

**BARRY M. GOLDWATER RANGE
INTEGRATED NATURAL RESOURCES
MANAGEMENT PLAN
PUBLIC REPORT**

on

**Military Use, Environmental Conditions,
Resource Management Activity, and
Public Access and Involvement**

2007 — 2012

Prepared in accordance with the Military Lands Withdrawal Act of 1999
(Public Law 106-65 § 3031(b)(5)(A))

Prepared in support of the:

Review and Update of the
2007 Barry M. Goldwater Range
Integrated Natural Resources Management Plan

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Cabeza Prieta National Wildlife Refuge
and
Arizona Game and Fish Department

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List of Acronyms and Abbreviations

ACTS	air combat tactics system
ADEQ	Arizona Department of Environmental Quality (Section 6)
AETC	Air Education and Training Command
AFAF	Air Force Auxiliary Field
AFB	Air Force Base
AFRC	Air Force Reserve Command
AGFD	Arizona Game and Fish Department
AGL	above ground level
AHAS	Avian Hazard Advisory System
ALF	auxiliary landing field
ANG	Air National Guard
APP	Avian Protection Plan
ARNG	Army National Guard
AUX	auxiliary airfield
BASH	Bird/Wildlife or Bird/Animal Aircraft Strike Hazard
BEC	Barry M. Goldwater Range Executive Council
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMGR	Barry M. Goldwater Range
BMP	Best Management Practice
BO	Biological Opinion
CEDES	Sustainable Development for the State of Sonora (Mexico)
CONANP	Natural Commission for Protected Natural Areas (Mexico)
CBP	U.S. Customs and Border Protection
DoD	Department of Defense
DZ	drop zone
EA	Environmental Assessment
EIS	Environmental Impact Statement
EOD	explosive ordnance disposal
ESA	Endangered Species Act
ETAC	East Tactical Range
FARP	forward arming and refueling point
FASP	field ammunition supply point
FONSI	Finding of No Significant Impact
FTHL	flat-tailed horned lizard
GIS	geographic information system
GMU	Game Management Unit
GPS	global positioning system
HE	high explosive
I-8	Interstate 8
ICC	Interagency Coordinating Committee
ICRMP	Integrated Cultural Resources Management Plan
IEC	Intergovernmental Executive Committee
INRMP	Integrated Natural Resources Management Plan
JSF	Joint Strike Fighter
Km	kilometer
LHA	Landing Helicopter Assault
LiDAR	Light Detection and Ranging
MBTA	Migratory Bird Treaty Act

MCAS	Marine Corps Air Station
MLWA	Military Lands Withdrawal Act
MOG	Management Oversight Group
MOU	Memorandum of Understanding
MSL	mean sea level
NEP	nonessential experimental population
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NM	National Monument
NTAC	North Tactical Range
NWR	National Wildlife Refuge
OHV	Off-highway vehicle
P.L.	Public Law
POL	petroleum, oils, and lubricants
RMCP	Range Munitions Consolidation Point
RMO	Range Management Office
RMS	Rangewide Management Strategy
ROD	Record of Decision
SDZ	surface danger zone
SGCN	Species of Greatest Conservation Need
SHPO	State Historic Preservation Officer
SR	State Route
STAC	South Tactical Range
SWAP	State Wildlife Action Plan
TACTS	Tactical Aircrew Combat Training System
U.S.C.	United States Code
UDI	undocumented immigrants
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UTC	Urban Target Complex
WDZ	weapon danger zone
WTI	Weapons Tactics Instructors

CHAPTER 1.0 INTRODUCTION

1.1 PUBLIC REPORT PURPOSE AND CONTENT

This draft Public Report was prepared in support of an ongoing process to review and update the 2007 Integrated Natural Resources Management Plan (INRMP) for the Barry M. Goldwater Range (BMGR) in southwestern Arizona (Figure 1). The draft Public Report was prepared in accordance with the Military Lands Withdrawal Act (MLWA) of 1999 (Public Law [P.L.] 106-65), which provides that the report be issued concurrent with each review of the BMGR INRMP to facilitate participation by affected parties in the process to update the INRMP (P.L. 106-65 § 3031(b)(5)(A)). The draft Public Report describes the changes in military use, environmental conditions, and public access opportunities at the BMGR that have occurred since the 2007 INRMP was implemented and provides an account of the resource management and public involvement activities that have transpired during the same period. The purpose of the draft Public Report is to provide information that will help reviewers better understand and comment on the proposed updates to the INRMP. This draft report is being issued for public review and comment. The Public Report and the 2012 update of the INRMP will be finalized in consideration of the comments received on the draft documents. The final Public Report will also include the comments received on the draft documents and responses to those comments. Reviews and updates of the INRMP are scheduled to occur at five-year intervals. The next review and update of the BMGR INRMP is currently scheduled for 2017. A public report similar to this document will be issued concurrent with that draft INRMP update and each subsequent update.

The BMGR is a major U.S. military installation that is used primarily by the U.S. Air Force and U.S. Marine Corps to train aircrews to fly air combat missions but is also used for other national defense purposes, most of which support or are associated with air combat training. Aircrew training and related missions have been the predominant activity at the BMGR since the range was established in 1941. Currently, the Air Force is the primary user of and managing agency for the eastern portion of the range, referred to as BMGR East, and the Marine Corps is the primary user of and managing agency for the western portion of the range, referred to as BMGR West.

The 2007 INRMP was prepared and implemented in accordance with the MLWA of 1999 and Sikes Act (16 United States Code [U.S.C.] 670a *et seq.*). The INRMP was prepared jointly by the Secretaries of the Navy, Air Force, and Interior, which were represented locally by the Installation Commanders of Marine Corps Air Station (MCAS) Yuma and Luke Air Force Base (AFB), and the U.S. Fish and Wildlife Service (USFWS), Southwest Region 2, Regional Director. The Regional Director in turn designated the Refuge Manager of the Cabeza Prieta National Wildlife Refuge (NWR) as his local representative. The INRMP was also prepared in cooperation with the Director of Arizona Game and Fish Department (AGFD). The Sikes Act provides that INRMPs are to be reviewed on a regular basis, but not less than every five years (16 U.S.C. 670a (b)(2)). The MLWA of 1999 elaborates by stipulating that the INRMP for the BMGR shall:



Throughout its history, the BMGR has evolved to meet the needs of new generations of aircrews and the technological advances in aircraft and weapons systems.

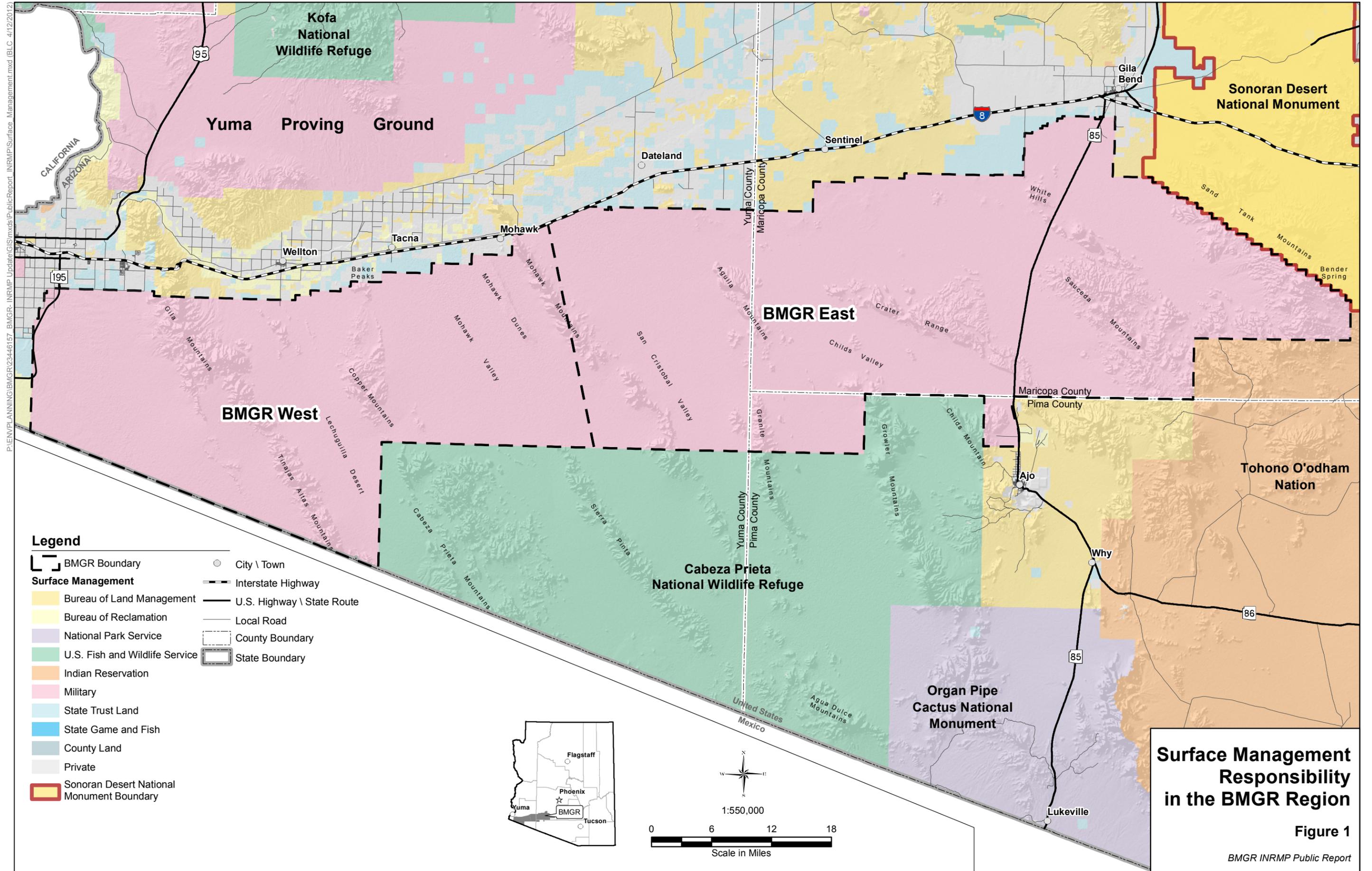
...include procedures to ensure that the periodic reviews of the plan under the Sikes Act are conducted jointly by the Secretary of the Navy, the Secretary of the Air Force, and the Secretary of the Interior, and that affected States and Indian tribes, and the public, are provided a meaningful opportunity to comment upon any substantial revisions to the plan that may be proposed...and...provide procedures to amend the plan as necessary (P.L. 106-65 § 3031(b)(3)(E)(ix) and (x)).

As already noted, the MLWA of 1999 also provides that a public report be prepared concurrent with each Sikes Act review of the INRMP to provide opportunities for meaningful public comment on both the report and proposed updates to the INRMP. In accordance with that Act, this draft Public Report provides descriptions of:

1. Current military land use
2. Changes in military land use since the 2007 INRMP
3. Changes in land and environmental conditions since the 2007 INRMP
4. Changes in public access opportunities since the 2007 INRMP
5. Natural and cultural resources management activities since the 2007 INRMP
6. Environmental remediation activities since the 2007 INRMP
7. Public involvement programs since the 2007 INRMP

This draft Public Report has been released for review and comment by the public and state and local governments. Consultations with affected Indian tribes on the draft Public Report and draft updated INRMP also will occur before those documents are finalized. If warranted, proposed INRMP updates or amendments will be reviewed in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4332), or other applicable law before being implemented.

The public comment period for the draft Public Report and draft updated INRMP began on 29 June 2012 with the publication of a Notice of Availability in the *Federal Register*. The comment period for this document will close 30 days following publication of the Notice of Availability. Public open-house meetings on the Public Report and INRMP Update are planned for 17 July 2012 in Yuma, Arizona and for 18 July 2012 in Gila Bend, Arizona. Comments on the Public Report, including the preliminary actions plans for 2013-2017 that included in this report, should be submitted on or before 30 July 2012 to ensure that they can be considered in the preparation of the final Public Report and updated INRMP.



Legend

- BMGR Boundary
- City \ Town
- Surface Management**
- Bureau of Land Management
- Bureau of Reclamation
- National Park Service
- U.S. Fish and Wildlife Service
- Indian Reservation
- Military
- State Trust Land
- State Game and Fish
- County Land
- Private
- Sonoran Desert National Monument Boundary
- Interstate Highway
- U.S. Highway \ State Route
- Local Road
- County Boundary
- State Boundary

Surface Management Responsibility in the BMGR Region

Figure 1

BMGR INRMP Public Report

1.2 2007 INRMP BACKGROUND

1.2.1 BMGR Land Withdrawal and Reservation

The BMGR encompasses 1,733,921 acres (approximately 2,709 square miles) of federal land that is administered through the Secretaries of the Air Force and Navy. About 1,650,200 acres (2,578 square miles) of the BMGR is composed of Department of the Interior public land that had been administered by the Bureau of Land Management (BLM) and was withdrawn by Congress and reserved for military purposes for 25 years through the MLWA of 1999. The remaining approximately 83,721 acres (131 square miles) of the range is comprised of land that is permanently administered by the Department of Defense (DoD). No distinction is made between the withdrawn BLM and DoD land in terms of its use for the military purposes for which the BMGR was established. Among other provisions, the MLWA of 1999 had the effect of:

- Withdrawing¹ the public land within the boundaries of the BMGR from all forms of appropriation under the general land laws, including the mining laws and the mineral leasing and geothermal leasing laws, subject to valid existing rights
- Transferring jurisdiction over the withdrawn public land to the Secretary of the Navy and the Secretary of the Air Force
- Reserving² the withdrawn public land for use by the Secretaries of the Air Force and Navy for use as—
 - (A) An armament and high-hazard testing area;
 - (B) Training for aerial gunnery, rocketry, electronic warfare, and tactical maneuvering and air support;
 - (C) Equipment and tactics development and testing; and
 - (D) Other defense-related purposes consistent with the purposes specified in this paragraph (P.L. 106-65 § 3031(a)(2))

The authorization for the BMGR provided by the MLWA of 1999 will terminate on 5 October 2024; however, the Act also authorizes the Secretaries of the Air Force and Navy to file an application to extend the land withdrawal and reservation if they determine that there will be a continuing military need for all or any portion of the range after that date. In accordance with the MLWA of 1999, the



Integrated training on the BMGR enhances the readiness of both aircrews and combat support troops.

¹ “Withdrawing” federal lands means to withhold them by executive or legislative action from settlement, sale, location, or entry under some or all of the general land, mining, and mineral laws in order to limit or prohibit activities normally permitted under those laws. The Defense Withdrawal Act of 1958 (P.L. 85-337) provides that an Act of Congress is required for land withdrawals for military purposes that are more than 5,000 acres in aggregate.

² “Reserving” federal lands means designating withdrawn areas for specified public (or governmental) purposes or programs. For example, military reservations established in areas formerly a part of the public domain consist of lands that have been withdrawn and then reserved, nearly always in the same executive or legislative action, for the purpose of military use.

5-year INRMP Public Reports will be an important component of an application to extend the land withdrawal and reservation of the range (P.L. 106-65 § 3031(e)(2)(b)).

The land withdrawals and reservations for the BMGR prior to the MLWA of 1999 were provided by a series of executive and legislative instruments dating from 1941. The MLWA of 1999 was the first instrument, however, to transfer jurisdiction over the withdrawn public land to the Secretaries of the Air Force and Navy, assign responsibility for managing the withdrawn lands to the Armed Services Secretaries, and provide that an INRMP be prepared for the range in accordance with the Sikes Act and other applicable guidance. Thus, the 2007 INRMP was the first resource management plan prepared for the range under DoD leadership and the first to incorporate a comprehensive inventory of both the requirements and distribution of military surface use as a baseline for developing resource management goals, objectives, and practices at the BMGR.

1.2.2 INRMP Management Guidance

The 2007 INRMP was developed based on the foundation provided by the Sikes Act for natural resource conservation and rehabilitation programs at military installations and on additional guidance provided by the MLWA of 1999 that is specific to the BMGR. The MLWA of 1999 provides that the INRMP shall:

... include provisions for proper management and protection of the natural and cultural resources of [the range], and for sustainable use by the public of such resources to the extent consistent with the military purposes [of the range]... (P.L. 106-65 § 3031(b)(3)(E)(i)).

The MLWA of 1999 also specified that the INRMP be prepared and implemented in accordance with the Sikes Act. The Sikes Act sets forth resource management policies and guidance for U.S. military installations and requires the preparation of INRMPs to facilitate implementation of natural resource conservation and rehabilitation programs. The Sikes Act provides that:

Consistent with the use of military installations to ensure the preparedness of the Armed Forces, the Secretaries of the military departments shall carry out [a natural resources management program] to provide for—

- (A) The conservation and rehabilitation of natural resources on military installations;
- (B) The sustainable multipurpose use of the resources, which shall include hunting, fishing, trapping and non-consumptive uses; and
- (C) Subject to safety requirements and military security, public access to [the BMGR] to facilitate the use (16 U.S.C. 670a (a)(3)).

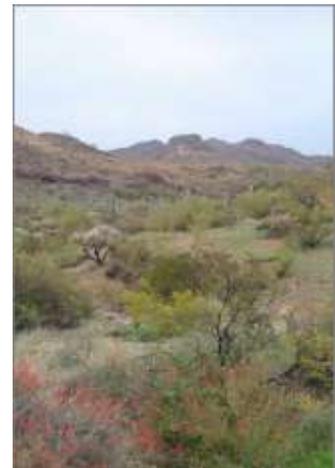
The Sikes Act further stipulates that, consistent with the use of military installations to ensure the preparedness of the Armed Forces, each INRMP shall, to the extent appropriate and applicable, provide for:

- (A) Fish and wildlife management, land management, forest management, and fish- and wildlife-oriented recreation;
- (B) Fish and wildlife habitat enhancement or modifications;

- (C) Wetland protection, enhancement, and restoration, where necessary for support of fish, wildlife, or plants;
- (D) Integration of, and consistency among, the various activities conducted under the plan;
- (E) Establishment of specific natural resource management goals and objectives and time frames for proposed action;
- (F) Sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of fish and wildlife resources;
- (G) Public access to the military installation that is necessary or appropriate for the use described in subparagraph (F), subject to requirements necessary to ensure safety and military security;
- (H) Enforcement of applicable natural resource laws (including regulations);
- (I) No net loss in the capability of military installation lands to support the military mission of the installation; and
- (J) Such other activities as the secretary of the military department determines appropriate.

The MLWA of 1999 and the Sikes Act provide parallel guidance for developing the INRMP and managing BMGR resources. Differences between the legal text of these two Acts on conserving versus protecting of resources were resolved depending on the sensitivities of individual resources through the Environmental Impact Statement (EIS) planning process that was integral to the preparation of the 2007 INRMP.

Another difference concerned the MLWA of 1999 stipulation that the INRMP provide for the management and protection of cultural resources, a management element that is not addressed by the Sikes Act. Cultural resource management and protection is as an important priority on military installations as is natural resources management; however, management guidance for natural and cultural resources is typically provided through separate INRMPs and Integrated Cultural Resources Management Plans (ICRMPs). Although the MLWA of 1999 provision is a departure from this norm, the 2007 INRMP provides for cultural resources protection at the BMGR by prescribing that natural resource management actions be fully supportive of and compliant with the range ICRMP, and the ICRMP is incorporated by reference in the INRMP.



Effective resource management depends on addressing natural and cultural resource management issues from an integrated perspective that promotes resource protection and conservation.

DoD environmental security policy also had an important influence on the development of the 2007 INRMP. DoD Instruction 4715.3, *Natural Resources Conservation Program*, outlines policy, assigns responsibilities, and prescribes procedures for the integrated management of natural and cultural resources on property under DoD control. This instruction calls for INRMPs to be based, to the maximum extent practicable, on ecosystem management. The goal of DoD ecosystem management is to maintain and improve the sustainability and native biological diversity of ecosystems while supporting human needs, including the DoD mission. This goal is reflected in the Department-level land management

policies of the Air Force and Marine Corps. Consequently, ecosystem management and protection of biological diversity are important guiding elements of the 2007 INRMP for the BMGR.

1.2.3 Interagency Participation

Although the Air Force and Marine Corps hold the primary surface management responsibility for the BMGR, the Secretary of the Interior, acting through USFWS, and the AGFD continue to exercise responsibilities for natural resources on the range. The USFWS also has responsibilities on the BMGR related to the recovery of endangered and threatened species. AGFD has primary jurisdiction over resident wildlife management within the BMGR and shares a role in the recovery of endangered and threatened species. In addition, AGFD is the responsible State agency for providing safe opportunities for off-highway vehicle (OHV) recreation in Arizona. The Air Force, Marine Corps, USFWS, and AGFD are jointly preparing the Public Report and conducting the five-year review and update of the BMGR INRMP in accordance with the MLWA of 1999; Sikes Act; and a 2001 Cooperative Agreement among the Air Force, Navy, and Interior and the State of Arizona to facilitate joint preparation and implementation of an ecosystem-based INRMP for the BMGR.

CHAPTER 2.0 CURRENT MILITARY AND NON-MILITARY USE AND CHANGES IN MILITARY AND NON-MILITARY USE AT THE BMGR

2.1 INTRODUCTION

The primary mission of both BMGR West and BMGR East is unchanged from the 2007 INRMP and continues to be military aircrew training, including advanced training for student aircrews transitioning to frontline combat aircraft and readiness training for aircrews in operational combat units. Training of student and operational aircrews continues on both sides of the range but student aircrew training continues to be the predominant activity at BMGR East while readiness training continues to be the most prevalent activity at BMGR West. The BMGR continues to serve the Air Force, Marine Corps, Air Force Reserve Command (AFRC), Air National Guard (ANG), Navy, and Army National Guard (ARNG) in these capacities. As secondary missions, the range also continues to support certain, ground troop training functions on a limited basis and periodically is used for testing and some other defense-related purposes. No change to the primacy of the aircrew-training mission at the BMGR is expected in the foreseeable future.

The regular military users of the range continue to originate from the BMGR region and include units from Luke AFB, MCAS Yuma, MCAS Miramar, Davis-Monthan AFB, Silverbell Army Heliport, and Arizona ANG Base at Tucson International Airport. In addition to regular users, “casual user” training deployments that originate from active duty, reserve, and ANG flying units from other areas of the country and from U.S. and allied units from overseas also continue to train at the range.

The land and restricted airspace dimensions of the BMGR remain unchanged from those that were in effect following implementation of the MLWA of 1999 and the 2007 INRMP. Four key attributes of the natural setting and environment of the BMGR continue to be essential to its overall suitability and capacity for supporting tactical aviation and air defense training, aviation tactics development and testing, and other assigned national defense missions. These attributes include:

- A location away from most major population areas yet within the effective training flight radius of aircraft at Air Force, Marine Corps, Navy, ANG, and ARNG installations in Arizona and California
- The uninhabited and undeveloped expanse of land and overlying airspace necessary to provide up to 13 aviation subranges and a number of ground-based training sites and areas needed to support multiple, independent training activities simultaneously or to support large-scale, range-wide exercises
- Year-round clear weather conditions that allows most aviation training activities to be efficiently performed as planned without weather delays or postponements
- Varied, wide-open terrain that allows development of diverse, tactical air-land combat training scenarios with realistic air-to-ground target simulations

Current military use at BMGR West and BMGR East closely resembles the patterns and distribution of use that was occurring when the 2007 INRMP was prepared; however, some changes in training, support activities, and range facilities have either occurred or are pending as the Marine Corps and Air Force



Aircrew training in the Marine Corps F-35B could begin at the BMGR by the end of 2012. The F-35B, also known as the Joint Strike Fighter or JSF, is capable of vertical take-off and landing.

continue to manage and update the BMGR to keep pace with National defense requirements. For example, an auxiliary landing field (ALF) complex has been approved and is pending construction at BMGR West to support aircrew training in the Marine Corps F-35B aircraft (also known as the Joint Strike Fighter or JSF), which will begin to replace AV-8B and some F/A-18 aircraft in Marine Corps squadrons beginning as early as the end of 2012. Similarly, the Air Force has approved construction of a new electronic Sensor Training Range to enhance the preparedness of aircrews to engage hostile forces in densely developed and populated urban areas. Both of these projects were addressed through environmental impact statement processes.

AGFD and the U.S. Department of Homeland Security, Border Patrol, both have active management and/or law enforcement missions on the BMGR. AGFD has management and law enforcement missions related to wildlife and OHV use and the Border Patrol is responsible for the security of the Nation’s borders against the illegal entry of undocumented individuals.

2.2 MILITARY USE AND CHANGES IN USE AT BMGR WEST

Military training support provided by BMGR West currently includes:

- Four aviation subranges
- An outlying auxiliary airfield (AUX-II)
- Two air-to-ground target complexes for inert ordnance deliveries
- An instrumented Tactical Aircrew Combat Training System (TACTS) Range that supports air-to-air, air-to-ground, and ground-to-air engagements
- Thirty-three undeveloped ground support areas
- A parachute cargo drop zone (DZ) and 10 personnel parachute DZs
- A rifle qualification range
- A pistol qualification range
- A small arms live-fire maneuver range
- A multi-purpose machine gun range
- Four convoy security operations courses
- A combat village training site
- Five hazard areas that restrict nonparticipating personnel from ground locations where hazardous training activities are scheduled
- A developed administrative and training site (Cannon Air Defense Complex)
- A field ammunition supply point (FASP)



Tactical targets on the BMGR present training aircrews with highly realistic battlefield simulations.

- A munitions treatment range
- A live ordnance and drop tank jettison area

In addition and as already noted, construction of an ALF complex to support Marine Corps F-35B training has been approved and construction will begin in the near future. Military use features and sites at BMGR West are shown in Figure 2, which is adapted from the 2007 INRMP. Current military use and changes in military use at BMGR West since the 2007 INRMP was prepared are shown in Figure 3 and Figure 4, respectively, and are described in summary form in Table 1.

2.3 MILITARY USE AND CHANGES IN USE AT BMGR EAST

Military training support provided by BMGR East currently includes:

- Nine aviation subranges
- Four manned ranges for primary instruction in air-to-ground delivery of bombs, rockets, and gunnery
- Three tactical ranges for advanced instruction in air-to-ground delivery of bombs, rockets, and gunnery
- Helicopter landing zones within the tactical ranges
- An air-to-air firing range
- An instrumented air combat tactics system (ACTS) range that supports air-to-air engagements
- Areas subject to explosive ordnance disposal (EOD) clearances
- Four Range Munitions Consolidation Points (RMCP) to demilitarize and process expended ordnance prior to recycling or sanitary disposal
- An EOD training range
- The Gila Bend Air Force Auxiliary Field (AFAF), which serves as the operational support center for BMGR East
- Two outlying auxiliary airfields
- A small arms range
- Sand and gravel excavation and stockpile areas to procure materials needed to construct, maintain, and/or repair range targets and roads



Explosive ordnance disposal clearances remove inert munitions and target debris from the range and detonate unexploded live ordnance where it is found.

In addition, construction of a Sensor Training Range to enhance the preparedness of aircrews has been approved and is pending. Other actions pending implementation or final approval include:

- Lowering the operational floor of restricted airspace R-2301E over the Cabeza Prieta NWR
- Constructing a taxiway and air traffic control tower at Gila Bend AFAF
- Developing a moving vehicle target for the North Tactical Range (NTAC)

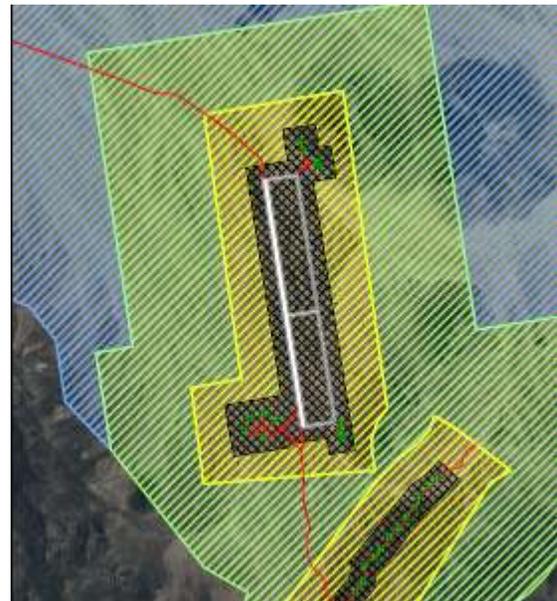
- Authorizing additional ground-based training for combat search and rescue and other land navigation and reconnaissance missions
- Converting the southern side of Manned Range 3 to an air-to-ground gunnery range for helicopters
- Establishing streamlined procedures for continuing updates of tactical range targets

Military use features and sites at BMGR East are shown in Figure 5, which is adapted from the 2007 INRMP. Current military use at BMGR East and changes in military use since the 2007 INRMP was prepared are shown in Figure 6 and Figure 7, respectively, and are described in summary form in Table 2.

The action for continuing updates of tactical range targets would streamline approval of plans to reconfigure target sets in North, South, and East tactical ranges by establishing standard procedures for determining the level of environmental impact review appropriate for proposed future updates of the target sets. The tactical ranges are used to provide pilots and other aircrew members with training in air-to-ground combat that is realistic to real-world battlefield conditions. To keep this training relevant to the real-world situations that U.S. aircrews may be tasked to face, target simulations must be periodically updated, which may involve realigning or repositioning of target sets such as simulations of vehicle convoys or air defense sites. Thus, rather than considering the likely environmental effects of all proposed target reconfigurations on a case-by-case basis, the environmental assessment and approval process would be streamlined by:

- Assessing the extent of environmental effects that would be likely to occur from proposed reconfiguration actions in each of five long-term military use areas in each tactical range
- Determining the degree to which additional environmental review, if any, would be necessary before target reconfigurations could be implemented in each of the long-term military use areas

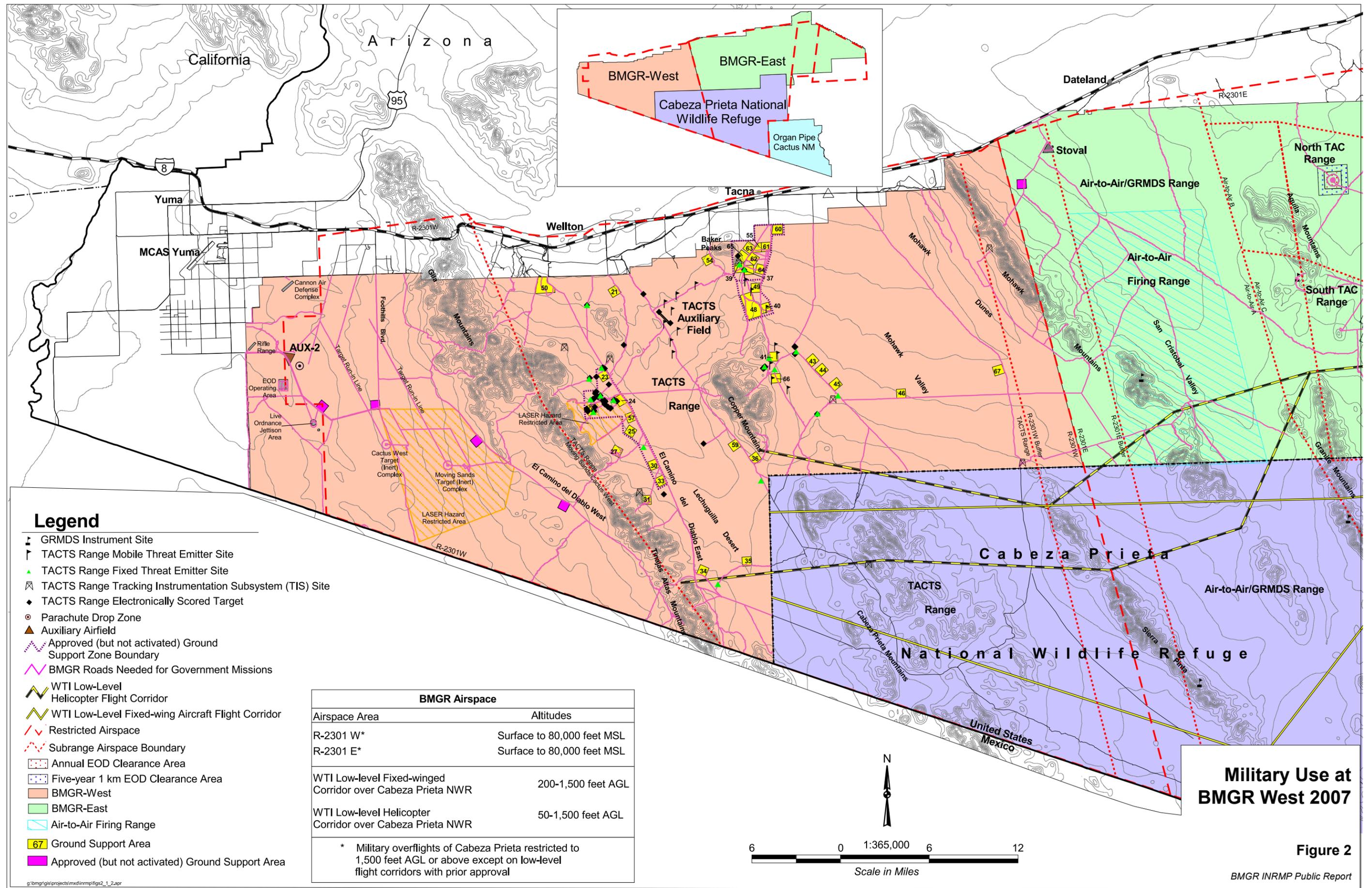
The five long-term military use areas in the tactical ranges are based on a combination of the current target set positions and the active and inactive EOD clearance areas that surround the target positions. Military uses within these areas generally include target simulations, inert or live explosive ordnance impacts, target construction and maintenance, and EOD clearance activities. The five use areas form a set of concentric polygons in which the inner polygon encompasses the currently active target positions and areas subject to EOD clearances on a biennial basis and the outer polygon encompasses the part of each tactical range that is outside of all active and inactive EOD clearances areas. Military activity and resulting surface disturbance impacts are relatively intense and extensive within the



This example of a runway and convoy target shows the concentric polygons indicating the degree of environmental clearance that would be required to reconfigure a target depending on the past level of military surface use.

inner polygon and diminish outward to negligible within the outer polygon. Environmental compliance reviews and approvals have previously been completed for the military activities that currently occur within the five use areas. Most of the inner four use areas have been previously surveyed for cultural resources. Environmental compliance reviews that may be required before a proposed target reconfiguration could be implemented in any of these use areas range from almost none to preparation of environmental impact documentation in accordance with NEPA, actions to comply with the National Historic Preservation Act (NHPA) and Endangered Species Act (ESA), and other applicable requirements. Approvals for target reconfigurations within the intensively used inner polygons would require the least amount of prior environmental review and the negligibly used outer polygons would require the most. Briefly summarized the five long-term military use areas include:

1. *Active Intensive Use Area*. Includes the currently active target positions and biennial EOD clearance areas. Biennial EOD clearances encompass the area out to a 300-foot radius around each target designated for inert ordnance and to a 500-foot radius areas around each target designated for live explosive ordnance.
2. *Active Moderate Use Area*. Includes those portions of the currently active decennial EOD clearance areas that are within the pre-2007 annual EOD footprint. The current decennial EOD clearance area is a 1,000-foot radius around each target as was the pre-2007 annual EOD footprint, however, the two areas may not be identical because targets may have been added or retired, thereby resulting in offset alignments in some locations.
3. *Infrequent Moderate Use Area*. Includes the 2001-2006 5-year EOD footprint. From 2001 to 2006, the 5-year EOD footprint extended to 1 kilometer around each target. The area that is between 1,000 feet and 1 kilometer from the perimeter of a target encompasses the area of infrequent moderate use.
4. *Reserve Light Use Area*. Includes the area inside the pre-2001 5-year EOD footprint, which extended to 1 nautical mile from each target, and outside of the 1 kilometer 2001-2006 5-year EOD footprint.
5. *Negligible Use Area*. Includes tactical range locations outside of the pre-2001 5-year EOD footprint.

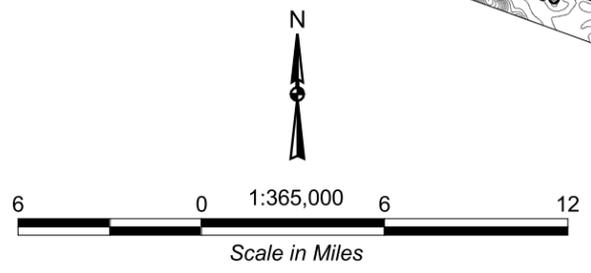


Legend

- GRMDS Instrument Site
- TACTS Range Mobile Threat Emitter Site
- TACTS Range Fixed Threat Emitter Site
- TACTS Range Tracking Instrumentation Subsystem (TIS) Site
- TACTS Range Electronically Scored Target
- Parachute Drop Zone
- Auxiliary Airfield
- Approved (but not activated) Ground Support Zone Boundary
- BMGR Roads Needed for Government Missions
- WTI Low-Level Helicopter Flight Corridor
- WTI Low-Level Fixed-wing Aircraft Flight Corridor
- Restricted Airspace
- Subrange Airspace Boundary
- Annual EOD Clearance Area
- Five-year 1 km EOD Clearance Area
- BMGR-West
- BMGR-East
- Air-to-Air Firing Range
- Ground Support Area
- Approved (but not activated) Ground Support Area

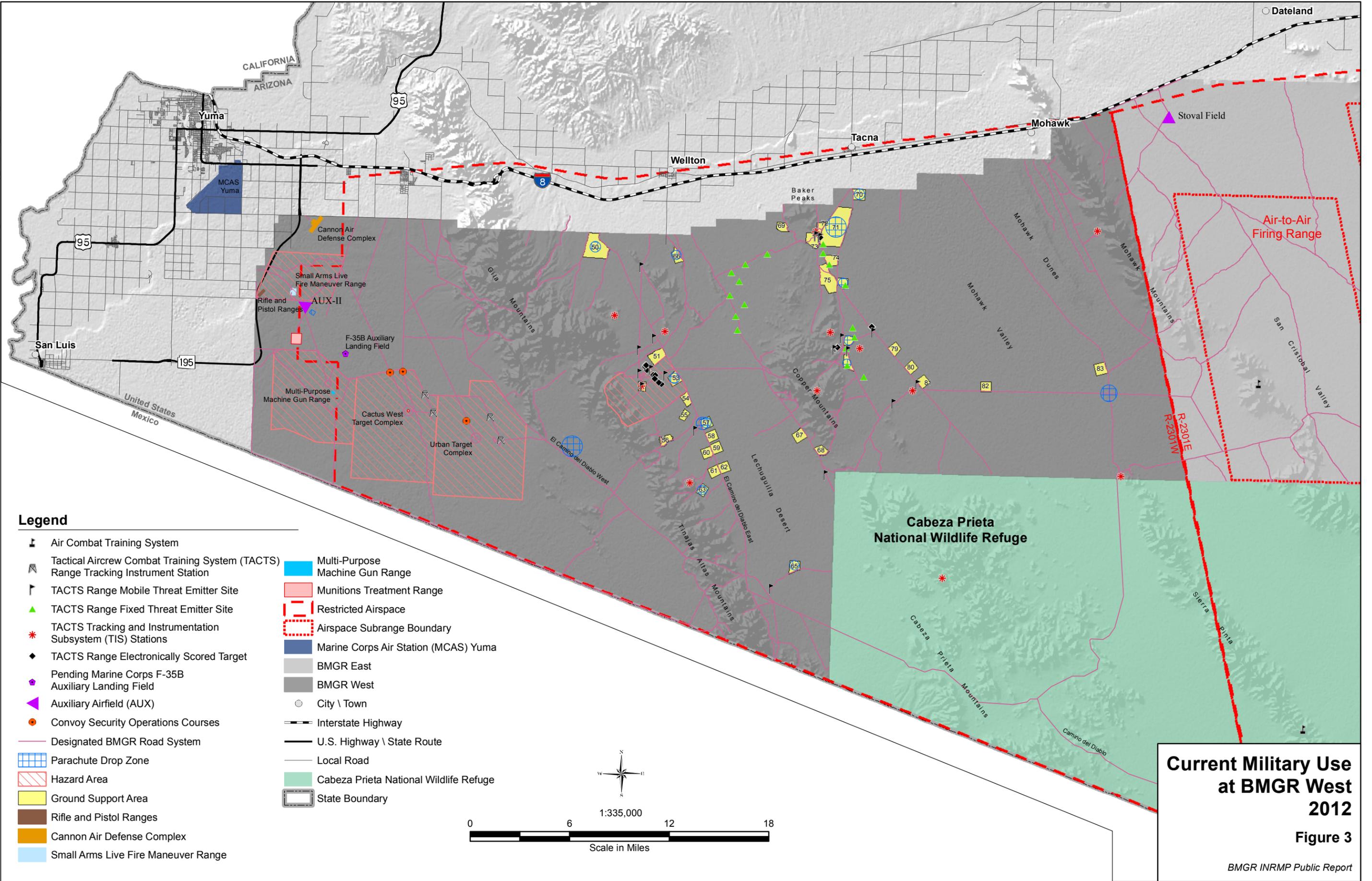
BMGR Airspace	
Airspace Area	Altitudes
R-2301 W*	Surface to 80,000 feet MSL
R-2301 E*	Surface to 80,000 feet MSL
WTI Low-level Fixed-winged Corridor over Cabeza Prieta NWR	200-1,500 feet AGL
WTI Low-level Helicopter Corridor over Cabeza Prieta NWR	50-1,500 feet AGL

* Military overflights of Cabeza Prieta restricted to 1,500 feet AGL or above except on low-level flight corridors with prior approval



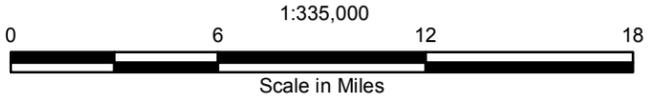
Military Use at BMGR West 2007

Figure 2

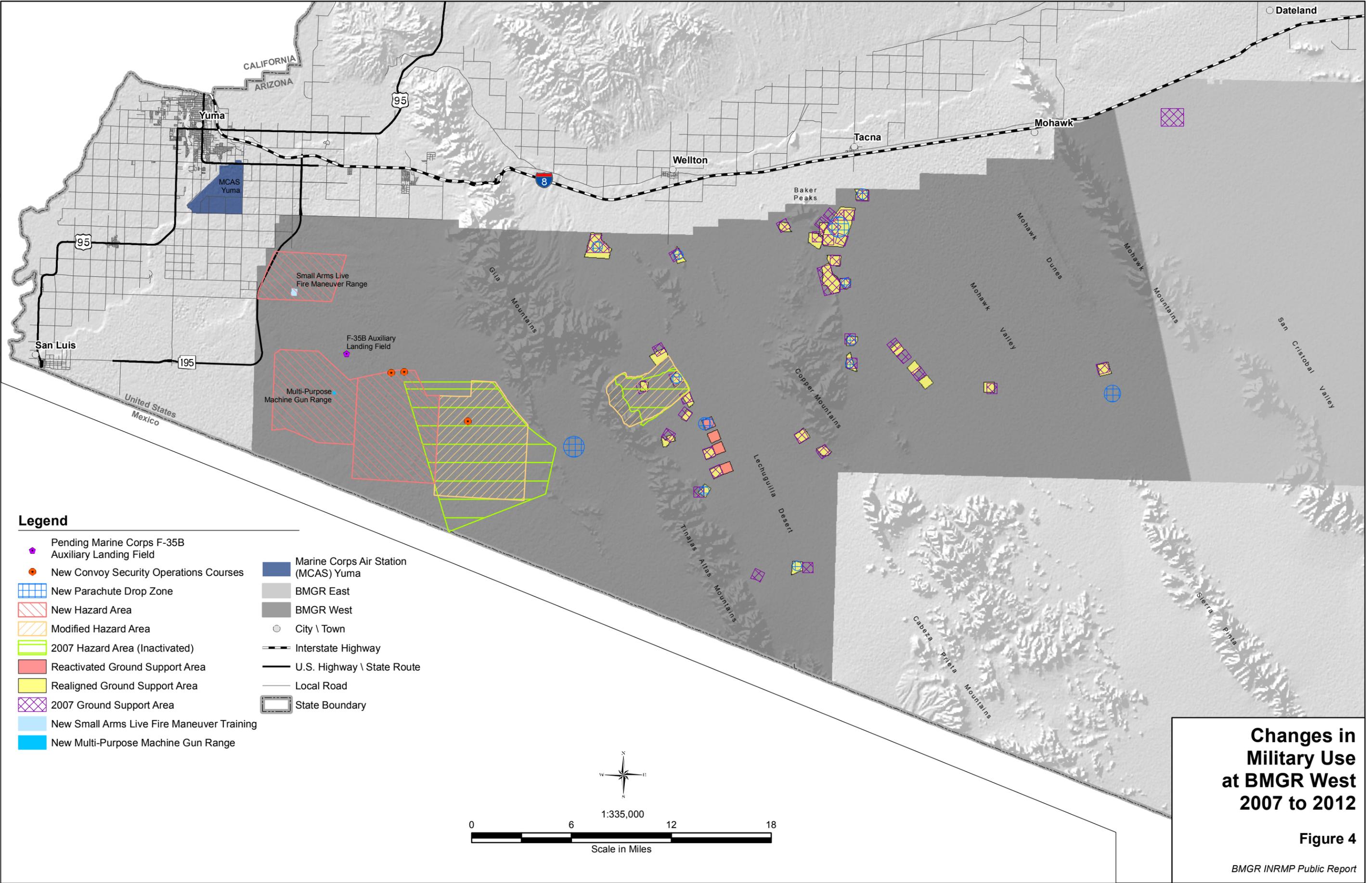


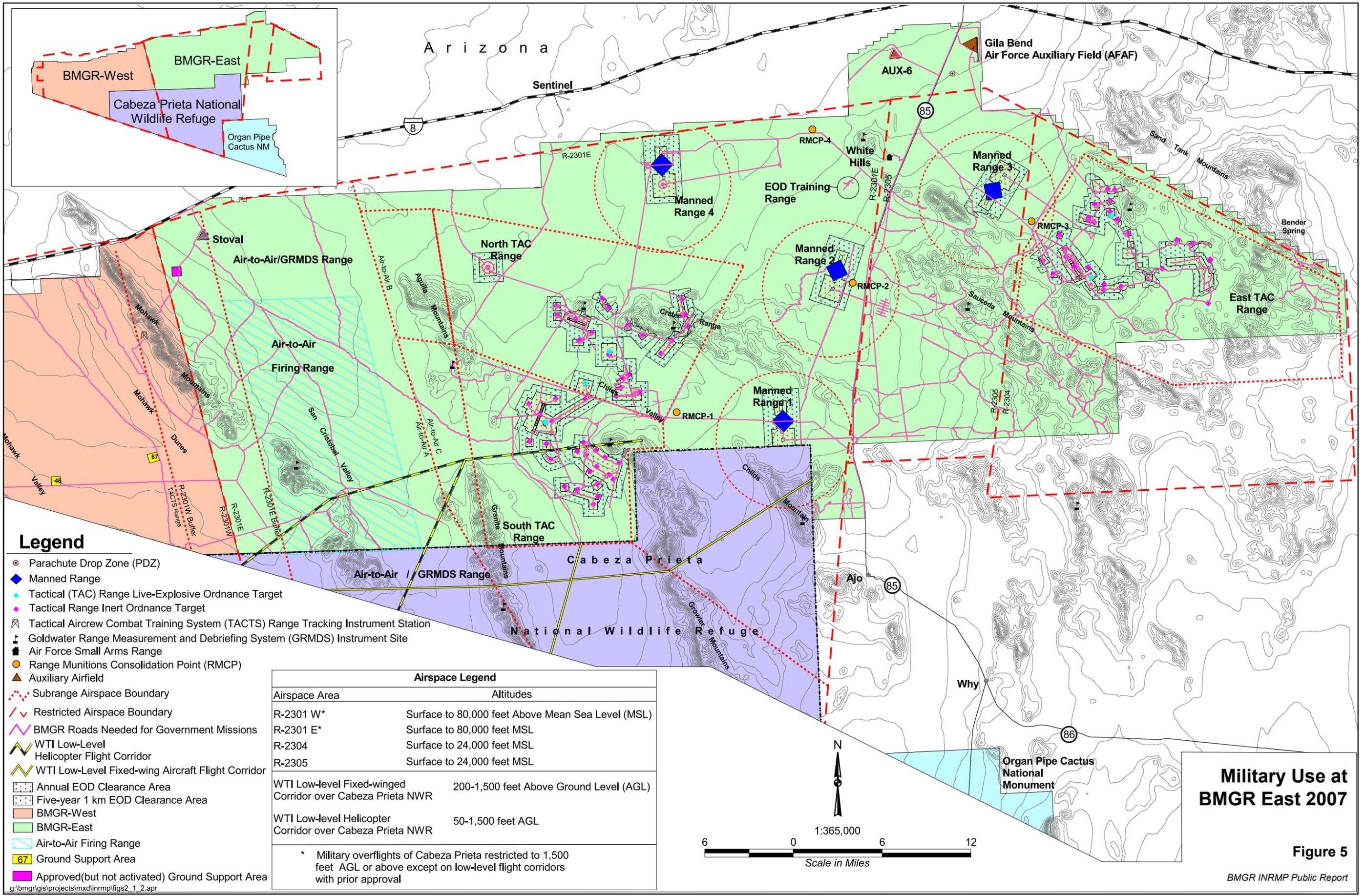
Legend

- Air Combat Training System
- Tactical Aircrew Combat Training System (TACTS) Range Tracking Instrument Station
- TACTS Range Mobile Threat Emitter Site
- TACTS Range Fixed Threat Emitter Site
- TACTS Tracking and Instrumentation Subsystem (TIS) Stations
- TACTS Range Electronically Scored Target
- Pending Marine Corps F-35B Auxiliary Landing Field
- Auxiliary Airfield (AUX)
- Convoy Security Operations Courses
- Designated BMGR Road System
- Parachute Drop Zone
- Hazard Area
- Ground Support Area
- Rifle and Pistol Ranges
- Cannon Air Defense Complex
- Small Arms Live Fire Maneuver Range
- Multi-Purpose Machine Gun Range
- Munitions Treatment Range
- Restricted Airspace
- Airspace Subrange Boundary
- Marine Corps Air Station (MCAS) Yuma
- BMGR East
- BMGR West
- City \ Town
- Interstate Highway
- U.S. Highway \ State Route
- Local Road
- Cabeza Prieta National Wildlife Refuge
- State Boundary



Current Military Use at BMGR West 2012
Figure 3
 BMGR INRMP Public Report



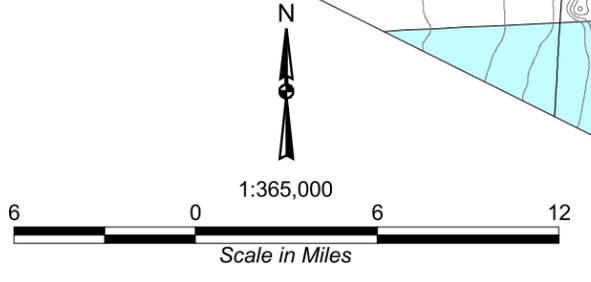


Legend

- Parachute Drop Zone (PDZ)
- ◆ Manned Range
- ◆ Tactical (TAC) Range Live-Explosive Ordnance Target
- ◆ Tactical Range Inert Ordnance Target
- ⊠ Tactical Aircrew Combat Training System (TACTS) Range Tracking Instrument Station
- ⊠ Goldwater Range Measurement and Debriefing System (GRMDS) Instrument Site
- ⊠ Air Force Small Arms Range
- Range Munitions Consolidation Point (RMCP)
- ▲ Auxiliary Airfield
- Subrange Airspace Boundary
- - - Restricted Airspace Boundary
- BMGR Roads Needed for Government Missions
- WTI Low-Level Helicopter Flight Corridor
- WTI Low-Level Fixed-wing Aircraft Flight Corridor
- Annual EOD Clearance Area
- Five-year 1 km EOD Clearance Area
- BMGR-West
- BMGR-East
- Air-to-Air Firing Range
- 67 Ground Support Area
- Approved (but not activated) Ground Support Area

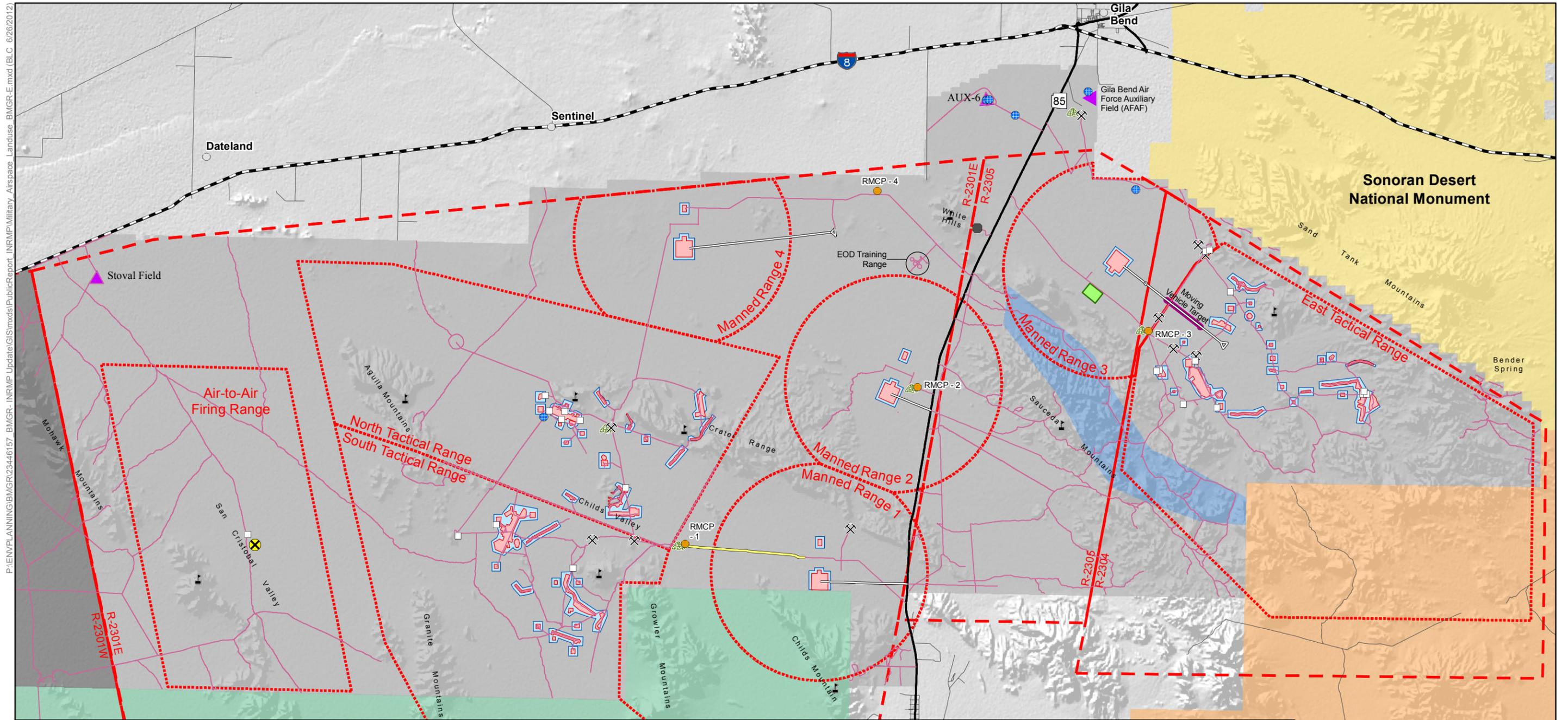
Airspace Legend	
Airspace Area	Altitudes
R-2301 W*	Surface to 80,000 feet Above Mean Sea Level (MSL)
R-2301 E*	Surface to 80,000 feet MSL
R-2304	Surface to 24,000 feet MSL
R-2305	Surface to 24,000 feet MSL
WTI Low-level Fixed-winged Corridor over Cabeza Prieta NWR	200-1,500 feet Above Ground Level (AGL)
WTI Low-level Helicopter Corridor over Cabeza Prieta NWR	50-1,500 feet AGL

* Military overflights of Cabeza Prieta restricted to 1,500 feet AGL or above except on low-level flight corridors with prior approval



Military Use at BMGR East 2007

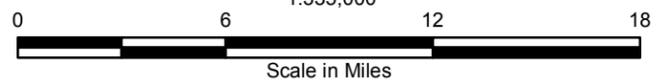
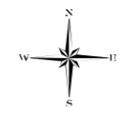
Figure 5



P:\ENVPLANNING\BMGR\23446157_BMGR_INRMP_Update\GIS\mxd\PublicReport_INRMP\Military_Airspace_BMGR-E.mxd (BLC_6/26/2012)

Legend

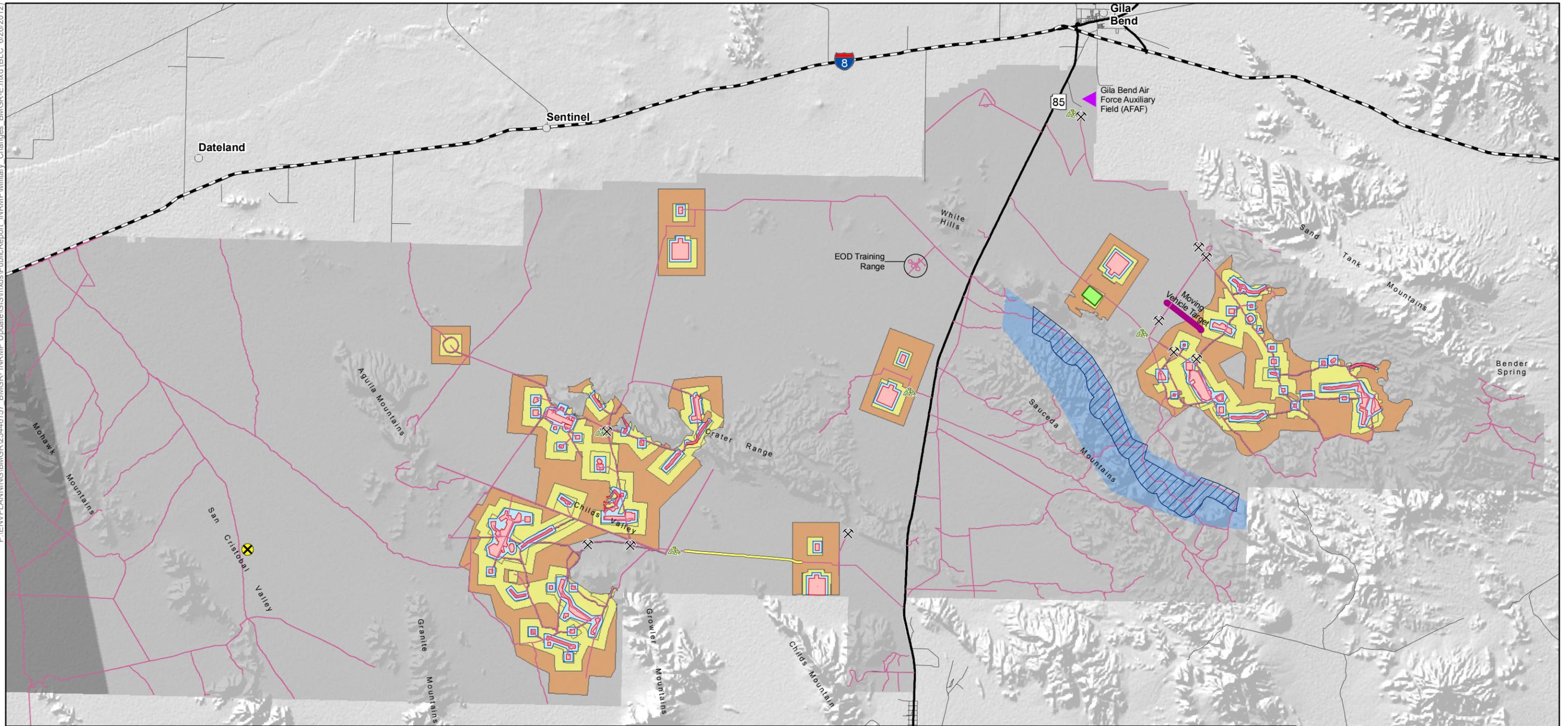
- Air Combat Training System
- Air Force Small Arms Range
- Range Munitions Consolidation Point (RMCP)
- Parachute Drop Zone
- Helicopter Landing Zone
- Sensor Training Area Site
- Sand and Gravel Extraction
- Sand and Gravel Stockpile
- Auxiliary Airfield (AUX)
- Lead-In-Line
- Moving Vehicle Target
- Designated BMGR Road System
- Approved Paving of Existing Road
- Helicopter Gunnery Range
- Explosive Ordnance Disposal (EOD) 2-Year Clearance Area
- Explosive Ordnance Disposal (EOD) 10-Year Clearance Area
- Restricted Airspace
- Airspace Subrange Boundary
- Conditional Public Access Area—Entry Permitted only with Prior Approval when East Tactical Range is Inactive
- BMGR East
- BMGR West
- City \ Town
- Interstate Highway
- U.S. Highway \ State Route
- Local Road
- Sonoran Desert National Monument
- Tohono O'odham Nation
- Cabeza Prieta National Wildlife Refuge



Tohono O'odham Nation

Current Military Use at BMGR East 2012

Figure 6



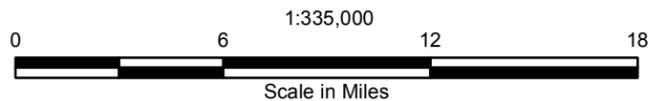
Legend

- New Sensor Training Area Site
- New Sand and Gravel Extraction
- New Sand and Gravel Stockpile
- Gila Bend Air Force Auxiliary Field (AFAF) New Taxiway and Control Tower
- New Moving Vehicle Target
- New Approved Paving of Existing Road
- New Helicopter Gunnery Range
- New Explosive Ordnance Disposal (EOD) 2-Year Clearance Area
- New Explosive Ordnance Disposal (EOD) 10-Year Clearance Area
- Retired Pre-2007 Explosive Ordnance Disposal (EOD) Clearance Area
- Retired Pre-2002 Explosive Ordnance Disposal (EOD) Clearance Area

Target Reconfiguration Priority Placement and Environmental Compliance Area

- New Conditional Public Access Area—Entry Permitted only with Prior Approval when East Tactical Range is Inactive
- 2007 Conditional Public Access Area
- Designated BMGR Road System

- BMGR East
- BMGR West
- City \ Town
- Interstate Highway
- U.S. Highway \ State Route
- Local Road



Changes in Military Use at BMGR East 2007 to 2012

Figure 7

2.4 MILITARY SURFACE USE AREAS AND CHANGES IN MILITARY SURFACE USE AREAS

Nearly all land areas within the BMGR support one or more military uses. Certain areas of the range are allocated on a either continuous or repetitive basis for training or support activities that occur in accordance with standard operating procedures and that have direct physical effects on soil surfaces, vegetation, and surface drainage. Many of the BMGR uses that are listed in Table 1 and Table 2—such as auxiliary airfields, air-to-ground target simulations and core impact areas, or ground support areas—qualify as these types of direct military surface uses. Other military activities—such as air-to-air gunnery and missile firings or laser targeting—affect the surface and surface use but the effects of these activities are dispersed and generally do not cause concentrated impacts within a defined area. All military use of the BMGR, however, requires a land base that can be secured, as necessary, and that is not encumbered by either the permanent or temporary presence of land uses, development, and/or individuals that are incompatible with both the safety and scheduling requirements of training and support activities.



Between 1941 and 1943 auxiliary airfields were built to a common standard consisting of three macadam runways configured as an equilateral triangle, with a rectangular macadam parking apron appended to one side. Most of these auxiliary fields have been determined eligible for inclusion on the National Register of Historic Places.

Range Safety and Security

Safety standards for the use of weapons and lasers at U.S. military ranges are both conservative and rigorous. Neither airborne nor ground-based weapons may be employed without prior determination that the expended ordnance or its fragments, debris, and components will be contained within a safe range area. This requirement is met by the calculation of a weapon danger zone (WDZ) for aircraft ordnance deliveries or a surface danger zones (SDZ) for ground-based weapon discharges. A WDZ defines the ground and airspace needed to laterally and vertically contain projectiles, fragments, debris, and components resulting from the firing, launching, and/or detonation of aircraft-delivered ordnance. The DoD standard for WDZs on all ranges is a 99.9999 percent level of containment, which means that the probability of munitions or hazardous fragments escaping the containment area is one in a million. SDZs are similar to WDZs but are prepared to determine the restricted land and airspace requirements to laterally and vertically contain projectiles, fragments, debris, and components resulting from the firing, launching, or detonation of ground-to-ground or ground-to-air weapons such as artillery, mortars, or surface-to-air missiles. SDZs are prepared to provide a 99.9999 percent level of containment for each type of ground-to-ground or ground-to-air weapon employed at a range. Both WDZs and SDZs must be wholly within the lateral and vertical limits of the range installation and overlying special use airspace. WDZs and SDZs can be enormous compared to the size of the target or core impact area in which the great majority of weapons fired at that target will strike. Targets and their core impact areas often occupy less than an acre or a few acres whereas WDZs and SDZs, which must account for the few weapons that will malfunction as well as the majority that will perform properly, can be tens or even hundreds of square miles in size. Similar safety parameters govern the use of military lasers, which are used for determining distances to targets, designating targets for attack, or guiding weapons to a target. The WDZs, SDZs, and/or laser hazards associated with standard training activities at the BMGR are typically contained within the lateral surface limits of the manned and tactical ranges in BMGR East and the designated range hazard areas in BMGR West. Weapons and/or laser use in training or test activities, however, are not limited to the standard operating procedures of these ranges; non-standard employment of weapons and lasers periodically occurs at the BMGR with advanced WDZ, SDZ, and/or laser hazard area determinations and approval. These non-standard activities may affect almost any portion of the range and require the closure of the affected range locations to nonparticipating personnel and the public during the scheduled duration of the activity.

The 2007 INRMP for the BMGR accounted for military surface use at the range by the relative effects of each allocated range area use on soil surfaces and vegetative communities. That inventory has been updated for 2012 and is provided in Table 3, Table 4, and Table 5. The degree of disturbance to soil surfaces, vegetation, and surface drainage that results from these uses varies from negligible to complete. Over 87 percent of the range surface has received no or low levels of disturbance from over 70 years of military use while less than 1 percent of the surface has been highly to completely disturbed.

2.5 NON-MILITARY AGENCY ACTIVITIES AT THE BMGR

2.5.1 Arizona Game & Fish Department

AGFD has management authority for the state's wildlife, which is held in trust for the citizens of the State of Arizona. This authority applies to the BMGR unless otherwise pre-empted by federal law. Established in 1929 under Title 17 of the Arizona revised statutes, AGFD is governed by the Arizona Game and Fish Commission. Under the provisions of Arizona Revised Statutes 17-231, the Arizona Game and Fish Commission establishes policy for the management, preservation, and harvest of wildlife. Under the umbrella of the Commission, the AGFD's mission is:

To conserve, enhance, and restore Arizona's diverse wildlife resources and habitats through aggressive protection and management programs, and to provide wildlife resources and safe watercraft and OHV vehicle recreation for the enjoyment, appreciation, and use by present and future generations.



AGFD has management authority for the state's wildlife.

The primary wildlife management responsibilities of AGFD on the BMGR were recognized in the 2007 INRMP and continue without change to include:

- Enforcing hunting regulations
- Developing and maintaining habitat assessment/evaluation, protection, management, and enhancement projects (for example, artificial water developments and Sonoran pronghorn food plots)
- Conducting wildlife population surveys
- Establishing game limits for hunting, trapping, and non-game species collection
- Managing wildlife predators and endangered species/special status species (management of federally listed endangered species is a responsibility shared with the USFWS)
- Managing OHV use in terms of habitat protection and user opportunities
- Issuing hunting permits

AGFD management activities on the BMGR typically continue to include conducting wildlife censuses to determine population trends, providing recommendations based on census data for restoring or maintaining resident species, controlling wildlife populations at appropriate sustained levels for protection of other BMGR resources values, and enforcing state game laws. AGFD continues to organize and conduct bighorn sheep surveys every year on BMGR lands; however, specific mountain ranges within the BMGR are usually surveyed every three years. AGFD conducts an annual call-count of mourning and

white-winged doves at Range 3 and the East Tactical Range (ETAC) and conducts Le Conte's thrasher surveys within BMGR East and BMGR West (see Section 5.2.2.1). The 56 RMO has ongoing partnerships with AGFD in conducting desert tortoise surveys (see Section 3.6.3). The AGFD performs annual surveys at BMGR West for the flat-tailed horned lizard (*Phrynosoma mcallii*) which is listed as species of concern by the Department.

AGFD also continues as a member of the Sonoran Pronghorn Recovery Team, which consists of representatives from the USFWS, Luke AFB, MCAS Yuma, National Park Service (from Organ Pipe Cactus National Monument [NM]), BLM (from the Lower Sonoran Field Office), the University of Arizona, Sustainable Development for the State of Sonora (CEDES) group (Mexico), Natural Commission for Protected Natural Areas (CONANP) (Mexico), veterinary staff and representatives from regional zoos including Phoenix Zoo and Los Angeles Zoo, and a representative from the U.S. Department of Homeland Security (Atkinson 2012). Although no tribal representatives have committed to be members of the current Recovery Team, Tohono O'odham Nation representatives have occasionally attended the Recovery Team meetings and paperwork to invite the tribe as a member of the recovery team is in progress. AGFD is usually the lead agency for implementing recovery and research actions for the Sonoran pronghorn that are authorized by the Recovery Team.

Luke AFB/56 RMO also partners with AGFD in the Southwestern Bald Eagle Management Committee, which oversees the successful Arizona Bald Eagle Nestwatch Program, and the relatively new Southwest Golden Eagle Management Committee. Luke AFB/56 RMO and MCAS Yuma also partner with AGFD in the Sonoran Desert Conservation Partnership Team.

In managing the state's wildlife, AGFD continues to make determinations on the appropriateness and need to transplant wildlife, which may include transplants into or out of the BMGR. Should wildlife transplants affecting the BMGR be proposed, appropriate environmental studies and regulatory compliance would be completed, as required, prior to implementing any specific proposal.

2.5.2 U.S. Border Patrol

U.S. Customs and Border Protection (CBP), as a component of the Department of Homeland Security, is



All roads approved for use on the BMGR are clearly marked for administrative (government use only), or public use. One management challenge is preventing the establishment of new, unauthorized trails.

charged with controlling and guarding the boundaries and borders of the United States against illegal border crossing activities (undocumented immigrants [UDI]), installing border infrastructure as needed to deter illegal crossings, and obtaining operational control of the border (Homeland Security Act of 2002, P.L. 107-296, codified at 6 U.S.C. §§101 *et seq.*, Section 102 of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, P.L. 104-208, as amended, 8 U.S.C. §1103 and other Acts. Within CBP, the U.S. Border Patrol is charged with “detecting and preventing the entry of terrorists, weapons of mass destruction, and unauthorized aliens into

the country, and to interdict drug smugglers and other criminals *between* official points of entry.” Within BMGR West, CBP also works with the Yuma County Sheriff’s Office and Yuma County Search and Rescue.

In January 2007, DHS waived numerous environmental, natural and cultural resource conservation, and endangered species protection laws in order to ensure the expeditious construction of the border fence along the international boundary within the BMGR and adjacent public lands (Federal Register 2007a), (Sikes Act, 16 U.S.C. §§ 670 *et seq.*, MLWA P.L. 106-65, 113 Stat. 885 (Oct. 5, 1999), NEPA 16 U.S.C. §§ 4321 *et seq.*, ESA 16 U.S.C. §§ 1531 *et seq.*, Clean Water Act 33 U.S.C. §§ 1251 *et seq.*, Wilderness Act, 16 U.S.C. §§ 1131 *et seq.*, NHPA 16 U.S.C. §§ 470 *et seq.*, National Wildlife Refuge System Administration Act, 16 U.S.C. §§ 668dd-668ee, and Administrative Procedure Act 5 U.S.C. §§ 551 *et seq.*) (Congressional Research Service Report (2009)).

BMGR West shares approximately 38 miles (about 61 kilometers) of the international border between the United States and Mexico but the entire range is potentially subject to UDI and smuggling traffic because of its proximity to the international border (Figure 1).

UDI and smuggling traffic across the BMGR was beginning to surge upward as the 2007 INRMP was being finalized. The rise in illegal cross-border traffic at the BMGR was the result of many factors but generally reflected the increased Border Patrol efforts to stem the illegal flow elsewhere along the whole of the southwestern border, which displaced traffic into remote and less well defended areas like the BMGR.

The illegal traffic, which involved border crossers in large numbers both on foot and in vehicles, and the Border Patrol’s law enforcement and search and rescue responses resulted in considerable off-road foot and vehicle traffic through the BMGR as well as the adjacent Cabeza Prieta NWR and Organ Pipe Cactus NM. Substantial damage to natural and cultural resources likely occurred in some heavily trafficked areas and dispersed traffic caused impacts in surface locations that had not been previously affected by military or public use. The Border Patrol law enforcement response included greatly expanded ground and aerial surveillance of the border, BMGR, Cabeza Prieta NWR, and Organ Pipe Cactus NM, as well as construction of a vehicle barrier fence. As a result of these measures, declining U.S. economic conditions, and other factors, UDI traffic through the BMGR and adjacent areas has sharply declined in recent years. In February 2012, Organ Pipe Cactus NM and the Border Patrol signed a Memorandum of Understanding (MOU) regarding the repair and maintenance of roads within the monument. In the spring of 2012, MCAS Yuma and the Border Patrol initiated meetings to develop a similar MOU regarding the repair and maintenance of roads within BMGR West.

Table 1. Current Military Use and Changes in Military Use at BMGR West

Range Feature or Activity	Current Use (see Figure 3)	Changes in Use from 2007 (see Figure 4)
<i>Surface Area and Airspace</i>		
Range Surface Area	Range boundary and land withdrawal area continue without change since established by the MLWA of 1999.	No changes.
Restricted Airspace	R-2301W continues essentially without change since before 1960.	No changes.
Airspace Subranges	Four airspace subranges continue to support training in air-to-air combat tactics, air-to-ground delivery of aircraft ordnance, forward airfield operations, and operations from Landing Helicopter Assault (LHA) ships. Airspace within R-2301W is reallocated to subranges or is aggregated into larger units as needed to support training but the lateral boundaries shown in Figure 3 are typical.	No changes.
<i>Aviation Training Ranges and Facilities</i>		
AUX-II	AUX-II continues to provide a simulated LHA deck for training pilots of AV-8B aircraft and helicopters to operate on and off of a LHA ship and an assault landing zone airstrip to train aircrews of C-130 aircraft to operate in and out of a primitive landing zone in a forward area. AUX-II also continues to be used as a staging area or forward arming and refueling point (FARP) for helicopter operations.	No changes.
F-35B Auxiliary Landing Field (ALF)	Construction of the Marine Corps F-35B ALF is currently authorized and in planning but has not been implemented.	Planning for basing the Marine Corps F-35B at MCAS Yuma and MCAS Miramar, conducting training at the BMGR, and constructing an ALF at BMGR West was initiated after 2007. The proposed actions were addressed in the 2010 <i>Final EIS for U.S. Marine Corps West Coast Basing of the F-35B Aircraft</i> (U.S. Department of the Navy, 2010). A Record of Decision (ROD) issued in December 2010 authorized construction of an ALF for F-35B operations at BMGR West. Like the AV-8B that it will replace, the F-35B is a short take-off and vertical landing aircraft that can operate from LHA and similar ships. The ALF will include three simulated LHA decks, flight control towers, an aircraft maintenance shelter, a refueling apron, a fire and rescue shelter, and a 3,000-foot long road operations training facility where pilots practice landing on a road.

Table 1. Current Military Use and Changes in Military Use at BMGR West

Range Feature or Activity	Current Use (see Figure 3)	Changes in Use from 2007 (see Figure 4)
Cactus West Target Complex	Cactus West continues to provide a bull’s-eye target, located inside a 1,500-foot radius bladed circle, for conventional bombing practice and two berm and panel targets for strafing practice. Ordnance deliveries are restricted to inert practice munitions. As described later in this table, the Cactus West Target is also used as an impact area for Multi-Purpose Machine Gun Range and as a Live Ordnance and Drop Tank Jettison Area.	The use of Cactus West for the Multi-Purpose Machine Gun Range and as a Live Ordnance and Drop Tank Jettison Area are changes since 2007 but there have been no changes in the use of Cactus West as an air-to-ground target complex.
Urban Target Complex (UTC)	The UTC continues to provide a simulated urban setting with streets, 182 buildings, and vehicles for training aircrews in precision air-to-ground attack in densely developed and populated areas. The UTC Range is located inside the 1,500-foot radius bladed circle of a former bull’s-eye target. The complex also continues to provide two berm and panel targets for strafing practice and a Moving Land Target, which consists of a remotely controlled vehicle that pulls a target sled on an oval track.	No changes.
TACTS Range	The TACTS range is an electronically instrumented range that continues to support air-to-air or air-to-ground combat training. The electronic architecture of the TACTS Range on the ground at BMGR West is composed of 27 fixed-position and 17 mobile-position electronic instrument sites that are used to track, record, and replay the simultaneous actions of up to 36 aircraft and generate electronic simulation and scoring of air-to-air, air-to-ground, and ground-to-air weapons use. The air-to-ground weapons delivery component of the TACTS Range is supported by 112 individual passive tactical target sites situated in 11 complexes that simulate airfield installations, power stations, fuel storage facilities, buildings, railway facilities, anti-aircraft missile and gun positions, and military vehicles. No munitions are fired or otherwise released on this electronically scored range.	No changes.
<i>Air-Ground Training Facilities</i>		
Ground Support Areas	Thirty-three undeveloped ground support areas are active as locations to which ground units may deploy off-road to participate in training exercises. Most ground troop deployments occur in association with aviation training exercises to promote coordination and integration between Marine air and ground elements and to enhance the realism of the training evolution for both elements.	Four ground support areas west of the Gila Mountains were approved for use in 2007 but were never activated or used and are not included in the current active inventory. Four other support areas—57, 58, 59, and 62 on Figure 3—were in active use prior to 1998, were inactive from 1998 to 2007, and have been reactivated since 2007. Five support areas to the east of the Baker Peaks in 2007 have been consolidated into Site 71 today. Some other sites have been slightly enlarged and others reduced in size. The active ground support areas in 2007 constituted about 10,922 acres in aggregate compared to an aggregate of 11,154 acres for the currently active inventory.

Table 1. Current Military Use and Changes in Military Use at BMGR West

Range Feature or Activity	Current Use (see Figure 3)	Changes in Use from 2007 (see Figure 4)
Parachute Drop Zones (DZ)	Eleven parachute DZs are currently designated. The DZ immediately to the east of AUX-II is the only DZ approved for parachute cargo drops, which require retrieval by an off-road combat fork lift. The AUX-II DZ is located within a previously disturbed, inactive bull’s-eye bombing target. The other 10 DZs are approved for use by military personnel only and are located at or along roads or in ground support areas so that no off-road driving is required to retrieve these troops.	Ten personnel DZ have been designated that were not in use in 2007. Prior to 2007, there were no restrictions as to where parachute troops could land within the BMGR West. Marine Corps safety criteria now require that DZs be surveyed for potential hazards, certified as approved, and published in the standard operating procedures for a range before they can be activated for use.
<i>Ground Combat Training Ranges</i>		
Rifle and Pistol Ranges	The Rifle and Pistol ranges continue to be used to train and qualify personnel in the use of small arms.	No changes.
Small Arms Live-Fire Maneuver Range	The Small Arms Live-Fire Maneuver Range is located in a retired sand and gravel borrow pit and serves as a close combat maneuvering range for training small teams or individuals in the tactical use of infantry small arms.	The Small Arms Live-Fire Maneuver Range was developed after 2007 in response to a need to provide pre-deployment training to troops from MCAS Yuma that were sent to Iraq or Afghanistan on short notice.
Multi-Purpose Machine Gun Range	The Multi-Purpose Machine Gun Range is located at the inactive air-to-ground bombing target at Panel Stager Range 2. Ground-to-ground machine gun fire of .50 caliber and smaller may be directed from guns mounted on vehicles traveling on access roads at target sets located in the retired bombing impact area.	The Multi-Purpose Machine Gun Range was developed after 2007 to provide pre-deployment training to troops that were deployed to Iraq or Afghanistan on short notice.
Convoy Security Operations Courses	Four Convoy Security Operations Courses are located along the existing access roads in the vicinities of the Cactus West Target Complex and the UTC and along the run-in line to the UTC. Ground-to-ground machine gun fire of .50 caliber and smaller may be directed from guns mounted on vehicles traveling on existing access roads or the existing run-in-line at target sets designed to simulate ambush attacks by hostile forces. The direction of fire from the access roads in the vicinity of the Cactus West is generally to the south such that the Cactus West target impact area also serves as an impact area for some of the Convoy Security Operations Courses. The direction of fire from the run-in-line is generally at target sets to the east or west such that the existing target impact areas at the UTC also serves as an impact area for the Convoy Security Operations Courses. The Convoy Security Operations Courses are designed to train troops assigned to protect vehicle convoys in combat theaters how to recognize, counter, and defeat threats from hostile forces. Static and pop-up targets that simulate threats are located in ambush scenarios along the access roads and the run-in line.	The four Convoy Security Operations Courses were initiated after 2007 in response to a need to provide pre-deployment training to troops from MCAS Yuma that were sent to Iraq or Afghanistan on short notice.

Table 1. Current Military Use and Changes in Military Use at BMGR West

Range Feature or Activity	Current Use (see Figure 3)	Changes in Use from 2007 (see Figure 4)
Combat Village	Combat Village continues to simulate a small building complex adjacent to a railroad. This facility is used as an electronically scored TACTS Range target and for training small units in infantry tactics involving reconnaissance, assaults, or defense at this setting. Only blank munitions are authorized at this training site.	No changes.
Hazard Areas	Five hazard areas are currently designated, four to the west and one to the east of the Gila and Tinajas Altas mountains, to support use of small arms and/or aircraft lasers in training operations. Surface entry to hazard areas is closed to nonparticipating personnel when hazardous activities are scheduled.	The hazard area east of the Gila Mountains and at the UTC west of these mountains were designated by 2007. Three additional hazard areas were designated after 2007 in response to regulations governing small arms ranges and laser use.
<i>Support Areas</i>		
Cannon Air Defense Complex	The Cannon Air Defense Complex continues to provide administrative, maintenance, and training areas for a Marine Air Control Squadron. The complex is a permanent built-up facility of about 0.3 square miles in size.	No changes.
AUX-II FASP	The field ammunition supply point (FASP), located about 1,500 feet northwest of AUX-II, continues to provide temporary secure storage for munitions used by ground units during field exercises, primarily during semi-annual Weapons Tactics Instructors (WTI) Courses.	No changes.
Munitions Treatment Range	The Munitions Treatment Range continues to be used to train personnel in the use of demolition explosives including the demolition of unexploded ordnance.	No changes.
Live Ordnance and Drop Tank Jettison Area	The Cactus West Target bull's-eye is used as a Live Ordnance and Drop Tank Jettison Area for aircraft experiencing difficulties that warrant a precautionary jettisoning of external stores prior to recovery at MCAS Yuma.	Since 2007, the Live Ordnance and Drop Tank Jettison Area has been relocated from the former bull's-eye circle of the inactive Panel Stager Target to Cactus West. Panel Stager Range 2 is presently used as the impact area for the Multi-Purpose Machine Gun Range.

Table 2. Current Military Use and Changes in Military Use at BMGR East

Range Feature or Activity	Current Use (see Figure 6)	Changes in Use from 2007 (see Figure 7)
<i>Surface Area and Airspace</i>		
Range Surface Area	Range boundary and land withdrawal area continue without change since established by the MLWA of 1999.	BMGR East boundary was re-surveyed, which resulted in the realignment of some boundary fences/markers, but there was no change in the range surface area.
Restricted Airspace	R-2301E, R-2304, and R-2305 continue essentially without change since before 1960.	No changes.
Airspace Subranges	Nine airspace subranges continue with only a few changes compared to 2007 conditions. The nine airspace subranges support aircraft weapons and air combat tactics system (ACTS) training and include an air-to-air firing range for aircraft gunnery or missile firing, four manned ranges and three tactical ranges for air-to-ground delivery of aircraft ordnance, and an ACTS Range. Airspace within R-2301E, R-2304, and R-2305 is reallocated to subranges or is aggregated into larger units as needed to support training, but the lateral boundaries shown in Figure 6 are typical.	Airspace previously allocated to Air-to-Air B and Air-to-Air C has been assigned to North and South tactical ranges to support operations in those ranges. This is a change to airspace only; the surface areas assigned to North and South tactical ranges is unchanged.
Lower Airspace Floor Over Cabeza Prieta NWR	Floor for standard flight activities in R-2301E over the Cabeza Prieta NWR remains at 1,500 feet above ground level (AGL) in accordance with a 1994 Memorandum of Understanding (MOU) among the Departments of the Air Force, Navy, and the Interior. Selected flight training operations, such as the twice per year WTI Course conducted by the Marine Corps, occur below 1,500 feet AGL, but are limited to prescribed altitudes, corridors, and times.	A proposal to lower the floor of R-2301E over the Cabeza Prieta NWR to 500 feet AGL is pending a Record of Decision (ROD). Planning for this action was initiated after 2007. The proposed action was addressed in the 2010 <i>Final EIS for Proposed BMGR East Range Enhancements</i> . The purpose of the proposed action is to enable realistic air-to-ground attack approaches to South Tactical Range (STAC) and low-altitude intercepts in the ACTS Range.
<i>Manned, Tactical, ACT, and Sensor Training Area Ranges</i>		
Manned Ranges	Manned Ranges 1, 2, 3, and 4 continue with no changes compared to 2007 conditions. Manned ranges provide primary instruction in air-to-ground delivery of bombs, rockets, and gunnery. Manned ranges continue to be restricted to inert-practice ordnance. Ordnance delivery training occurs on an almost daily basis at the manned ranges.	A ROD issued in May 2011 authorizes conversion of the southern, or left, side of Manned Range 3 from a weapons delivery range for fixed-wing aircraft to an air-to-ground gunnery range for helicopters. Planning for this action was initiated after 2007. The proposed action was addressed in the 2010 <i>Final EIS for Proposed BMGR East Range Enhancements</i> . Construction of the helicopter gunnery range began in March 2012.

Table 2. Current Military Use and Changes in Military Use at BMGR East

Range Feature or Activity	Current Use (see Figure 6)	Changes in Use from 2007 (see Figure 7)
Tactical Ranges	<p>North, South, and East tactical ranges continue with no changes to range surface boundaries, targets, or ordnance delivery authorizations compared to 2007 conditions. The tactical ranges provide advanced instruction in air-to-ground delivery of bombs, rockets, and gunnery in settings that are tactically realistic. Since 2007, a moving vehicle target was established and is currently in use. This target, which uses the existing lead-in-line to Manned Range 3 as a vehicle track was developed in East Tactical Range for air-to-ground attack training. North, South, and East tactical ranges each continue to provide one target for the delivery of live high explosives (HE) bombs; North and East tactical ranges each continue to provide one target for live HE air-to-ground missiles. All other targets are restricted to inert-practice ordnance. Tactical ranges continue to be used on a near daily basis for ordnance delivery training.</p>	<p>The moving vehicle target that uses the existing lead-in-line to Manned Range 3 as a vehicle track was developed after 2007. A ROD issued in May 2011 authorizes construction of a second target for the delivery of live HE air-to-ground missiles within East Tactical Range (ETAC). Planning for this action was initiated after 2007. The 2010 <i>Final EIS for Proposed BMGR East Range Enhancements</i> proposed two additional actions within the tactical ranges. One proposal is to develop a moving vehicle target in NTAC and the second is to streamline procedures for reconfiguring targets in all three tactical ranges to continue to upgrade targets to realistically simulate real-world tactical conditions. RODs for these two proposed actions are pending.</p>
ACTS Range	<p>The ACTS Range continues to support training in air combat maneuvering, fighter intercepts, and other tactical air combat activities with no changes compared to 2007 conditions. The airspace assigned to the ACTS Range usually extends to the perimeter of R-2301E but excludes airspace assigned to the Air-to-Air Firing; Manned Ranges 1, 2, and 4; and NTAC and STAC when these ranges are active. The ACT can be expanded to include R-2304 and R-2305 and/or airspace within the Sells Military Operations Area to the east above the Tohono O'odham Nation. The surface footprint of the ACTS Range is limited to 17 electronic instrument sites of which 9 sites are located within BMGR East and 8 sites are in off-range locations. Fifteen of the instrument sites require an area of no more than 15 feet by 15 feet.</p>	<p>No changes.</p>
Air-to-Air Firing Range	<p>The Air-to-Air Firing Range continues to support air-to-air gunnery and missile firing with no changes compared to 2007 conditions. The ground surface below the firing range serves receives expended gunnery rounds, missiles, and target debris. Firing missions at this range continue to be irregularly scheduled and infrequent (fewer than 10 annually).</p>	<p>No changes.</p>
Sensor Training Area Range	<p>The Sensor Training Area Range is currently authorized, but construction of this facility has not yet been implemented.</p>	<p>Planning for the Sensor Training Area Range was initiated after 2007. The proposed action was addressed in the 2010 <i>Final EIS for Proposed BMGR East Range Enhancements</i>. A ROD issued in May 2011 authorizes the Sensor Training Area Range, but construction of this action has not yet been initiated. The planned range would simulate a modern</p>

Table 2. Current Military Use and Changes in Military Use at BMGR East

Range Feature or Activity	Current Use (see Figure 6)	Changes in Use from 2007 (see Figure 7)
		<p>urban environment located in an area of about 640 acres. Air-to-ground attacks on the target complex would not involve actual ordnance deliveries, but would be simulated by sophisticated electronic and laser sensors. Aircraft engaging the Sensor Training Area would use airspace that is also used for the Air-to-Air Firing and ACTS ranges; these ranges would not be activated when the Sensor Training Area is scheduled.</p>
<i>EOD Clearances, Range Munitions Consolidation Points (RMCP), and EOD Training Range</i>		
EOD Clearance Areas	<p>EOD clearances of the target impact areas and range roads have been reduced in size and frequency at each manned and tactical range compared to 2007 conditions. EOD clearances now occur once a year, every two years, and every 10 years. Expended ordnance and target debris on the surface is cleared annually to 50 feet on either side of roads and target access ways and in the vicinities of targets to provide safe work areas for maintenance, reconstruction, or replacement of targets. Every two years, ordnance and target debris on the surface is cleared to a radius of 300 feet from each inert ordnance target and to a radius of 500 feet from each live ordnance target. Every ten years, ordnance and target debris on the surface is cleared to a radius of 1,000 feet from each inert and live ordnance target. No EOD clearances are conducted within the surface area below the Air-to-Air Firing Range.</p>	<p>EOD clearance areas at manned and tactical ranges have been reduced in size and frequency compared to the clearance that were conducted in 2007. The 2007 clearance criteria included:</p> <ul style="list-style-type: none"> • every year to 50 feet on either side of range roads outside of target impact areas • every year to a radius of 1,000 feet from each target • every five years to a radius of 1,000 meters (3,281 feet) from each target <p>The new biennial EOD clearance area is:</p> <ul style="list-style-type: none"> • 2,456 acres and 32 percent smaller than the 2007 annual clearance areas at all four manned ranges in aggregate • 8,176 acres and 31 percent smaller than the 2007 annual clearance areas at all three tactical ranges in aggregate <p>The new ten-year EOD clearance area is:</p> <ul style="list-style-type: none"> • 4,412 acres and 16 percent smaller than the 2007 five-year clearance areas at all four manned ranges in aggregate • 21,584 acres and 23 percent smaller than the 2007 five-year clearance areas at all three tactical ranges in aggregate
RMCPs 1, 2, 3, and 4	<p>RMCPs 1, 2, 3, and 4 continue to serve as range EOD and maintenance support areas. Expended munitions, munitions scrap, and target debris that is safe for handling is cleared from the three tactical and four manned ranges and transported to the RMCPs for demilitarization and decontamination processing before being released for off-range recycling or disposal. The RMCPs are also used as staging locations for target construction, maintenance, and replacement operations.</p>	No changes.

Table 2. Current Military Use and Changes in Military Use at BMGR East

Range Feature or Activity	Current Use (see Figure 6)	Changes in Use from 2007 (see Figure 7)
EOD Training Range	The EOD Training Range continues to be used for instructing EOD technicians in conducting safe detonations of expended but unexploded ordnance. Detonation of high-explosive charges weighing up to 2,000 pounds net explosive weight is authorized in this area.	No changes.
<i>Auxiliary Airfields, Small Arms Range, and Sand and Gravel Excavation and Stockpile Areas</i>		
Gila Bend AFAF	Gila Bend AFAF continues to serve as the operational support center for BMGR East and includes a 8,500-foot runway for fixed-wing aircraft, a heliport, and a built area that houses office, industrial, storage, temporary housing, and other spaces. The six-pad heliport is used routinely to support ARNG training operations. No personnel or aircraft are permanently based at Gila Bend AFAF. A taxiway for the runway and a new air traffic control tower are authorized, but no construction has been initiated.	A ROD issued in May 2011 authorizes a new taxiway for the runway and a new air traffic control tower but construction of these actions has not yet been initiated. Planning for these facilities was initiated after 2007 and the proposed actions were addressed in the 2010 <i>Final EIS for Proposed BMGR East Range Enhancements</i> .
Auxiliary Airfields	AUX-6, AUX-11, and Stoval Airfield are World War II vintage, primitive airfields that continue to be used for certain training activities. AUX-6 is used on an irregular schedule as a staging area or FARP for helicopter operations and as a field training/bivouac site for ARNG or Air Force Security Police units. AUX-11 also is used on an irregular schedule as a staging area for helicopter operations or as an artillery firing position. Stoval Airfield is often used during Marine Corps WTI Courses as a FARP, helicopter assault staging area, and bivouac site, as well as for C-130 aircraft forward operating field operations.	No changes.
Small Arms Range	The Small Arms Range continues to be used for small arms training by the U.S. Border Patrol and Air Force Security Police.	The U.S. Border Patrol use of the small arms range has increased from occasional use in 2007 to near-daily use in 2012.
Sand and Gravel Excavation and Stockpile Areas	A ROD issued in May 2011 authorizes excavation of sand and gravel from 10 wash locations in BMGR East and stockpiling of these materials for later use. The sand and gravel is authorized for on-range use to simulate target features such as aircraft parking revetments, repair/maintain facilities such as berms, fill road ruts, restore at-grade road crossings of washes, and similar on-range needs. This action has been initiated.	Planning for sand and gravel excavation and stockpile areas was initiated after 2007. The proposed action was addressed in the 2010 <i>Final EIS for Proposed BMGR East Range Enhancements</i> .

Table 3. Active and Inactive Military Surface Use Footprint at BMGR West

Active or Inactive Military Surface Use Area	Associated Surface Disturbance ^a	Active Surface Use Area in 2007		Inactive Surface Use Area in 2007		Active Surface Use Area in 2012		Inactive Surface Use Area in 2012	
		Area in Acres	Percentage ^b	Area in Acres	Percentage ^b	Area in Acres	Percentage ^b	Area in Acres	Percentage ^b
1. AUX-II	L to H	215	0.03			215	0.03		
2. Cactus West Target Complex/Live Ordnance and Drop Tank Jettison Area	C	200	0.03			200	0.03		
3. Urban Target Complex (Moving Sands Target Complex in 2007)	C	200	0.03			205	0.03		
4. TACTS Range targets and instrument sites	C	170	0.02			170	0.02		
5. Ground Support Areas	L to H	10,922	1.58	232	0.03	11,154	1.61		
6. Parachute Drop Zones	N	10	<0.01			4,058	0.59		
7. Rifle and Pistol Ranges	C	37	<0.01			37	<0.01		
8. Small Arms Live-Fire Maneuver Range	C	NA ^c	NA			77	<0.01		
9. Multi-Purpose Machine Gun Range	L to H	NA	NA			18	<0.01		
10. Convoy Security Operations Courses	L to H	NA	NA			3,265	0.47		
11. Combat Village	M to C	54	<0.01			54	<0.01		
12. Hazard Areas (two in 2007, five in 2012)	N	38,721	5.56			71,486	10.32		
13. Cannon Air Defense Complex	C	169	0.02			169	0.02		
14. AUX-II FASP	C	NA	NA			4	<0.01		
15. Munitions Treatment Range	M to C	252	0.04			252	0.04		
16. Retired test areas	M to C			841	0.12			841	0.12
17. Pending F-35 B ALF (projected area)	C	NA	NA			320	0.05		
Total direct active/inactive surface use areas at BMGR West that cause no or negligible surface disturbance	N	38,731	5.59			75,544	10.90		
Total direct active/inactive surface use areas at BMGR West that cause low to moderate surface disturbance	L to M	0	0.00			0	0.00		
Total direct active/inactive surface use areas at BMGR West that cause low to high surface disturbance	L to H	11,137	1.61	232	0.03	11,369	1.64		

Table 3. Active and Inactive Military Surface Use Footprint at BMGR West

Active or Inactive Military Surface Use Area	Associated Surface Disturbance ^a	Active Surface Use Area in 2007		Inactive Surface Use Area in 2007		Active Surface Use Area in 2012		Inactive Surface Use Area in 2012	
		Area in Acres	Percentage ^b	Area in Acres	Percentage ^b	Area in Acres	Percentage ^b	Area in Acres	Percentage ^b
Total direct active/inactive surface use areas at BMGR West that cause moderate to complete surface disturbance	M to C	306	0.04	841	0.12	306	0.04	841	0.12
Total direct active/inactive surface use areas at BMGR West that cause complete surface disturbance	C	776	0.11			1,182	0.17		
Total direct active/inactive surface use areas at BMGR West		50,950	7.35	1,073	0.15	88,401	11.13	841	0.12

^a N = No or negligible levels of disturbance to ground surfaces, surface drainages, and vegetative communities.
L to M = Low to moderate levels of disturbance to ground surfaces, surface drainages, and vegetative communities.
L to H = Low to high levels of disturbance to ground surfaces, surface drainages, and vegetative communities.
M to C = Moderate to complete levels of disturbance to ground surfaces, surface drainages, and vegetative communities.
C = Complete levels of disturbance to ground surfaces, surface drainages, and vegetative communities.
^b BMGR West encompasses 692,816 acres.
^c NA = Not applicable, surface use does not exist.

Table 4. Active and Inactive Military Surface Use Footprint at BMGR East

Active or Inactive Military Surface Use Area	Associated Surface Disturbance ^a	Active Surface Use Area in 2007		Inactive Surface Use Area in 2007		Active Surface Use Area in 2012		Inactive Surface Use Area in 2012	
		Area in Acres	Percentage ^b	Area in Acres	Percentage ^b	Area in Acres	Percentage ^b	Area in Acres	Percentage ^b
1. Manned Ranges 1, 2, 3, and 4									
1.1 Cleared target areas	C	939	0.09			939	0.09		
1.2 Two-year EOD clearance areas—extends to 300' from targets—active 2007 to present	L to H					2,245	0.21		
1.3 Ten-year EOD clearance areas—extends from 300' to 1,000' from targets—active 2007 to present	L to M					1,857	0.18		
1.4 One-year EOD clearance areas—extended to 1,000' from targets—active 2001 to 2007	L to M	7,615	0.72					3,834	0.36
1.5 Five-year EOD clearance areas—extended from 1,000' to 1 kilometer (3,281') from targets—active 2001 to 2007	L to M	19,070	1.81					19,070	1.81
1.6 Five-year EOD clearance areas—extended from 1,000' to 1-nautical mile (6,081') from targets—active 1975 to 2001	L to M			8,168	0.78			8,168	0.78
2. North, South, and East Tactical Ranges									
2.1 Cleared target simulations	C	430	0.04			430	0.04		
2.2 Two-year EOD clearance areas—extends to 300' from targets—active 2007 to present	L to H					6,580	0.63		
2.3 Ten-year EOD clearance areas—extends from 300' to 1,000' from targets—active 2007 to present	L to M					12,256	1.16		
2.4 One-year EOD clearance areas—extended to 1,000' from targets—active 2001 to 2007	L to M	26,447	2.51					7,531	0.72
2.5 Five-year EOD clearance areas—extended from 1,000' to 1 kilometer (3,281') from targets—active 2001 to 2007	L to M	42,028	3.99					40,682	3.87

Table 4. Active and Inactive Military Surface Use Footprint at BMGR East

Active or Inactive Military Surface Use Area	Associated Surface Disturbance ^a	Active Surface Use Area in 2007		Inactive Surface Use Area in 2007		Active Surface Use Area in 2012		Inactive Surface Use Area in 2012	
		Area in Acres	Percentage ^b	Area in Acres	Percentage ^b	Area in Acres	Percentage ^b	Area in Acres	Percentage ^b
2.6 Five-year EOD clearance areas—extended from 1,000’ to 1-nautical mile (6,081’) from targets—active 1975 to 2001	L to M			50,520	4.80			50,520	4.80
2.7 HE hill target core and dispersed blast impact areas (included in active 2-year EOD areas)	L to C	3,027	0.29			3,027	0.29		
3. Air-to-Air Firing Range	N	101,040	9.60			106,956	9.60		
4. ACTS Range instrument sites	C	<1	<0.01			<1	<0.01		
5. RMCPs 1, 2, 3, and 4 and other maintenance and EOD support areas	M to C	435	0.04			20	<0.01		
6. EOD Training Range	C	145	0.01			145	0.01		
7. Gila Bend AFAF	M to C	2,007	1.91			3	1.91		
8. AUX-6, AUX-11, and Stoval Airfield	L to H	1,000	0.10			1,000	0.10		
9. Four <u>inactive</u> auxiliary airfields (AUX-7, -8, -9, and -10)	L to H			1,170	1.11			1,170	1.11
10. Small Arms Range	C	15	<0.01			15	0.01		
11. Sand and gravel excavation and stockpile areas	C					4	<0.01		
12. Pending Sensor Training Area Range (projected area)	M to C					640	0.06		
13. Pending Manned Range 3 Helicopter Gunnery Range (to be located within existing active and inactive EOD clearance areas)	M to C					1,800	0.17		
14. Pending North Tactical Range Moving Vehicle Target (to be located in existing active and inactive EOD clearance areas)	M to C								
Total direct active/inactive surface use areas at BMGR East that cause no or negligible surface disturbance	N	101,040	9.60			106,956	10.16		
Total direct active/inactive surface use areas at BMGR East that cause low to moderate surface disturbance	L to M	95,160	9.04	58,688	5.58	14,113	1.34	129,805	12.34

Table 4. Active and Inactive Military Surface Use Footprint at BMGR East

Active or Inactive Military Surface Use Area	Associated Surface Disturbance ^a	Active Surface Use Area in 2007		Inactive Surface Use Area in 2007		Active Surface Use Area in 2012		Inactive Surface Use Area in 2012	
		Area in Acres	Percentage ^b	Area in Acres	Percentage ^b	Area in Acres	Percentage ^b	Area in Acres	Percentage ^b
Total direct active/inactive surface use areas at BMGR East that cause low to high surface disturbance	L to H	1,000	0.10	1,170	1.11	9,825	0.93	1,170	1.11
Total direct active/inactive surface use areas at BMGR East that cause moderate to complete surface disturbance	M to C	2,442	0.23			2,463	0.23		
Total direct active/inactive surface use areas at BMGR East that cause complete surface disturbance	C	1,530	0.15			1,534	0.15		
Total direct active/inactive surface use areas at BMGR East		201,172	19.12	59,858	5.69	134,891	12.82	130,975	12.45

^a N = No or negligible levels of disturbance to ground surfaces, surface drainages, and vegetative communities.
L to M = Low to moderate levels of disturbance to ground surfaces, surface drainages, and vegetative communities.
L to H = Low to high levels of disturbance to ground surfaces, surface drainages, and vegetative communities.
M to C = Moderate to complete levels of disturbance to ground surfaces, surface drainages, and vegetative communities.
C = Complete levels of disturbance to ground surfaces, surface drainages, and vegetative communities.

^b BMGR East encompasses 1,052,121 acres.

^c NA = Not applicable, surface use does not exist.

Table 5. Total Active and Inactive Military Surface Use Footprint at BMGR

	Active Surface Use Area in 2007		Inactive Surface Use Area in 2007		Active Surface Use Area in 2012		Inactive Surface Use Area in 2012	
	Area in Acres	Percentage of BMGR	Area in Acres	Percentage of BMGR	Area in Acres	Percentage of BMGR	Area in Acres	Percentage of BMGR
Military Surface Use Area								
Total direct active/inactive surface use areas at BMGR that cause negligible surface disturbance	139,771	8.01			182,500	10.46		
Total direct active/inactive surface use areas at BMGR that cause low to moderate surface disturbance	95,160	5.45	58,688	3.36	14,113	0.81	129,805	7.44
Total direct active/inactive surface use areas at BMGR that cause low to high surface disturbance	12,137	0.70	1,402	0.08	21,194	1.21	1,170	1.11
Total direct active/inactive surface use areas at BMGR that cause moderate to complete surface disturbance	2,748	0.16	841	0.12	2,769	0.16		
Total direct active/inactive surface use areas at BMGR that cause complete surface disturbance	2,306	0.13			2,716	0.16		
Total direct active/inactive surface use areas at BMGR	252,122	14.45	60,931	3.49	223,292	12.80	130,975	7.51