Experimental Population
NEPA	National Environmental Policy Act
NMDGF	New Mexico Department of Game and Fish
R&D	Research and Development
RDT&E	Research, Development, Testing, and Evaluation
ROD	Record of Decision
ROI	Region of Influence
SDZ	Surface Danger Zone
SWFL	Southwestern Willow Flycatcher
T&E	Threatened and Endangered
US	United States
USAF	United States Air Force

ACRONYM LIST (Continued)

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WSMR	White Sands Missile Range

EXECUTIVE SUMMARY

White Sands Missile Range (WSMR) has prepared an Environmental Impact Statement (EIS) for development and implementation of range-wide mission and major capabilities at WSMR. The EIS assesses the impacts associated with implementing new mission requirements and developing new test and training capabilities at the installation. This Biological Assessment (BA) has been prepared pursuant to Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et. seq.*) to assess the effects of the proposed action on federally listed species.

Species analyzed in this BA include the endangered Todsens's pennyroyal (*Hedeoma todsenii*), the endangered northern aplomado falcon (*Falco femoralis septentrionalis*), the endangered southwestern willow flycatcher (*Empidonax trailii extimus*), and the threatened Mexican spotted owl (*Strix occidentalis lucida*). WSMR has determined that implementation of the proposed action may affect, but is not likely to adversely affect, the Todsens's pennyroyal, southwestern willow flycatcher, and Mexican spotted owl. The proposed action will not affect Critical Habitat of the southwestern willow flycatcher, and may affect, but is not likely to adversely affect, the Critical Habitat of the Todsens's pennyroyal or Mexican spotted owl.

The northern aplomado falcon in New Mexico is listed under section 10(j) of the Endangered Species Act as a Nonessential Experimental Population; therefore federal agencies are required to determine if their activities could jeopardize the continued existence of the species. WSMR has determined that implementation of the proposed action would not jeopardize the continued existence of the northern aplomado falcon.

Introduction

WSMR is a tri-service installation in the U.S. Army's Installation Management Command (IMCOM) supporting the Army, Air Force and Navy. It is managed and operated by the Army for research, development, test and evaluation (RDT&E) of military systems and similar high-technology commercial products. U.S. Army Developmental Test Command (DTC), which reports to the Army Test and Evaluation Command, is WSMR's major tenant and uses the extensive test resources and infrastructure of this installation to accomplish its RDT&E role. Leadership at the installation is provided by the WSMR Commanding General, the Test Center Commander, and the Garrison Commander. Day-to-day direction is provided by Team WSMR, which is comprised of the installation leadership, the Deputies for the Navy and Air Force, and the primary tenant organizations located at the installation.

The regional location of WSMR is depicted in Figure 1.2-1 of the Environmental Impact Statement (EIS) for Development and Implementation of Range-Wide Mission and Major Capabilities at WSMR (herein after referred to as the EIS). Physiographically, it is located in the Tularosa Basin and the northern Jornada del Muerto Basin of south central New Mexico and is approximately 40 miles wide and 100 miles long EIS Fig. 1.2-4. WSMR encompasses most of the San Andres and Oscura Mountains and is located to the west of the Sacramento Mountains.

The land area of WSMR surrounds White Sands National Monument, which is operated and managed by the National Park Service, and the San Andres National Wildlife Refuge, which is operated and managed by the U.S. Fish and Wildlife Service (USFWS). A portion of the U.S. Department of Agriculture's Jornada Experimental Range is also within the boundaries of WSMR. The WSMR land area totals approximately 1.9 million acres EIS Table 1.2-1. Holloman Air Force Base borders WSMR on the east and has a land area of approximately 59,700 acres. Ft. Bliss borders the installation on the south east and has a land area of 1.1 million acres. Cumulatively, WSMR and surrounding military use lands encompass approximately 3.4 million acres.

WSMR also holds leases or partner agreements with adjacent land owners on an additional 3.3 million acres for "call-up" areas or Firing-In-Extension (FIX) areas. Restricted air space overlies and extends beyond the WSMR land boundary. The FIX and restricted air space areas are shown in EIS Figure 1.2-2.

A comprehensive description of the installation and a detailed description of the purpose and need for the proposed action are included in Section 1, of the EIS.

Need for Biological Assessment

The WSMR EIS examines the environmental effects of new mission requirements and the development of new test and training capabilities in accordance with the National Environmental Policy Act (NEPA). Section 7 (c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et. seq.*), requires federal agencies to evaluate their actions with respect to any species which is listed as endangered or threatened.

Provisions of the ESA require federal agencies to ensure that actions authorized, funded, or carried out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of Critical Habitat as determined by the USFWS. The purpose of this Biological Assessment (BA) is to assess the impacts of the proposed development and implementation of range-wide mission and major capabilities at WSMR on federally listed threatened, endangered, or proposed species.

Informal consultation on the Proposed Action was initiated in July 2008 via electronic mail and telephone conversations between WSMR staff (Ms. Trish Griffin) and USFWS staff (Ms. Pat Zenone). WSMR notified the USFWS by electronic mail on July 17, 2008 of their intent to prepare an EIS and asked the USFWS to participate in the scoping process. The USFWS responded to this request by letter dated August 18, 2008 which provided recommendations for conserving threatened and endangered species and their habitats. By letter dated September 4, 2008, WSMR informed the USFWS of their intent to prepare a BA addressing three species including Todsen's pennyroyal (*Hedeoma todsenii*), northern aplomado falcon (*Falco femoralis septentrionalis*), and the MSO (*Strix occidentalis lucida*) and requested their concurrence with the list of species to be addressed. In a telephone conversation (December 9, 2008) between WSMR and USFWS, the USFWS stated that they would not respond in writing to WSMR's species list for the BA, but that the species list looked correct. On 21 June 09 WSMR documented its first southwestern willow flycatcher (*Empidonax trailii extimus*) occurrence, so this species has been added to the list of species addressed in this BA.

Description of Proposed Action and Alternatives

The 1998 *WSMR Range-Wide EIS* evaluated the programs functioning at WSMR at the time of its publication. Many of those (such as missile testing, nuclear, and electromagnetic effects; and high energy laser testing) are still the core workload at the installation. The Proposed Action of this 2009 EIS incorporates the continuation of ongoing activities and expands WSMR capabilities. It focuses on types of activities, land uses, and physical development needed to support the range-wide requirements of all users, rather than on individual programs.

The purpose of the proposed action is to:

- Provide adequate land and infrastructure to support a broad spectrum of existing and future testing and expanded training activities;
- Designate land areas for potentially high intensity ground training and testing operations in a manner that would pose minimal conflicts with other missions and provide long-term sustainability of range resources;
- Provide a land use and airspace management framework that, in conjunction with additional facility and range management processes, would help expedite the approval and coordination of new and expanded range and airspace activities (including expanded off-road vehicle and ground maneuvers) using practices for range sustainability; and
- Reserve adequate suitable land for facilities and infrastructure to support future test and expanded training missions (including associated civilian personnel, Soldiers and Families).

The projected changes in land use, activities, levels of use, infrastructure and facilities, personnel, and equipment associated with implementation of the proposed action are discussed in Section 1.5 of the EIS.

Pursuant to this EIS, the Army will decide whether or not to adopt and implement changes in land use and capabilities at WSMR to allow for expanded testing and training, including more off-road vehicle maneuvering. The Army will consider and decide on expansion of built-up areas around the Main Post and Range Centers to accommodate more test users and potential training units, construction of range infrastructure and training ranges, and testing activities for future weapons and countermeasure systems. In addition, the Army will consider and make decisions about expanding capacity and capability sufficient to implement a stationing of a HBCT or equivalent unit at WSMR, including the associated personnel, operations and maintenance activities, and training. Two alternatives are being considered; one for providing off-road maneuvers for testing purposes only, and one to support off-road for testing and training for a HBCT. In making these decisions, the Army will select among the following alternatives that are described in detail in Chapter 2:

- **No Action Alternative.** Under this alternative, current test capabilities and existing land use designations on WSMR would continue at current levels of operations and activities. The No Action Alternative includes several previously approved actions that are in various stages of implementation having already undergone NEPA evaluations, including, but not limited to:
 - Stationing of the EN BN on WSMR with training on Fort Bliss, which will result in approximately 700 new Soldiers and approximately 1,200 Family members residing on-post and in surrounding communities;
 - Expansion of the Main Post by 70 acres and construction of 310,000 s.f. of new facilities on the Main Post to support the EN BN, BCT Modernization, and other test programs; and
 - Initial testing for the BCT Modernization program in the southeast part of WSMR and other ongoing tenant programs.

The No Action Alternative would not meet the purpose and need for the Proposed Action as described in Sections 1.4 and 1.5, and therefore is not considered a reasonable alternative. It is included in this EIS as required by CEQ Regulations for purposes of comparison to Alternatives 1 and 2.

- **Alternative 1.** The ongoing and previously approved projects and activities included in the No Action Alternative would continue under this alternative. In addition, land use designations would change and testing capabilities expanded throughout the installation to support new and evolving test requirements. Additional field training capability would be provided on WSMR for the EN BN, which currently conducts its training at Fort Bliss. Live-fire training by the EN BN would continue to be performed at Fort Bliss. The main elements of Alternative 1 are:
 - All elements of No Action Alternative;
 - Approval of proposed land use changes, including expansion of the Main Post and alterations in authorized uses of range areas, allowing for off-road activities;
 - Development of new and expanded infrastructure throughout the installation, and increase in the level of test activities;

- Development of six new specialized areas (four for test operations, and two to support EN BN training); and
- Establishment of a Land Use and Airspace Strategy Plan and siting process for facilitating future tests and training activities at WSMR.

This alternative meets the Army’s purpose and need to expand capabilities to support future test missions, to allow for new on-the-ground test operations, and some expansion of training activities. It also would provide WSMR with a management framework for planning future mission activities using siting criteria and practices for long-term range sustainability.

- **Alternative 2.** In addition to the existing and proposed activities incorporated in the No Action Alternative and Alternative 1, Alternative 2 would provide for expanded training, including the potential stationing of a HBCT (or equivalent unit), with the capability to conduct off-road vehicle training at WSMR in a newly designated Southeast Multi-Use Area. This area would be used both for training and testing maneuvers. Off-road vehicle maneuver training would likely use a combination of WSMR and Fort Bliss training areas. Live-fire training by a HBCT or equivalent large-sized military unit would be conducted at Fort Bliss. The main elements of this alternative include:
 - Construction of facilities on the Main Post for a HBCT (or equivalent unit), including new Soldier and Family housing, schools, infrastructure, administrative facilities, other garrison support facilities, and expanded utilities;
 - Development of the Southeast Multi-Use Area (120,000 acres) for intensive off-road maneuvers for test and training.

This alternative supports the Army’s purpose and need to provide flexibility and to increase capacity for both test and training at WSMR, including future stationing actions. This alternative also provides for physical development of facilities and infrastructure to support a large training unit and for repetitive heavy maneuver training in a designated portion of the installation.

Due to the complexity of the EIS and amount of data required for analyses, the locations of data and documents pertinent to this BA are described in Table 1.

**Table 1
Location of Information**

Data	Location	Document
Description of Purpose and Need for the Project and Description of Project Area	Section 1.0	EIS
Description of Proposed Action and Alternatives	Section 2.0	EIS
Land Use Airspace Strategy Plan (LUASP)	Appendix A	EIS
Activity Categories	Table 3-1	LUASP
Land Use Classifications	Table 3-2	LUASP
Activity Categories Occurring in Each Land Use Classification	Table 3-3	LUASP

WSMR Restricted Area Airspace	Figure 4-1	LUASP
Current Land Use Classifications in LUASP Focus Area	Figure 4-4	LUASP
Land Use Constraints on WSMR	Table 4-4, Figure 4-5	LUASP
Future Land Use in LUASP Focus Area	Figure 5-1	LUASP

Scope of Biological Assessment

For the purposes of this BA, the affects analysis for each species is based upon proposed actions described in Alternative 2, which incorporates the proposed actions of all three alternatives.

Other Federally Listed Species and No Affect Determinations

Three additional federally listed species are not analyzed further in this BA because WSMR has determined that the Proposed Action will not affect them:

Endangered interior population of the least tern (*Sterna antillarum*): The least tern has been recorded in nine New Mexico counties, but is considered transient in all of these counties except for Chavez Co. (BISON-M 2008) where they breed at Bitter Lake National Wildlife Refuge 160 kilometer (km) to the East of WSMR. They have also been documented breeding, since 2004, at Brantly Reservoir on the Pecos River. A single least tern was observed once at WSMR on June 8, 1997 at Malpais Spring during a range-wide migratory bird survey effort (New Mexico Cooperative Fish and Wildlife Unit 1999). Surveyors targeted water bird/shorebird habitat and observed 21 species of shorebirds during 153 surveys at six sites. The least tern is a colonial nester, and is not known to breed in the Tularosa Basin. Nesting habitat requires relatively barren substrate coupled with an adequate supply of fish nearby to support the colony. The White Sands pupfish inhabits Malpais Spring, but the habitat is considered marginal for a least tern nesting colony due to small area of suitable substrate, the presence of thick vegetation, and distance from suitable nesting habitat (Natural Heritage New Mexico 2005).

Endangered jaguar (*Panthera onca*): An evaluation of jaguar habitat in New Mexico by Menke and Hayes (2003) concluded that there is low potential for suitable habitat on WSMR. Additionally, there is no verified documentation of jaguars on WSMR. New Mexico records include unspecified reports from Otero County for 1902; two individuals reportedly killed in the Sierra de Los Caballos mountains west of WSMR (one in the late 1800s and one in 1904 or 1905); unspecified reports in the San Andres Mountains prior to 1903; and one observation reported by a U.S. Geological Survey (USGS) hunter in the San Andres Mountains in 1937 (Schmitt 1998, Halloran 1946, Natural Heritage New Mexico 2005).

Endangered Mexican gray wolf (*Canis lupus baileyi*): This species is designated a Nonessential Experimental Population (NEP) in New Mexico and Arizona, and does not occur on WSMR. Currently WSMR is defined in the 1998 NEP Final Rule and EIS as the *White Sands Wolf Recovery Area* which is within the Mexican Wolf Experimental

Population Area (63 FR 1752). However, the White Sands Wolf Recovery Area is not of sufficient size nor does it have sufficient prey density to function as an independent recovery area (72 FR 44065). The USFWS is currently modifying the Mexican Wolf Reintroduction NEP rule and EIS, and WSMR has accepted the invitation to participate in the modification process as a cooperating agency.

Threatened, Endangered, or Proposed Species that could be Affected by the Proposed Action

Todsen's pennyroyal (*Hedeoma todsenii*)

Taxonomy and Status

Todsen's pennyroyal was first discovered in the San Andres Mountains in 1978 by Dr. Thomas Todsen and described as a new species in 1979. Prompted by its small population size and restricted range (only two known locations at the time of listing) Todsen's pennyroyal was given federal endangered status and Critical Habitat was designated under Section 7 of the ESA on January 19, 1981 (46 FR 5730). Compliance with the ESA requires that federal agencies conserve endangered and threatened species and that they do not jeopardize the continued existence of endangered species or destroy or adversely modify critical habitat. Todsen's pennyroyal is listed as endangered by the State of New Mexico (Center for Plant Conservation 2008).

Description and Biology of Species

Todsen's pennyroyal is a somewhat woody perennial mint approximately 10-20 centimeters (cm) or 4-8 inches (in) tall. It has small lance-shaped leaves that are arranged oppositely along the stem. The flowers range in color from red-orange to orange-yellow and open into two lips. The leaves emit a distinctive fragrant odor, typical of plants in the mint family (Center for Plant Conservation 2008).

Presently, it is known only from Sierra and Otero counties, New Mexico, where it occurs in the San Andres Mountains and on the western slope of the Sacramento Mountains (New Mexico Rare Plants 2008). It grows in loose, gypseous-limestone soils associated with the Permian Yeso Formation and usually on steep north or east facing slopes in pinyon-juniper woodlands. Plant species reported to occur in association with Todsen's pennyroyal include pinyon pine (*Pinus edulis*), one seed juniper (*Juniperus monosperma*), mountain mahogany (*Cercocarpus breviflorus*), yellowleaf silktassel (*Garrya flavescens*), wavyleaf oak (*Quercus undulata*), white ragweed (*Hymenopappus radiatus*), snakeweed (*Gutierrezia* sp.) and muhly grass (*Muhlenbergia* sp.) (USFWS 2001). This species does not appear to associate consistently with any other particular species, and has been observed growing in the shade of pinyon pines and junipers, in woodland openings with thin grasses, and in thickets of wavyleaf oak (USFWS 2001).

Potential threats to the Todsen's pennyroyal were outlined by the USFWS in 1981 when the species was listed as endangered (46 FR 5730), and discussed in the Revised Recovery Plan for the species (USFWS 2001) and WSMR Endangered Species Management Plan (ESMP). The ESMP identifies the only known natural threat to the

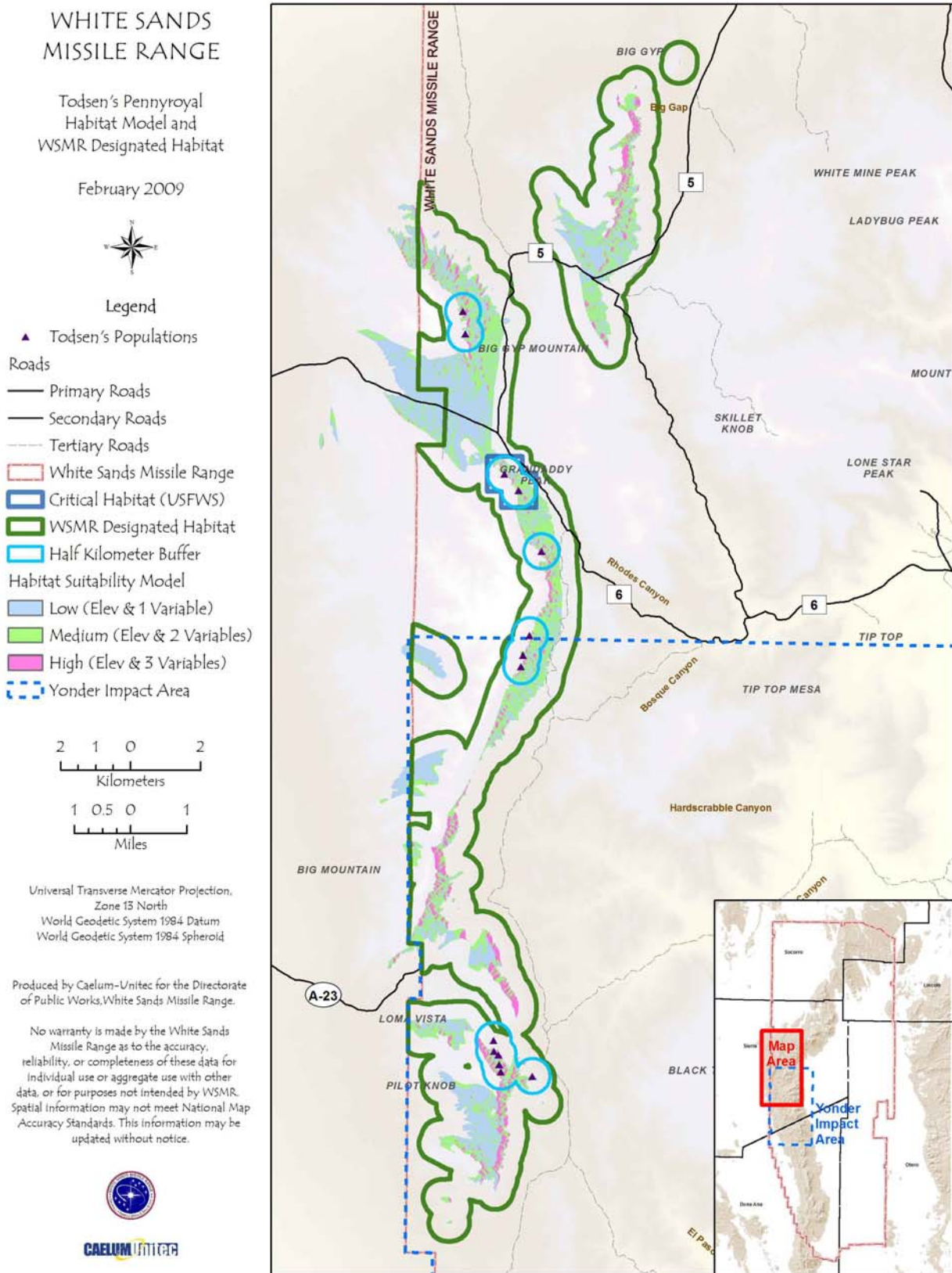
species is its relative rarity (WSMR 2001), although global climate change could also emerge as a threat to the species (Pers. Comm. Dr. David Anderson). The small numbers of individuals and populations of this species makes them susceptible. Browsing of plants by native wildlife species such as deer or rodents is a potential threat, but has not been documented. The only documented animal damage to the species is from an unidentified insect which may lay its eggs in its flowers (WSMR 2001).

Fire is a listed potential threat to the species, but the impact of fire on this species is unknown. The ecological community in which Todsens pennyroyal occurs is subject to burning every 10-30 years which suggests the species may have evolved with fire. The plant reproduces both sexually by producing seeds, and asexually by growing rhizomes underneath the surface of the ground. If fire were to damage the stems above ground, it is likely the plant would re-sprout from the rhizomes (USFWS 2001). However, an intense fire could damage the organic content of the soil and result in a decrease in survivorship (WSMR 2001). Threats from fire could be human induced or from natural threats such as lightning. Regardless of the source, Todsens pennyroyal habitat located on WSMR appears to lack sufficient fine fuels to carry a fire (Pers. Comm. Dr. David Anderson and Dr. Bob Sivinski) which would reduce the potential threat of fire on this species. At WSMR fire has burned areas close to Todsens pennyroyal populations, but to date there is no evidence that fire has burned within known Todsens pennyroyal populations (Pers. Comm. Dr. David Anderson).

It has been speculated that Todsens pennyroyal may exhibit low genetic diversity (Huenneke 1993), resulting from accumulation of deleterious alleles constraining the species' ability to adapt to change. However, there is little evidence supporting this idea in Todsens pennyroyal populations presently (WSMR 2001).

Other types of threats include mission testing, and operation activities being conducted at WSMR. Presently, ground-disturbing military activities are not allowed within the areas containing Todsens pennyroyal populations. Aircraft or missiles occasionally fly over the areas where Todsens pennyroyal occurs, but these areas are not used for surface-to-air or surface-to-surface testing. WSMR personnel involved in recovery operations stated that under current missions (outside of the Todsens pennyroyal area) debris is not likely to fall onto pennyroyal habitat (Pers. Comm. Mr. Joe Prather). Eight known Todsens pennyroyal populations lie beneath Yonder Impact Area (Figure 1). Yonder Impact Area is used for live-fire air-to-air activities by the Air Force 49th Fighter Wing (US Air Force 2006a and 2006b), but is not used by WSMR for air-to-air or air-to-ground activities. Use of Yonder Impact Area by the Air Force for the F-22A and Weapons System Evaluation Program (WSEP) was evaluated in a separate BA and consultation (see App A), and the USFWS concurred that these activities were not likely to adversely affect Todsens Pennyroyal.

Figure 1
Todsen's Pennyroyal Habitat Model and WSMR Designated Habitat



Troop training missions would have the potential to impact Todsens pennyroyal populations. These types of activities include troop and equipment movements, dismounted troop maneuvers, and could cause trampling or removal of vegetation, soil compaction, and erosion as well as introducing alien species. These activities are not allowed in Todsens pennyroyal areas (WSMR 2001). As shown in Figure 1, 0.5 km buffers have been set up around known Todsens pennyroyal populations. Ground disturbing activities are not allowed inside them or within areas of suitable habitat that have not been surveyed until surveys have determined that Todsens pennyroyal is absent.

Non-military human visitation is another potential threat to the species identified by WSMR. Threats could result from activities such as hunting, wood-harvesting, hiking, or even scientific research. The WSMR ESMP for the Todsens pennyroyal (WSMR 2001) establishes a 0.5 km buffer area around each known population and Critical Habitat in which the only activities allowed to occur include research and monitoring under permit with USFWS.

Grazing from livestock or other non-native species is another identified threat to the species. Livestock are not known to consume Todsens pennyroyal, but could pose a direct threat by trampling and indirectly by compacting soils or by introduction of seeds of alien plant species (WSMR 2001). However, at WSMR Todsens pennyroyal is located on relatively steep slopes that are not frequented by cattle. Furthermore, livestock grazing is not allowed on WSMR north of Highway 70, but trespass grazing occasionally occurs. Oryx (*Oryx gazella*), a non-native African antelope, were introduced on WSMR and have been observed in the vicinity of Todsens pennyroyal populations. They have the potential to negatively affect Todsens pennyroyal populations by grazing or trampling plants, or damaging soils (WSMR 2001). Limited oryx hunting in the San Andres Mountains is permitted and has a beneficial effect by reducing oryx numbers within the vicinity of Todsens pennyroyal. All hunting activities, however, are prohibited within the 0.5 km buffer areas around known Todsens pennyroyal populations and Critical Habitat.

Todsens pennyroyal populations on WSMR appear to be unthreatened by anthropomorphic disturbances. Cattle are excluded from all but two populations of Todsens pennyroyal at WSMR. These two populations lie outside the WSMR boundary fence, but actually occur on WSMR lands because the boundary fence was placed on the interior of the actual boundary. These populations exhibit population characteristics (individual densities, stems per individual densities, age distribution, and reproductive effort and output) within the range of variation for the other WSMR populations that excluded cattle (WSMR 2007a). Thus, WSMR has not detected any threat from cattle in these two populations.

Distribution and Abundance of the Species

When the Todsens pennyroyal was listed as endangered in 1981 it was known to occur at only two sites on WSMR (USFWS 1981). In 1988 an additional population was found by the Bureau of Land Management (BLM) on the western slope of the Sacramento Mountains east of WSMR across the Tularosa Basin (USFWS 2001). Additional

populations of the species have been found as survey efforts have increased. In the 1990's, fifteen additional populations were located in the Sacramento Mountains, and an additional third population was found in the San Andres Mountains (USFWS 2001). By 2006 eight populations had been located on WSMR property (WSMR 2007a).

Additional searches for new populations of Todsens's pennyroyal were conducted by WSMR in 2007 and resulted in the discovery of six new sites on the lower slopes of the Chalk Hills (WSMR 2007a). Currently, the species is known from a total of 29 sites in southern New Mexico, 14 of which occur on WSMR and the remainder occurring on lands in the Sacramento Mountains managed by the U.S. Forest Service and BLM (Figure 1).

At the time of listing the total WSMR population of Todsens's pennyroyal was listed as 750 plants occurring on 3000 m². By 2006 the population estimates had increased to an estimated total of 35,415 individuals occurring in eight populations (WSMR 2007a). These populations ranged in size from 552 to 17,894 individual plants. Population estimates are not available for the most recently discovered populations, but they are scheduled for monitoring in 2009. Currently, the smallest population on WSMR covers 387 m² (0.1 acre) and the largest covers 4,942 m² (1.22 acres).

Habitat Modeling

WSMR has developed a draft habitat suitability model for Todsens's pennyroyal to determine the total amount of suitable habitat present on the installation and to assist in identifying areas in which to conduct search efforts for new populations of the species. The model was generated from habitat characteristics that are believed to be important to the species: 1) elevation, 2) aspect, 3) percent slope, and 4) soil type. The results of this model are depicted in Figure 1. "Low" suitable habitat occurs where the model meets the elevation requirement (lower elevation bound of 6,381 feet or 2,013 meters) and one other variable (any of the three). "Medium" suitable habitat occurs where the model meets the elevation requirement and two other variables (any two of the three). "High" suitable habitat occurs where the model meets the elevation requirement and all three variables. This model is a work in progress, and will be modified as new populations are discovered and as more is learned about habitat characteristics of the existing populations. For example, better information on soils from the known populations might help to better identify areas that are most suitable for Todsens's pennyroyal.

Searches for new populations of Todsens's pennyroyal using a similar model (WSMR 2001) helped WSMR to locate six new populations. The current model (Figure 1) identifies approximately 8,246 acres of potential habitat suitable for Todsens's pennyroyal to be surveyed in the future, including 4,167 acres of "low" suitability habitat, 3,177 acres of "medium" suitability habitat, and 901 acres of "high" suitability habitat.

Protection and Conservation Measures

As a federally listed species, Todsens's pennyroyal is afforded protection under the ESA of 1973 (Public Law 93-205). The ESA prohibits maliciously damaging, destroying, or removing and reducing to possession any endangered or threatened plants from areas of federal jurisdiction. It also prohibits harming such species, which includes significant

modification or degradation of habitat. Section 7 (a) (1) of the act requires all federal agencies “...utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of the species...”

The state of New Mexico has also conferred endangered status to Todsens’ pennyroyal (New Mexico State Rules Act 1978), which prohibits taking, possessing, transporting and exporting, selling, or offering for sale any listed plant species.

WSMR has prepared and implemented an Integrated Natural Resource Management Plan (INRMP) (WSMR 2002) in accordance with the Sikes Act, (16 United States Code [USC] 670 et seq.). The INRMP complies with both NEPA and the ESA, and was coordinated with the USFWS. It describes natural resources values specific to WSMR and prescribes actions to facilitate the management of those resources. These actions are designed to meet Department of Defense (DoD) and WSMR natural resource conservation and management requirements and federal environmental laws, consistent with the military mission (WSMR 2002). The INRMP lists eighteen range-wide goals to support the military mission of WSMR while meeting natural resource management and conservation requirements. Three of the eighteen goals require the conservation of threatened and endangered species.

Goal number 4: *“Conserve species listed by the U.S. Fish and Wildlife Service as threatened or endangered, as well as their designated critical habitats, by using all methods and procedures necessary to bring them to the point where protections provided pursuant to the ESA are no longer necessary”.*

Goal number 5: *“Document the distribution of federal candidate species on the installation and monitor their status”.*

Goal number 6: *“Conserve all species on the installation listed by the state of New Mexico as threatened or endangered in accordance with state laws and Army regulations and guidance”.*

WSMR’s management of Todsens’ pennyroyal is also guided by regulations issued by the Department of the Army (DA) in accordance with Army Regulation (AR) 200-1, “Environmental Protection and Enhancement”.

The USFWS issued the first recovery plan for the species in 1985 and in 2001 approved a revised recovery plan for Todsens’ pennyroyal (USFWS 2001). The revised recovery plan delineated three actions necessary for recovery and delisting of the species. These actions include: 1) Remove any threats to existing Todsens’ pennyroyal populations; 2) Study populations and natural habitat; and 3) Use information from studies to identify potential habitat and search these areas for populations of Todsens’ pennyroyal.

In 2001 WSMR developed a Todsens’ Pennyroyal ESMP that is consistent with the USFWS recovery plan. The ESMP is incorporated by appendix into WSMR’s INRMP (WSMR 2002). In 2006 WSMR recommended provisions to update the ESMP (WSMR 2006). These revisions included methodologies to assess the status and population trends of the eight Todsens’ pennyroyal populations, determine natural variation in population

characteristics, document changes in populations and plant communities over time, assess potential threats to the WSMR populations, and continue searches for undiscovered populations in areas identified as potential habitat.

The installation has been very proactive in implementing the ESMP. To protect known populations it established designated “buffer areas” within which nearly all activities are restricted (Figure 1), and calls for searches to find any additional populations that may occur on WSMR lands. Each buffer area in the ESMP was designed to meet several goals including protection of all habitats within 0.5 km of the population, protection of designated Critical Habitat, exclusion of roads, and watershed protection.

Livestock grazing is prohibited by WSMR regulations, though it still occasionally occurs at low levels because of trespass (WSMR 2001). However, at WSMR, Todsens pennyroyal is located on relatively steep slopes that are not frequented by cattle.

Protection and conservation measures directly related to the EIS Proposed Action are discussed in the section, below, titled Impact Analysis of Proposed Action.

Research and Monitoring

All research and monitoring of the Todsens pennyroyal at WSMR is coordinated with USFWS under WSMR’s endangered species permit. WSMR has been conducting surveys, monitoring known populations, monitoring any debris or impacts, and conducting research on the biology of the species in accordance with the recovery plan. The results of these efforts have been documented and furnished to the USFWS annually in accordance with the permit. The USFWS and WSMR have developed and implemented searching and monitoring protocols (WSMR 2004) that are intended to provide critical information for the regular review of the recovery status of the species. While methods for searching for additional occurrences of Todsens pennyroyal have met with some success, they have yielded little heuristic information on the species (WSMR 2007a). Consequently, monitoring protocols were revised in 2006 in an effort to obtain the most meaningful data using the least intrusive means to evaluate population status. WSMR will continue to facilitate research designed to further knowledge of the ecological requirements, reproductive biology, and life history of Todsens pennyroyal and also the ecosystems within which the species occurs.

Monitoring and studies associated with population dynamics, and reproductive effort are continuing. Low seed set has been documented for the species and is a reproductive concern. Several hypotheses have been developed to explain this condition, but none are conclusive. Based upon limited observations and data from sampling, WSMR staff hypothesizes that the combined and possibly interactive effects of reproductive output from the previous year and climatic condition prior to and during the growing season may determine the amount of reproductive output (Pers. Comm. Dr. David Anderson). Additional work is needed in this area, and WSMR is continuing to fund these efforts.

Work conducted by WSMR on Todsens pennyroyal has been beneficial to the species. New populations have been discovered and the known range of the species and numbers of plants has expanded since its listing. Research into the species’ reproductive biology

is ongoing and supported by WSMR. A habitat suitability model has been developed by WSMR. This model continues to be refined as data on new populations become available. WSMR has put in place several measures to insure that Todsens pennyroyal is not impacted from research and monitoring efforts:

1. When any research, surveys, or monitoring occurs in the Todsens pennyroyal habitat area surveyors are required to be aware of where they are stepping to avoid crushing plants.
2. Researchers are required to conduct research, surveys, and monitoring from the exterior of each population unless it is absolutely necessary to enter the population.
3. If it is necessary for research to be conducted from inside a population, the number of persons entering the population is limited to the minimum number necessary to accomplish the task.

Impact Analysis of Proposed Action and Alternatives

As shown in LUASP Figure 5-1, Todsens pennyroyal occurs in areas designated under Land Use Area C. All Activity Categories are included in Land Use Area C, but the LUASP identifies the WSMR Designated Habitat area (Figure 1) as a constraint area (Table 4-4, Figure 4-5) because the Todsens pennyroyal ESMP and INRMP exclude most activities from this area. Activities that have potential to disturb the ground are not allowed in WSMR Designated Habitat area, including within the 0.5 km buffer areas around known populations and Critical Habitat areas. When areas of unsurveyed suitable habitat are surveyed these restrictions will be lifted if Todsens pennyroyal is determined to be absent. Known populations, Critical Habitat, and the 0.5 km buffer areas will remain off-limits to ground-disturbing activities. Additionally, operational constraints limit activities to slopes less than 40% throughout WSMR (LUASP Table 6-2).

An evaluation of probable impacts associated with each activity category identified to occur as a result of implementation of the LUASP is shown in Table 2, below.

The Activity Categories listed in Table 2, below, are described in Table 3-1 of the LUASP. A list of existing policies, plans, procedures, and restrictions at WSMR to protect sensitive biological resources are described in EIS Section 4.7.1. Conditions of Use and Best Management Practices are described in Section 6.1 of the LUASP.

Table 2
Analysis of Potential Impacts to Todsen's Pennyroyal or Critical Habitat with
Implementation of the Land Use Airspace Plan

Activity Category	Affect on Todsen's Pennyroyal or Critical Habitat
Mission Support Facility	No effect ^a
Specialized Areas	No effect ^a
On-Road Vehicle Use	No effect ^a
Off-Road Vehicle Use (light weight)	No effect ^a
Off-Road Vehicle Use (other) (heavy)	No effect ^a
Dismounted Operations	No effect ^a
Field Operations	No effect ^a
Surface Weapons Firing	No effect ^a
Airborne Weapons/Munitions Release (with evacuation)	No effect. There are currently no airborne releases proposed in the LUASP or EIS that could affect the Todsen's pennyroyal. Air Force F-22A and Weapons System Evaluation Program (WSEP) activities were evaluated in a separate BA and consultation (see App A), and the USFWS concurred that these activities were not likely to adversely affect Todsen's Pennyroyal. In the future, releases proposed over or adjacent to the WSMR Designated Todsen's pennyroyal Habitat area (Figure 1) will only occur if 1) WSMR makes a no effect determination for the activity 2) the FWS concurs with a not likely to adversely affect determination for the activity or 3) if an adverse effect determination is made, the activity will only occur according to the terms of a Biological Opinion.
Airborne Weapons /Munitions Release (without evacuation)	No effect. There are currently no airborne releases proposed in the LUASP or EIS that could affect the Todsen's pennyroyal. Air Force F-22A and WSEP activities were evaluated in a separate BA and consultation (see App A), and the USFWS concurred that these activities were not likely to adversely affect Todsen's Pennyroyal). In the future, releases proposed over or adjacent to the WSMR Designated Todsen's pennyroyal Habitat area (Figure 1) will only occur if 1) WSMR makes a no effect determination for the activity 2) the FWS concurs with a not likely to adversely affect determination for the activity or 3) if an adverse effect determination is made, the activity will only occur according to the terms of a Biological Opinion.
Directed Energy Systems	No effect ^a

Table 2 (Continued)
Analysis of Potential Impacts to Todsens's Pennyroyal or Critical Habitat with Implementation of the Land Use Airspace Plan

Activity Category	Affect on Todsens's Pennyroyal or Critical Habitat
Instrumentation and Communication Systems	No effect ^a
Weapons Impact	No effect ^a
Surface Danger Zone	May affect, but not likely to adversely affect. Inclusion of Todsens's pennyroyal known population, Critical Habitat, or un-surveyed suitable habitat within a SDZ is not equivalent to being included in an impact area. The SDZ is the safety buffer zone around an operation designated for human safety should munitions accidentally land in the SDZ. The risk of a plant being affected by an accidental hit is insignificant and discountable.
Airspace Danger Zone	No effect. This activity category simply designates restricted area airspace when the airspace is being used by weapons or aircraft.
Air-Vehicle Operations	May affect, but not likely to adversely affect. Flight within the airspace above Todsens's pennyroyal populations or Critical Habitat by weapons systems or aircraft is not reasonably expected to affect Todsens's pennyroyal or Critical Habitat because the chance of an accidental crash is unlikely, not predictable, and not measureable, and is therefore discountable.
Notes: ^a This activity type is prohibited in the area of known Todsens's pennyroyal populations, Critical Habitat, and in areas of suitable habitat (Figure 1) until sufficient surveys have been completed to demonstrate that Todsens's pennyroyal does not occur in the suitable habitat.	

Analysis of Proposed HBCT Stationing and Training, and EN BN Training

All activities associated with the stationing and training of the HBCT at WSMR, and EN BN are located south of Highway 70 and not within or near the range of this species. Therefore, the proposed stationing and training of HBCT and/or EN BN will not affect Todsens's pennyroyal or its designated Critical Habitat.

Analysis of Surveys, Research, and Monitoring Affects on Todsens's Pennyroyal

All research and monitoring of the Todsens's pennyroyal at WSMR is coordinated with USFWS under WSMR's endangered species permit, and is reported to USFWS annually. Research and monitoring is considered beneficial to the species because it contributes valuable information on distribution, population trends, and ecology of the species that helps contribute to sound management of the species. Furthermore, several measures are in place (described above) to ensure that neither the Todsens's pennyroyal, nor its Critical Habitat, are adversely affected from research and monitoring activities. Therefore, research and monitoring may affect, but are not likely to adversely affect, the Todsens's pennyroyal or its Critical Habitat.

Cumulative Effects

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Cumulative effects for the proposed action are discussed in section 4.19 of the EIS, and a list of past, present and reasonably foreseeable future actions is shown in EIS Table 4.19-1. On WSMR, all of the areas containing known populations of Todsens's pennyroyal are in federal ownership. There are no known future State, tribal, local, or private actions planned in these areas. NMDGF hunting units include WSMR, but WSMR determines the boundaries of each hunt area and prohibits hunting within 0.5 km of Todsens's pennyroyal populations. Consequently, there would be no cumulative effects from future non-federal actions on this species.

Southwestern willow flycatcher (*Empidonax traillii extimus*)

Taxonomy and Status

The willow flycatcher is one of 11 *Empidonax* flycatcher species that breeds in North America. The southwestern willow flycatcher (SWFL) breeds in dense riparian habitats in southwestern North America, and winters in southern Mexico, Central America, and northern South America. The subspecies is defined by its breeding range which includes far western Texas, New Mexico, Arizona, southern California, southern portions of Nevada and Utah, southwestern Colorado, and possibly extreme northern portions of the Mexican States of Baja California del Norte, Sonora, and Chihuahua. The subspecies was listed federally as endangered effective March 29, 1995. Approximately 900 to 1100 pairs existed when the recovery plan was written for this species in 2002 (USFWS 2002). Critical Habitat has been designated for the species in Grant, Hidalgo, Mora, Rio Arriba, Socorro, Taos, and Valencia counties in New Mexico (NM), but no Critical Habitat occurs at or adjacent to WSMR, or within the proposed action area. The SWFL is also listed as endangered by the State of New Mexico under the New Mexico Wildlife Conservation Act.

Description and Biology of Species

The SWFL is a small Neotropical migratory bird approximately 15 cm (5.75 in) long, and weighs about 12 g (0.42 oz) (USFWS 2002). It has a grayish-green back and wings, whitish throat, light grey-olive breast, and pale yellowish belly. Two wing bars are visible; the eye ring is faint or absent (USFWS 2002). The upper mandible is dark, the lower is light with a yellowish tone. The song is a sneezy "fitz-bew," the call a repeated "whitt." Other vocalizations, usually given by flycatchers in close interactions with one another, include "wheek-adee," "wheeo" and rolling "brrrt" notes. Although males are the primary singers, females also sing occasionally (USFWS 2002).

SWFL nesting habitat is restricted to relatively dense growths of trees and shrubs in riparian ecosystems associated with rivers, swamps, and other wetlands, including lakes

and reservoirs (USFWS 2002). Most of these habitats are classified as wetlands in the legal sense, but some are non-wetland riparian forests (USFWS 2002). Surface water or saturated soil are typically, but not always, present year-round or seasonally and ground water is generally at a depth of less than 2 or 3 meters (6.5 to 9 ft) within or adjacent to nesting habitat (USFWS 2002).

Distribution and Abundance of the Species

Willow flycatchers (*Empidonax trailii*) are fairly common throughout New Mexico during migration, but the SWFL subspecies breeds only in a few scattered drainages primarily in western New Mexico (Meyer 2006). The historic breeding range of the SWFL is considered to have been primarily from the Rio Grande Valley westward, including the Rio Grande, Chama, Zuni, San Francisco, and Gila watersheds (USFWS 2002). The SWFL persists in the Rio Grande, Chama, Zuni, San Francisco, and Gila watersheds and small breeding populations also occur in the San Juan drainage and along Coyote Creek in the Canadian River drainage (USFWS 2002). In 2008, a nesting pair of flycatchers was documented at Rattlesnake Springs, in Eddy County.

While the willow flycatcher has been documented at WSMR during migration, the endangered SWFL was not documented until 21 June 2009 when a single bird was observed at Davies Tank about 5 miles east of the main post cantonment area. Prior to this sighting, several surveys at multiple sites documented migrating willow flycatchers, but not SWFL (New Mexico Cooperative Fish and Wildlife Unit 1999, Natural Heritage New Mexico 2003, and Meyer 2006). The lack of breeding activity at WSMR is likely due to a lack of breeding habitat for the SWFL (New Mexico Cooperative Fish and Wildlife Unit 1999, and Natural Heritage New Mexico 2003) which is a riparian obligate. The closest known breeding populations occur along the Rio Grande at Seldon Canyon, at the north end of Elephant Butte Reservoir, and in the Gila and San Francisco River drainages in the western part of the state (Meyer 2006). It is unknown at this time if the amount or quality of habitat at Davies Tank is suitable breeding habitat for the species, and elsewhere WSMR has only small amounts of cottonwood, willow, or salt cedar dominated riparian habitat that could support riparian obligate bird species. Further surveys and discussions with USFWS will help us to determine if Davies Tank has suitable breeding habitat for the SWFL at WSMR.

Protection and Conservation Measures

Section 4.3.2 of the LUASP describes a constraint area around Davies Tank which is in place to prevent potential adverse effects to the SWFL. WSMR Environmental will conduct general (3-visit) surveys annually for the flycatcher, and project-specific (5-visit) surveys will be required for any proposed action that could affect the SWFL. This includes, but is not limited to, any project at or near Davies Tank that could affect the SWFL due to direct or indirect 1) modification of the vegetation or soils; 2) a change in the flow of water or effluent to Davies Tank; 3) effects to the insect community; 4) an increase in noise levels. WSMR Environmental will use survey results to make the appropriate ESA Section 7 effect determinations, and will consult with the U.S. Fish and Wildlife Service regarding any project that may affect the species. Surveys will also help

determine if we have a population at WSMR that would warrant a management plan specifically for this species. Meanwhile, several other conservation measures are in place that contribute to protection of the species:

WSMR has prepared and implemented an INRMP (WSMR 2002) in accordance with the Sikes Act, (16USC 670a et seq.). The INRMP complies with standards set by both NEPA and the ESA. It describes natural resources values specific to WSMR and prescribes actions to facilitate the management of those resources. These actions are designed to meet DoD and WSMR natural resource conservation and management requirements and federal environmental laws, consistent with the military mission (WSMR 2002). The INRMP lists 18 range-wide goals to support the military mission of WSMR while meeting natural resource management and conservation requirements. Range-wide goals No. 1, 3, 4, and 6 are applicable to conservation of the SWFL:

Goal number 1: *“Apply ecosystem management tools-in context of the current military Mission- to preserve, maintain, and/or restore, where appropriate, the native biodiversity, and ecological integrity of natural biotic communities, in sufficiently large blocks to avoid ecological fragmentation.”*

Goal number 3: *“Protect migratory bird resources in accordance with the WSMR Commanders Guide on Migratory Bird Treaty Act.”*

Goal number 4: *“Conserve species listed by the U.S. Fish and Wildlife Service as threatened or endangered, as well as their designated critical habitats, by using all methods and procedures necessary to bring them to the point where protections provided pursuant to the ESA are no longer necessary”.*

Goal number 6: *“Conserve all species on the installation listed by the state of New Mexico as threatened or endangered in accordance with state laws and Army regulations and guidance”.*

Measures in place that contribute to conservation of the SWFL at WSMR include:

- Compliance with the Migratory Bird Treaty Act (MBTA), which prohibits take of migratory birds, nests, eggs, and nestlings.
- Conducting surveys for the SWFL in potential habitat, and report results to the USFWS.
- The INRMP calls for the fencing of riparian areas to protect them from livestock grazing when livestock cannot be kept out by boundary fencing.
- Following the Sustainable Land Use Guide prepared for the installation (WSMR 2007d) which is provided to range users. The guide prohibits:
 - 1) The collection, harassment, harming, or killing of animals
 - 2) The removal of nests, eggs, or nestlings

- 3) Harvesting plants for personal needs, destroying plants, or cutting vegetation for camouflage
- 4) Tossing, burning, or burying trash
- 5) Driving off designated roads, routes, or areas
- 6) Withdrawing water from ponds, pools, or streams
- 7) Open fires on the range

Research and Monitoring

Despite several past survey efforts, the SWFL was not documented at WSMR until 21 June 2009 when a singing male was documented in a stand of coyote willow (*Salix exigua*) at Davies Tank about 5 miles southeast of the main post cantonment area. Gooding's black willow (*Salix gooddingii*), and saltcedar (*Tamarix* spp.) are also present at the site. Protocol follow-up surveys on 9 and 16 July resulted in no SWFL detections, and a survey 22 July by NMDGF (Hira Walker) resulted in no SWFL detected.

Prior to the June 2009 sighting, several surveys at multiple sites throughout WSMR following the USFWS survey protocol documented migrating willow flycatchers, but not SWFL (New Mexico Cooperative Fish and Wildlife Unit 1999, Natural Heritage New Mexico 2003, and Meyer 2006). The lack of breeding activity at WSMR is likely due to a lack of breeding habitat for the SWFL (New Mexico Cooperative Fish and Wildlife Unit 1999, and Natural Heritage New Mexico 2003) which is a riparian obligate.

WSMR will conduct annual surveys for SWFL at Davies Tank. General (3-visit) surveys will be conducted by a permitted biologist, and will follow the current SWFL survey protocol.

Impact Analysis of Proposed Action and Alternatives

At this time there are no activities proposed within the EIS that have potential affect the SWFL, except for Air-Vehicle Operations associated with Condron Airfield one mile south of Davies Tank. The noise from fixed-wing and helicopter activities at Condron Airfield, may affect, but is not likely to adversely affect, the SWFL because 1) the airfield is located 1 mile from Davies Tank, 2) there is very little flight activity at Condron (average 4 takeoffs/landings per day), and 3) the main runway and approach is parallel (not perpendicular) to Davies Tank, therefore the normal flight pattern does not route traffic through the Davies Tank area.

Because Davies Tank falls within Land Use Area C, it is possible that in the future WSMR would propose new activities that could affect the SWFL. WSMR will consult with USFWS on any such activities. The EIS (Section 2.3.1.1) requires that uses of Area C will be coordinated with the WSMR Environmental Division to identify any general or specific measures required to reduce adverse environmental impacts, in accordance with WSMR plans, permits, and regulations.

Releases of the tamarisk beetle (*Diorhabda* spp.) in New Mexico to control saltcedar (*Tamarix* spp.) could affect the SWFL at WSMR. Beetle releases have not occurred on WSMR, and are not planned for WSMR, but have occurred as recently as 2009 on other federal lands within 40-50 miles of Davies Tank. WSMR will monitor the condition of saltcedar stands at Davies Tank and other sites on the range.

Analysis of Proposed HBCT Stationing and Training, and EN BN Training

All activities associated with the stationing and training of the HBCT at WSMR, and EN BN are located south of Highway 70. However, at this time there is no planned testing or training activities that would affect the Davies Tank area or the SWFL. Therefore, the proposed stationing and training of HBCT and training of the EN BN will not affect the SWFL.

If the HBCT was stationed at WSMR this would result in an increase in the human population at WSMR which would likely result in an increase of treated wastewater effluent to Davies Tank. Such an increase would likely result in either the same amount or a greater amount of willow species, but would be unlikely to negatively affect willow species. However, a decision has been made to cancel the HBCT for WSMR, therefore we have determined that there will be no affect to the SWFL.

The EN BN is already stationed at WSMR, so we do not predict a change in treated sewage effluent to affect Davies Tank. The EIS discusses the possible diversion of one storm water channel to Davies Tank on behalf of EN BN; however, this channel already flows into a wash that drains into the Davies Tank area, so there would be no affect to the amount of water flowing to Davies Tank.

Cumulative Effects

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Cumulative effects for the proposed action are discussed in EIS Section 4.19, and a list of past, present and reasonably foreseeable future actions is shown in EIS Table 4.19-1. On WSMR, all of the areas with potential SWFL habitat are in federal ownership. There are no known future State, tribal, local, or private actions planned in these areas.

Northern aplomado falcon (*Falco femoralis septentrionalis*)

Taxonomy and Status

Aplomado falcons are inhabitants of desert grasslands and savannas and originally ranged from Latin America to Texas, New Mexico, and southwestern Arizona (USFWS 1990). There are three recognized subspecies which include: *Falco femoralis septentrionalis* which occurs in Arizona and New Mexico; *Falco femoralis pichincae*, which occurs in

western South America and, *Falco femoralis femoralis* occurring in the remaining portions of South and Central America (USFWS 1990, WSMR 2007b, and BISON-M 2008).

The northern aplomado falcon was listed as federally endangered by the USFWS in 1986 (51 FR 6686). In accordance with the Section 4(f) of the ESA, the USFWS developed a recovery plan for the species (USFWS 1990). The recovery plan described six goals necessary for recovery of the species including re-establishment of the northern aplomado falcon in the United States and Mexico.

In July 2006 the USFWS published a final ruling for the northern aplomado falcon under Section 10(j) of the ESA, classifying the species as a nonessential experimental population in all of New Mexico and Arizona (USFWS 2006a). Under this designation, federal agencies are no longer required to consult with the USFWS regarding proposed actions that may affect the northern aplomado falcon, but they are required to confer with the USFWS regarding proposed actions that could jeopardize the species.

In June 2007 the WSMR published a Final Environmental Assessment and “Finding of No Significant Impact” for Implementation of the ESMP for the northern aplomado falcon at WSMR. Implementation of the ESMP at WSMR proposed the release of northern aplomado falcons into suitable grassland habitats within WSMR in cooperation with the Peregrine Fund, USFWS, and New Mexico Department of Game and Fish (NMDGF) (WSMR 2007c). WSMR proposed to release up to 20 juvenile northern aplomado falcons per year over the next 10 years to contribute to the recovery of the species in accordance with Section 7 (a)(1) of the ESA.

There have been several documented sightings of the northern aplomado falcon within the boundary of the installation (WSMR 2007c). The first was in May 1991 (WSMR 2008) and a handful of sightings have been reported since 1992 (WSMR 2007c). Two occurred in 1992 in the east-central area of the installation, and in 2005 a single northern aplomado falcon was observed in the Stallion Range area. A map of these sightings is shown in Figure 2-2 of the WSMR ESMP for the northern aplomado falcon. There has also been a single banded female (released in 2007) that has been seen at least three times on the eastern edge of Stallion Range.

As a result of the section 10(j) reclassification, the northern aplomado falcon is being reintroduced in New Mexico. A total of 120 northern aplomado falcons have been released in New Mexico since the 10(j) designation. Fifty-four northern aplomado falcons have been released at the confluence of lands managed by WSMR, BLM and New Mexico State Land Office lands. Others were released on the Armendaris Ranch over the past three years (WSMR 2008). Another 45-50 pairs have been established in Texas (WSMR 2007c).

Description and Biology of Species

The northern aplomado falcon is a medium-sized falcon, approximately 35-45 cm (14-18 in) in length with a wingspan ranging from 78-102 cm (31-40 in) (Keddy-Hector 1990). Sexual dimorphism does occur and the female tends to be larger than the male. Adults

have a steel-gray dorsal plumage (“aplomado” is Spanish for steel-gray), with a dark belly band or “cummerbund” separating a white to buffy upper breast and a cinnamon to rufous belly. Distinguishing adult field marks include bold face markings with a light stripe behind each eye, and a long, narrow banded tail. The long wings and white trailing edge are easily distinguished while the northern aplomado falcon is in flight. Adult females often retain dark streaks on the breast. Juveniles are similar to adults, except for browner upper parts and dark streaking on a buff-colored breast.

The northern aplomado falcon utilizes open habitats ranging from coastal prairie and other grasslands through tropical savanna to open woodlands containing oaks and pines (BISON-M 2008). In grasslands they are found at lower elevations (2,800-5,500 feet [ft]) (Hubbard 1978). In the desert grasslands of the southwestern United States the northern aplomado falcon has been reported from elevations below 1,800 m (NMDGF 1991)

Prey consumed by the species includes both terrestrial and aerial vertebrates and arthropods. A study conducted by (Hector 1981) reported that insects constituted approximately 65 percent of the prey items in their diet, but that birds accounted for 97 percent of the total biomass. Another study (Montoya 1995) examined prey remains from regurgitated pellets and found the composition to be 94 percent avian and 6 percent insect. In Arizona, Haynes and Schuetze (1997) found the northern aplomado falcon to feed primarily on birds including doves, parrots, snipes, pigeons, and insects, but also reported them to feed on small mammals, reptiles, and fish.

Northern aplomado falcons are known to hunt on foot and by flying, and have been observed hunting in male and female pairs (Haynes and Shuetze 1997).

The northern aplomado falcon requires open terrain, low ground cover, and scattered trees for nesting. Suitable nesting platforms include mesquite and yuccas (USFWS 1987). In the desert southwest, northern aplomado falcons do not build their own nests but use the nests of other bird species including Chihuahuan ravens (*Corvus cryptoleucus*) and Swainson’s hawks (*Buteo swainsonii*) (NMDGF 1991). Nests usually contain 2-4 eggs and average 44.4 x 35.5 mm in size (Hubbard et al 1979). The eggs are whitish to buff in color with cinnamon spots and blotches are laid in the spring (Haynes and Shuetze 1997). Incubation lasts approximately 31-32 days, with the fledgling’s first flight occurring approximately 4-5 weeks after hatching (Haynes and Shuetze 1997).

The northern aplomado falcon was considered numerous and widespread in its New Mexico range in the late 19th and 20th centuries. At least a dozen specimens were known from that period, as well as various sight records. By the 1960’s the northern aplomado falcon was largely extirpated from the U.S. (NMDGF 1991). The reasons for decline of the northern aplomado falcon are unclear, but several hypotheses have been suggested, including pesticide contamination, habitat destruction, habitat modification, and stream channelization that reduced riparian foraging habitat (70 FR 6819). Exposure to dichlorodiphenyltrichloroethane (DDT) may be the most significant cause of the species extirpation from the U.S. (70 FR 6819 and Kiff et al. 1980). Another factor may have been the conversion of desert grasslands to shrubland as a result of overgrazing, which

may have reduced the suitability of this habitat for the northern aplomado falcon and/or its prey (Hector 1987).

Current threats that may be limiting recovery of the species include continued pesticide exposure, shrub encroachment into grasslands, low densities of avian prey species in some areas, and an increased presence of the great-horned owl (*Bubo virginianus*) which preys on the northern aplomado falcon (70 FR 6819).

Distribution and Abundance of the Species

Historically, the range of the Aplomado included the southwestern U.S. southward through eastern and southern Mexico and into Argentina and Chile. Today the current distribution of the northern aplomado falcon is from Mexico to southern South America (Haynes and Schuetze, 1997). A distribution map for the northern aplomado falcon is shown as Figure 2-1 of the WSMR ESMP. Historically, the distribution of the northern aplomado falcon in the U.S included the grasslands and savannas of Trans-Pecos Texas, southern New Mexico, and southeastern Arizona (Hector 1987 and Keddy-Hector 1990). In 1996 Kames and Burkett listed the northern aplomado falcon as an accidental species at WSMR (BISON-M 2008). The historical distribution in New Mexico includes Dona Ana, Grant, Hidalgo, Luna, Sierra, Socorro, Eddy, and Lea counties (NMDGF 1991). The current range of the northern aplomado falcon in the U.S. is limited to reintroduced populations in southern Texas, west Texas, and southern New Mexico. Unbanded birds documented in southern New Mexico may be from Chihuahua, Mexico, but could also be the unbanded offspring of reintroduced birds.

Predictive modeling conducted by Young et.al. (2005) estimated that roughly 10 percent of WSMR (226,590 acres; 91,700 hectares) consisted of moderate to highly suitable habitat for the northern aplomado falcon. The majority of habitat in these two categories was predicted to occur within the Stallion Range in the northwestern portion of WSMR. According to the WSMR vegetation coverage maps there are approximately 197,860 hectares of grasslands within WSMR (WSMR 2007b).

Protection and Conservation Measures

The Army and WSMR are committed to the conservation, recovery and delisting of the northern aplomado falcon. In 2007 the installation prepared an ESMP for the northern aplomado falcon and NEPA documentation for implementing the ESMP. WSMR has subsequently, actively participated in the reintroduction program conducted by The Peregrine Fund in coordination with the USFWS. A total of 120 northern aplomado falcons were released in New Mexico in 2007 and 2008 under the 10(j) designation (Peregrine Fund 2008). Of these, 54 northern aplomado falcons were released at a site on the boundary of WSMR, BLM lands, and State of New Mexico lands. WSMR has provided funding to continue the program in 2009.

For 16 years WSMR has conducted annual range wide monitoring surveys for the northern aplomado falcon at seven permanent routes (WSMR 2008). The results of these efforts have been documented and furnished to the USFWS annually. In 2009, WSMR is

coordinating with the USFWS, the Turner Endangered Species Fund, and The Peregrine Fund to develop a monitoring program for the northern aplomado falcon in New Mexico.

WSMR has prepared and implemented an INRMP (WSMR 2002) in accordance with the Sikes Act, (16USC 670a et seq.). The INRMP complies with standards set by both NEPA and the ESA. It describes natural resources values specific to WSMR and prescribes actions to facilitate the management of those resources. These actions are designed to meet DoD and WSMR natural resource conservation and management requirements and federal environmental laws, consistent with the military mission (WSMR 2002). The INRMP lists 18 range-wide goals to support the military mission of WSMR while meeting natural resource management and conservation requirements. Range-wide goals No. 1, 3, 4, and 6 are applicable to the northern aplomado falcon.

Goal number 1: *“Apply ecosystem management tools-in context of the current military Mission- to preserve, maintain, and/or restore, where appropriate, the native biodiversity, and ecological integrity of natural biotic communities, in sufficiently large blocks to avoid ecological fragmentation.”*

Goal number 3: *“Protect migratory bird resources in accordance with the WSMR Commanders Guide on Migratory Bird Treaty Act.”*

Goal number 4: *“Conserve species listed by the U.S. Fish and Wildlife Service as threatened or endangered, as well as their designated critical habitats, by using all methods and procedures necessary to bring them to the point where protections provided pursuant to the ESA are no longer necessary”.*

Goal number 6: *“Conserve all species on the installation listed by the state of New Mexico as threatened or endangered in accordance with state laws and Army regulations and guidance”.*

A large area of grasslands near the Stallion Range Station on WSMR has been identified as suitable habitat for northern aplomado falcons (WSMR 2007b). Restoration and protection of large blocks of ecological communities to avoid ecological fragmentation is a management goal addressed in Section 8.3.1 of the WSMR INRMP (WSMR 2002), and is also clearly addressed in Chapter 4-Management Strategies and Actions, Objective 3, of the ESMP. WSMR will conserve and restore grasslands in an effort to increase habitat for the northern aplomado falcon when compatible with the military mission.

Measures in place to ensure conservation of the northern aplomado falcon at WSMR include:

- Compliance with the Migratory Bird Treaty Act (MBTA), which prohibits take of migratory birds, nests, eggs, and nestlings.
- Conducting surveys for the northern aplomado falcon for any new activity in grassland habitats (EIS Section 4.7.1.2), and report positive results to the USFWS as required in WSMR’s endangered species permit.

- Coordination with USFWS to follow-up on northern aplomado falcon sitings and nests (EIS Section 4.7.1.2). Northern aplomado falcon observations will be reported to the USFWS within 24 hours, and WSMR will coordinate with the USFWS to minimize disturbances to northern aplomado falcon nests and/or roost sites.
- When siting projects in grassland habitats, striving to reduce fragmentation of grasslands, project footprints, and to restore disturbed areas whenever possible (WSMR 2002).
- The recovery of the species, and continued reintroductions, monitoring, and restoration of grassland habitats at WSMR in accordance with Management Objectives 1 and 3 of the ESMP (WSMR 2007b). Restoration and conservation of grasslands is also a goal of the WSMR INRMP (WSMR 2002), and will occur when compatible with the military mission.
- Following the Sustainable Land Use Guide prepared for the installation (WSMR 2007d) which is provided to range users. The guide prohibits:
 - 1) The collection, harassment, harming, or killing of animals
 - 2) The removal of nests, eggs, or nestlings
 - 3) Harvesting plants for personal needs, destroying plants, or cutting vegetation for camouflage
 - 4) Tossing, burning, or burying trash
 - 5) Driving off designated roads, routes, or areas
 - 6) Withdrawing water from ponds, pools, or streams
 - 7) Open fires on the range

Research and Monitoring

WSMR will continue to conduct annual range-wide monitoring surveys for the northern aplomado falcon at seven permanent routes (WSMR 2008). Surveys for the northern aplomado falcon will be conducted only by qualified biologists under a USFWS endangered species permit. WSMR will continue to do follow-up surveys for northern aplomado falcons seen on WSMR, and will work with USFWS and The Peregrine Fund to monitor any nest sites discovered. The results of these efforts will continue to be documented and furnished to the USFWS annually, under WSMR's endangered species permit. Additionally, WSMR is coordinating with the USFWS and the Turner Endangered Species Fund to develop a monitoring program for the northern aplomado falcon in New Mexico. WSMR will also continue to participate in the New Mexico reintroduction program.

Impact Analysis of Proposed Action and Alternatives

The most suitable habitat for the northern aplomado falcon on WSMR is concentrated in the northwestern portion of the installation (WSMR 2007b). This is also the location of

northern aplomado falcon sightings (single birds) from 2005 to present, and the northern aplomado falcon release site. These areas and features occur within Land Use Areas C (Augmented Test Zone) and O (High Altitude Restricted Area Airspace [outside land and call-up areas]) of the LUASP. Types of activities potentially occurring in this area include all of the activity categories displayed in the land use matrix. Consequently, implementation of the new mission requirements and the development of new test and training capabilities proposed in the EIS would have the potential to affect the northern aplomado falcon.

In the Augmented Test Zone (Land Use Area C), the estimated potential disturbance footprint caused by off-road vehicle wheels and tracks is about 14,800 acres (59 km²) per year (EIS Section 2.3.1.2.1). This area of disturbance represents about 1.4 percent of the least-constrained land in the Augmented Test Zone (Land Use Area C), and less than one percent of the entire Augmented Test Zone. Uses of the Augmented Test Zone will be coordinated with the WSMR Environmental Division to identify any general or specific measures required to reduce adverse environmental impacts, in accordance with WSMR plans, permits, and regulations (EIS Section 2.3.1.1). Additionally, siting and other criteria (LUASP Section 6.4) include measures for minimizing impacts to and fragmentation of grasslands, and for preserving large, complex yucca trees. New proposed actions, or actions not fully covered by this EIS, will go through an environmental review process where potential affects to the Aplomado falcon will be considered.

WSMR has several measures in place (see section on Protection and Conservation Measures, above) to ensure that 1) personnel understand where northern aplomado falcons are located on the range, 2) all northern aplomado falcon sightings and nests are reported to the USFWS, 3) the intentional and unintentional take of northern aplomado falcons, nests, eggs, and nestlings, is prevented 4) incidental take is minimized through best management practices and coordination with USFWS, 5) impacts to and fragmentation of grassland habitats is minimized, and 5) recovery continues to be supported via the reintroduction program and restoration of grasslands when feasible and when funds are available. Due to these measures, and the relatively low number of aplomado falcons known from within the action area (or EIS region of influence), the Proposed Action is not likely to jeopardize the northern aplomado falcon.

Mexican spotted owl (*Strix occidentalis lucida*)

Taxonomy and Status

Spotted owls are described as three subspecies, the Northern Spotted Owl (*Strix occidentalis caurina*), the California Spotted Owl (*S. o. occidentalis*), and the MSO (*S. o. lucida*) (Gutiérrez, R. J., A. B. Franklin and W. S. Lahaye. 1995.). The MSO subspecies was described from a specimen collected at Mount Tancitaro, Michoacan, Mexico, and named *Syrnium occidentale lucidum*. The spotted owl was later assigned to the genus *Strix*, and MSO became known as *Strix occidentalis lucida*. MSO was federally listed as threatened under the ESA of 1973, as amended on March 16, 1993 (USFWS 1993). The USFWS published a final rule that designated Critical Habitat for MSO (69 FR 53182). Section 7 of the ESA requires federal agencies to ensure that any action authorized,

funded or carried out is not likely to jeopardize the continued existence of listed species or modify their critical habitat (ESA 1973). Additionally, The species was recommended for inclusion on the New Mexico state list as Group 2 (threatened) in 1994 (BISON-M 2008), but has not been placed on the current list of state species (NMDGF 2006).

Description and Biology of Species

The MSO is a medium-sized brown owl (total length 466-483mm). Most are chocolate brown to chestnut brown with round to elliptical or irregular white spots on head, neck, back, and underparts. Remiges and rectrices are dark brown and barred with light brown and white. The face is round and lacks ear tufts. Large, round, brownish facial disks with indistinct concentric circles of darker brown are around each eye. Eyes are dark brown. The bill and gape are yellowish green. Legs and feet are fully feathered. Males are smaller than females, though sexes have similar plumage. MSOs are distinguished from Barred Owls (*Strix varia*) by slightly smaller size, lack of horizontal bars on breast, lack of vertical streaks on abdomen, and darker appearance (Gutierrez et al. 1995).

The MSO is distinguished from the California and northern subspecies primarily by geographic distribution and plumage. The background coloration of the MSO is generally darker brown than the California and northern subspecies. The plumage spots are larger, more numerous and whiter in the MSO, giving it a lighter appearance overall (USFWS 1993). Also, Gutierrez et al. (1995) identify that MSO is smaller than the other subspecies. The sexes are nearly identical, but females have darker head and face color, and breeding females have brood patches (AGFD 2005). MSOs are sexually dimorphic, as male MSO are smaller than females, weighing 449-625g, while females weigh 480-680g (Gutierrez et al. 1995).

MSOs are monogamous. Pairs begin roosting and interacting together about 4 to 6 weeks prior to egg-laying in February-March. MSOs will occasionally breed in their first year. Most pairs do not breed every year and some pairs will not breed for 5 or 6 years. Copulation begins 2-3 weeks before nesting and occurs frequently prior to egg-laying. Males probably initiate nest site selection before egg-laying in March-April. MSOs do not build their own nests, but depend on suitable naturally occurring nest sites or on nests built by other animals. There is typically only one brood per season, and a pair will rarely re-nest if the first nest fails (Gutierrez et al. 1995).

The female incubates the egg for approximately 30 days. Young fledge at 34-36 days after hatching (usually between mid-May and the end of June). Parents care for and roost near the owlets through August, a total of about 60-90 days post-fledging (Gutierrez et al. 1995). Adults are generally long-lived; however, there is a low survival of young to breeding age. Individuals often live for 16-17 years (AGFD 2005).

MSOs are mostly solitary outside the breeding season. They roost during the day, and hunt at dusk and at night. They are intolerant of moderately high temperatures, thus, often selecting daytime summer roosts on north facing slopes with dense overhead canopy. Owls have been known to remain year-round in the same general areas but exhibit seasonal shifts in habitat use pattern. Some migrate 20-50 km between summer and winter ranges (USFWS 1995a). Seasonal migration of some individuals occurs in many

or most MSO populations, and in both sexes, but not always year to year. It is unknown why only some owls migrate. When migration occurs to wintering areas, it generally is from higher to lower elevations, and to more open habitats (AGFD 2005).

MSOs occupy vegetative communities consisting primarily of warm-temperate and cold-temperate forests, and, to a lesser extent, woodlands and riparian deciduous forest. Mixed-conifer communities appear to be most frequently used. The most common overstory trees associated with these owls in these communities are white fir (*Abies concolor*), Douglas fir (*Pseudotsuga menziesii*), and ponderosa pine (*Pinus ponderosa*). Less common species are southwestern white pine (*Pinus strobiformis*), limber pine (*Pinus flexilis*), aspen (*Populus* sp.), and corkbark fir (*Abies lasiocarpa* var. *arizonica*). The understory, providing important roosting sites for MSOs, usually contains the same conifer species found in the overstory plus Gambel's oak (*Quercus gambelii*), maples (*Acer* sp.), and New Mexico locust (*Robinia neomexicana*). Montane riparian canyon bottoms used by owls in the mixed-conifer zone may contain box elder (*Acer negundo*), narrowleaf cottonwood (*Populus angustifolia*), maples, and alders (*Alnus* sp.) (USFWS 1993).

MSOs primarily nest and roost in closed-canopy forests or rocky canyons. MSO may nest on cliff ledges, in caves, in stick nests built by other birds, on debris platforms in trees, and in tree cavities. Forests used for roosting and nesting often contain mature or old-growth stands with complex structure, are typically uneven-aged, multistoried, and have high canopy closure. A wider variety of trees are used for roosting, but Douglas-fir is the most commonly used species (USFWS 2009). Winter habitats of MSOs include lower-elevation pinyon-juniper woodlands. Other habitats are open mountain-shrub habitat or higher-elevation conifer forests (Gutierrez et al. 1995). Several studies suggest that breeding habitat typically has a minimum of 60% canopy cover, but 70-80% is more typical (WSMR 2003). Furthermore, wherever canopy cover was extremely high, associated slopes can be as low as 20%, but typically range from 35-75%.

The MSO is a carnivore, commonly preying upon woodrats, mice, voles, rabbits, gophers, bats, birds, reptiles, and arthropods. The diet is often heavily dominated by small, terrestrial, nocturnal mammals (USFWS 2009).

When federally listed as a threatened species, two primary reasons were cited for the listing: (1) historical and potential future alteration of MSO habitat as the result of timber management practices, specifically the use of even-aged silviculture, and (2), the danger of catastrophic wildfire (USFWS 1995b).

Distribution and Abundance of the Species

The MSO is patchily distributed from southern Utah and Colorado south through isolated mountain ranges of Arizona, New Mexico, western Texas and northern Mexico (Gutierrez et al. 1995). MSO live almost throughout the State of New Mexico, most commonly found in the south. They are found in the San Juan, Jemez, Sangre de Cristo, Mt. Taylor, Sandia, Manzano, San Francisco, Tularosa, Mogollon, San Mateo, Pinos Altos, Black, White, Sacramento, Guadalupe, and Animas Mountains (BISON-M 2008).

A minimum of 777-1,554 MSOs were estimated for the southwestern U.S., with 38 in Mexico between 1991 and 1993. These numbers are not likely reliable, due to variation in collection effort and limited efforts in Mexico. The largest populations of MSOs are located along the Mogollon rim, central Arizona; Gila National Forest, western New Mexico; and in the Sacramento Mountains of New Mexico (Gutierrez et al. 1995).

MSO are present in the Lincoln National Forest in the Sacramento Mountains near Alamogordo, New Mexico, less than 10 miles east of WSMR.

Critical Habitat has been designated for the MSO (69 FR 53182) in the region of influence (ROI) for the current EIS. Approximately 18 percent (368,598 acres) of designated Critical Habitat for the MSO is located within the ROI, and an additional 81,550 acres of MSO Protected Activity Centers (PACs) exist in the Lincoln National Forest (US Air Force 2008). These activity centers are 600-acre protected areas centered at known or historical nest or roost sites located in suitable MSO habitat.

The numbers of birds observed in MSO surveys conducted from 1999 to 2006 vary, and numbers reported for the Lincoln National Forest (LNF) appear low compared to numbers observed in the Gila and Cibola National Forests. A total of ten MSOs were reported from the Lincoln National Forest in 2001, two in 2002, and zero in 2003 (US Air Force 2008).

There are no known confirmed records of the MSO occurring on WSMR. A survey of breeding habitat for the MSO (WSMR 2003) concluded that habitat at WSMR is not suitable to support breeding MSOs because: (1) the mountain slopes are not steep enough to support canyon nesting, (2) elevations are not high enough to support the large trees used for forest nesting, (3) where riparian vegetation is apparently adequate, the canyons are either not sufficiently incised or they are isolated from appropriate montane forests, and (4) where canyons are more deeply incised, the trees are too short. However, the forested habitat present at WSMR could potentially support dispersing, wintering, or vagrant owls between fall and spring.

Protection and Conservation Measures

WSMR has no specific protection and conservation measures for the MSO because the species has not been documented on WSMR and is not expected to reside on WSMR due to lack of breeding habitat. However, there are several protection measures in place which provide protections for the species and help with recovery of the species.

As a federally listed species, MSOs are protected under the ESA of 1973 (Public Law 93-205). The ESA prohibits maliciously damaging, destroying, or removing and reducing to possession any endangered or threatened animals from areas of federal jurisdiction. It also prohibits harming such species, which includes significant modification or degradation of habitat. Section 7 (a) (1) of the act requires all federal agencies "...utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of the species...".

The USFWS first designated Critical Habitat for the MSO in 1995, which provided additional protection requirements under Section 7 of the ESA. Most of the Critical Habitat designated was located on federal and Tribal land. The Critical Habitat was modified in 2001 and 2004, and the number of acres designated Critical Habitat almost doubled to 8.6 million acres when updated in 2004.

Section 4(f) (1) of the ESA of 1973, as amended (16 U.S.C. 1531), requires the development and implementation of recovery plans for the conservation of endangered species and threatened species. The *Recovery Plan for the Mexican Spotted Owl* was published and implemented in 1995. This Recovery Plan outlines steps necessary to bring about recovery of the species. Protocols for surveying the MSO have been developed by the USFWS and define the methods for surveying for MSOs in the southwest (USFWS 2003). These protocols require conducting four annual surveys within designated times during the breeding season by permitted biologists. They also require the use of diurnal surveys to determine locations and breeding status of owls.

Protection measures for MSOs have been implemented under terms and conditions in other Section 7 Consultations with the Air Force for activities that occur at relatively low altitudes (Cons. # 2-22-96-F-334, May 8, 1998). The terms and conditions of this consultation restrict flights during the owl breeding season of each year over known PACs and inadequately surveyed nest/roost habitat. It also sets limits to avoid flying near PACs and requires subsequent monitoring and surveys on selected areas (US Air Force 2008).

The MBTA provides protection for the MSO. Under the provisions of the MBTA it is unlawful to pursue, hunt, take, capture, or kill in any manner any migratory bird.

WSMR has prepared and implemented an INRMP (WSMR 2002) in accordance with the Sikes Act, (16 USC 670 et seq.). The INRMP complies with standards set by both NEPA and the ESA. It describes natural resources values specific to WSMR and prescribes actions to facilitate the management of those resources. These actions are designed to meet DoD and WSMR natural resource conservation and management requirements and federal environmental laws, consistent with the military mission (WSMR 2002). The INRMP lists 18 range-wide goals to support the military mission of WSMR while meeting natural resource management and conservation requirements. Three of the 18 goals require the conservation of threatened and endangered species. Range-wide goals listed in the INRMP which relate to the MSO include goals No.3 and No. 4.

Goal number 3 is: *“Protect migratory bird resources in accordance with the WSMR Commanders Guide on MBTA.”*

Goal number 4 is: *“Conserve species listed by the U.S. Fish and Wildlife Service as threatened or endangered, as well as their designated critical Habitats, by using all methods and procedures necessary to bring them to the point where protections provided pursuant to the ESA are no longer necessary.”*

Impact Analysis of Proposed Action and Alternatives

The MSO is a year-round resident in New Mexico and has been reported to occur in several counties adjacent to WSMR including Dona Ana, Lincoln, Otero, Socorro, Sierra, and Torrance. There are no known confirmed records of the MSO occurring on WSMR and it is not expected to occur on WSMR due to lack of breeding habitat. A survey of breeding habitat for the MSO (WSMR 2003) found that the vegetation, elevation, and topography of WSMR are not suitable to support breeding MSOs.

The MSO and designated Critical Habitat occur in two areas designated under Land Use Classification Area O (LUASP Figure 4-1, US Air Force 2006a). This area includes ranges (R)-5109A and R-5109B, which are located to the east of WSMR and are composed of a mixture of non-DoD federal, state, and private ownerships. The proposed use of these ranges is described as airspace use only above FL 240 (Flight Level 24,000 ft), in accordance with FAA regulations, by Notice to Airmen.

Three activity categories are proposed to occur in Area O (LUASP Table 3-3) and include: Airborne Weapons Release (without evacuation), Air Space Danger Zone, and Air-vehicle Operations. Types of activities to be conducted of the ranges are associated with Research and Development (R&D) of military weapons or aircraft instrumentation systems. Altitude/flight levels used for all types of activities are from 24,000 feet Mean Sea Level (MSL) to unlimited. The airspace would be used by aircraft maneuvering for weapon deliveries within R-5107B, remotely piloted aircraft profiles, aircraft checking out developmental navigation systems, and aircraft starting test runs into R-5107B. The ranges would also be used for Joint Chiefs of Staff (JCS) directed exercises, Army exercises, USAF/Army exercises, and locally directed Air Combat Command (ACC) exercises. Other types of activities which could occur include supersonic flight, high altitude research balloon experiments, laser operations, and safety area for missile debris within R-5107B.

The types of aircraft expected to use these ranges include: A-3, AV-8, B-1, B-2, B-52, B-707, B-727, B-747, B-767, C-5, C-12, C-17, C-130, C-141, C-337, D-7, DC-10, E-2, E-3, ER-2, F-4, F-14, F-15, F-16, F-18, F-22, F-117, FA-20, G-2, GR-1, KC-135, NKC-135, LR-21, LR-36, P-3, T-38, and ER-2.

When the MSO was listed as threatened, the two primary reasons cited included: (1) Historical alteration of its habitat as the result of timber management practices and (2) the danger of catastrophic wildfire. Other potential threats discussed in the listing included over utilization for commercial, recreational, scientific, or educational purposes, predation by great horned owls, inadequacy of existing regulatory mechanisms, and other natural or manmade factors affecting its continued existence (USFWS 1993). None of the activities proposed to occur within the high altitude air space of the two ranges involve any types of construction or ground –disturbing actions that would alter Critical Habitat of MSOs. Consequently, no physical loss of MSO habitat is expected to occur.

Another potential listed threat to the MSO is catastrophic wild fire. Large crown fires can destroy large tracts of forest eliminating MSO nesting, roosting, and foraging habitat (USFWS 1995b). Small-scale natural fires and prescribed burns may create habitat

beneficial to the MSO. The risk of catastrophic fires is widespread throughout the Southwest due to fuel accumulations and over abundance of trees (Moody 1992), and place MSO habitat at risk. Use of the airspace over MSO habitat by military aircraft has a potential for accidental crashes. If an aircraft were to crash within the two ranges, depending upon site location, moisture, and vegetative conditions there could be a potential for fire. However, flight within the airspace above MSO Critical Habitat is not reasonably expected to affect the MSO or its habitat because the chance of accidental crash is unlikely, not predictable, and not measurable, and is therefore discountable.

In Arizona, Ganey and Balda (1994) found that the MSO does not appear to use areas above approximately 9,400 ft in elevation. This equates to approximately 14,600 ft or 2.8 miles below the established lower flight limit of 24,000 ft for the types of activities to occur on the ranges. Due to the distance of the over flight activities above MSO habitat, the potential for a bird strike or aircraft collision with an MSO is discountable.

While not listed as a potential threat to the species at the time of listing in 1998, the USFWS felt that noise associated with military aircraft over flight could potentially adversely affect threatened and endangered bird species underneath airspace (USFWS 1998a). However, recent studies and research conclude this is not the case. A study of MSO responses to F-16 over flights in Colorado found that MSOs exhibited minimal responses to over flights of jet aircraft at elevations of 1,500 ft above canyon rims. The observed owls were reported to be day-roosting at elevations ranging from 650 ft to 975 ft below the canyon rims, which would put the over flight level at approximately 2,150 ft-2,475 ft. The observers also noted that owl responses to the F-16 over flights were often less than responses to naturally occurring events such as thunderstorms. Similarly, Delaney (1999) found that MSOs quickly returned to normal day-roosting behavior after being disturbed by helicopters.

The Air Force prepared an Environmental Assessment and BA (US Air Force 2006b) addressing the impacts of F-22A overflights on the MSO and bald eagle. The USFWS concurred with the findings of the Air Force that there would be a “may affect, but not likely to adversely affect” the MSO because the F-22A would fly in excess of 3,000 ft above ground level over the MSO protected activity centers in the LNF, and because owls are expected to habituate and react to noise disturbance (sonic booms) in similar fashion as they react to thunder. The over flight activities proposed to occur on R-5109A and B would be at approximately 4.8 times greater height than the minimum 3,000 ft over flight distances required for the F-22As.

Another potential concern with MSO responses to over flight is that if females are forced off the nest it could expose young by leaving the nest before they are capable of thermo regulating on the own (thermal independence) (USAF-ACC 2008). Studies conducted by the ACC found that aircraft noise had no effect on occupancy of MSO activity centers, and found no correlations among measures of aircraft exposure and nesting success (USAF-ACC 2008). This study also found that natural habitat characteristics such as topography, forest cover, distance to water sources, and precipitation were better predictors of nesting success.

Due to the great vertical distance of over flights above MSO habitat (2.8 miles), previous concurrence by the USFWS on findings for the F-22A and evidence provided in the noted studies and research on effects of aircraft noise on the MSO, the types of activities proposed are not likely to adversely affect the MSO.

An analysis of the proposed activities on the MSO is shown in Table 3.

**Table 3
Potential Impacts to the MSO and Critical Habitat With
Implementation of the Land Use Airspace Plan**

Activity Category	Affect on MSO and Critical Habitat
Mission Support Facility	N/A (this Activity Category is not proposed for Land Use Area O
Specialized Areas	N/A (this Activity Category is not proposed for Land Use Area O
On-Road Vehicle Use	N/A (this Activity Category is not proposed for Land Use Area O
Off-Road Vehicle Use (ultra-light weight) (light)	N/A (this Activity Category is not proposed for Land Use Area O
Off-Road Vehicle Use (other) (heavy)	N/A (this Activity Category is not proposed for Land Use Area O
Dismounted Operations	N/A (this Activity Category is not proposed for Land Use Area O
Field Operations	N/A (this Activity Category is not proposed for Land Use Area O
Surface Weapons Firing	N/A (this Activity Category is not proposed for Land Use Area O
Airborne Weapons/Munitions Release (with evacuation)	N/A (this Activity Category is not proposed for Land Use Area O

Table 3 (Continued)
Potential Impacts to the MSO and Critical Habitat With
Implementation of the Land Use Airspace Plan

Activity Category	Affect on MSO and Critical Habitat
Airborne Weapons/Munitions Release (without evacuation)	<p>May affect, but not likely to adversely affect.</p> <p>There would be no construction or ground disturbing actions associated with this activity category that might affect MSO Critical Habitat.</p> <p>All actions would be confined to the use of airspace greater than 24,000 ft. Studies have shown that aircraft flown at least 3,000 ft above MSO habitat have minimal noise impacts on MSOs. The proposed activities over MSO habitat would be conducted at distances approximately 4.8 times greater than 3,000 ft. Consequently, disturbances to the MSO and Critical Habitat as a result of high altitude aircraft noise would be minimal.</p> <p>With use of the airspace over MSO habitat by military aircraft there would be a potential for accidental crashes. If an aircraft were to crash within the two ranges, there could be a potential for fire depending upon crash site conditions and location. However, flight within the airspace above MSO Critical Habitat is not reasonably expected to affect the MSO or its habitat because the chance of accidental crash is unlikely, not predictable, and not measurable, and is therefore insignificant and discountable.</p>
Directed Energy Systems	N/A (this Activity Category is not proposed for Land Use Area O)
Instrumentation and Communication Systems	N/A (this Activity Category is not proposed for Land Use Area O)
Weapons Impact	N/A (this Activity Category is not proposed for Land Use Area O)
Surface Danger Zone	N/A (this Activity Category is not proposed for Land Use Area O)
Airspace Danger Zone	No affect. This activity category simply designates restricted area airspace when the airspace is being used by weapons or aircraft.

Table 3 (Continued)
Potential Impacts to the MSO and Critical Habitat With
Implementation of the Land Use Airspace Plan

Activity Category	Affect on MSO and Critical Habitat
Air-Vehicle Operations	<p>May affect, but not likely to adversely affect.</p> <p>There would be no construction or ground disturbing actions associated with this activity category that might affect MSO habitat.</p> <p>All actions would be confined to the use of airspace greater than 24,000 ft. Studies have shown that aircraft flown at least 3,000 ft above MSO habitat have minimal impacts on MSO. The proposed activities over MSO habitat would be conducted at distances approximately 4.8 times greater than 3,000 ft. Consequently, disturbances to the MSO and Critical Habitat as a result of high altitude aircraft noise would be minimal.</p> <p>With use of the airspace over MSO habitat by military aircraft there would be a potential for accidental crashes. If an aircraft were to crash within the two ranges, there could be a potential for fire depending upon crash site conditions and location. However, flight within the airspace above MSO Critical Habitat is not reasonably expected to affect the MSO or its habitat because the chance of accidental crash is unlikely, not predictable, and not measurable, and is therefore discountable.</p>

Cumulative Effects

Cumulative effects include the effects of future state, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7 of the Act.

Cumulative effects for the proposed action are discussed in EIS Section 4.19, and a list of past, present and reasonably foreseeable future actions is shown in Table 4.19-1. With respect to the MSO, the proposed action is for the use of restricted airspace above 24,000 feet. Only one future state, tribal, local, or private action identified in the EIS has the potential to occur within high altitude airspace. This activity is Spaceport America which involves research and development of commercial-sector space ventures, and is listed to occur in a fiscal year 2010 timeframe. These activities above 24,000 feet are not likely to affect MSO or Critical Habitat. Therefore, no significant cumulative effects are expected to occur to the MSO as a result of non-federal actions identified to occur in the high altitude restricted air space within the action area.

Findings and Determinations

Todsen's pennyroyal

WSMR has determined that implementation of the proposed action may affect, but is not likely to adversely affect, the Todsen's pennyroyal or its Critical Habitat.

Most activities proposed in the EIS are prohibited from occurring in the WSMR Todsen's pennyroyal habitat area which includes all known populations, designated Critical Habitat, and un-surveyed suitable habitat (Figure 1). Activities can occur in unsurveyed suitable habitat only after the habitat has been adequately surveyed and Todsen's pennyroyal is determined to be absent. All known populations and Critical Habitat will remain protected, including a 0.5 km buffer zone around each population (Figure 1). Airborne releases over or adjacent to the WSMR Designated Pennyroyal Habitat area will only occur if 1) WSMR makes a no effect determination for the activity, 2) the USFWS concurs with a not likely to adversely affect determination for the activity, or 3) if an adverse effect determination is made, the activity will only occur according to the terms of a Biological Opinion.

Northern aplomado falcon

WSMR has determined that implementation of the proposed action is not likely to jeopardize the continued existence of the northern aplomado falcon for reasons described above in the Protection and Conservation Measures and Impact Analysis. Additionally, aplomado falcon populations in Texas and New Mexico are much larger than the number of birds that occur on WSMR, or are likely to occur on WSMR in the future. Therefore, impacts to the northern aplomado falcon on WSMR could not jeopardize the species unless population numbers and distribution in the United States (outside of WSMR) declined drastically. Finally, by definition, a "nonessential experimental population" is not essential to the continued existence of the species. Therefore no proposed or alternative actions impacting a population so designated could lead to a jeopardy determination for the entire species (USFWS 1998b).

Southwestern willow flycatcher

WSMR has determined that implementation of the proposed action may affect, but is not likely to adversely affect, the southwestern willow flycatcher. Air-Vehicle Operations at Condron Airfield are not likely to adversely affect the flycatcher because they do not occur frequently or in close proximity to Davies Tank. There is no Critical Habitat on or adjacent to WSMR, or within the action area (EIS region of influence); therefore there will be no affect to Critical Habitat.

Mexican spotted owl

WSMR has determined that implementation of the proposed action may affect, but is not likely to adversely affect, the MSO or its Critical Habitat. There would be no construction or ground disturbing actions associated with the proposed activities that could affect the constituent elements of MSO Critical Habitat. All actions would be

confined to the use of airspace greater than 24,000 feet. Studies have shown that noise associated with aircraft (above 3,000 ft over MSO habitat) has minimal impacts on MSO. WSMR proposed overflight activities would be conducted at much higher elevations (14,600 ft) above MSO habitat. Consequently, disturbances to the MSO as a result of high altitude aircraft noise would be insignificant and discountable. The chance of accidental crash is unlikely, not predictable, and not measurable, and is therefore insignificant and discountable.

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Appendix A. July 2009 consultation letter from U.S. Fish and Wildlife Service regarding Air Force use of Yonder



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road, NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525; Fax: (505) 346-2542

July 24, 2009

Cons. #22410-2006-I-0129

Jose A. Gallegos
Chief, Environmental Division
U.S. Army Garrison White Sands
100 Headquarters Avenue
White Sands Missile Range, New Mexico 88002-5000

Dear Mr. Gallegos:

Thank you for providing your June 22, 2009, request for informal consultation and Biological Assessment (BA) for Use of Yonder Air Space at White Sands Missile Range, New Mexico. In 2006, the U.S. Fish and Wildlife Service (Service) concurred with your Transforming the 49th Fighter Wing's Combat Capability Project regarding effects to northern aplomado falcon (*Falco femoralis septentrionalis*), bald eagle (*Haliaeetus leucocephalus*), Mexican spotted owl (*Strix occidentalis lucida*), its critical habitat, and southwestern willow flycatcher (*Empidonax traillii extimus*). However, your 2006 BA did not address potential effects to Todsen's pennyroyal (*Hedeoma todsenii*) and its critical habitat. The BA you sent to us was received by the Service on June 24, 2009 and clarifies the proposed action and analyzes the effects to Todsen's pennyroyal from Use of Yonder Air Space and the Weapons Systems Evaluation Program at White Sands Missile Range. You determined that the proposed project "may affect, is not likely to adversely affect" Todsen's pennyroyal and its critical habitat.

Proposed activities for Yonder Air Space include the use of training chaff, training flares, and live-fire air-to-air activities. The BA contains a complete description of the proposed action and is herein incorporated by reference.

We concur that the proposed action "may affect, is not likely to adversely affect" Todsen's pennyroyal and its critical habitat based on the following:

- There is an extremely low likelihood of munitions utilized in live-fire air-to-air activities to impact Todsen's pennyroyal and its critical habitat because they are fired at 12,500 feet to 20,000 feet above mean sea level and a very small percent of the area within the bullet impact area would be hit.
- There is an extremely low likelihood of chaff fibers or flare components to impact Todsen's pennyroyal because chaff and flares are used at very high altitudes and they disperse widely over the area.

Jose A. Gallegos

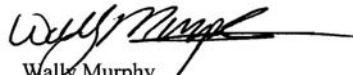
2

- It is unlikely that a flare could cause a fire near Todsens's pennyroyal because the habitat lacks fine fuels to carry a fire and suppression of fires near Todsens's pennyroyal are required.

Please contact the Service if: 1) future surveys detect listed or proposed species in habitats where they have not been previously observed; 2) the project is changed or new information reveals effects of the proposal to listed species that have not been considered in this analysis; or 3) a new species is listed or critical habitat designated that may be affected by the action.

We appreciate the analyses provided in the letter and the BA and your efforts to protect endangered and threatened species. In future communications regarding this project, please refer to Consultation # 22410-2006-I-0129. If we can be of further assistance, please contact Lynn Gemlo of my staff at 505/761-4726.

Sincerely,



Wally Murphy
Field Supervisor

cc:

Director, New Mexico Department of Game and Fish, Santa Fe, NM
Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division,
Santa Fe, NM

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APPENDIX F
WSMR MAJOR VEGETATION MAP UNITS AND SENSITIVE SPECIES

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APPENDIX F. WSMR MAJOR VEGETATION MAP UNITS AND SENSITIVE SPECIES

F.1 WSMR Major Vegetation Map Units

Seventy-one major plant associations occur at WSMR. These plant associations have been combined into 35 major Map Units (MU) of floristically and physiographically similar areas which are further described in Table F-1.

Table F-1. Major Vegetation Map Units Which Occur on WSMR

MU #	Plant Community	Map Unit Name	Acres	Brief Description
1	Woodland	Ponderosa Pine	220	Open park-like woodland savannas which historically have frequent fires. Occur from elevations of 7,680 feet at Silvertop Mountain to 8,760 feet at Salinas Peak.
2	Woodland	Pinyon Pine Woodland	53,550	Occurs from 5,800 to 8,500 feet. Has a natural fire frequency of every 50 years and generally has a varied vertical and horizontal structure and patchwork depending on fire frequency and the historical land use.
3	Woodland	Juniper Woodland	80,780	Occurs between 4,800 and 7,500 feet in elevation. They are considered an ecotonal community (i.e., a transitional community between 2 distinct vegetation communities with some characteristics of both) and generally lie between the pinyon pine woodlands above and the foothill grasslands below.
36	Woodland	Montane Valley Dune Woodland	860	Dominated by oneseed juniper and shrub live oak (<i>Quercus turbinella</i>), and is restricted to dunes in the interior valleys of the San Andres Mountains.
Total Woodland Acres			135,410	
6	Shrubland	Sandsage Shrubland	86,360	These shrublands occur at 3,800 to 5,000 feet in elevation and occur on rolling sandy plains and lower alluvial fan piedmonts within a mosaic of desert grasslands.
10	Shrubland	Acacia Shrublands	11,490	Shrubland dominated by viscid acacia (<i>Acacia neovernicosa</i>) and occurs on the foothill slopes and upper alluvial fans at 4,900 to 6,400 feet elevation.
8	Shrubland	Creosotebush Shrublands	281,620	Occurs from 3,900 in the basin alluvial fan piedmonts to 5,700 feet in the foothills. Shrublands are dominated by creosotebush shrubs with understories ranging from sparse to grassy.
7	Shrubland	Fourwing Saltbush Shrubland	82,560	Found in wet soils on alluvial flats and playas from 3,800 to 6,700 feet in elevation. Dominated by fourwing saltbush with a mixture of tarbush and creosotebush shrubs.
9	Shrubland	Tarbush Shrubland	2,310	Found in elevations from 3,800 to 5,600 feet on alluvial flats and dominated by tarbush shrubs with a mix of fourwing and creosotebush shrubs.

Table F-1. Major Vegetation Map Units Which Occur on WSMR (continued)

MU #	Plant Community	Map Unit Name	Acres	Brief Description
32	Shrubland	Tamarisk Shrubland	4,370	Shrubland dominated by Tamarisk, an exotic invasive shrub, along Salt Creek, in Lake Lucero, and on alkaline flats.
34	Shrubland	Mimosa Shrubland	4,820	Occurs at elevations from 4,500 to 6,500 feet and are dominated by mimosa (<i>Albizia julibrissin</i>) with a grass cover of black, blue, and hairy grama.
Total Shrubland Acres			473,530	
27	Patchy	Pickleweed Shrubland	83,980	Dominated by pickleweed (<i>Salicornia spp.</i>), a succulent, leafless shrub and found in elevations from 3,800 to 4,150 feet. Occur on alkaline soils of flats and playas and saline seeps.
11	Patchy	Mesquite Shrubland	265,790	Occurs on dunefields and alluvial flats from 3,900 to 4,300 feet in elevation.
28	Patchy	Malpais Lava Scrub	40,820	Found on the Carrizozo lava flows with a mixture of scrub species including creosotebush, acacia, mimosa, tarbush, and others.
22	Patchy	Gypsum Duneland - Vegetated	33,380	Occurs along the margins of the gypsum dunefields and has limited vegetation including hoary rosemary-mint (<i>Poliomintha incana</i>), broom dalea (<i>Psoralea scoparia</i>), sandhill muhly (<i>Muhlenbergia pungens</i>), and mesa dropseed (<i>Sporobolus flexuosus</i>).
30	Patchy	Vegetated Gypsum Outcrop	86,950	Occurs on basin floors and into the foothills from 3,800 to 6,200 feet in elevation. Dominated by gyp dropseed (<i>Sporobolus nealleyi</i>), hairy coldenia (<i>Tiquilia hispidissima</i>), Hartweg's sundrops (<i>Calylophus hartwegii</i>), and gypsum monopod.
Total Patchy Acres			510,920	
13	Grass-Shrub Mix	Mixed Lowland Desert Scrub	187,830	Found in elevations from 3,800 to 5,600 feet on alluvial flats and dominated by creosotebush, fourwing saltbush, and tarbush shrubs.
4	Grass-Shrub Mix	Montane Scrub	54,660	Deciduous scrub community which occurs in a mosaic with woodlands and grasslands on cool slopes from 5,000 to 8,700 feet in elevation. Dominated by mountain mahogany (<i>Cercocarpus montanus</i>) and Gambel oak (<i>Quercus gambelii</i>).
5	Grass-Shrub Mix	Interior Chaparral	19,910	Evergreen shrub community which occurs in a mosaic with woodlands and grasslands on warmer slopes from 4,600 to 7,200 feet. Dominated by shrub live oak.
Total Grass-Shrubland Mix Acres			262,400	
15	Grassland	Foothill-Montane Temperate Grasslands	92,320	Found in mountain valleys and slopes at mid to upper elevations. Often have a thick cover of grasses including blue grama and New Mexico needlegrass.
17	Grassland	Piedmont Temperate Grasslands	11,430	Occurs in valley bottoms and on alluvial fans from 4,500 to 6,500 feet in elevation. Dominated by a thick cover of grasses such as black, blue and hairy grama grasses.

Table F-1. Major Vegetation Map Units Which Occur on WSMR (continued)

MU #	Plant Community	Map Unit Name	Acres	Brief Description
12	Grassland	Mixed Foothill-Piedmont Desert Grassland	184,960	Found on mountain slopes, foothills and alluvial fan piedmonts from 4,000 to 6,500 feet in elevation. Dominated by black, blue, hairy, and sideoats grams, and curlyleaf muhly.
16	Grassland	Piedmont Desert Grassland	39,320	Found on alluvial fans from 4,500 to 6,500 feet and is usually dominated by black grama.
29	Grassland	Black Grama Lava Grasslands	850	Found on the Armendaris lava flows and are dominated by desert grasslands with a scattered layer of Torrey's jointfir shrub (<i>Ephedra torreyana</i>).
18	Grassland	Desert Plains Grassland	38,340	Found in low-elevation sandy plains and are dominated by black grama.
19	Grassland	Lowland Basin Grassland	196,030	Occurs on flats, swales, and drainages from 3,800 to 5,800 feet in elevation. Dominated by alkali sacaton, tobosagrass, and burrograss.
33	Grassland	Gypsum Interdune Swale Grassland	34,460	Occurs in the gypsum dunefields and are dominated by gypsum grama (<i>Bouteloua breviseta</i>), New Mexico bluestem (<i>Andropogon scoparius var. neomexicanus</i>), and sandhill muhly.
Total Grassland Acres			597,710	
20	Wetlands	Wetland/Riparian	430	Occurs along riparian areas and wetlands including springs, seeps and marshes. Dominated by American bulrush (<i>Scirpus americanus</i>) and broadleaf cattail (<i>Typha latifolia</i>).
Total Wetland Acres			430	
35	Barren	Playa	47,060	Barren playas and alkaline alluvial flats in the Tularosa Basin. These areas are periodically inundated and the largest continuous occurrence is Lake Lucero.
21	Barren	Alluvial Flats – Barren	4,520	Non-vegetated alluvial fan flats which occur in the piedmont in the northern San Andres Mountains into the northern Jornada Basin.
23	Barren	Gypsum Duneland – Barren	67,920	Non-vegetated gypsum duneland and interdune swales which occur in the Tularosa Basin.
40	Barren	Military Disturbance	14,750	Military development including Warhead Impact Targets (WITs), airstrips, Range Centers, Main Post, etc.
39	Barren	Road Disturbance	74,730	All roads within a sixty-meter-wide road corridor.
24	Barren	Rock Outcrop/Talus	210	Non-vegetated rock outcrops and talus on steep slopes of Salinas Peak within the San Andres Mountains.
Total Barren Acres			209,190	
Total Acres Vegetation¹			1,980,400	

1. Does not include Barren areas.
Sources: Ref# 074, 088, 091.

F.2 WSMR Sensitive Species

Sixty-one Federal and/or State sensitive species of flora and fauna known to occur, or having the potential to occur, on WSMR and describes their respective habitats (Table F-2). Of the 61 sensitive species, 4 species (2 birds and one plant) are listed as Federally-endangered, 1 bird species is listed as endangered (nonessential experimental population), 1 bird species is listed as a Federal candidate species, 8 species (4 birds and 4 plants) are listed as State endangered and 12 species (8 birds, 3 mammals, and 1 fish), are listed as State threatened.

Table F-2. Sensitive Species at WSMR

Species		Status		WSMR Habitat
Common Name	Scientific Name	Federal	New Mexico	
Birds				
Least Tern (Interior Population)	<i>Sterna antillarum</i>	E	E	Transient.
Northern Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	E, 10(j)	E	Savannas and grasslands, often with scattered trees or tall yuccas.
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E	E	An individual species was observed along Davies Tank. Possible during migration within other riparian areas.
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	T	T	Species or Critical Habitat does not occur on WSMR.
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Delisted	T	Suspected breeding in Oscura and San Andres Mountains.
Baird's Sparrow	<i>Ammodramus bairdii</i>	Not Listed	T	Grasslands; Jornada Plain.
Bell's Vireo	<i>Vireo bellii</i>	Not Listed	T	Early successional riparian thickets; San Andres Mountains (below 5,000 feet).
Mountain Plover	<i>Charadrius montanus</i>	Not Listed	SOC	Rare in migration or winter.
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Candidate	SOC	Limited desert riparian woodland areas consisting of willow, cottonwood and dense mesquite.
Black Tern	<i>Chlidonias niger</i>	SOC	SOC	Migration/stopover only.
Western Burrowing Owl	<i>Athene cunicularia hypugaea</i>	SOC	Not Listed	Chihuahuan Desert scrub with open stands of creosotebush and large succulents.
Brown Pelican	<i>Pelecanus occidentalis</i>	Not Listed	E	Migration/stopover only.
Neotropic Cormorant	<i>Phalacrocorax brasilianus</i>	Not Listed	T	Migration/stopover only.
Broad-billed Hummingbird	<i>Cyanthus latirostris</i>	Not Listed	T	Higher desert canyons and washes, riparian woodlands and foothill woodlands (3,000 to 5,000feet).

Table F-2. Sensitive Species at WSMR (continued)

Species		Status		WSMR Habitat
Common Name	Scientific Name	Federal	New Mexico	
Birds				
Costa's Hummingbird	<i>Calypte costae Bourcier</i>	Not Listed	T	Shrublands within dry washes and canyons with southern exposure.
Gray Vireo	<i>Vireo vicinior</i>	Species at Risk	T	Juniper canyon and foothill woodlands typically with well developed grass component; San Andres and Organ Mountains (4,300 to 7,000 feet).
Varied Bunting	<i>Passerina versicolor</i>	Not Listed	T	Dense thorny scrub in canyons; San Andres Mountains.
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Not Listed	SOC	Common at WSMR.
Pinyon jay	<i>Gymnorhinus cyanocephalus</i>	Species at Risk	SOC	Pinyon-juniper woodlands.
Fish				
White Sands Pupfish	<i>Cyprinodon tularosa</i>	SOC	T	Perennial springs; Tularosa Basin.
Mammals				
Desert Pocket Gopher	<i>Geomys arenarius</i>	SOC	SOC	Disturbed terrain or sandy areas along riverbanks; Tularosa Basin.
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	SOC	SOC	Semi-desert and montane shrublands.
White Sands Woodrat	<i>Neotoma micropus leucophaea</i>	SOC	Not Listed	Tularosa Valley Basin.
Organ Mountain Colorado Chipmunk	<i>Neotamias quadrivittatus australis</i>	Not Listed	T	Texas Canyon, Organ Mountains (4,219 to 7,464 feet).
Oscura Mountain Colorado Chipmunk	<i>Neotamias quadrivittatus oscuraensis</i>	Species at Risk	T	Entire known population on WSMR; Oscura Mountains pinyon-juniper associations.
Desert Bighorn Sheep	<i>Ovis canadensis mexicanus</i>	Not Listed	T	Desert, grassland, chaparral, and woodland zones often within 1 mile of a water source; San Andres Mountains.
Spotted Bat	<i>Euderma maculatum</i>	Not Listed	T	Chihuahuan Desert to treeline; Mound Springs.
Cave Myotis Bat	<i>Myotis velifer</i>	Not Listed	SOC	Lower elevations.
Fringed Myotis Bat	<i>Myotis thysanodes thysanodes</i>	Not Listed	SOC	Ponderosa pine or mixed coniferous woodland; elevation between roughly 4,000 feet and 6,900 feet.

Table F-2. Sensitive Species at WSMR (continued)

Species		Status		WSMR Habitat
Common Name	Scientific Name	Federal	New Mexico	
Big Free-tailed Bat	<i>Nyctinomops macrotis</i>	Not Listed	SOC	Rocky cliffs in weathered rock fissures and crevices; roosting in plants including ponderosa pines, and desert shrubs.
Little brown myotis	<i>Myotis lucifugus</i>	Not Listed	SOC	Mixed shrub habitat in lower elevations below the mesas (elevation less than 6,700 feet).
Long-eared myotis	<i>Myotis evotis</i>	Not Listed	SOC	Pinon/juniper habitat on benches and mesa tops above 6700 feet in elevation.
Long-legged myotis	<i>Myotis volans</i>	Not Listed	SOC	Ponderosa pine zone.
Western red bat	<i>Lasiurus blossevilli</i>	Not Listed	SOC	Riparian associations of deciduous trees.
Eastern red bat	<i>Lasiurus borealis</i>	Not Listed	SOC	Riparian associations of deciduous trees.
Western small-footed myotis	<i>Myotis ciliolabrum melanorhinus</i>	Not Listed	SOC	Ponderosa pine zone.
Yuma myotis	<i>Myotis yumanensis yumanensis</i>	Not Listed	SOC	Riparian communities of desert, grassland, and woodland.
Western Spotted Skunk	<i>Spilogale gracilis</i>	Not Listed	SOC	Rocky bluffs and brush-bordered canyon stream beds.
Common Hog-nosed Skunk	<i>Conepatus leuconotus</i>	Not Listed	SOC	Rocky foothills and brushy areas.
Plants				
Todsen's Pennyroyal	<i>Hedeoma todsenii</i>	E	E	Gypseous–limestone soils; north or east slopes in pinyon-juniper woodland; San Andres Mountains (6,200 to 7,200 feet).
Desert Night-blooming Cereus	<i>Peniocereus greggii var. greggii</i>	SOC	E	Gravelly soils on desert grassland or desert scrub; eastern and western slopes of the San Andres Mountains.
Mescalero Milkwort	<i>Polygala rimulicola var. mescalerorum</i>	SOC	E	Crevices in limestone cliffs; montane scrub; endemic, San Andres Mountains (5,700 to 6,300 feet).
Alamo Beard Tongue	<i>Penstemon alamosensis</i>	SOC	SOC	Sheltered rocky areas, canyon sides and bottoms, on limestone; east end of San Andres Mountains.
Organ Mountain Evening-Primrose	<i>Oenothera organensis</i>	SOC	SOC	Seeps and springs in drainage bottoms; Organ Mountains (5,700 to 7,600 feet).
Supreme sage	<i>Salvia summa</i>	SOC	SOC	Partly shaded limestone cliffs 5,000-7,000 feet; San Andres and Organ Mountains.

Table F-2. Sensitive Species at WSMR (continued)

Species		Status		WSMR Habitat
Common Name	Scientific Name	Federal	New Mexico	
Cory's jointfir	<i>Ephedra coryi</i>	SOC	SOC	On limestone, in dry sandy soils, and on dunes; below 5,000 feet.
Desert Parsley	<i>Pseudocymopterus longiradiatus</i>	Not Listed	SOC	Shaded areas in canyons; pinyon-juniper woodland to lower montane coniferous forest; San Andres and Oscura Mountains (elevation 6,000 to 7,000 feet).
Vasey's Bitterweed	<i>Hymenoxys vaseyi</i>	Not Listed	SOC	Hillsides on canyon bottom; montane scrub and pinyon-juniper woodlands; Organ and San Andres Mountains (4,500 to 8,500 feet).
San Andres Rockdaisy	<i>Perityle staurophylla</i> var. <i>homoflora</i>	Not Listed	SOC	North-oriented limestone cliffs; endemic north end of San Andres Mountains (5,413 to 7,000 feet).
New Mexico Rockdaisy	<i>Perityle staurophylla</i> var. <i>staurophylla</i>	Not Listed	SOC	North-oriented limestone cliffs; San Andres Mountains (4,900 to 7,000 feet).
Organ Mountain Pincushion Cactus	<i>Escobaria organensis</i>	Not Listed	E	Igneous outcrops; desert scrub, open oak or pinyon-juniper woodlands; Organ Mountains (5,600 to 7,400 feet).
Sendberg's Pincushion Cactus	<i>Escobaria sandbergii</i>	Not Listed	SOC	Limestone; desert scrub to oak and pinyon-juniper woodland; San Andres Mountains (4,200 to 7,400 feet).
Plank's Campion	<i>Silene plankii</i>	Not Listed	SOC	Cliffs; pinyon-juniper to ponderosa; San Andres and Organ Mountains (5,000 to 8,925 feet).
Cliff Brittlebush	<i>Apacheria chiricahuensis</i>	Not Listed	SOC	North-facing cliffs of limestone or rhyolite; Chalk Hills section of San Andres Mountains (5,500 to 7,450 feet).
Castetter's Milkvetch	<i>Astragalus castetteri</i>	Not Listed	SOC	Limestone slopes; montane scrub and juniper woodlands; San Andres Mountains (5,000 to 7,050 feet).
Mosquito Plant	<i>Agastache cana</i>	Not Listed	SOC	Grassy riparian areas; Organ Mountains (4,600 to 5,900 feet).
Mescalero Pennyroyal	<i>Hedeoma pulcherrima</i>	Not Listed	SOC	Arroyo riparian areas; San Andres Mountains.
New Mexico Beardtongue	<i>Penstemon neomexicanus</i>	Not Listed	SOC	Gravelly wooded slopes and open glades in ponderosa pine, spruce-fir forests or openings in pinyon-juniper woodlands; San Andres and Oscura Mountains (6,000 to 9,000 feet).

Table F-2. Sensitive Species at WSMR (continued)

Species		Status		WSMR Habitat
Common Name	Scientific Name	Federal	New Mexico	
Reptiles				
Bleached Earless Lizard	<i>Holbrookia maculata ruthveni</i>	Not Listed	SOC	Gypsum dunes only.
Southwestern Fence Lizard	<i>Sceloporus cowlesi</i>	Not Listed	SOC	White form in gypsum dunes; species occurs throughout WSMR.
Little White Whiptail	<i>Aspidoscelis gypsi</i>	Not Listed	SOC	Gypsum dunes only.

E - Endangered, T-Threatened; SOC-Species of Concern; 10(j)-Nonessential Experimental Population.
Sources: Ref# 074, 249, 250.