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

FINAL

March 2010

This page intentionally left blank

RECORD OF DECISION FOR THE DEVELOPMENT AND IMPLEMENTATION OF RANGE-WIDE MISSION AND MAJOR CAPABILITIES AT WHITE SANDS, NEW MEXICO

EXECUTIVE SUMMARY: The Final Environmental Impact Statement (Final EIS) for the Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range (WSMR), New Mexico, evaluates the potential environmental and socioeconomic effects associated with implementing land use changes and enhanced test and training capabilities at WSMR. Additionally, the Final EIS also evaluates impacts of the potential stationing of a Heavy Brigade Combat Team (HBCT), however, on June 2, 2009; the Secretary of the Army announced a decision not to station a HBCT at WSMR in 2013.

The Final EIS, published on December 24, 2009 is incorporated by reference in this Record of Decision (ROD). This ROD explains that the Army will proceed with its Preferred Alternative (Alternative 1) identified in the Final EIS. Alternative 1 authorizes the proposed land use changes, including expansion of the Main Post and alterations in authorized uses of range areas; development of new and expanded infrastructure throughout the installation, increases in the level of test activities; development of six new Specialized Areas (four for test operations and two to support small-scale Engineer Battalion training); establishment of a Land Use and Airspace Strategy Plan and siting process for facilitating future tests and training activities at WSMR; continued Main Post expansion for the Engineer Battalion and Brigade Combat Team (BCT) Modernization (formerly Future Combat Systems); and other tenant programs. This decision will result in a total growth of approximately 480 personnel and the conversion of land use on about 1.6 million acres of WSMR to allow for intermittent off-road vehicle use. Alternative 1 best supports WSMR as a test range for rapid development and deployment of new systems in response to ongoing world conditions and national defense priorities by more fully utilizing WSMR resources and thus is the Selected Alternative.

1.0 INTRODUCTION

The Final EIS evaluates the environmental effects of the proposed changes in land use and activities at WSMR to support future Army needs associated with Army Transformation, the Army Campaign Plan, modernization of the fighting force (including equipment and weaponry), Army Growth and Force Structure Realignment, Global Defense Posture Realignment, and other Army initiatives. These changes and expansions in capabilities at WSMR have evolved since the preparation of the WSMR Range-Wide EIS and ROD in 1998. The EIS also assesses the site-specific effects of implementing the decision of the December 2007 ROD for the Programmatic EIS for Army Growth and Force Structure Realignment to station a HBCT at WSMR, although this decision has been reversed by the Army.

The Final EIS and this ROD comply with the requirements contained in the Council on Environmental Quality (CEQ) regulations that implement NEPA (40 Code of Federal Regulations (CFR) Parts 1500 – 1508) and the Army NEPA implementing procedures, 32 CFR Part 651.

2.0 PROPOSED ACTION

The Army's Proposed Action is to augment WSMR capabilities to support future testing and expanded training requirements. To accomplish this, the Army will make land use changes on WSMR to allow for expanded off-road maneuvering, expansion of build-up areas for housing and community functions, expanded infrastructure, and mission support and administrative facilities to support a HBCT (or comparable unit) in the future. To accommodate rapidly evolving customer needs, support current and future mission activities, and support test and training efforts from individual components up through major joint and multinational programs, the Army will adopt a flexible capabilities-based Land Use and Airspace Strategy Plan. The expansion of testing and training capabilities is 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. Over the long term, WSMR will continue to support the evolving operational, infrastructure, training and testing requirements of the Army and the Department of Defense (DoD) to solidify its role as a Major Range and Test

Facility Base (MRTFB). A MRTFB is a designated core set of DoD research, development, testing and evaluation (RDT&E) infrastructure and associated workforce that must be preserved as a national asset to provide RDT&E capabilities to support the DoD acquisition system.

3.0 ALTERNATIVES ANALYZED

3.1 No Action Alternative

Under this No Action Alternative, current test capabilities and existing land use designations on WSMR will 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 (see Section 1.8 of the Final EIS for a more detailed description):

- Stationing of the Engineer Battalion 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 square feet of new facilities on the Main Post to support the Engineer Battalion, BCT Modernization (formerly Future Combat Systems), and other test programs; and

- Initial testing for the BCT Modernization program in the Southeast multi-use area of WSMR and other ongoing tenant programs.

Total assigned personnel could increase from approximately 6,350 in 2007 to approximately 7,720 by 2013, with the number of military Family members increasing from approximately 600 in 2007 to 1,500 in 2013. Equipment levels at WSMR will increase under the No Action Alternative, primarily in response to the arrival of the Engineer Battalion, which by 2012 will add 315 wheeled/tracked vehicles and generator sets to the 2007 inventory of about 1,920 pieces (for a total of approximately 2,235).

The No Action Alternative does not meet the purpose and need for the Proposed Action as described in Sections 1.4 and 1.5 of the Final EIS.

3.2 Selected Alternative (Alternative 1) – Implement Land Use Changes and Enhanced Test Capabilities

The Selected Alternative (Alternative 1), includes ongoing and previously approved projects and activities included in the No Action Alternative, which will continue under this alternative. The Selected Alternative will change land use at WSMR and expand testing and training capabilities to support new and evolving test requirements throughout the installation. It also provides limiting capability for the Engineer Battalion within designated specialized areas. This alternative will result in:

- Changes in land use to allow off-road vehicle use to support test operations on an additional 1.6 million acres for a total of 1.8 million acres;

- Expansion of designated built-up areas for future development around Main Post and range centers;

- Expansion of current test operations, such as missile firing, directed energy weapons, off-road maneuvering for tests, and next generation programs using the full extent of WSMR land and airspace resources;

- Overall increase in test-related ground and airspace operations during the next five years;

- Development of infrastructure throughout WSMR to support future tests and training, including reconstruction of 75 miles of existing tank trails, construction of a new 150-mile tank trail system to link the north and south range, 20 miles of connector tank trails to Fort Bliss, range center expansions, and construction of utilities and communication infrastructure;

- Development of new mission support facilities and six new Specialized Areas for test and training purposes;

- Continuation of previously approved activities described under the No Action Alternative, and

- Adoption of a flexible capabilities-based Land Use and Airspace Strategy Plan, and siting and activity planning process, to accommodate rapidly evolving customer needs, support current and future mission activities, and support test and training efforts from individual components up through major joint and multinational programs.

Under the Selected Alternative, over 1.6 million acres of land classified as Primary Test Zone (Land Use Classification A) will be converted to Augmented Test Zone (Land Use Classification C) allowing for intermittent off-road vehicle use. Approximately 7,000 acres will be designated as built-up areas (Land Use Classification B) that could be developed over time. Approximately 2,000 acres may be converted to impact areas (Land Use Classification D), but no specific sites have been identified.

WSMR proposes to expand range capabilities to support the future test needs of current and new users, and support faster fielding of equipment and technology to deployed Soldiers. These capabilities range in specificity from broad trends and concepts for future testing to specific programs planned for the near term. Table 3.2-1 provides a summary of additional changes in activities projected under the Selected Alternative.

Table 3.2-1. Changes in Activities at WSMR under the Selected Alternative

Activity	Description
On-Road Vehicle Use	On-road vehicle use will increase due to a gradual increase in testing activity and training.
Off-Road Vehicle Use (lightweight)[1]	This activity is limited to vehicles with a maximum loaded weight of 1,500 pounds or less; speed limited to a maximum of 25 miles per hour (for example, lightweight robotic test articles). These vehicles could operate throughout the Augmented Test Zone (Land Use Classification C). Exploded ordnance disposal recovery efforts could increase using All Terrain Vehicles to access dispersed (usually remote) recovery sites throughout the installation.
Off-Road Vehicle Use (other)	Vehicles used will weigh greater than 1,500 pounds; speed will potentially be greater than 25 miles per hour in the Augmented Test Zone (Land Use Classification C). Users will perform off-road operations (in-field combat scenarios) using a variety of test and support vehicles, including wheeled and tracked types. As many as 65 vehicles may operate concurrently in areas between 5,000 acres to 60,000 acres.
Dismounted Operations	Alternative 1 may involve substantial increases in dismounted operations, particularly in the upper range, to support BCT Modernization test events (up to 500 Soldiers for one or two weeks using up to 1,000-acre operational nodes). Range management and recovery efforts will also increase by at least 25 percent over current levels.
Field Operations	Additional test missions will increase activities for test set up and tear down and retrieval of debris, as well as exploded ordnance removal operations. Test and training activities (e.g., Special Operations, Warrior Transition Course), may involve digging of trenches, constructing earthen berms, establishing additional bivouac areas, use and set up of temporary camps with as many as 500 Soldiers for 24-hour periods, and limited Engineer Battalion operations to perform operations and maintenance projects for WSMR.
Surface Weapons Firing	Surface weapons firing is projected to increase by about 25 percent over Fiscal Year 2007 levels for various ongoing and new programs.

Table 3.2-1. Changes in Activities at WSMR under the Selected Alternative

Activity	Description
Airborne Weapons/Munitions Releases (with evacuation)	Increased hazardous airborne weapons/munitions releases will involve new advanced tactical laser and air to air airborne laser operations and joint battlefield air operations. Live-fire air combat training will use specialized bombing and gunnery sites. An increase of 25 percent over Fiscal Year 2007 levels is projected.
Airborne Weapons/Munitions Releases (without evacuation)	An increase in non-hazardous airborne weapons/munitions releases will include unmanned aerial systems operations and "non-hot" air operations for tests and training purposes. An increase of 25 percent over Fiscal Year 2007 levels is projected.
Directed Energy Systems	Directed energy system tests are projected to increase substantially. Most future tests are expected to be similar to existing missions, but some changes in technology and an increase in dynamic platforms may occur. An increase to four times the Fiscal Year 2007 levels for directed energy activities is projected.
Instrumentation and Communication Systems	Use of non-hazardous instrumentation and communication systems may increase as test levels increase.
Weapons Impact	Use of existing weapons impact areas may increase (up to 25 percent). Development of new warhead impact target areas will need to undergo Army planning and approval process.
Surface Danger Zone Activities	Utilization of Surface Danger Zones will increase as test activities increase. The mid-range area will continue to have the heaviest utilization for "hot" test mission events.
Airspace Danger Zone	An increase in hazardous Airspace Danger Zone activity of 25 percent is projected.
Air Vehicle Operations	An increase in non-hazardous air vehicle operations will include Air Force flight operations and unmanned aerial systems activity in WSMR restricted airspace.

1. "Lightweight", as defined, has been used for the purposes of this EIS and planning at WSMR.

Closures on U.S. Highway 70, 54, and 380 could more than double from 2007 levels to 2013 under the Selected Alternative, however, closures will remain within the notification and duration limits in the Memorandum of Understanding with the New Mexico State Highway Department. This could increase annual closures to 44 occurring on U.S. Highway 70 and 25 occurring on U.S. Highway 380.

Evacuations of call-up areas could increase as much as 25 percent above Fiscal Year 2007 levels. Evacuations will continue to comply with the terms of current agreements, with no more than 25 per year in any portion of the call-up areas. This number of evacuations is within the range of variation for previous years.

New infrastructure projects will disturb approximately 4,480 acres of rangeland for improvements such as: expanded range center facilities, a new tank trail corridor, additional instrumentation sites, expanded communication networks, range road improvements and upgrades, an Ammunition Holding Area, and the Uprange Medical Evacuation Facility.

Six new Specialized Areas are proposed for WSMR. In total, all range projects will involve construction of almost 1.3 million square feet of new facilities using about 18,200 acres of land. Approximately 3,500 acres will be disturbed during construction. No specific site locations have been identified at this time. The specialized areas are briefly described as follows:

- **Environmental Laboratory Complex**: The proposed Environmental Laboratory Complex will include new and existing facilities with roads, parking space, and utilities located in a development area of approximately 1,600 acres in two parcels on either side of Range Road 2 (Nike Road). The facilities will support both non-hazardous and hazardous testing of missiles and components subjected to extreme conditions.

- **Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System**: The Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) consists of unpowered

elevated radar sensors held aloft in helium-filled balloons (known as "aerostats") moored to the ground by long cables. JLENS tests the ability of system radars to detect, locate, and identify intruding aircraft and relay information to surface-based defensive systems. Physical infrastructure for the system will consist of an aerostat with a mobile mooring station and data processing stations. One JLENS site is proposed for WSMR, approximately 14 acres, and there may be two additional sites supporting JLENS in the region, potentially on Fort Bliss.

- **Joint Urban Research, Development, Test, and Evaluation Environment**: This project will create a mock urban environment, involving approximately two square miles for the mock environment, (composed of 32 single and multi-story buildings. The buildings will be composed of a variety of materials (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 will also have utilities (such as power and water); subsurface tunnels; parking areas; passageways; and a cell phone tower and other emitters such as radar, microwave phone, TV, and broadband generators—all intended to replicate the complexity of the radio frequency interference encountered in diverse battlefield situations. Additionally, eight square miles of additional area and a safety surface danger zone of 5,120 acres for test events may be required.

- **Electro-Optical .50 Caliber Test Range**: The Program Executive Office for Soldier Systems Electro-Optical Testing proposes a .50 caliber Small Arms Range, approximately 118 acres, for testing weapon-mounted systems. This range will be used for testing sensors and lasers for use on the battlefield in all weather conditions.

- **Individual Combat Skills Training Area:** An Individual Soldier Combat Skills Area, approximately 60 acres, is proposed on a site relatively close to the Main Post. The facility will provide proficiency training in basic Soldier survivability skills. Soldiers are required regularly to accomplish prescribed tasks in a variety of courses and/or tests. These include obstacle and confidence courses, a bayonet course, Army Physical Fitness Test, day and night land navigation course, gas chamber exercise, and long distance marches.

- **Local Training Area**: A Local Training Area, approximately 12,800 acres, will be developed to provide an area to **train** Soldiers in weapons use, force protection, small unit tactics, and teamwork. The Local Training Area will support regular training necessary to maintain these war fighting skills. While the Local Training Area is planned for the southern portion of the range, near the Main Post, a specific location has not yet been chosen.

The upgrades to WSMR under the Selected Alternative do not include any increases in currently assigned equipment; however, the level of use of non-tactical (general services) vehicles and generators may increase as a function of the increase support for test programs. There will be an expected five percent increase in personnel (an additional 480 persons) to the Main Post by 2013 over the No Action Alternative level.

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 expansion training activities. It also will provide WSMR with a framework for planning future mission activities using siting criteria and management practices for long-term range sustainability.

3.3 Alternative 2 – Implement Alternative 1 Plus Military Unit Stationing and Training Capability

Alternative 2 would include the existing and proposed activities of the No Action Alternative together with the implementation of the Selected Alternative. Alternative 2 would provide for expanded training, including the potential stationing of a HBCT (or equivalent unit), and the capability to conduct off-road vehicle training at WSMR in a newly designated Southeast Multi-Use Area (120,000 acres). This area would be used both for training and maneuver-to-test activities. Off-road vehicle maneuver training would likely use a combination of

WSMR and Fort Bliss training areas. Live-fire training by a HBCT or equivalently sized, large military unit would be conducted at Fort Bliss. The main elements of Alternative 2 are:

- All elements of the No Action Alternative and the Selected Alternative;
- 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; and
- Development of the Southeast Multi-Use Area for intensive off-road maneuvers for test and training.

Alternative 2 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.

4.0 PUBLIC INVOLVEMENT

In accordance with the CEQ regulations (40 CFR Parts 1500 – 1508) and Army Regulation 200-2 (32 CFR Part 651), the Army provided the Federal, State, and local stakeholders, as well as the public and other interested parties the following notification and opportunities for involvement during the preparation of the Final EIS:

- On June 19, 2008, the Army published a Notice of Intent in the Federal Register to prepare the EIS.
- On May 5, 2009, letters were mailed to agencies and interested parties providing information on the availability of the Draft EIS, the request for review and comment on the Draft EIS, and details regarding public review meetings. On June 2, 2009, a second mailing occurred to announce the extension of the comment period.
- On May 8, 2009, the Army issued a Notice of Availability (NOA) in the Federal Register to announce the availability and a 45-day comment period of the Draft EIS for agency and public review. The public comment period was extended an additional two weeks to July 6, 2009, due to technical problems with the WSMR website that limited access to the Draft EIS via the internet.
- Public comment meetings were held in Alamogordo, Las Cruces, and Socorro, New Mexico, on June 2, 3, and 4, 2009, respectively. Notification of the public comment period was published in five local newspapers during the weeks of May 4, 2009 and June 1, 2009. The 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.
- Public review and comment on the Draft EIS occurred from May 8 through July 6, 2009. The Draft EIS was available at public libraries in potentially affected local communities, and the Draft EIS was made publically available on both the WSMR and U.S. Army Environmental Command websites for download and review. Hard copies or digital copies of the document were sent to those who requested copies.
- Public comment meetings were held in Las Cruces, Socorro, and Alamogordo, New Mexico on July 22, 23, and 24, 2008, respectively. Notification of the scoping meetings was published in five local newspapers during the week of July 14, 2008. Notification letters were mailed to agencies and interested parties on July 18, 2008. The formal comment period ended on August 8, 2008, though the Army continued to accept input to just prior to submission of the Draft EIS.

- On December 24, 2009, the Army issued a NOA in the Federal Register to announce the availability of a 30-day comment period of the Final EIS for agency and public review. Notification of the public comment period was published in five local newspapers the week of December 24, 2009. The public comment period ended January 25, 2010. No substantive comments that required updates to the Final EIS were received.

- The NOA of this ROD will be published in the Federal Register. Following its publication, the ROD will be made available (with the Final EIS) online and at local libraries.

5.0 DECISION FOR THE DEVELOPMENT AND IMPLEMENTATION OF RANGE-WIDE MISSION AND MAJOR CAPABILITIES AT WSMR

In the Final EIS, the Army identified Alternative 1 as the Preferred Alternative (now designated as the Selected Alternative). This alternative includes approval of proposed land use changes, 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, increase in the level of test activities, development of six new Specialized Areas (four for test operations and two to support Engineer Battalion training), and establishment of a Land Use and Airspace Strategy Plan, and a siting process for facilitating future tests and training activities at WSMR. The selected alternative is needed to support Army growth by using WSMR land, airspace, and facilities more fully. This decision supports the need 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 (MRTFB).

6.0 ENVIRONMENTAL CONSEQUENCES

Implementation of this decision is expected to result in direct, indirect, and cumulative impacts to WSMR. Impacts will occur as a result of land use changes allowing for expanded off-road vehicle use, facilities and infrastructure construction, expanded test and training activities, and an increase in personnel to support expanded WSMR operations. The Final EIS has ensured that, in making this decision, WSMR is aware of the potential environmental and socioeconomic impacts associated with the implementation of the Selected Alternative (Alternative 1). The discussion below presents a summary of impacts that are predicted to occur as a result of implementing the Selected Alternative. Mitigation measures to reduce impacts associated with the Selected Alternative are provided in the following resource discussions and in Section 8.0 Mitigation Commitments.

6.1 LAND USE AND AESTHETICS

Infrastructure development could cause adverse impacts to land use; however, utilizing an integrated siting process should reduce the potential for land use conflicts to arise. Adopting the Land Use and Airspace Strategy Plan will include a siting process for future activities and development, benefitting land use management through a coordinated planning process. Ground maneuver operations may result in adverse impacts that may limit the viability of future land uses in certain areas. Hazardous operations (e.g., increases in hot missions) could result in several adverse impacts by increasing safety issues and nuisance factors (e.g., noise, dust, and smoke), and increased evacuations of call-up areas, and potential degradation of the visual environment. An increase in air operations may generate minimal amounts of additional noise with a low potential to cause land use compatibility issues. The proposed North-South tank trail will require an agreement with either the San Andres National Wildlife Refuge or the White Sands National Monument as it will need to traverse at least one of these areas to reach the northern portion of the range.

6.2 AIRSPACE

Overall, a 25 percent increase in hot missions and airspace use for test purposes will not exceed restricted airspace capacity, but will slightly decrease the amount of time WSMR airspace is returned to Federal Aviation Administration control, potentially causing minor impacts.

6.3 AIR QUALITY

Ground operations (i.e., off-road vehicle use) will result in additional emissions from tail-pipe pollutants, particulate matter emissions from soil disturbance, and minor local short-term impacts. Hazardous operations (i.e., missile firing and weapons impact) will also result in minor local short-term impacts of air emissions and release of particulate matter from soil.

6.4 CULTURAL RESOURCES

Changes in land use classifications to allow increased off-road vehicle use and changes in activities and levels of use for infrastructure development, ground operations, and hazardous operations could potentially cause adverse effects to previously unidentified archaeological and paleontological sites. New construction activities will be in keeping with the setting of the existing structures within the WSMR Historic District, thus changes in the view shed will not result in an adverse effect. Outside the Main Post, there are archaeological sites, ranches, trails, test facilities, and the Trinity Site National Historic Landmark that are listed on or eligible for listing on the National Register of Historic Places. These locations are considered sensitive and will be avoided through the planning process as WSMR Environmental Division clears areas for activities. Approximately 150 miles of tank trails will be developed for a North-South route along existing range roads. The development of these routes and final site locations will require archeological surveys. Areas authorized for off-road maneuver or intensive ground operations will be surveyed and mitigated for archeological and other cultural resources. WSMR will continue to comply with Section 106, and implement the Programmatic Agreement between the Army and the State Historic Preservation Office.

6.5 EARTH SCIENCES

Increased areas of off-road vehicle use has the potential to compact soils and damage vegetation and soil crusts, exposing the soils to wind and water erosion, causing minor to moderate impacts. The high frequency and density of projected maneuvers by wheeled and tracked vehicles, as well as the concentrations of troops on foot, will likely lead to increasing areas of bare ground or mesquite coppice dunes where they do not currently exist. The expansion of impact areas could permanently alter soil in these areas with the potential to contaminate soils with chemicals and/or explosives. Ground operations, particularly off-road vehicle maneuvering, can compact soils and damage vegetation and soil crusts, exposing the soils to wind and water erosion, and possible desertification, potentially causing significant impacts. Hazardous operations can adversely affect soils through ground disturbance and accelerated erosion, as previously described, or by contaminating soils with chemicals and explosives. Earthmoving construction for range infrastructure and tank trails could cause moderate to severe surface disturbances and localized soil erosion hazards. Infrastructure development, ground operations and hazardous operations could cause loss of biological crust and erosion. Depending on the activity, best management practices (BMPs) will be implemented, such as soils rotating activities, siting activities to avoid biological crust, and use of soil erosion control measures (e.g., application of gravel or chemical dust palliatives) to prevent or alleviate dust nuisance.

6.6 BIOLOGICAL RESOURCES

Changes in land use allow increased off-road vehicle use, which has the potential to cause adverse impacts to biological resources through the degradation of habitat, fragmentation, decreases in species diversity and affects on species behavior. Expansion of impact areas will cause losses of biological resources, concentrated in those locations. An increase in range centers and built-up areas will result in a loss of up to 7,000 acres of

vegetation. This loss of habitat will constitute less than one-half percent of available habitat, and will therefore be minor. Changes in activities and levels of use for infrastructure development and ground operations could cause potentially significant impacts including: the loss/degradation of habitat, the introduction/spread of invasive species, avoidance behaviors and displacement of wildlife, and direct mortality of wildlife through collisions with vehicles and equipment. 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. Other adverse impacts will include avoidance and displacement of wildlife, interruptions to nesting and breeding, and interruptions to migration/wildlife corridors. Impacts to wetlands and arroyo riparian drainages will be avoided, minimized, or mitigated using BMPs for sediment control during construction and from siting footprints of these actions outside of these resources. Proposed tank trails will be adjacent to existing roads, minimizing vegetation and additional habitat fragmentation impacts. The proposed tank trail has the potential to impact "Limited Use" White Sands Pupfish Habitat. Mitigation measures will include re-routing the tank trail to avoid Limited Use and Essential Pupfish Habitat.

WSMR prepared a Biological Assessment for four Federally-listed species known to occur either at WSMR or beneath the high altitude airspace east of WSMR. This assessment concluded that land use changes and associated activities use may affect, but is not likely to adversely affect, populations of the Todsen's pennyroyal, southwestern willow flycatcher, and Mexican spotted owl, and is not likely to jeopardize the continued existence of the nonessential experimental population of the Northern Aplomado falcon. The U.S. Fish and Wildlife Service has concurred with these determinations in a letter dated September 24, 2009. Testing and training activity impacts on Federally-protected species will be avoided or minimized through adherence to existing policies, management plans, and accepted BMPs.

6.7 WATER RESOURCES

Conversion of land to Augmented Test Zone (Land Use Classification C) will allow increased off-road vehicle use, which could substantially alter surface water flow conditions, patterns, and rates if these vehicles are allowed to operate within surface water features. WSMR will restrict crossings of streams, rivers, creeks, lakes, ponds, floodplains, and wells, to the extent feasible; and will use hardened crossings where practicable. Disturbances from off-road vehicles could increase the probability of flooding as well as decrease available surface water for wildlife. An increase of impact areas could cause adverse impacts to water resources, the degree to which will be dependent upon their proximity to surface water features and potable wells. Implementation of the Land Use and Airspace Strategy Plan for siting impact areas will be expected to minimize the potential for adverse effects. Earth moving activities and ground operations in areas around surface water features could cause increased sediment loads to enter water bodies, which can result in altered hydrology and flow conditions, increased flooding potential, and, ultimately, a decrease in the availability of water for wildlife. These impacts could be avoided or minimized through BMPs. In addition, vehicles could leak substances (e.g., fuel, oils, antifreeze, battery acids) that could cause surface and ground water contamination. The off-road test activities will have minor to moderate impacts on surface waters depending on the event size. Hazardous operations have the potential to create large-scale alterations to landforms and topography. If located in close proximity to surface waters, ground target impacts could severely alter hydrology and surface flow conditions, increase flooding potential, and decrease the availability of water for wildlife. These activities could also be a potential source of surface and ground water contamination. The proposed tank trail will cross two intermittent streams that are tributaries to Salt Creek (White Sands pupfish habitat), which could cause minor impacts through sedimentation, contamination, and alteration of stream flow characteristics; however, the use of BMPs during construction will minimize the potential for these impacts to occur. Additional personnel will result in minor increased water demand, which will cause minor impacts on groundwater resources; however, based on their current pumping rates, WSMR could avoid saline water intrusion.

6.8 SAFETY

The potential increase in lands designated as impact areas may cause minor impacts in terms of active range safety hazards and the creation of new unexploded ordnance (UXO) hazards. Increased ground operations will cause minor impacts in terms of personnel exposure to natural hazards. Additionally, the use of heavier tracked vehicles may cause an increase in dust generation during maneuvers. In high winds, drifting dust could diminish visibility along U.S. 70, potentially causing safety hazards to motorists. Similarly, increases in use of countermeasures could produce smoke or dust that may obscure visibility. Increases in hazardous operations will cause minor impacts to personnel safety in terms of active range risks, UXO hazards, and occupational and natural hazards. The construction of new tank trails will be expected to enhance traffic safety by minimizing traffic conflicts with military convoys and other vehicles along those routes.

6.9 NOISE

Expansion and modification of missions requiring ground and air assets, the reconfiguration of these assets, construction, and additional personnel stationed at WSMR will create noise having varying degrees of intensity. Changes in mission activities and levels of use have the potential to increase noise levels in some localized areas away from receptors; however, until these proposals are better defined, a valid assessment of potential noise impacts cannot be made. Of the proposed Specialized Areas, the Electro-Optical .50 Caliber Range, the Individual Combat Skills Course, and the Joint Urban R,D,T&E Environment could cause adverse noise impacts; therefore, noise will be a key consideration in future environmental review of these projects.

6.10 HAZARDOUS MATERIALS AND HAZARDOUS WASTE

WSMR test and training operations will result in an increase in hazardous materials by quantity used, storage, and transportation and disposal (and an increased potential for spills), and an increase in radioactive sources. Impacts to the Otero-Lincoln County Landfill will be minor, based on the anticipated solid waste generated from the expected personnel.

6.11 FACILITIES AND INFRASTRUCTURE

Increase in ground operations and associated off-road vehicle maneuvers and dismounted operations will increase risk of damaging underground utility lines, such as gas pipelines, causing minor impacts. Additional personnel and facilities within the Main Post, range centers, and new Specialized Areas will increase the use of utilities resulting in minor to moderate impacts to existing utilities in these areas.

6.12 TRANSPORTATION

Minor impacts to the primary highways surrounding WSMR (e.g., U.S. 70 and U.S. 380) will occur as the population increases. Moderate impacts to Main Post traffic will occur due to increased traffic volumes, delays, road maintenance, and accidents from increased privately-owned vehicle usage. Temporary and localized disruptions could occur to local traffic patterns during construction, resulting in increased congestion and traffic delays to local users. The creation of new tank trails will generally provide beneficial impacts, decreasing the potential for maneuver vehicles to use existing range roads, and thus, will minimize the potential for traffic delays, accidents, and damage to road infrastructure.

6.13 SOCIOECONOMIC RESOURCES

Employment increases will provide a positive impact with increases in employment and personal income in the region of influence and Doña Ana County.

6.14 ENVIRONMENTAL JUSTICE

No disproportionately high and adverse human health or environmental effects will be expected to occur to minority and low-income populations.

6.15 ENERGY DEMAND

Increases in hazardous operations could result in increases to the peak energy demand during those missions and may also require expansion of energy infrastructure for the new firing points. Development of the proposed Specialized Areas may require expansions of utility infrastructure; therefore, providing electricity and natural gas to these facilities should be considered during the siting process and environmental review of these projects. Compared to the No Action Alternative, annual electricity use under the Selected Alternative will increase by an estimated five percent, which could be accommodated by the existing provider. Natural gas consumption will increase but will not exceed supply capacity.

6.16 FREQUENCIES

Conflicts with the safe and secure operation of systems and avionics within WSMR or with neighboring military installations could occur but will be unlikely. Conflicts with residential, commercial, or municipal electronic systems and communication systems, including air traffic control systems, could occur but will be unlikely. Minor to moderate impacts could occur to impair the ability of WSMR to meet its test and training mission requirements due to the unavailability of dedicated frequencies. WSMR, however, has a process in place for scheduling and monitoring frequencies.

6.17 WILDLAND FIRE

An increase in testing activities will cause an increase in the potential for wildland fires. Primary activities that will have the potential to cause wildland fire ignitions include on-road vehicle use, off-road vehicle use, dismounted operation, and field operations. Potential unplanned fire ignitions from hazardous operations (such as line-fire weapons releases and high powered microwave weapons) could increase. A slight increase in air operations including unmanned aerial systems could increase the risk of a catastrophic mishap that could cause a fire under restricted airspace. The increased risk will be minor and will be minimized through ongoing management practices. Any additional tank trails could have a beneficial impact on wildland fire management by acting as potential fire breaks. The proposed Specialized Areas will not introduce new activities or facilities that will be expected to cause an increase in the potential for wildland fires. The Local Training Area will be mostly cleared of vegetation through heavy use, limiting the amount of combustible material. Standard field measures could minimize the number of unplanned ignitions.

7.0 MITIGATION COMMITMENTS

The Army is committed to sustaining and preserving the environment at WSMR. WSMR will continue to implement the existing review and approval processes for use of the range, as well as the existing standard requirements for range users discussed in Section 2.5 of the EIS. As part of the decision to implement the Preferred Alternative, the Army will enact the environmental mitigations described in Table 8.0-1 to minimize the impacts of this decision.

Table 8.0-1. Summary of Mitigation Measures for the Preferred Alternative

Resource Area	Mitigation Measures
Land Use and Aesthetics	WSMR will 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. Also, coordination with the White Sands National Monument will be conducted prior to any tank trail or road improvements in the vicinity of the monument to prevent flash flood events from washing unnatural debris into the monument.

Table 8.0-1. Summary of Mitigation Measures for the Preferred Alternative

Resource Area	Mitigation Measures
Air Quality	During site preparation, construction, or other earth-moving activities, BMPs will be implemented to minimize fugitive dust emissions, such as wetting soil surfaces, covering truckloads of dirt with tarps to reduce windborne dust, and properly maintaining equipment. County ordinances as well as the recommendations developed under the WSMR Particulate Matter Control Plan will be followed regarding erosion control and construction where practical and when it is not in conflict with the mission of WSMR.
Cultural Resources	WSMR will implement the Programmatic Agreement between the Army and the State Historic Preservation Officer as a mitigation measure that will govern future actions. WSMR will also ensure that any areas authorized for off-road maneuver or intensive ground operations will be surveyed and mitigated for archeological and historic properties as necessary. Additional management and mitigation measures for cultural resources will be provided as necessary relative to the degree of anticipated ground disturbance and construction.
Earth Sciences	Due to the variability in timing, duration, frequency, and location of off-road vehicle maneuvers, use of adaptive management for identifying mitigation measures to reduce the impacts to soils will be used. Mitigation strategies could include using a combination of approaches such as applying soil stabilizers, using windbreaks, and rotating areas authorized for off-road use. Workplans for mitigating impacts to soils will be developed. Erosion of roads and trails will be specifically monitored to identify prevention, maintenance, and repair actions needed to maintain stability.
Biological Resources	WSMR will conduct additional monitoring to identify repair and or maintenance projects for the Integrated Natural Resource Management Plan and Integrated Training Area Management Program to reduce impacts of testing and training throughout the 1,825,000 acres having the potential for off-road activities. Coordination with the New Mexico Division of Game and Fish will be conducted to ensure that the construction and operation of the proposed tank trail will not adversely affect populations of White Sands pupfish. Mitigation measures will include re-routing the tank trail to avoid Limited Use and Essential Pupfish Habitat (an option that seems feasible based on the local terrain) or working with New Mexico Division of Game and Fish and U.S. Fish and Wildlife Service to develop BMPs to prevent or limit sedimentation of streams or other adverse impacts where these areas cannot be avoided.
Water Resources	WSMR will create and employ an adaptive management plan for the recovery of disturbed areas. Maintaining soil stability will mitigate the indirect effects of dust generation and sedimentation resulting from accelerated erosion of existing intermittent streams and arroyos.
Safety	WSMR will develop new Standard Operating Procedures and directives to address safety components of off-road activities. In particular, Standard Operating Procedures will be needed to address potential adverse impacts to visibility on public and military roads from dust created from tactical vehicles conducting off-road maneuvers. Standard Operating Procedures to minimize risks associated with specific test and training activities include: tailoring operating conditions accordingly, implementation of evacuations, imposing access restrictions as necessary, and ceasing any operations that will pose an imminent danger to human health and safety will continue.
Facilities and Infrastructure	To protect existing buried utilities, hardened crossings over existing gas lines in areas designated for off-road maneuver will be put in place. WSMR will revise the current digging permit process to encompass digging associated with any field operations or construction activities.

All practicable means to avoid or minimize environmental harm from the selected action have been adopted. The Army will also employ a monitoring and enforcement program for the mitigation measures adopted in this decision.

WSMR has considered the results of the analysis described in the Final EIS and comments provided during formal comment and review periods. Based on this review, WSMR has determined that the Selected Alternative reflects the proper balance of initiatives for the protection of the environment, funding

considerations, and the need for WSMR to expand its capabilities as a Major Range and Test Facility Base to support future Army needs associated with Army Transformation, the Army Campaign Plan, modernization of the fighting force, Army Growth and Force Structure Realignment, Global Defense Posture Realignment, and other Army initiatives.

8.0 ADDITIONAL INFORMATION

For additional information or copies of the Final EIS and this ROD please contact: White Sands Test Center, Operations Office; Attention: Ms. Catherine Giblin, 124 Crozier Street, Building 124, Room B-15, White Sands Missile Range, New Mexico 88002; Fax 575-678-4082; Email: *WSMREIS@conus.army.mil.;* or Ms. Monte Marlin, Public Affairs Office, Building 1782, Headquarters Avenue, White Sands Missile Range, New Mexico, 88002; 575-678-1134; or e-mail *monte.marlin@us.army.mil.*

Approved by:

24 Mar 2010

JOHN B. NERGER
Executive Director
U.S. Army Installation Command

Date

22 Mar 2010

JAMES J. STREILEIN
Executive Director
U.S. Army Test and Evaluation Command

Date

Appendix A. List of Acronyms

BCT	Brigade Combat Team
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DoD	Department of Defense
EIS	Environmental Impact Statement
HBCT	Heavy Brigade Combat Team
JLENS	Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System
MRTFB	Major Range and Test Facility Base
NOA	Notice of Availability
RDT&E	research, development, testing and evaluation
ROD	Record of Decision
U.S.	United States
UXO	Unexploded Ordnance
WSMR	White Sands Missile Range