Adirondack Assessment Details

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	7.77	7.77	N/A	**Encroachment Scores**	8.96	8.96	N/A
No comments.				No comments.			

Adirondack Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Air Drop	🟡	Significant progress has been made in the past year with EOD clearance but large areas of land remain unusable due to the presence of MPPEH. These hazards prevent the range from constructing realistic airfield and realistic urban training areas, and allowing realistic maneuver of ground forces. The range will continue to request EOD support as funding and EOD personnel become available. Additional tree clearance will occur this year. Need an IR stimulator for realistic/relevant threat simulation.
	Special Operations	🟡	Significant progress has been made in the past year with EOD clearance but large areas of land remain unusable due to the presence of MPPEH. These hazards prevent the range from constructing realistic airfield and realistic urban training areas, and allowing realistic maneuver of ground forces. The range will continue to request EOD support as funding and EOD personnel become available.
Targets	Strategic Attack	🟡	Significant progress has been made in the past year with EOD clearance but large areas of land remain unusable due to the presence of MPPEH. These hazards prevent the range from constructing realistic airfield and realistic urban training areas. The range will continue to request EOD support as funding and EOD personnel become available.
	Counterair	🟡	Same as above.
	Counterland	🟡	Significant progress has been made in the past year with EOD clearance but large areas of land remain unusable due to the presence of MPPEH. These hazards prevent us from constructing realistic airfield and realistic urban training areas, and allowing realistic maneuver of ground forces. The range will continue to request EOD support as funding and EOD personnel become available.
Threats	Strategic Attack	🔴	Wideband Remote Emitter Threat System (WRETS) has no supply or depot support. The RWR Lite has very limited range. The range has very limited success providing EW threats to its customers when requested to do so.
	Counterair	🔴	Same as above.
	Counterland	🔴	Same as above.
	Electronic Combat Support	🔴	Same as above.
	Air Drop	🟡	Same as above.
Scoring & Feedback System	Counterair	🟡	No ACMI type system available
	Electronic Combat Support	🟡	Transmiter only, visual/verbal feedback only
Range Support	Strategic Attack	🟡	No current Link 16 capability. The range has acquired most of the hardware to setup a Digital Gateway but installation is a still a work in progress.
	Counterair	🔴	Same as above.
	Counterland	🔴	Same as above.
	Electronic Combat Support	🔴	Same as above.
	Command and Control	🔴	Same as above.
	Special Operations	🔴	Same as above.
	Intelligence, Surveillance and Reconnaissance	🔴	Same as above.
Small Arms Ranges	Counterland	🟡	Much of the range has become overgrown and/or littered with MPPEH. This prevents installation of targets and precludes land navigation training on much of the range. The range continues to request EOD support and work with environmental personnel to clear more land.
	Special Operations	🟡	Same as above.
	Intelligence, Surveillance and Reconnaissance	🟡	Same as above.
Collective Ranges	Electronic Combat Support	🔴	Wideband Remote Emitter Threat System (WRETS) has no supply or depot support. The RWR Lite has very limited range. The range has very limited success providing EW threats to its customers when requested to do so.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Adirondack Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
MOUT Facilities	Counterland		Significant progress has been made in the past year with EOD clearance but large areas of land remain unusable due to the presence of MPPEH. These hazards prevent the range from constructing realistic airfield and realistic urban training areas. The range will continue to request EOD support as funding and EOD personnel become available.
	Command and Control		Same as above.
	Special Operations		Significant progress has been made in the past year with EOD clearance but large areas of land remain unusable due to the presence of MPPEH. These hazards prevent the range from constructing realistic airfield and realistic urban training areas, and allowing realistic maneuver of ground forces. The range will continue to request EOD support as funding and EOD personnel become available.
	Intelligence, Surveillance and Reconnaissance		Same as above.
Suite of Ranges	Counterland		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance and Reconnaissance		Same as above.

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Threatened & Endangered Species/ Critical Habitat	Strategic Attack		The presence of the Indiana Bat prevents the cutting of trees, which may be used as habitat for the bat, during much of the year. This restriction delays or prevents clear cutting of various parts of the range for target construction.
	Counterland		Same as above.
	Command and Control		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance and Reconnaissance		Same as above.
Munitions Restrictions	Counterland		Significant progress has been made in the past year with EOD clearance but large areas of land remain unusable due to the presence of MPPEH. These hazards prevent the range from constructing realistic airfield and realistic urban training areas, and allowing realistic maneuver of ground forces. The range will continue to request EOD support for surface clearance as funding and EOD personnel become available.
	Special Operations		Same as above.
Airspace	Strategic Attack		Army UAS activity and the Safety Danger Zones created by concurrent use of other ranges on Fort Drum create a number of restrictions on any given day in the R5201 restricted airspace.
	Counterland		Same as above.
	Command and Control		Same as above.
	Special Operations		Same as above.
Wetlands	Strategic Attack		Wetlands restrictions have had a significant negative impact on target area/training area development. - The approval process required to develop target/training areas in the vicinity of wetlands often takes years to navigate. Requests for use of the wetlands mitigation bank on Ft. Drum have always been denied. Wetlands cover much of the training areas on Ft. Drum and combined with the presence of MPPEH have precluded use of vast tracts of land that would otherwise be available for training. The range continues to work with Environmental Division to resolve wetland related issues.
	Counterland		Same as above.
	Command and Control		Same as above.
	Special Operations		Same as above.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Airburst Assessment Details

Range Mission Description

3110 acre (845 acre impact area) Primary Training Range (PTR) located on southern portion of Fort Carson Army Post. Airburst's mission is to provide today's warfighters with a training environment that closley mirrors the battlefields and threats they will face in today's combat theaters' of operations. We cater to a broad spectrum of Federal, State, and local military, law enforcement and first responder units, designing relevent training packages/scenarios that most closely replicate the real world challenges they will face. We are authorized all types of inert ordnance, to include PGM's and JDAM. Primary Training Units include. 120FS (F-16 Buckley AFB, CO), 13ASOS (Joint Terminal Attack Controllers, Fort Carson, CO), 1-2 (AH-64, Fort Carson, CO), 2-135 (CH-47, UH-60 Buckley AFB, CO), 302AW (C-130, Peterson AFB, CO), 160th SOAR (AH-6, MH-60, MH-47), 10SFG (Fort Carson), EOD (Buckley AFB, Peterson AFB), Security Forces (140 SFS/460 SFS Buckley AFB, 137 SWS Greeley, 302 SFS/21 SFS Peterson AFB, 10 SFS US Air Force Academy). Other users include. 917AW (A-10 Barksdale AFB, LA), various F/A-18 and F-16 units, PC-12 sensor testing (Centenial Airfield, CO), AF Research Lab, Naval Research Lab.

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	FMC	NMC			PMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Counterair	FMC	NMC			FMC	FMC	FMC	FMC	FMC				FMC
Counterspace													
Counterland	PMC	PMC			PMC	PMC	FMC	FMC	FMC	FMC	FMC	PMC	FMC
Countersea													
Information Operations													
Electronic Combat Support	FMC	FMC			PMC	FMC		FMC	FMC		FMC		FMC
Command and Control	FMC	FMC			FMC	FMC		PMC	FMC		FMC	FMC	FMC
Air Drop	FMC	FMC			FMC	PMC	FMC	FMC	FMC		FMC	FMC	FMC
Air Refueling													
Spacelift													
Special Operations	FMC	FMC			FMC	PMC	FMC	FMC	FMC	FMC	FMC	PMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC			FMC	FMC		PMC	FMC		FMC	FMC	FMC

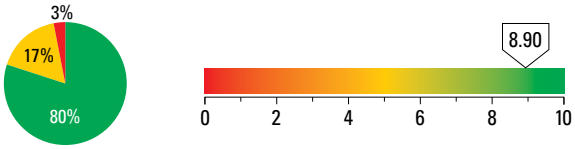
Legend: FMC PMC NMC

Encroachment Data

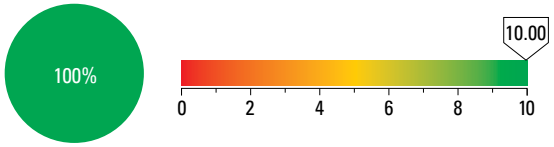
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	Minimal	Minimal	Minimal		Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Counterair												
Counterspace												
Counterland	Minimal	Minimal	Minimal		Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Countersea												
Information Operations												
Electronic Combat Support	Minimal		Minimal		Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Command and Control	Minimal		Minimal		Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Air Drop	Minimal	Minimal	Minimal		Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Air Refueling												
Spacelift												
Special Operations	Minimal	Minimal	Minimal		Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Intelligence, Surveillance, and Reconnaissance	Minimal		Minimal		Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate

Legend: Minimal Moderate Severe

Capability Chart and Scores



Encroachment Chart and Scores



Airburst Assessment Details

Summary Observations				Summary Observations			
No comments.				No comments.			
Historical Information, Results, and Future Projections				**Historical Information, Results, and Future Projections**			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	8.28	8.28	10.00	**Encroachment Scores**	8.86	8.86	10.00
A vast majority of areas rated yellow can be attributed to our inability to create the most realistic and relevant training environment due to insufficient land-space, air-space, funding and target sets. We perform very well at Close Air Support, Basic Surface Attack, and Basic Air Drops. Training evolutions suffer in terms of realism/relevance when the mission dictates large ground forces, enhanced threats, and large force exercises. In the coming years we will continue to operate as we have, maximizing the assets and personnel we have while operating on a shrinking budget.				No comments.			

Airburst Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Counterland		Limited land space doesn't allow us to build a realistic Urban CAS village. Training impact is limited number of targets and associated scenarios. We will continue to build the best Urban CAS village within current land constraints.
Airspace	Strategic Attack		Insufficient volume and attributes of airspace to conduct large force exercises or for bomber aircraft to maneuver . Marginal for fighter aircraft conducting strategic attack training.
	Counterair		Insufficient volume and attributes of airspace to conduct large force exercises. Working to expand airspace via Colorado Airspace Initiative.
	Counterland		Volume and attributes of airspace limits tactics and ordnance. Virtually all attack runs with PGMs or JDAM are limited to one direction. Working to expand airspace via Colorado Airspace Initiative.
Targets	Strategic Attack		Range target suite provides some but not all target types possible for strategic attack (ie real buildings/complexes vice stacked conex containers). Additionally, we don't posses any target sets with required fidelity for 5th gen fighters. We will continue to try to build the most realistic target sets that our current assets allow.
	Counterland		Range target suite provides some but not all target types possible for close air support. Limits are no realistic village for Urban CAS and no compressed soil block machine to build 'mud huts' similar to those in OIF/OEF. Additionally, we don't have any moving strafe targets that can be employed against with inert ordnance. Currently trying to procure funds for the compressed soil block machine through various channels.
	Electronic Combat Support		Limited capability to provide targets in the electro-magnetic spectrum, both in target types as well as range and cueing.
Threats	Strategic Attack		Limited capability to replicate a few tactical surface-to-air threats—RWR Lite x1, Smokey SAM launchers x 2.
	Counterland		Limited capability to replicate a few tactical surface-to-air threats—RWR Lite x1, Smokey SAM launchers x 2. Limited untrained, highly motivated, ground force (personnel) act as aggressors / Red Force against JTACS/SOF.
	Air Drop		Limited capability to replicate a few tactical surface-to-air threats—RWR Lite x1, Smokey SAM launchers x 2.
	Special Operations		Limited capability to replicate a few tactical surface-to-air threats—RWR Lite x1, Smokey SAM launchers x 2. Limited untrained, highly motivated, ground force (personnel) act as aggressors / Red Force against SOF.
Infrastructure	Command and Control		Current communications suite antiquated and need of replacement by building of greater functional configuration, visibility, and cost-effective construction. Date of remedy unknown. Additionally, no SADL, Link-16 or RADS (ATC feed) capabilities at the range. Currently attempting to procure software/hardware for a SADL and RADS feed.
	Intelligence, Surveillance and Reconnaissance		No small paved runway available for small ISR platforms requiring a prepared or hard surface.
MOUT Facilities	Counterland		A MOUT facility would greatly enhance the CAS and ground forces (Security Forces, EOD, and Special Ops Forces) training evolutions. This could go hand in hand with an Urban Village.
	Special Operations		Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Atterbury Range Assessment Details

Range Mission Description

Atterbury Range provides primary training for the 122nd FW, 178th FW, 180th FW, and joint training for LFE's, MEU's, SOF, SMERF, FEMA, ASOS, IW, Urban Warfare, Homeland Defense all in conjunction with the Muskatatuck Urban Warfare Training Center.

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	●	●			●	●	●	●	●			●	●
Counterair		●				●			●				
Counterspace													
Counterland	●	●			●	●	●	●	●	●	●		●
Countersea													
Information Operations													
Electronic Combat Support													
Command and Control													
Air Drop													
Air Refueling													
Spacelift													
Special Operations	●	●			●	●	●	●	●	●		●	●
Intelligence, Surveillance, and Reconnaissance	●	●			●	●	●	●	●		●	●	●

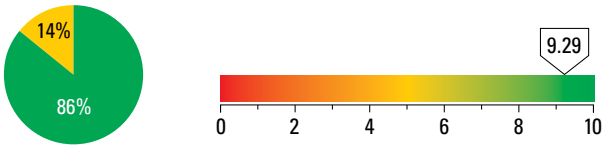
Legend: FMC ● PMC ● NMC ●

Encroachment Data

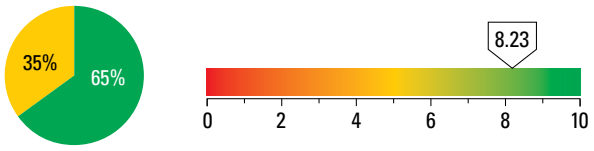
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	●	●	●	●	●	●	●	●	●			●
Counterair					●	●	●	●				●
Counterspace												
Counterland		●			●		●	●	●	●		●
Countersea												
Information Operations												
Electronic Combat Support	●	●			●	●	●	●	●	●		●
Command and Control												
Air Drop												
Air Refueling												
Spacelift												
Special Operations												
Intelligence, Surveillance, and Reconnaissance												

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

1. 14% of the AF's range/range complex mission areas are Partially Mission Capable (PMC)
2. MOUT Facilities and Suite of Ranges are impacting the range's capability to support Intelligence, Surveillance, and Reconnaissance, Special Operations, and Strategic Attack.

Summary Observations

1. 35% of the range/range complex mission is Moderately impacted by encroachment factors
2. Noise Restrictions and Adjacent Land Use are restricting range's abaility to support Counterland, Counterair and Strategic Attack.

Atterbury Range Assessment Details

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	8.98	8.98	8.98	**Encroachment Scores**	8.23	8.23	8.23
No comments.				No comments.			

Atterbury Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
MOUT Facilities	Strategic Attack	●	Under Construction.
	Special Operations	●	Same as above.
	Intelligence, Surveillance, and Reconnaissance	●	Same as above.
Suite of Ranges	Strategic Attack	●	Various types of ranges available on post through Army
	Special Operations	●	Same as above.
	Intelligence, Surveillance, and Reconnaissance	●	Same as above.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Airspace	Counterair	●	Racer MOA cannot be scheduled at the same time as JPG MOA
	Counterland	●	Occasional altitude restrictions over adjacent Army ranges
Noise Restrictions	Strategic Attack	●	Cannot over fly Princes Lakes to the West due to noise complaints
	Counterair	●	Same as above.
	Counterland	●	Same as above.
Adjacent Land Use	Strategic Attack	●	Cannot over fly Princes Lakes to the West due to noise complaints
	Counterair	●	Same as above.
	Counterland	●	Same as above.
Cultural Resources	Counterland	●	
Water Quality/ Supply	Counterland	●	
Range Transients	Counterair	●	Occasional civilian aircraft entering airspace

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Avon Park Assessment Details

Range Mission Description

Provide DoD and Allied users a full spectrum training facility focused on air-to-ground operations. The complex maintains unique target sets, training sites, and state-of-the-art scoring systems in battle space designated for fire and maneuver. Infrastructure supports any size unit up to and including composite large force exercises. While APAFR is part of the 23 Wing and an ACC installation, the range's primary user is the 93rd FS, Homestead ARB, FL. APAFR is also host to Atlantic Strike and Jaded Thunder LFEs.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack													
Counterair		FMC			FMC	PMC	PMC	PMC	PMC				FMC
Counterspace													
Counterland	FMC	FMC			FMC	PMC	FMC	PMC	PMC	FMC		FMC	FMC
Countersea													
Information Operations													
Electronic Combat Support	FMC	FMC			FMC	PMC	PMC	FMC	PMC				FMC
Command and Control	FMC	FMC			FMC	FMC	PMC	FMC	PMC			FMC	FMC
Air Drop	FMC	FMC			FMC	FMC	FMC	FMC	FMC				FMC
Air Refueling		FMC				FMC	FMC	FMC	FMC				FMC
Spacelift													
Special Operations	FMC	FMC			FMC	PMC	FMC	FMC	PMC	FMC		FMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC			FMC	PMC	FMC	FMC	PMC			FMC	FMC

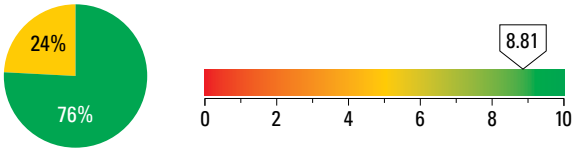
Legend: FMC, PMC, NMC

Encroachment Data

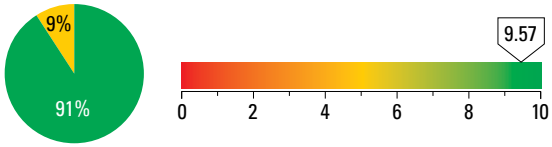
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack												
Counterair	Minimal		Moderate		Moderate	Moderate	Moderate	Severe	Moderate	Moderate	Moderate	Moderate
Counterspace												
Counterland	Minimal	Minimal	Moderate		Moderate	Moderate	Moderate	Severe	Moderate	Moderate	Severe	Moderate
Countersea												
Information Operations												
Electronic Combat Support	Minimal				Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Command and Control	Minimal	Minimal	Moderate		Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Air Drop	Minimal		Moderate		Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Air Refueling	Minimal		Moderate		Moderate	Moderate	Moderate	Severe	Moderate	Moderate	Moderate	Moderate
Spacelift												
Special Operations	Minimal	Minimal	Moderate		Moderate	Moderate	Moderate	Severe	Moderate	Moderate	Severe	Moderate
Intelligence, Surveillance, and Reconnaissance	Minimal		Severe		Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate

Legend: Minimal, Moderate, Severe

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

Limited capability to train for counter air. Not a primary mission of APAFR. Counterland capability is limited by lack of runway certification - air assets must launch and recover from MacDill AFB reducing their time on station. Biggest capability limitation has been a tremendous increase in ops tempo with no corresponding increase in manpower. APAFR is at or near it's maximum training capacity with current manning.

Summary Observations

Adjacent land use continues to be the primary area of encroachment concern. Completion of the JLUS was a significant step and the local jurisdictions provided a good deal of support to the process and were generally very supportive of the range mission. Increased UAS/RPA activity may highlight additional encroachment issues in the future. Wetlands will continue to be a challenge, especially in the State of Florida.

Avon Park Assessment Details

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	9.62	9.62	9.62	**Encroachment Scores**	9.32	9.32	9.32
APAFR's capabilities rating has decreased in relation to the last two years primarily due to a significant increase in ops tempo and the number and variety of units seeking training space. APAFR will be pursuing a man-power study in an effort to better align workload and manpower requirements. APAFR is actively pursuing runway certification and the programing actions needed to sustain the airfield as an integral part of the training environment. One significant mission change will be the introduction of the F-35 into the CAF and the associated operational requirements. Impacts of the F-35 operational training on range operations is not known at this time.				Overall scores have improved slightly from 2008–2010. Increased emphasis on public outreach and the JLUS process has helped. Efforts to pursue adoption of the JLUS recommendations by the local jurisdictions will be a major emphasis area in the coming years. Recently passed legislation in the State of Florida makes it mandatory for local planning councils to coordinate with military installations in their district. This has the potential to lessen encroachment pressures.			

Avon Park Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Threats	Counterair		APAFR has no high-fidelity, surface to air threat replication capability. Lack of high-fidelity threats limits the quality of training especially during large force exercises. No current plans to integrate high-fidelity threats at APAFR.
	Counterland		Same as above.
	Electronic Combat Support		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance and Reconnaissance		Same as above.
Scoring & Feedback System	Counterair		APAFR lacks any TSPI capability. Limits fidelity of air to air training. No current plans to integrate TSPI capability at APAFR.
	Electronic Combat Support		APAFR has an outdated communications infrastructure that cannot support LVC operations. Limits fidelity of training. APAFR communications upgrade has been funded and is underway. Expect new architecture in place by end of CY 10. LVC capability. has been discussed and will be more actively pursued once upgrade is complete.
	Command and Control		Same as above.
Infrastructure	Counterair		APAFR has an 8000x150 ft runway that is currently only certified as an LZ. Lack of runway certification severly limits the number and type of aircraft that can operate from the range. Pursuing airfield certification/waiver approval. ECD within 6 months.
	Counterland		Same as above.
Range Support	Counterair		Operations tempo has significantly increased, particularly over the last five years. Range manning has not been updated to keep pace with the additional workload. Manning combined with the 60 hour per week contract limitation has reached the point where APAFR staff cannot support all incoming training requests. Additionally, APAFR lacks SIPRNET capability. Units have to reschedule or are being denied range time. Lack of SIPRNET limits training fidelity and complicated range scheduling. APAFR staff pursue a manpower survey and seek additional manpower authorizations. ECD unknown. SIPRNET capability will be pursued once communications infrastructure upgrade is complete.
	Counterland		Same as above. Additionally, APAFR has limited capability to respond to wildland fires and relies heavily on State assistance. APAFR will be coordinating the results of a wildland fire program evaluation with the 23rd WG .
	Electronic Combat Support		Same as above.
	Command and Control		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance and Reconnaissance		Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Avon Park Detailed Comments

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Spectrum	Intelligence, Surveillance and Reconnaissance		Limited frequencies are available of UAS/RPA activity. Due to increased UAS/RPA activity at APAFR, available frequencies must be deconflicted through scheduling. Requests for range time have to be denied due to spectrum availability despite available air and ground space. APAFR personnel need to determine if additional frequencies can be obtained and if the expanded frequencies will alleviate the conflicts.
Adjacent Land Use	Counterair		Private development and other land use could affect the training mission at APAFR. A specific project is the Destiny project in Osceola County that would affect 1/3 of the Marion MOA. APAFR does not have a community planner. If the development goes through APAFR could lose 1/3rd of the Marion MOA which extends from 500 to 5000 ft AGL. Recently completed a Joint Land Use Study (JLUS) involving four counties and three municipalities, including Osceola County. Working with all the Planning Councils to adopt JLUS recommendations which will help fight encroachment. APAFR needs an authorization for a community planner. ECD - Encroachment is an on-going issue with no completion date.
	Counterland		Same as above.
	Air Refueling		Same as above. Additionally, low-level helicopter refueling occurs in Marion MOA.
	Special Operations		Same as above.
Wetlands	Counterland		Any new training mission, project, or change to an existing range activity that impacts wetlands requires extensive coordination and approval from numerous State and Federal entities. Efforts to meet wetland requirements have the potential to delay or even prevent training activities. An effort to produce a range wide FONPA is being processed to minimize impact.
	Special Operations		Same as above.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

BMGR Assessment Details

Range Mission Description

BMGR East is the major training range for the 56 FW, 162 FW, 355 FW, 563 RQS, and Arizona Army National Guard. BMGR supports daily air-to-ground sorties and electronic combat training. The range also supports. Air Guard/Air Reserve Test Center operations; Arizona ANG ""Snowbird"" deployed operations; Support ACC directed Angel Thunder Ex and USMC Weapons and Tactics Instructor Course training; Support world-wide JTAC training as well as coalition war fighter air-to-ground employment Provide for HE/ inert weapons employment; combat laser operations with a vast arrary of targetsProvide for full spectrum Air Combat Training Systems to include ACMI, threat simulation, datalink network, C2 Primary Users. 56 FW (AETC) F-16. 162 FW AZ ANG (AETC) F-16; 355 FW (ACC) A-10; 563 RQG (AFSOC) HC-130/H-60; AFRES H-60; AZ ArNG AH-64. users include 3 separate and distinct foreign military sales squadrons from Taiwan and Singapore.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack													
Counterair	●	●			●	●	●	●	●		●	●	●
Counterspace													
Counterland	●	●			●	●	●	●	●		●	●	●
Countersea													
Information Operations													
Electronic Combat Support	●	●				●							
Command and Control	●	●							●				
Air Drop	●	●				●	●	●	●	●	●	●	●
Air Refueling		●							●				
Spacelift													
Special Operations	●	●			●	●		●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●			●	●						●	

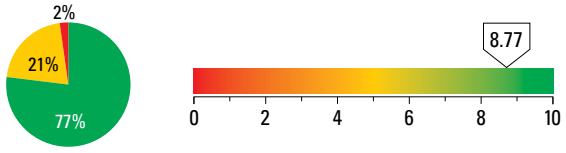
Legend: FMC ● PMC ● NMC ●

Encroachment Data

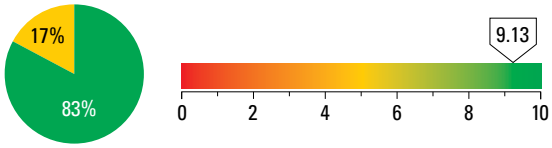
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack												
Counterair	●	●	●		●		●	●	●			●
Counterspace												
Counterland	●	●	●		●		●	●	●			●
Countersea												
Information Operations			●									
Electronic Combat Support			●		●				●			●
Command and Control			●		●				●			●
Air Drop	●	●	●		●	●	●		●			●
Air Refueling		●	●		●	●	●					
Spacelift												
Special Operations	●	●	●		●		●	●	●			●
Intelligence, Surveillance, and Reconnaissance												

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



BMGR Assessment Details

Summary Observations	Summary Observations
1. Did not rate training areas currently not conducted on the BMGR-E. In some cases we could support but limited capability exist; i.e. ISR and electronic combat 2. Effective C2 of training space having a negative effect on some operations/ training, i.e. JTAC train like you fight operations 3. Better fidelity MOUT facilities single most attribute effecting the training mission 4. While not a core competency of the range, supporting SPECOPS and like training is most effected training area on the BMGR.	1. 82.61 % of the range/range complex mission areas are fully capable and are not impacted by encroachment factors 2. 17.39 % of the range/range complex missions areas are moderately impacted by encroachment factors, but are being addressed. 3. While it appears cultural resources and range transients are impacting the BMGR-E the most, we are still able to support the mission as it stands today. Future/different military mission requirements may be more or less impacted in the future. Cultural impact is prevalent given magnitude of archeological finds on range and its impact is mitigated through need, assessment, and resolution. Range transients issue is sporadic based on Border Patrol effectiveness and overall flow of illegal traffic but raises concern due to lack of solid visibility downrange. Seeing illegal transients in nontraditional areas; and in an area not traditionally monitored. Counterland mission most effected by above encroachment factors. Sonoran Pronghorn population on the increase due in part to a joint captive breeding venture. Introduction of a second herd being proposed by U.S. Fish and Wildlife Service. Potential exist to de-list the species in mid-term vice long term if herd continues to grow at current rate. 4. No range/range complex mission areas are severely impacted by encroachment. Beginning to see solar development gain significant interest and development on the northern border of the BMGR-E (west of Gila Bend, AZ.)

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	8.77	8.77	8.77	**Encroachment Scores**	9.13	9.13	9.13
1. Note. Electronic combat/threats. Limited threat capability, lack of interactive feedback to pilots; seeing a lack of use due to limited system capabilities and nature/pace of F-16 syllabus training 2. While counterland/Air-space coded "GREEN," integration of RPAs/UAVs extremely difficult if not impossible based on current manned aircraft customer base (significant amount of RTU training coupled with operational squadron training); RPA/UAV mission currently assessed as incompatible				1. Rating stayed the same however, BMGR realized significant gain in new Sonoran Pronghorn Biological Opinion. New opinion reduced target closure criteria and lessened impact by over 80 percent and a take statement was added to the agreement. New opinion realized from health of population and on-going efforts, cooperation. Due to it's endangered status, the Pronghorn must be actively monitored and will continue to be an impact to the mission until de-listed 2. Until the US-Mexican border can be truly controlled, illegal trespass will continue to be an issue and impact to military mission. Excellent coordination with Customs Border Protection is helping to minimize impacts; most crossing are occurring during no-military operating times. Currently no electronic observation means available on the BMGR (USAF side). All clearing done by human on site and can have limited effect based on volume of land space 3. Non-renewable energy source development still being 'watched' on the northern border of the BMGR. Primarily in the vicinity of Gila Bend, AZ; no ground breaking development to date but permits and incentives have been issued by the State. 56 RMO and 56 FW trying to stay engaged with developers to ensure compatible development with military flying operations is considered.		

BMGR Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Targets	Special Operations	●	Limited targets designed for special ops (people/pop ups, etc). Severely limited opportunities for special ops and combat search and rescue. Planned Action. Continued development of Spec Op/CSAR ground movement area; current EIS addressing the development of a helicopter unique range incorporating pop-up targets, ROD expected in Spring 2011; target area specific funding source unknown
Threats	Electronic Combat Suppor	●	Lack of interactive threat simulation; limited threat capability; no electronic means for real time feedback capability to ECM or maneuver. Limited usefulness by flying community. Unknown remedies at this time; operations must provide requirement in order for BMGR-E to realize capability to support requirement.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

BMGR Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Threats	Intelligence, Surveillance and Reconnaissance	🟡	Limited threat generation down range limits ISR technique. Inability to effectively support mission. Unknown remedies at this time; addressing need however operational requirement will drive capability.
Scoring & Feedback System	Counterland	🟡	Manual range scoring only--no scoring on tactical ranges. This limits positive feedback to aircrew on effectivenes. Short term solution is to provide limited optical scoring capability in one of the tactical ranges; limited capability funded in-house; IOC spring 2011.
	Air Drop	🔴	No scoring capability for air drops. scoring only on manned ranges. This limits operational feedback on effectiveness. Unknown remedy at this time; no operational requirement for drop zone scoring.
Range Support	Command and Control	🟡	Limited capability for daily operations; no infrastructure exists to support operational C2 (AOC) if desired; LMR coverage is severely lacking; air/ground advisory service available but ATC like facility and positive control necessary to sustain future operations. Impact to Training: Safety of humans on the ground; restrictions to aircrew based on low situational awareness from a C2 perspective. Planned Action: 1) Current C2 node continues to grow in support of range and airspace operations--provides access, de-confliction, and situational awareness to users with limited resources (one long range FAA radar feed; read only Air Marine Operations Center (DHS) composite radar feed), extremely limited LMR system. 2) LMR repeater architecture submitted for assessment and approval--funding unknown and must wait for overall LMR upgrade of truncated system. 3) ATC like facility being readdressed for requirements/funding. Capability seen as a must given future real-time airspace sharing with FAA and expected integration of different assets downrange.
	Special Operations	🟡	There are limited maneuver areas; no instrumented MOUT facilities. This effects viable training opportunities for unique user set/requirement. Unknown remedy at this time; operators have not specifically addressed limited facilities with BMGR management; currently have limited on-ground maneuver training opportunities.
Collective Ranges	Counterland	🟡	Range is primarily air-maneuver centric. This provides a limited opportunity to integrate full spectrum air with ground maneuver such as convoy escort. Range Enhancement EIS is addressing this shortfall to a limited degree; Record of Decision expected Spring 2011.
MOUT Facilities	Counterland	🟡	There are limited maneuver areas; no instrumented MOUT facilities. This affects viable training opportunities for unique user set/requirement. Unknown remedy at this time; operators have not specifically addressed limited facilities with BMGR management; currently have limited on-ground maneuver training opportunities.
	Special Operations	🟡	MOUT areas are relatively rudimentary and limited in complexity; not instrumented for IED/cellular network; does not allow for full scale recovery operations. Limited utility/operational use. Planned Action: Continue to develop limited maneuver MOUT areas in support of Special Operations and CSAR; while it may not be feasible to develop down range, Gila Bend AFAF is a potential candidate to support special mission training requirements.
	Intelligence, Surveillance and Reconnaissance	🟡	Same as above.
Suite of Ranges	Special Operations	🟡	Same as above.

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Threatened & Endangered Species/ Critical Habitat	Counterland	🟡	Sonoran Pronghorn antelope (endangered species) on range. Presence on range closes targets; slows EOD/ maintenance activity. Continuing program of unique on-going assessment and avoidance measures; new Biological Opinion realized in 2010--reduced target closure criteria and opened targets by over 80%; realized one take statement. Additional captive breeding plot being proposed by Fish and Wildlife Service--herd will be classified 'experimental' ergo should not have any operational impact to mission however, if animals intermix with existing herd (by area), then they become protected
Munitions Restrictions	Counterland	🟡	HEI bullets not allowed on range due to EOD and safety. This limits training opportunities. Planned Actions. Consider developing an HEI only target area, contained. Unknown completion date due to operational requirement/ needs statement.
Cultural Resources	Counterland	🟡	BMGR-E lands rich in cultural artifacts; requires assessment and mitigation of each site that may or may not affect operations. Given time, each can be mitigated, minimizing impact. Cultural resource surveys and Section 106 consultation required for most operational undertakings (outside existing/historical target sets); discovery may impact training objectives, limit scope of operations. Planned Actions. Continue programmatic survey of all range lands; determine eligibility of site(s); continue to work with user to determine best course of action balancing operational need with cultural and biological sensitivities. Range enhancement EIS is to address expanded land use for target placement; Record of Decision anticipated in Spring 2011.

BMGR Detailed Comments

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Cultural Resources	Air Drop		Same as above.
	Special Operations		Same as above.
Range Transients	Counterland		Illegal human traffic and resulting law enforcement cross/access the BMGR-E; currently no electronic ground detection exists downrange. Discovery leads to range closures; cease weapons expenditures. Planned Actions. Continued interaction with Customs Border Protection agents; continue research on feasibility of ground based ground detection radar systems in interest of human safety; in 2010 have leveraged Civil Air Patrol flights with early AM sorties to help clear the range before opening--program deemed a success to help visually acquire illegal traffic (abandoned and staged vehicles) and act as a deterrent to illegal traffic.
	Air Drop		Same as above.
	Special Operations		Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Bollen Assessment Details

Range Mission Description

Provide a quality, realistic, tactical range environment for air-to-ground, forward air control and airdrop training to ensure the combat readiness of flying units throughout the Northeast and Mid Atlantic region. Primary Users 113 FW, 175th FW

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	PMC	PMC			FMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Counterair	PMC	PMC			FMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Counterspace													
Counterland	PMC	PMC			FMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Countersea													
Information Operations													
Electronic Combat Support													
Command and Control	FMC	FMC			FMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Air Drop	PMC	PMC			FMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Air Refueling													
Spacelift													
Special Operations	PMC	PMC			FMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Intelligence, Surveillance, and Reconnaissance	PMC	PMC			FMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC

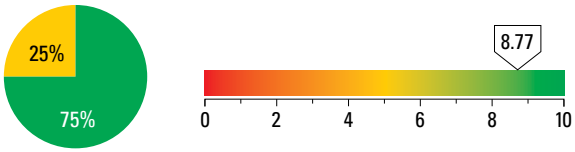
Legend: FMC PMC NMC

Encroachment Data

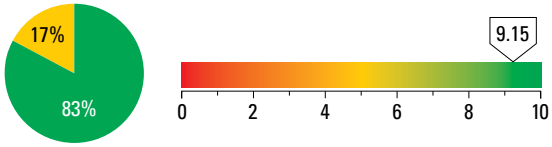
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	Minimal	Moderate	Minimal		Moderate	Minimal	Moderate	Minimal	Minimal	Minimal	Minimal	Minimal
Counterair	Minimal	Moderate	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterspace												
Counterland	Minimal	Moderate	Minimal		Moderate	Minimal	Moderate	Minimal	Minimal	Minimal	Minimal	Minimal
Countersea												
Information Operations												
Electronic Combat Support	Minimal	Minimal	Minimal		Moderate	Minimal	Moderate	Minimal	Minimal	Minimal	Minimal	Minimal
Command and Control	Minimal	Minimal	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Drop	Moderate	Minimal	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Refueling												
Spacelift												
Special Operations	Minimal	Minimal	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Intelligence, Surveillance, and Reconnaissance	Minimal	Minimal	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal

Legend: Minimal Moderate Severe

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

1. The small size of the airspace and impact area directly affects the majority of mission areas.
2. Many munitions are restricted due to the small size of the impact area.
3. Counterair is fallback mission within the range airspace.
4. Fourth Generation fighters will not be able to utilize Bollen Range effectively without increase in Restricted Airspace size and Noise Assessment.
5. Modern precision weapons require larger landspace and airspace.

Summary Observations

1. The small size of the airspace and impact area directly affects the majority of mission areas.
2. Many munitions are restricted due to the small size of the impact area.
3. Counterair is fallback mission within the range airspace.
4. Fourth Generation fighters will not be able to utilize Bollen Range effectively without increase in Restricted Airspace size and Noise Assessment.
5. Modern precision weapons require larger landspace and airspace.

Bollen Assessment Details

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	8.90	8.90	8.77	**Encroachment Scores**	9.43	9.43	9.15
1. The size of the current airspace needs to be modified. Preliminary research is underway and discussions with FAA have taken place regarding modifying existing training airspace. Positive results anticipated. 2. Several Threat Systems have been researched and several avenues for funding are being pursued. Anticipating positive outcome with greatly improved Threat Training Capabilities. 3. Several new missions to range are being integrated. These new missions will increase training realism and do so on a non-interference basis with existing training missions. 4. Encroachment issues stable at this time.				No comments.			

Bollen Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Strategic Attack		Small Landspace, limits tactics, no planned remedy.
	Counterair		Same as above.
	Counterland		Same as above.
	Air Drop		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance and Reconnaissance		Same as above.
Airspace	Strategic Attack		Small Landspace, limits tactics, Planning to increase Restricted Airspace size.
	Counterair		Same as above.
	Counterland		Same as above.
	Air Drop		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance and Reconnaissance		Same as above.
Threats	Strategic Attack		Limited Threat Capability, Minimal Training Benefit, Funding Request for Upgrade.
	Counterair		Same as above.
	Counterland		Same as above.
	Command and Control		Same as above.
	Air Drop		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance and Reconnaissance		Same as above.

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Threatened & Endangered Species/ Critical Habitat	Air Drop		Endangered species in drop zone, incomplete mission feedback, selective relocation by Wildlife Biologists.
Munitions Restrictions	Strategic Attack		Small Landspace, Restricts Munition Types, Planning to modify existing airspace to better meet mission requirements.
	Counterair		Same as above.
	Counterland		Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Bollen Detailed Comments

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Airspace	Strategic Attack		Small Airspace, Limits Tactics, Planning to Increase Restricted Airspace Size.
	Counterair		Same as above.
	Counterland		Same as above.
	Electronic Combat Support		Same as above.
	Command and Control		Same as above.
	Air Drop		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance and Reconnaissance		Same as above.
Noise Restrictions	Strategic Attack		No Missions Allowed 2300-0700L, Limits Night Training, No Planned Remedy.
	Counterland		Same as above.
	Electronic Combat Support		Same as above.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Cannon Assessment Details

Range Mission Description

Cannon Range is the primary training range for the 442FW. The 442FW utilizes Cannon Range twice a day Monday thru Friday and one weekend a month. Cannon hosts Joint Terminal Attack controllers on average two weeks per month working with the A-10's in Close Air Support. Cannon also supports the 131BW B-2 training, 139th AW for Airdrops, as well as an assortment of other types of air to ground exercises throughout the year. Cannon supports the 1-135th and the 3-135th Army aviation, Missouri Army Guard, in their UH-60 and AH-6 live gunnery training.

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	PMC	NMC			PMC	PMC	PMC	PMC	PMC				
Counterair													
Counterspace													
Counterland	PMC	PMC			FMC	PMC	PMC	PMC	PMC		FMC	PMC	
Countersea													
Information Operations	FMC					NMC		PMC	PMC				
Electronic Combat Support	FMC	PMC			PMC	NMC	NMC	PMC	PMC				
Command and Control	FMC	PMC			FMC	NMC	NMC	NMC	PMC			PMC	
Air Drop	PMC	PMC			FMC	PMC	FMC	FMC	PMC				
Air Refueling													
Spacelift													
Special Operations	PMC	PMC			FMC	PMC	PMC	PMC	PMC		PMC	PMC	
Intelligence, Surveillance, and Reconnaissance	FMC	PMC			PMC	NMC	NMC	NMC	PMC				

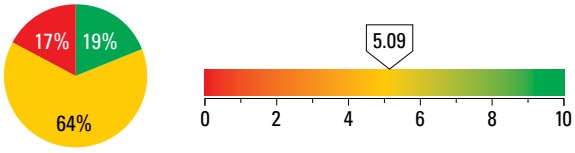
Legend: FMC, PMC, NMC

Encroachment Data

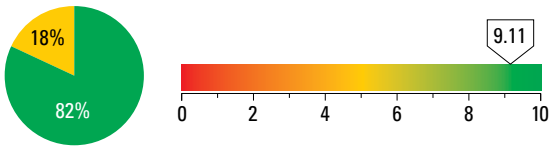
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	Minimal	Moderate	Minimal		Minimal	Minimal	Minimal	Moderate	Minimal	Minimal	Minimal	Minimal
Counterair	Minimal	Moderate	Minimal		Minimal	Minimal	Minimal		Minimal	Minimal		Minimal
Counterspace												
Counterland	Minimal	Moderate	Minimal		Moderate	Minimal	Minimal	Moderate	Minimal	Minimal	Minimal	Minimal
Countersea												
Information Operations												
Electronic Combat Support	Minimal	Moderate	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Command and Control	Minimal		Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Drop	Minimal	Moderate	Minimal		Moderate	Minimal	Minimal	Moderate	Minimal	Minimal	Minimal	Minimal
Air Refueling												
Spacelift												
Special Operations	Minimal	Moderate	Minimal		Moderate	Minimal	Minimal	Moderate	Minimal	Minimal	Minimal	Minimal
Intelligence, Surveillance, and Reconnaissance	Minimal		Minimal		Moderate	Minimal	Minimal	Moderate	Minimal	Minimal	Minimal	Minimal

Legend: Minimal, Moderate, Severe

Capability Chart and Scores



Encroachment Chart and Scores



Cannon Assessment Details

Summary Observations	Summary Observations
1. Cannon Range primarily provides a joint training environment for Counter-land operations. Other training uses in decreasing order of utilization are Special Operations, Air Drop, Strategic Attack, ISR, and Counter Air. Training for Command and Control, Electronic Combat Support, and Information Operations are integrated, within Cannon Range's capabilities, in each mission area. 2. Range support, particularly resource allocation (personnel and O&M $) is driving factor behind many of areas rated "Yellow" 3. 84% of rated areas are fully or partially mission capable	1. Adjacent Land Use is the highest encroachment factor affecting Cannon Range. As part of Fort Leonard Wood, small arms ranges are encroaching on the east side of Cannon to the point where it is effecting all air usage to some degree, and in some cases limiting when we can occupy our facilities (Army .50 cal range being active) 2. Mission Areas most severely impacted would be counterland, since this encompasses most of our mission.

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	5.17	5.17	5.17	**Encroachment Scores**	9.05	9.05	9.05
Capability scores have remained relatively unchanged from last CY. A vast majority of areas rated yellow are due to insufficient personnel to perform the type and duration of missions being requested. Cannon Range has limited capability to perform missions outside the normal day to day operations. We perform very well at Close Air Support, Basic Air Drops, etc. When the mission dictates large ground forces, enhanced threats, and large force exercises we fall short. This shortfall is due to manning, airspace size, and budget shortfalls. In the coming years we will continue to operate as we have, maximizing the assets and personnel we have.				1. Scores remained relatively the same since last CY, however improved business practices have been implemented to mitigate the impact of the .50 cal Army range. We have continued to deconflict our schedule proactively with Fort Leonard Wood. 2. Encroachment will continue to be an issue in the future, maybe more so since the Army is modifying some of their small arms ranges, to include Range 24 (.50 cal) to support more soldiers. This will negate the current way of deconflicting schedules. Currently their requirement to train soldiers on the .50 cal range is able to be mitigated by giving them days that we are not scheduled to go hot. However in the future with more soldiers needing trained on those ranges, I see encroachment to be an issue for several years to come. 3. In the future with current encroachment from other DoD assets (i.e. Army), Cannon Range will mitigate all conflicting land usage requirements by developing a solid relationship with our DoD counterparts. This will include analyzing the scheduling process to ensure that all parties can perform their mission using the same landspace to accomplish goals.		

Cannon Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Strategic Attack	🟡	Adjoining land uses and infrastructure effectively limit or preclude certain ordnance deliveries due to WDZ containment. No planned remedy.
	Counterland	🟡	Adjoining land uses and infrastructure effectively limit or preclude certain ordnance deliveries, particularly IAM due to WDZ size. Terrain limits feasible observation positions for Type 1 CAS controls.
	Air Drop	🟡	Unable to conduct static line airdrop due to vegetation, terrain, and adjacent HE impact area.
	Special Operations	🟡	Adjoining land uses and infrastructure effectively limit or preclude certain ordnance deliveries. Terrain limits feasible observation positions for Type 1 CAS controls.
Airspace	Strategic Attack	🔴	Insufficient volume and attributes of airspace to conduct large force exercises or for bomber aircraft to maneuver . Marginal for fighter aircraft conducting strategic attack training.
	Counterland	🟡	Volume and attributes of airspace limits tactics and ordnance
	Electronic Combat Support	🟡	Volume of airspace limits types of EC aircraft which can utilize range airspace. Other nearby airspace can accommodate Iron Triad. Volume and attributes (chaff/flare restrictions) of airspace limits some types of defensive reactions.
	Command and Control	🟡	Volume of airspace limits types of C2 aircraft which can utilize range airspace. Other nearby airspace can accommodate Iron Triad. (Lindbergh MOA/ATCAA)
	Air Drop	🟡	Volume and attributes of airspace limits tactics.
	Special Operations	🟡	Volume and attributes of airspace limits tactics and ordnance
	Intelligence, Surveillance and Reconnaissance	🟡	Volume of airspace limits types of ISR aircraft which can utilize range airspace. Other nearby airspace can accommodate manned ISR. Range accommodates space-based ISR. Restricted airspace suitable for small and micro-UAS, marginal for medium UAS.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Cannon Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Targets	Strategic Attack	🟡	Range target suite provides some but not all target types possible for strategic attack.
	Electronic Combat Support	🟡	Limited capability to provide targets in the electro-magnetic spectrum.
	Intelligence, Surveillance and Reconnaissance	🟡	Thermal characteristics of target array are low-fidelity. Good CCD capabilities, terrain, vegetation, and dynamic, movable and mobile targets provide high quality training for Find, Fix, Track portion of kill chain.
Threats	Strategic Attack	🟡	Limited capability to replicate a few tactical surface-to-air threats—RWR Lite x2, Smokey SAM launchers x 2.
	Counterland	🟡	Limited capability to replicate a few tactical surface-to-air threats—RWR Lite x2, Smokey SAM launchers x 2. Limited untrained, highly motivated, ground force (personnel) act as aggressors / Red Force against JTACS/SOF.
	Information Operations	🔴	Only IO threat capability is spoofing or denial of service in UHF/VHF spectrum.
	Electronic Combat Support	🔴	Limited capability to replicate a few surface-to-air tactical threats—RWR Lite x 2, Smokey SAM launchers x 2.
	Command and Control	🔴	No capability to provide threats effecting C2 at a level higher than JTAC/AFAC/Flt Lead
	Air Drop	🟡	Limited capability to replicate a few tactical surface-to-air threats—RWR Lite x2, Smokey SAM launchers x 2.
	Special Operations	🟡	Limited capability to replicate a few tactical surface-to-air threats—RWR Lite x2, Smokey SAM launchers x 2. Limited untrained, highly motivated, ground force (personnel) act as aggressors / Red Force against SOF.
	Intelligence, Surveillance and Reconnaissance	🔴	Limited capability to replicate a few tactical surface-to-air threats—RWR Lite x2, Smokey SAM launchers x 2.
Scoring & Feedback System	Strategic Attack	🟡	Portion of target array is un-scoreable; aircraft and ground personnel TSPI not collected or stored. SADL equipped, no JTIDS capability, no method to monitor C4I network information flow. Some hardware on site for implementation of LVC network; scoreable target array will increase by end of FY2010 with phase 2 and 3 of JAWSS installation.
	Counterland	🟡	Portion of target array is un-scoreable; aircraft and ground personnel TSPI not collected or stored. SADL equipped, no JTIDS capability, no method to monitor C4I network information flow. Some hardware on site for implementation of LVC network; scoreable target array will increase by end of FY2010 with phase 2 and 3 of JAWSS installation.
	Electronic Combat Support	🔴	No method to assess or provide feed back for ECM/ECCM. SADL equipped, no JTIDS capability, no method to monitor C4I network information flow.
	Command and Control	🔴	Aircraft and ground personnel TSPI not collected or stored. SADL equipped, no JTIDS capability, no method to monitor C4I network information flow. Some hardware on site for implementation of LVC network through ARCNet.
	Special Operations	🟡	Portion of target array is un-scoreable; aircraft and ground personnel TSPI not collected or stored. SADL equipped, no JTIDS capability, no method to monitor C4I network information flow. Some hardware on site for implementation of LVC network; scoreable target array will increase by FY2009 with phase 2 and 3 of JAWSS installation.
	Intelligence, Surveillance and Reconnaissance	🔴	No substantial capability to provide feedback for ISR training. Portion of target array is un-scoreable; aircraft TSPI not collected or stored. SADL equipped, no JTIDS capability, no method to monitor C4I network information flow. Some hardware on site for implementation of LVC network through ARCNet scoreable target array will increase by FY2009 with phase 2 and 3 of JAWSS installation.
Infrastructure	Strategic Attack	🟡	Volume of indoor storage space inadequate to store and maintain certain strategic attack targets, including next generation threats. No classified vault.
	Counterland	🟡	Bridge failure in FY2005 cut-off access to host US Army post, nearly eliminating joint ground force access, increasing time for JTACs to reach Cannon Range and certain OPS.
	Information Operations	🟡	Limited volume of space to improve / add hardware.
	Electronic Combat Support	🟡	Limited volume of space to improve / add hardware.
	Command and Control	🔴	Insufficient volume of space for a C2 unit to mobilize and operate out of existing buildings
	Special Operations	🟡	Bridge failure in FY2005 cut-off access to host US Army post, nearly eliminating joint ground force access, increasing time for JTACs to reach Cannon Range and certain OPS.
	Intelligence, Surveillance and Reconnaissance	🔴	No small paved runway available for small ISR platforms requiring a prepared or hard surface.

Cannon Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Range Support	Strategic Attack		Insufficient number of personnel, full-time, or part-time, to maintain target array, conduct support functions, or provide 2-shift manning. Operational hours limited to 8 hours per day.
	Counterland		Insufficient number of personnel, full-time, or part-time, to maintain target array, conduct support functions, or provide 2-shift manning. Operational hours limited to 8 hours per day. UHF/VHF systems at 100% capacity, additional hardware required for mission growth.
	Information Operations		Insufficient number of personnel, full-time, or part-time, to maintain target array, conduct support functions, or provide 2-shift manning. Operational hours limited to 8 hours per day. SIPRNET consistently unreliable. Limited NIPRNET bandwidth
	Electronic Combat Support		Insufficient number of personnel, full-time, or part-time, to maintain target array, conduct support functions, or provide 2-shift manning. Operational hours limited to 8 hours per day.
	Command and Control		Same as above.
	Air Drop		Insufficient number of personnel, full-time, or part-time, to maintain target array, conduct support functions, or provide 2-shift manning. Operational hours limited to 8 hours per day. Limited personnel and equipment to handle CDS or HE airdrops.
	Special Operations		Insufficient number of personnel, full-time, or part-time, to maintain target array, conduct support functions, or provide 2-shift manning. Operational hours limited to 8 hours per day. Range personnel generally unavailable to assist with
	Intelligence, Surveillance and Reconnaissance		Insufficient number of personnel, full-time, or part-time, to maintain target array, conduct support functions, or provide 2-shift manning. Operational hours limited to 8 hours per day.
Collective Ranges	Special Operations		Need to add properly equipped and trained aggressors / Red Force to improve
MOUT Facilities	Counterland		5 total complexes, Low-fidelity thermal / IR signature
	Command and Control		Same as above.
	Special Operations		5 total complexes, Low-fidelity thermal / IR signature. Need to add sim-round capable shoot complex; required to integrate total mission from infiltration through exfiltration with air-to-ground platforms.

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Munitions Restrictions	Strategic Attack		No live ordnance permitted; theoretically limited capability to employ IAM; 170 acres of inactive US Army artillery range can not be cleared for range residue. Flares not permitted below 1,000' AGL.
	Counterair		Chaff (except RR-112) not permitted above 3,000' AGL
	Counterland		No live ordnance permitted; White Phosphorous not permitted; theoretically limited capability to employ IAM; 170 acres of inactive US Army artillery range can not be cleared for range residue; Chaff (except RR-112) not permitted above 3,000' AGL. Flares not permitted below 1,000' AGL. Illumination flares not permitted.
	Electronic Combat Support		Chaff (except RR-112) not permitted above 3,000' AGL. Flares not permitted below 1,000' AGL.
	Air Drop		Chaff (except RR-112) not permitted above 3,000' AGL. Flares not permitted below 1,000' AGL.
	Special Operations		No live ordnance permitted; White Phosphorous not permitted; theoretically limited capability to employ IAM; 170 acres of inactive US Army artillery range can not be cleared for range residue; Chaff (except RR-112) not permitted above 3,000' AGL. Flares not permitted below 1,000' AGL.
Airspace	Counterland		Surface Danger Zones from US Army small arms ranges and demolitions ranges limits minimum altitudes over certain areas adjacent to impact area 10% of time
	Air Drop		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance and Reconnaissance		Same as above.
Adjacent Land Use	Strategic Attack		Adjoining US Army Multi-Purpose Machine Gun Range (.50 cal) closes Cannon Range to all use, including maintenance, approx. 30-60 hours/month, but not all of these hours are scheduled by Cannon Range for use or maintenance. Adjacent land uses limit or eliminate employing inert IAMs, some PWII, and other ordnance.
	Counterland		Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Cannon Detailed Comments

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Adjacent Land Use	Air Drop		Adjoining US Army Multi-Purpose Machine Gun Range (.50 cal) closes Cannon Range to all use, including maintenance, approx. 30-60 hours/month, but not all of these hours are scheduled by Cannon Range for use or maintenance. Adjoining Live Fire Convoy course limits minimum altitudes over a portion of the range and ground personnel locations, including a portion of Slingshot DZ, 20% of time
	Special Operations		Same as above.
	Intelligence, Surveillance and Reconnaissance		Same as above.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Claiborne Assessment Details

Range Mission Description

Air-to-ground range. Primary User. 47th Fighter Squadron, Barksdale AFB, LA 71110

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	●	●			●	●	●	●	●		●	●	
Counterair													
Counterspace													
Counterland	●	●			●	●	●	●	●		●	●	
Countersea													
Information Operations													
Electronic Combat Support													
Command and Control													
Air Drop													
Air Refueling													
Spacelift													
Special Operations													
Intelligence, Surveillance, and Reconnaissance													

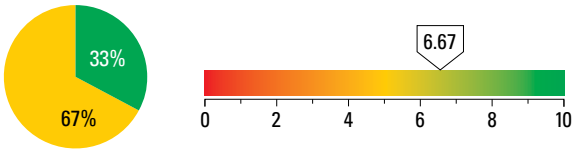
Legend: FMC ● PMC ● NMC ●

Encroachment Data

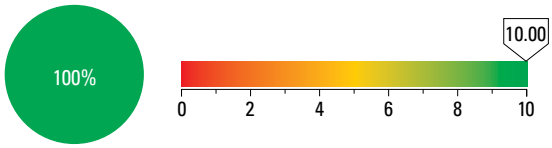
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	●	●			●	●	●	●	●	●	●	●
Counterair												
Counterspace												
Counterland	●	●			●	●	●	●	●	●	●	●
Countersea												
Information Operations												
Electronic Combat Support												
Command and Control												
Air Drop												
Air Refueling												
Spacelift												
Special Operations												
Intelligence, Surveillance, and Reconnaissance												

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

No comments.

Summary Observations

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	6.56	6.56	7.86

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	10.00	10.00	10.00

No comments.

Claiborne Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Strategic Attack		Claiborne Range is a small range located in a US Nationa Forest. Authorized weapons are limited to practice bombs and training rounds. This does not include inert JDAMs or LGBs. Additional land is not currently available. No remedy planned at this time.
	Counterland		Same as above.
Threats	Strategic Attack		Current inventory includes only an RWR lite threat emitter, which is not utilized very often in A-10 training scenarios and not robust enough for B-52 training. Local ACFT are required to travel further to accomplish required training. The current plan is to investigate increasing the ECM capabilities and adding simulated SAM threats upon completion of other improvements; 3 year plan.
	Counterland		Same as above.
Scoring & Feedback System	Strategic Attack		The current JAWSS scoring system is limited by antequated analog technology. This prevents efficient and ongoing data storage and limits feedback to hard copies only. Current plan is to update scoring system upon completion of other facility upgrades; 2 - 3 years.
	Counterland		Same as above.
Range Support	Strategic Attack		Although a T1 communications line is in place and functioning, AF global email and the PEX server are unavailable. This requires additional effort by all to ensure that range personnel are aware of changes to the training schedule. A work order is in progress; estimated time of resolution is unknown.
	Counterland		Same as above.
Collective Ranges	Strategic Attack		There are currently no designated observation points besides the control towers for ground units; i.e. TACP teams. This limits training scenarios in which JTACs are required. Plans for construction are in currently in progress with an estimated completion date no later than Oct 2012.
	Counterland		Same as above.
MOUT Facilities	Strategic Attack		The current facility is very limited in scope. This limits training opportunities. Plans for construction are in currently in progress with an estimated completion date no later than Oct 2012.
	Counterland		Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Dare County Assessment Details

Range Mission Description

The Dare County bombing Range is the primary training location for the 4th Fighter Wing, Seymour Johnson AFB, NC. Besides providing bombing , gunnery and electronic combat training for these F-15E aircrews. a multitude of Navy,, Marine and Air National Guard units also use the range. The range is extremely popular with special operations (air and ground) and forward air controll untis from all military services for training personnel from across the US and some foreign bases.

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	●	●			●	●	●	●	●			●	●
Counterair	●	●			●	●	●	●	●			●	●
Counterspace													
Counterland	●	●			●	●	●	●	●			●	●
Countersea													
Information Operations	●	●			●	●	●	●	●			●	●
Electronic Combat Support	●	●			●	●	●	●	●			●	●
Command and Control	●	●			●	●	●	●	●			●	●
Air Drop													
Air Refueling													
Spacelift													
Special Operations	●	●			●	●	●	●	●			●	●
Intelligence, Surveillance, and Reconnaissance	●	●			●	●	●	●	●			●	●

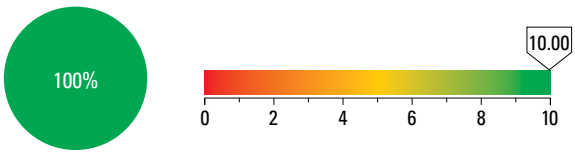
Legend FMC ● PMC ● NMC ●

Encroachment Data

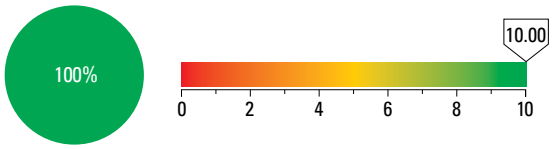
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	●	●	●		●	●	●	●	●	●	●	●
Counterair	●	●	●		●	●	●	●	●	●	●	●
Counterspace												
Counterland	●	●	●		●	●	●	●	●	●	●	●
Countersea												
Information Operations	●	●	●		●	●	●	●	●	●	●	●
Electronic Combat Support	●	●	●		●	●	●	●	●	●	●	●
Command and Control	●	●	●		●	●	●	●	●	●	●	●
Air Drop												
Air Refueling												
Spacelift												
Special Operations	●	●	●		●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●	●		●	●	●	●	●	●	●	●

Legend Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

There is no degradation of capabilities currently affecting DCBR due to encroachment. The potential for future wind energy farms does exist in surrounding airspace, but there are no farms currently planned which will impact our operations.

Summary Observations

Currently, there are no significant encroachment issues that are degrading the range training mission.

Dare County Assessment Details

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	9.95	9.95	9.59	**Encroachment Scores**	9.95	9.95	9.55
No comments.				The effects of encroachment factors are negligible. Range training capabilities have expanded dramatically due to the efficient use of existing air and ground space. Developers are showing increasing interest in developing wind farms at various locations in the coastal area, some in fairly close proximity to the range air and ground space. No development has been done as of yet. The range mission should continue to be unaffected for the foreseeable future.			

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Eglin Assessment Details

Range Mission Description

The Eglin Test and Training Complex (ETTC), provides full support and infrastructure for DT&E/OT&E, and multi-Service training activities (including AFSOC, 7th Special Forces Group (Airborne), 6 Ranger Training Battalion, the Navy EOD School, Navy Training Wings 5 and 6, and the Alabama Army National Guard). The Eglin MRTFB is designated the test and evaluation center for Air Force air-delivered weapons, navigation and guidance systems, Command and Control (C2) systems, and Air Force Special Operations Command systems. The 46 TW also provides planning, facilities, and infrastructure support for developmental organizations, such as the Air Force Research Laboratory (AFRL) and Defense Threat Reduction Agency (DTRA).

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack	PMC	PMC	FMC	FMC	FMC	PMC	PMC	PMC	FMC	FMC	FMC	PMC	PMC
Counterair	FMC	PMC	FMC		FMC	PMC	PMC	PMC	FMC		FMC	PMC	PMC
Counterspace	FMC	PMC	PMC		PMC	PMC	FMC		FMC				
Counterland	PMC	PMC	FMC		FMC	PMC	PMC	PMC	FMC	FMC	FMC	PMC	PMC
Countersea	FMC	FMC	FMC	FMC	PMC	FMC	FMC		FMC				
Information Operations	FMC	FMC	FMC		PMC		PMC	PMC	FMC				
Electronic Combat Support	FMC	FMC	FMC		FMC	PMC	FMC	PMC	FMC		FMC		
Command and Control	PMC	FMC	FMC		FMC	PMC	FMC	FMC	FMC			PMC	PMC
Air Drop	FMC	FMC	FMC			FMC	FMC	FMC	FMC				
Air Refueling	FMC	FMC	FMC					FMC	FMC				
Spacelift	PMC	FMC	FMC				FMC	PMC	PMC				
Special Operations	PMC	PMC	FMC		PMC	PMC	PMC	FMC	FMC	FMC	FMC	PMC	PMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC	FMC		FMC	PMC		FMC	FMC				

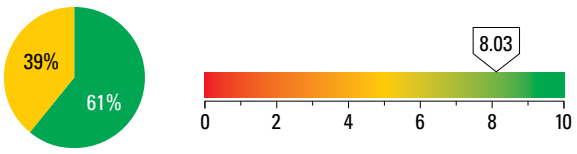
Legend: FMC PMC NMC

Encroachment Data

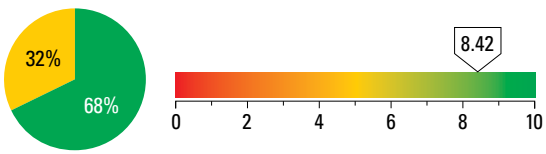
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack	PMC	FMC	PMC	PMC	PMC	FMC	PMC	PMC	FMC	FMC	FMC	FMC
Counterair	PMC	FMC	PMC	PMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Counterspace	PMC	FMC	PMC	PMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Counterland	PMC	FMC	PMC		PMC	FMC	PMC	PMC	PMC	FMC	PMC	FMC
Countersea	PMC	PMC	PMC	PMC	PMC	FMC	FMC	PMC	PMC	FMC	FMC	FMC
Information Operations	FMC	FMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Electronic Combat Support	FMC	FMC	PMC	FMC	FMC	FMC	FMC	FMC	PMC	FMC	FMC	FMC
Command and Control	FMC	FMC	PMC	FMC	FMC	FMC	FMC	FMC	PMC	FMC	FMC	FMC
Air Drop	FMC	FMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Air Refueling	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Spacelift			FMC		PMC	FMC	PMC	PMC	PMC	FMC	PMC	FMC
Special Operations	PMC	PMC	PMC	PMC	FMC	FMC	PMC	FMC	PMC	FMC	PMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	PMC	FMC

Legend: Minimal Moderate Severe

Capability Chart and Scores



Encroachment Chart and Scores



Eglin Assessment Details

Summary Observations	Summary Observations
1. There are no "red" areas under Capabilities Assessment and approximately 61% of attributes are "green"; Threats, Infrastructure, Airspace, Landspace, MOUT Facilities, and Suite of Ranges are the primary attribute areas that restrict the Range's training capability. 2. Strategic Attack, Counterland, and Special Operations are the Mission Areas most affected, with 7 of the Capability Attributes graded "yellow" due to one or more restrictions.	1. There are no "red" areas, and 68% are graded "green". Spectrum, T&E Species, Airspace, and Cultural Resources are the factors most frequently graded "yellow." 2. Counterland, Countersea, and Special Operations are the Mission Areas most affected.

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	8.50	8.50	8.42	**Encroachment Scores**	8.52	8.52	8.52
1. The primary cause for changes in CY2010 and CY2011 scores is improved accuracy in assessment data quality. 2. Airspace continues to be a concern. The Gulf Regional Airspace Strategic Initiative (GRASI) will provide a macro-level perspective of available airspace and will recommend approaches to use it most effectively. This should ease some of the Airspace concerns identified in this Report. However, beddown of the Joint Strike Fighter (JSF) training program and significant increases in AFSOC flying activity will probably continue to stress the Airspace capacity of the ETTC in the 3-5 year future. 3. When 7SFG(A) live fire ranges are completed, much of the Suite of Ranges shortfalls will be resolved, and part of the MOUT facility deficiency will be eliminated.				1. The primary cause for changes in CY2010 and CY2011 scores is improved accuracy in assessment data quality. 2. Availability of Spectrum continues to be a concern, and the primary approach to reducing its impact has been to improve Frequency Management equipment and procedures, and to attempt to acquire instrumentation and communication equipment that uses less bandwidth. 3. The Gulf Regional Airspace Strategic Initiative (GRASI) will provide a macro-level perspective of available airspace and will recommend approaches to use it most effectively. This should ease some of the Airspace concerns identified in this Report. However, beddown of the Joint Strike Fighter (JSF) training program and significant increases in AFSOC flying activity will probably still stress the Airspace capacity of the ETTC in the 3-5 year future. 4. Overall projected status should remain essentially the same for the future, unless Outer Continental Shelf oil and gas drilling is expanded to the point that the DoD bows to pressure to move the Military Mission Line, in the Gulf of Mexico, eastward.			

Eglin Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Strategic Attack		There is inadequate land-space to conduct some large footprint weapons. Some long range standoff weapons currently require flight termination systems or must be released over Eglin's water range. Planned Action: A Next Generation proposal for a remote impact area in a sparsely populated area near the Florida coast is being reviewed for resubmission. This solution would provide a large water-to-land corridor that would enable the overwater launch and subsequent land impact of almost any long range standoff weapon in development or in the inventory. Anticipated Date: N/A
	Counterland		Current landspace available to conduct large footprint weapons has been reduced by siting of BRAC-directed 7SFG(A) support facilities near center of Eglin Range. The potential large number of JDAM and GBU drops during JSF training ops may seriously stress the capacity of Air-to-Surface impact areas on Eglin. Fewer long range standoff weapons can be dropped overland without flight termination systems, or they must be released over Eglin's water range. Number of desired JSF munitions drops may need to be revised downward, or inert munitions may be dropped over Eglin's water range. Planned Action: None for large footprint weapons. EIS has been completed and Record of Decision has been signed. Desired number of munitions releases during JSF training is being reviewed. Anticipated Date: N/A
	Command and Control		Premier Test and Training Site D-84 has been restricted from general test and training use for some time (since 2002) due to cultural resources concerns, although it had been an Army Recreational Facility with numerous RV sites and extensive underground utilities for many years prior to reverting to a Test and Training Site. This coastal EC and CC test and training site has been closed to use by most potential test and training customers while a final detailed survey was performed and documented and the findings approved by the local Cultural Resources office and the SHPO. The final report is being developed and should be available for Cultural Resources and SHPO review and approval soon. Planned Action: After Cultural Resources and SHPO approval of the final report, facilities and grounds at Test and Training Site D-84 will be upgraded and improved to provide comprehensive support for test and training customers in the future. Anticipated Date: Report completion and review by CY2010
	Spacelift		Infrastructure limits potential launch locations. Launch locations are limited by resources required, e.g., serviceable roads, utilities, and size of ground area required. Planned Action: All potential launch sites will be evaluated for existing infrastructure and improvements/changes will be funded by the proponent.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Eglin Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Special Operations	●	Restricted airspace above ground targets will become more congested from the 7th SFG(A) and JSF impact on the MRTFB. Special Ops flight training will be restricted to smaller pieces of airspace resulting in less realistic training and missed planned training. Planned Action: None.
Airspace	Strategic Attack	●	Integration of the BRAC-directed JSF training activities at Eglin, additional training requirements at Tyndall and NAS Pensacola, expansion of oil/gas drilling, and projected growth in civilian general aviation activities. Increased competition for existing airspace between training, test, and civilian use, while the amount of SUA available for weapons releases is shrinking due to oil/gas drilling in the EGTTR. Planned Action: The Gulf Regional Airspace Strategic Initiative will provide a macro-level perspective of available airspace and will recommend approaches to use it most effectively. Updated Mission Impact Analyses concerning oil/gas drilling in the Gulf are provided to the DoD Executive Agent for OCS activities on a regular basis. These analyses provide a basis for maintaining the current Military Mission Line and preserving the DoD's ability to test and train in the Gulf. Anticipated Date of GRASI completion, final planning, and implementation - FY2012-15.
	Counterair	●	Integration of the BRAC-directed JSF training activities at Eglin; additional training requirements of AFSOC, Tyndall and NAS Pensacola. expansion of oil/gas drilling; and projected growth in civilian general aviation activities. Increased competition for existing airspace between training, test, and civilian use, while the amount of SUA available for weapons releases is shrinking due to oil/gas drilling in the EGTTR. Planned Action: The Gulf Regional Airspace Strategic Initiative will provide a macro-level perspective of available airspace and will recommend approaches to use it most effectively. Updated Mission Impact Analyses concerning oil/gas drilling in the Gulf are provided to the DoD Executive Agent for OCS activities on a regular basis. These analyses provide a basis for maintaining the current Military Mission Line and preserving the DoD's ability to test and train in the Gulf. Anticipated Date of GRASI completion, final planning, and implementation - FY2012-15.
	Counterspace	●	Airspace over EGTTR inadequate for very large scale counterspace test and training operations. Airspace over Gulf adequate for many, but not all, such operations. Planned Action. None. Pacific Missile Range can be used for very large scale counterspace operations.
	Counterland	●	Restricted airspace above ground targets will become more congested from the 7th SFG(A) and JSF impact on the MRTFB. Other training customer flight training will be restricted to smaller pieces of airspace resulting in less realistic training and missed planned training. Planned Action: Eglin's Central Scheduling Enterprise will be used to minimize conflicts.
	Special Operations	●	Restricted airspace above ground targets will become more congested from the 7th SFG(A) and JSF impact on the MRTFB. Special Ops flight training will be restricted to smaller pieces of airspace resulting in less realistic training and missed planned training. Planned Action: Eglin's Central Scheduling Enterprise will be used to minimize conflicts.
Seaspace	Counterspace	●	Seaspace in EGTTR is inadequate for very large scale counterspace test and training operations. Seaspace over Gulf adequate for many, but not all, such operations. Planned Action: None. Pacific Missile Range can be used for very large scale counterspace operations.
Targets	Counterspace	●	Mid-to-high altitude targets limited by net explosive weight of propellant used. Santa Rosa Island (SRI) provides launch capability for mid-to-high altitude targets. Endo-atmospheric probes have been launched from SRI, but overall capabilities are limited by net explosive weight of the propellant used. Site D-3 was selected as a candidate for a Space Port Florida launch site. Planned Action: None.
	Countersea	●	No undersea targets available except those provided by test and training customers for specific programs. Test and training customers must provide their own undersea targets and instrumentation. Land and sea targets are available. Planned Action: None. Customers will continue to supply their own undersea targets.
	Information Operations	●	Inadequate number of suitable/diverse targets available except those provided by test and training customers for specific programs. Test and training customers must provide their own undersea targets and instrumentation. Land and sea targets are available. Planned Action: None. Customers will continue to supply their own information operations targets.
	Special Operations	●	Targets sets available to Spec Ops are static and unrealistic. These targets do not represent what personnel will encounter during combat operations, resulting in poor reactions to real world situations. Planned Action: None. Customers will continue to supply their own targets.
Threats	Strategic Attack	●	There are few representative EC emitters. SRI has numerous EC emitters, but few are representative of those faced by our forces; also range lacks OPFOR capability; battlefield effects simulators. Planned Action: No current program to upgrade existing EC emitters or acquire training threat simulators.
	Counterair	●	Same as above.
	Counterspace	●	There are few representative EC emitters. SRI has numerous EC emitters, but few are representative of those faced by reentry vehicles. Planned Action: No current program to upgrade existing EC emitters or acquire training threat simulators.

Eglin Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Threats	Counterland	●	There are few representative EC emitters. SRI has numerous EC emitters, but few are representative of those faced by our forces; also range lacks OPFOR capability; battlefield effects simulators. Planned Action: No current program to upgrade existing EC emitters or acquire training threat simulators.
	Electronic Combat Support	●	Same as above.
	Command and Control	●	There are no viable threat emitters or simulators for this area. Net-centric weapons and UAS activities require a limited set of emitters/simulators. Planned Action: No action planned beyond identifying the minimum set of threats needed in this area. Customers will continue to provide their own system-specific threats.
	Special Operations	●	There are few representative EC emitters. SRI has numerous EC emitters, but few are representative of those faced by our forces; also range lacks OPFOR capability; battlefield effects simulators. Planned Action: No current program to upgrade existing EC emitters or acquire training threat simulators.
	Intelligence, Surveillance and Reconnaissance	●	There are no viable threat emitters or simulators for this area. Net-centric weapons and UAS activities require a limited set of emitters/simulators. Planned Action: No action planned beyond identifying the minimum set of threats needed in this area. Customers will continue to provide their own system-specific threats.
Scoring & Feedback System	Strategic Attack	●	Scoring and feedback systems are inadequate to support certain training and exercise operations. There are no state-of-the-art facilities to support training reconstruction or facilities to allow for deployment of large forces into the range - both air or ground; multiple sources of TSPI currently available but some not compatible with deployed aircraft. Planned Action: Joint Test and Training Operations Control Center will incorporate numerous tracking capabilities, but will not include training and exercise mission reconstruction and analysis.
	Counterair	●	Same as above.
	Counterland	●	Same as above.
	Information Operations	●	Lack of facilities to demonstrate effects for training audience; lack of targets. This limits scope of mission debriefing capabilities. Planned Action: None.
	Special Operations	●	Scoring and feedback systems do not exist on ranges used by SOF. Personnel provide their own scoring which can lead to errors. There is no independent record keeping and analyst which prevents Commanders from identifying trends and implementing corrective measures. Planned Action: None.
Infrastructure	Strategic Attack	●	Inadequate facilities to support deployed assets. There is less than efficient use of deployed assets due to need to use available facilities that may not have a full range of features needed by deployed units. Planned Action: Need Exercise Support Facility. Currently unfunded.
	Counterair	●	Same as above.
	Counterland	●	Same as above.
	Information Operations	●	Same as above.
	Electronic Combat Support	●	Inadequate systems to meet needs of some training customers. As such there is less than fully effective support for some training customers. Planned Action: No funding available for acquiring new systems. May be able to leverage on JSF training needs to obtain some simulators that could be used by other customers, as well. Otherwise, customers must bring their own specific emitters/simulators.
	Spacelift	●	Limited infrastructure for Spacelift. Also limited site options for Spacelift operations; however, SRI sites have been used for endoatmospheric probe launches, and D-3 was selected as a Space Port Florida site. Planned Action: None. Current facilities have been adequate to date.
Range Support	Spacelift	●	Same as above.
MOUT Facilities	Strategic Attack	●	There are no consolidated MOUT facility for joint training needs. Only a small number of MOUT-like facilities exist across the range. Need joint, consolidated plan to install a dedicated MOUT facility to meet joint training needs. Planned Action. A small sophisticated MOUT capability is being constructed to specifically support 7SFG(A) training. This, in conjunction with smaller MOUTs built for AFSOC training operations, will satisfy the majority of joint training needs. Anticipated Date. Dec 2011
	Counterair	●	Same as above.
	Counterland	●	Same as above.
	Command and Control	●	Same as above.
	Special Operations	●	Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Eglin Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Suite of Ranges	Strategic Attack		There is no certified joint MOUT facility with adjacent ground maneuver areas is available. This causes the inability to perform maneuver and MOUT operations on a joint certified training area hampers effective joint training operations. Planned Action: A small sophisticated MOUT capability is being constructed to specifically support 7SFG(A) training. This, in conjunction with smaller MOUTs built for AFSOC training operations, will satisfy the majority of joint training needs. Anticipated Date. Dec 2011
	Counterair		Same as above.
	Counterland		Same as above.
	Command and Control		Same as above.
	Special Operations		Same as above.

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Threatened & Endangered Species/ Critical Habitat	Strategic Attack		A proposal to establish Marine Protected Areas (MPAs) or Monuments in the northern Gulf of Mexico has the potential to significantly impact Eglin's munitions test and training mission. This would restrict AFSOC overwater training munitions expenditures and the release of munitions during test missions over the Eglin Gulf Test Range (EGTR). Planned Action: Continue to provide Mission Impact data to decision makers. Anticipated Date: N/A
	Counterair		A proposal to establish Marine Protected Areas (MPAs) or Monuments in the northern Gulf of Mexico has the potential to significantly impact Eglin's munitions test and training mission. This would restrict overwater testing of munitions, including air-to-air tests of AMRAAM/AIM-9X and other A-T-A missiles and Combat Archer A-T-A training activities over the Eglin Gulf Test Range (EGTR). Planned Action: Continue to provide Mission Impact data to decision makers. Anticipated Date: N/A
	Counterspace		A proposal to establish Marine Protected Areas (MPAs) or Monuments in the northern Gulf of Mexico has the potential to significantly impact Eglin's munitions test and training mission. This would restrict test and deployment of theatre missile defense systems for flights over the Eglin Gulf Test Range (EGTR). Would also interfere with Directed Energy and Hypervelocity test activities is support of counterspace DT&E systems. Planned Action: Continue to provide Mission Impact data to decision makers. Anticipated Date: N/A
	Counterland		Existence of red cockaded woodpeckers, Okaloosa darters, Flatwoods salamanders, gopher tortoises, marine mammals, and various sea turtles (the primary local endangered/threatened species), and designated critical habitat for certain shorebirds on Santa Rosa Island and the gulf sturgeon along shorelines and adjacent rivers/streams. This restricts the use of some land areas and littoral/riverine areas for the use of some a/c, munitions, and targets; as well as land/water training maneuvers. Planned Action. Continue to work with local Natural Resources office to develop mitigations and procedures to minimize the impact of T&E considerations on test and training capabilities. There has been continual coordination with both the test wing and the regulators to mitigate activities within these areas. It is not so much that the areas are restricted to use as is that there are certain terms and conditions that have to be met in order to use these areas. Where the delays occur is during the consultation process, ample time must be given in order to complete consultation for all activities that could potentially impact protected species. Anticipated Date: N/A
	Countersea		Limitations on operations due to gulf sturgeon critical habitat along coast, in Bay, and in adjacent rivers; and the presence of marine mammals along the coast and in the bays. A proposal to establish Marine Protected Areas (MPAs) or Monuments in the northern Gulf of Mexico has the potential to significantly impact Eglin's munitions test and training mission. This restricts certain operations over the EGTTR, including those that were designed/intended for countersea operations. Planned Action: Continue to work with local Natural Resources office to develop mitigations and procedures to minimize the impact of T&E considerations on test and training capabilities. Provide mission impact analysis to decision makers concerning the proposed MPA. Anticipated Date: N/A
	Special Operations		Limitations on operations due to gulf sturgeon critical habitat along coast, in Bay, and in adjacent rivers; and the presence of marine mammals along the coast and in the bays. A proposal to establish Marine Protected Areas (MPAs) or Monuments in the northern Gulf of Mexico has the potential to significantly impact Eglin's munitions test and training mission. Restrictions due to sea turtle nesting and seasonal shorebird presence on SRI. This restricts certain operations over the EGTTR and in littoral and riverine areas, including those that were designed/intended for Special Operations. Planned Action. Continue to work with local Natural Resources office to develop mitigations and procedures to minimize the impact of T&E considerations on test and training capabilities. There has been continual coordination with both the test wing and the regulators to mitigate activities within these areas. It is not so much that the areas are restricted to use as is that there are certain terms and conditions that have to be met in order to use these areas. Where the delays occur is during the consultation process, ample time must be given in order to complete consultation for all activities that could potentially impact protected species. Provide mission impact analysis to decision makers concerning the proposed MPA. Anticipated Date: N/A

Eglin Detailed Comments

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Munitions Restrictions	Countersea	●	Limitations on operations due to gulf sturgeon critical habitat along coast, in Bay, and in adjacent rivers. This restricts certain operations over the EGTTR, including those that were designed/intended for countersea operations. Planned Action: Continue to work with local Natural Resources office to develop mitigations and procedures to minimize the impact of T&E considerations on test and training capabilities. Anticipated Date: N/A
	Special Operations	●	Same as above.
Spectrum	Strategic Attack	●	Unavailability of, or interference with, required electromagnetic spectrum for test and training operations. There ar. constraints placed on training/testing due to unavailability of, or interference with, required electromagnetic spectrum. Planned Action: All frequencies shall be scheduled for de-confliction to prevent RFI to its users. Eglin has a Frequency Control and Analysis function with both fixed and mobile assets that find conflicting signal sources that need to be shut down. Eglin is in the process of installing 3 additional fixed DF sites which will aid in finding those conflicting signals. Eglin has also done extensive upgrades and are continuing to purchase newer radios and equipment that have tighter control of their emissions (narrower bands) and have shifted to less used frequency bands. We also actively work on shielding and noise attenuation to limit impact to and impacts from our equipment. Anticipated Date: N/A
	Counterair	●	Same as above.
	Counterspace	●	Same as above.
	Counterland	●	Same as above.
	Countersea	●	Same as above.
	Information Operations	●	Same as above.
	Electronic Combat Support	●	Same as above.
	Command and Control	●	Same as above.
	Air Drop	●	Same as above.
	Special Operations	●	Unavailability of, or interference with, required electromagnetic spectrum for test and training operations. There are constraints placed on training/testing due to unavailability of, or interference with, required electromagnetic spectrum. Planned Action: All frequencies shall be scheduled for de-confliction to prevent RFI to its users. Anticipated Date: N/A
	Intelligence, Surveillance and Reconnaissance	●	Same as above.
Maritime Sustainability	Strategic Attack	●	Encroachment from oil drilling operations in Gulf, restrictions on use of high explosives in Gulf, and increased volume of civilian boating activities in potential danger areas. Oil drilling operations with above surface structures greatly reduces the area available to test and train with large footprint weapons over the EGTTR; certain types of high explosive munitions are restricted from use in the EGTTR which restricts the type of training and testing that can be done in the EGTTR; increased civilian boat traffic makes it more time consuming to clear large areas of the EGTTR for large footprint weapons releases. Planned Action: Work with EGTTR customers to ensure updated Mission Impact Analyses are provided to the DoD Executive Agent (for Outer Continental Shelf (OCS) oil and gas development) of the DoD's use of the Gulf of Mexico to protect the military's interests in maintaining the current Military Mission Line and restrictions for OCS development to enable future test and training operations in the EGTTR. Continue to work with local Natural Resources office to develop mitigations and procedures to minimize the impact of T&E considerations on test and training capabilities in the EGTTR. Ensure range clearance procedures are reviewed frequently and provide the most efficient process for clearing required areas of the EGTTR. Anticipated Date: N/A
	Counterair	●	Same as above.
	Counterspace	●	Same as above.
	Countersea	●	Same as above.
	Special Operations	●	Limitations on operations due to gulf sturgeon critical habitat along coast, in Bay, and in adjacent rivers; and the presence of marine mammals along the coast and in the bays. This restricts the use of certain operations over the EGTTR and in littoral/riverine areas, including those that were designed/intended for Special Operations. Planned Action: Continue to work with local Natural Resources office to develop mitigations and procedures to minimize the impact of T&E considerations on test and training capabilities. Anticipated Date: N/A

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Eglin Detailed Comments

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Airspace	Strategic Attack		Increasing pressures for off-shore oil and gas exploration and production, growing civilian air transportation activities in the area, increased UAV ops from 7th SFG(A), and increased traffic/mission ops from JSF training. This causes significantly reduced surface area for test and training of large footprint weapons over the EGTTR; increasing airspace congestion due to civilian air traffic and the implementation of the BRAC-directed JSF integrated training center at Eglin. Planned Action: Work with EGTTR customers to ensure updated Mission Impact Analyses are provided to the DoD Executive Agent (for Outer Continental Shelf (OCS) oil and gas development) of the DoD's use of the Gulf of Mexico to protect the military's interests in maintaining the current Military Mission Line and restrictions for OCS development to enable future test and training operations in the EGTTR. A Gulf Regional Airspace Strategic Initiative has been developed to address all airspace issues. Anticipated Date of GRASI completion, final planning, and implementation - FY2012-15
	Counterair		Same as above.
	Counterspace		Same as above.
	Counterland		Increased general aviation traffic in N-S corridor and placement of the 7SFG(A) cantonment area in the north-central portion of the Eglin land range. This restricts capability for cross range shots, large footprint munitions test and training, and simultaneous use of east and west range areas for live weapons activity. Planned Action: Some Safety profiles have been reengineered to include the new restrictions and some profiles have been deleted. A Gulf Regional Airspace Strategic Initiative has been developed to address all airspace issues. Anticipated Date of GRASI completion, final planning, and implementation - FY2012-15
	Countersea		Increasing pressures for off-shore oil and gas exploration and production, and increased volume of civilian air traffic over potential danger areas. This causes reduced surface area and associated airspace, and reduced availability of existing Special Use Airspace for Countersea test and training operations. Planned Action: Work with EGTTR customers to ensure updated Mission Impact Analyses are provided to the DoD Executive Agent (for Outer Continental Shelf (OCS) oil and gas development) of the DoD's use of the Gulf of Mexico to protect the military's interests in maintaining the current Military Mission Line and restrictions for OCS development to enable future test and training operations in the EGTTR. A Gulf Regional Airspace Strategic Initiative has been developed to address all airspace issues. Anticipated Date of GRASI completion, final planning, and implementation - FY2012-15
	Spacelift		Insufficient land space to conduct vertical launch for delivery into space; however, space plane launch/recovery could be a viable option from within the Eglin reservation. As such, range is unable to support vertical launch operations. however, space plane launch/recovery could be a viable option from within the Eglin reservation. Planned Action: None. Anticipated Date: N/A
Noise Restrictions	Strategic Attack		Land use conversion can create noise-sensitive areas near low level routes and airfield approaches. Future JSF training and 7SFG(A) range activities will exacerbate this problem. Basing the majority of JSF training operations at Eglin Main Base has already elicited a noise-related lawsuit from the community of Valparaiso. The proximity of the 7th SFG live-fire ranges to populated areas may cause public noise complaints. Planned Action: A Supplemental EIS is being prepared to evaluate other JSF flight options, including moving the bulk of airfield training activities to Auxiliary Field 3. A community outreach program to disseminate noise information related to 7SFG(A) range activities will be conducted prior to the ranges becoming active. The SEIS was released to the public in September 2010.
	Counterland		Low level routes and overwater approaches to the land range result in occasional noise complaints. This problem will increase when JSF training operations begin. Noise complaints could increase which could cause additional restrictions to be placed on low level and overwater approaches. Planned Action: The original EIS did not identify this area as a high risk issue, but if noise complaints do become a problem, local officials will develop modified procedures to address it. Anticipated Date: N/A
	Spacelift		There is noise related to space launch activities. Local communities would be affected by launch noise from larger space launch activities and public sentiment might not support space launches if the noise levels were very high and on a frequent basis. Planned Action: If Eglin or Cape San Blas is ever considered for a role in space launches, the EIS will place special emphasis on the attendant noise and all feasible mitigations and controls. Anticipated Date: N/A
	Special Operations		SOF accomplishes much of its training during the hours of darkness, frequently requiring the use of explosives. The noise of these operations will impact the local community during normal rest periods, leading to negative impressions of the military by the effected communities. Planned Action: None. Date: N/A

Eglin Detailed Comments

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Adjacent Land Use	Strategic Attack		Range limited water-to-land flight access for armed weapons systems. This reduces the flexibility of making realistic water-to-land transitions with armed weapons systems or allowing water-to-land transitions by long range standoff weapons. Planned Action: Potential land acquisitions and cooperative efforts with other agencies to obtain overflight privileges are always reviewed with an eye toward increasing the width of the water-to-land corridor. A Next Generation proposal for a remote impact area in a sparsely populated area near the Florida coast is being reviewed for resubmission. This solution would provide a large water-to-land corridor that would enable the overwater launch and subsequent land impact of almost any long range standoff weapon in development or in the inventory. Anticipated Date: Unknown since review is still in informal phase.
	Counterland		Urban sprawl, land use conversion from agriculture to residential, and new transportation corridors (on and off Eglin). The push for use of more renewable energy sources has resulted in siting of a solar farm near the eastern boundary of the Land Range, and there is increased use of small wind energy systems (including "turbine" designs) in the civilian areas surrounding Eglin. This can restrict future military operations on periphery of the Eglin Range, and interfere with flight operations and data transmission and receipt on test and training missions. Planned Action: Develop Readiness and Environmental Protection Initiative (REPI) projects to acquire property rights to adjoining private property in areas of expanded military use, and participate actively in local Joint Land Use Study initiative. Solar Farm coordinated the project with Eglin officials to ensure AF design concerns were addressed. Eglin is working with Santa Rosa County planners to draft a small wind energy ordinance that should become the model for the other counties surrounding Eglin. Currently awaiting results of an AF sponsored study of small wind energy generators before completing the Santa Rosa County ordinance. Anticipated Date. Study should be completed by end of CY2010.
	Countersea		Urban sprawl, land use conversion from agriculture to residential, and new transportation corridors (on and off Eglin). This can restrict future military operations on periphery of the Eglin Range, including shore-to-ship and ship-to-shore weapons systems; and water-land test and training operations. Planned Action: Develop Readiness and Environmental Protection Initiative (REPI) projects to acquire property rights to adjoining private property in areas of expanded military use, and participate actively in local Joint Land Use Study initiative. A well structured Range Planning Process is in place with an Mission Impact Analysis performed on any significant proposal for Range reconfiguration or mission change. Anticipated Date: N/A
	Spacelift		There is noise related to space launch activities. Local communities would be affected by launch noise from larger space launch activities and public sentiment might not support space launches if the noise levels were very high and on a frequent basis. Planned Action. If Eglin or Cape San Blas is ever considered for a role in space launches, the EIS will place special emphasis on the attendant noise and all feasible mitigations and controls. Anticipated Date: N/A
Cultural Resources	Counterland		There are known and suspected cultural resource sites along coast and in the interior of the land Range. Known but undefined, and suspected cultural resource sites along the Gulf/Bay coasts, and along rivers and streams impede the use of these areas for important military test and training missions. Littoral and riverine, ingress/egress training operations are restricted to several small and somewhat uncharacteristic areas along the coasts and streams. Planned Action: Proponent must work with the Cultural Resources office during AF Form 813 review to identify available training sites and to determine what restrictions apply to the proponent's preferred sites. Anticipated Date: N/A
	Countersea		There are known and suspected cultural resource sites along coast and in the interior of the land Range. Known but undefined, and suspected cultural resource sites along the Gulf/Bay coasts, and along rivers and streams impede the use of these areas for important military test and training missions. Littoral and riverine, ingress/egress training operations are restricted to several small and somewhat uncharacteristic areas along the coasts and streams. Planned Action: Areas that need evaluation will be identified and elevated to the Cultural Resources office for priority funding and evaluation. An effort will be made to ensure local Range users are included in the current review proces. to ensure the Cultural Resources office understands the full mission impact of blanket designations of suspected cultural resource sites and historical buildings. Anticipated Date: N/A
	Electronic Combat Support		Premier Test and Training Site D-84 has been restricted from general test and training use for some time (since 2002) due to cultural resources concerns, although it had been an Army Recreational Facility with numerous RV sites and extensive underground utilities for many years prior to reverting to a Test and Training Site. This coastal EC and CC test and training site has been closed to use by most potential test and training customers while a final detailed survey was performed and documented and the findings approved by the local Cultural Resources office and the SHPO. The final report is being developed and should be available for Cultural Resources and SHPO review and approval soon. Planned Action: After Cultural Resources and SHPO approval of the final report, facilities and grounds at Test and Training Site D-84 will be upgraded and improved to provide comprehensive support for test and training customers in the future. Anticipated Date: Report completion and review by CY2010
	Command and Control		Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Eglin Detailed Comments

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Cultural Resources	Spacelift	●	There are known and suspected cultural resource sites along coast and in the interior of the land Range. Known but undefined, and suspected cultural resource sites along the Gulf/Bay coasts could impact selection of launch location, especially on Santa Rosa Island. Planned Action: Potential launch areas would undergo the standard AF Form 813 review process which would include evaluation of each launch site from a cultural resources standpoint. Anticipated Date: N/A
	Special Operations	●	Known and suspected cultural resource sites along coast and in the interior of the land Range. Known but undefined, and suspected cultural resource sites along the Gulf/Bay coasts, and along rivers and streams impede the use of these areas for important military test and training missions. Littoral and riverine, ingress/egress training operations are restricted to several small and somewhat uncharacteristic areas along the coasts and streams. Planned Action: Proponent must work with the Cultural Resources office during AF Form 813 review to identify available training sites and to determine what restrictions apply to the proponent's preferred sites. Anticipated Date: N/A
Wetlands	Counterland	●	Land use restrictions in or near wetlands. Some restrictions on land use affects aircraft, munitions, and target; as well as land maneuvers in or near wetlands. Planned Action: Proponent must work with the Natural Resources office during AF Form 813 review to identify available test and training sites and to determine what restrictions apply to the proponent's preferred sites. Anticipated Date: N/A
	Spacelift	●	There are wetlands along the coast and in the interior of the land Range. Wetlands would impact selection of launch location, especially on Santa Rosa Island. Planned Action: Potential launch areas would undergo the standard AF Form 813 review process which would include evaluation of each launch site from a natural resources standpoint. Anticipated Date: N/A
	Special Operations	●	There are land use restrictions in or near wetlands. There are some restrictions on land use affects aircraft, munitions, and target; as well as land maneuvers in or near wetlands. Planned Action: Proponent must work with the Natural Resources office during AF Form 813 review to identify available test and training sites and to determine what restrictions apply to the proponent's preferred sites. Anticipated Date: N/A
	Intelligence, Surveillance and Reconnaissance	●	Same as above.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Falcon Assessment Details

Range Mission Description

Falcon Range is the primary training range (PTR) for the 301st Fighter Wing, Air Force Reserve Command. The range supports air-to-ground sorties and electronic combat training. Secondary users include B-52, A-10, F-16 and F/A-18 aircraft from the Air Force and Marine Corps Reserve and Air National Guard. The range also provides training to the USAF AT-38 Introduction to Fighter Fundamentals (IFF) course at Sheppard AFB, TX, as well as active duty, Air National Guard, and allied joint terminal attack controller (JTAC) initial and continuation training. In addition, the range supports the Joint Fires Observer (JFO) training course at Fort Sill, which trains US and allied JFOs to augment JTAC missions. The range provides laser testing and scoring for MC-12W aircraft, and supports threat reaction and weapons employment for rotary wing aircraft. The range also supports UAS training.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack	PMC	FMC			FMC	FMC	FMC	FMC	FMC			FMC	FMC
Counterair	FMC	FMC			FMC	PMC	FMC	FMC	FMC			FMC	FMC
Counterspace													
Counterland	FMC	FMC			FMC	FMC	FMC	FMC	FMC			FMC	FMC
Countersea													
Information Operations													
Electronic Combat Support	FMC	FMC			FMC	FMC	FMC	FMC	FMC			FMC	FMC
Command and Control	FMC	FMC			FMC	FMC	FMC	FMC	FMC			FMC	FMC
Air Drop	FMC	FMC			FMC	FMC	FMC	PMC	FMC			FMC	FMC
Air Refueling													
Spacelift													
Special Operations	FMC	FMC			FMC	FMC	FMC	FMC	FMC			FMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC			FMC	FMC	FMC	FMC	FMC			FMC	FMC

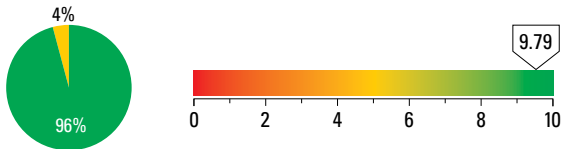
Legend: FMC, PMC, NMC

Encroachment Data

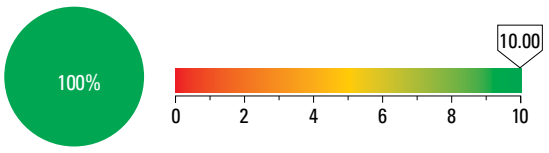
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack	Minimal	Minimal	Minimal		Minimal		Minimal	Minimal	Minimal	Minimal		Minimal
Counterair	Minimal	Minimal	Minimal		Minimal		Minimal	Minimal	Minimal	Minimal		Minimal
Counterspace												
Counterland	Minimal	Minimal	Minimal		Minimal		Minimal	Minimal	Minimal	Minimal		Minimal
Countersea												
Information Operations												
Electronic Combat Support	Minimal	Minimal	Minimal		Minimal		Minimal	Minimal	Minimal	Minimal		Minimal
Command and Control	Minimal	Minimal	Minimal		Minimal		Minimal	Minimal	Minimal	Minimal		Minimal
Air Drop	Minimal	Minimal	Minimal		Minimal		Minimal	Minimal	Minimal	Minimal		Minimal
Air Refueling	Minimal	Minimal	Minimal		Minimal		Minimal	Minimal	Minimal	Minimal		Minimal
Spacelift												
Special Operations	Minimal	Minimal	Minimal		Minimal		Minimal	Minimal	Minimal	Minimal		Minimal
Intelligence, Surveillance, and Reconnaissance	Minimal	Minimal	Minimal		Minimal		Minimal	Minimal	Minimal	Minimal		Minimal

Legend: Minimal, Moderate, Severe

Capability Chart and Scores



Encroachment Chart and Scores



Falcon Assessment Details

Summary Observations	Summary Observations
The range has improved its infrastructure since 2004 with multiple scoring systems. Falcon Range provides aircrews with two MOUT areas, one laser-scoring capable, and one which is kinetic-capable. Three electronic warfare threat simulators are available, and realistic self-consuming MANPAD simulators provide additional threat reaction training while making a very minimal impact on the environment. The MANPAD simulators do not require and EOD support and leave no residue. The range has on-site EOD support, so the range is not closed for EOD cleanup. Targets are realistic and range from large buildings to small anti-aircraft guns and mannequins. An unmanned moving target allows the full-scale delivery of weapons against a moving target, as well as combat laser employment. There are three laser scoring systems and two kinetic scoring systems available. The primary constraint to the range is the size of the impact area. It limits the employment of inertially-aided munitions due to weapons danger zone restrictions. The Army prohibits the intrusion of any WDZ outside the range areas with a containment or risk of greater than 1:1,000,000. Several doctrinally-accepted weapons deliveries are restricted due to WDZs extending outside the range. The range is working on a drop zone and should have one by 2012. The range also works extensively with Fort Sill environmental agencies and has helped reclaim old dump areas to their original state. Strategic Attack is most affected by the range's size; however, there are very infrequent (less than 2% of annual sorties) strategic attack missions. The majority of missions flown at Falcon Range are Counterland.	The range is part of the Fort Sill range complex. Encroachment is minimal. The Army is currently involved in the purchase of adjoining land in order to provide a larger buffer zone. There are no environmental or cultural shortfalls at the range. Frequency spectrum issues are minimal.

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	6.88	6.88	10.00	**Encroachment Scores**	9.77	9.77	10.00
The range has excellent capabilities, although future employment has some limitations. These limitations are not unique to Falcon Range; as inertially-aided weapons are developed and fielded, their weapons danger zones (WDZs) for some weapons parameters prove to be larger than the range boundaries. The range is limited to 1:1,000,000 risk values to manned sites by Army Regulation 385-63. Until 2007 the Army allowed sportsmen to intrude into the impact area when the range was active. This practice has been banned, and now larger WDZ weapons deliveries are allowed. The range has excellent laser scoring capability, and all personnel are highly trained in laser operations. The addition of the GPS-guided moving target allows aircrews to actively fire lasers at a moving target, a capability not found at most other ranges. This capability becomes more critical as weapons such as the laser JDAM are developed, and as lead-computing impact point software is employed.				There are no historical issues at Falcon Range for encroachment. The range has not been affected by encroachment; in fact, the range has benefitted from the upgrades at Fort Sill as a result of BRAC 2005. Cultural sites on the range are well clear of any target areas and are set aside from the target arrays in order to preserve their integrity; Fort Sill has an active cultural trust program. The existence of the Wichita Mountains Wildlife Refuge to the north and Fort Sill to the east preclude development nearby. To the south and west of the range there are potential encroachment areas, but the areas are rural and are being purchased by the Army for buffer zones.			

Falcon Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Strategic Attack		The range impact area is not large enough to support inertially-aided munitions employment from doctrinal (high) altitudes. Training is minimally affected; most users employ these munitions in a simulated manner anyway. No solution is feasible until the WDZ Tool provides smaller weapons footprints.
Threats	Counterair		The HARM threat simulator does not provide more than one threat for SEAD missions. It does not adversely impact training; the nearest HARM-capable user is over 800 nautical miles distant, with nearby access to threat simulators. There is no upgrade requirement.
Infrastructure	Air Drop		No drop zone has been established at Falcon Range. This precludes any air drops at an established DZ. The range is currently establishing a DZ within the impact area which will alleviate this shortfall, with an estimated completion by 2012.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Grand Bay Assessment Details

Range Mission Description

Primarily supporting the air-to-ground training of units assigned to the 23 WG (A-10, HH-60, HC-130) and various other DoD units. Also support ground training requirements of the 23 WG, the 93 AGOW, and other DoD units.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack	PMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Counterair	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Counterspace	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Counterland	PMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Countersea													
Information Operations	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Electronic Combat Support	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Command and Control	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Air Drop	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Air Refueling	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Spacelift													
Special Operations	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC

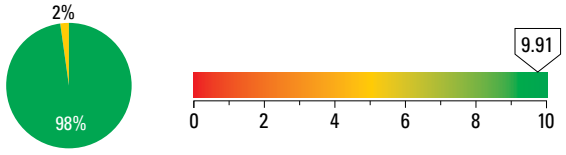
Legend: FMC, PMC, NMC

Encroachment Data

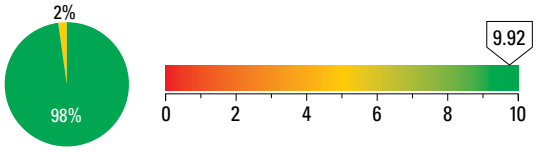
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Moderate	Minimal	Minimal	Minimal	Minimal
Counterair	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterspace	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterland	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Moderate	Minimal	Minimal	Minimal	Minimal
Countersea												
Information Operations	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Electronic Combat Support	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Command and Control	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Drop	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Refueling	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Spacelift												
Special Operations	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Intelligence, Surveillance, and Reconnaissance	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal

Legend: Minimal, Moderate, Severe

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

No comments.

Summary Observations

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	9.58	9.58	9.68

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	9.49	9.49	9.49

No comments.

Grand Bay Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Counterland		Grand Bay Range is too small to allow large force ground exercise and movement. Small force movement and CAS operations can be conducted. Dry operations are conducted underneath MOA airspace for greater flexibility. No major impact—large force movement not needed for assigned units. Plans are being studied to acquire additional acreage east of the range boundary to better support ground exercises and mission support flexibility.
	Strategic Attack		Same as above.

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Adjacent Land Use	Strategic Attack		Training can be accomplished on a limited basis - but limited due to size of Grand Bay Range and proximity of Moody AFB. Some noise restrictions exist around the area the present a small impact the training flexibility. Only small force training can be accomplished. Discussions to restructure the airspace and the possibility of acquiring additional land towards the east are ongoing.
	Counterland		Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Grayling Assessment Details

Range Mission Description

Support ANG Flying of A10 unit 107th FS at Selfridge ANGB MI and all units in training at Alpena CRTC. Support ground force training of JTAC's, Security Forces and Joint exercises.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack	●	●			●	●	●	●	●		●	●	●
Counterair	●	●			●	●	●	●	●		●		●
Counterspace													
Counterland	●	●			●	●	●	●	●	●	●	●	●
Countersea													
Information Operations	●	●			●	●	●	●	●				●
Electronic Combat Support	●	●			●	●	●	●	●				●
Command and Control	●	●			●	●	●	●	●				●
Air Drop	●	●			●	●	●	●	●				●
Air Refueling	●	●			●	●	●	●	●				●
Spacelift													
Special Operations	●	●			●	●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●			●	●	●	●	●			●	●

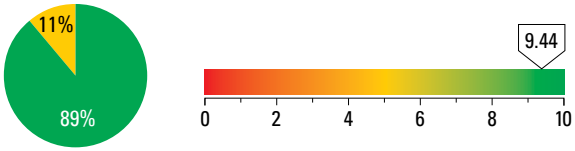
Legend FMC ● PMC ● NMC ●

Encroachment Data

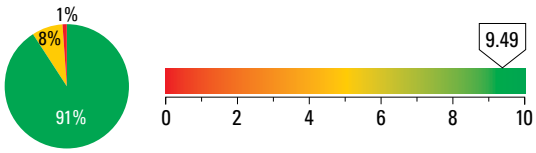
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack	●	●	●		●	●	●	●	●	●	●	●
Counterair	●	●	●		●	●	●	●	●	●	●	●
Counterspace												
Counterland	●	●	●		●	●	●	●	●	●	●	●
Countersea												
Information Operations												
Electronic Combat Support	●	●	●		●	●	●	●	●	●	●	●
Command and Control	●	●	●		●	●	●	●	●	●	●	●
Air Drop	●	●	●		●	●	●	●	●	●	●	●
Air Refueling	●	●	●		●	●	●	●	●	●	●	●
Spacelift												
Special Operations	●	●	●		●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●	●		●	●	●	●	●	●	●	●

Legend Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

No comments.

Summary Observations

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	9.39	9.39	9.44

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	9.49	9.49	9.49

No comments.

Grayling Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Airspace	Counterland	🟡	Airspace limits flexibility for counterland effectiveness.
	Electronic Combat Support	🟡	Airspace is limited by lateral and vertical limits. Airspace is adequate to accomplish most of the training required, but does restrict a small portion of the training required.
	Special Operations	🟡	Airspace is limited by lateral and vertical limits. Airspace is adequate to accomplish most of the training required, but does restrict a small portion of the training required.
Targets	Counterland	🟡	Currently the requirement for a moving strafe target are not being met. Range space and target cost have prohibited the ability to develop a moving strafe target.
Threats	Strategic Attack	🟡	No comments.
Range Support	Strategic Attack	🟡	Grayling range staffing does not meet current mission types and requirements for Fire support. Range manning is based on one shift. Current training requires approx. 30% to be at night, which has driven the range to cover more time with fewer bodies.
	Counterland	🟡	Grayling range staffing does not meet current mission types and requirements for Fire support. Requirements for range JTACs, moving targets, and scenario based CAS training outstrip staffing capabilities.
	Special Operations	🟡	Grayling range staffing does not meet current mission types and requirements for Fire support. Requirements for range JTACs, moving targets, opposing forces (OPFOR), and scenario based CAS training outstrip staffing capabilities.
Suite of Ranges	Counterland	🟡	No comments.
	Special Operations	🟡	No comments.

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Airspace	Strategic Attack	🟡	Airspace is limited in size based on older aircraft and their capabilities. Currently working an airpace review to re-work the airspace to meet the needs of current and future aircraft.
	Counterair	🟡	Airspace is limited in size based on older aircraft and their capabilities. Currently working an airpace review to re-work the airspace to meet the needs of current and future aircraft.
	Counterland	🔴	Airspace is limited in size based on older aircraft and their capabilities. CAS is a critical mission for current conflict and airspace restrictions severely impact realistic training. Currently working an airpace review to re-work the airspace to meet the needs of current and future aircraft.
	Electronic Combat Support	🟡	Airspace is limited in size based on older aircraft and their capabilities. Currently working an airpace review to re-work the airspace to meet the needs of current and future aircraft.
	Special Operations	🟡	Airspace is limited in size based on older aircraft and their capabilities. Current working an airpace review to re-work the airspace to meet the needs of current and future aircraft.
	Intelligence, Surveillance and Reconnaissance	🟡	Increased need for restricted airspace for UAS training push size and structure requirements.
Noise Restrictions	Strategic Attack	🟡	Mission types have driven the type of training needed to more populated areas and weapon employment parameters have increased (LGB, Urban CAS,etc) to push aircraft to the edge of restricted airspace. Although areas surrounding the Range were built up in the 70's and 80's, well after the range site was established in 1948, training requirements have many residents filing habitual noise complaints and engaging local and State politicians.
	Counterland	🟡	Mission types have driven the type of training needed to more populated areas and weapon employment parameters have increased (LGB, Urban CAS,etc) to push aircraft to the edge of restricted airspace. Although areas surrounding the Range were built up in the 70's and 80's, well after the range site was established in 1948, training requirements have many residents filing habitual noise complaints and engaging local and State politicians.
	Special Operations	🟡	Mission types have created the need for larger patterns around the impact area. CAS wheels, POD usage, and LGB employment create larger noise issues with encroaching summer residents.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Hardwood Assessment Details

Range Mission Description

Support ANG and DoD aircrew and JTAC training. 2x6 mile impact area that allows a variety of munition deliveries in realistic tactial senareios to include PGMs. Range has 5 UMTE treat emmiters. Main users are 115th FW, 132nd FW, 148th FW, 114th FW, 28th BW. 934th AW, and 147th AVN. Hardwood Range is a primary trainging range for 6 CTS and CAF JTACs. As well Hardwood is often used for major excersises at Volk Field such as NATO JTAC training (NATO Rover 2010).

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	FMC	PMC			FMC	PMC	FMC	FMC	PMC		FMC	FMC	FMC
Counterair	FMC	PMC			FMC	PMC	FMC	FMC	FMC		FMC		FMC
Counterspace													
Counterland	FMC	PMC			FMC	FMC	FMC	FMC	PMC	FMC	FMC	FMC	FMC
Countersea													
Information Operations	FMC	FMC			FMC	FMC	FMC	FMC	FMC			FMC	FMC
Electronic Combat Support	FMC	PMC			FMC	PMC	FMC	FMC	FMC			FMC	FMC
Command and Control	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Air Drop	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC
Air Refueling	FMC	FMC			FMC	FMC	FMC	FMC	FMC				FMC
Spacelift													
Special Operations	FMC	FMC			FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC			FMC	FMC	FMC	FMC	FMC			FMC	FMC

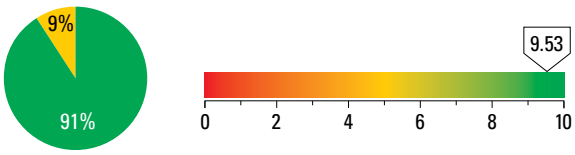
Legend: FMC, PMC, NMC

Encroachment Data

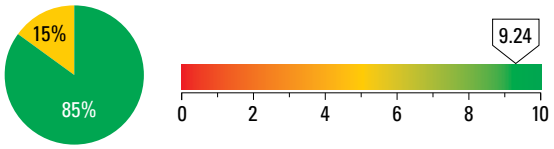
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	Minimal	Minimal	Moderate		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Moderate	Moderate
Counterair	Minimal	Minimal	Moderate		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterspace												
Counterland	Minimal	Minimal	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Moderate	Moderate
Countersea												
Information Operations												
Electronic Combat Support	Minimal	Minimal	Moderate		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Moderate	Moderate
Command and Control	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Drop	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Refueling	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Spacelift												
Special Operations	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Moderate	Moderate
Intelligence, Surveillance, and Reconnaissance	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal

Legend: Minimal, Moderate, Severe

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

No comments.

Summary Observations

No comments.

Hardwood Assessment Details

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	9.17	9.17	9.50	**Encroachment Scores**	8.99	8.99	9.09
Volk Field/ WICRTC/ Hardwood Range has taken an aggressive approch to future sustainment and viability, by constantly working on the training needs of future missions and public outreach through efforts such as JLUS. Efforts at Hardwood are improving training and the range overall.				No comments.			

Hardwood Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Airspace	Strategic Attack		Airspace is limited by lateral and vertical limits. Airspace is adequate to accomplish most of the training required, but does restrict a small portion of the training required. Supersonic flight is not authorized within the current airspace. Airspace rework is underway to meet the needs of future aircraft. This should be accomplished by 2011
	Counterair		Airspace is limited by lateral and vertical limits. Airspace is adequate to accomplish most of the training required, but does restrict a small portion of the training required. Supersonic flight is not authorized within the current airspace. Airspace rework is underway to meet the needs of future aircraft. This should be accomplished by 2011
	Counterland		Airspace is limited by lateral and vertical limits. Airspace is adequate to accomplish most of the training required, but does restrict a small portion of the training required. Supersonic flight is not authorized within the current airspace. Airspace rework is underway to meet the needs of future aircraft. This should be accomplished by 2011
	Electronic Combat Support		Airspace is limited by lateral and vertical limits. Airspace is adequate to accomplish most of the training required, but does restrict a small portion of the training required. Supersonic flight is not authorized within the current airspace. Airspace rework is underway to meet the needs of future aircraft. This should be accomplished by 2011
Threats	Strategic Attack		Next generation weapons systems require more up to date threat simulators and the landspace to properly place them within the airspace. Currently working to aquire more threats and developing agreements to place the threats within the current airspace
	Counterair		Next generation weapons systems require more up to date threat simulators and the landspace to properly place them within the airspace. Currently working to aquire more threats and developing agreements to place the threats within the current airspace
	Electronic Combat Support		Next generation weapons systems require more up to date threat simulators and the landspace to properly place them within the airspace. Currently working to aquire more threats and developing agreements to place the threats within the current airspace
Range Support	Strategic Attack		Hardwood range is one of the least manned ranges throuhgout the NGB. Current mission types and requirements for Fire support etc. has placed a need for creative scheduling. Range manning is based on one shift. Current training requires approx. 40% to be at night, which has driven the range to cover more time with fewer bodies.
	Counterland		Hardwood range is one of the least manned ranges throuhgout the NGB. Current mission types and requirements for Fire support etc. has placed a need for creative scheduling. Range manning is based on one shift. Current training requires approx. 40% to be at night, which has driven the range to cover more time with fewer bodies.

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Spectrum	Strategic Attack		Based on our location between two busy civilian airports severe restrictions are placed on chaff and ECM use. Frequencies are tougher to get based on everything moving to data links and civilian population becoming more electronic centric.
	Counterair		Based on our location between two busy civilian airports severe restrictions are placed on chaff and ECM use. Frequencies are tougher to get based on everything moving to data links and civilian population becoming more electronic centric.
	Electronic Combat Support		Based on our location between two busy civilian airports severe restrictions are placed on chaff and ECM use. Frequencies are tougher to get based on everything moving to data links and civilian population becoming more electronic centric.
Airspace	Strategic Attack		Airspace is limited in size based on older aircraft and their capabilities. Airsapce exspansion is difficult based on the location between two large civilian airports and their associated arrival and departure routes. Current working an airpace review to re-work the airspace to meet the needs of current and future aircraft.
	Counterair		Airspace is limited in size based on older aircraft and their capabilities. Airsapce exspansion is difficult based on the location between two large civilian airports and their associated arrival and departure routes. Current working an airpace review to re-work the airspace to meet the needs of current and future aircraft.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Hardwood Detailed Comments

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Airspace	Counterland	●	Airspace is limited in size based on older aircraft and their capabilities. Airsapce expansion is difficult based on the location between two large civilian airports and their associated arrival and departure routes. Current working an airpace review to re-work the airspace to meet the needs of current and future aircraft.
	Electronic Combat Support	●	Airspace is limited in size based on older aircraft and their capabilities. Airsapce expansion is difficult based on the location between two large civilian airports and their associated arrival and departure routes. Current working an airpace review to re-work the airspace to meet the needs of current and future aircraft.
Wetlands	Strategic Attack	●	The range is located in an area of large quantities of wetlands. Wetland restrictions have restricted our ability to construct complete firebreaks, the placement of new targets, etc. Working with the natural resource advisory, we plan new target development around wetlands on the range.
	Counterland	●	The range is located in an area of large quantities of wetlands. Wetland restrictions have restricted our ability to construct complete firebreaks, the placement of new targets, etc. Working with the natural resource advisory, we plan new target development around wetlands on the range.
	Electronic Combat Support	●	The range is located in an area of large quantities of wetlands. Wetland restrictions have restricted our ability to construct complete firebreaks, the placement of new targets, etc. Working with the natural resource advisory, we plan new target development around wetlands on the range.
	Special Operations	●	The range is located in an area of large quantities of wetlands. Wetland restrictions have restricted our ability to construct complete firebreaks, the placement of new targets, etc. Working with the natural resource advisory, we plan new target development around wetlands on the range.
Range Transients	Strategic Attack	●	The range boundaries are open, but marked appropriately for the activities taking place. Based on more ATV type vehicles, this increases the number of transients across the range. An effort to fence the entire range is underway. We continually advice the public of the activities taking place trough ATV clubs etc. Public awareness is critical. Hardwood has land use policies in place and active perimeter checks are done to ensure public safety.
	Counterland	●	The range boundaries are open, but marked appropriately for the activities taking place. Based on more ATV type vehicles, this increases the number of transients across the range. An effort to fence the entire range is underway. We continually advice the public of the activities taking place trough ATV clubs etc. Public awareness is critical. Hardwood has land use policies in place and active perimeter checks are done to ensure public safety.
	Electronic Combat Support	●	The range boundaries are open, but marked appropriately for the activities taking place. Based on more ATV type vehicles, this increases the number of transients across the range. An effort to fence the entire range is underway. We continually advice the public of the activities taking place trough ATV clubs etc. Public awareness is critical. Hardwood has land use policies in place and active perimeter checks are done to ensure public safety.
	Special Operations	●	The range boundaries are open, but marked appropriately for the activities taking place. Based on more ATV type vehicles, this increases the number of transients across the range. An effort to fence the entire range is underway. We continually advice the public of the activities taking place trough ATV clubs etc. Public awareness is critical. Hardwood has land use policies in place and active perimeter checks are done to ensure public safety.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Holloman Assessment Details

Range Mission Description

Holloman Ranges consist of Red Rio Range, Centennial Range Oscura Range, and Casa range. These ranges are the primary training ranges for the 49th Wing. Ranges support daily air to ground sorties. These ranges also support training for F-16s, HH60s, and JTAC personnel and an assortment of other US, Marine, Army aircraft and German Air Force training

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	FMC	FMC			FMC		FMC	FMC	FMC	FMC		FMC	FMC
Counterair	FMC	FMC			FMC		FMC	FMC	FMC	FMC		FMC	FMC
Counterspace	FMC	FMC			FMC		FMC	FMC	FMC	FMC		FMC	FMC
Counterland	FMC	FMC			FMC		FMC	FMC	FMC	FMC		FMC	FMC
Countersea													
Information Operations	FMC	FMC			FMC		FMC	FMC	FMC	FMC		FMC	FMC
Electronic Combat Support	FMC	FMC				NMC	NMC	NMC	NMC				
Command and Control	FMC	FMC			FMC		PMC	PMC	PMC	FMC		FMC	FMC
Air Drop	FMC	FMC			FMC			FMC	FMC			FMC	FMC
Air Refueling	FMC	FMC			FMC			FMC	FMC	FMC		FMC	FMC
Spacelift													
Special Operations	FMC	FMC			FMC		FMC	FMC	FMC	FMC		FMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC			FMC		FMC	FMC	FMC	FMC		FMC	FMC

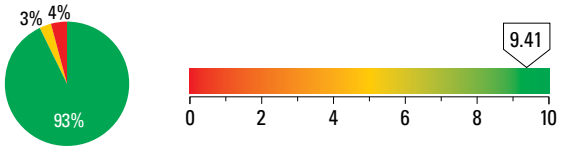
Legend: FMC, PMC, NMC

Encroachment Data

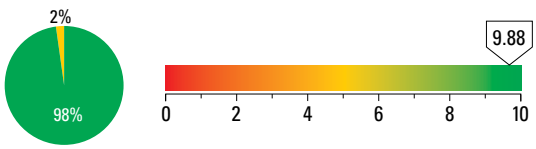
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterair	Minimal	Minimal	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterspace	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterland	Minimal	Moderate	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Countersea												
Information Operations	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Electronic Combat Support												
Command and Control	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Drop	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Refueling	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Spacelift	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Special Operations	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Intelligence, Surveillance, and Reconnaissance	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal

Legend: Minimal, Moderate, Severe

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

Require Link16 for improved command/control, and training. Estimated install is FY2011.

Summary Observations

AGM114 produces a large footprint that will not fit on our live drop range. The AGM114 is HE only, no inerts are manufactured or available at this time for training. This reduces training quality for MQ1 and MQ9 aircraft. The proposed Sun Zia transmission lines have potential impacts on Holloman Range. The full effects are unknown as the siting routes are still under deliberation.

Holloman Assessment Details

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	8.04	8.04	9.41	**Encroachment Scores**	8.42	8.42	10.00
Scores have varied due to changing mission requirements (F117A - F22, addition of MQ1/9)				Scores have varied due to changing mission requirements (F117A - F22, addition of MQ1/9)			

Holloman Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Threats	Electronic Combat Support	🔴	No electronic combat support; no training capability; no fixed plan at this time
Scoring & Feedback System	Electronic Combat Support	🔴	No electronic combat support; no training capability; no fixed plan at this time
	Command and Control	🟡	Awaiting Link 16; limited training capability; Link 16 install projected FY2011
Infrastructure	Electronic Combat Support	🔴	No electronic combat support; no training capability; no fixed plan at this time
	Command and Control	🟡	Awaiting Link 16; limited training capability; Link 16 install projected FY2011
Range Support	Electronic Combat Support	🔴	No electronic combat support; no training capability; no fixed plan at this time
	Command and Control	🟡	Awaiting Link 16; limited training capability; Link 16 install projected FY2011

Encroachment Observations

Attributes	Assigned Training Mission	Score	Comments
Munitions Restrictions	Counterland	🟡	AGM114 footprint exceeds range boundaries; RPVs cannot train with AGM114; Requires use of M-36 Captive Flight Trainer
Airspace	Counterair	🟡	Airspace priority for test missions; training missions rescheduled; close coordination between Air Force/Army scheduling activities
	Counterland	🟡	Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Jefferson Range Assessment Details

Range Mission Description

Jefferson Range provides primary training for the 122nd FW, 178th FW, 180th FW, and joint training for LFE's, MEU's, SOF, SMERF, FEMA, ASOS, IW, Urban Warfare, Homeland Defense all in conjunction with the Muskatatuck Urban Warfare Training Center.

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	FMC	FMC			PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Counterair		FMC			FMC	FMC	NMC	FMC	FMC			FMC	
Counterspace													
Counterland	PMC	FMC			PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Countersea													
Information Operations	FMC				FMC		PMC	PMC	PMC			FMC	FMC
Electronic Combat Support	FMC				FMC		PMC	PMC	PMC			FMC	FMC
Command and Control	FMC	FMC			FMC	FMC	PMC	FMC	FMC			FMC	FMC
Air Drop	FMC	FMC			PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Air Refueling		FMC				FMC		FMC	FMC				
Spacelift													
Special Operations	PMC	FMC			PMC	PMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC			PMC	FMC	PMC	FMC	FMC			FMC	FMC

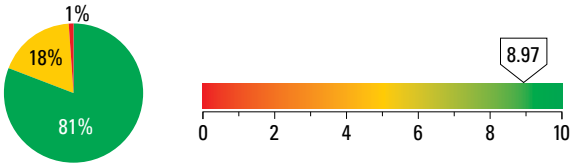
Legend: FMC PMC NMC

Encroachment Data

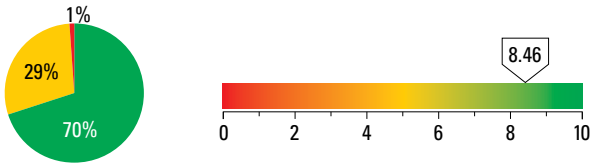
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	PMC	PMC	FMC		FMC	FMC	PMC	FMC	PMC	FMC	FMC	FMC
Counterair	PMC	FMC	PMC		PMC	FMC	PMC			FMC	FMC	FMC
Counterspace								PMC				
Counterland	PMC	PMC	FMC		FMC	FMC	PMC	NMC	PMC	FMC	FMC	FMC
Countersea												
Information Operations			FMC				FMC	PMC	FMC			
Electronic Combat Support		PMC	PMC		PMC		FMC	PMC	FMC			
Command and Control	FMC	FMC	FMC		FMC	FMC	FMC	PMC	FMC	FMC	FMC	FMC
Air Drop	PMC	PMC	FMC		FMC	FMC	FMC	PMC	FMC	FMC	FMC	FMC
Air Refueling	FMC	FMC			FMC	FMC	FMC			FMC	FMC	FMC
Spacelift												
Special Operations	FMC	PMC	FMC		FMC	FMC	PMC	PMC	PMC	FMC	FMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC	FMC		FMC	FMC	FMC	PMC	FMC	FMC	FMC	FMC

Legend: Minimal Moderate Severe

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

UXO contamination somewhat limits Jefferson Range's placement of targets and manuever areas. Clearance of the UXO during annual residue removal is opening new areas for small arms training and target placement and retrieval of RPA and air drops,however further expansion and development is prohibitive under current budget.

Summary Observations

The impact area is saturated with UXO residue which limits the ability to conduct activities such as retrieval of dropped objects. Most requests for air drops are accompanied by a request for retrieval.

Jefferson Range Assessment Details

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	8.75	8.75	9.14	**Encroachment Scores**	8.66	8.66	8.71
Overall capabilities of the Range complex have been increased by the annual clearance of the UXO. It is a slow process however due to the limitations of the EOD assets and the total amount of UXO present in the impact area.				No comments.			

Jefferson Range Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Counterland	🟡	Under current permit and MOU, we have approx 100 acres for development of target arrays.
	Special Operations	🟡	Same as above.
Targets	Strategic Attack	🟡	We are in an Army impact field with a high degree of UXOs. Cost for EOD outside of scrapes and access roads with current budget preclude expansion and development.
	Counterland	🟡	Same as above.
	Countersea	🟡	Same as above.
	Air Drop	🟡	Same as above.
	Special Operations	🟡	Same as above.
	Intelligence, Surveillance and Reconnaissance	🟡	Same as above.
Threats	Special Operations	🟡	We are in an Army impact field with a high degree of UXOs. Cost for EOD outside of scrapes and access roads with current budget preclude expansion and development.
Scoring & Feedback System	Counterair	🔴	NO feedback currently available to performance however partnership with MUTC is affording opportunities for intrumentation of range.
	Information Operations	🟡	Current scoring system does not provide AAR for IAO
	Electronic Combat Support	🟡	Current scoring system does not provide AAR for ECS
	Command and Control	🟡	Current scoring system does not provide AAR for C&C
	Intelligence, Surveillance, Reconnaissance	🟡	Current scoring system does not provide AAR for ICR
Infrastructure	Information Operations	🟡	Infrastructure does not support IO
	Electronic Combat Support	🟡	Infrastructure does not support ECS
Range Support	Information Operations	🟡	Infrastructure does not support IO
	Electronic Combat Support	🟡	Infrastructure does not support ECS

Encroachment Capabilities

Factors	Assigned Training Mission	Score	Comments
Threatened & Endangered Species	Strategic Attack	🟡	We have several protected species surrounding the impact areas and under the MOAS
	Counterair	🟡	Same as above.
	Counterland	🟡	Same as above.
	Air Drop	🟡	Same as above.
Munitions Restrictions	Strategic Attack	🟡	UXO limits the placement of targets. Yearly residue clearance is opening new areas for target placement.
	Counterland	🟡	Same as above.
	Electronic Combat Support	🟡	Bordered by CVG,SDF, and IND therefore restricting use of ECS
	Air Drop	🟡	UXO limits the placement of targets. Yearly residue clearance is opening new areas for target placement.
	Special Operations	🟡	Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Jefferson Range Assessment Details

Encroachment Capabilities

Factors	Assigned Training Mission	Score	Comments
Spectrum	Counterair	🟡	Bordered by CVG,SDF, and IND therefore restricting use of potentially jamming spectrums
	Electronic Combat Support	🟡	Bordered by CVG,SDF, and IND therefore restricting use of ECS
Airspace	Counterair	🟡	Not sufficient MOA space for counterair
	Electronic Combat Support	🟡	Bordered by CVG,SDF, and IND therefore restricting use of ECS
Noise Restrictions	Strategic Attack	🟡	EA assessment is limited in noise study and needs to be expanded for future weapons systems
	Counterair	🟡	Same as above.
	Counterland	🟡	Same as above.
	Special Operations	🟡	EA assessment is limited in noise study and needs to be expanded for future weapons systems
Adjacent Land Use	Counterspace	🟡	Adjacent land is Army owned and operated by FWS. FWS has permit for approx 49000 acres as compared to our 1100. Our footprints are authorized outside of our permitted area, however that is all. Also, much of the land is no access du to UXO.
	Counterland	🔴	Same as above.
	Information Operations	🟡	Same as above.
	Electronic Combat Support	🟡	Same as above.
	Command and Control	🟡	Same as above.
	Air Drop	🟡	Same as above.
	Special Operations	🟡	Same as above.
	Intelligence, Surveillance, Reconnaissance	🟡	Same as above.
Cultural Resources	Strategic Attack	🟡	Jefferson Range has oversight by BRAC 1988. Conducting operations outside the MOU as established by BRAC would require congressional authorization.
	Counterland	🟡	Same as above.
	Special Operations	🟡	Same as above.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

McMullen Assessment Details

Range Mission Description

McMullen (Yankee) Range serves as the 149th Fighter Wing's Primary Training Range (PTR). The 149th Fighter Wing is a Formal Training Unit (FTU) for F-16 Fighter training. FTU syllabus requirements include Basic Surface Attack (BSA), Conventional & Tactical Target Attack, Close Air Support (CAS), Urban CAS, Low Altitude Air-to-Air Tactics and Surface Electronic Attack training. McMullen Range also supports two Air Education & Training Command AT-38 squadrons from Randolph AFB (435th FTS) and Laughlin AFB (434th FTS). AT-38 operations include Introduction to Fighter Fundamentals (IFF) training for BSA. Finally, McMullen Range supports the 147th Air Support Operations Squadron (ASOS) from Ellington Field, TX (TXANG) for Joint Terminal Attack Controller (JTAC) ground training requirements.

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	●	●			●	●	●	●		●		●	●
Counterair	●	●			●	●				●		●	●
Counterspace													
Counterland	●	●			●	●	●	●		●		●	●
Countersea													
Information Operations	●	●			●	●		●				●	●
Electronic Combat Support	●	●			●	●	●	●		●		●	●
Command and Control	●	●			●	●	●	●		●		●	●
Air Drop													
Air Refueling													
Spacelift													
Special Operations	●	●			●	●	●	●		●		●	●
Intelligence, Surveillance, and Reconnaissance	●	●			●	●	●	●		●		●	●

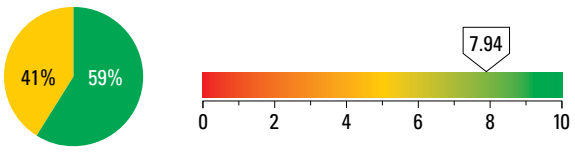
Legend: FMC ● PMC ● NMC ●

Encroachment Data

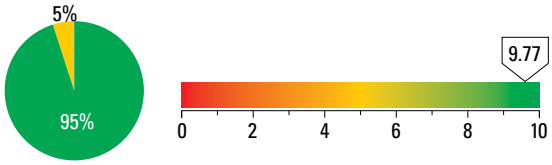
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	●	●	●		●	●	●	●	●	●	●	●
Counterair	●	●	●		●	●	●	●	●	●	●	●
Counterspace												
Counterland	●	●	●		●	●	●	●	●	●	●	●
Countersea												
Information Operations	●	●	●		●	●	●	●	●	●	●	●
Electronic Combat Support	●	●	●		●	●	●	●	●	●	●	●
Command and Control	●	●	●		●	●	●	●	●	●	●	●
Air Drop												
Air Refueling												
Spacelift												
Special Operations	●	●	●		●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●	●		●	●	●	●	●	●	●	●

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



McMullen Assessment Details

Summary Observations				Summary Observations			
No comments.				No comments.			
Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	8.42	8.42	6.27	**Encroachment Scores**	8.92	8.92	9.81
No comments.				No comments.			

McMullen Limitation Details

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Strategic Attack		Yankee Range Land-space is insufficient for full-up training ops. Current land-space of approximately 4000 acres (with only a 400 acre impact area) precludes live weapon drops and severely limits full-scale inert weapon releases. There are currently no planned actions to remedy this issue.
	Counterland		Yankee Range Land-space is insufficient for full-up training ops. Current land-space of approximately 4000 acres (with only a 400 acre impact area) precludes live weapon drops and severely limits full-scale inert weapon releases. There are currently no planned actions to remedy this issue.
Airspace	Strategic Attack		Restricted Area R-6312 over Yankee Range is inadequate for realistic maneuver. Consists of 5NM Radius circle from Surface to FL 230. R-6312 is often capped at 10K due to Houston Center and/or Navy operations. Impact to training includes limited capability for maneuver within airspace. Proposal in-works to create an ATCAA "air-bridge" for ingress to target area from unit's assigned Air-to-Air training MOA.
	Counterair		Same as above.
	Counterland		Same as above.
Threats	Strategic Attack		Range is currently authorized and utilizes RWR-Lite threat emitters that are aging and outdated. Threat equipment maintenance and operation requires manpower above current authorizations. Due to age and limited capabilities of RWR-Lite emitters, little significant training can be accomplished with respect to EW threats. Range is continuously seeking alternatives for more robust systems, i.e. - AN/VPQ-1 and (JTE) Joint Threat Emitters. No immediate timeline at current.
	Counterair		Same as above.
	Counterland		Same as above.
	Electronic Combat Support		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance, Reconnaissance		Same as above.
Infrastructure	Strategic Attack		Range infrastructure is comprised of portable-style buildings, non-permanent in nature and minimal communication infrastructure connectivity outside the range. There are no permanent facilities for personnel or equipment used to maintain targets, roads, fire breaks, communications equipment, structural maintenance equipment and IT connectivity beyond minimal requirements (phone & LAN). Real property must be acquired or a lease in excess of 20 years must be executed in order to erect permanent structures/facilities on Range. No planned actions to remedy this issue at current.
	Counterland		Same as above.
	Electronic Combat Support		Same as above.
	Command and Control		Same as above.
Smalls Arms Ranges	Strategic Attack		Range currently lacks funding for a second, full-time Range Control Officer and authorizations for additional operators/maintainers. Absences due to health, work or family situations will be a show-stopper for Class A Range operations. Det-1 has pursued funding for a second full-time RCO and personnel through State and NGB channels for several years with no success. No immediate timeline at current
	Counterair		Same as above.
	Counterland		Same as above.
	Electronic Combat Support		Same as above.
	Command and Control		Same as above.
	Special Operations		Same as above.
	Intelligence, Surveillance, Reconnaissance		Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

McMullen Assessment Details

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
MOUT Facilities	Electronic Combat Support		Range is currently authorized and utilizes RWR-Lite threat emitters that are aging and outdated. Threat equipment maintenance and operation requires manpower above current authorizations. Due to age and limited capabilities of RWR-Lite emitters, little significant training can be accomplished with respect to EW threats. Range is continuously seeking alternatives for more robust systems, i.e. - AN/VPQ-1 and (JTE) Joint Threat Emitters. No immediate timeline at current.
Suite of Ranges	Strategic Attack		Limited to a single range for BSA with limited standoff attack capability; no live weapons training, no Urban CAS target, limited EW threats and limited airspace for maneuver. Ongoing initiatives to expand airspace, targets and EW threats; no projected timeline.
	Counterair		Same as above.
	Counterland		Same as above.
	Electronic Combat Support		Same as above.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Airspace	Strategic Attack		Restricted Area R-6312 over Yankee Range is inadequate for realistic maneuver. Consists of 5NM Radius circle from Surface to FL 230. R-6312 is often capped at 10K due to Houston Center and/or Navy operations. Impact to training includes limited capability for maneuver within airspace. Proposal in-works to create an ATCAA "air-bridge" for ingress to target area from unit's assigned Air-to-Air training MOA.
	Counterair		Restricted Area R-6312 over Yankee Range is inadequate for realistic maneuver. Consists of 5NM Radius circle from Surface to FL 230. R-6312 is often capped at 10K due to Houston Center and/or Navy operations. Impact to training includes limited capability for maneuver within airspace. Proposal in-works to create an ATCAA "air-bridge" for ingress to target area from unit's assigned Air-to-Air training MOA.
	Counterland		Restricted Area R-6312 over Yankee Range is inadequate for realistic maneuver. Consists of 5NM Radius circle from Surface to FL 230. R-6312 is often capped at 10K due to Houston Center and/or Navy operations. Impact to training includes limited capability for maneuver within airspace. Proposal in-works to create an ATCAA "air-bridge" for ingress to target area from unit's assigned Air-to-Air training MOA.
	Special Operations		Restricted Area R-6312 over Yankee Range is inadequate for realistic maneuver. Consists of 5NM Radius circle from Surface to FL 230. R-6312 is often capped at 10K due to Houston Center and/or Navy operations. Impact to training includes limited capability for maneuver within airspace. Proposal in-works to create an ATCAA "air-bridge" for ingress to target area from unit's assigned Air-to-Air training MOA.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Melrose Range Assessment Details

Range Mission Description

Melrose Air Force Range provides unique training capability for Air Force Special Operations airpower and Combat Air Forces. Provides unique opportunities to build and foster improved joint air to ground integration training with joint terminal attack control (JTAC). Ensures a high quality electronic combat training environment for Air Force and other DoD assets.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack	●	●			●	●	●	●	●	●		●	
Counterair		●				●							
Counterspace													
Counterland	●	●			●	●	●	●	●	●		●	
Countersea													
Information Operations		●											
Electronic Combat Support	●	●			●	●	●	●	●			●	
Command and Control	●				●	●	●	●	●				
Air Drop	●	●			●	●							
Air Refueling		●				●							
Spacelift													
Special Operations	●	●			●	●	●	●	●	●		●	●
Intelligence, Surveillance, and Reconnaissance	●	●			●	●	●	●	●	●		●	

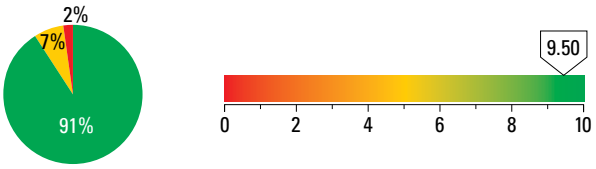
Legend: FMC ● PMC ● NMC ●

Encroachment Data

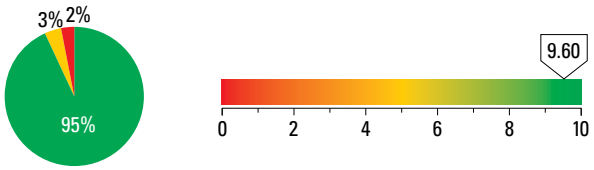
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack	●	●	●		●	●	●	●	●	●	●	●
Counterair	●	●	●		●	●	●	●	●	●	●	●
Counterspace												
Counterland	●	●	●		●	●	●	●	●	●	●	●
Countersea												
Information Operations												
Electronic Combat Support	●	●	●		●	●	●	●	●	●	●	●
Command and Control												
Air Drop	●	●	●		●	●	●	●	●	●	●	●
Air Refueling	●	●	●		●	●	●	●	●	●	●	●
Spacelift												
Special Operations	●	●	●		●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●	●		●	●	●	●	●	●	●	●

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

No comments.

Summary Observations

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	9.05	9.05	10.00

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	9.32	9.32	9.75

No comments.

Melrose Range Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Targets	Special Operations	🟡	Of the 2 AC-130 Target sites, one is operational but the second live fire target area is in design/development and is tied to the Environmental Assessment under contract. Current training impacts limit the AC-130 to single ship operations. Scheduled EA completion 01/28/11.
Infrastructure	Special Operations	🔴	Power, water, communications and roads need to be developed for planned range development. Range Admin, maintenance, and fire department buildings need to be updated and relocated out of the primary impact area. Permanent Exercise Facilities needed to facilitate training of SOF forces in a realistic training environment. Training artificialities hinder SOF forces training opportunities due to administrative and travel time with no onsite facility. Development plan is in the works but implementation is dependent on funding.
Range Support	Special Operations	🟡	Datalink capabilities do not exist. Bandwidth is limited. No SIPR available. Incapable of secure communications Repair ticket submitted to 27 SOCS but no get well date has been given to date.
MOUT Facilities	Special Operations	🟡	MOUT sites are incomplete. This limits ground operations training. Sites are being developed as funds become available.
Suite of Ranges	Special Operations	🟡	NSAv Landing Zone not built. Current temporary LZ operations are limited by weather. 3Permanent LZ contract award estimated for 09/20/2010.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Munitions Restrictions	Strategic Attack	🟡	Cannot employ all weapons approved. Minimal training impact due to alternate weapons capabilities that meet training requirements. No remedy immediately available.
	Counterland	🔴	Same as above.
	Special Operations	🔴	Structured Targets/Ranges/dirt LZ is funded and in the contracting process. Schedule deconfliction burden is increased resulting in lost training due to availability of resources. Funded projects will alleviate some of deconfliction issues opening up additional training opportunities. Get well: FY2015
Spectrum	Electronic Combat Support	🟡	Four frequencies are not available: 15.4 GHz earth exploration satellite (passive), 3930MHz satellite broadcast, 668 and 878 MHz White Sands Missile Range FCC restriction. Manual of Regulations and Procedures for Federal Radio Frequency Management, US footnote 246. Minimal training impact. Workarounds in place. No immediate remedy available. Restrictions not anticipated to change.
Adjacent Land Use	Special Operations	🟡	In the Clovis NM area, wind turbine farms are the primary concern because of the favorable atmospheric conditions Currently there are no wind farms hindering operations; however, because of these favorable wind conditions it is inevitable that Melrose Air Force Range will be forced to mitigate impacts of several proposed wind farms planned in close proximity. The 27 SOW has recently formed an Encroachment Committee to focus on this issue. This committee will be the forum to disseminate encroachment information, discuss the concerns of the 27 SOW on the impacts of encroachment to the base/surrounding airspace and then vet information to 27 SOW/AFSOC leadership. The 27 SOW has recently increased communication efforts with State planning/licensing agencies to inform them of our airspace "areas of concern" and to permit early evaluation of proposed projects in our area. Additionally, the neighboring counties have an ongoing Joint Land Use Study (JLUS) with the SOW; encroachment has been the primary issue and we are working to raise awareness of the encroachment issue and establish an early vetting process for ordinances or zoning to help mitigate encroachment to the base.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Mountain Home Range Assessment Details

Range Mission Description

Mountain Home Range Complex (MHRC) consists of 2 impact areas, Saylor Creek Range and Juniper Butte Range, 5 No -Drop target areas, the main EC site at Grasmere and multiple EC sites. The Range is classified as a Primary Training Range by ACC. The primary mission of the range is to support the 366FW and ID ANG by providing both conventional and tactical targets, urban targets, and EW threats for basic surface attack, tactical surface attack missions and CAS training with JTACs.

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	●	●			●	●	●	●	●		●		●
Counterair	●	●			●	●	●	●	●		●		●
Counterspace													
Counterland	●	●			●	●	●	●	●		●	●	●
Countersea													
Information Operations													
Electronic Combat Support	●	●			●	●	●	●	●		●	●	●
Command and Control	●	●			●	●	●	●	●		●	●	●
Air Drop	●	●				●			●		●	●	●
Air Refueling	●	●				●		●	●		●		●
Spacelift													
Special Operations	●	●			●	●	●	●	●		●	●	●
Intelligence, Surveillance, and Reconnaissance													

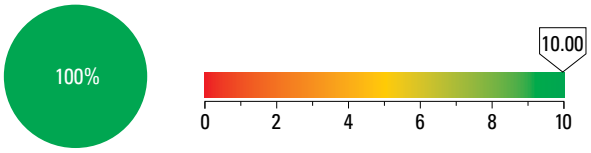
Legend FMC ● PMC ● NMC ●

Encroachment Data

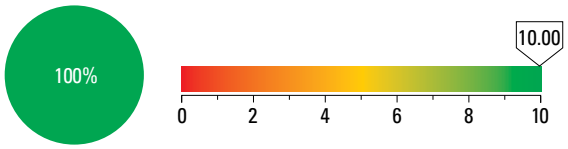
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	●	●	●		●	●	●	●	●	●	●	●
Counterair	●	●	●		●	●	●	●	●	●	●	●
Counterspace												
Counterland	●	●	●		●	●	●	●	●	●	●	●
Countersea												
Information Operations												
Electronic Combat Support	●	●	●		●	●	●	●	●	●	●	●
Command and Control	●	●	●		●	●	●	●	●	●	●	●
Air Drop	●	●	●		●	●	●	●	●	●	●	●
Air Refueling	●	●	●		●	●	●	●	●	●	●	●
Spacelift												
Special Operations	●	●	●		●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance												

Legend Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

1. 100% of the AF's range/range complex mission areas that are applicable to the MHRC are Fully Mission Capable (FMC).
2. MHRC does not support counterspace, countersea, information operations, spacelift, and ISR missions on a normal basis and only rarely supports air drop missions

Summary Observations

The only significant impact on operations in the MHRC is caused by the existence of Slick Spot Peppergrass, a threatened species growing near the impact area at Juniper Butte Range. Their is minimal impact to air and ground operations in the current target complex at Juniper Butte, but it could impact expansion efforts in the future. Saylor Creek serves as our primary impact area, and has no encroachment issues at this time.

Mountain Home Range Assessment Details

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	10.00	10.00	10.00	**Encroachment Scores**	9.89	9.89	10.00
The overall capability score has been steady. The only change in recent years has been the official listing of Slick Spot Peppergrass as a threatened species and the construction of a more robust MOUT target set in keeping with current CAS/ JTAC requirements.				The overall encroachment score remains steady at 10. The only change has been the listing of Slick Spot Peppergrass as a threatened species. This may impact future expansion efforts at Juniper Butte Range, should they be attempted. We are currently in the process of approving strafe at Juniper Butte in addition to BDU-33 practice bombs, which should be approved despite the listing.			

Mountain Home Ranges Limitation Details

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
No comments.			

Encroachment Observations

Factors	Assigned Training Mission	Score	Comments
No comments.			

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Nevada Test and Training Range Assessment Details

Range Mission Description

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	FMC	FMC			FMC	PMC	FMC		FMC		FMC	PMC	FMC
Counterair	FMC	PMC				PMC	FMC		FMC		FMC	FMC	FMC
Counterspace													
Counterland	FMC	FMC			FMC	FMC	FMC	FMC	PMC	FMC	FMC	FMC	FMC
Countersea													
Information Operations					NMC	NMC	NMC	FMC	PMC		NMC	NMC	NMC
Electronic Combat Support	FMC	PMC			PMC	PMC	PMC	FMC			FMC	PMC	FMC
Command and Control	FMC	FMC			NMC	PMC	NMC	FMC	FMC	FMC	FMC	FMC	FMC
Air Drop	FMC	FMC			FMC	FMC		FMC	FMC	FMC	FMC	PMC	FMC
Air Refueling		FMC						FMC			FMC		FMC
Spacelift													
Special Operations	FMC	FMC			FMC	FMC		FMC	FMC	FMC	FMC	FMC	FMC
Intelligence, Surveillance, and Reconnaissance		FMC			PMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC

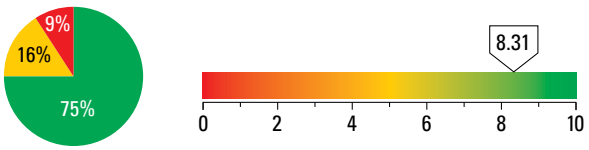
Legend: FMC, PMC, NMC

Encroachment Data

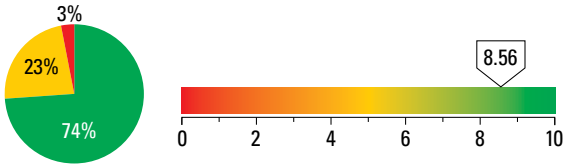
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	Severe	Moderate	Minimal	Minimal	Moderate	Moderate	Minimal	Moderate	Moderate	Moderate	Moderate	Minimal
Counterair	Minimal	Minimal	Minimal	Minimal	Moderate	Minimal	Moderate	Moderate	Moderate	Minimal	Minimal	Minimal
Counterspace	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterland	Severe	Moderate	Minimal	Minimal	Moderate	Moderate	Minimal	Moderate	Moderate	Moderate	Moderate	Minimal
Countersea												
Information Operations	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Electronic Combat Support	Minimal	Minimal	Minimal	Minimal	Severe	Moderate	Minimal	Severe	Moderate	Minimal	Moderate	Minimal
Command and Control	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Drop	Moderate	Minimal	Minimal	Minimal	Moderate	Minimal	Minimal	Minimal	Moderate	Minimal	Moderate	Minimal
Air Refueling	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Spacelift												
Special Operations	Moderate	Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Moderate	Moderate	Minimal	Moderate	Minimal
Intelligence, Surveillance, and Reconnaissance	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal

Legend: Minimal, Moderate, Severe

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

1. Most impacting performance are: Threats, Targets, Scoring and Feedback; then Collective Ranges and Suite of Ranges in this order.
2. Mission areas impacted are: Command and Control and Information Operations
3. FY2012 POM will include: a) Threat Relevancy Requirements are "signature representative" and "robustness in density." Modernize to Double Digit capabilities. b) Representative Targets including Time Sensitive Targets (TST) c) Instrumented Battlespace with upgrades for compartmentalized debriefs d) Throughput on Operational Hours. Extend the NTTR range hour capacity with additional shifts to handle new workload for the F-35 and Test requirements. Includes Saturday operations and Night Shifts.

Summary Observations

No comments.

Nevada Test and Training Range Assessment Details

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	8.22	8.22	8.39	**Encroachment Scores**	8.62	8.24	8.26
No comments.				No comments.			

Nevada Test and Training Range Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Airspace	Counterair	🟡	Increasing restrictions on the range due to noise complaints, urban encroachment, and natural lands. Supersonic, chaff, flare, and overflight restrictions continue to shrink the NTTR airspace. Avoidance Areas - Nellis has established noise sensitive area around communities under the MOA.
	Electronic Combat Support	🟡	Limited Capability to do full-spectrum jamming. Current FAA chaff restrictions deny employment over the NTTR. Avoidance Areas - Nellis has established noise sensitive area around communities under the MOA. Added since 2008 an increase in renewable energy wind farms (WGEF) has the potential to impact our ability to operate in a clean electronic environment currently in study with the AF Scientific Advisory Board (SAB). Impacts are RADAR operations with low observable aircraft frames have degradation in analysis for weapons and tactics testing and training.
Targets	Information Operations	🔴	We have no self-contained Information Operations (IO) Targets on the NTTR. All IO play is based on the users and the equipment that they bring to the range. We have some means of facilitating IO play but no organic capability. Continuing to work with JIOR to provide a mobile service which can be deployed at the Urban Operations Complex (UOC) on Range 62.
	Electronic Combat Support	🟡	Continue to work on Digital Integrated Air Defense System (DIADS) suite in order to show a real-time degradation on red systems based on real efforts of jamming platforms.
	Command and Control	🔴	No Red C2 Targetable Nodes exist on the NTTR. Jamming platforms do not get real-time feedback on operations. With DIADS implementation and IO suite we should better simulate a degraded C2 system while maintaining safety.
	Intelligence, Surveillance and Reconnaissance	🟡	NTTR Requires High-Fidelity ISR Targets on the Range. ISR is the one of the most heavily tasked functions and we have only minimal target support. Continue to expand ISR targets to include the High Speed Moving Target (HSMT) and our IO capabilities.
Threats	Strategic Attack	🟡	Lack of double-digit SAM capabilities. We are still multiple years away of allowing users to train on significant double digit SAM threats - ACC tracking JTE with SPO. Workarounds are planned but do not support full training objectives. Right now aircrew must train on legacy single-digit SAMs.
	Counterair	🟡	Same as above.
	Information Operations	🔴	We have no self-contained Information Operations Targets on the NTTR. All IO play is based on the users and the equipment that they bring to the range. We have some means of facilitating IO play but no organic capability. Continuing to work with JIOR to provide a mobile service which can be deployed at the UOC.
	Electronic Combat Support	🟡	Lack of complete electronic target set. EA platforms do not get real-time feedback on their capabilities and their effects during training. Continue to work on DIADS suite in order to show a real-time degradation on red systems based on real efforts of jamming platforms.
	Command and Control	🟡	No Red C2 Targetable Nodes exist on the NTTR. Jamming platforms do not get real-time feedback on operations. With DIADS implementation and IO suite we should better simulate a degraded C2 system while maintaining safety.
Scoring and Feedback Systems	Information Operations	🔴	We have no self-contained Information Operations Targets on the NTTR. All IO play is based on the users and the equipment that they bring to the range. We have some means of facilitating IO play but no organic capability. Continuing to work with JIOR to provide a mobile service which can be deployed at the UOC.
	Electronic Combat Support	🟡	Lack of complete electronic target set. EA platforms do not get real-time feedback on their capabilities and their effects during training. Continue to work on DIADS suite in order to show a real-time degradation on red systems based on real efforts of jamming platforms.
	Command and Control	🔴	No Red C2 Targetable Nodes exist on the NTTR. Jamming platforms do not get real-time feedback on operations. With DIADS implementation and IO suite we should better simulate a degraded C2 system while maintaining safety.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Nevada Test and Training Range Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Range Support	Counterland	🟡	Limited Blue Force Track Capability & Convoy Support. Ground Troops are deploying without high fidelity training. Currently working with 99 GCTS to provide training area for robust convoy training with 99 ABW and ACC coordination.
	Information Operations	🟡	We have no self-contained Information Operations Targets on the NTTR. All IO play is based on the users and the equipment that they bring to the range. We have some means of facilitating IO play but no organic capability. Continuing to work with JIOR to provide a mobile service which can be deployed at the UOC.
Collective Ranges	Information Operations	🔴	Same as above.
MOUT Facilities	Strategic Attack	🟡	New Area Security Operations (ASO) requirement for GCTS and do no have the current capabilities to provide all required. Currently having to use "band-aid" fixes and train when any time is available in "min" requirements being met. Trying to work with HHQ to provide specific funding, manning, and requirements to get higher priority.
	Information Operations	🔴	We have no self-contained Information Operations Targets on the NTTR. All IO play is based on the users and the equipment that they bring to the range. We have some means of facilitating IO play but no organic capability. Continuing to work with JIOR to provide a mobile service which can be deployed at the UOC.
	Electronic Combat Support	🟡	Deploying jammable infrastructure at the Urban Operations Center. Crews cannot get robust training in CAS / EA / or ISR without a robust electronic threat. Right now we use the UOC as low-threat area but working to obtain deployable systems.
	Air Drop	🟡	Currently there are five Drop Zones (two area and three circular) near the UOC on Range 62. This is an AMC requirement we are meeting. We do NOT have an operational LZ near the UOC. This is an AMC and SOCOM requirement we are not meeting. Training would be greatly enhanced to have a LZ near the UOC to conduct full ops. Working to enhance the current landing strip in the UOC complex to allow rotary wing, C-130 and C-17 assault/bare base operations.
Suite of Ranges	Information Operations	🔴	We have no self-contained Information Operations Targets on the NTTR. All IO play is based on the users and the equipment that they bring to the range. We have some means of facilitating IO play but no organic capability. Continuing to work with JIOR to provide a mobile service which can be deployed at the UOC.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Threatened & Endangered Species/Critical Habitat	Strategic Attack	🔴	Placement of targets in the southern ranges are constrained by US Fish and Wildlife Service guidance/ agreements. Must comply with ESA (Increase costs or Risks) – The NTTR southern ranges is home to the Desert Tortoise, a Threatened Species. We operate under a Biological Opinion (BO) issued by the US Fish and Wildlife Services. In accordance with the BO, we pay a one-time fee per acre and must implement required conditions. USFWS nominated the higher elevations in the Southern Ranges as Wilderness. This severely restricts our ability to place threats or targets at high elevations to provide future capabilities. USFWS recently issued interim guidance on protecting golden eagles. It is unknown how these rules will impact our ability to manage range targets. There are no open venues to mitigate these issues for increased capabilities; since ESA compliance and wilderness regulation compliance are based on Public Law. At some point additional lands to support increase capabilities will be necessary.
	Counterland	🔴	Endangered Species Act (Increase costs or Risks) – The NTTR southern ranges is home to the Desert Tortoise, a Threatened Species. We operate under a Biological Opinion (BO) issued by the US Fish and Wildlife Services. In accordance with the BO, we pay a one-time fee per acre of $723 for each acre of "suitable habitat" we disturb and must implement required conditions. There are no open venues to mitigate these issues for increased capabilities; since ESA compliance and wilderness regulation compliance are based on Public Law. At some point additional lands to support increase capabilities will be necessary.
	Air Drop	🟡	Placement of Drop Zones in the southern ranges must follow US Fish and Wildlife Service guidance/ agreements. The Biological Opinion is the driver behind drop zone limitations. There are no open venues to mitigate these issues for increased capabilities; since ESA compliance and wilderness regulation compliance are based on Public Law. At some point additional lands to support increase capabilities will be necessary.
	Special Operations	🟡	In the lower elevations of the southern range, Special Operations ground movements are restricted due to USFWS Desert Tortoise Habitat and the Biological Opinion (BO) requirements. The southern ranges higher elevations Wilderness Areas designation prevents vehicle use for ground movements. USFWS recently issued interim guidance on protecting golden eagles. It is unknown how these rules will impact our ability to manage range targets. There are no open venues to remedy these issues; ESA compliance and wilderness regulation compliance.

Nevada Test and Training Range Detailed Comments

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Munitions Restrictions	Strategic Attack	🟡	Placement of live and inert targets on the southern ranges must follow USFWS guidance/agreements. In the lower elevations of the southern range, target placement is constrained due to USFWS Desert Tortoise Habitat. The southern ranges higher elevations Wilderness Areas designation eliminates this area being used for target placement. USFWS recently issued interim guidance on protecting golden eagles. It is unknown how these rules will impact our ability to manage range targets. There are no open venues to remedy these issues; ESA compliance and wilderness regulation compliance.
	Counterland	🟡	Placement of live and inert targets on the southern ranges must follow USFWS guidance/agreements. In the lower elevations of the southern range, target placement is constrained due to USFWS Desert Tortoise Habitat. The southern ranges higher elevations Wilderness Areas designation eliminates this area being used for target placement. USFWS recently issued interim guidance on protecting golden eagles. It is unknown how these rules will impact our ability to manage range targets. There are no open venues to remedy these issues; ESA compliance and wilderness regulation compliance.
	Special Operations	🟡	Placement of live and inert targets on the southern ranges must follow USFWS guidance/agreements. In the lower elevations of the southern range, target placement is constrained due to USFWS Desert Tortoise Habitat. The southern ranges higher elevations Wilderness Areas designation eliminates this area being used for target placement. USFWS recently issued interim guidance on protecting golden eagles. It is unknown how these rules will impact our ability to manage range targets. There are no open venues to mitigate these issues for increased capabilities; since ESA compliance and wilderness regulation compliance are based on Public Law. At some point additional lands to support increase capabilities will be necessary.
Airspace	Strategic Attack	🟡	Airspace constraint (creates overflight avoidance areas)—NTTR shares approximately 847,050 acres with the US Fish and Wildlife Services (USFWS). USFWS has established Big Horn Sheep watering points in the mountain ranges. In accordance with the Nellis AFB and USFWS MOU, each watering location has a 1-mile buffer zone (overflight avoidance area). There are no plans to challenge this long-standing restriction.
	Counterair	🟡	Same as above.
	Counterland	🟡	Same as above.
	Electronic Combat Support	🔴	Placement of threats on the southern ranges must follow USFWS guidance/agreements. In the lower elevations of the southern range, threat placement is constrained due to USFWS Desert Tortoise Habitat. The southern ranges higher elevations Wilderness Areas designation eliminates this area being used for threat placement. For Air to Ground use the airspace constraint (creates avoidance areas)—NTTR shares approximately 847,050 acres with the US Fish and Wildlife Services (USFWS). USFWS has established Big Horn Sheep watering points in the mountain ranges. In accordance with the Nellis AFB and USFWS MOU, each watering location has a 1-mile buffer zone (overflight avoidance area). There are no plans to challenge this long-standing restriction.
	Air Drop	🟡	DZs outside withdrawn lands are not controlled by DoD. All military use of these lands must be approved by the land manger, in most cases around the NTTR this is BLM. To use the lands for Drop Zones, Nellis must request a Right of Way. This process can take up to a year to accomplish the appropriate NEPA and Real Estate Instrument actions. Only remedy is timely identification of the need. Problem has no known long-term solution and the Air Force is at risk of BLM manager approval which could change over time.
Air Quality	Strategic Attack	🟡	Nellis has received several Notice's of Violation (NOV) due to excessive dust emissions from the Southern Ranges. Violations could have included fines up to $10,000/day/violation. Funding has been requested through multiple sources to pave primary roads. Paving would also reduce wear and tear on vehicles.For the Northern Ranges, Best Practical methods must be used at all times for any quantity of disturbance (paving, watering, revegetation, chemical stabilization, phased construction, etc.) The Title V Operating Permit has a supplemental Surface Area Disturbance Permit, # 9711-1233 which establish terms of compliance. For the Southern Ranges, Clark County rules apply. Best Available Control Methods must be used at all times for any quantity of soil disturbance including traffic on unpaved roads (watering, dust palliative, etc.) A visible dust plume cannot exit the property or extend over 100 feet within the property boundary. Dust permits must be purchased prior to construction If a project disturbs more than 1/4 acre of soil (including access road, storage area, parking during construction), involves mechanized trenching of greater than or equal to 100 feet in length, or mechanical demolition of structure smaller than 1,000 square feet.
	Counterland	🟡	Same as above.
	Electronic Combat Support	🟡	Same as above.
Noise Restrictions	Counterair	🟡	NTTR restrictions for supersonic flight. Increased noise complaints have occurred due to F-22A activity. More will be expected for the F-35.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Nevada Test and Training Range Detailed Comments

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Adjacent Land Use	Strategic Attack		Numerous Renewable Energy projects under or adjacent to the NTTR. Increased urban development under the MOAs (Coyote Springs and BLM Land Sales). Remedy - Continued contact with Federal, State and community land managers striving for compatible development. Requires an Air Staff policy directive and a update to AFI 13-201, paragraph 6.6. that addresses all Renewable Energy.
	Counterair		Same as above.
	Counterland		Same as above.
	Electronic Combat Support		Same as above.
	Special Operations		Numerous Renewable Energy projects under or adjacent to the NTTR. Increased urban development under the MOAs (Coyote Springs and BLM Land Sales). Remedy - Continued contact with Federal, State and community land managers striving for compatible development. Requires an Air Staff policy directive and a update to AFI 13-201, paragraph 6.6. that addresses all Renewable Energy.
Cultural Resources	Strategic Attack		Cultural resources affect target and threat placement on the NTTR. Remedy - The process can take up to a year to accomplish the appropriate NEPA, NHPA consultation, and Native American coordination. Only attempt to remedy is planning or timely identification of the need. Problem has no known long term solution.
	Counterair		Same as above.
	Counterland		Same as above.
	Electronic Combat Support		Same as above.
	Air Drop		Same as above.
	Special Operations		Same as above.
Water Quality/ Supply	Strategic Attack		Limited Water Resources for Range Maintenance (Dust abatement, etc). Remedy - Obtain funding for additional wells, storage tanks and water trucks to haul water to the construction sites.
	Counterland		Same as above.
Wetlands	Strategic Attack		Wetlands have not been delineated on the NTTR. This is potentially a mission delay and time impediment to completing the NEPA process and Section 404 of the Clean Water Act consultation/requirements for target/ threat placement on the NTTR. The remedy is to identify mission activity/requests in a timely manner and address needs as required by US Army Corps of Engineers (COE). Problem has no known long term solutions.
	Counterland		Same as above.
	Electronic Combat Support		Same as above.
	Air Drop		Same as above.
	Special Operations		Same as above.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Patrick Range Assessment Details

Range Mission Description

Given that most of the training types identified in the call do not occur here, we have answered the questions asked within the framework of could we support training of the types shown. The other difference from the previous year's submittal is that we have looked at munitions from an MMRP perspective rather than an operational perspective.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack													
Counterair													
Counterspace													
Counterland													
Countersea													
Information Operations													
Electronic Combat Support													
Command and Control													
Air Drop													
Air Refueling													
Spacelift	●	●	●	●	●	●	●	●	●	●	●	●	●
Special Operations													
Intelligence, Surveillance, and Reconnaissance													

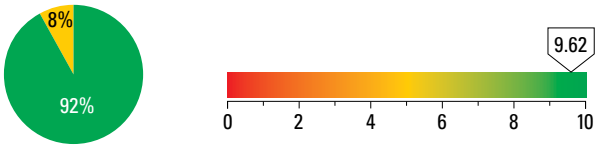
Legend: FMC ● PMC ● NMC ●

Encroachment Data

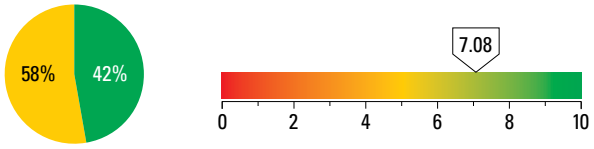
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack												
Counterair												
Counterspace												
Counterland												
Countersea												
Information Operations												
Electronic Combat Support												
Command and Control												
Air Drop												
Air Refueling												
Spacelift	●	●	●	●	●	●	●	●	●	●	●	●
Special Operations												
Intelligence, Surveillance, and Reconnaissance												

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

Aging utility infrastructure is major concern.

Summary Observations

Spectrum encroachment is a growing concern on TM spectrum availability. Normal environmental processes related to endangered species and cultural sites are workable.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	NA	NA	NA

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	NA	NA	NA

No comments.

Patrick Range Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Infrastructure	Spacelift	●	Aging utility infrastructure impacts day to day processing for spacelift operations. Potential for electrical and water outages. Waterline replacement project in work. New electrical transformers have been installed and/or ordered. High Voltage electrical distribution system under review for contracted maintenance.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Threatened & Endangered Species/Critical Habitat	Spacelift	●	15 Listed Endangered Species, this requires continuous species monitoring, AF recommends terrain avoidance, and species analysis, no anticipated end date.
Spectrum	Spacelift	●	Spectrum encroachment via Windmills on NEXRAD weather systems, and on Telemetry and communication transmitters. There have been two recent Executive decisions to open up more spectrum for public use can impact our TM systems. Also spectrum encroachment on FM band, primarily Impacts availability to support spacelift operations due to frequency conflict with flight termination signals. No anticipated end date.
Noise Restrictions	Spacelift	●	Impact of rocket noise on marine mammals. This requires special monitoring and potential mitigation due to regulatory requirements. No anticipated end date.
Cultural Resources	Spacelift	●	Cultural resources present basewide, causing delays and avoidance. This may require SHPO consultation and monitoring/mitigation. No anticipated end date.
Water Quality/ Supply	Spacelift	●	Industrially generated wastewater from launch operations must be managed and disposed of in accordance with Federal and State permits and regulations, incurring costs for compliance. No anticipated end date.
Wetlands	Spacelift	●	Several wetlands containing endangered species. This requires mitigation and permitting. No anticipated end date.
Range Transients	Spacelift	●	Enters into restricted safety zones prior to launch. This could cause launch scrub resulting in several hundred thousand dollar recycle cost. This requires training, surveillance and risk assessment and mitigation.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Poinsett Electronic Combat Range Assessment Details

Range Mission Description

To provide realistic electronic combat (EC) and bombing and gunnery (B&G) training for the 20 FW, USAF and DoD aircrews.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack	●	●			●	●	●	●	●	●	●	●	●
Counterair	●	●			●	●	●	●	●	●	●	●	●
Counterspace	●	●			●	●	●	●	●	●	●	●	●
Counterland	●	●			●	●	●	●	●	●	●	●	●
Countersea													
Information Operations	●	●			●	●	●	●	●	●	●	●	●
Electronic Combat Support	●	●			●	●	●	●	●	●	●	●	●
Command and Control	●	●			●	●	●	●	●	●	●	●	●
Air Drop	●	●			●	●	●	●	●	●	●	●	●
Air Refueling	●	●			●	●	●	●	●	●	●	●	●
Spacelift	●	●			●	●	●	●	●	●	●	●	●
Special Operations	●	●			●	●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●			●	●	●	●	●	●	●	●	●

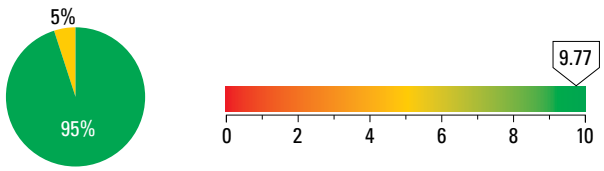
Legend: FMC ● PMC ● NMC ●

Encroachment Data

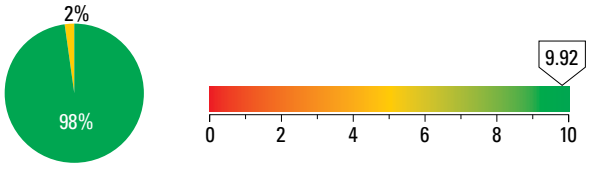
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack	●	●	●		●	●	●	●	●	●	●	●
Counterair	●	●	●		●	●	●	●	●	●	●	●
Counterspace	●	●	●		●	●	●	●	●	●	●	●
Counterland	●	●	●		●	●	●	●	●	●	●	●
Countersea												
Information Operations	●	●	●		●	●	●	●	●	●	●	●
Electronic Combat Support	●	●	●		●	●	●	●	●	●	●	●
Command and Control	●	●	●		●	●	●	●	●	●	●	●
Air Drop	●	●	●		●	●	●	●	●	●	●	●
Air Refueling	●	●	●		●	●	●	●	●	●	●	●
Spacelift	●	●	●		●	●	●	●	●	●	●	●
Special Operations	●	●	●		●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●	●		●	●	●	●	●	●	●	●

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

No comments.

Summary Observations

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	10.00	10.00	9.81

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	10.00	10.00	9.92

No comments.

Poinsett Electronic Combat Range Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Airspace	Strategic Attack	●	Gamecock D airspace is geographically too small to do any opposed training and that is also the best airspace with respect to the quantity of threat emitters. It is usable airspace as long as the Poinsett Transition Area is active, but the PTA is too restrictive with respect to maneuvers within the PTA and the lack of ability for fighters to release ordinance on R-6002 and return to Gamecock D. There is no proposed action to allow fighters to defensively threat react within the PTA nor release weapons inside R-6002 due to a LOA between Jacksonville Center and Shaw AFB.
	Counterair	●	Same as above.
Threats	Strategic Attack	●	The best SEAD airspace is W177/161 over water which contains no actual threat emitters. The airspace is usable for SEAD with the ability of the F-16 to create a training simulation, however there is no ability to be targeted from simulated threats to allow for threat reactions. There is a plan in the works with no current timeline to put some threat emitters on the coast. Bulldog airspace has a high altitude shelf that does not allow for descent in the case of weather or to PID threat emitters with DEAD training limiting training. The elimination of this shelf or the addition of more threat emitters in the all altitude portion of Bulldog airspace would eliminate this problem. There is no proposed capabilities to eliminate the shelf. There is a proposed plan to add additional threat emitters into Bulldog, Currently two additional sites are in the leasing process with construction planned for FY2011.
	Counterair	●	Same as above.
	Electronic Combat Support	●	Same as above.
Scoring and Feedback System	Electronic Combat Support	●	Current system to provide aircrew feedback inadequate for EC missions. This does not allow 20 FW pilots to accurately debrief SEAD and DEAD missions with actual emitter "truth" data. ACC/A3AR is aware of the problem and an EW Server have been discussed. This server would provide emitter data directly to aircrews for ICADS playback. ECD:TBD

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Airspace	Strategic Attack	●	W177B & 161B airspace is given less than 50% of the time up to the normal altitude of 30,000 ft. leaving significantly less airspace for high altitude tactics. There is no planned action/capability to prevent ATC from capping the airspace.
	Counterair	●	Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Polygone Assessment Details

Range Mission Description

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack													
Counterair	●	●			●	●	●	●	●				
Counterspace													
Counterland	●	●			●	●	●	●	●				
Countersea													
Information Operations													
Electronic Combat Support	●	●			●	●	●	●	●				
Command and Control													
Air Drop													
Air Refueling													
Spacelift													
Special Operations													
Intelligence, Surveillance, and Reconnaissance													

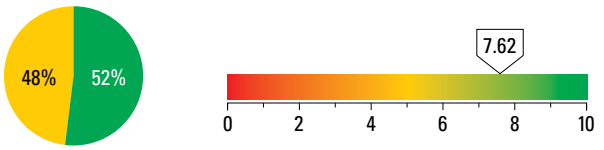
Legend: FMC ● PMC ● NMC ●

Encroachment Data

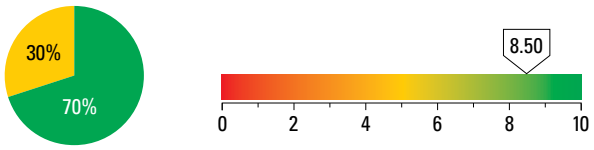
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack												
Counterair	●	●	●		●		●	●	●	●	●	●
Counterspace												
Counterland												
Countersea												
Information Operations												
Electronic Combat Support	●	●	●		●		●	●	●	●	●	●
Command and Control												
Air Drop												
Air Refueling												
Spacelift												
Special Operations												
Intelligence, Surveillance, and Reconnaissance												

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Polygone Assessment Details

Summary Observations	Summary Observations
1. Greatest impact is to the available frequency spectrum, the use of radio and radar threat simulators is becoming more time constrained for authorization with reduced operating areas. The next greatest impact is the increase of surrounding civilian airways and lack of dedicated Military Operating Area for aircrew training against surface threats IAW realistic TTP's. 2. All mission areas are equally impacted by the frequency authorization issues and the Counterland missions are most impacted by the airspace limitations. 3. Further limitations in the areas we can operate EW threat simulators throughout Europe and increased cost for deployments to areas with appropriate airspace.	1. Greatest impact is to the available frequency spectrum, the use of radio and radar threat simulators is becoming more time constrained for authorization with reduced operating areas. The next greatest impact is the increase of surrounding civilian airways and lack of dedicated Military Operating Area for aircrew training against surface threats IAW realistic TTP's. 2. All mission areas are equally impacted by the frequency authorization issues and the Counterland missions are most impacted by the airspace limitations. 3. Further limitations in the areas we can operate EW threat simulators throughout Europe and increased cost for deployments to areas with appropriate airspace.

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	4.38	4.38	NA	**Encroachment Scores**	5.25	5.27	NA
No comments.				No comments.			

Polygone Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Airspace	Counterair	●	Extensive scheduling issues attributed to high demand and profound weather impacts; The availability of training is consequently limited; Corrective actions are not planned to address the issues.
	Counterland	●	High demand for range use (US and international partners) and profound weather impacts present scheduling challenges; The availability of training is consequently limited; Corrective actions are not planned to address the issues.
	Electronic Combat Support	●	Scheduling challenges result from high range demand and problematic weather conditions; The availability of training is consequently limited; Corrective actions are not planned to address the issues.
Threats	Electronic Combat Support	●	Two of our threat simulators are outdated and can be used for CJ tng only --the rest are aging and approaching irrelevance; EW training is limited to single-digit SAM simulation in an autonomous acquisition scenario. We have no capability to provide training against the newer real-world threats or integrated IADS scenario. Current capability is sufficient for 80% of the customer training requirements We are at the mercy of nextgen EW simulator production. "Joint Threat Emitter" (JTE) is behind milestone development. Would like to acquire double digit capability (XMS-11 or similar) but availability and funding are current constraints.
Scoring & Feedback System	Counterair	●	Current feedback for EW range events is archaic - a text line sent via email. Near real-time feedback does not exist; Installation of the new P5 CTS in USAFE over the next year will enhance this integration but necessitates integration of emitter data at a higher fidelity than currently available for analysis during debrief. Aircrew EW training will suffer if range results can't be integrated; Installation of the P5 RUU and EW server is scheduled to occur in Summer 2011 timeframe. The plan is to leverage the CTS backbone to provide the means of integrating threat data. We will require the engineering of a solution for getting digitized system data from threats/simulators back to the PCC for real-time feedback integration .
	Counterland	●	Same as above.
	Electronic Combat Support	●	Same as above.
Range Support	Counterair	●	Comm network/engineering support is not resident at POLYGONE. O&M contractor does not have an engineering flight. As a GSU, Polygone must rely on HHQ comm/engineering support for design and instalation of needed upgrades/enhancements. Expertise/familiarity with PCC operations by supporting CE/COMM is nonexistent. Our status as a GSU leads to limited or no support from Ramstein. Under the WPC, support has improved however we anticipate further increases in needed support; Installation of the new P5 CTS in USAFE over the next year, will necessitate integration of emitter data for analysis during debrief. The plan is to leverage the CTS backbone to provide the means of integrating threat data. We will need to engineer a solution for getting digitized system data from threats/simulators back to the PCC. Without this solution in-place, we will not be capable of fully exploiting any DMO/LVC initiative for integration of POLYGONE Range data. Aircrew EW training will be suffer if range results can't be integrated; With the inclusion of Polygone in the P5 CTS upgrade, we plan to leverage engineering/comm expertise to establish a working group dedicated to solving the feedback problem and follow on LVC capability by linking up with the DMO portal located at the WPC, Einsiedlerhof AS.
	Counterland	●	Same as above.
	Electronic Combat Support	●	Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Polygone Detailed Comments

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Munitions Restrictions	Counterair	●	Use of Chaff / flares is restricted in Germany; Negative aircrew training - inability to train as they would fight; No planned action—we don't "own" any airspace so we must abide by host nation restrictions.
	Electronic Combat Support	●	Same as above.
Spectrum	Counterair	●	Authorizations for required freq bands are, at times, not attainable in several European countries; We are unable to support customer requests for EW threat training - affects training capability < 10% of the time; Spectral management is becoming more restrictive as commercial spectrum requirements increase—no fix in sight.
	Electronic Combat Support	●	Same as above.
Airspace	Counterair	●	Problematic weather and high demand for range use cause scheduling challenges; Training availability is negatively impacted; Corrective actions are not currently planned to address the issue.
	Electronic Combat Support	●	Extensive scheduling issues attributed to high demand and profound weather impacts; The availability of training is consequently limited; Corrective actions are not planned to address the issues.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Razorback Assessment Details

Range Mission Description

No mission description provided.

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	FMC	FMC			FMC	FMC	FMC	FMC	FMC			FMC	FMC
Counterair	FMC	FMC			FMC	FMC	FMC	FMC	FMC			FMC	FMC
Counterspace													
Counterland	PMC	FMC			FMC	FMC	FMC	PMC	PMC	FMC	FMC	FMC	FMC
Countersea													
Information Operations	FMC	FMC				FMC		FMC	FMC				FMC
Electronic Combat Support	FMC	FMC			FMC	PMC	FMC	FMC	FMC				FMC
Command and Control	FMC	FMC			FMC	FMC		FMC	PMC				FMC
Air Drop	FMC	FMC			FMC	PMC	FMC	FMC	FMC		FMC	FMC	FMC
Air Refueling		NMC				FMC							
Spacelift													
Special Operations	FMC	FMC			FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC			FMC	FMC	FMC	FMC	FMC		FMC	FMC	FMC

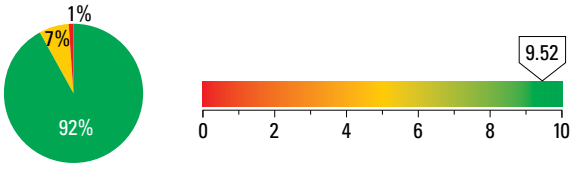
Legend: FMC, PMC, NMC

Encroachment Data

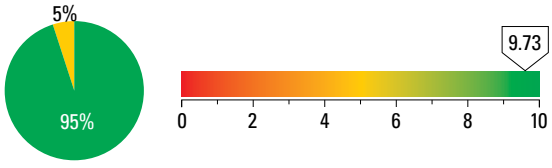
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	Minimal	Moderate	Severe		Severe	Severe	Severe	Severe	Severe	Severe	Severe	Severe
Counterair	Minimal	Moderate	Severe		Severe	Severe	Severe	Severe	Severe	Severe	Severe	Severe
Counterspace												
Counterland	Minimal	Moderate	Severe		Severe	Severe	Severe	Moderate	Severe	Severe	Severe	Severe
Countersea												
Information Operations	Minimal	Minimal	Severe						Severe		Severe	Severe
Electronic Combat Support	Minimal	Minimal	Severe		Severe		Severe	Severe	Severe	Severe	Severe	Severe
Command and Control	Minimal	Minimal	Severe		Severe		Severe	Severe	Severe	Severe	Severe	Severe
Air Drop	Minimal	Minimal	Severe		Severe	Severe	Severe	Severe	Severe	Severe	Severe	Severe
Air Refueling												
Spacelift												
Special Operations	Minimal	Moderate	Severe		Severe	Severe	Severe	Severe	Severe	Severe	Severe	Severe
Intelligence, Surveillance, and Reconnaissance	Minimal	Minimal	Severe		Severe	Severe	Severe	Severe	Severe	Severe	Severe	Severe

Legend: Minimal, Moderate, Severe

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

No comments.

Summary Observations

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	9.88	9.88	9.52

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	9.78	9.78	9.73

No comments.

Razorback Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Counterland	🟡	Small landspace restricts allowable precision guided weapon deliveries.
Airspace	Air Refueling	🔴	Airspace too small for air refueling operations; adjoining MOA is used for air refueling.
Threats	Electronic Combat Support	🟡	Current threat simulator has limited range and cueing capabilities.
	Air Drop	🟡	Range has no stimulator for IR self protection flares
Infrastructure	Counterland	🟡	Awaiting funding for range residue holding area construction.
Range Support	Counterland	🟡	Limited by manpower and O&M funding. Additional RCO requested. Cannot support 2-shift operations.
	Command and Control	🟡	Current telephone line is unreliable. Connectivity to Air Force systems is often not available. Pursuing the installation of new fiber optic lines. Situation is improving due to guard wide GSU connectivity initiative.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Munitions Restrictions	Strategic Attack	🟡	Live munitions not allowed
	Counterair	🟡	Same as above.
	Counterland	🟡	Same as above.
	Special Operations	🟡	Same as above.
Adjacent Land Use	Counterland	🟡	Army Surface Danger Zones from adjacent small arms ranges frequently limit minimum altitude deliveries or prevent mission entirely.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Shelby Ranges Assessment Details

Range Mission Description

Class A Primary Training Range for Basic Surface Attack (BSA), Close Air Support (CAS), and Electronic Warfare (EW)for the 187th FW Montgomery AL, 238th ASOS Meridian MS, and multiple CRTC deployed units. Primary Drop zone and Assault Landing Zone for 172nd AW Jackson, MS, 815th AW Keesler AFB, and CRTC deployed AMC units. Support USAF 40th FTS and 85th TES located at Eglin AFB conducting BSA and CAS training. Support aerial gunnery training for the 4th and 19th SOS, Hurlburt AFB, FL. Support the 153rd ARS Meridian MS for Intelligence, Surveillance and Reconnaissance (ISR) Training. Support multiple MS Army National Guard aviation units for door gunnery training. Support 2 Large Force Exercises annually Magnolia Warrior MS Air National Guard and Emerald Warrior AFSOC.

Capability Data

Mission Areas	Capability Attributes												
	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	FMC	PMC			FMC	FMC	FMC	FMC	PMC	FMC	FMC	FMC	FMC
Counterair	FMC	PMC			FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Counterspace													
Counterland	FMC	FMC			FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Countersea													
Information Operations	FMC	FMC			FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Electronic Combat Support	FMC	FMC			FMC	FMC	FMC	FMC	PMC	FMC	FMC	FMC	FMC
Command and Control	FMC	FMC			FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Air Drop	FMC	FMC			FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC
Air Refueling													
Spacelift													
Special Operations	FMC	FMC			FMC	FMC	FMC	FMC	PMC	FMC	FMC	FMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC			FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC	FMC

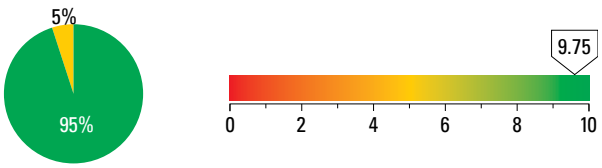
Legend: FMC PMC NMC

Encroachment Data

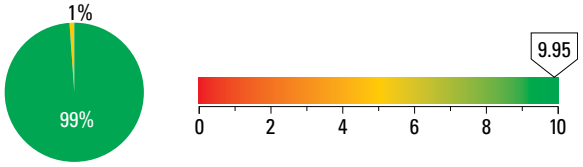
Mission Areas	Encroachment Factors												
	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	Minimal	Minimal	Moderate		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterair	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterspace												
Counterland	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Countersea												
Information Operations	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Electronic Combat Support	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Command and Control	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Drop	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Refueling	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Spacelift												
Special Operations	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Intelligence, Surveillance, and Reconnaissance	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal

Legend: Minimal Moderate Severe

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

No comments.

Summary Observations

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	8.04	8.04	9.90

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	8.90	8.90	9.80

No comments.

Shelby Ranges Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Airspace	Strategic Attack	●	Inadequate Airspace Volume both vertical and horizontal. Limits number of aircraft and types of maneuvers allowed. An airspace proposal is in the works to increase vertical airspace in Desoto MOA I and II. Proposal should be complete and charted NLT mid 2011.
	Counterair	●	Same as above.
Range Support	Strategic Attack	●	Limited authorized manpower levels. Limits the amount of operations that can take place, limits the amount and type of target area maintenance and improvement that can be conducted. Upcoming manpower study, date TBD may alleviate this issue.
	Electronic Combat Support	●	Limited authorized manpower levels Limits the amount of operations that can take place, electronic AFSC personnel are currently stretched thin, addition of new EW threat will place even larger workload on these troops. Upcoming manpower study, date TBD may alleviate this issue.
	Special Operations	●	Same as above.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comments
Spectrum	Strategic Attack	●	Proximity to Eglin and Tyndal training areas causes overlap in frequency assignments. Threat Emitter frequency authorizations are limited and lengthy approval process. Limits SADL operations, occasional air to ground and air to air frequency overlaps. SADL use must be coordinated with Joint Gulf Spectrum Manager prior to use, with limited frequencies and power settings. Radio frequency overlaps are coordinated with NGB Spectrum Manager for frequency re-assignment.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Siegenberg Assessment Details

Range Mission Description

Siegenburg Range has made many improvements over the last 12 months, the main improvement effecting capability vs. July 2009 is the addition of a second target, the second target enables USAFE A-10 and F-16's to drop BDU-33's as well as BDU-50's using normal delivery parameters, the addition of the target 600 feet downrange from the primary target puts a second target on a wider portion of the range, it complies with WDZ and AFI 13-212 requirements and makes no significant change to the current flight path of user aircraft eliminating any potential of additional noise complaints. The long-term solution (which is being persued) would be to add more land to the north of the range and use just one target for all aircraft, a work order is currently in the 52CES Real Estate Working Group, the estimate for action from the German Administrative office concerning the area in question is 3-5 years. Over the last 13 months many of the facilities have been renovated and are all currently functioning as intended, roads have been improved with gravel and compacting.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack													
Counterair													
Counterspace													
Counterland	PMC	PMC			PMC		FMC	FMC	PMC				
Countersea													
Information Operations													
Electronic Combat Support													
Command and Control													
Air Drop													
Air Refueling													
Spacelift													
Special Operations													
Intelligence, Surveillance, and Reconnaissance													

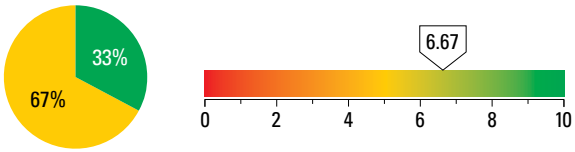
Legend: FMC, PMC, NMC

Encroachment Data

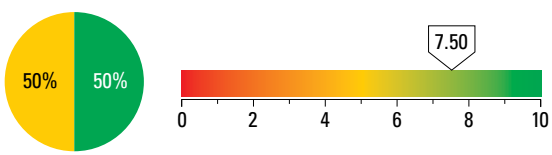
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack												
Counterair												
Counterspace												
Counterland	Minimal	Moderate			Moderate	Minimal	Moderate	Moderate		Minimal		Minimal
Countersea												
Information Operations												
Electronic Combat Support												
Command and Control												
Air Drop												
Air Refueling												
Spacelift												
Special Operations												
Intelligence, Surveillance, and Reconnaissance												

Legend: Minimal, Moderate, Severe

Capability Chart and Scores



Encroachment Chart and Scores



Siegenberg Assessment Details

Summary Observations	Summary Observations
Siegenburg Range provides a functional and score able Air-to-Ground range for NATO aircraft. It also provides a demolition training area for the German Army EOD (7.5kg max) and USAFE EOD personnel (50lb max), there is limited ground training on range. The infrastructure in its' current state support operations however the ageing phone lines are starting to cause communication problems.	Siegenburg Range complies with safe/accepted standards and operations. Weapons Safety zones have been reviewed and are in compliance with WDZ and AFI 13-212. The airspace limitation is a hindrance but does not impact the main mission of Siegenburg which is to provide NATO aircraft with a score able Air-to-Ground bombing range.

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	4.03	4.03	6.67	**Encroachment Scores**	5.52	5.52	7.50
Siegenburg Range has made many improvements over the last 12 months, the main improvement effecting capability vs. July 2009 is the addition of a second target, the second target enables USAFE A-10 and F-16's to drop BDU-33's as well as BDU-50's using normal delivery parameters, the addition of the target 600 feet downrange from the primary target puts a second target on a wider portion of the range, it complies with WDZ and AFI 13-212 requirements and makes no significant change to the current flight path of user aircraft eliminating any potential of additional noise complaints. The long-term solution (which is being persued) would be to add more land to the north of the range and use just one target for all aircraft, a work order is currently in the 52CES Real Estate Working Group, the estimate for action from the German Administrative office concerning the area in question is 3-5 years. Over the last 13 months many of the facilities have been renovated and are all currently functioning as intended, roads have been improved with gravel and compacting.				Over the last year there have been improvements to the Encroachment Factors, amendments to the range reg will make it more user friendly for USAFE A/C and not impact noise abatement procedures. During the last environmental survey (Spring 2009) it was noted and documented that the care of the land mass that is Siegenburg Range by 52OSS personnel (in coordination with the assigned Forester) supports many diverse plants and animals to include some endangered species of both. The ability to strafe would enhance the use of Siegenburg Range and increase usage however the range in its current condition does support our main mission Air-to-Ground bombing along with the ability to score the shots.			

Siegenburg Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Counterland	●	Land-space restrictions curtail scope of available training. Aircrews are unable to train with PGMs or live munitions. 52 CES Real Estate Working Group is working to purchase land north of the range.
Airspace	Counterland	●	Range is in close proximity to German Airport, Manching. A/C making bombing passes must be on a 235 heading for deliveries and make immediate left turnouts after release. No corrective actions available, RCO and ATC facility maintain close coordination while range is active to eliminate safety of flight issues.
Targets	Counterland	●	The range only supports point targets and not a tactical array. This does not support training beyond basic surface attack. Efforts to purchase additional land remain on-going.
Range Support	Counterland	●	Deteriorating phone line from main building to range complex Limitation on bandwidth from range complex to adjacent facilities. 52CES is trying to solve the problem through workarounds/patches, eventual/long-term solution to install fiber optic cable and make the change from analog to digital throughout facilities.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Munitions Restrictions	Counterland	●	Munitions restrictions preclude live munitions and PGMs. There are restricted delivery headings due to the footprint. The restrictions limit aircrew familiarity with fuzing and exposure to PGMs and live munitions. Corrective actions are not feasible without land purchases (currently being pursued by 52 CES).
Airspace	Counterland	●	Range is in close proximity to German Airport, Manching. A/C making bombing passes must be on a 235 heading for deliveries and make immediate left turnouts after release. No corrective actions available, RCO and ATC facility maintain close coordination while range is active to eliminate safety of flight issues.
Noise Restrictions	Counterland	●	Need to navigate (zig-zag) around small towns in the area. For instance, USAFE A/C making 30+ degree passes optimum base turn would be on the southern end of the town of Siegenburg vs. before or after the town. Making an adjustment/amendment to the range regulation showing a hard base of 4500' above the town of Siegenburg along with the advisory to avoid overflying it if possible. This will allow USAFE A/C to make standard patterns. If there is an increase in noise complaints from the town it will be removed, this does not affect GAF Tornados they fly a different delivery pattern and avoid the town of Siegenburg.
Adjacent Land Use	Counterland	●	Several towns and protected forests surround the area. The limited size does not meet the requisite footprint for PGMs, precluding training with these munitions. Remedies are not available.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Smoky Hill Air National Guard Range (SHANGR) Assessment Details

Range Mission Description

Major Missions include 4 ANG flying units (132FW, 114FW, 138FW & 139AS), 2 Reserve AF flying units (303FS & 93BS) and 14 Active Duty AF flying units (49TES, 11BS, 20BS, 96BS, 340WS, 23BS, 69BS, 9BS, 337BS, 28BS, 37BS, 34BS, 509BW & 48AS), SHANGR supports daily air-to-ground sorties and electronic combat training. ASOS units CAF wide visit monthly if not weekly. 284th ASOS (Kansas ANG) and 10th ASOS (Active Duty) are frequent users. SHANGR supports a variety of Kansas Army guard units including PTAE and 108th Aviation units (door gunnery). SHANGR also provides training for Ft Riley aviation units (OH-58D, AH-64, UH-47 and HH-60) and various ground training for infantry. Last, the range also supports Canadian JTAC training course three times a year which includes CF-18, Alpha Jet and Griffon air-to-ground attack.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
Strategic Attack	●	●			●	●	●	●	●		●	●	●
Counterair	●	●			●	●	●	●	●		●	●	●
Counterspace													
Counterland	●	●			●	●	●	●	●		●	●	●
Countersea													
Information Operations													
Electronic Combat Support	●	●											
Command and Control													
Air Drop	●	●				●	●	●	●		●	●	●
Air Refueling		●				●		●	●				
Spacelift													
Special Operations	●	●			●	●		●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●			●	●		●	●		●	●	●

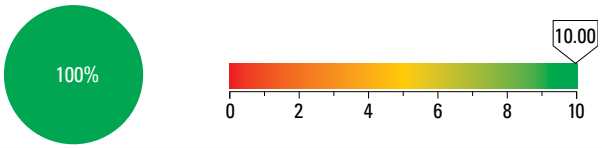
Legend: FMC ● PMC ● NMC ●

Encroachment Data

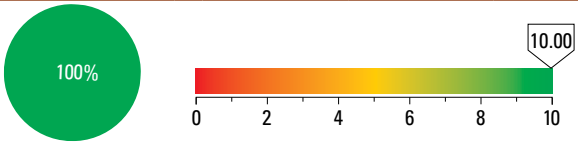
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
Strategic Attack	●	●	●		●	●	●	●	●	●	●	●
Counterair	●	●	●		●	●	●	●	●	●	●	●
Counterspace												
Counterland	●	●	●		●	●	●	●	●	●	●	●
Countersea												
Information Operations												
Electronic Combat Support	●	●	●		●	●	●	●	●	●	●	●
Command and Control												
Air Drop	●	●	●		●	●	●	●	●	●	●	●
Air Refueling	●	●	●		●	●	●	●	●	●	●	●
Spacelift												
Special Operations	●	●	●		●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●	●		●	●	●	●	●	●	●	●

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

Army Ranges on SHANGR have been improved to provide support for 5.56, 7.62 and .50 cal firing.

Summary Observations

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	9.85	9.85	9.85

Army Ranges on SHANGR have been improved to provide support for 5.56, 7.62 and .50 cal firing.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	10.00	10.00	10.00

No comments.

Smoky Hill Air National Guard Range (SHANGR) Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
No comments.			

Encroachment Observations

Factors	Assigned Training Mission	Score	Comments
No comments.			

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Townsend Range Assessment Details

Range Mission Description

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack	●	●			●	●	●	●	●			●	
Counterair	●	●			●	●	●	●	●			●	
Counterspace													
Counterland	●	●			●	●	●	●	●	●		●	
Countersea													
Information Operations	●	●			●	●	●	●	●			●	
Electronic Combat Support	●	●			●	●	●	●	●			●	
Command and Control	●	●			●	●	●	●	●	●		●	
Air Drop													
Air Refueling	●	●				●		●	●				
Spacelift													
Special Operations	●	●			●	●	●	●	●			●	
Intelligence, Surveillance, and Reconnaissance	●	●			●	●	●	●	●			●	

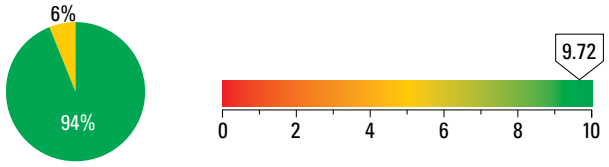
Legend: FMC ● PMC ● NMC ●

Encroachment Data

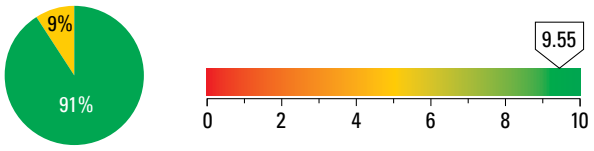
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack	●	●	●		●	●	●	●	●	●	●	●
Counterair	●	●	●		●	●	●	●	●	●	●	●
Counterspace												
Counterland	●	●	●		●	●	●	●	●	●	●	●
Countersea												
Information Operations	●	●	●		●	●	●	●	●	●	●	●
Electronic Combat Support	●	●	●		●	●	●	●	●	●	●	●
Command and Control	●	●	●		●	●	●	●	●	●	●	●
Air Drop												
Air Refueling	●	●	●		●	●	●	●	●	●	●	●
Spacelift												
Special Operations	●	●	●		●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●	●		●	●	●	●	●	●	●	●

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

No comments.

Summary Observations

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	9.85	9.85	9.72

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	9.72	9.72	9.55

No comments.

Townsend Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Strategic Attack	●	No comments.
Airspace	Strategic Attack	●	No comments.
	Counterair	●	No comments.
	Air Refueling	●	No comments.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Munitions Restrictions	Strategic Attack	●	No comments.
	Command and Control	●	No comments.
Airspace	Strategic Attack	●	No comments.
	Counterair	●	No comments.
	Air Refueling	●	No comments.
	Intelligence, Surveillance, Reconnaissance	●	No comments.
Noise Restrictions	Strategic Attack	●	No comments.
	Counterland	●	No comments.
	Spacelift	●	No comments.
	Special Operations	●	No comments.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Utah Test and Training Range (UTTR) Range Assessment Details

Range Mission Description

Primary Training Range with infrastructure to support large footprint testing. Primarily OT&E

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack	●	●			●	●	●	●	●	●	●	●	●
Counterair	●	●			●	●	●	●	●	●	●	●	●
Counterspace													
Counterland	●	●			●	●	●	●	●	●	●	●	●
Countersea													
Information Operations													
Electronic Combat Support	●	●			●	●	●	●	●	●	●	●	●
Command and Control													
Air Drop	●	●			●	●	●	●	●	●	●	●	●
Air Refueling	●	●			●	●	●	●	●	●	●	●	●
Spacelift													
Special Operations	●	●			●	●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●			●	●	●	●	●	●	●	●	●

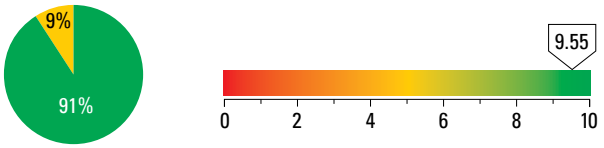
Legend: FMC ● PMC ● NMC ●

Encroachment Data

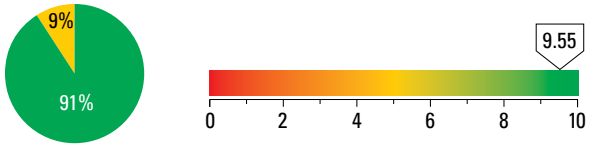
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack	●	●	●		●	●	●	●	●	●	●	●
Counterair	●	●	●		●	●	●	●	●	●	●	●
Counterspace												
Counterland	●	●	●		●	●	●	●	●	●	●	●
Countersea												
Information Operations												
Electronic Combat Support	●	●	●		●	●	●	●	●	●	●	●
Command and Control												
Air Drop	●	●	●		●	●	●	●	●	●	●	●
Air Refueling	●	●	●		●	●	●	●	●	●	●	●
Spacelift												
Special Operations	●	●	●		●	●	●	●	●	●	●	●
Intelligence, Surveillance, and Reconnaissance	●	●	●		●	●	●	●	●	●	●	●

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Utah Test and Training Range (UTTR) Range Assessment Details

Summary Observations	Summary Observations
1. 91% of the UTTR's range/range complex mission areas are Fully Mission Capable (FMC) 2. Airspace Support is impacted as a direct result of the US Army expansion of Dugway Proving Ground (DPG) beyond operations as a Chem/Bio MRTFB into the realm of Unmanned Aerial Systems (UAS). The majority of these issues can be controlled through cooperative scheduling among DoD users, but continued uncontrolled Army UAS mission expansion will have dire impacts to all mission areas involving UTTR airspace. Additional limitations are also placed on airspace support during cruise missile, WSEP testing. 388 FW is forced to use White Elk ATCAA which does not support Strategic Attack or Electronic Combat. 3. Land space support may also be impacted as the Army further restricts Air Force operation on DPG property which underlies UTTR airspace. 4. Targets and Threats are not available to support next generation aircraft and weapons (F-22, JSF).	1. 91% of the range/range complex mission is free from encroachment factors 2. Overall external encroachment for the UTTR is minimal. However, internal encroachment is a direct result of the US Army expansion of Dugway Proving Ground (DPG) beyond operations as a Chem/Bio MRTFB into the realm of Unmanned Aerial Systems (UAS). The majority of these issues can be controlled through cooperative scheduling among DoD users, but continued uncontrolled Army UAS mission expansion will have dire impacts to all mission areas involving UTTR airspace. 3. Cultural Resources Encroachment involves a few very small Archeological sites which require avoidance. 4. The UTTR has one jurisdictional wetland area of 16,000 acres. It is located in the buffer zone to the UTTR, on the Western boundary of the range and has not created encroachment because of its close proximity to the boundary

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	9.89	9.89	9.89	**Encroachment Scores**	9.83	9.83	9.83
No comments.				No comments.			

Utah Test and Training Range Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Strategic Attack	●	Land space and all associated operations may be severely restricted or eliminated as the Army further restricts Air Force operation on DPG property which underlies UTTR airspace. Primary impact to ground operations to AF target complexes on DPG property underlying UTTR airspace.
Airspace	Strategic Attack	●	Can be limited during cruise missile, WSEP testing forcing 388th to use White Elk ATCAA which does not support surface attacks.
	Counterair	●	Same as above.
	Electronic Combat Support	●	Can be limited due to rapidly increasing Army UAS usage and to a lesser degree during cruise missile, WSEP testing forcing 388th to use White Elk ATCAA which does not support surface attacks. The Air Force is aggressively pursuing cooperative scheduling processes; however, continued Army UAS mission expansion is expected to push beyond the limits of efficient scheduling.
Targets	Strategic Attack	●	Land space and all associated operations may be severely restricted or eliminated as the Army further restricts Air Force operation on DPG property which underlies UTTR airspace. Primary impact to ground operations to AF target complexes on DPG property underlying UTTR airspace.
Threats	Strategic Attack	●	Threat systems and all associated operations may be severely restricted or eliminated as the Army further restricts Air Force operation on DPG property which underlies UTTR airspace. Primary impact will be reduced threat availability. Presently coordinating with Army and seeking alternative threat locations on AF property.
	Counterair	●	Same as above.
	Electronic Combat Support	●	Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Utah Test and Training Range Detailed Comments

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Spectrum	Electronic Combat Support	●	Competing frequency spectrum usage from adjoining US Army Dugway Proving Ground requires ever greater vigilance to ensure non-interference. Army users typically schedule frequency usage by days or weeks instead of specific hourly requirements which greatly limits utilization. Increases in the density of spectrum dependent equipment operating in the same bands result in increased operational conflict and a higher potential for interference. A DoD wide prioritization would be beneficial. Additionally, public and private development to include energy initiatives are increasingly utilizing COTS wireless equipment. This is beginning to cause spectrum encroachment issues which will only increase in future years.
Airspace	Strategic Attack	●	Competing airspace usage from adjoining US Army Dugway Proving Ground requires ever greater vigilance to ensure non-interference. Army usage has greatly increased limiting utilization by other users. The expanding mission of DPG outside the scope of its MRTFB Chem/Bio T&E capabilities will significantly impact UTTR operations.
	Counterair	●	Competing airspace usage from adjoining US Army Dugway Proving Ground requires ever greater vigilance to ensure non-interference. Army usage has greatly increased limiting utilization by other users. The expanding mission of DPG outside the scope of its MRTFB Chem/Bio T&E capabilities will significantly impact UTTR operations.
	Counterland	●	Competing airspace usage from adjoining US Army Dugway Proving Ground requires ever greater vigilance to ensure non-interference. Army usage has greatly increased limiting utilization by other users. The expanding mission of DPG outside the scope of its MRTFB Chem/Bio T&E capabilities will significantly impact UTTR operations.
	Electronic Combat Support	●	Competing airspace usage from adjoining US Army Dugway Proving Ground requires ever greater vigilance to ensure non-interference. Army usage has greatly increased limiting utilization by other users. The expanding mission of DPG outside the scope of its MRTFB Chem/Bio T&E capabilities will significantly impact UTTR operations.
Cultural Resources	Counterland	●	Archeological sites require avoidance. This avoidance has not and is not expected to limit access to training because they are very small areas within the UTTR and avoidance is easily achieved.
	Air Drop	●	Same as above.
	Special Operations	●	Same as above.

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Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Vandenberg Range Assessment Details

Range Mission Description

Provide range and launch services to spacelift and strategic missile processing and launch operations while insuring public safety.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack	●	●	●	●			●		●				
Counterair													
Counterspace													
Counterland													
Countersea													
Information Operations													
Electronic Combat Support													
Command and Control													
Air Drop													
Air Refueling													
Spacelift	●	●	●	●			●	●	●				
Special Operations													
Intelligence, Surveillance, and Reconnaissance													

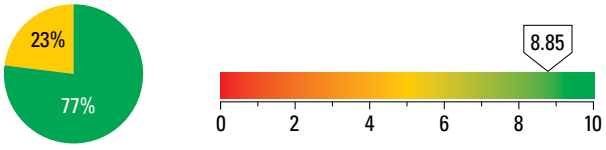
Legend: FMC ● PMC ● NMC ●

Encroachment Data

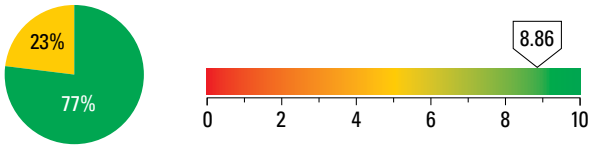
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack	●		●	●	●	●	●	●	●	●	●	●
Counterair												
Counterspace												
Counterland												
Countersea												
Information Operations												
Electronic Combat Support												
Command and Control												
Air Drop												
Air Refueling												
Spacelift	●		●	●	●	●	●	●	●	●	●	●
Special Operations												
Intelligence, Surveillance, and Reconnaissance												

Legend: Minimal ● Moderate ● Severe ●

Capability Chart and Scores



Encroachment Chart and Scores



Summary Observations

No comments.

Summary Observations

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Capability Scores	NA	NA	NA

No comments.

Historical Information, Results, and Future Projections

Calendar Year	2008	2009	2010
Encroachment Scores	NA	NA	NA

No comments.

Vandenberg Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Infrastructure	Spacelift		Infrastructure systems at CCAFS, water, sewer, power, roads, support facilities, etc, are aged and should have been recapitalized twice over the last 50 years. Infrastructure is required to support spacecraft and launch vehicle processing and range and launch operations--failure of infrastructure increase mission assurance risk. In order to operate within constrained budgets only triage of worst actors infrastructure can be addressed.
Range Support	Strategic Attack		Like infrastructure most range systems are aged and near end of life--the previous initiative to modernize range systems only addressed 25% of range systems. Increased risk to range availability to support vehicle processing and launch operations--risk to launch on time and ability to restore strategic SSBN asset to operations. With Launch Enterprise Transformation, we are reducing range foot print to the minimum to support public safety and customer most cherished requirements--limited recapitalization budget is directed to worst actor range systems essential to keep range green.
	Spacelift		Like infrastructure most range systems are aged and near end of life--the previous initiative to modernize range systems only addressed 25% of range systems. Increased risk to range availability to support vehicle processing and launch operations--risk to launch on time and assured access to space. With Launch Enterprise Transformation, we are reducing range foot print to the minimum to support public safety and customer most cherished requirements--limited recapitalization budget is directed to worst actor range systems essential to keep range green.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Threatened & Endangered Species/Critical Habitat	Strategic Attack		Several threatened & endangered species exist on 45 SW installations. Endangered Scrub Jay drives habitat remediation for most launch expansion and upgrades on CCAFS. More species are currently being considered for listing by US Fish and Wildlife, including gopher tortoises. This has the potentially to further impact mitigation requirements on future development to support T&E. Cost impact to all development on CCAFS to provide Scrub Jay offsetting habitat. Air Force will continue to bear cost.
	Spacelift		Same as above.
Spectrum	Strategic Attack		Increasing interference on C-band radar and UHF command frequencies. Potential to scrub launch attempts; inability to calibrate radars. Mitigation plans and procedures in place for command frequencies to minimize impact; expensive frequency purchase expected to be required to retain downrange (Antigua) radar capability.
	Spacelift		Same as above.
Adjacent Land Use	Spacelift		Development north of KSC is increasing population and therefore increasing expected casualty risk for potential vehicle anomaly. Canaveral Port Authority interest in taking over AF Port property threatens future mission needs. Future constraints on launch trajectories and launch availability from CCAFS. Investigating land purchases to limit development.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Warren Grove Assessment Details

Range Mission Description

9416 acre Primary Training Range (PTR) located in central Southeastern New Jersey Pinelands Preserve. Mission is to deliver the most realistic, relevant and safe environment to train air and ground warfighters for victory in today and tomorrow's joint combat operations arena – supporting Federal, State, local and first responder personnel for homeland defense operations, and national and world wide tasking. Primary Training Units include: 119FW (F-16, ACY), 113FW (F-16, ADW), 175FW (A-10, BAL), VX23/Test Pilot School (F-18, NHK), 1/150th (H-60, MAG-49 (UH-1/CH-53D, NXX), 106 RQW (H-60, FOK), 227 ASOS (JTAC, ACY), Numerous ground and Special Forces units around the globe.

Capability Data

Mission Areas	Landspace	Airspace	Seaspace	Underseaspace	Targets	Threats	Scoring & Feedback System	Infrastructure	Range Support	Small Arms Ranges	Collective Ranges	MOUT Facilities	Suite of Ranges
	Capability Attributes												
Strategic Attack	FMC	FMC			PMC	PMC	PMC	PMC	FMC			FMC	FMC
Counterair	FMC	PMC			FMC	PMC	FMC	FMC	FMC			FMC	FMC
Counterspace		NMC											
Counterland	FMC	PMC			PMC	PMC	PMC	FMC	FMC	PMC	NMC	FMC	FMC
Countersea			NMC										
Information Operations	FMC	FMC			FMC			FMC	PMC				FMC
Electronic Combat Support	FMC	FMC			FMC	PMC		FMC	FMC				FMC
Command and Control	FMC	FMC			FMC		FMC	PMC	PMC				FMC
Air Drop	FMC	FMC			FMC	FMC	FMC	FMC	FMC				FMC
Air Refueling		NMC											
Spacelift		NMC											
Special Operations	FMC	FMC			FMC	FMC	FMC	FMC	FMC	PMC	PMC	PMC	FMC
Intelligence, Surveillance, and Reconnaissance	FMC	FMC			FMC	PMC	FMC	FMC	PMC			FMC	FMC

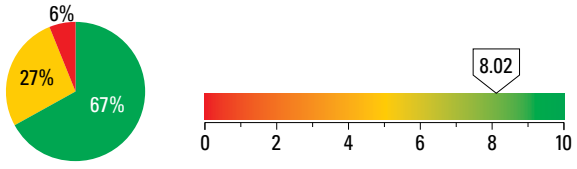
Legend: FMC, PMC, NMC

Encroachment Data

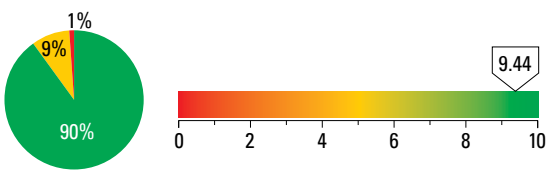
Mission Areas	Threatened and Endangered Species	Munitions Restrictions	Spectrum	Maritime Sustainability	Airspace	Air Quality	Noise Restrictions	Adjacent Land Use	Cultural Resources	Water Quality/Supply	Wetlands	Range Transients
	Encroachment Factors											
Strategic Attack	Minimal	Moderate	Moderate		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterair	Minimal	Moderate	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Counterspace												
Counterland	Minimal	Moderate	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Countersea												
Information Operations	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Electronic Combat Support	Minimal	Moderate	Severe		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Command and Control	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Drop	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Air Refueling												
Spacelift												
Special Operations	Minimal	Minimal	Minimal		Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal
Intelligence, Surveillance, and Reconnaissance	Minimal	Minimal	Minimal		Moderate	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal	Minimal

Legend: Minimal, Moderate, Severe

Capability Chart and Scores



Encroachment Chart and Scores



Warren Grove Assessment Details

Summary Observations	Summary Observations
1. Munitions restrictions and airspace limits are the largest factors affecting WGR's ability to provide best training environment in given areas. 2. No-drop scoring/feedback system would eliminate restrictions imposed by munitions restrictions 3. Outstanding MOUT facility is tremendous asset in indicated areas (4) WGR does not have a suite of ranges, does not provide added benefit to areas, but does not detract as it is not a competing issue	No comments.

Historical Information, Results, and Future Projections				Historical Information, Results, and Future Projections			
Calendar Year	2008	2009	2010	**Calendar Year**	2008	2009	2010
Capability Scores	NA	NA	9.81	**Encroachment Scores**	NA	NA	9.74
No comments.				No comments.			

Warren Grove Range Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Landspace	Strategic Attack	🟡	Evaluating if range owned land is large enough to permit use of IAMS weapons. Currently have limited use of LGBs. Actively pursuing additional land acquisition via REPI and partnerships with local conservations organizations IAW RAICUZ. Ongoing.
Airspace	Strategic Attack	🟡	Limited airspace restricts types, tactics of SA training. High Altitude expansion initiative of R-5002 airspace currently under FAA review. When expansion approved, will greatly enhance type, tactics of SA training available to meet the needs of current and future aircraft.
	Counterair	🟡	Same as above.
	Counterspace	🔴	Insufficient airspace to conduct any counter-space training. No feasible solution proposed.
	Counterland	🟡	Limited airspace restricts types, tactics of CL training. High Altitude expansion initiative of R-5002 airspace currently under FAA review. When expansion approved, will greatly enhance type, tactics of SA training available to meet the needs of current and future aircraft.
	Air Refueling	🔴	Insufficient airspace to conduct any air-refueling training
	Spacelift	🔴	Insufficient airspace to conduct any space-lift training
Seaspace	Countersea	🔴	No sea-space at WGR, land range - cannot conduct counter-sea training
Targets	Strategic Attack	🟡	The range does not posses targets with fidelity sufficient for 5th generation aircraft training
	Counterland	🟡	Currently the requirement for a moving strafe target are not being met. Target cost have prohibited the ability to develop moving strafe target. Moving target of local design currently under development. Efficacy of current local design should be validated by late CY10/early CY11.
Threats	Strategic Attack	🟡	Lack of available frequency authorization limits ability of WGR to present tactical threat array for threats which would be present in these areas. Relief date unknown.
	Couterair	🟡	Same as above.
	Couterland	🟡	Same as above.
	Electronic Combat Support	🟡	Same as above.
	Intelligence, Surveillance and Reconnaissance	🟡	Same as above.
Scoring & Feedback System	Strategic Attack	🟡	Lack of IR scoring capability limits ability to score night weapon impacts or provide valid aircrew feedback. Awaiting funding for Night/IR WISS Scoring capability.
	Counterland	🟡	Same as above.

Figure 3-39 Air Force Capability and Encroachment Assessment Detail (continued)

Warren Grove Range Detailed Comments

Capability Observations

Attributes	Assigned Training Mission	Score	Comments
Infrastructure	Strategic Attack	🟡	Lack of a target fabrication facility limits ability to construct multitude of targets for extensive SA training. Limits fabrication and versatility of target array. Package submitted to Base CE for construction Target Fabrication Facility. Unfunded. Date of remedy unknown.
	Command and Control	🟡	Current Main Tower and communications suite antiquated and need of replacement by building of greater functional configuration, visibility, and cost-effective construction. Package submitted to Base CE for construction of new Main Tower. Unfunded. Date of remedy unknown.
Range Support	Information Operations	🟡	WGR is not currently connected to DTOC, limiting ability to train in the Decide and Assess areas of the war fighting cycles. Pursuing SADL/Gateway connectivity. Date of Remedy unknown.
	Command and Control	🟡	Same as above.
	Intelligence, Surveillance and Reconnaissance	🟡	Same as above.
Small Arms Ranges	Counterland	🟡	WGR does not currently have a Small Arms range, although one is in development. Limits training opportunities of ground force employment.
	Special Operations	🟡	Same as above.
Collective Ranges	Counterland	🔴	WGR is not a collective range, does not have land mass to accommodate a collective range.
	Special Operations	🟡	WGR is not a collective range, does not have land mass to accommodate large unit level battlefield operations, but has ability to train team size JTAC units for battlefield operations
MOUT Facilities	Special Operations	🟡	MOUT targets are outstanding from air, but not the best for special ops forces. New area for ground forces under development. Targeted Construction completion date of summer FY2011.

Encroachment Observations

Factors	Assigned Training Mission	Score	Comment
Munitions Restrictions	Strategic Attack	🟡	Ability to expend weapons with marking charges may be restricted in the future, restricting the type of training munitions available for SA, CA, and CL training
	Counterair	🟡	Same as above.
	Counterland	🟡	Same as above.
	Electronic Combat Support	🟡	Chaff not permitted. Aircrew unable to expend Chaff during self-protect maneuvering. No relief anticipated.
Spectrum	Strategic Attack	🟡	Based upon size of Restricted Airspace and proximity to high volume Civil Airways, chaff not permitted. Aircrew unable to expend Chaff during self-protect maneuvering. No relief anticipated.
	Electronic Combat Support	🔴	Lack of approved WGR temporary or permanent frequency authorization limits ability to execute EC (EA or EP) training. Cannot provide threat simulations for aircrew. No relief date given.
Airspace	Strategic Attack	🟡	Vertical and horizontal limits to R-5002 airspace limit ability to provide tactical training environment for SA operations. High Altitude expansion initiative of R-5002 airspace currently under FAA review. When expansion approved, will greatly enhance type, tactics of SA training available to meet the needs of current and future aircraft.
	Counterair	🟡	Vertical and horizontal limits to R-5002 airspace limit ability to provide tactical training environment for CA operations. High Altitude expansion initiative of R-5002 airspace currently under FAA review. When expansion approved, will greatly enhance type, tactics of CA training available to meet the needs of current and future aircraft.
	Counterland	🟡	Vertical and horizontal limits to R-5002 airspace limit ability to provide tactical training environment for CL operations. High Altitude expansion initiative of R-5002 airspace currently under FAA review. When expansion approved, will greatly enhance type, tactics of CL training available to meet the needs of current and future aircraft.
	Intelligence, Surveillance and Reconnaissance	🟡	Vertical and horizontal limits to R-5002 airspace limit ability to provide tactical training environment for ISR operations. High Altitude expansion initiative of R-5002 airspace currently under FAA review. When expansion approved, will greatly enhance type, tactics of ISR training available to meet the needs of current and future aircraft.

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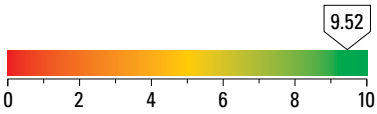
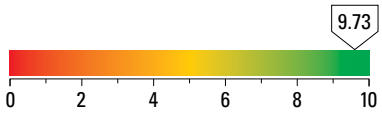
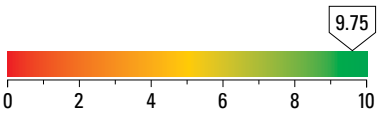
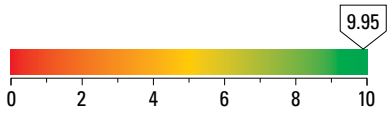
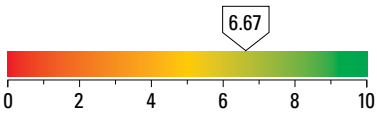
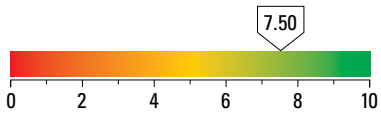
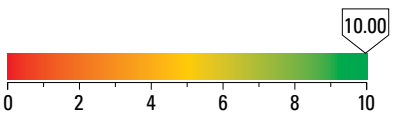
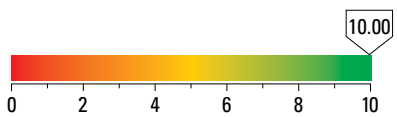
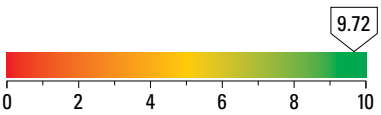
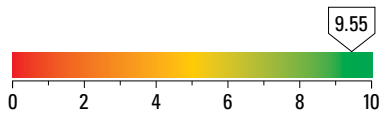
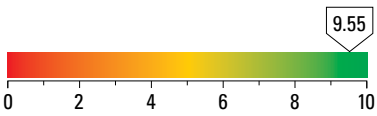
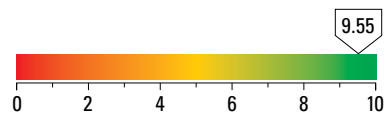
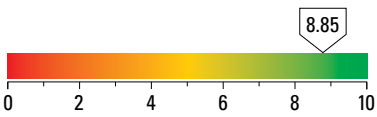
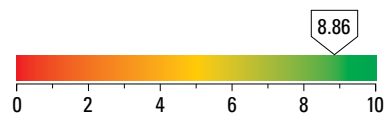
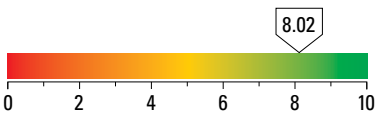
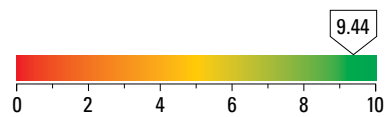
Table 3-15 Air Force Range Capability and Encroachment Assessment Comparison

Range Name	Capability Score	Encroachment Score
Adirondack	7.27	8.94
Airburst	8.90	10.00
Atterbury	9.29	8.23
Avon Park	8.81	9.57
BMGR	8.77	9.13
Bollen	8.77	9.15
Cannon	5.09	9.11
Claiborne	6.67	10.00
Dare County Ranges	10.00	10.00
Eglin Ranges	8.03	8.42
Falcon	9.79	10.00

Range Name	Capability Score	Encroachment Score
Grand Bay	9.91	9.92
Grayling	9.44	9.49
Hardwood	9.53	9.24
Holloman	9.41	9.88
Jefferson	8.97	8.46
McMullen	7.94	9.77
Melrose	9.50	9.60
Mountain Home Ranges	10.00	10.00
Nevada Test and Training Range (NTTR)	8.31	8.56
Patrick	9.62	7.08
Poinsett	9.77	9.92
Polygone	7.62	8.50

Table 3-15 Air Force Range Capability and Encroachment Assessment Comparison (continued)

Range Name	Capability Score	Encroachment Score
Razorback		
Shelby Ranges		
Siegenburg		
Smoky Hill		
Townsend		
Utah Test and Training Range (UTTR)		
Vandenberg		
Warren Grove		

3.3 Summary and Conclusion

This data will allow DoD and the Military Services to systematically evaluate the status of training ranges in a consistent and reliable manner that is comparable over time to enhance informed decision making. Decision makers, planners, and analysts can use the capabilities and encroachment data to develop strategies to mitigate range and training area shortfalls, bring required capabilities to standards, and address negative impacts from encroachment. These benefits will aid in improving range sustainment plans and investment priorities.

The ability to see data in a common framework across Military Service mission areas will allow OSD and the Military Services to analyze range data in a number of ways, at various levels, which will aid in the identification of trends and the assessment of the sustainability of ranges. DoD will continue to provide necessary guidance to improve assessment methods, data quality, and reliability, and exercise its oversight responsibilities to ensure ranges and operational areas meet the Department's training requirements.

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4 Department of Defense's Comprehensive Training Range Sustainment Plan

NDAA Section 366(a)(1) requires DoD to develop a comprehensive training range sustainment plan. DoD has established a comprehensive range planning and management program under its SRI that addresses this requirement.

The SRI is a multi-faceted program that has reorganized the way the Department identifies and responds to increasing constraints on realistic training.[10] The program focuses more directly on the training, policy, people, and resource needs by employing the concept of sustainability as a guiding principle. DoD reinvigorated existing relationships and initiated new partnering and outreach efforts with a wide array of stakeholders in a collaborative fashion, including: communities surrounding our ranges and installations; State and Federal regulatory, planning, and infrastructure agencies; native American tribes; and non-governmental organizations (NGOs).

The SRI provides a flexible and adaptive planning framework that guides continuing, cooperative, and coordinated range sustainment efforts between DoD and the Military Services, as well as mechanisms that facilitate interaction with local, State, and other Federal agencies and NGOs. The program includes an array of policy, organizational, programming, outreach, legislative, and related efforts to address near-term training requirements and long-term sustainability of ranges and installations. This broad-based framework supports:

- Individual and joint range requirements and needs of DoD and the Military Services;
- Identification of Military Service-specific and DoD-wide encroachment and range sustainability issues;
- Evaluation of the availability, accessibility, and usability of existing range resources;
- Development of overarching program goals, articulation of the actions and activities necessary to achieve them, and the establishment of milestones to validate progress; and
- Initiation of legislative, regulatory, and outreach program activities, as required.

This chapter of the FY2010 SRR addresses FY2003 NDAA Sections 366(a)(4)(c) to report on such sustainable range initiatives.

4.1 Management Structure

DoD and the Military Services have key roles to play in implementing the SRI in order to create a comprehensive approach to training range sustainability. Those roles, framed in large part by the requirements of U.S.C. Title 10, are described in Sections 4.1.1 and 4.1.2 of this report.

4.1.1 Department of Defense

The Office of the Under Secretary of Defense for Personnel and Readiness (OUSD[P&R]) has lead responsibility for developing and overseeing implementation of DoD's comprehensive training range sustainment plan. To ensure consideration of the full spectrum of readiness issues, OUSD(P&R) works with the

10 Although this report only focuses on the training aspects of test ranges, the SRI is concerned with both training and test aspects of all ranges.

Senior Readiness Oversight Council (SROC). The SROC is the decision-making body and advisory board for matters pertaining to readiness. Its responsibilities include reviewing range sustainment policies and issues, overseeing readiness-related activities, providing recommendations to the Secretary of Defense on readiness policy matters, and providing reports on current and projected readiness issues.[11]

The Sustainable Ranges Integrated Product Team (IPT) reports to the SROC on range sustainment issues. This IPT operates on two levels. The OIPT acts as the coordination forum for the development of range sustainment strategies. The Working Integrated Product Team (WIPT), co-chaired by the Office of the Deputy Assistant Secretary of Defense for Readiness (ODASD[R]), the Office of the Deputy Under Secretary of Defense for Installations and Environment (ODUSD[I&E]), and the Office of the Director, Operational Test and Evaluation (DOT&E), meets regularly and reports to the OIPT. Both the OIPT and the WIPT work collaboratively with other DoD and Military Service organizations on range sustainability issues.

4.1.2 The Military Services

While the establishment of fundamental training policy and oversight of DoD-wide training range sustainment activities is the responsibility of OUSD(P&R), the Military Services implement most sustainable range initiatives. Each Military Service has one or more headquarters-level offices responsible for overseeing the development and operational implementation of Military Service-specific range sustainment policies and programs. Table 4-1 lists the offices responsible for training ranges within OSD and the Military Departments.

4.2 Goals, Actions, and Milestones

Since the 2006 SRR, DoD had been using a set of shared goals and milestones that were, at the time, planned to guide range sustainability activities through FY2011. By using a common framework of goals and their related milestones, DoD and the Military Services were able to make meaningful comparisons and measurements of past performance and progress towards achieving their training and range sustainability objectives. During FY2009, DoD determined that many of the previous goals and milestones used in previous reports had either been overcome by other events or outlived their relevance.

New goals that are measurable, attainable, and more closely aligned to the seven sustainable ranges IPT focus areas were established for the 2010 Report. The following graphic reflects the new goals.

Using these goals as a common framework, the Military Services then set out to establish their own supporting milestones and actions. The structure of these goals and milestones, and the current status of supporting Military Service activities are shown in Tables 4-2 through 4-8. Based on annual assessment data, these programmatic goals and milestones will continue to be reviewed and updated annually to ensure the SRI continues to effectively address training requirements as well as constraints or limitations that may arise in the future.

2011 Goals

Goal 1—Mitigate encroachment pressures on training activities from competing operating space (land, air, sea, space, and cyber) uses.

Goal 2—Mitigate frequency spectrum competition.

Goal 3—Meet military airspace challenges.

Goal 4—Manage increasing military demand for range space.

Goal 5—Address impacts from new energy infrastructure and renewable energy impacts.

Goal 6—Anticipate climate change impacts.

Goal 7—Sustain excellence in environmental stewardship.

11 Guidance for Fiscal Years 2006-2011 Sustainable Ranges Programs, memorandum from the Under Secretary of Defense for Personnel and Readiness, 26 June 2003.

Table 4-1 Responsible Training Range Offices within OSD and the Military Departments

Milestones	Actions Taken to Achieve the Milestone
Office of the Secretary of Defense (OSD)	**Office of the Under Secretary of Defense for Personnel and Readiness** Deputy Assistant Secretary of Defense (Readiness) Director, Training Readiness and Strategy
Army	**Office of the Deputy Chief of Staff, G-3/5/7,** Training Directorate Training Support Systems Division (DAMO-TRS) Assistant Chief of Staff for Installation Management (ACSIM)
Marine Corps	**Commanding General, Training, and Education Command** Range and Training Area Management Division[12] Range Modernization and Investment Range Operation and Maintenance Deputy Commandant for Installations and Logistics Facilities and Services Division[13] Environmental Encroachment
Navy	**Office of the Chief of Naval Operations, Materiel Readiness, and Logistics (N4)** Fleet Readiness Division (N43) Range Modernization and Investment (N433) and Range Operation and Maintenance (N433) Environmental Readiness Division (N45) Operational Environmental Readiness Planning Branch (N456) Commander, Naval Installations Command (CNIC)/Ashore Readiness Division (N46)
Air Force	**Deputy Chief of Staff for Operations, Plans, and Requir ements** HQ USAF Bases, Ranges and Airspace/A3O-BAR

12 Executive Agent for Marine Corps Ranges

13 Executive Agent for Marine Corps Installations

Table 4-2 Encroachment Actions and Milestones

Goal Mitigate Encroachment Pressures on Training Activities from Competing Operating Space (land, air, sea, space, and cyber issues)

Actions	Milestones
Army	
Review and maintain Installation Range Complex Master Plans (RCMPs)	▸ Finalize 100% of RCMPs for required installations by 4th Quarter FY2011 ▸ Review and update RCMPs for required installations—Ongoing (annually)
Execute the Army Compatible Use Buffer (ACUB) Zone program to protect the military mission and offset training restrictions	▸ Execute the ACUB program at over 29 locations, permanently protecting land from incompatible land uses—Ongoing ▸ Document a consistent and clearly defined ACUB strategy, including metrics for program success and prioritization measures by 4th Quarter FY2011 ▸ Transition management of the ACUB program from environmental to operations by 2nd Quarter FY2012 ▸ Compete for out-year Army funding to support the ACUB program during POM 13-17
Implement a focused community research process to: provide the Army with a research-based understanding of community views on operational and perceived impacts of Army installations and training activities; demonstrate interest in public opinions, making the public part of the decision-making process	▸ Complete two additional installation community research efforts by 4th Quarter FY2011 ▸ Implement an on-going strategy to continually update community research findings at major training installations by 4th Quarter FY2011
Execute State Legislative Initiatives	▸ Conduct reviews with stakeholders to discuss the adverse impacts of incompatible land uses near military installations and gain their support—Ongoing
Marine Corps	

Continue to analyze and assess encroachment, quantitatively and qualitatively, at the installation, regional, and Service levels	▸ Include encroachment analysis in Regional Range Complex Management Plans (RCMPs)
	  ▸ Marine Corps Installations (MCI) -West underway (initiated FY2009)
	  ▸ MCI-East (planned FY2011)
	  ▸ MCI-PAC (planned FY2011/FY2012)
	▸ Execute Encroachment Control Plans (ECPs)
	▸ ECPs completed:
	  ▸ Marine Corps Air Station (MCAS) Yuma
	  ▸ Marine Corps Air Ground Combat Center (MCAGCC) Twentynine Palms
	  ▸ Marine Corps Base (MCB) Quantico
	  ▸ MCAS Cherry Point
	  ▸ MCAS Beaufort/Townsend Range
	  ▸ MCB Camp Lejeune/MCAS New River
	▸ ECP in progress (complete in FY2010):
	  ▸ Joint (Navy/Marine Corps) Guam
	  ▸ MCB Camp Pendleton
	  ▸ MCAS Miramar
	  ▸ MCI-WEST
	  ▸ MCB Hawaii
	▸ ECPs planned (FY2010/FY2011):
	  ▸ Marine Corps Mountain Warfare Training Center Bridgeport
	▸ Facilitate/support regional inter-agency and inter-governmental partnerships:
	  ▸ Western Regional Partnership
	  ▸ Southeast Regional Partnership for Planning and Sustainability

Continue to evaluate, plan for, and execute encroachment partnering opportunities per 10 U.S.C. § 2684a	▸ Execute buffer lands acquisition
	▸ Completed partnering transactions (32 complete to date):
	MCI—National Capital Region
	  ▸ Quantico (302 acres [ac.])
	MCI—EAST
	  ▸ MCAS Beaufort (1,622 ac)
	  ▸ Townsend Range (21,761 ac)
	  ▸ MCAS Cherry Point (259 ac)
	  ▸ Camp Lejeune (1,794 ac)
	  ▸ Piney Island Range (2,226 ac)
	MCI—WEST
	  ▸ Camp Pendleton (1,793 ac)
	  ▸ Twentynine Palms (958 ac)
	▸ Evaluate opportunities in all Continental United States MCI regions (FY2011)

Table 4-2 Encroachment Actions and Milestones (continued)

Goal Mitigate Encroachment Pressures on Training Activities from Competing Operating Space (land, air, sea, space, and cyber issues)

Actions	Milestones
Navy	
Employ proactive interaction with all Services to sustain installation and range capabilities	▸ Interact with the other Services through common scheduling and coordination and regional partnership conferences to discuss installation growth and energy sustainment with operational range capabilities (by FY2011)
Continue to analyze and assess encroachment, quantitatively and qualitatively at the installation and regional levels	▸ Update nine Encroachment Action Plans (EAPs) and complete an assessment of encroachment pressures and their impacts on the same Navy training ranges using a parallel process (by FY2011) ▸ Utilize and develop the Navy Community Liaison and Plans Officer program to continuously engage communities where the potential encroachment of installations and ranges may arise
Continue to evaluate, plan for, and execute partnering opportunities per 10 U.S.C. Section 2684a	▸ Use a parallel process to update applicable EAPs and identify all encroachment partnering opportunities for associated Navy training ranges
Air Force	

Develop the Center Scheduling Enterprise (CSE) system and integrate flight scheduling systems with other scheduling systems	▸ Created a modified range and airspace utilization reporting process to make it more effective (FY2010)—Complete
	▸ Developed modified information operations activities for consistent application for standard open air range operations (FY2010)—Complete
	▸ Modify utilization reports to provide a complete and accurate account of airspace and range usage (FY2011)
	▸ Use enterprise architecture to institute a streamlined version of CSE (FY2009-FY2012):
	  ▸ Developed a common system for units to schedule Air Force assets; BETA (FY2009); Version 1.0 (FY2010)—Complete
	  ▸ Established CSE architecture (FY2010)—Complete
	  ▸ Deploy CSE system throughout the Air Force (FY2010–FY2012)—Ongoing
	  ▸ Standardize terms, practices, and procedures used for scheduling and utilization reporting at all Air Force ranges to ensure true comparison of assets (FY2010) – Ongoing
	  ▸ Provide a quantitative basis for defending current requirements and developing future needs (FY2011–FY2012)
	  ▸ Integrate CSE with Federal Aviation Administration system to allow seamless machine-to-machine data transfer of airspace schedules, activations, and release (FY2010–FY2011)—Ongoing
	  ▸ Develop and interface between CSE and the Army/Marine Corps Range Facility Management Support System (FY2011)

Improve range encroachment considerations in Air Force basing decision making	▸ Incorporate range encroachment as a key and quantifiable factor in the Air Force corporate basing process (FY2011) ▸ Incorporate beneficial zoning and civic encroachment mitigations in the decision making process (FY2011)

Table 4-3 Frequency Spectrum Actions and Milestones

Goal Mitigate Frequency Spectrum Competition

Actions	Milestones
Army	
Create an ACUB to protect spectrum at Fort Huachuca, home of Electronic Proving Ground	▸ Complete Phase III and IV of the Fort Huachuca ACUB proposal by 4th Quarter FY2011 (subject to the availability of funding)
Design new ranges to minimize spectrum competition	▸ Complete installation of fiber optic cabling to support a wireless network, control targetry, and minimize spectrum and interference on ranges by FY2017
Marine Corps	
Analyze and assess frequency spectrum issues potentially impacting training capabilities at range complexes	▸ Assess operational impacts of frequency encroachment at the range complex level (planned FY2011–2012) ▸ Incorporate frequency spectrum encroachment analysis and potential mitigation measures into planned ECPs; incorporate updates to existing ECPs (see Goal 1 for schedule)
Navy	
Analyze and assess frequency spectrum issues potentially impacting training capabilities at the range complex and regional level	▸ Update the RCMPs and EAPs to identify and assess frequency spectrum conflicts, shortfalls, and the impacts on Navy training (by end of FY2012) ▸ Advocate the protection of military frequencies that could be affected by frequency re-allocation and/or the National Broadband Plan
Air Force	
Improve frequency/spectrum considerations in AF basing decision-making	▸ Incorporate frequency/spectrum as a key and quanifyable factor in the AF corporate basing process (FY2011)

Table 4-4 Airspace Actions and Milestones

Goal Meet Military Airspace Challenges

Actions	Milestones
Army	
Develop an unmanned aircraft system (UAS) Army Strategy; Define the Army's UAS use through 2035	▸ Publish the Army's Roadmap for UAS through 2035—Complete ▸ Sustained UAS training facilities at 28 locations in POM (FY2012–2016) ▸ Perform additional facility upgrades of UAS training facilities at 28 locations in POM (FY2013–2017)
Marine Corps	
Define future requirements for military airspace, current and projected airspace shortfalls, and possible courses of action to mitigate shortfalls at installation, range complex, regional, and Service levels	▸ Include airspace analysis in Regional Range Complex Management Plans (RCMPs) (see Goal 1 for schedule) ▸ Assess airspace requirements and shortfalls in preparation of and submission for Regional Airspace Plans (FY2011) ▸ Complete strategic-level assessment of range requirements and shortfalls re: training land and airspace (presently at 4-Star decision level) ▸ Continue airspace expansion planning for Marine Corps Air-Ground Combat Center Twentynine Palms (draft EIS 1st Qtr FY2011) ▸ Continue to track airspace issues and FAA initiatives potentially affecting military activities
Navy	
Define future requirements for military airspace, current and projected airspace shortfalls, and possible courses of action to mitigate shortfalls at installation, range complex, regional, and Service	▸ Use RCMPs and EAPs to assess future Navy special use airspace requirements based on projected force structure changes and new weapon systems and missions; recommend possible courses of action consistent with regional airspace plans; identify potential shortfalls in land and sea space for each Navy range complex level (by end of FY2012) ▸ Ensure the common aspects of this goal and the goal of addressing "Impacts from New Energy Infrastructure and Renewable Energy Impacts" coordinate with and compliment each other
Air Force	
Improve airspace considerations in Air Force basing decision-making	▸ Incorporate airspace as a key and quantifiable factor in the Air Force corporate basing process (FY2011)

Table 4-5 Range Space Actions and Milestones

Goal Manage Increasing Military Demand for Range Space

Actions	Milestones
Army	
Assess overall range capabilities in support of Army Force Generation (ARFORGEN), as part of the Army Training Support System Assessment	▸ Canvass four Continental United States (CONUS) installations to ensure Mission Essential Requirements (MERs) are met for ranges by 1st Quarter FY2011
Execute Theater In-Process Reviews (IPRs) to review range capabilities against MERs	▸ Conduct Theater IPRs in Europe and the Pacific to assess range capabilities to support ARFORGEN during 3rd-4th Quarter FY2011 ▸ Apply results from the Theater IPRs to POM 14-18
Implement the Range and Training Land Strategy (RTLS) to prioritize Army training land investments and provide a framework to address training land shortfalls through land acquisition, compatible use buffering, sustainable management, and use of other Federal land	▸ Finalize review and revision of the RTLS by 4th Quarter FY2011 ▸ Implement a two-year review and update the RTLS process by 4th Quarter FY2011
Execute Training Land Acquisitions to offset the nearly five million acre shortfall in training land assets	▸ Open the western and southern expansion areas at Fort Irwin/National Training Center, CA for training, pending the U.S. Fish and Wildlife Service rendering a biological opinion for the desert tortoise—Ongoing ▸ US Army Corps of Engineers to complete title work and appraisals of property located in priority expansion areas at Fort Polk/Joint Readiness Training Center, LA and initiate formal negotiations with land owners by 2nd Quarter FY2011 ▸ Complete the Environmental Impact Statement (EIS) to study proposed areas for training land acquisition at Fort Benning, GA by 4th Quarter FY2011; US Army Corps of Engineers to complete real estate planning studies by 1st Quarter FY2012 ▸ Complete the EIS to study proposed areas for training land acquisition at South Texas Training Site, TX by 2nd Quarter FY2012
Utilize non-Department of Defense sites for Army training (e.g., Savannah River Site)	▸ Complete the draft Environmental Assessment to facilitate full training use of Savannah River Site by 2nd Quarter FY2011
Marine Corps	
Define future requirements for land ranges and other areas to support training, current and projected land shortfalls, and possible courses of action to mitigate shortfalls at range complex-, regional- and Service-levels	▸ Include range requirements analysis in regional Range Complex Management Plans (RCMPs) (see Goal 1 for schedule) ▸ Facilitate enhanced cross-service utilization of range areas (cross-service use to be analyzed and quantified in Regional RCMPs FY2010/2011) ▸ Initiate strategic-level assessment of range requirements and shortfalls re: training land and airspace (initiate FY2010) ▸ Continue range expansion planning for MCAGCC Twentynine Palms (draft EIS 1st Qtr FY2011) ▸ Continue range expansion planning for Townsend Bombing Range (pending Notice of Intent) ▸ Conduct strategic land requirements analysis (currently at 4-star decision level)
Navy	
Define future requirements for land ranges and other areas to support training, current and projected land shortfalls, and possible courses of action to mitigate shortfalls at Navy range complexes	▸ Update and complete RCMPs to assess future requirements for Navy air, sea, and land ranges based on force structure change, and new weapon systems and missions by FY2012; identify shortfalls in range capabilities in POM12 and PR13 and complete range requirements in Navy service-level Planning, Programming, Budgeting, and Execution
Air Force	
Improve range space considerations in Air Force basing decision-making	▸ Incorporate range space as a key and quantifiable factor in the Air Force corporate basing process (FY2011)
Develop range configuration to support urban training	▸ Develop Melrose Range, an urban training complex with a mountainside village and a target complex with hillside tunnels; transform Cannon Air Force Base (AFB), NM to support the Air Force Special Operations Command mission (FY2011)

Table 4-6 Energy Actions and Milestones

Goal Address Impacts from New Energy Infrastructure and Renewable Energy Impacts

Actions	Milestones
Army	
Assess on-going Army energy security projects	▸ Issue Army policy on the internal review and coordination process for energy projects to ensure projects do not impact training missions—Complete ▸ Identify central Army portal for all external energy projects having a potential training or environmental impact at Army installations—Complete ▸ Participate on the Department of Defense (DoD) Energy Subcommittee; assess strategic implications of infrastructure policy on Army training equities—Ongoing
Marine Corps	
Support Office of the Secretary of Defense (OSD)-directed energy infrastructure policy and assessments	▸ Respond to OSD-directed requests for data and analysis on potential impacts of emerging energy infrastructure on range capabilities
Monitor developments regarding energy infrastructure planning in the western United States; engage on initiatives with potential training impacts, at regional and headquarters levels, as necessary	▸ Facilitate and support regional inter-agency and inter-governmental partnerships; coordinate/participate in Western Regional Partnership Energy Committee—Ongoing
Navy	
Engage renewable energy proponents to mitigate or minimize impacts on naval training	▸ Define and codify organizational roles and responsibilities to streamline Navy assessments of renewable energy proposals by the end of FY2011 ▸ Continuously respond to requests for analysis on potential impacts on range capabilities and range space from proposed energy infrastructure on range capabilities (FY2011) ▸ Complete development of the Geographic Information System assessment tool in Environmental Information Management System (EIMS) to expedite OSD-directed assessments by the end of FY2012
Coordinate and contribute to the on-going OSD effort to assess energy infrastructure proposals are accomplished at the appropriate level	▸ Continue to interact with State renewable energy task forces to support an iterative assessment of wind energy development proposals to minimize impacts to Navy/DoD readiness requirements ▸ Support and participate in the initiative to establish a single DoD point of contact to receive and assess wind farm proposals (FY2011)
Air Force	
Engage renewable energy proponents in order to collaborate on site selections	▸ Implement a DoD preliminary screening tool (completed October 2008) ▸ Conduct a Nellis Energy Summit (completed February 2009) ▸ Establish the Air Mobility Command Wind Resource Area Task Force (completed Spring 2009) ▸ Contribute to the American Wind Energy Association National Conference, Governmental Listening Session and Presentation (completed April 2009) ▸ Attend the FAA Conference on Competition for the Sky (completed September 2008) ▸ Manager training on engaging energy developers (completed January–April 2009) ▸ USAF Nevada Energy Forum sponsored by USecAF and SAF/IE (Aug 2010) where government and industry collaborated on process development
Study potential impacts and mitigation techniques	▸ Study wind turbine impacts and mitigation techniques (Phase 1—April 2010; Phase 2—Early FY2011) ▸ Develop Tracking and/Decision making tool (FY2011) ▸ Expansion of Radar Toolbox for prediction of impacts on ASR-11 radar from wind turbines (FY2011)
Create and field a DoD tracking and visualization tool for energy proposals	▸ Developing Mission Compatibility Awareness Tool (MCAT) (FY2011)

Table 4-7 Climate Actions and Milestones

Goal Anticipate Climate Change Impacts

Actions	Milestones
Army	
Assess Global Climate Change risks and vulnerabilities	▸ Implement DoD Quadrennial Defense Review Global Climate Change directives when final ▸ Program adaptation and mitigation measures requirements in future POM cycles—Ongoing ▸ Assess Global climate change risks and vulnerabilities—Ongoing ▸ Program Global Climate Change adaptation and mitigation measures in future POM cycles—Ongoing ▸ Address global climate change in existing Army plans—Ongoing

Table 4-7 Climate Actions and Milestones (continued)

Goal Anticipate Climate Change Impacts

Actions	Milestones
Marine Corps	
Support OSD-directed climate change policy and assessments	▸ Continue to respond to requests for data and analysis on potential impacts of range operations on climate change, and climate change impacts on range capabilities (as directed by OSD) ▸ Continue leadership role at Headquarters level in DoD Clean Air Act Services' Steering Committee, Subcommittee for Global Climate Change (Ongoing—USMC representative currently Subcommittee chair)
Navy	
Support OSD-directed climate change policy and assessments	▸ Implement DoD Quadrennial Defense Report Global Climate Change directives (FY2011) ▸ Assess climate change risks and vulnerabilities—Ongoing
Air Force	
Assess global climate change risks and vulnerabilities	▸ Implement DoD Quadrennial Defense Review Global Climate Change Directives (FY2011) ▸ Assess climate change risks and vulnerabilities—Ongoing
Prepare for increased renewable energy priority and development	▸ Participate in White House Task Force on Wind Turbine Impacts on Radar (FY2010-FY2011) ▸ Engage U.S. Bureau of Land Management to improve siting process (FY2011)
Participate in DoD Strategic Environmental Research and Development Program (SERDP) studies	▸ Participate in SERDP studies assessing the impact of climate-induced sea level rise on military infrastructure and coastal ecosystems; manage intermittent streamflows and altered fire regimes—Ongoing

Table 4-8 Environmental Stewardship Actions and Milestones

Goal Sustain Excellence in Environmental Stewardship

Actions	Milestones
Army	
Execute the Army Range Assessment Program	▸ Review and finalize all range assessment data from Phase I reports—Complete ▸ Complete Phase II assessments, where required, by 4th Quarter FY2014
Execute environmental management and stewardship program to support sustainment of ranges and training lands	▸ Finalize the Army Sustainability Campaign Plan—Complete ▸ Start implementing tasks and objectives identified in the Army Sustainability Campaign Plan by 3rd Quarter FY2011 ▸ Implement a process to integrate natural resource and conservation management plans into the Range Complex Master Plan template by 4th Quarter FY2011
Marine Corps	
Maintain Service-wide environmental management and range sustainability programs in accordance with applicable laws and regulations	▸ Engage in national regulatory and legislative processes on issues with that may potentially impact range sustainability or range readiness in coordination with the Office of the Secretary of Defense ▸ Continue to engage local, regional, and State regulatory agencies on issues that may affect range sustainability or range readiness ▸ Explore biological crediting banks (e.g., wetland and Endangered Species Act) at the regional and national levels in coordination with the other branches of service and the Department of the Interior ▸ Encourage non-governmental organizations and local communities to work on regional solutions for land use conflicts (e.g., Southeast Regional Partnership for Planning and Sustainability and Western Regional Partnership)
Navy	
Execute Service-wide environmental management and range sustainability programs as required by law/regulation	▸ Renew annually-expiring Marine Mammal Protection Act authorizations, as needed ▸ Evaluate the implementation and effectiveness of Integrated Natural Resources Management Plans at the end of each fiscal year ▸ Complete ongoing environmental planning for at-sea operational areas and range complexes by the end of FY2012
Air Force	
Provide for more accurate, more flexible risk assessment and weapons footprint creation	▸ Implemented the Weapons Danger Zone tool (FY2010–FY2011) ▸ Reduced the landscape/airspace requirments for employing guided bomb units known as GBU-38s ▸ Completed Dare County Range in North Carolina and Draughon Range in Japan
Develop range configuration to support urban training	▸ Expand the Air Force Special Operations Command Emerald Warrior exercise to include urban training over additional airspace and Gulf Coast communities (FY2010–FY2011)
Continue environmental management and range sustainability programs	▸ Maintain active participation in Range Sustainment Initiatives e.g., Southeast Partnership for Planning and Sustainability and Western Regional Partnership—Ongoing

4.3 Funding Requirements

NDAA Section 366(a)(3)(C) requires DoD and the Military Services to report on funding requirements associated with implementing range sustainability initiatives. DoD has stated in previous submissions of this report that it faces several challenges in meeting this requirement.

One challenge is that the Military Services manage their range sustainment funding in a manner that best suits the way their ranges are operated to meet their specific missions. A more significant challenge is that, within DoD, funding for range sustainment efforts is spread across and embedded within different appropriations (e.g., operation & maintenance, military personnel, procurement, and military construction) and program elements (e.g., manpower, training, environmental, real property, utilities). While the details may differ to some degree among the Military Services based upon their particular command structure, mission, and financial processes, each Military Service experiences similar challenges which create difficulties with accurate and consistent tracking and reporting of range sustainment funding.

In an attempt to develop a common framework across the Military Services for consistently and accurately tracking and reporting range sustainment funding, a Sustainable Ranges Funding Subgroup was formed under the WIPT. The subgroup examined funding strategies and categorizations used by the Military Services for their training range sustainability efforts.

The group developed four main categories as a common starting point from which to report training range sustainment funding data. The categories, their descriptions, and specific examples for each category are included in Table 4-9.

These categories serve as a framework being explored by DoD and the Military Services to track, report, and project the need for future range sustainment fiscal resources. The ability to compare side-by-side the status of resources against the results of the range encroachment and capabilities assessments described in Section 3 will give DoD increased capability to address progress on resolving range sustainment issues. Taken together, this ability represents an important management tool that allows leadership to make informed decisions about both the adequacy of existing resources, and the need for additional investment of sustainment dollars. Future funding will necessarily be subject to change, and is presented for planning purposes only. Military Service-wide range sustainability funding levels for FY2011 through FY2015 are provided in Table 4-10. A notable change to this year's table is the addition of Readiness and Environmental Protection Initiative (REPI) program funds. In an attempt to increase accuracy of reporting, the Services were asked to report based on their FY2011 President's Budget submissions. As REPI is an OSD centrally managed program to support buffer lands initiatives, funds are not contained in the Service programs. Rather, OSD programs for REPI funds and then allocates them to the Services based on an assessment of need (for a more thorough discussion of the REPI program see Section 4.4.1). It was therefore decided that it would be more accurate to report REPI funds as an OSD program as opposed to under Service encroachment funding. Any Service funds budgeted for buffer projects are captured in that Services' encroachment lines.

Table 4-9 DoD Sustainable Ranges Initiative Funding Categories[14]

Funding Category	Description	Specific Examples
Modernization and Investment	Research, development, acquisition, and capital investments in ranges and range infrastructure. It includes related items such as real property purchases, construction, and procurement of instrumentation, communication systems, and targets.	▸ Construction of new Multi-Purpose Training Ranges at Army installations ▸ Construction of Improvised Explosive Device (IED) Defeat Lanes ▸ Upgrades to Small Arms Ranges
Operations & Maintenance	Funds allocated for recurring activities associated with operating and managing a range and its associated infrastructure, including funds dedicated to range clearance, real property maintenance, and range sustainment plan development.	▸ Clearance of unexploded ordnance prior to range construction ▸ CivPay for Range Operators at Army installations
Environmental	Funds dedicated to environmental management of ranges, including range assessments, response actions, and natural and cultural resource management planning and implementation.	▸ Conservation funding for INRMPs and ICRMPs ▸ Environmental mitigation costs associated with range modernization and range construction ▸ Conducting Range Assessments
Encroachment	Funds dedicated to actions to optimize accessibility to ranges by minimizing restrictions that do or could limit ranges activities, including outreach and buffer projects.	▸ Administration and support of the Army Compatible Use Buffer (ACUB) program

14 These funding categories should not be confused with appropriation categories.

Table 4-10 DoD Training Range Sustainment Funding ($M)[15]

Service[F1]	Fiscal Year				
Army	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Modernization & Investment[A1]	$362.2	$290.2	$438.2	$314.0	$347.0
Operation & Maintenance	$321.3	$371.0	$385.4	$394.3	$405.0
Environmental	$148.9	$170.9	$174.8	$157.9	$153.0
Encroachment[F2]					
Army Total	**$832.4**	**$832.1**	**$998.4**	**$866.2**	**$905.0**
Marine Corps	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Modernization & Investment	$0.4	$2.8	$31.0	$31.8	$32.5
Operation & Maintenance[M1]	$39.8	$44.7	$58.8	$58.8	$59.3
Environmental	$5.7	$5.7	$5.7	$5.7	$5.7
Encroachment[F2]	$3.0	$3.0	$3.0	$3.0	$3.0
Marine Corps Total	**$48.9**	**$56.2**	**$98.5**	**$99.3**	**$100.5**
Navy	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Modernization & Investment	$82.6	$79.6	$78.8	$76.9	$76.4
Operation & Maintenance	$175.9	$173.8	$175.6	$178.9	$182.1
Environmental[N1]	$28.7	$32.1	$32.1	$36.6	$31.8
Encroachment[F2,N2]	$10.7	$16.6	$17.0	$17.4	$17.8
Navy Total	**$297.9**	**$302.1**	**$303.5**	**$309.8**	**$308.1**
Air Force[AF1]	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Modernization & Investment	$60.4	$53.6	$49.1	$47.2	$39.4
Operation & Maintenance	$89.6	$91.1	$80.9	$82.5	$85.6
Environmental	$26.8	$27.7	$26.1	$25.6	$26.2
Encroachment[F2]					
Air Force Total	**$176.8**	**$172.4**	**$156.1**	**$155.3**	**$151.2**
OSD	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
REPI Program[F2]	$39.8	$39.2	$39.0	$39.0	$39.1
DoD	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
DoD Total	**$1,395.8**	**$1,402.0**	**$1,595.5**	**$1,469.6**	**$1,503.9**

F1 *Range sustainability programs are fully represented in the Services' programming and budgetting processes. Program fluctuations generally reflect best alignment of available resources across competing Service priorities based on programming guidance and validated by the Service Chiefs and Department Secretaries.*

A1 *Increase in F13 funding is due to Military Construction funding in support of the Army Campaign Plan and Global Defense Posture Realignment implementation.*

F2 *The Readiness and Environmental Protection Initiative (REPI) is an OSD centrally managed program that distributes funds to the Services for execution. Past reports had included Service projections for future allocations. These funds are now reported under OSD using actual programmed figures.*

M1 *The Marine Corps Operations & Maintenance line identifies funds centrally managed by Training and Education Command, Range and Training Area Management Division, which manages an estimated 80-90% of all Marine Corps range funding. Funds for real property maintenance and Base Operating Support are managed at the installation-level to provide responsive support for various installation requirements, including local range sustainment initiatives. These installation-managed funding lines are not included in the Operations & Maintenance line, because breakouts to range-specific expenditures were not available. FY2011 amounts reflected are based upon FY2011 actual amounts. FY2012–2015 amounts reflected are accurate as of December 2010. Information provided does not include reductions experienced during NAVCOMP Budget Cycle.*

N1 *Beginning in FY2011, the Navy reclassified some resources and reprioritized compliance with Marine Mammal Protection Act and Endangered Species Protection Act for major range complexes. Compliance is now programmed as a recurring requirement. Navy will also be expanding regulatory coverage beyond individual range complexes.*

N2 *FY2011 to FY2012 increase is attributable to an increase in installation Community Plans and Laison Officers and funding for Encroachment Partnering acquisition.*

AF1 *Funding for Air Force training ranges, as defined and categorized by OSD P&R, is tracked through two discrete channels. The first channel, which reflects the main source of funding for ranges, is through the Air Force A3/5 chain. The second channel is through the Air Force A4/7 chain. Within these two funding channels, the Air Force's reporting framework does not line up precisely with OSD P&Rs definitions and categories. Under these OSD P&R definitions and categories, the Air Force is able to report on Modernization and Investment, Operation and Maintenance, and Environmental. It is unable to report on Encroachment funds, as that category is defined by OSD P&R.*

15 The funding categories in this table should not be confused with appropriation categories.

4.4 Partnering and Outreach Initiatives

To support the DoD mission, Congress has entrusted nearly 30 million acres of land—1.1% of the total land area of the United States—for DoD to use and care for properly. DoD also shares land, air, and sea space, as well as the nation's radio frequency spectrum to conduct its training mission and maintain force readiness. The Department is fully committed to partnering with stakeholders, environmental stewardship, and the sustainable management of resources under its care, for both today and the future.

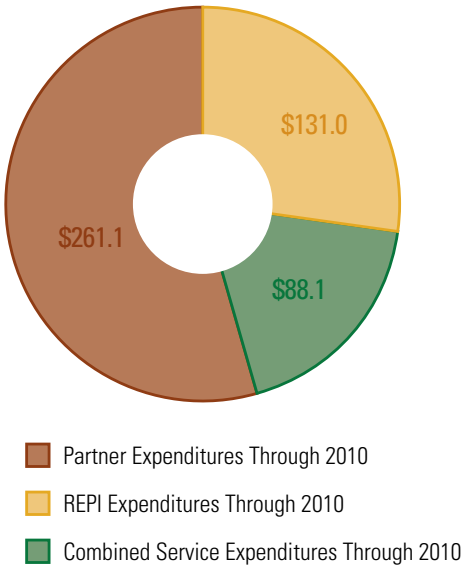
Recognizing the importance of open communication and close coordination with neighboring stakeholder communities in land-use planning and decision making, the SRI has institutionalized a "toolbox" of programs and efforts that enable and support extensive partnerships focused on common needs and issues. The SRI toolbox incorporates the Readiness and Environmental Protection Initiative (REPI), the Office of Economic Adjustment's (OEA) Compatible Use Program, Education and Engagement supporting outreach as well as in-reach within DoD, and Regional Partnering among DoD, State, Federal, tribal and NGO agencies. Collectively these efforts educate internal and external stakeholders ,engage State and local governments, and implement collaborative efforts outside installation and range fence lines in order to protect DoD's mission and resources. Success across the nation has established the effectiveness of the toolbox and strengthened DoD's ability to sustain training and testing space and capabilities well into the future. Such efforts allow partners to use DoD and other public and private sector funds to acquire property, or property interests such as conservation easements, from willing sellers that preserve critical buffers and habitat areas near installations and ranges where the military operates, tests and trains. This toolbox continues to expand and evolve through innovations that solve complex problems, leverage additional funding and incorporate additional and diverse stakeholders.

4.4.1 The Readiness and Environmental Protection Initiative

REPI supports DoD compatible land use and conservation partnering initiatives and projects at ranges and installations across the country. It is a critical component of DoD's SRI to prevent or reduce encroachment by protecting installation capability, accessibility and availability for training and testing.

REPI implements the authority authorized by Congress in 2002 under 10 U.S.C. § 2684a by providing DoD funding to the Military Services to enter into agreements with private conservation organizations, and with State and local governments. Such agreements allow partners to use DoD and other public and private sector funds to acquire property, or property interests such as conservation easements, from willing sellers that preserve critical buffers and habitat areas near installations and ranges where the military operates, tests and trains.

Figure 4-1 REPI Funds Leveraged Through 2010



Prior to the enactment of 10 U.S.C. § 2684a, the Sikes Act was the primary authority for DoD to enter into cooperative agreements with State and local governments, NGOs, and individuals to maintain and improve natural resources on private properties in support of DoD. This authority was almost entirely directed toward protection of natural resources and partnerships, and took the form of working relationships to protect and revitalize species through various installation habitat enhancement efforts.

REPI, however, has allowed DoD to work collaboratively with stakeholders and landowners outside installation and range boundaries to both preserve habitat and limit incompatible development. Since FY2005 and through the end of FY2010, REPI has supported Military Service partnerships with State and local governments or NGO advocates for private landowners to protect more than 174,000 acres of non-DoD land around installation and range lands across the nation. In total, between FY2005 and FY2010, REPI funding has supported projects at 59 installations and ranges in 23 states across the country. Partner resources are valued at more than half of the cost of preserving compatible land use through REPI partnership (See Figure 4-1).

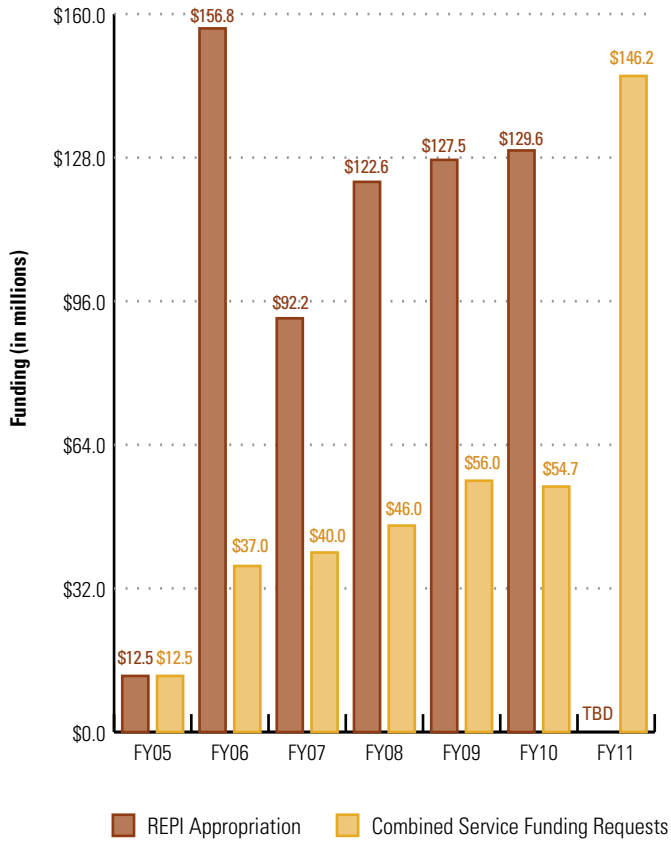
The REPI vision is to create a dynamic equilibrium, or adaptive steady state, where the warfighter has continued access to land, air, water and facilities for the training and testing needed to achieve and maintain mission readiness. The key to accomplishing and maintaining this steady state is an effective decision-making framework to help maximize the capability and flexibility of key external assets and partnerships that can support and benefit those missions. The ultimate

result is bringing State and local government and private partners together with DoD, working with willing landowners, to protect physical buffer areas and critical landscapes and natural resources around and near military installations, ranges, and airspace throughout the country. REPI has begun to effectively enhance military readiness, protect open space and key natural habitats, and sustain the vital contribution military installations make to our local, State, and regional economies.

Recent DoD and RAND Corporation assessments have validated the effectiveness of REPI, but they indicated that the program needs additional resources to meet the challenges that encroachment is posing to military installations and ranges. The 2007 independent RAND analysis resulted in the report entitled *The Thin Green Line*, and concluded that the REPI program is underfunded, opportunities for effective action to protect bases are being lost, and the cost of effective action will only increase over time (See Figure 4-2).

For additional information on the REPI program and the military's efforts to reduce encroachment through use of the 10 U.S.C. § 2684a authority, please refer to DoD's 2011 REPI Report to Congress, at *http://www.denix.osd.mil/sri/*.

Figure 4-2 Component REPI Funding Requests and Congressional REPI Appropriations



4.4.2 Office of Economic Adjustment Compatible Use Program

OEA's Compatible Use Program implements Executive Order 12788, as amended, under the authority granted by 10 U.S.C. §2391(b)(1). As such, OEA provides technical assistance to installation and range officials and technical and financial assistance to neighboring states, communities, and interest groups through a Joint Land Use Study (JLUS) process. This tool helps the military to minimize its operational effects on neighboring jurisdictions and ensures that local civilian development is compatible with ongoing DoD mission.

A JLUS serves as a comprehensive strategic action plan to identify and address existing conflicts, promote future compatible use, protect the installation's military mission, and promote the public health, safety, quality of life, and economic stability of the community. The JLUS process promotes an open, continuous dialogue between the installation, surrounding communities and State to address existing encroachment issues and implement measures to promote future compatible use.

JLUS and REPI are complementary. Through the JLUS process, a Military Service and/or its stakeholder communities may identify an issue for which a REPI project can provide resolution. Thus, the JLUS is a powerful tool for bringing communities and the military together to address compatible use issues and needs.

4.4.3 Education and Engagement

Within the core of the SRI lies the incorporation of both internal (DoD and Military Services) and external stakeholders into the protection of DoD's mission and sustainability. Using coalition building, in-reach, and an easy-access educational toolbox for all stakeholders to rely on for ideas and information, DoD is planning for the future with a progressive and collaborative mindset.

Coalition building with internal and external stakeholders enhances both ongoing partnerships and the potential for new partnerships that build trust and effectively support the longevity of DoD's test and training mission. SRI depends upon knowledge of the issues, interactive communication, and cooperative partnerships to gain support, and therefore effective assistance, in compatible land use and mission sustainability in our communities. Using conferences, web-based social networking, informal forums, and range tours, the SRI has developed an outreach network that understands the DoD mission, sets the stage for partnership and collaborative planning, and is eager to educate stakeholders on what DoD has to offer as a partner in sustainability. These interactive outreach events proactively:

- Raise awareness about DoD's mission sustainability needs and initiatives;

- Educate policymakers and NGO action officers about policies favorable to installation and range mission sustainability;
- Build relationships among stakeholders that can ultimately advance sustainability efforts at local, State and national levels; and
- Identify partners who can serve as opinion leaders for both national sustainability messaging and to build internal support among DoD leadership.

Today, DoD enjoys effective partnerships with State and local government groups, conservation and environmental NGOs, and stakeholder groups within DoD. The following sections depict the outcomes of some of these partnerships which demonstrate that the DoD mission is gaining visibility, support, and, therefore, greater sustainability outside installation and range fence lines.

Key Coalitions

The SRI program has built a coalition of NGOs to work with the military on legislative topics, encroachment concerns, and other mission-related issues. These include the National Association of Conservation Districts (NACD), National Conference of State Legislatures (NCSL), the National Association of Regional Councils (NARC), Western Governors Association (WGA), and many others. Examples of these efforts include:

- The National Association of Conservation Districts has worked with the SRI program to educate military personnel, DoD stakeholders, and regional and local leaders about how to effectively engage each other to ensure that local planning and development decisions consider the effects on local military installations and vice-versa. Conservation districts are local units of government established under State law to carry out natural resource management programs at the local level. Districts work with millions of cooperating landowners and operators to help them manage and protect land and water resources on all private lands and many public lands in the United States. A NACD primer under development will discuss the presence, purpose, and applications of the over 3,000 Conservation Districts throughout the U.S.
- The National Conference of State Legislatures has formed a Military Sustainability Task Force to address how states can help to protect military installations and Military Service members' quality of life through effective legislation. The task force is composed of key legislative leaders in critical military-heavy states, such as Arizona, Georgia, Kansas, North Carolina, Oklahoma, New Jersey, and Texas. The organization reaches into State, Federal and local government arenas and has a history of partnering with DoD on compatible land use projects and development of primers dating back to 2003. This partnership has led to legislation in 32 states and sample legislation provided directly to State legislators. The NCSL Military Sustainability Task Force participated in a range tour at Buckley Air Force Base and the Task Force for Veterans' and Military Affairs met in July 2010 in Louisville, Kentucky, providing a first-hand look at quality of life and encroachment concerns at DoD installations to active State legislators.
- The National Association of Regional Councils serves as the national advocacy organization for "regionalism" by advancing regional cooperation efforts across the country. NARC's members include regional councils (RCs), and region-wide associations of local governments—councils of government, regional planning and development agencies, and metropolitan planning organizations. RCs across the country perform planning of all types on a broad regional scale. In the past, only a minority of installations have taken part in these planning efforts. In 2010, NARC hosted Major General Carl Jensen, Marine Corps Installations East as a contributing speaker at the 2010 NARC Annual Conference in Cleveland Ohio, educating RC members on installation and range management and collaborative land use planning issues. NARC has also contributed to the SRI primer series co-authoring *Working With Regional Councils, A Guide for DoD Installations*.
- The Western Governors' Association represents 21 of the nation's governors and the Pacific territories and is the largest of the regional governors' organizations. As governors, WGA's members are increasingly leaders in sustainability, "smart growth," alternative energy, and conservation efforts across the nation. They have worked closely with DoD in compatible land use, renewable energy, and a variety of land development issues relevant to military training and testing lands in the western region.

The SRI team also coordinates with Congress and other Federal agencies and offices such as:

- Department of the Interior (DOI);
- U.S. Department of Agriculture (USDA);
- Department of Transportation (DOT);
- Green Infrastructure Community of Practice; and
- Environmental Protection Agency (EPA).

DoD's outreach program fulfills a representative role on the Federal Lands Protection Program Work Group. These relationships support initiatives to improve the REPI program, as well as the SRI goals to engage and collaborate on a national level and ensure other agencies receive information pertaining

to DoD range sustainability initiatives and joint projects. Some examples include:

America's Great Outdoors

In April 2010, President Obama launched the America's Great Outdoors program to reshape U.S. conservation programs. DUSD(IE) represented DoD at the event, attending with Secretary of the Interior, Secretary of Agriculture, EPA Administrator, and Chair of the White House Council on Environmental Quality. In response to this new initiative, the SRI team participated in public listening sessions and has been partnering with the Departments of Interior and Agriculture and other NGO partners to develop a strategy and plan for conserving America's landscapes. The collaboration between agencies, stakeholders, and the public combined with the strong emphasis on landscape and regional conservation efforts has the potential to help support many of the SRI goals.

Sustainability Map Project for State Sustainability Policies

The SRI has created a comprehensive and interactive map to serve as an online clearinghouse of information about State laws, regulations, policies and programs that states have championed to sustain the nation's military installations and ranges.

The Range Sustainment Initiative's Sustainability Map profiles the following laws, regulations, policies and State programs in each of the 50 states:

- Compatible land use or encroachment statutes, regulations and State programs, identifying those elements relevant to the military including land use planning, notification of the military (in terms of communication or public notice requirements) and land conservation elements directly addressing military bases or installations.
- Real estate and property disclosure requirements.
- Outdoor lighting, and so-called "lighting pollution," requirements or restrictions.
- Open space and land conservation statutes or State programs that serve to create or protect open space or provide funding for buffering, development rights, land easements or purchases and conservation efforts.
- State military-related commission and legislative committees, including Adjutant General and National Guard liaison contact information and related advisory or executive level commissions.

The Sustainability Map can be found at *http://www.legislativestatemap.org.*

In-Reach

Another key to SRI's success is an understanding across DoD and the Military Services, from the leadership to the installation level, of whom the stakeholders are, who represents them, what their motivations and concerns are, and what achievements can be gained from communicating and working together. The SRI outreach program has built an education toolbox from which all agencies within DoD can draw educational material for their staff and begin to build internal outreach plans more tailored to their Military Service and needs. The SRI outreach and engagement efforts are coordinated within DoD through:

- Regular DoD leadership briefings prior to all key outreach events;
- Participation within the Sustainable Ranges Integrated Product Team;
- Growing relationships that provide opportunities for Military Service and DoD leadership participation in key outreach events; and
- Promoting use of primers, fact sheets, conference tracker, and other educational tools.

A successful in-reach program results in the SRI being understood and promoted at all levels of DoD and the Military Services. The purpose is for DoD and Military Service leadership to maintain excellent working relationships with key stakeholders and clear communications with Military Services components to allow an easy exchange of ideas that will create effective and innovative solutions to range sustainment issues.

SRI Education and Engagement Toolbox

The purpose of the SRI education toolbox is to increase and enhance effectiveness of communication and collaboration with our partners and stakeholders with wide distribution of, and access to, relevant, current, and diverse materials. The toolbox contains:

- The DoD Primer series;
- Fact sheet sets;
- Conference tools (SRI booth, SRI handouts, SRI information sheets);
- Mainstream media tracker for highlighting SRI in the media;
- SRI briefing materials;
- A Defense Environmental Network Information Exchange (DENIX) Portal/web site; and
- Quarterly newsletters on SRI-related stories and events.

A key tool for facilitating outreach and education is the primer series. This series is designed to inform readers about engagement from the perspective of being potential partners. It is a series of guidebooks outlining best practices in a reader-friendly format to be used by both the military and stakeholders. These primers were developed through partnerships between DoD, professional and educational associations, conservation organizations, and State and local government groups to facilitate communication and expand collaboration between communities, counties and State governments, and military installations. The primer series helps military installation personnel to better understand local government management and legislative processes, and to exercise best practices to facilitate compatible land use planning discussions with community stakeholders. Likewise, State and local governments can use them to understand the importance of mission sustainability and the military's historical and cultural role within the community, as well as efforts to interact and partner outside the fence line. DoD distributes primers individually or as a series, upon requests from partners such as Military Service officials, other Federal agency representatives, State and local officials, and conservation, environmental, and land use groups. The series is also made available at conferences.

The Primer series currently contains the following:

- *Working with Land Trusts, A Guide for Military Installations and Land Trusts;*
- *Working with State Legislators, A Guide for Military Installations and State Legislators;*
- *Working With Local Governments, A Practical Guide for Installations;*
- *Collaborative Land Use Planning, A Guide for Military Installations and Local Governments;*
- *Working to Preserve Farm, Forest, and Ranch Lands, A Guide for Military Installations;*
- *Outreach for Mission Sustainability: Working to Balance Military and Civilian Community Needs;*
- *Commanders Guide to Community Involvement;* and
- *Working With Regional Councils, A Guide for DoD Installations.*

The SRI team is working to increase the primer library in 2011 with the following:

- *Working with Developers, A Primer for Military Installation Commanders and Their Staffs;*
- *Working with NGOs;*
- *Utilizing Conservation Districts*
- *Working with Federal Agencies;* and
- *The Successful Range Tour, A Guide for Military Installations and Stakeholder Leadership.*

Range Tours

Another key outreach tool developed by DoD for use in supporting the SRI is the range tour. DoD personnel working to support the SRI have been conducting educational range tours to facilitate communication between specific military installations, stakeholder groups, and partnering agencies since 2004. The purposes of range tours vary. In some instances, the tour is designed to highlight installation natural resource programs; in other cases, participants are given the opportunity to view urban development and learn about how encroachment factors related to incompatible growth can inhibit range activities. When possible, participants view live testing and training activities allowing them to better appreciate military training. Every range tour highlights DoD's commitment to mission requirements while simultaneously demonstrating their leadership in conservation and preserving the nation's natural resources. Range tours also provide participants with a forum to interact with Military Service personnel, natural resource managers, and range or installation commanders.

In February 2010, a New York Times journalist was taken on tours of several installations in the Southeast US. The Department of Defense was subsequently featured in two articles and a video reporting on DoD's successful endeavors to protect both the environment and the DoD mission. Highlighting conservation efforts at Fort Stewart for the Red Cockaded Woodpecker, Eglin Air Force Base for the Okaloosa Darter, and San Clemente Island for restoration of the Loggerhead Shrike, the military's commitment to wildlife and habitat preservation and the challenges of dealing with encroachment threats were acknowledged and highly publicized.

This press coverage illustrates the balancing act installations must play to protect these often endangered species while sustaining mission readiness, while also illustrating the benefit to reaching out to and educating the public through public meetings, forums and range tours.

Range tours and stakeholder events on installations occurred in 2010 at Nellis AFB, NV; NAS Jacksonville, FL; NavSta Mayport, FL; NAS Key West, FL; Buckley AFB, CO; Fort Stewart, GA; and Fort Benning, GA. Stakeholders that were included on these tours include such diverse groups as NCSL, WGA, Natural Resources Defense Council (NRDC), and Hawaii North Shore Community Land Trust.

Sustaining Military Readiness Conference

Building on the success of the 2009 conference, the 2011 Sustaining Military Readiness Conference will be held July 25-29, 2011, in Nashville, Tennessee. This biennial

conference is designed to bring together DoD personnel and stakeholders interested in military training and testing; natural and cultural resource management; and sustainable land, air, sea, and frequency use to:

- Explore the interdisciplinary nature of sustaining military readiness,
- Share lessons learned and best practices among colleagues and stakeholders, and
- Participate in a broad spectrum of informative training workshops.

The goal is to link individuals representing DoD, other government agencies, and NGOs to promote military readiness through conservation, compatible land use planning, and encroachment mitigation. Conference workshops and sessions offer valuable insight and skills for multiple mission successes across communities.

For 2011, sponsoring organizations include:

- Deputy Under Secretary of Defense (Installations and Environment), Basing Directorate
- Director, Operational Test & Evaluation
- Legacy Resource Management Program
- Office of Economic Adjustment
- Deputy Assistant Secretary of Defense (Readiness), Training Readiness and Strategy Directorate
- Strategic Environmental Research and Development Program
- DoD Test Resource Management Center.

Additional information can be found at:
http://www.smrconference.com

4.4.4 Engagement for Energy Infrastructure Compatibility

New and expanding energy infrastructure can have an adverse effect on DoD's use of airspace, seaspace and land ranges for training, testing and operations. DoD must coordinate internally to effectively correlate its diverse interests in protecting force readiness, enhancing facility energy security, and meeting energy efficiency and emissions targets. DoD must also engage externally to more effectively identify and address conflicts with potentially incompatible energy proposals. The ODASD(Readiness) is working closely with other OSD and Service training, test, operations, and installations and environment interests on a cooperative process to better analyze energy proposals and articulate a single departmental position.

Large scale energy development is underway or planned in many regions of the U.S. Solar, wind, geothermal, and other renewable energy resources are attracting increasing public and private investments, often near vital test and training assets. At the same time, domestic oil and gas production is being emphasized to reduce U.S. dependence on foreign sources, particularly on the Outer Continental Shelf (OCS). DoD is increasingly involved in identifying and evaluating the impacts of energy proposals on our existing and planned activities. In the Western U.S., numerous large and small wind and solar projects are being proposed and approved to supply renewable energy to the national energy grid. Near DoD training ranges or operating areas, or under military training routes, energy production or transmission facilities can obstruct military aircraft. Additionally, wind turbines create a doppler effect and other interference that can degrade the performance of radars and other electronic systems. Specific examples of issues now being worked include concerns over the safety of pilot training at the Kingsville Naval Air Station, TX due to a proliferation of nearby wind farms; potential training impacts from a high-voltage transmission line being planned in southern New Mexico and Arizona; and the deconfliction of military activities with planning for offshore wind farms and expanded oil and gas leasing along the east coast and in the Gulf of Mexico.

DoD is working closely with the Services to develop repeatable and responsive processes that can inform the energy industry of DoD interests and evaluate energy projects to support effective decision making. However, DoD by itself lacks the authority in most cases to prohibit or redirect energy development on non-DoD controlled public or private lands. DoD typically works with agencies responsible for developing energy resources, such as the Bureau of Land Management (BLM) and Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), or those with a regulatory oversight role (like FAA), to convey concerns and to work cooperatively on enabling energy development that does not degrade readiness activities.

DoD has a protocol in place with BLM regarding siting of wind energy projects on BLM lands and this agreement has protected DoD equities in the western states. Efforts are underway to expand this protocol to other forms of renewable energy, and possibly to include additional Federal agencies as well. Additionally, the Department is working to establish an energy siting clearinghouse function to help identify, review, and facilitate fully coordinated DoD positions on the compatibility of proposed projects for energy developers, government agencies, and other concerned parties.

4.4.5 Military Service Specific Stakeholder Engagement

The Military Services are in varying phases of developing and implementing Military Service-specific outreach and communication programs to support range sustainment and compatible land use issues. The following are two examples of current Military Service outreach initiatives.

Army: Training Support Systems Division

The Army has developed a focused community research concept and, since 2007, has implemented it at six major installations around the country. Additional community research efforts are currently underway for 2009 and the Army has plans to develop an ongoing strategy to continually update community research findings at all major training installations.

The community research concept is based on conducting both primary and secondary research efforts. Primary research activities include community stakeholder interviews, roundtable sessions, and community surveys, while secondary research activities include news media analysis, demographic analysis, and elected official background analysis. The goals of this research are to:

- Identify community views regarding operational and perceived impacts of Army installations and their training activities;
- Provide Army installations with a research-based understanding of the community and its leadership, so that better informed decisions can be made regarding future installation operations and stakeholder involvement efforts;
- Reach out to installation stakeholders to create a solid base of information to enhance relationships and assist in making operational and communications decisions; and
- Demonstrate an interest in public opinions associated with installation activities and decisions, making the public part of the decision-making process.

Marine Corps: Continuing Its Tradition of Community Engagement

Encroachment Partnering (EP) program – The Marine Corps continues to partner with State, local community, and conservation organizations to maintain operations assurance through the coordinated implementation of restrictive easements. Through September 2010, the Navy has acquired 30,452 acres of restrictive easements using $47M in OSD REPI funds and Marine Corps operation and maintentance funds, while our partners contributed $53M. Projects have been completed at 8 different ranges and installations. In the case of Townsend Range, the restrictive easement acreage acquired thus far exceeds the size of the range by 400%. In the case of MCAS Beaufort restrictive easements equal about 30% of the installation acreage.

Community Plans and Liaison Officer (CPLO) Program – CPLOs actively manage compatible land use issues through the identification of potential encroachment challenges affecting installations, ranges and "white space." They monitor encroachment concerns and local conditions in and around the installation/range and conduct community outreach to ensure mission sustainability and protect operational capability. CPLOs proactively maintain contact and visibility with local governments to acquire a working knowledge of local land use plans, zoning and development regulations, development trends, environmental issues, and local, State, and regional plans and programs that have the potential to impede the mission of the installation or range. Further, CPLOs establish working relationships with local, State and regional governments and agencies, non-governmental organizations, and other groups engaged in any aspect of land use planning, development, conservation and preservation that could impact operational assurance at the installation or range. CPLOs are employed at every USMC installation and region.

The Assistant Commandant of the Marine Corps signed Marine Corps Order 11011.22B – Policies and Procedures for Encroachment Control Management on 27 Jul 2010. This order directs installations to actively engage the local communities to develop encroachment solutions and articulates the duties of CPLOs.

Navy: Integration of Community Plans and Liaison Offices (CPLO)

Encroachment Action Plans (EAPs) – The Navy continues to develop EAPs, which focus on systematic encroachment identification, quantification, and mitigation/prevention at ranges, installations and OPAREAs. These EAPs support existing as well as future mission requirements and ensure effective testing/training capabilities are maintained. Through 2010, the Navy has completed 31 EAPs while continuing work on 21 additional plans (9 new EAP awards in FY2010). The Navy EAP program includes Range Complexes and Target Areas such as: VACAPES, Dare County Bombing Range, Pinecastle Range Complex, R-2508 Range Complex, Atlantic Test Range, McMullen Target Area, Pt. Mugu Sea Range, San Clemente Island, Northwest Range Complex, PMRF Kauai, El Centro Range Complex, and the Fallon Training Range Complex.

Encroachment Partnering (EP) program – The Navy continues to partner with State, local community, and conservation organizations to maintain operations assurance through the coordinated implementation of restrictive easements. Through September 2010, the Navy has acquired 8,630 acres of restrictive easements using $57.5M in OSD REPI, Navy EP, and partner funding to prevent incompatible development. The Navy has 14 multi-year Encroachment

Protection Agreements with partners at 12 installations and ranges including the R-2508 China Lake Range Complex to protect the Black Mountain Supersonic Corridor, NAS Fallon in support of the Fallon Training Range Complex, the Naval Base Coronado Assault and Tactical Weapons Training Complex (La Posta) in support of SPECWARCOM, NAS Oceana/NALF Fentress and NAS Jacksonville/OLF Whitehouse in support of Field Carrier Landing Practice training, the Atlantic Test Range/NAS Patuxent River in support of NAVAIR testing, and NAS Whiting Field in support of initial naval aviator training. Projects have also been completed at NAS Pensacola, NAS Whidbey Island, OLF Coupeville, Meridian Sea Ray Target Range, former NAES Lakehurst, and NS Everett.

Community Plans and Liaison Officer (CPLO) Program – CPLOs actively manage compatible land use issues through the identification of potential encroachment challenges affecting installations and ranges (including MTRs, special use airspace and OPAREAs). They monitor encroachment concerns and local conditions in and around the installation/range and conduct community outreach to ensure mission sustainability and protect operational capability. CPLOs proactively maintain contact and visibility with local governments to acquire a working knowledge of local land use plans, zoning and development regulations, development trends, environmental issues, and local, State, and regional plans and programs that have the potential to impede the mission of the installation or range. Further, CPLOs establish working relationships with local, State and regional governments and agencies, Non-Governmental Organizations (NGOs), and other groups engaged in any aspect of land use planning, development, conservation, and preservation that could impact operational assurance at the installation or range.

CNIC signed the Encroachment Management Program instruction (CNICINST 11010.1) in May 2010, which officially designated the CPLO program to advise the Regional and Installation/Range Commanders on encroachment and to manage the EAP execution and outreach necessary to mitigate or prevent encroachment. To date, there are seven Regional CPLOs and approximately 25 official installation CPLOs in place with more growth expected in FY2011.

Air Force: Transformation of Stakeholder Engagement

The Air Force is transforming its stakeholder engagement in an effort to prevent and manage encroachment. The new framework is designed to integrate existing programs not replace them and will develop strategies to address areas that aren't covered by existing programs. An Installation Complex Encroachment Management Action Plan (ICEMAP) will be developed for each installation complex and will include an assessment of encroachment and mission sustainability issues, as well as community issues and concerns. The installation complex is comprised of a main installation and its non-contiguous properties (auxiliary airfields, annexes, missile fields, ranges, MTRS, airspace and landing/drop zones) that provide direct support to or are managed or scheduled by the main installation.

The mission footprint is also considered. This includes airspace (routes, MOAs, etc.) and ranges that are used by the installation or its tenants but not controlled/owned or managed by the main installation. By taking this systems approach the individual components are highlighted in terms of the contribution to the entire "readiness system."

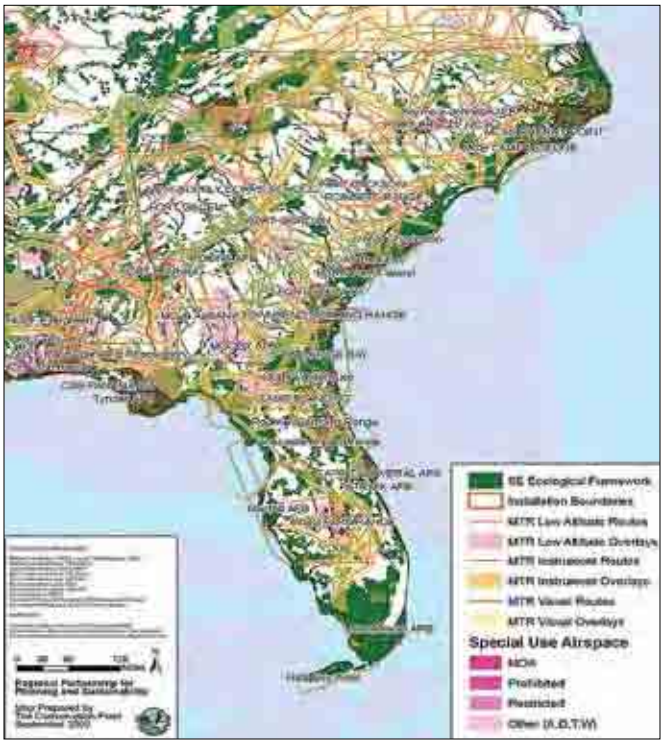
An action plan detailing actions for the installation level as well as higher headquarters and the community will be developed. A detailed outreach and communication strategy will also be built for each installation complex to assist them in implementing the plan. Building and sustaining relationships with local communities is a key component to successful encroachment prevention and management.

In addition to the larger overarching encroachment management initiative, the Air Force has also embarked on an effort to develop a Range Compatible Use program. Similar to the successful Air Installation Compatible Use Program, this initiative strives to develop similar compatible zones for the Air Force Ranges. The concept has had several beta version documents created to help support Joint Land Use Study efforts at Air National Guard Ranges. A prototype Range Compatible Use Analysis has been developed for both Hardwood Range in Wisconsin, and Warren Grove Range in New Jersey. These two efforts build upon the initial prototype analysis prepared for Avon Park Bombing Range, FL in 2008. The Air Force is working to finalize how operational and compatibility zones will be developed so they can finalize a program that will assist range commanders in their outreach and engagement with local communities.

4.4.6 Regional Partnerships

Incorporated into DoD's engagement strategy, regional partnering has enabled the Department to work successfully with multi-State, multi-agency teams to address substantial sustainability issues. At the regional level, DoD is currently involved with two partnerships that address sustainability issues: SERPPAS and the Western Regional Partnership (WRP). These two partnerships address sustainability, compatible land use issues relating to shared airspace and natural resources, urban sprawl, and renewable energy development. SERPPAS is formally endorsed by State and DoD entities via signed charter, and both partnerships are committed to working collaboratively through information sharing such as GIS, land use planning, and renewable energy endeavors that cross installation boundaries, metropolitan areas, and that cross State lines. In 2010, DoD began working with State representatives to explore development of a Mid

Figure 4-3 Southeast Regional Partnership for Planning and Sustainability Focus Areas



Atlantic regional partnership to include Virginia, Maryland, Pennsylvania, New Jersey and Delaware.

SERPPAS (*www.SERPPAS.org*)

In 2005, State environmental and natural resource officials from across the Southeast partnered with DoD and other Federal agencies to form SERPPAS to promote better collaboration when making resource-use decisions. SERPPAS works to prevent encroachment around military lands, encourage compatible resource-use decisions, and improve coordination among regions, states, communities, and Military Services. The region covered by SERPPAS (as seen in Figure 4-3) includes the states of North Carolina, South Carolina, Georgia, Alabama, Mississippi, and Florida. Federal partners include DoD, U.S. Fish and Wildlife Services (USFWS), USDA Forest Service, EPA, Natural Resources Conservation Service, the National Oceanic and Atmospheric Administration, and USGS.

The mission of SERPPAS is to seize opportunities and solve problems in ways that provide mutual and multiple benefits to the partners, sustain the individual and collective mission of partner organizations, and secure the future for all the partners, the region, and the nation. This mission is being accomplished through identifying opportunities for mutual gain among all partner groups, effectively addressing differences among the partners, and focusing on identifying solutions to complex problems. SERPPAS partners have identified four primary objectives that support the SERPPAS mission:

- Promote improved regional, State, and local coordination;
- Manage, sustain, and enhance national defense, natural, economic, and human resources;
- Develop and complete regional projects supporting the sustainment of natural, economic, and national defense resources related to base realignment planning in the southeast region; and
- Develop a GIS Sustainability Decision Support Tool that integrates Federal, DoD, Military Service, and State data for use in regional planning by both SERPPAS and the States.

Primary activities within SERPPAS focus areas include the sharing of GIS maps and identification of potential land uses and development of partnership activities to leverage resources and promote mutual and multiple benefits to SERPPAS partners. Project focus areas include the Strategic Lands Inventory, Longleaf Pine Conservation, the Marine Coastal Initiative, Red Cockaded Woodpecker Translocation, and Gopher Tortoise Conservation efforts. The 10th Principals meeting was held in May 2010 in Mobile, Alabama, to include a range tour of the Deepwater Horizon Oil Spill Emergency Response Center.

Western Regional Partnership (*www.wrpinfo.org*)

The DoD's second regional planning effort, the WRP (Figure 4-4), continues to build momentum and address issues of mutual concern among states and Federal agencies. Specifically, the Department's interest is to better protect and enhance access to and the quality of military test and training ranges. In the West, there are significant military assets and the West's population growth exceeds that of all other regions. This growing population puts more pressure on infrastructure systems such as energy, transportation and wildlife ecosystems. Long-range, sustainable planning is essential to accommodate growth, sustain the economic and environmental health of the region, and protect public safety and health, while at the same time securing the viability of the WRP's partners' missions.

At the WRP Principals' meeting held in August 2010, WRP agreed to a charter, vision and mission. The mission of WRP is to provide a proactive and collaborative framework for senior-policy level Federal, State and tribal leadership to identify common goals and emerging issues in the states of Arizona, California, Nevada, New Mexico and Utah and to develop solutions that support WRP partners and protect natural resources, while promoting sustainability, homeland security and military readiness.

Figure 4-4 Western Regional Partnership Focus Areas

Issues of common concern are addressed through committees. WRP principals first met in November 2007 and established committees to address six critical western regional issues, and those issues still require attention today:

- Border
- Disaster Preparedness
- Energy
- GIS
- Land Use
- Wildlife Corridors, Critical Habitat, and Threatened and Endangered Species

WRP committees work to better improve regional and interagency cooperation among Federal agencies, tribal leadership, states, and non-governmental organizations on critical western regional issues. WRP committees provide a forum for information exchange, issue identification, problem solving and recommendations across the WRP region. Committees are continually reviewed to maintain a resilient and dynamic organization. The focus of committee actions will be to move from knowledge gathering to collaborative action.

In addition, at the third WRP principals' meeting held in August 2010, the Principals accepted the Interim Steering Committee's recommendation to become a permanent body in order to continue to provide additional definition and direction to WRP.

4.4.7 Benefits to Range Sustainment

Over the years, SRI has gone from widespread education and outreach efforts to seeing action and success at installations and ranges across the nation. Planning agencies are meeting with DoD staff and engaging in two-way communication to discuss encroachment potential and mitigation, compatible land use planning, energy development and partnerships for greater sustainability. It is, however, incumbent upon DoD staff to reach out and engage those beneficial stakeholders.

Success Stories

Townsend Wildlife Management Area

In 2010, the State of Georgia was proud to put 6,911 acres in Long County into permanent conservation as part of the Townsend Wildlife Management Area (WMA), and as a significant buffer for the USMC Townsend Bombing Range. The property is located in the lower Altamaha River floodplain, a valuable ecological corridor in Georgia, stretching for 10 miles adjacent to the Altamaha River.

The Governor of GA stated "Permanently preserving tracts of land of this significance is integral to creating a culture of conservation in Georgia, and this is an excellent example of the State partnering with the private sector, conservation community and the Federal government to make that happen." Federal, State and private-sector partners that contributed financial and other support to the project include the U.S. Marine Corps, U.S. Forest Service, National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife

Service, Rayonier Forest Resources, The Nature Conservancy and Georgia Land Conservation Program (GLCP).

The Marine Corps played a significant role in the successful transfer of property from Rayonier Forest Resources to the GA Department of Natural Resources via critical funding and bringing USMC leadership and collaboration to multi-agency process. Utilizing SERPPAS relationships and tools provided by the Sustainable Ranges Initiative also played a crucial role in this land acquisition, benefiting State conservation efforts and the DoD mission through partnership. Providing a buffer around Townsend Bombing Range in order to sustain operations there for training all military services is critical to national security.

2010 GSA Innovation in Real Property Award, Fort A.P. Hill, VA

The GSA Innovation in Real Property Award for Asset Management recognizes achievements related to asset management planning, inventory management, performance management, utilization and disposal of real property, transportation and infrastructure improvement, and portfolio optimization. In 2010 the GSA recognized the innovation and success of the Camden Farm-Army Compatible Use Buffer (ACUB) partnership established in 2008.

On October 2, 2008, the Fort A.P. Hill-ACUB partnership placed an easement on the 500 acre Camden Farm marking several firsts, including the first time a REPI project has been able to leverage BRAC mitigation funding and the first ever programmatic agreement between the Army, Virginia State Historic Preservation Officer and The Advisory Council on Historic Preservation to implement the Army Innovative Mitigation Strategy (AIMS). The Camden Farm easement was highly effective in bringing multiple partnerships together to better manage DoD's real estate on a much larger scale. Fort A.P. Hill's cooperative agreements with The Conservation Fund, The Nature Conservancy, and The Trust for Public Land provided the means to mitigate impacts to cultural resources off post.

In the case of Camden Farm, AIMS produced a ground-breaking model programmatic agreement between the U.S. Army, The Virginia State Historic Preservation Officer and The Advisory Council on Historic Preservation to improve coordination and compliance with the NHPA. BRAC construction catalyzed a relationship between these two partnerships, however BRAC construction also impacted cultural and historic resources on the installation. By linking objectives with the ACUB program and working with conservation-minded NGO's, Fort A.P. Hill was able to garner additional regulatory and resource benefits making a significant contribution to military readiness.

Oahu's Honouliuli Preserve

In March 2010 and as part of multi-agency cooperative efforts and funding, the Trust for Public Land (TPL) and the Hawaii Department of Land and Natural Resources successfully transferred the 3,592 acre Honouliuli Preserve on Oahu to the State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW). The Preserve has been added to the DOFAW forest reserve for watershed and habitat protection. A $345K endowment has been established at the Hawaii Community Foundation to support the State's management efforts in the Preserve.

The Trust for Public Land raised $4.3M in acquisition funding from three cooperating sources. TPL raised nearly $2.7M in military funds from the Army Compatible Use Buffer Program (ACUB), $628K from the U.S. Fish & Wildlife Service Recovery Land Acquisition (RLA) Program, and nearly $1M from the Hawaii Legacy Land Conservation Fund. The ACUB program has also helped conserve 1,875 acres at Waimea Valley, Oahu in 2006, 1,129 acres at Pūpūkea-Paumalū, Oahu in 2007, and 3,716 acres at Moanalua Valley, Oahu in 2007.

The Preserve is a lowland diverse forest on the eastern slope of the Wai'anae Mountain Range where 35 threatened and endangered species live, including 16 found nowhere else in the world. The land is also part of the watershed feeding the Pearl Harbor Aquifer, the largest drinking water resource on Oahu. The Preserve also includes many very significant cultural sites including Pōhākea Pass.

Offshore Wind Energy Development

In December 2009, the Minerals Management Service requested a DoD review of a proposed offshore wind energy development area on the outer continental shelf off the Virginia Capes. The Department responded by conducting a thorough examination of potential impacts to military training, testing, and operational activities. The result was that these potential impacts were taken into account in the determination of lease blocks to be opened for offshore wind development. DoD's experience with Virginia's offshore wind effort served as a springboard for further requests from other coastal states for the Department to participate in the Bureau of Ocean Energy Management, Regulation and Enforcement task force process. The Department now works with Virginia, North Carolina, Maryland, Delaware, New Jersey, Rhode Island, Massachusetts, and Maine to help shape the future of outer continental shelf wind energy development in a manner that will meet military security objectives as well as energy security objectives for the nation.

4.5 Overview of Legislative and Regulatory Initiatives

In 2010, the Air Force has put forth two legislative initiatives for consideration. The "Study on Air Force Test and Training Range Infrastructure" is a bill crafted by Senator Ensign, Nevada-R. The bill had not passed as of September 2010, but

if enacted it would require the Air Force to study threats to, and sustainability of, the air, test and training range infrastructure. The Air Force is also participating in the report pursuant to NDAA 2010 Section 332 that assesses the viability and impacts of renewable energy development at installations.

DoD will continue to follow the processes and procedures prescribed by the Office of Management and Budget for introducing and socializing such initiatives in the future.

4.6 Readiness Reporting Improvements

As robust encroachment and capabilities assessments are conducted under the SRI, DoD is enhancing DRRS by establishing a range assessment module (RAM) to address range resource and readiness issues. DoD actions to better integrate range readiness issues into the DRRS are consistent with the Section 366(b) requirement to improve readiness reporting by reflecting the training and readiness impacts caused by constraints on the use of military lands, marine areas, and airspace.

4.6.1 The Defense Readiness Reporting System Enterprise

The OCO and U.S. military involvement in Iraq and Afghanistan have reinforced the urgent need for a robust readiness reporting system that can provide accurate, relevant, and timely information to support the full range of operational planning, as well as offer risk assessments of multiple simultaneous contingencies in the context of Defense Strategy. DoD Directive (DoDD) 7730.65, Department of Defense Readiness Reporting System Enterprise, authorized the establishment of a readiness assessment Enterprise System to calculate the capabilities and preparedness of military units to conduct wartime missions and other contingencies.

The DRRS Enterprise provides the means to manage and report on the readiness of DoD and the Military Services by building upon existing processes and readiness assessment tools to establish a capabilities-based, adaptive, near real-time readiness reporting system. The system is currently capable of reporting on the availability of resources needed to support a mission in six resource areas: Personnel, Equipment, Military Services, Training, Ordnance, and Facilities. It establishes a mission-focused, capabilities-based, common framework that provides the Combatant Commanders, Military Services, Joint Chiefs of Staff, and other key DoD users with a data-driven collaborative environment. The system allows users to evaluate, in near real-time, the readiness and capability of U.S. Armed Forces to carry out their national security missions.

The DRRS Enterprise enables commanders and force managers to look across DoD for required capabilities, identify organizations with those capabilities, and then determine the readiness of the organizations to provide the capability. Readiness to provide needed capabilities for missions is established based upon available resources, the ability of an organization to execute its Service assigned METs and METLs, and to support the Joint Force Commander's JMETL.

4.6.2 Relationship with Other Readiness Systems

The DRRS Enterprise also links to broader DoD Transformation initiatives such as training, logistics, and personnel systems. Additionally, the METs considered in the DRRS Enterprise provide the building blocks to support existing readiness processes, including the request for forces, force management, joint readiness, and adaptive planning tools. Effectively linking the DRRS with other existing and planned systems and decision support tools will further enable the emerging DoD requirement of on-demand creation and revision of executable plans, with up-to-date options, in near real time, as circumstances require. The Military Services have developed Service specific readiness reporting systems that are designed to interface with the DRRS-Enterprise. These ongoing readiness initiatives are currently focused on providing a robust organizational readiness view using information contained in the relevant authoritative databases and made available through Enhanced Status of Resources and Training Systems (ESORTS).

4.6.3 Range Assessment as a Component of DRRS

During 2009, a congressional reporting requirement House Report (H.R.) 5658 (Duncan Hunter NDAA for FY2009) directed DoD to report on:

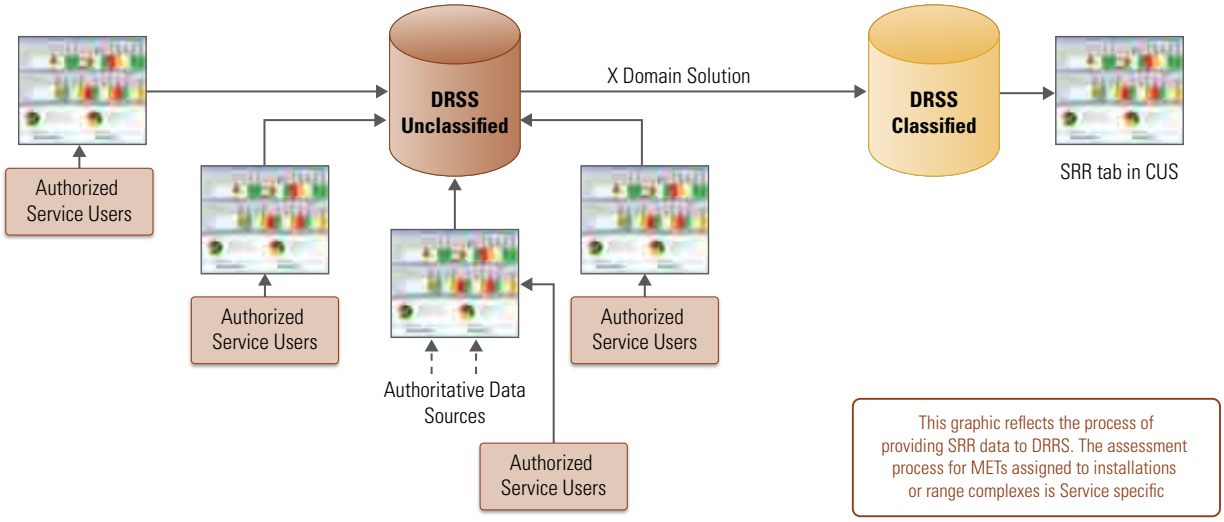
- Plans to pilot test a new functionality for training range encroachment assessment during CY2008; and
- How encroachment affects the training and readiness levels of tactical units of the Military Services.

As discussed in Chapter 3 of this report, DoD has determined a common set of thirteen Capability Attributes, twelve Encroachment Factors, and Military Service specific Training Mission Areas assigned to ranges. The assessment results have shown that the process of collecting and reporting assessments in this "cause and effect" manner is understandable, repeatable, and efficient. This capability and encroachment based assessment methodology provides DoD with a tool to perform "what-if" analysis of potential range issues as they relate encroachment and capability concerns to unit readiness.

Based on the results and feedback from SRR 2008 and 2009 data collections, a decision was made to use the manual reporting methodology and the SRR business rule as a baseline for development of a distributed on-line capability for a Range Assessment Module (RAM).

The Department began a phased concept development in January 2009 for a RAM in DRRS. The Phase I development

Figure 4-5 Planned RAM Cross Domain Solution in DRRS



focused on synchronizing the existing SRR assessment methods as a component within the DRRS business process.

Following Phase I, a Phase II effort began in mid-2009 focused on using the existing DRRS framework and functionality with range assessments to build associations with operational readiness reporting processes. This in turn supports the linkages between ranges and the operational tasks assigned to the units using these ranges. It is aimed at addressing how encroachment affects the training and readiness levels of the tactical units of the military Services.

Initial Phase II prototype development and logic testing were developed based on knowledge of existing DRRS-Strategic functionality. As a starting point for building relationships between encroachment and unit readiness, there was Service development, or identification, of over-arching range-specific Mission Essential Tasks (METs).

In one approach currently under consideration, the data from the SRR is entered in the unclassified portion of DRRS (Phase I) and transferred to a classified DRRS link (Phase II) using a cross domain solution (Figure 4-5).

DoD will coordinate with the Services to integrate range readiness from Service Specific readiness reporting systems into the DRRS-Enterprise. Service representatives from the readiness community, the installation community, and the DRRS Implementation Office (DIO) are closely coordinating. As measures are implemented, the Department is exploring the development of a Business Intelligence (BI) tool to collect operational readiness information in DRRS, which could then be related to range availability and capability, and make it available to installation or range complex managers to help build the encroachment relationships with operational readiness.

With full Phase II implementation, end-user (range operator) participation, dedicated system sustainment and additional user training, RAM will serve as an important decision support tool for both OSD and the Services.

In its full implementation, the RAM application will allow DoD and the Services to understand and visualize the relationship among range encroachment and capability by assigned mission area, and training tasks associated with operational mission areas.

The alignment between the Department and Services range assessment and readiness reporting is through the standard criteria and definitions set forth in the 2008 and subsequent SRRs, which were based in part, on other Service-specific range systems and input to RAM.

The requirements of these individual systems are sufficiently consistent for the needs of the Department and the Services. As part of the annual process improvement for the SRR, opportunities for increased interoperability of data and metrics across the Department and Service systems and processes are constantly evaluated for implementation.

4.7 Shared Information Enterprise

As the SRI continues to mature, the need to maintain, access, analyze, and share range-specific data to support reporting requirements and to inform decision makers is also maturing. DoD continues to encourage the Military Services to develop information system solutions that both satisfy Military Service and range needs, as well as share summary data and support specific information requests from OSD and other users. The system should be able to support:

- Congressional reporting;
- Range inventories, capacity, and capabilities reporting;

- Range readiness reporting;
- Investment planning;
- Budget management;
- Range sustainability initiatives; and
- Asset management.

Information management efforts will be based upon a strategy aligned to DoD and Federal information sharing goals and policies (e.g., Net-Centric Data Strategy). All efforts will contribute to the development of a shared data environment that will support range management decision-making and reporting.

4.8 Range Inventory Summary

The requirement for DoD and the Military Services to develop and maintain an inventory of operational ranges is specifically detailed in NDAA Section 366(c).

This section represents a summary of the Military Service inventories, and provides current inventory information. DoD believes an accurate inventory is necessary to support range management and planning processes. In addition to the requirement to maintain a training range inventory as set forth in NDAA Section 366(c), DoD has issued specific policy directives that require the Military Services to develop and utilize sound GIS-based range inventories and scientific data as the basis for decision-making that supports training and testing mission activities. Specific inventory details for each Military Service are provided in Appendix C, which contains maps and an inventory of the ranges, range complexes, and special use areas. Appendix E contains summaries of DoD and Military Service range sustainment policies.

The Sustainable Ranges Report Inventory is organized into the following components:

- Regional Range and SUA Maps—These maps display the location of DoD training and testing ranges and SUA around the world. The data is drawn from the Military Services and the National Geospatial Intelligence Agency (NGA). Each Military Service maintains geospatial information on their training and testing ranges.
- Tabular Range Inventory—This component of the inventory provides a list of range complexes, range descriptions, and available range types. The Military Services maintain more detailed inventories that are used to support their specific range management and sustainment processes.
- Military Training Route (MTR) Inventory—The MTR inventory includes a listing of the three types of routes: visual routes, instrument routes, and slow routes. The inventory provides information on each MTR, including the originating agency, scheduling agency, effective times, and route length.
- SUA Inventory—This portion of the inventory provides a list of SUA and includes information relating to the controlling agency, associated range complex or installation, altitudes, users (Military Service), and area.

The SRR inventory is built on Military Service inventories and information pulled from Military Service-supporting information management systems. When compiled, this inventory provides a comprehensive picture of DoD training and testing assets. In order to provide a Military Service-level perspective on range inventories, the following highlights some of the key components of the Military Service range inventories.

4.8.1 Army Range Inventory Description

Background

The Army has complied with the requirements set forth in DoDD 3200.15 by providing a comprehensive GIS-based inventory of all operational ranges with the Army operational range inventory. The operational range inventory was initiated in June 2004 and completed in April 2008. This inventory was based on an initial effort, evaluating the Army active/inactive range inventory of installations and training sites having operational ranges.

In August 2008, to improve consistency and coordination of all Installation geospatial data, the Deputy Chief of Staff for G-3/5/7 and the Assistant Chief of Staff for Installation Management issued guidance for U.S. Army Installation Geospatial Information and Services (IGI&S) data proponency, Common Installation Picture, and Quality Assurance Plans (QAPs). Based on this guidance, all Army installations are required to maintain geospatial common installation picture data and metadata for their sites; and updating of the operational range inventory has now transitioned from a centralized data collection effort to a decentralized effort. Updates of range data for installations under the Army's Sustainable Range Program (SRP) are now being compiled by Army SRP GIS Professionals per the HQDA G-37/TRS SRP GIS Program Data Development Strategy guidance issued in November 2008 with oversight from the Army Training Support Center Training Capability Manager— Live. SRP supported installations which lack on-site SRP GIS assistance, are alternately provided support from the SRP Geospatial Support Center. The geospatial data layers that represent operational ranges are required to be validated annually.

Data Elements and Sources

The range data elements created and maintained by installation SRP GIS Professionals or the SRP Geospatial

Support Center are defined in each layer's geospatial data QAP. QAPs provide the definition, information about the functional and organizational proponent(s), policies and regulations, formatting and naming convention requirements, geometry used, database storage requirements, data update frequency, acceptable source data and methods, data quality requirements, attribute definitions and requirements, and metadata requirements for each of the data layers. QAPs are living documents and are maintained by the HQDA proponent with input from the installation data stewards and other stakeholders. QAPs are reviewed, updated (as required), and published annually.

Databases and Applications

The Army Mapper is the Army's database of record for installation geospatial data. All geospatial data relating to operational ranges is stored in the Army Mapper. Geospatial range data for installations supported by the Army's SRP is required to be validated by the installation Garrison Commander, or equivalent/delegated approval authority, prior to submission to the Army Mapper database of record.

4.8.2 Marine Corps Range Inventory Description

The Marine Corps Training and Education Command's Range and Training Area Management Division (TECOM/RTAM) is responsible for managing the Marine Corps range complex inventory. The Marine Corps range complexes refer to a collection of training areas and ranges, airspace areas, and other designated attributes for training. The inventory provides a detailed list of Marine Corps range complexes, including land, air, sea, and underseaspace. The intent of the range inventory is to support Marine Corps range management and sustainment processes, including capabilities assessment, investment strategy, encroachment management, operational planning, and environmental management.

The Marine Corps first developed the inventory for the 2004 SRR based on information available in the RTAM system (RTAMS). RTAMS is a web-enabled, institutional-level, centrally managed system. It provides commanders, operating units, range managers, and all cross-Military Service users with a single source access for all range-related capabilities and resources. RTAMS uses established and developing data metrics and software. The range complex information available in RTAMS was the primary source for the initial range complex inventory. The 2010 Marine Corps inventory will follow previous review processes and use the RTAMS database and the RCMPs as primary data sources.

The Marine Corps range complex inventory is currently maintained on RTAMS, as well as in a spreadsheet format.

It uses a number of data fields (name, claimant organization, location, size, and range type) and provides GIS data with numerous data layers. The inventory is updated annually and has been significantly improved upon during the last few years due to the initiation of RCMPs which catalogue range complex baseline attributes and capabilities, and include a comprehensive inventory of ranges and SUA.

The RTAMS inventory review process is led by TECOM/RTAM, using a QA/QC process to ensure inventory consistency and accuracy.

4.8.3 Navy Range Inventory Description

The Navy range complex inventory is a detailed list of land, air, sea, and underseaspace that comprise the Navy range complexes. It encompasses major fleet training ranges, OPAREAs, SUA, and major range and test facility base (MRTFB) sites, referred to as range complexes. The inventory does not capture individual ranges and training areas not associated with a range complex. The intent of the range inventory is to support Navy range management and sustainment processes, including capabilities assessment, investment strategy, encroachment management, operational planning, and environmental management.

The Navy inventory has improved over the years due to the implementation of the Tactical Training Theater Assessment Planning (TAP) Program, which included the preparation of RCMPs. RCMPs catalog range complex baseline assets and capabilities, and include a comprehensive inventory of ranges, OPAREAs, and SUA.

The Office of the Chief of Naval Operations (OPNAV) N43 first developed the inventory for the 2004 Sustainable Ranges Report based on multiple sources that included the Navy's Ranges to Readiness Study, active/inactive range survey (2000), Fleet Training Area/Range Directory (Naval Warfare Assessment Station, Corona, 2003), Fleet OPAREA Instruction, and Fleet Area Control and Surveillance Facility Instructions. The inventory is currently maintained in a relational database, as part of the Tactical Training and Testing Ranges Repository and Management System (TRAMS), and in a spreadsheet format. As the inventory spreadsheet is updated, the TAP Repository (TAPR) database will be updated. Additional detail on the range complex inventory is provided as part of the RCMPs to include scheduling, operations, encroachment, and capabilities information. In the future, the inventory and associated information will be integrated into the TAPR.

The inventory is updated annually using the best available sources of information, as described above. The RCMP is the primary source of information for the updates. The RCMP will be updated biennially to coincide with the POM development cycle, beginning in FY2009. The updates will include an assessment of each range complex's inventory and capabilities. For the remaining range complexes, range instructions and manuals will be used to update the inventory.

The inventory review process involves a review by the United States Pacific Fleet and the United States Fleet Forces Command to ensure the most current information is reflected in the inventory. Additionally, the Navy has a QA/QC process that ensures consistency and accuracy of the inventory.

The Fleet Forces Command will use the inventory as the basis for the Navy training area geospatial library now under development in the TRAMS/Environmental Information Management System (TRAMS/EIMS) project. Space and Warfare Systems Center Charleston and Naval Facilities Engineering Command developed EIMS to meet a fleet requirement for "a single, comprehensive Navy GIS-based information management system and databases for operational and environmental planning to support operational requirements, at sea environmental issues, and range/OPAREAs compliance and encroachment concerns." TRAMS was originally developed as the TAPR with the goal of hosting all TAP-generated training area data, much of which is geospatial. However, the TAPR became TRAMS as the program moved beyond hosting only TAP data. The fleets recognized the need for a single authoritative geospatial library in EIMS, based on a comprehensive Navy training area inventory and built on maps provided by the NGA, DoD's mapping authority. The foundational maps from NGA will include training area boundaries, with all other geospatial information developed by TAP and other authoritative sources layered on top. NGA will provide web-based geospatial information so that when it updates training area boundaries, it will update the foundational maps in EIMS as well. Complete, foundational maps for all fleet range complexes are currently being worked on with the schedule dependent upon RCMP completion.

4.8.4 Air Force Range Inventory Description

The Air Force testing and training range inventory is managed and administered by the Headquarters USAF Ranges and Airspace Division. The inventory is comprised of four parts:

- U.S. air-to-ground ranges;
- Overseas ranges operated by the Air Force;
- Detailed SUA information; and
- Detailed MTR information.

The inventory is based on data elements from a variety of sources, and is in GIS format. The format allows the inventory to be searched, filtered, and displayed on a map for quick analysis. Inventory elements are stored in a variety of formats, from tabular data to geographic information sources. Major Command reports are also used to update capabilities. Every 56 days, the airspace tables are updated with information from the NGA, while range information is continuously updated. The entire inventory receives an annual review.

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5 The Way Ahead

As DoD's SRI has continued to mature over the last nine years, DoD and the Military Services have made significant progress in being able to identify and act upon the external pressures that constrain the use of training and testing range resources. Critical factors in managing those pressures have been:

- Effective use of Section 2864a authorities;
- Engagement activities for compatible land, sea, and airspace use
- Both local and regional encroachment partnering activities;
- Further refining the comprehensive DoD-wide range inventory; and
- Development of clear criteria and standard methods for assessing the adequacy of range resources against current and anticipated training requirements.

Looking to the future, DoD must build upon the early successes of the SRI while continually evaluating needs and requirements associated with a constantly changing environment and using innovations to ensure the long-term sustainability of military range resources.

5.1 The Sustainable Ranges Initiative

The SRI is an ongoing process, with its greatest benefits coming from influencing and changing approaches to mission management and land use decision making. Though encroachment is an issue for ranges in general, the situation at each range is unique and requires a specific approach in order to achieve mission success. SRI is designed to help range staffs address encroachment concerns by providing training and education to staffs both inside and outside the fence line, fostering long-term partnerships to reduce the likelihood of future conflict, and attracting outside investment in mission protection. SRI helps provide tools to improve asset management on the ranges, and encourage compatible land uses off the ranges.

5.2 Compatible Land, Airspace, and Sea Space Use and Engagement and Partnering Activities

Competition for land, airspace, and sea space for siting of renewable energy infrastructure to meet national energy objectives is of paramount importance to the Department. DoD has been working on developing compatible siting considerations and sharing information with interested stakeholders to include NGO's, other government agencies, and the renewable energy industry. These considerations will protect military training, testing, and operational considerations while promoting sound environmental stewardship. The Department is also working with the Bureau of Ocean Energy Management, Regulation and Enforcement and the coastal states through a task force process to ensure that renewable energy infrastructure siting on the outer continental shelf is compatible with the Department's offshore activities. Additionally, DoD is seeking to proactively engage with stakeholders to develop compatible siting solutions through the establishment of a DoD Energy Siting Clearinghouse to facilitate fully coordinated Department positions on the compatibility of proposed projects for energy developers, government agencies, and other concerned parties.

DoD will continue to work with Congress, other Federal agencies, Native American tribes, states, local governments, NGOs, and other stakeholders to take full advantage of legislative and regulatory initiatives that support compatible land use and encroachment prevention around military installations. The REPI program conserved over 144,900 acres of land near and around DoD installations by the close of

FY2009, and demand from the Military Services for funding of projects in FY2010 was nearly 2.5 times greater than those funds appropriated for the program. Regional partnering efforts are bearing fruit, with State partners in SERPPAS and WRP investing in compatible land use, conservation, habitat restoration and management, and renewable energy. Academia is contributing to that success in a variety of studies and pilot projects directly impacting DoD efforts, while NGOs are working collaboratively to develop and implement range-wide planning efforts. DoD and the Military Services have found outreach and partnering on such issues to be the most effective way to address today's encroachment concerns while minimizing future problems and ensuring the long-term sustainability of DoD's range resources.

Through the Regional Partnerships established in the Southeast and the Southwest, GIS mapping is being used to clearly articulate DoD current and future mission requirements across these regions, particularly in areas where outlying landing fields, low-level flight routes, and helicopter training areas are located. This effort could expand to all regions of the country, if states are interested, or if there is desire among a particular set of states to coordinate efforts towards multiple and mutual benefits across a region.

It is important to note that SRI outreach, education, engagement, and partnering is a long-term part of the solution to develop true sustainability across all DoD ranges. DoD is committed to continued investment in current efforts, and to developing new tools to protect and enhance readiness. Conservation banking, as authorized in the FY2010 NDAA, holds particular promise for tapping new sources of private industry funding to leverage DoD, other Federal agency funding, and State and local government contributions. It took several decades for the challenges of encroachment to manifest themselves around ranges opened during World War II, and it will take a consistent and sustained effort to address and mitigate those challenges.

5.3 Use of Range Inventory and Encroachment and Capability Tools

DoD will make greater use of its comprehensive range inventory and standardized assessment methodology to evaluate encroachment impacts and range capabilities in a manner that is consistent across the Military Services. The tools developed to date will assist DoD and Military Service leadership with identifying at-risk ranges, recognizing emerging issues, and making informed decisions about how to focus new or additional range sustainment efforts. These actions will enhance the abilities of DoD and the Military Services to meet training requirements, and will allow for accurate and expedited responses to internal and Congressional requests for related information.

Equally important to understanding impacts on readiness is the ability to measure and effectively demonstrate the successes of SRI. The ultimate success of the SRI will be realized when DoD can prevent encroachment and avoid mission degradation before it occurs. The Military Services have efforts underway to realize this goal, as described in Chapter 4.

5.4 Sustainable Ranges Report Format and Methodologies

The 2008 SRR established a baseline for future reports on the SRI. The 2008 format presented information in a more concise format that allows progress against Congressional reporting requirements and internal goals and milestones to be more readily determined. Now in its eighth year, the SRR provides Congress with a consistent report that highlights the continued evolution of DoD's SRI. DoD expects the data to provide improved information for more precise planning in the future. The format will continue to be refined, as needed, but continue with the presentation of critical policy and guidance documents, as well as status and updates on existing and emerging implementation tools.

Each year DoD and the Military Services will conduct a one-day workshop to review and analyze the usefulness of the data collected. Strategies for improvement will be explored in order to better track OSD's progress to address training constraints caused by limitations on its ranges. DoD will continue to work with the Military Services in establishing quantifiable goals and milestones for tracking planned actions and measuring progress, and developing projected funding requirements to more fully address identified training constraints.

A National Defense Authorization Act Language

The National Defense Authorization Act for Fiscal Year 2003

Sec. 366. Training Range Sustainment Plan, Global Status of Resources and Training System, and Training Range Inventory.

[a] Plan Required—(1) The Secretary of Defense shall develop a comprehensive plan for using existing authorities available to the Secretary of Defense and the Secretaries of the military departments to address training constraints caused by limitations on the use of military lands, marine areas, and airspace that are available in the United States and overseas for training of the Armed Forces.

[2] As part of the preparation of the plan, the Secretary of Defense shall conduct the following:

[A] An assessment of current and future training range requirements of the Armed Forces; and

[B] An evaluation of the adequacy of current Department of Defense resources (including virtual and constructive training assets as well as military lands, marine areas, and airspace available in the United States and overseas) to meet those current and future training range requirements.

[3] The plan shall include the following:

[A] Proposals to enhance training range capabilities and address any shortfalls in current Department of Defense resources identified pursuant to the assessment and evaluation conducted under paragraph (2);

[B] Goals and milestones for tracking planned actions and measuring progress;

[C] Projected funding requirements for implementing planned actions; and

[D] Designation of an office in the Office of the Secretary of Defense and in each of the military departments that will have lead responsibility for overseeing implementation of the plan.

[4] At the same time as the President submits to Congress the budget for fiscal year 2004, the Secretary of Defense shall submit to Congress a report describing the progress made in implementing this subsection, including:

[A] The plan developed under paragraph (1);

[B] The results of the assessment and evaluation conducted under paragraph (2); and

[C] Any recommendation that the Secretary may have for legislative or regulatory changes to address training constraints identified pursuant to this section.

[5] At the same time as the President submits to Congress the budget for each of fiscal years 2005 through FY2008, the Secretary shall submit to Congress a report describing the progress made in implementing the plan and any additional actions taken, or to be taken, to address training constraints caused by limitations on the use of military lands, marine areas, and airspace.

[b] Readiness Reporting Improvement—Not later than 30 June 2003, the Secretary of Defense, using existing measures within the authority of the Secretary, shall submit to Congress a report on the plans of the Department of Defense to improve the Global Status of Resources and Training System to reflect the readiness impact that training constraints caused by limitations on the use of military lands, marine areas, and airspace have on specific units of the Armed Forces.

[c] Training Range Inventory—(1) The Secretary of Defense shall develop and maintain a training range inventory for each of the Armed Forces—

[A] To identify all available operation training ranges;

[B] To identify all training capacities and capabilities available at each training range; and

[C] To identify all training constraints caused by limitations on the use of military lands, marine areas, and airspace at each training range.

[2] The Secretary of Defense shall submit an initial inventory to Congress at the same time as the President submits the budget for fiscal year 2004, and shall submit an updated inventory to Congress at the same time as the President submits the budget for fiscal years 2005 through 2008

[d] GAO Evaluation—The Secretary of Defense shall transmit copies of each report required by Subsections (a) and (b) to the Comptroller General. Within 60 days after receiving a report, the Comptroller General shall submit to Congress an evaluation of the report.

[e] Armed Forces Defined—In this section, the term "Armed Forces" means the Army, Navy, Air Force, and Marine Corps.

National Defense Authorization Act for Fiscal Year 2007

Sec. 348. Five-Year Extension of Annual Report on Training Range Sustainment Plan and Training Range Inventory.

Section 366 of the Bob Stump National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314; 116 Stat. 2522; 10 USC 113 note) is amended—

[1] in Subsections (a)(5) and (c)(2), by striking `fiscal years 2005 through 2008' and inserting `fiscal years 2005 through 2013'; and

[2] in Subsection (d), by striking `within 60 days of receiving a report' and inserting `within 90 days of receiving a report'.

B Service Mission Area Descriptions and Definitions

Army

Movement and Maneuver—The related tasks and systems that move forces to achieve a position of advantage in relation to the enemy. It includes those tasks associated with employing forces in combination with direct fire or fire potential (maneuver), force projection (movement), and mobility and counter-mobility. Movement and maneuver are the means by which commanders concentrate combat power to achieve surprise, shock, momentum, and dominance. For the purposes of the encroachment and capability assessments discussed in Chapter 3 of this report, each range will be assessed for its ability to support three movements and maneuver task areas:

- Infantry
- Armor
- Aviation

Fire Support—The related tasks and systems that provide collective and coordinated use of Army indirect fires, joint fires, and offensive information operations. It includes those tasks associated with integrating and synchronizing the effects of these types of fires with the other operating functions to accomplish operational and tactical objectives. For the purposes of the encroachment and capability assessments discussed in Chapter 3 of this report, each range will be assessed for its ability to support two fire support task areas:

- Field Artillery
- Air Defense Artillery

Intelligence—The related tasks and systems that facilitate understanding of the enemy, terrain, weather, and civil considerations. It includes those tasks associated with intelligence, surveillance, and reconnaissance. The intelligence operating function is a flexible and adjustable architecture of procedures, personnel, organizations, and equipment that provide relevant information and products relating to the threat, civil populace, and environment to commanders.

Sustainment—The related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance. Sustainment facilitates uninterrupted operations through means of adequate logistic support. It is accomplished through supply systems, maintenance, and other services that ensure continuous support throughout an operation.

Command and Control—The related tasks and systems that support commanders in exercising authority and direction. It includes those tasks associated with acquiring friendly information, managing all relevant information, and directing and leading subordinates. Command and control has two components: the commander and the command and control system. Information systems—including communications systems, intelligence-support systems, and computer networks—form the backbone of command and control systems. They allow commanders to lead from anywhere in their AO. Through command and control, commanders initiate and integrate all operating functions.

Protection—The related tasks and systems that preserve the force so the commander can apply maximum combat power. Preserving the force includes protecting personnel (combatant and noncombatant), physical assets, and information of the United States and multinational partners. For the purposes of the encroachment and capability assessments discussed in Chapter 3 of this report, each range will be assessed for its ability to support three protection task areas:

- Engineering

- Chemical
- Military Police

Marine Corps

Individual Level Training—The set of core and core plus skills associated with the USMC Individual Training Standards (ITS) for each element of a Marine Air Ground Task Force (MAGTF). Accordingly, the Individual Level training range provides and supports the most basic training environment associated with the MAGTF Aviation Combat Element (ACE), Ground Combat Element (GCE)—and Combat Logistics Element (CLE)—The Individual Level training range also reinforces basic infantry combat skills and supports those specific training requirements and skills associated with progressive USMC ITS and the program of instruction at each USMC Formal School.

Unit Level Training—The set of friendly force small unit offensive and defensive tactics and operations associated with expeditionary MAGTF forces against hostile or potentially hostile forces. The Unit Level training range supports all types of aircraft, weapons, special operations forces, landing forces, and ground forces employed in concerted military efforts described by the Marine Corps' Expeditionary Maneuver Warfare (EMW) doctrine, which includes Operational Maneuver from the Sea (OMFTS) and Ship to Objective Maneuver (STOM). It includes tactics and operations associated with all training phases of small unit level missions of a MAGTF.

Marine Expeditionary Unit Level Training—The set of friendly force offensive and defensive tactics and operations associated with expeditionary MAGTF forces against hostile or potentially hostile forces. The MEU Level training range supports all types of aircraft, weapons, special operations forces, landing forces, and ground forces employed in concerted military presence and engagement efforts described by the USMC's EMW doctrine, to include OMFTS and STOM.

Marine Expeditionary Brigade Level Training—The set of friendly force offensive and defensive tactics and operations associated with small-scale contingency expeditionary MAGTF forces against hostile or potentially hostile forces. The MEB Level training range supports all types of aircraft, weapons, special operations forces, landing forces, and ground forces that will be employed in concerted crisis response military efforts that are characterized by high-density, high-risk operations.

Navy

Strike Warfare (STW)—The set of friendly force air, surface, subsurface, and land-based offensive tactics and operations associated with identifying, targeting, and engaging fixed, mobile, and time-sensitive land-based targets using air-to-ground (A-G) weapons. The STW range also supports tactics and operations associated with manned and unmanned Tactical Airborne Reconnaissance, Unmanned Combat Air Vehicles, Suppression of Enemy Air Defenses (SEAD), Close Air Support (CAS), and engagement of fixed and mobile land-based targets using naval surface gunfire and sea-launched cruise missiles.

Electronic Combat (EC)—The set of friendly offensive and defensive tactics and operations associated with Electronic Attack and Electronic Protect activities. The EC range function supports identifying, degrading, or denying hostile forces the effective use of their battlefield surveillance, targeting radar and electro-optical systems, communications, counter-fire equipment, and electronically fused munitions. It is a subset of Command and Control Warfare.

Anti-Air Warfare (AAW)—The set of friendly force offensive and defensive surface-to-air (S-A) and air-to-air (A-A) tactics and operations associated with defending friendly air, surface, and land forces from emergent hostile air threats, whether launched from air, surface, or subsurface platforms. The AAW range function also supports the set of friendly force offensive A-A tactics and operations associated with gaining and maintaining air superiority or air supremacy of the battle space. The AAW range function supports the use of electronic decoys and electronic jammers used by friendly forces for the purpose of counter-targeting against airborne threats.

Anti-Surface Warfare (ASUW)—The set of friendly force air, surface, and subsurface offensive and defensive tactics and operations associated with detection, surveillance, and engagement of contacts, critical contacts of interest, and hostile at-sea surface forces. In addition to traditional training against large ships, the ASUW range function also supports a variety of training activities against small boats, and fast-moving surface vessels. The ASUW range function may also support offensive tactics and operations against designated surface targets located in ports, harbors, and anchorages.

Mine Warfare (MW)—The set of friendly force air, surface, and subsurface offensive and defensive tactics and operations associated with mine-laying and Mine Counter Measures (MCM). Offensive minelaying operations aim to dislocate the enemy war efforts and improve the security of friendly sea lines of communications by destroying, or threatening to destroy, enemy seaborne forces. MCM includes active measures (to locate and clear mined areas), passive measures (to include small object avoidance and ship routing around high threat areas), and self-protective measures (ship signature reduction).

Amphibious Warfare (AMW)—The set of friendly force offensive and defensive tactics and operations associated with providing expeditionary forces capable of projecting power ashore from the sea to accomplish a specific objective. The AMW range function may support establishing and sustaining landing forces ashore for extended periods or putting landing forces ashore only for a short period of time before withdrawing them. The AMW range function supports virtually every type of ship, aircraft, weapon, special operations force, and landing force employed in concerted military efforts described by the Operational Maneuver from the Sea (OMFTS) doctrine, which includes Expeditionary Maneuver Warfare, and Ship to Objective Maneuver. As a result, the AMW range function supports tactics and operations associated with all phases of ESG and MEU missions using OMFTS, including both amphibious assault and vertical assault tactics. The AMW range function does not support specific post-landing tactics and operations.

Anti-Submarine (ASW)—The set of friendly force air, surface, and subsurface offensive and defensive tactics and operations associated with countering hostile and potentially hostile submarine threats. The ASW range function may support open-ocean, choke point, and littoral anti-submarine missions, including detection, classification, surveillance, localization, tracking, and attack.

Naval Special Warfare (NSW)—The set of friendly force air, surface, subsurface, and land-based offensive and defensive tactics and operations associated with the five principal NSW missions: Combating Terrorism, Counter Proliferation, Special Reconnaissance, Direct Action, and Unconventional Warfare. The NSW range function supports identifying, targeting, and engaging fixed, mobile, and time sensitive land-based targets using the entire inventory of NSW weapons.

Air Force

Strategic Attack—Offensive action conducted by command authorities aimed at generating effects that most directly achieve our national security objectives by affecting the adversary's leadership, conflict-sustaining resources, and strategy.

Counterair—Operations to attain and maintain a desired degree of air superiority by the destruction, degradation, or disruption of enemy forces. Counterair's two elements, offensive counterair (OCA) and defensive counterair (DCA), enable friendly use of contested airspace and disable the enemy's offensive air and missile capabilities to reduce the threat posed against friendly forces.

Counterspace—Kinetic and non-kinetic operations conducted to attain and maintain a desired degree of space superiority by the destruction, degradation, or disruption of enemy space capability. Counterspace operations have an offensive and a defensive component.

Counterland—Air and space operations against enemy land force capabilities to dominate the surface environment and prevent the opponent from doing the same. Counterland is composed of two discrete air operations for engaging enemy land forces: air interdiction, in which air maneuver indirectly supports land maneuver or directly supports an air scheme of maneuver, and close air support (CAS), in which air maneuver directly supports land maneuver.

Countersea—Specialized collateral tasks performed in the maritime environment such as sea surveillance, anti-ship warfare, protection of sea lines of communications through antisubmarine and anti-air warfare, aerial minelaying, and air refueling in support of naval campaigns with the objective of gaining control of the medium and, to the extent possible, dominating operations either in conjunction with naval forces or independently.

Information Operations—Actions taken to influence, affect, or defend information, systems, and/or decision-making of an adversary's "observe-orient-decide-act" (OODA) loop while protecting our own.

Electronic Combat Support—Actions involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy across the electromagnetic battlespace. The operational elements of electronic warfare operations are electronic attack, electronic protection, and electronic warfare support.

Command and Control—The battlespace management process of planning, directing, coordinating, and controlling forces and operations. It involves the integration of a system of procedures, organizational structures, personnel, equipment, facilities, information, and communications designed to enable a commander to exercise authority and direction across the range of military operations.

Air Drop—Air Drop is the delivery of personnel and materiel from an aircraft in flight to a drop zone (DZ). Most airdrop procedures use parachutes to deliver loads to the ground, such as heavy equipment, container delivery systems, and personnel. Another airdrop procedure is free fall delivery. This involves dropping relatively small items, such as packaged meals or unbreakable objects like hay bales without the use of a parachute. Airdrop allows commanders to project and sustain combat power into areas where a suitable ALZ or a ground transportation network may not be available.

Air Refueling—The in-flight transfer of fuel between tanker and receiver aircraft.

Space lift—The delivery of satellites, payloads, and materiel to space.

Special Operations—The use of special airpower operations (denied territory mobility, surgical firepower, and special tactics) to conduct the following special operations functions: unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, psychological operations, and counterproliferation.

Intelligence, Surveillance & Reconnaissance—Activities involving the systematic observation of air, space, surface, or subsurface areas, places, persons, or things, by visual, aural, electronic, photographic, or other means; obtaining specific information about the activities and resources of an enemy or potential enemy through visual observation or other detection methods; or by securing data concerning the meteorological, hydrographic, or geographic characteristics of a particular area; and the resulting product of such activities.

C

Maps and Inventory of Ranges, Range Complexes, Military Training Routes, and Special Use Areas

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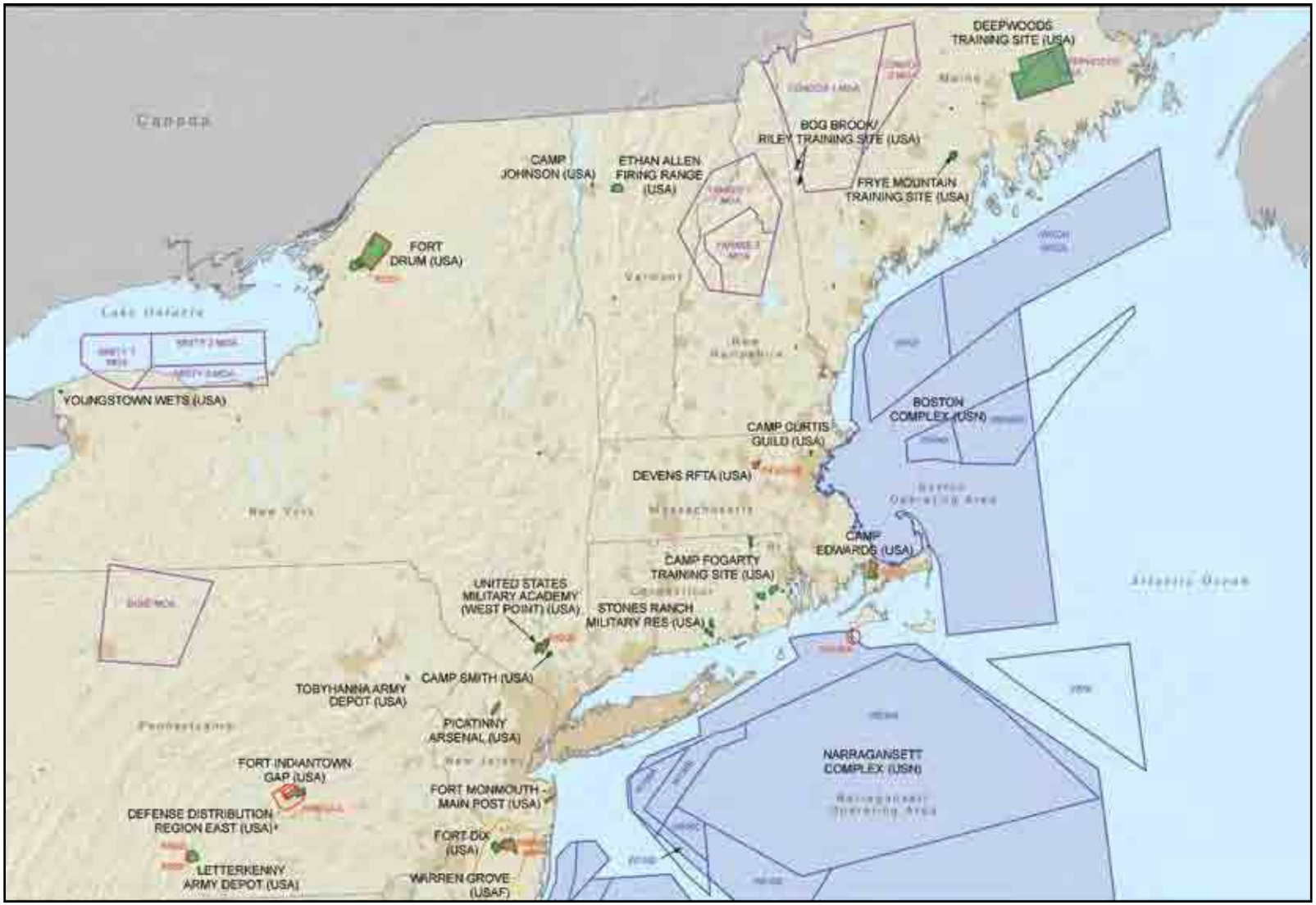
Figure C-1 DoD Regional Range Complexes: Northeast



Testing and Training Ranges
Northeast

DoD Ranges

- U.S. Marine Corps
- U.S. Navy
- U.S. Air Force
- U.S. Army*

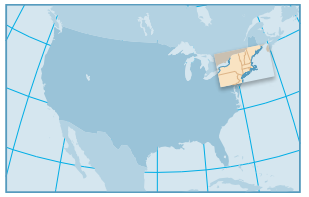
*Army ranges smaller than 500 acres are not labeled.

Special Use Airspace

- Alert Area
- Military Operating Area (MOA)
- Restricted Area
- Warning Area
- Surface/Subsurface Operating Areas
- U.S. Census Populated Places

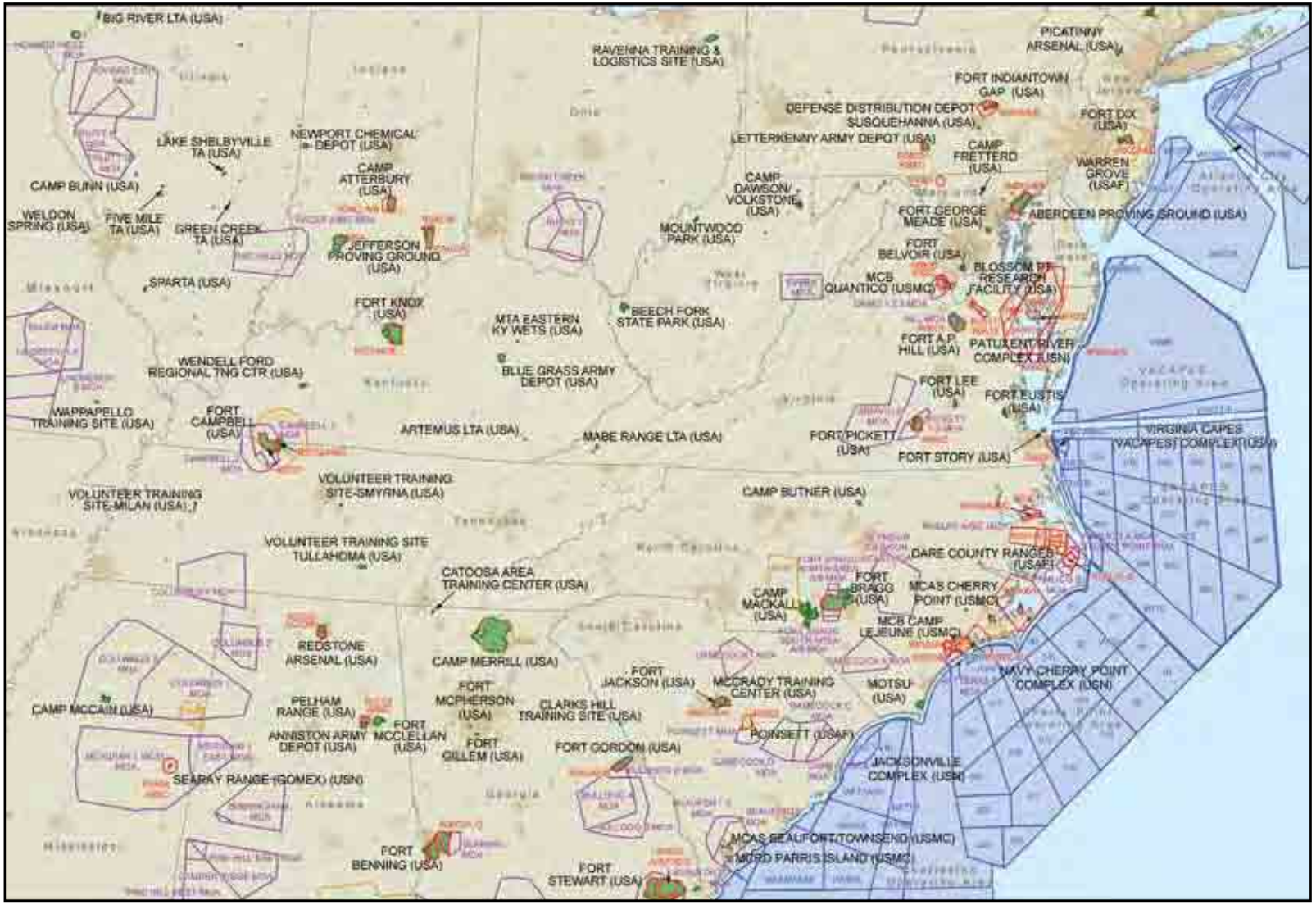
50 0 Nautical Miles

50 0 Miles



Sources: IVT, DISDI, 2004; ORIS, USAEC, 2007; NGA DAFIF, 2008; Atlantic Fleet Inst 3120.26E, 1993.

Figure C-2 DoD Regional Range Complexes: Mid-Atlantic



Testing and Training Ranges
Mid-Atlantic

DoD Ranges

- U.S. Marine Corps
- U.S. Navy
- U.S. Air Force
- U.S. Army*

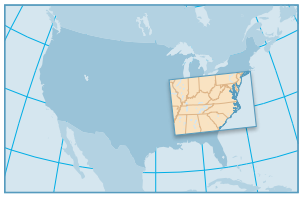
*Army ranges smaller than 500 acres are not labeled.

Special Use Airspace

- Alert Area
- Military Operating Area (MOA)
- Restricted Area
- Warning Area
- Surface/Subsurface Operating Areas
- U.S. Census Populated Places

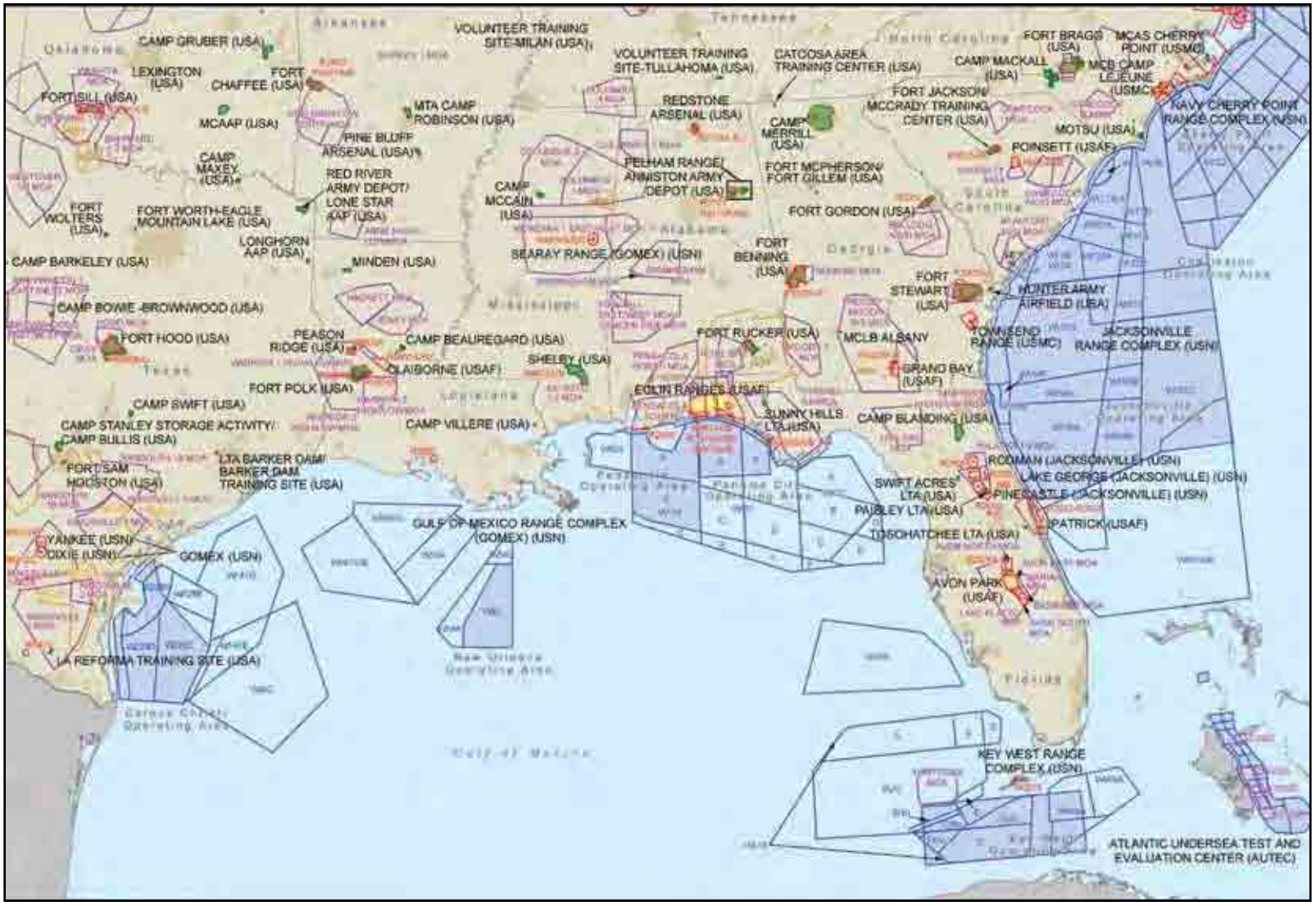
50 0 Nautical Miles

50 0 Miles



Sources: IVT, DISDI, 2004; ORIS, USAEC, 2007; NGA DAFIF, 2008; Atlantic Fleet Inst 3120.26E, 1993.

Figure C-3 DoD Regional Range Complexes: Southeast



Sources: IVT, DISDI, 2004; ORIS, USAEC, 2007; NGA DAFIF, 2008; Atlantic Fleet Inst 3120.26E, 1993

Figure C-4 DoD Regional Range Complexes: Northwest

Testing and Training Ranges
Northwest

DoD Ranges

- U.S. Marine Corps
- U.S. Navy
- U.S. Air Force
- U.S. Army*

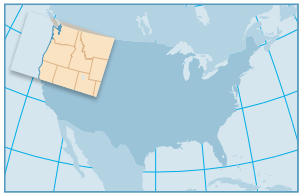
*Army ranges smaller than 500 acres are not labeled.

Special Use Airspace

- Alert Area
- Military Operating Area (MOA)
- Restricted Area
- Warning Area
- Surface/Subsurface Operating Areas
- U.S. Census Populated Places

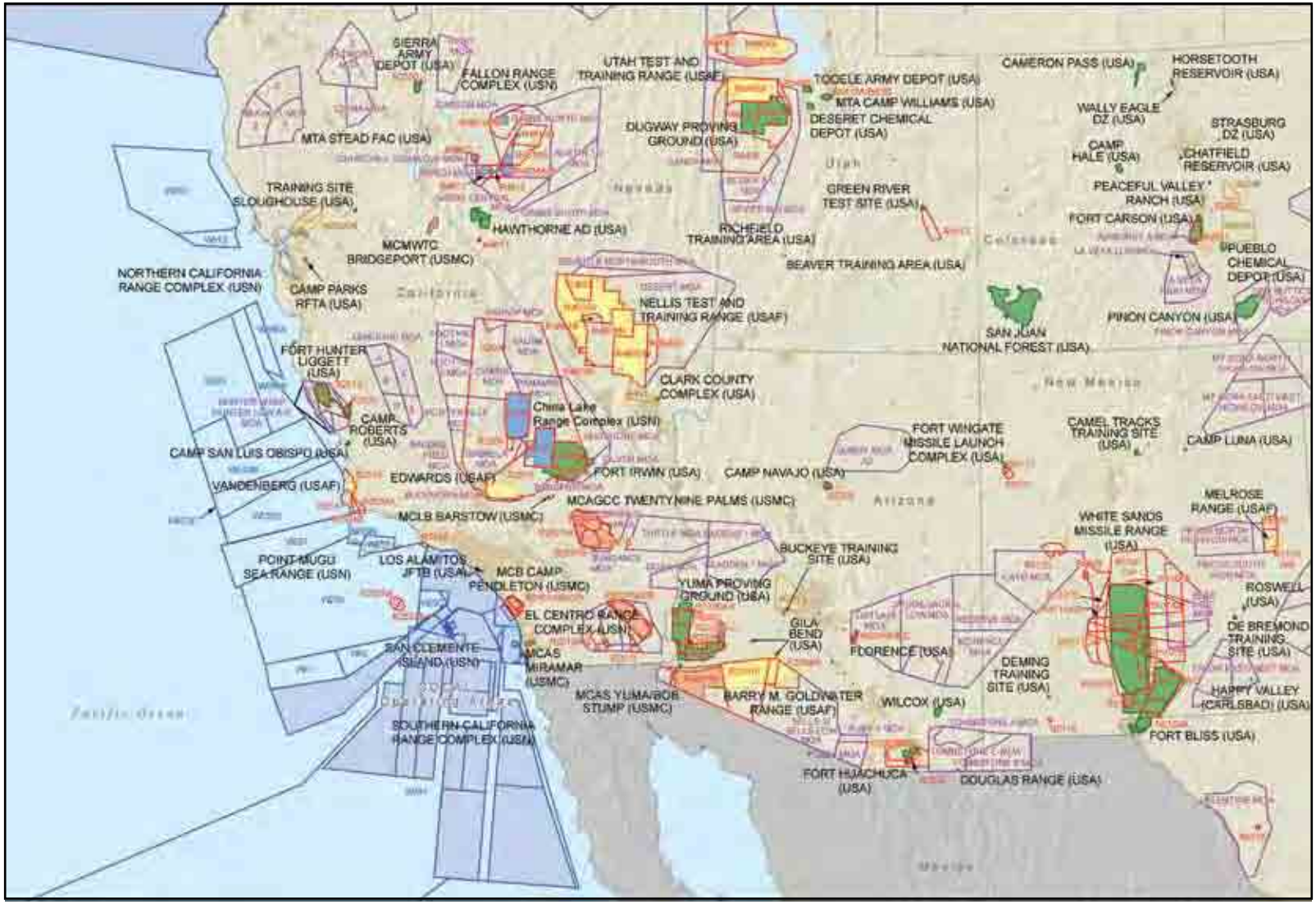
50 0 Nautical Miles

50 0 Miles



Sources: IVT, DISDI, 2004; ORIS, USAEC, 2007; NGA DAFIF, 2008; FACSFAC San Diego Inst 3120.1E, 2000

Figure C-5 DoD Regional Range Complexes: Southwest



Testing and Training Ranges
Southwest

DoD Ranges

- U.S. Marine Corps
- U.S. Navy
- U.S. Air Force
- U.S. Army*

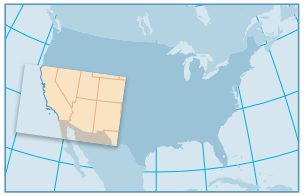
*Army ranges smaller than 500 acres are not labeled.

Special Use Airspace

- Alert Area
- Military Operating Area (MOA)
- Restricted Area
- Warning Area
- Surface/Subsurface Operating Areas
- U.S. Census Populated Places

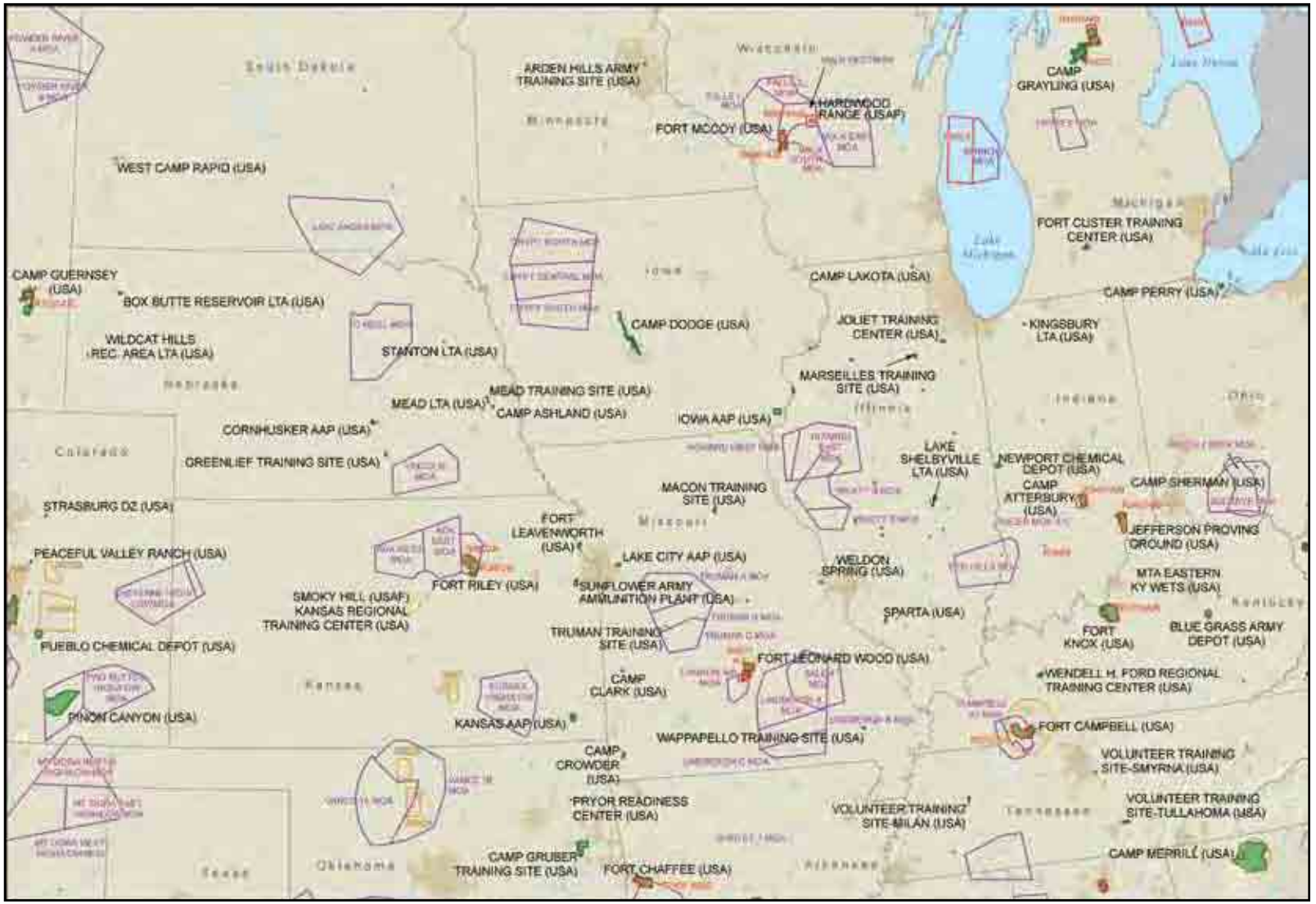
50 0 Nautical Miles

50 0 Miles



Sources: IVT, DISDI, 2004; ORIS, USAEC, 2007; NGA DAFIF, 2008; FACSFAC San Diego Inst 3120.1E, 2000

Figure C-6 DoD Regional Range Complexes: Midwest



Testing and Training Ranges
Midwest

DoD Ranges

- U.S. Marine Corps
- U.S. Navy
- U.S. Air Force
- U.S. Army*

*Army ranges smaller than 500 acres are not labeled.

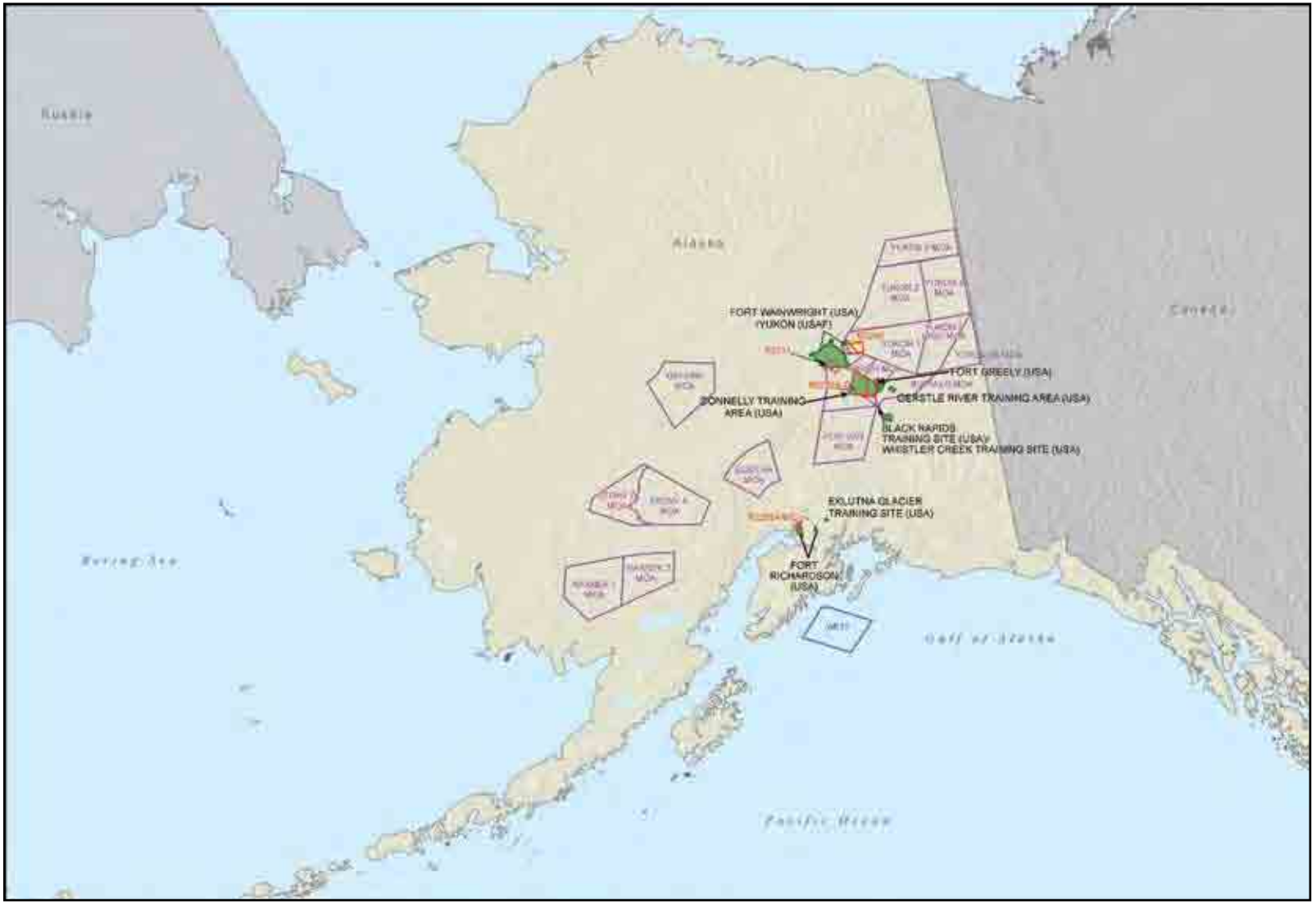
Special Use Airspace

- Alert Area
- Military Operating Area (MOA)
- Restricted Area
- Warning Area
- Surface/Subsurface Operating Areas
- U.S. Census Populated Places

50 0 Nautical Miles
50 0 Miles

Sources: IVT, DISDI, 2004; ORIS, USAEC, 2007; NGA DAFIF, 2008; Atlantic Fleet Inst 3120.26E, 1993

Figure C-7 DoD Regional Range Complexes: Alaska



Testing and Training Ranges
Alaska

DoD Ranges

- U.S. Marine Corps
- U.S. Navy
- U.S. Air Force
- U.S. Army*

*Army ranges smaller than 500 acres are not labeled.

Special Use Airspace

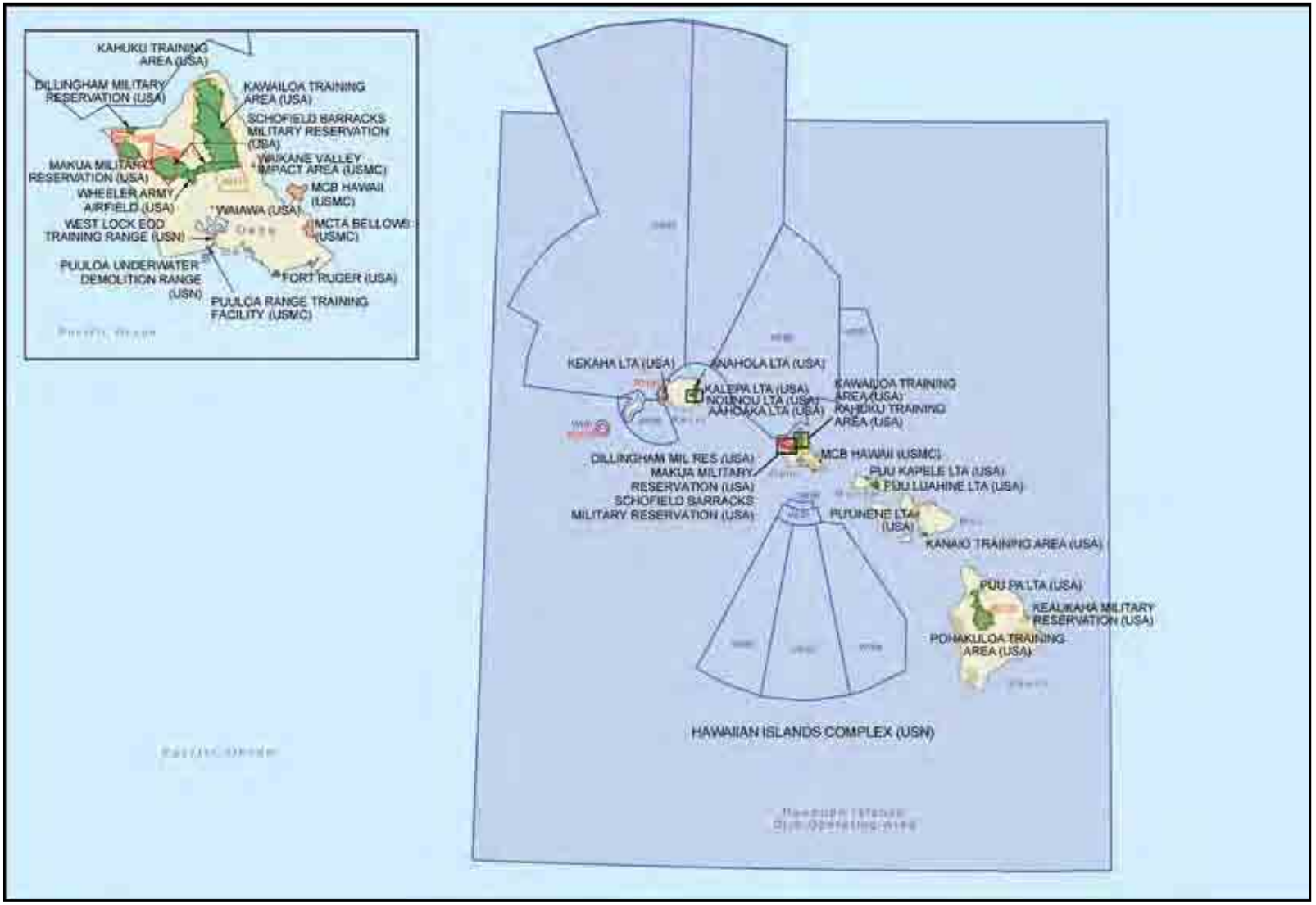
- Alert Area
- Military Operating Area (MOA)
- Restricted Area
- Warning Area
- Surface/Subsurface Operating Areas
- U.S. Census Populated Places

50 0 Nautical Miles

50 0 Miles

Sources: IVT, DISDI, 2004; ORIS, USAEC, 2007; NGA DAFIF, 2008; FACSFAC San Diego Inst. 3120.1E, 2000.

Figure C-8 DoD Regional Range Complexes: Hawaii



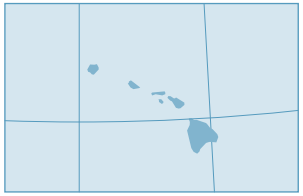
Testing and Training Ranges
Hawaii

DoD Ranges
- U.S. Marine Corps
- U.S. Navy
- U.S. Air Force
- U.S. Army*

*Army ranges smaller than 500 acres are not labeled.

Special Use Airspace
- Alert Area
- Military Operating Area (MOA)
- Restricted Area
- Warning Area
- Surface/Subsurface Operating Areas
- U.S. Census Populated Places

50 0 Nautical Miles
50 0 Miles



Sources: IVT, DISDI, 2004; ORIS, USAEC, 2007; NGA DAFIF, 2008; FACSFAC San Diego Inst. 3120.1E, 2000.

Figure C-9 DoD Regional Range Complexes: Europe

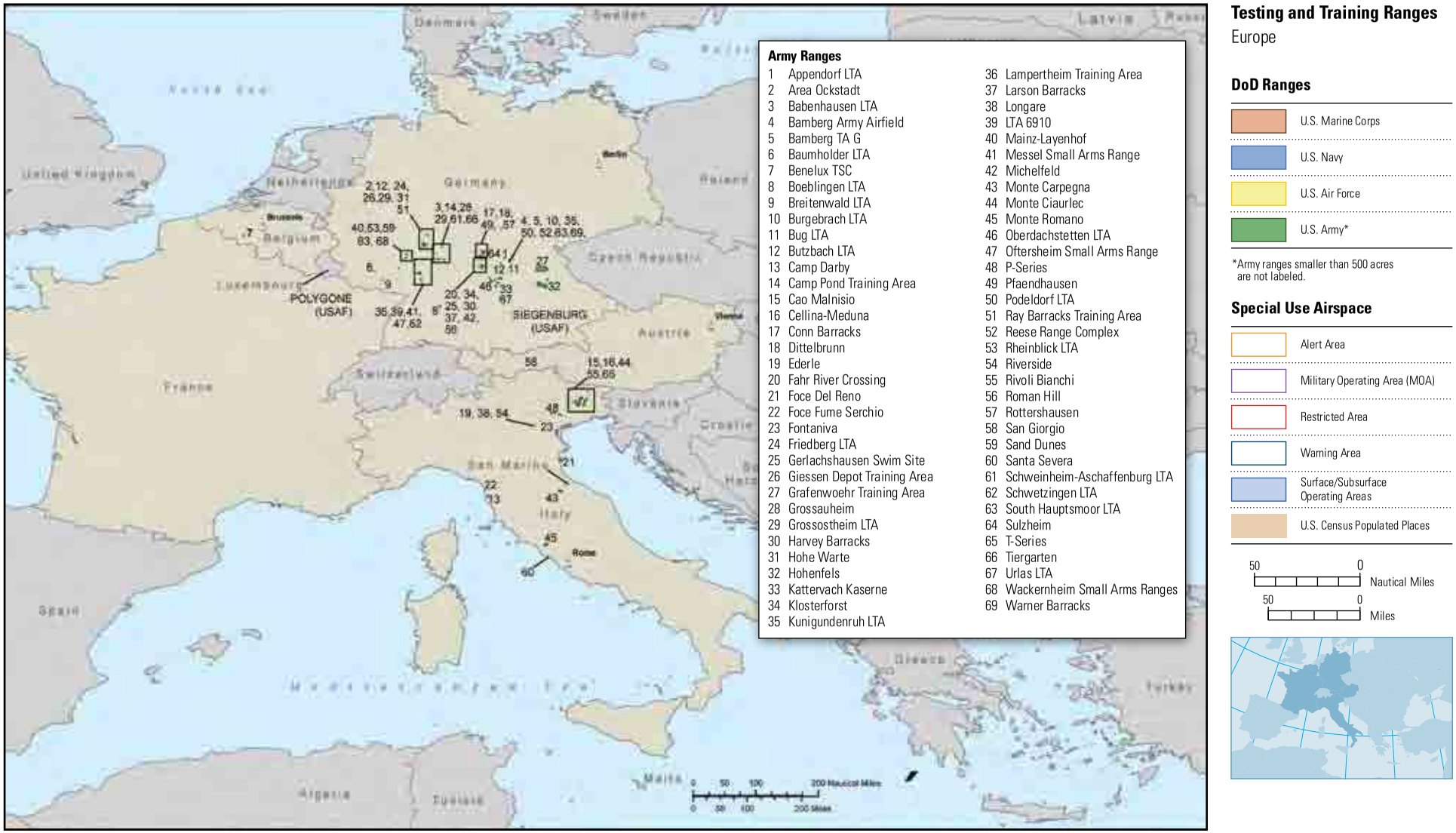
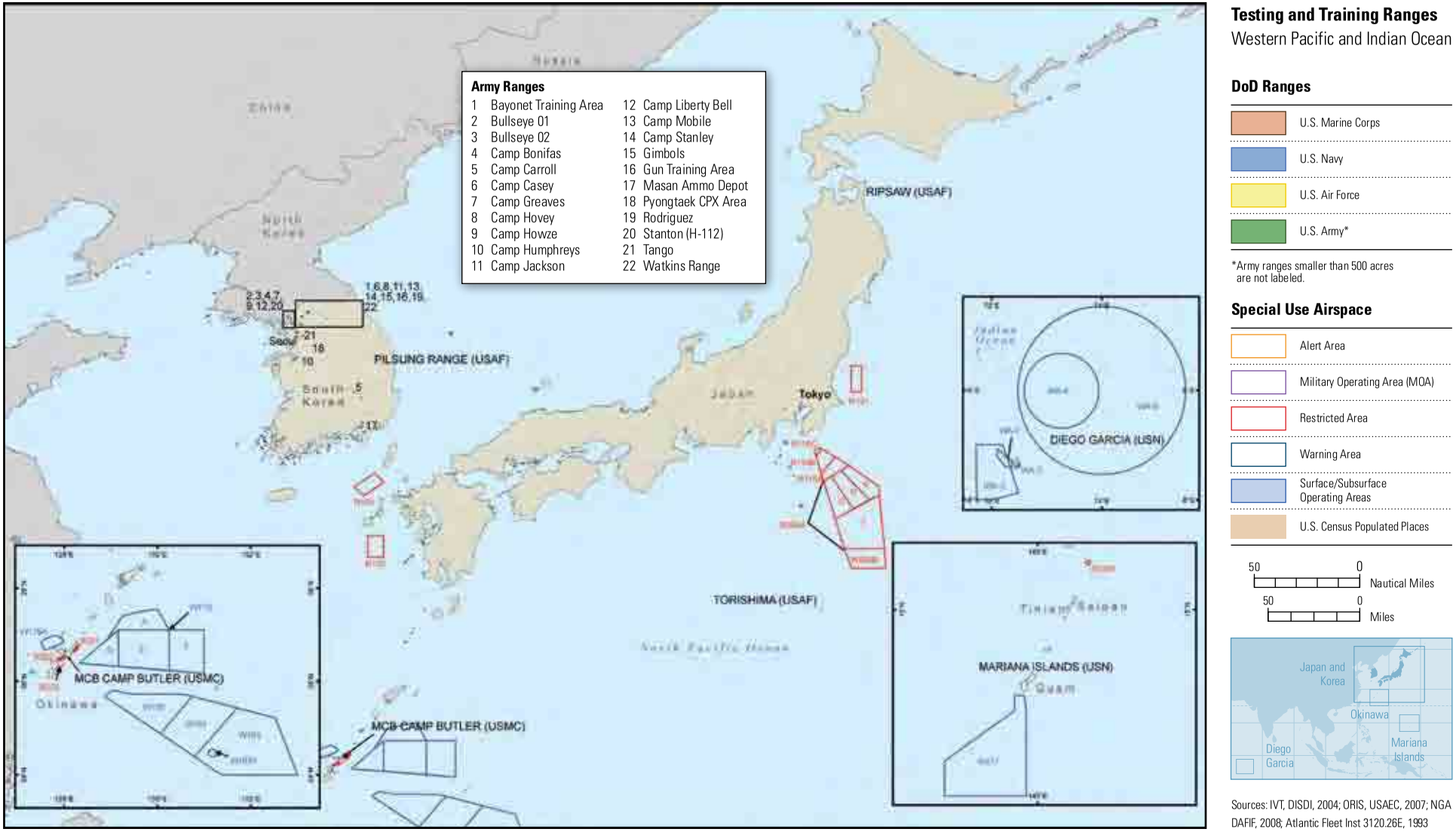


Figure C-10 DoD Regional Range Complexes: West Pacific and Indian Ocean



Sources: IVT, DISDI, 2004; ORIS, USAEC, 2007; NGA DAFIF, 2008; Atlantic Fleet Inst 3120.26E, 1993

Table C-1 Training Range Complex Inventory

Training Range Complex Inventory

Military Service	Range Complex	United States (US) or Overseas (OS)	State or Country	Command/ Component	Range Description				Range Type										
					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Army	Aberdeen Proving Ground	US	MD	AMC	64,250	133	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Anniston Army Depot	US	AL	AMC	88	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Ansbach LTA	OS	Germany	USAREUR	899	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Arden Hills Army Training Site	US	MN	ARNG	1,796	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Area I (North)	OS	Korea	EUSA	41,495	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Area II (Northwest)	OS	Korea	EUSA	115	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Area III (Central)	OS	Korea	EUSA	113	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Area IV (South)	OS	Korea	EUSA	722	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Aschaffenbu RG LTA	OS	Germany	USAREUR	1,337	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Auburn	US	ME	ARNG	203	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Austin Training Property	US	NE, SD	ARNG	409	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Bangor Training Center	US	ME	ARNG	189	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Barker Dam Training Site	US	TX	ARNG	572	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Baumholder	OS	Germany	USAREUR	188	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Belton LTA	US	MO	USARC	461	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Biak Training Center	US	OR	ARNG	27,801	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Black Mountain	US	NM	ARNG	2,114	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Blossom Point Research Facility	US	MD	AMC	1,643	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Blue Grass Army Depot	US	KY	AMC	175	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Boeblingen	OS	Germany	USAREUR	1,125	0	0	0	N	N	Y	N	Y	N	N	Y	N	N	Y
	Bog Brook/Riley Deepwoods Training Site	US	ME	ARNG	341,015	0	0	0	N	N	Y	N	Y	N	N	Y	N	N	Y
	Breitenwald	OS	Germany	USAREUR	205	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Buckman	US	FL	ARNG	68	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Bucksnort Gun Club	US	MO	ARNG	10	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Buhl Training Site	US	ID	ARNG	162	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Camp Adair	US	OR	ARNG	523	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Ashland - Greenleaf Training Site	US	NE	ARNG	4,263	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y

Training Range Complex Inventory

Military Service	Range Complex	United States (US) or Overseas (OS)	State or Country	Command/ Component	Range Description				Range Type										
					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Army	Camp Atterbury	US	IN	ARNG	31,889	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Beauregard	US	LA	ARNG	12,558	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Blanding	US	FL	ARNG	68,543	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Camp Bowie	US	TX	ARNG	8,697	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Butner	US	NC	ARNG	4,550	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Clark	US	MO	ARNG	997	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Crowder	US	MO	ARNG	4,098	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Curtis Guild	US	MA	ARNG	623	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Darby	OS	Italy	USAREUR	135	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Camp Davis	US	ND	ARNG	82	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Dawson	US	WV	ARNG	4,363	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Camp Edwards	US	MA	ARNG	13,285	13	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Fogarty Training Site	US	RI	ARNG	17,755	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Fretterd	US	MD	ARNG	424	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Camp Grafton	US	ND	TRADOC	11,380	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Grayling	US	MI	ARNG	147,711	8,680	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Gruber	US	OK	ARNG	46,887	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Guernsey	US	WY	ARNG	35,062	46	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Hartell	US	CT	ARNG	31	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Johnson	US	VT	ARNG	591	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Mackall	US	NC	FORSCOM	8,403	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Camp Maxey	US	TX	ARNG	6,562	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp McCain	US	MS	ARNG	12,741	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Merrill	US	GA	TRADOC	340,358	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Camp Minden	US	LA	ARNG	13,637	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Camp Murray	US	WA	ARNG	113	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Camp Perry	US	OH	ARNG	343	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Rilea	US	OR	ARNG	4,188	0	0	0	N	N	Y	N	Y	N	N	Y	N	N	Y

Training Range Complex Inventory

Military Service	Range Complex	United States (US) or Overseas (OS)	State or Country	Command/ Component	Range Description				Range Type										
					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Army	Camp Ripley	US	MN	ARNG	50,929	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Camp Roberts	US	CA	ARNG	41,051	64	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Robinson	US	AR	ARNG	30,837	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Camp Rowland	US	CT	ARNG	38	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Camp San Luis Obispo	US	CA	ARNG	4,852	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Santiago	US	PR	ARNG	12,044	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Shelby	US	MS	ARNG	133,193	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Camp Sherman	US	NC	ARNG	430	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	N
	Camp Stanley Storage Activity	US	TX	AMC	82	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Camp Swift	US	TX	ARNG	11,663	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Varnum	US	RI	ARNG	18	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Camp Villere	US	LA	ARNG	654	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Williams	US	UT	ARNG	25,000	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Camp Wismer	US	WS	ARNG	3,319	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Camp Withycombe	US	OR	ARNG	165	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Campo Pond TA	OS	Germany	USAREUR	366	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Cao Malnisio	OS	Italy	USAREUR	4,098	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Casper Armory	US	WY	ARNG	27	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Catoosa	US	TN	ARNG	1,515	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Cellina-Meduna	OS	Italy	USAREUR	11,558	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Chaffee	US	AR	ARNG	63,519	81	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Clinton Training Site	US	PA	USARC	154	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Colorado Springs Training Site	US	CO	ARNG	309	1	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Conn Barracks	OS	Germany	USAREUR	127	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Cpt. Euripides Rubio Jr. Center	US	PR	USARC	51	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	De Bremond Training Center	US	NM	ARNG	1,343	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Defense Distribution Depot Susquehanna	US	PA	AMC	0	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Deseret Chemical Depot	US	UT	AMC	549	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y

Training Range Complex Inventory

Military Service	Range Complex	United States (US) or Overseas (OS)	State or Country	Command/ Component	Range Description				Range Type										
					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Army	Dillingham MIL RES	US	HI	USARPAC	600	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Dona Ana Range Camp	US	NM	ARNG	64	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Duffield Industrial Park	US	VA	ARNG	74	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Dugway Proving Ground	US	UT	ATEC	763,093	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	East Haven Rifle Range	US	CT	ARNG	113	0	0	0	N	N	Y	Y	N	N	N	N	N	N	Y
	Eastern Kentucky Gun Club	US	KY	ARNG	13	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Ederle	OS	Italy	USAREUR	11	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Ethan Allen Firing Range	US	VT	ARNG	10,686	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Eustis/Fort Story	US	VA	TRADOC	3,923	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Florence Training Site	US	AZ	ARNG	25,489	61	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Floyd Edsal Training Center	US	NV	ARNG	1,525	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Foce del Reno	OS	Italy	USAREUR	8,941	0	0	0	N	N	N	Y	Y	N	N	N	N	N	N
	Foce Fume Serchio	OS	Italy	USAREUR	163	0	0	0	N	N	N	Y	Y	N	N	N	N	N	N
	Fort A.P. Hill	US	VA	MDW	74,263	928	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Allen	US	PR	ARNG	423	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Fort Belvoir	US	VA	MDW	2,178	0	0	0	N	N	Y	Y	N	N	N	N	N	N	Y
	Fort Benning	US	GA	TRADOC	168,119	422	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Bliss	US	TX	TRADOC	1,096,153	1,597	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Bragg	US	NC	FORSCOM	142,985	1,718	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Campbell	US	KY, TN	FORSCOM	94,121	931	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Carson/Pinon Canyon	US	CO	FORSCOM	358,504	1,153	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Custer Training Center	US	MI	ARNG	7,487	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Devens	US	MA	USARC	4,588	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Dix	US	NJ	USARC	28,002	104	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Drum	US	NY	FORSCOM	98,524	299	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort George G. Meade	US	MD	MDW	129	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Fort Gillem	US	GA	FORSCOM	472	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Fort Gordon	US	GA	TRADOC	49,149	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y

Training Range Complex Inventory

Military Service	Range Complex	United States (US) or Overseas (OS)	State or Country	Command/ Component	Range Description				Range Type										
					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Army	Fort Hood	US	TX	FORSCOM	199,758	500	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Huachuca	US	AZ	TRADOC	73,840	815	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Indiantown Gap	US	PA	ARNG	14,869	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Irwin	US	CA	FORSCOM	585,638	560	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Jackson	US	SC	TRADOC	29,532	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Knox	US	KY	TRADOC	101,220	113	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Leavenworth	US	KS	TRADOC	4,285	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Fort Lee	US	VA	TRADOC	3,097	69	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Leonard Wood	US	MO	TRADOC	53,502	175	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Lewis	US	WA	FORSCOM	77,577	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort McClellan	US	AL	ARNG	40	0	0	0	N	N	Y	N	N	N	N	Y	N	N	Y
	Fort McCoy	US	WI	USARC	135,601	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort McPherson	US	GA	FORSCOM	21	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Fort Meade	US	SD	ARNG	6,090	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Fort Monmouth	US	NJ	AMC	104	0	0	0	N	N	Y	N	Y	N	N	Y	N	N	Y
	Fort Nathaniel Greene	US	RI	USARC	96	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Fort Pickett	US	VA	ARNG	38,699	161	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Polk	US	LA	FORSCOM	138,126	5,471	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Richardson	US	AK	USARPAC	54,541	163	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Riley	US	KS	FORSCOM	92,209	107	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Rucker	US	AL	TRADOC	58,204	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Sam Houston/Camp Bullis	US	TX	MEDCOM	27,600	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Sill	US	OK	TRADOC	85,002	153	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Fort Stewart	US	GA	FORSCOM	274,291	556	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Fort Wainwright	US	AK	USARPAC	922,589	0	0	0	N	N	N	Y	Y	N	N	Y	N	N	Y
	Fort William Henry Harrison	US	MT	ARNG	6,314	0	0	0	N	N	Y	N	Y	N	N	Y	N	N	Y
	Fort Wingate Missile Launch Complex	US	NM	ATEC	6,526	0	0	0	N	N	N	N	Y	N	N	N	N	N	N

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					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Army	Fort Wolters	US	TX	ARNG	4,061	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Friedberg LTA	OS	Germany	USAREUR	8,519	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Frye Mountain Training Site	US	ME	ARNG	5,137	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Gardiner	US	ME	ARNG	106	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Grafenwoehr	OS	Germany	USAREUR	52,281	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Greely	US	AK	USARPAC	631,643	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Green River Launch Complex	US	UT	ATEC	3,944	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Guilderland	US	NY	ARNG	291	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Gunpowder MIL RES	US	MD	ARNG	227	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Happy Valley (Carlsbad)	US	NM	ARNG	721	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Hawthorne Army Depot	US	NV	AMC	35,633	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	N
	Henry H. Cobb Jr. - Pelham	US	AL	ARNG	22,139	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Hofenfels	OS	Germany	USAREUR	38,981	0	0	0	N	N	Y	N	Y	N	N	Y	N	N	Y
	Hollis Plains Training Site	US	ME	ARNG	412	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Hunter Army Airfield	US	GA	FORSCOM	2,742	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Hunter-Liggit	US	CA	USARC	153,872	113	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Idaho Falls Training Site	US	ID	ARNG	1,081	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Idaho Launch Complex	US	ID	ATEC	315	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Ike Skelton Training Site	US	MO	ARNG	24	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Indiana Range Wet Site	US	PA	ARNG	165	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Iowa AAP	US	IA	AMC	1,338	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Jefferson Proving Ground	US	IN	AMC	1,050	0	0	0	N	N	N	Y	N	N	N	N	N	N	N
	John Sevier Range	US	TN	ARNG	6	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Joliet Training Center	US	IL	USARC	3,446	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Kahuka Training Area	US	HI	USARPAC	8,833	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Kanaio Training Center	US	HI	ARNG	4,612	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Kansas AAP	US	KS	AMC	157	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Kansas Regional Training Site (Smoky Hills)	US	KS	ARNG	3,404	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y

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Army	Kawailoa Training Area	US	HI	USARPAC	23,455	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Keaukhana MIL RES	US	HI	ARNG	434	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	N
	Kekaha	US	HI	ARNG	61	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Keystone Rifle Range	US	CA	ARNG	189	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Keystone Training Site	US	PA	USARC	452	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	La Reforma Training Site	US	TX	ARNG	4,264	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Lake City AAP	US	MO	AMC	696	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Lampertheim Training Area	OS	Germany	USAREUR	3,942	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Lander Local Training Area	US	WY	ARNG	1,353	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Lauderick Creek MIL RES	US	MD	ARNG	1,065	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Letterkenny Army Depot	US	PA	AMC	9	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Limestone Hills Training Area	US	MT	ARNG	19,120	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Lone Star AAP	US	TX	AMC	232	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Longare	OS	Italy	USAREUR	15	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Los Alamitos JFTB	US	CA	ARNG	397	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Lovell Local Training Area	US	WY	ARNG	3,606	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Mabe Range LTA	US	VA	ARNG	1,726	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Macon Training Site	US	MT	ARNG	3,062	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Makua MIL RES	US	HI	USARPAC	4,228	0	0	0	N	N	N	Y	Y	N	N	N	N	N	Y
	Marseilles Training Site	US	IL	ARNG	2,617	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	McAlester AAP	US	OK	AMC	2,245	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	McCrady Training Center	US	SC	ARNG	14,506	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Mead Training Site	US	NE	ARNG	1,185	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Messell Small Arms Range	OS	Germany	USAREUR	25	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Milan Volunteer Training Site	US	TN	ARNG	2,391	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Mobridge Training Area	US	SD	ARNG	119	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Monte Carpegna	OS	Italy	USAREUR	6,488	0	0	0	N	N	Y	Y	N	N	N	N	N	N	N
	Monte Ciarlec	OS	Italy	USAREUR	7,925	0	0	0	N	N	Y	Y	N	N	N	N	N	N	N

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Army	Monte Romano	OS	Italy	USAREUR	10,207	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	MOTSU	US	NC	MTMC	7	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	MTA Camp Dodge	US	IA	ARNG	4,025	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	MTA SMR CP Pendleton	US	VA	ARNG	89	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Navajo	US	AZ	ARNG	28,349	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	New Castle Rifle Range	US	DE	ARNG	93	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Newton Falls (RAAP)	US	OH	ARNG	2,879	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	NGTC at Sea Girt	US	NJ	ARNG	120	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	NH NG Training Site	US	NH	ARNG	94	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Offersheim Small Arms Range	OS	Germany	USAREUR	3	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Onate Training Site	US	NM	ARNG	158	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Orchard (Gowen Field) Training Area	US	ID	ARNG	138,847	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Papago Park MIL RES	US	AZ	ARNG	103	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Parks RFTA	US	CA	USARC	1,985	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Pearson Ridge NC	US	LA	FORSCOM	33,456	0	0	0	N	N	N	Y	Y	N	N	N	N	N	N
	Picatinny Arsenal	US	NJ	AMC	4,545	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Pine Bluff Arsenal	US	AR	AMC	99	0	0	0	N	N	N	Y	Y	N	N	N	N	N	Y
	Plymouth Training Site	US	ME	ARNG	306	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Pocatello Training Site	US	ID	ARNG	718	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Podeldorf LTA	OS	Germany	USAREUR	1,105	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Pohakuloa Training Area	US	HI	USARPAC	109,950	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	P-Series	OS	Italy	USAREUR	5,291	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Pueblo Chemical Depot	US	CO	AMC	94	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Puu Luahine (Red Hill) LTA	US	HI	ARNG	8,314	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Racine County Line Range	US	WI	ARNG	15	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Ray Barracks Training Area	OS	Germany	USAREUR	21	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Red River Army Depot	US	TX	AMC	165	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Redfield Training Area	US	SD	ARNG	174	0	0	0	N	N	Y	N	N	N	N	N	N	N	N

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Army	Redstone Arsenal	US	AL	AMC	25,505	25	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Reese Range Complex	OS	Germany	USAREUR	18	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Rheinblick LTA	OS	Germany	USAREUR	44	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Ridgeway	US	PA	ARNG	7	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Rio Rancho	US	NM	ARNG	96	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Rivoli Bianchi	OS	Italy	USAREUR	235	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Roswell	US	NM	ARNG	5,376	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Santa Severa	OS	Italy	USAREUR	100	0	0	0	N	N	N	Y	Y	N	N	N	N	N	N
	Schofield Barracks MIL RES	US	HI	USARPAC	11,442	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Schweinfurt	OS	Germany	USAREUR	6,326	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Schwetzingen LTA	OS	Germany	USAREUR	249	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Scranton (Leach Range)	US	PA	AMC	101	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Seagoville LTA	US	TX	USARC	198	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Sheridan Local TA	US	WY	ARNG	3,980	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Sierra Army Depot	US	CA	AMC	4,722	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Sioux Falls Airport Training Area	US	SD	ARNG	15	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Smith	US	NY	ARNG	1,763	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Smyrna Volunteer Training Site	US	TN	ARNG	557	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Springfield Training Site	US	IL	ARNG	98	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	St. Anthony Training Site	US	ID	ARNG	3,336	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	St. George Training Area	US	UT	ARNG	369	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Stewart River	US	AK	ARNG	25,519	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Stones Ranch MIL RES	US	CT	ARNG	5,753	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Sunflower Army Ammunition Plant	US	KS	AMC	493	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Tiergarten	OS	Germany	USAREUR	234	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Tooele Army Depot	US	UT	AMC	1,450	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Truman Training Site	US	MO	ARNG	565	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	TS Caswell	US	ME	ARNG	1,094	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N

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Army	TS NAS Fallon RG B19	US	NV	ARNG	132	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	T-Series	OS	Italy	USAREUR	7,222	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Tucumcari Training Site	US	NM	ARNG	63	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Tullahoma MIL RES	US	TN	ARNG	6,553	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Twin Falls Training Site	US	ID	ARNG	312	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Ukumehame Firing Range	US	HI	ARNG	39	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Umatilla Chemical Depot	US	OR	AMC	9	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Vail Tree Farm LTA	US	WA	USARC	166,332	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Van Vleck Ranch	US	CA	ARNG	2,685	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Wackernheim Small Arms Ranges	OS	Germany	USAREUR	32	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Waco Training Area	US	MT	ARNG	4,763	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Wappapellots	US	MO	ARNG	2,187	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Watkin Armory	US	CO	ARNG	5	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Weldon Spring	US	MO	ARNG	1,659	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Wendell H. Ford Regional Training Center	US	KY	ARNG	7,174	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	West Camp Rapid	US	SD	ARNG	566	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	West Point MIL RES	US	NY	USMA	14,101	4	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	West Silver Spring Complex	US	WI	USARC	9	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Westminster	US	VT	ARNG	38	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	White Sands Missile Range	US	NM	ATEC	3,531,715	7,321	0	0	N	N	N	Y	Y	N	N	N	N	N	Y
	Wildcat Hills State Rec. Area TA	US	NE	ARNG	853	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Williston Wets	US	ND	ARNG	345	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Wuerzburg	OS	Germany	USAREUR	3,308	0	0	0	N	N	Y	N	Y	N	N	Y	N	N	Y
	WV DNR Elk River WMA TA	US	WV	ARNG	277	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	WV DNR McClintic WMA TA	US	WV	ARNG	54	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Yakima Training Center	US	WA	FORSCOM	324,313	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Youngstown Wets	US	NY	ARNG	848	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Yuma Proving Ground	US	AZ	ATEC	1,033,361	1,500	0	0	N	N	Y	N	Y	N	N	N	N	N	Y

Training Range Complex Inventory

Military Service	Range Complex	United States (US) or Overseas (OS)	State or Country	Command/ Component	Range Description				Range Type										
					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Individual Army Ranges	89TH RSC Mead WET Site	US	NE	USARC	956	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	89TH RSC Sunflower WET Site	US	KS	USARC	69	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Aahoaka LTA	US	HI	ARNG	3,126	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Albuquerque LTA	US	NM	USARC	7	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	American Samoa LTA	US	AS	USARC	79	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Ananhola LTA	US	HI	ARNG	3,312	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Appendorf LTA	OS	Germany	USAREUR	328	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Area Ockstadt	OS	Germany	USAREUR	192	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Artemus LTA	US	KY	ARNG	523	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	AVN Training Area (Weyerhaeuser)	US	WA	USARC	20,443	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Babenhausen LTA	OS	Germany	USAREUR	190	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Bamberg Army Airfield	OS	Germany	USAREUR	11	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Bamberg TA G	OS	Germany	USAREUR	70	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Barada LTA	US	NE	ARNG	85	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Barker Dam LTA	US	TX	USARC	1,636	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Beaver Training Area	US	UT	ARNG	657	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Beckley City Police Range	US	WV	ARNG	2	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Beech Fork State Park	US	WV	ARNG	12,783	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Benelux TSC	OS	Belgium	USAREUR	70	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	BG Thomas Baker Training Site	US	MD	ARNG	871	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Bidwell Hill	US	CO	ARNG	40	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Black Rapids Training Site	US	AK	USARPAC	4,213	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Blanding Armory	US	UT	ARNG	28	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Bolivar LTA	US	TN	ARNG	170	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Book Cliffs Rifle Range	US	CO	ARNG	345	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Box Butte Reservoir LTA	US	NE	ARNG	13	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Brettons Wood Biathlon Range	US	NH	ARNG	1	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Buckeye Training Site	US	AZ	ARNG	1,481	0	0	0	N	N	Y	N	N	N	N	N	N	N	N

Training Range Complex Inventory

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					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Individual Army Ranges	Buckley ANG Base, CO	US	CO	ARNG	10	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Bug LTA	OS	Germany	USAREUR	111	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Bullseye 02	OS	Korea	EUSA	1,395	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Bullville Usarc	US	NY	USARC	154	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Burgebrach LTA	OS	Germany	USAREUR	249	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Camel Tracks TNG Site	US	NM	ARNG	8,349	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Cameron Pass	US	CO	ARNG	45,193	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Camp Barkeley	US	TX	ARNG	980	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Camp Fowler	US	IN	ARNG	98	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Camp Greaves	OS	Korea	EUSA	0	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Camp Hale	US	CO	ARNG	21,389	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Camp Howze	OS	Korea	EUSA	0	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Camp Humphreys	OS	Korea	EUSA	1	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Camp Keyes TS	US	ME	ARNG	1	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Camp Luna	US	NM	ARNG	133	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Camp Mabry	US	TX	ARNG	178	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Camp Seven Mile	US	WA	ARNG	340	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Casa Grande Training Site	US	AZ	ARNG	797	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Chatfield Reservoir	US	CO	ARNG	2,271	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Clarks Hill TS	US	SC	ARNG	891	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Cornhusker AAP	US	NE	USACE	6	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Douglas Training Site	US	AZ	ARNG	987	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	DZ Babich	US	MD	ARNG	113	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	DZ Beech Hill	US	WV	ARNG	189	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Eagle Mountain Lake Training Site	US	TX	ARNG	1,246	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	East Stroudsburg Armory	US	PA	ARNG	19	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Edgemeade TS Mtn Home	US	ID	ARNG	123	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Eklutna Glacier TS	US	AK	USARPAC	33	0	0	0	N	N	Y	N	N	N	N	N	N	N	N

Training Range Complex Inventory

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					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Individual Army Ranges	Ernie Pyle Usarc/Amsa #12 (G)	US	NY	USARC	2	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	FAA Radio Tower Site	US	CO	ARNG	13	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Fahr River Crossing	OS	Germany	USAREUR	3	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Felicity	US	OH	ARNG	1	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Fontaniva	OS	Italy	USAREUR	155	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Fort Mifflin	US	PA	ARNG	26	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Fort Morgan Airport	US	CO	ARNG	19	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Fort Ruger	US	HI	USARPAC	311	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Fountain Inn TS	US	SC	ARNG	21	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Freeman Field Police Range	US	IN	ARNG	2	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Garrison WET Site	US	ND	ARNG	765	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Gerlachshausen Swim Site	OS	Germany	USAREUR	0	0	0	0	N	N	N	N	N	N	N	N	N	N	N
	Gerstle River Training Area	US	AK	USARPAC	20,589	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Giessen Depot Training Area	OS	Germany	USAREUR	137	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Gila Bend Training Site	US	AZ	ARNG	637	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Gimbols	OS	Korea	EUSA	3,019	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Goodpasture DZ	US	CO	ARNG	178	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Great Bend LTA	US	KS	USARC	1	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Grossauheim	OS	Germany	USAREUR	46	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Grossostheim LTA	OS	Germany	USAREUR	1,557	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Haws Crossroads WET Site	US	TN	USARC	103	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Hayden Lake LTA	US	ID	USARC	612	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Hayford Pit LTA	US	WA	USARC	24	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Hidden Valley LTA	US	KY	ARNG	535	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Hilltop Range	US	IN	ARNG	1	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Hobbs	US	NM	ARNG	262	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Hodges TS	US	SC	ARNG	20	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Hohe Warte	OS	Germany	USAREUR	160	0	0	0	N	N	Y	N	N	N	N	N	N	N	N

Training Range Complex Inventory

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					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Individual Army Ranges	Honopou LTA	US	HI	ARNG	106	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Horsetooth Reservoir	US	CO	ARNG	5,012	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Kalepa LTA	US	HI	ARNG	902	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Katterbach Kaserne	OS	Germany	USAREUR	49	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Keamuku LTA	US	HI	USARPAC	22,640	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Kekaha LTA	US	HI	ARNG	3,193	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Kelly Canyon TS	US	ID	ARNG	3,826	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Kingsbury LTA	US	IN	USARC	919	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Kunigundenruh LTA	OS	Germany	USAREUR	113	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Lake City AAP	US	MO	AMC	696	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Lampertheim Training Area	OS	Germany	USAREUR	3,942	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Lander Local Training Area	US	WY	ARNG	1,353	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Lauderick Creek MIL RES	US	MD	ARNG	1,065	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Lebanon Readiness Center	US	NH	ARNG	0	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Leeman Field LTA	US	VA	ARNG	24	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Leroy Dilka Land	US	CO	ARNG	2	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Letterkenny Army Depot	US	PA	AMC	9	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Lexington	US	OK	ARNG	317	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Limestone Hills Training Area	US	MT	ARNG	19,120	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Lone Star AAP	US	TX	AMC	232	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Longare	OS	Italy	USAREUR	15	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Longhorn AAP	US	TX	AMC	0	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Los Alamitos JFTB	US	CA	ARNG	397	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Lovell Local Training Area	US	WY	ARNG	3,606	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	LTA 6910	OS	Germany	USAREUR	104	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	LTA Vaap	US	TN	USARC	195	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Ltc Hernan G. Pesquera Usar Center	US	PR	USARC	4	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Mabe Range LTA	US	VA	ARNG	1,726	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y

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Individual Army Ranges	Macon Training Site	US	MT	ARNG	3,062	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Mainz-Layenhof	OS	Germany	USAREUR	249	0	0	0	N	N	N	N	N	N	N	Y	N	N	N
	Makua MIL RES	US	HI	USARPAC	4,228	0	0	0	N	N	N	Y	Y	N	N	N	N	N	Y
	Maluhia LTA	US	HI	ARNG	70	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Mankato Local Training Area	US	MN	USARC	20	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Marion LTA	US	OH	USARC	122	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Marseilles Training Site	US	IL	ARNG	2,617	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	McAlester AAP	US	OK	AMC	2,245	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	McCrady Training Center	US	SC	ARNG	14,506	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Mead Training Site	US	NE	ARNG	1,185	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Messell Small Arms Range	OS	Germany	USAREUR	25	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Michelfeld	OS	Germany	USAREUR	92	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Milan Volunteer Training Site	US	TN	ARNG	2,391	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Mitchell Training Area	US	SD	ARNG	1	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Mobridge Training Area	US	SD	ARNG	119	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Monte Carpegna	OS	Italy	USAREUR	6,488	0	0	0	N	N	Y	Y	N	N	N	N	N	N	N
	Monte Ciarlec	OS	Italy	USAREUR	7,925	0	0	0	N	N	Y	Y	N	N	N	N	N	N	N
	Monte Romano	OS	Italy	USAREUR	10,207	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Moosehorn	US	ME	ARNG	0	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	MOTSU	US	NC	MTMC	7	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Mountwood Park	US	WV	ARNG	3,109	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	MTA Camp Dodge	US	IA	ARNG	4,025	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	MTA SMR CP Pendleton	US	VA	ARNG	89	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	MTA Stead FAC	US	NV	ARNG	196	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Navajo	US	AZ	ARNG	28,349	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	New Castle Rifle Range	US	DE	ARNG	93	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	New River Valley Training Site	US	VA	USARC	88	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Newark LTA, NY	US	NY	ARNG	100	0	0	0	N	N	Y	N	N	N	N	N	N	N	N

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Individual Army Ranges	Newfane WET Site	US	NY	USARC	3	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Newport Chemical Depot	US	IN	AMC	0	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Newton Falls (RAAP)	US	OH	ARNG	2,879	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	NGTC at Sea Girt	US	NJ	ARNG	120	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	NH NG Training Site	US	NH	ARNG	94	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Nounou LTA	US	HI	ARNG	1,720	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Ocala Armory	US	FL	ARNG	0	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Offersheim Small Arms Range	OS	Germany	USAREUR	3	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Ogden Local Training Area	US	UT	USARC	132	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Onate Training Site	US	NM	ARNG	158	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Orchard (Gowen Field) Training Area	US	ID	ARNG	138,847	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Oxford	US	ME	ARNG	58	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Paisley LTA	US	FL	ARNG	11,279	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Papago Park MIL RES	US	AZ	ARNG	103	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Parks RFTA	US	CA	USARC	1,985	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Pau'Uilo LTA	US	HI	ARNG	45	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Peaceful Valley Ranch	US	CO	ARNG	1,205	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Pearson Ridge NC	US	LA	FORSCOM	33,456	0	0	0	N	N	N	Y	Y	N	N	N	N	N	N
	Peterborough Readiness Center	US	NH	ARNG	0	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Picacho Training Site	US	AZ	ARNG	352	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Picatinny Arsenal	US	NJ	AMC	4,545	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Pickens TS	US	SC	ARNG	9	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Pierre Training Area	US	SD	ARNG	5	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Pine Bluff Arsenal	US	AR	AMC	99	0	0	0	N	N	N	Y	Y	N	N	N	N	N	Y
	Platte Training Area	US	SD	ARNG	40	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Plymouth Training Site	US	ME	ARNG	306	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Pocatello Airport Local Training Area	US	ID	USARC	9	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Pocatello Training Site	US	ID	ARNG	718	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N

Training Range Complex Inventory

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					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Individual Army Ranges	Podeldorf LTA	OS	Germany	USAREUR	1,105	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Pohakuloa Training Area	US	HI	USARPAC	109,950	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Poverty Flats Training Area	US	UT	ARNG	448	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Price Training Area	US	UT	ARNG	159	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	P-Series	OS	Italy	USAREUR	5,291	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Pueblo Chemical Depot	US	CO	AMC	94	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Puu Kapele LTA	US	HI	ARNG	1,109	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Puu Luahine (Red Hill) LTA	US	HI	ARNG	8,314	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Puu Pa LTA	US	HI	ARNG	13,243	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Pu'Unene LTA	US	HI	ARNG	1,610	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Racine County Line Range	US	WI	ARNG	15	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Raleigh County Firing Range	US	WV	ARNG	1	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Ramey Usar Center LTA	US	PR	USARC	53	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Ray Barracks Training Area	OS	Germany	USAREUR	21	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Raytown Training Site	US	MO	ARNG	51	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Red River Army Depot	US	TX	AMC	165	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Redfield Training Area	US	SD	ARNG	174	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Redstone Arsenal	US	AL	AMC	25,505	25	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Reese Range Complex	OS	Germany	USAREUR	18	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Rheinblick LTA	OS	Germany	USAREUR	44	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Ridgeway	US	PA	ARNG	7	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Rio Rancho	US	NM	ARNG	96	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Rittenhouse Training Site	US	AZ	ARNG	198	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Riverside	OS	Italy	USAREUR	3	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Rivoli Bianchi	OS	Italy	USAREUR	235	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Roswell	US	NM	ARNG	5,376	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Rottershausen	OS	Germany	USAREUR	142	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Safford Training Site	US	AZ	ARNG	399	0	0	0	N	N	Y	N	N	N	N	N	N	N	N

Training Range Complex Inventory

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					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Individual Army Ranges	San Giorgio	OS	Italy	USAREUR	68	0	0	0	N	N	N	N	N	N	N	Y	N	N	N
	San Juan National Forest	US	CO	ARNG	629,816	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Sand Dunes	OS	Germany	USAREUR	105	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Santa Severa	OS	Italy	USAREUR	100	0	0	0	N	N	N	Y	Y	N	N	N	N	N	N
	Schofield Barracks MIL RES	US	HI	USARPAC	11,442	0	0	0	N	N	Y	Y	Y	N	N	Y	N	N	Y
	Schweinfurt	OS	Germany	USAREUR	6,326	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Schwetzingen LTA	OS	Germany	USAREUR	249	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Scranton (Leach Range)	US	PA	AMC	101	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Seagoville LTA	US	TX	USARC	198	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Sheridan Local TA	US	WY	ARNG	3,980	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Sierra Army Depot	US	CA	AMC	4,722	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Sioux Falls Airport Training Area	US	SD	ARNG	15	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Smith	US	NY	ARNG	1,763	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Smyrna Volunteer Training Site	US	TN	ARNG	557	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Snake Creek Training Site	US	FL	ARNG	295	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	South Charleston	US	WV	ARNG	1	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	South Hauptsmoor LTA	OS	Germany	USAREUR	268	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Springfield Training Site	US	IL	ARNG	98	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	St. Anthony Training Site	US	ID	ARNG	3,336	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	St. George Training Area	US	UT	ARNG	369	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Stanton LTA	US	NE	ARNG	633	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	State Police Academy, VT	US	VT	ARNG	0	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Stewart River	US	AK	ARNG	25,519	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Stones Ranch MIL RES	US	CT	ARNG	5,753	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Strasburg DZ	US	CO	ARNG	943	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Sunflower Army Ammunition Plant	US	KS	AMC	493	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Sunny Hills LTA	US	FL	ARNG	11,091	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Swift Acres LTA	US	FL	ARNG	4,154	0	0	0	N	N	Y	N	N	N	N	N	N	N	N

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Individual Army Ranges	Tarlton LTA	US	OH	ARNG	118	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Tiergarten	OS	Germany	USAREUR	234	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Toledo Usarc	US	OH	USARC	28	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Tooele Army Depot	US	UT	AMC	1,450	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Tosohatchee LTA	US	FL	ARNG	3,445	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Truman Training Site	US	MO	ARNG	565	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	TS Caswell	US	ME	ARNG	1,094	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	TS NAS Fallon RG B19	US	NV	ARNG	132	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	T-Series	OS	Italy	USAREUR	7,222	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	TS-Hawk McConnelsville, OH	US	OH	ARNG	395	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Tucumcari Training Site	US	NM	ARNG	63	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Tullahoma MIL RES	US	TN	ARNG	6,553	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Twin Falls Training Site	US	ID	ARNG	312	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Ukumehame Firing Range	US	HI	ARNG	39	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Umatilla Chemical Depot	US	OR	AMC	9	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Vail Tree Farm LTA	US	WA	USARC	166,332	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Van Vleck Ranch	US	CA	ARNG	2,685	0	0	0	N	N	Y	N	N	N	N	N	N	N	Y
	Vernal Training Area	US	UT	ARNG	159	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Wackernheim Small Arms Ranges	OS	Germany	USAREUR	32	0	0	0	N	N	N	N	Y	N	N	N	N	N	Y
	Waco Training Area	US	MT	ARNG	4,763	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Waiawa	US	HI	ARNG	15	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Walker Field Airport	US	CO	ARNG	25	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Wally Eagle DZ	US	CO	ARNG	837	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Wappapellots	US	MO	ARNG	2,187	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Warner Barracks	OS	Germany	USAREUR	2	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Washington County Memorial Usarc	US	OH	USARC	16	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Watertown Training Area	US	SD	ARNG	5	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Watkin Armory	US	CO	ARNG	5	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Watkins Range	OS	Korea	EUSA	44	0	0	0	N	N	N	N	N	N	N	N	N	N	Y

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Individual Army Ranges	Weldon Spring	US	MO	ARNG	1,659	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Wells Gulch	US	CO	ARNG	57	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Wendell H. Ford Regional Training Center	US	KY	ARNG	7,174	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	West Camp Rapid	US	SD	ARNG	566	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	West Point MIL RES	US	NY	USMA	14,101	4	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	West Silver Spring Complex	US	WI	USARC	9	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Western Arng Aviation (Waats) Silverbell	US	AZ	ARNG	160	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Westminster	US	VT	ARNG	38	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Wheeler Army Airfield	US	HI	USARPAC	568	0	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Whistler Creek TS	US	AK	USARPAC	543	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	Whitaker Education Training Center	US	OK	ARNG	593	0	0	0	N	N	Y	N	N	N	N	N	N	N	N
	White Sands Missile Range	US	NM	ATEC	3,531,715	7,321	0	0	N	N	N	Y	Y	N	N	N	N	N	Y
	Whitehorse Range	US	WV	ARNG	1	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Wilcox	US	AZ	TRADOC	28,814	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Wildcat Hills State Rec. Area TA	US	NE	ARNG	853	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Williston Wets	US	ND	ARNG	345	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	Wuerzburg	OS	Germany	USAREUR	3,308	0	0	0	N	N	Y	N	Y	N	N	Y	N	N	Y
	WV DNR Elk River WMA TA	US	WV	ARNG	277	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	WV DNR McClintic WMA TA	US	WV	ARNG	54	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	WV State Police Academy Range	US	WV	ARNG	12	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Wvdnr Bluestone Wma Range	US	WV	ARNG	1	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Wvdnr Plum Orchard Wma Range	US	WV	ARNG	3	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	Yakima Training Center	US	WA	FORSCOM	324,313	0	0	0	N	N	Y	Y	Y	N	N	N	N	N	Y
	Youngstown Wets	US	NY	ARNG	848	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	Yuma Proving Ground	US	AZ	ATEC	1,033,361	1,500	0	0	N	N	Y	N	Y	N	N	N	N	N	Y

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Marine Corps	MCAS Beaufort/Townsend	US	SC	MCIEAST	5,182	1,130	0	0	Y	Y	N	Y	Y	N	N	N	N	N	Y
	MCAS Cherry Point	US	NC	MCIEAST	29,139	1,082	0	0	Y	Y	Y	Y	Y	Y	N	Y	N	N	N
	MCAS Miramar	US	CA	MCIWEST	14,311	0	0	0	N	N	Y	N	Y	N	N	N	N	N	Y
	MCAS Yuma/Bob Stump	US	AZ	MCIWEST	1,216,000	7,085	0	0	Y	Y	Y	Y	Y	Y	N	N	N	N	Y
	MCB Camp Lejeune	US	NC	MARFORLANT	107,263	151	0	0	N	Y	Y	Y	Y	N	Y	Y	N	Y	Y
	MCB Japan	OS	Japan	MARFORPAC	47,000	333	0	0	N	N	Y	Y	Y	N	Y	Y	N	N	Y
	MCB Camp Pendleton	US	CA	MARFORPAC	125,704	180	0	0	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
	MCB Hawaii	US	HI	MARFORPAC	1,986	0	0	0	N	N	Y	N	Y	N	N	Y	N	Y	Y
	MCB Quantico	US	VA	MCCDC	55,278	278	0	0	N	Y	Y	Y	Y	N	N	Y	N	N	Y
	MCLB Albany	US	GA	MATCOM	4	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	MCLB Barstow	US	CA	MATCOM	2,438	0	0	0	N	N	N	N	Y	N	N	N	N	N	N
	MCMWTC Bridgeport	US	CA	TECOM	62,000	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	MCRD Parris Island	US	SC	TECOM	1,100	0	0	0	N	N	Y	N	Y	N	N	N	N	N	N
	MCAGCC Twentynine Palms	US	CA	TECOM	601,151	1,268	0	0	N	Y	Y	Y	Y	Y	N	Y	N	N	Y
Navy	Atlantic City	US	NJ	CFFC	0	5,585	4,413	4,413	Y	N	N	N	N	N	Y	N	N	N	N
	Atlantic Test Range (Patuxent River)	US	MD, VA	NAVAIR	5,700	3,401	330	0	Y	Y	N	Y	N	Y	N	N	N	N	N
	Atlantic Undersea Test and Evaluation Center (AUTEC)	OS	Bahamas	NAVSEA	0	870	1,320	195	Y	N	N	N	N	N	Y	N	Y	N	N
	Boston	US	MA	CFFC	12,446	10,099	13,494	13,494	Y	Y	Y	N	N	N	Y	N	N	N	Y
	China Lake	US	CA	NAVAIR	1,141,200	13,661	0	0	Y	Y	N	Y	N	Y	N	N	N	N	N
	Diego Garcia	OS	BIOT	CPF	0	32,692	0	0	Y	N	N	N	N	N	N	N	N	N	N
	El Centro	US	CA	CFFC	43,948	256	0	0	Y	Y	N	Y	N	N	N	N	N	N	Y
	Fallon	US	NV	CFFC	232,481	14,182	0	0	Y	Y	Y	Y	Y	Y	N	Y	N	N	N
	Guantanamo	OS	Cuba	CFFC	8	13,175	13,118	13,118	Y	Y	Y	Y	Y	N	Y	N	N	N	N
	Gulf of Mexico	US	FL, MS, TX	CFFC	10,057	38,393	17,469	17,469	Y	Y	N	Y	Y	N	Y	N	N	Y	N
	Hawaii	US	HI	CPF	303	94,083	214,638	214,638	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y
	Jacksonville	US	FL, GA	CFFC	17,728	61,265	50,098	50,098	Y	Y	N	Y	Y	N	Y	N	N	N	N
	Japan	OS	Japan	CPF	0	10,165	0	0	Y	N	N	N	N	N	N	N	N	N	N

Training Range Complex Inventory

Military Service	Range Complex	United States (US) or Overseas (OS)	State or Country	Command/ Component	Range Description				Range Type										
					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Navy	Key West	US	FL	CFFC	1	24,812	8,282	8,282	Y	Y	N	N	Y	Y	Y	N	N	N	Y
	Mariana Islands	US	CNMI, Guam	CPF	24,894	8,726	8,698	8,698	Y	N	Y	N	Y	N	Y	Y	N	Y	Y
	Narragansett	US	RI	CFFC	0	13,005	27,208	27,208	Y	N	N	N	N	N	Y	N	N	N	N
	Navy Cherry Point	US	NC	CFFC	0	18,718	18,718	18,718	Y	N	N	N	N	Y	Y	N	N	N	Y
	Northern California (NOCAL)	US	CA	CFFC	0	19,681	0	0	Y	N	N	N	N	N	N	N	N	N	N
	Northwest Training Range Complex	US	CA, OR, WA	CFFC	49,674	42,714	128,103	128,103	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y
	Okinawa	OS	Japan	CPF	0	35,129	0	0	Y	Y	N	N	N	N	N	N	N	N	N
	Pt. Mugu Sea Range	US	CA	NAVAIR	15,000	27,712	27,278	0	Y	Y	N	N	N	Y	Y	N	N	N	N
	Southern California (SOCAL)	US	CA	CFFC	43,437	113,231	120,000	7,699	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	VACAPES	US	NC, VA	CFFC	1,543	29,925	28,916	28,916	Y	Y	Y	N	Y	N	Y	Y	N	Y	N
Air Force	Adirondack	US	NY	ANG	75,000	200	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Airburst	US	CO	ANG	4,257	26	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Atterbury	US	IN	ANG	18,500	103	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Avon Park	US	FL	ACC	106,073	1,400	0	0	Y	Y	N	N	N	N	N	N	N	N	N
	Barry M. Goldwater Range	US	AZ	AETC	1,607,018	3,906	0	0	Y	Y	N	N	N	Y	N	N	N	N	N
	Belle Fourche ESS	US	SD	ACC	183	0	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Blair Lake	US	AK	PACAF	2,560	22,000	0	0	N	Y	N	N	N	N	N	N	N	N	N
	Bollen	US	PA	ANG	10,657	42	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Cannon	US	MO	ANG	4,600	339	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Claiborne	US	LA	AFRC	7,800	135	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Dare County Ranges	US	NC	ACC	46,621	1,184	0	0	Y	Y	N	N	N	Y	N	N	N	N	N
	Draughon	OS	Japan	PACAF	0	0	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Edwards Ranges	US	CA	AFMC	50,080	20,000	0	0	Y	Y	N	N	N	Y	N	N	N	N	N
	Eglin Ranges	US	FL	AFMC	463,360	133,979	0	0	Y	Y	N	N	N	Y	N	N	N	N	N
	Falcon	US	OK	AFRC	5,200	1,845	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Grand Bay	US	GA	ACC	6,000	17,290	0	0	N	Y	N	N	N	N	N	N	N	N	N
	Grayling	US	MI	ANG	145,025	63	0	0	Y	Y	N	N	N	Y	N	N	N	N	N
	Hardwood	US	WI	ANG	7,263	84	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Holloman	US	NM	ACC	207,800	2,256	0	0	Y	Y	N	N	N	Y	N	N	N	N	N

Training Range Complex Inventory

Military Service	Range Complex	United States (US) or Overseas (OS)	State or Country	Command/ Component	Range Description				Range Type										
					Land Area for Ranges (acres)	Special Use Airspace (sq nm)	Sea Surface Area (sq nm)	Underwater Tracking Area (sq nm)	Air-to-Air or Air-to-Surface	Air-to-Ground	Land Maneuver	Land Impact Area	Land Firing Range	C2W/EW	Ocean Operating Area	MOUT	Underwater Tracking Range	Amphibious Area	Other
Air Force	Jefferson	US	IN	ANG	50,000	160	0	0	Y	Y	N	N	N	Y	N	N	N	N	N
	Lone Star ESS	US	TX	ACC	90	0	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	McMullen	US	TX	ANG	2,800	63	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Melrose	US	NM	AFSOC	66,033	22,000	0	0	Y	Y	N	N	N	Y	N	N	N	N	N
	Mountain Home Ranges	US	ID	ACC	120,844	18,526	0	0	Y	Y	N	N	N	Y	N	N	N	N	N
	Nevada Testing and Training Range	US	NV	ACC	2,919,890	12,000	0	0	Y	Y	N	N	N	Y	N	N	N	N	N
	Oklahoma	US	AK	PACAF	25,600	22,000	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Patrick	US	FL	AFSOC	14,591	25,239	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Pilsung	OS	Korea	PACAF	0	0	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Poinsett	US	SC	ACC	12,521	1,500	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Polygone	OS	France/ Germany	USAFE	0	0	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Razorback	US	AR	ANG	5,760	128	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Shelby Ranges	US	MS	ANG	26,676	0	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Siegenberg	OS	Germany	USAFE	0	0	0	0	N	Y	N	N	N	N	N	N	N	N	N
	Smoky Hill	US	KS	ANG	33,875	53	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Snyder ESS	US	TX	ACC	90	0	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Torishima	OS	Japan	PACAF	0	0	0	0	N	Y	N	N	N	N	N	N	N	N	N
	Townsend	US	GA	ANG	5,183	288	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Utah Testing and Training Ranges	US	UT	ACC	1,712,000	12,574	0	0	Y	Y	N	N	N	Y	N	N	N	N	N
	Vandenberg	US	CA	AFSOC	100,751	334	0	0	N	N	N	N	N	N	N	N	N	N	Y
	Warren Grove	US	NJ	ANG	9,416	30	0	0	N	Y	N	N	N	Y	N	N	N	N	N
	Yukon	US	AK	PACAF	25,600	22000	0	0	N	Y	N	N	N	Y	N	N	N	N	N

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Table C-2 Military Training Route (MTR) Inventory

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR002	20 OSS/OSOA, Shaw AFB, SC 29152-5000 DSN 965-1121/1122, C 803-895-1121/1122, Fax	20 OSS/OSOS, Shaw AFB, SC 29152 Duty hrs DSN 965-1118/1119, C803-895-1118/1119.	Continuous	125
IR012	4 OSS/OSR, Seymour Johnson AFB, NC 27531-5004 DSN 722-2672, C919-722-2672.	4 OSS/OSOSF, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129	Continuous	144
IR015	347 OSS/OSKA, Moody AFB, GA 31699-1899 DSN 460-4131, C229-257-4131.	347 OSS/OSOS, Moody AFB, GA 31699-1899 Mon-Fri 0730-1630L exc holidays DSN 460-4	Continuous	164
IR016	347 OSS/OSKA, Moody AFB, GA 31699-1899 DSN 460-4131, C229-257-4131.	347 OSS/OSOS, Moody AFB, GA 31699-1899 Mon-Fri 0730-1630L exc holidays DSN 460-4	Continuous	167
IR017	187 FW, 5187 Selma Highway, Montgomery, AL 36108-4824 DSN 358-9255, C334-394-725	Same as Originating Activity	Continuous	201
IR018	FACSFAC JAX, NAS Jacksonville, FL 32212 DSN 942-2004/2005, C904-542-2004/2005, A	Same as Originating Activity	0700-2400 local daily	401
IR019	FACSFAC JAX, NAS Jacksonville, FL 32212 DSN 942-2004/2005, C904-542-2004/2005, A	Same as Originating Activity	0700-2400 local daily	454
IR020	FACSFAC JAX, NAS Jacksonville, FL 32212 DSN 942-2004/2005, C904-542-2004/2005, A	Same as Originating Activity	0700-2400 local daily	392
IR021	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ Mon-Fri, occasionally on weekends	451
IR022	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ weekdays, occasional weekends	322
IR023	CG MCAS CHERRY POINT, ATTN RAC-DIROPS, Cherry Point, NC 28533 DSN 582-3466, C252	Central Scheduling Division, MCAS Cherry Point, NC 28533 DSN 582-4040/4041, C252	Continuous	224
IR026	FACSFACJAX, PO Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005 C904-54	Same as Originating Activity	By NOTAM	55
IR027	FACSFACJAX, PO Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005 C904-54	Same as Originating Activity	By NOTAM	12
IR030	Commander Naval Air Warfare Center, Weapons Division, Code 52911GE, NAWS, Point	Same as Originating Activity	Daylight hours only, daily	260
IR031	Commander Naval Air Warfare Center, Weapons Division, Code 52911GE, NAWS, Point	Same as Originating Activity	Daylight hours only, daily	260
IR032	Commander Naval Air Warfare Center, Weapons Division, Code 52911GE, NAWS, Point	Commander Fleet Area Control and Surveillance Facility Jacksonville, Naval Air S	Daylight hours	167
IR033	Commander Naval Air Warfare Center, Weapons Division, Code 52911GE, NAWS, Point	Commander Fleet Area Control and Surveillance Facility Jacksonville, Naval Air S	Daylight hours	211
IR034	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	0600-2400 local	150
IR035	437 AW/C-17 OSS/OSA Charleston AFB, SC 29404 DSN 673-7692, C843-963-7692.	20 OSS/OSOS, Shaw AFB, SC 29152-5000 Duty hours DSN 965-1118/1119 C803-895-1118,	0600-2200 local, daily	198
IR036	437 AW/C-17 OSS/OSOT Charleston AFB, SC 29404 DSN 673-5613, C803-566-5613.	20 OSS/OSOS, Shaw AFB, SC 29152-5000 Duty hours DSN 965-1118/1119 C803-895-1118,	0600-2200 local, daily	178

* Data fields are limited to 80 characters in the source database (National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File)); therefore, some data field entries are not complete. Please refer to DoD Flight Information Publications for complete originating and scheduling activity information.

** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR037	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	Mon-Fri 1200-0400Z++, occasional weekends	213
IR038	FACSFAC, NAS Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	Sunrise-Sunset, Mon-Fri, occasional weekends	398
IR040	FACSFAC, NAS Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	Mon-Fri 1200-0400Z++, occasional weekends	176
IR044	COMTRAWING ONE, NAS Meridian, MS 39309-0136 DSN 637-2347, C601-679-2347.	Same as Originating Activity	Sunrise-Sunset	161
IR046	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	0700-2400 local, daily	171
IR047	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	0700-2400 local, daily	67
IR048	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	0700-2400 local, daily	31
IR049	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	0700-2400 local, daily	87
IR050	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	0700-2400 local, daily	109
IR051	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	0700-2400 local, daily	196
IR053	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	0600-2400 local, daily	136
IR055	347 WG, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33621-5205	347 WG, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 33621-5205	0600-2400 local, daily	138
IR056	347 WG, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33621-5205	347 WG, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 33621-5205	0600-2400 local	206
IR057	16 OSS/DOAA, Hurlburt Field, FL 32544 DSN 579-7409, C850-884-7409.	16 OSS/DOO, Hurlburt Field, FL 32544 DSN 579-6877/7812, C850-884-6877/7812.	Continuous	416
IR059	16 OSS/DOAA, Hurlburt Field, FL 32544 DSN 579-7409, C850-884-7409.	16 OSS/DOO, Hurlburt Field, FL 32544 DSN 579-6877/7812, C850-884-6877/7812.	Continuous	436
IR062	COMSTRKFIGHTWINGLANT, Oceana NAS, Virginia Beach, VA 23460 DSN 433-4013, C757-43	FACSFAC VACAPES, Oceana , NAS Virginia Beach, VA 23460 DSN 433-1228, C757-433-12	Continuous	507
IR066	14 OSS/OSOP, Columbus AFB, MS 39710 DSN 742-7560/7633, C662-434-7560/7633.	50 FTS, Columbus AFB, MS 39710 DSN 742-7734/7735, C662-434-7734/7735.	Sunrise-Sunset Mon-Fri	285
IR067	14 OSS/OSOP, Columbus AFB, MS 39710 DSN 742-7560/7633, C662-434-7560/7633.	48 FTS, Columbus AFB, MS 39710 DSN 742-7840/7847, C662-434-7840/7847.	Sunrise-Sunset Mon-Fri	312

* Data fields are limited to 80 characters in the source database (National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File)); therefore, some data field entries are not complete. Please refer to DoD Flight Information Publications for complete originating and scheduling activity information.

** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR068	14 OSS/OSOP, Columbus AFB, MS 39710 DSN 742-7560/7633, C662-434-7560/7633.	48 FTS, Columbus AFB, MS 39710 DSN 742-7840/7847, C662-434-7840/7847.	Sunrise-Sunset Mon-Fri	149
IR070	14 OSS/OSOP, Columbus AFB, MS 39710-5000 DSN 742-7560/7633, C662-434-7560/7633.	48 FTS, Columbus AFB, MS 39710 DSN 742-7840/7847, C662-434-7840/7847.	Sunrise-Sunset daily	260
IR077	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ Mon-Fri; occasional weekends	276
IR078	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ Mon-Fri; occasional weekends	276
IR079	FACSFA, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ Mon-Fri; occasional weekends	246
IR080	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ Mon-Fri; occasional weekends	267
IR081	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ Mon-Fri; occasional weekends	216
IR082	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ Mon-Fri; occasional weekends	270
IR083	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ Mon-Fri; occasional weekends	298
IR089	437 OSS/OSOT, Charleston AFB, SC 29404 DSN 673-5554, C843-963-5554.	437 OSS/OSOT, Charleston AFB, SC 29404 DSN 673-5552, C843-963-5552. Non duty hrs	0600-2400 local, daily, Jan, Mar, May, Jul, Sep and Nov only	177
IR090	437 OSS/OSOT, Charleston AFB, SC 29404 DSN 673-5554, C843-963-5554.	437 OSS/OSOT, Charleston AFB, SC 29404 DSN 673-5552, C843-963-5552. Non duty hrs	0600-2400 local, daily, Feb, Apr, Jun, Aug, Oct and Dec only	177
IR091	14 OSS/OSOP Columbus AFB, MS 39710 DSN 742-7560/7633 C662-434-7560/7633.	50 FTS Columbus AFB, MS 39710 DSN 742-7734/7735, C662-434-7734/7735.	Sunrise-Sunset Mon-Fri	179
IR102	49 OSS/OSTA, 700 Delaware Ave., Holloman AFB, NM 88330-8017 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Daylight hours by NOTAM	520
IR103	301 OG/SUA, NAS JRB Fort Worth, TX 76127 DSN 739-6903/6904/6905, C817-782-6903/6	Same as Originating Activity	0600-2200 local, daily	117
IR105	301 OG/SUA, NAS JRB, Ft. Worth, TX 76127 DSN 739-6903/6904/6905, C817-782-6903/6	Same as Originating Activity.	0600-2200 local, daily	212
IR107	27 SOSS/OSTA 110 E. Sextant Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2521	27 SOSS/OSOS 110 E. Sextant Ave., Suite 1080, Cannon AFB, NM 88103 DSN 681-2276,	Continuous	655
IR109	27 SOSS/OSTA 110 E. Sextant Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2521	27 SOSS/OSOS 110 E. Sextant Ave., Suite 1080, Cannon AFB, NM 88103 DSN 681-2276,	Continuous	747
IR111	27 SOSS/OSTA 110 E. Sextant Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2521	7 SOSS/OSOS 110 E. Sextant Ave., Suite 1080, Cannon AFB, NM 88103 DSN 681-2276,	Continuous	661

* Data fields are limited to 80 characters in the source database (National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File)); therefore, some data field entries are not complete. Please refer to DoD Flight Information Publications for complete originating and scheduling activity information.

** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR112	27 SOSS/OSTA 110 E. Sextant Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2521	27 SOSS/OSOS 110 E. Sextant Ave., Suite 1080, Cannon AFB, NM 88103 DSN 681-2276,	Continuous	641
IR113	27 SOSS/OSTA 110 E. Sextant Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2521	27 SOSS/OSOS 110 E. Sextant Ave., Suite 1080, Cannon AFB,NM 88103. Req for use s	Continuous	781
IR115	49 OSS/OSTA, 700 Delaware Ave., Holloman AFB, NM 88330-8017 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Daylight hours by NOTAM	62
IR116	49 OSS/OSTA, 700 Delaware Ave., Holloman AFB, NM 88330-8017 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Daylight hours by NOTAM	62
IR117	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	117
IR117	188FW Arkansas ANG, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 72 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	71
IR120	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	81
IR121	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	120
IR122	49 OSS/OSTA, 700 Delaware Ave., Holloman AFB, NM 88330-8017 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Continuous (except Sunday 1000-1200 local)	28
IR123	301 OG/SUA, NAS JRB Fort Worth, TX 76127 DSN 739-6903/6904/6905, C817-782-6903/6	Same as Originating Activity	0700-2200 local	403
IR124	301 OG/SUA, NAS JRB Fort Worth, TX 76127 DSN 739-6903/6904/6905, C817-782-6903/6	Same as Originating Activity	0700-2200 local	245
IR126	7 OSS/A3R, 965 Ave. D-4, Ste. 109, Dyess AFB, TX 79606 DSN 461-3666, C325-696-36	7 OSS/A3R, 966 Ave. D-4, Ste. 109, Dyess AFB, TX 79606 DSN 461-3665, C325-696-36	Continuous	807
IR127	12 OSS/OSOA, 501 I Street East, Randolph AFB, TX 78150 DSN 487-5580, C210-652-55	99th FTS, 1450 5th Street East, Randolph AFB, TX 78150 DSN 487-6746, C210-652-67	Sunrise-Sunset	243
IR128	7 OSS/A3R, 965 Ave. D-4, Ste. 109, Dyess AFB, TX 79606 DSN 461-3666, C325-696-36	7 OSS/A3R, 966 Ave. D-4, Ste. 109, Dyess AFB, TX 79606 DSN 461-3665, C325-696-36	Continuous	651
IR129	12 OSS/OSOA, 501 I Street East, Randolph AFB, TX 78150 DSN 487-5580, C210-652-55	99th FTS, 1450 5th Street East, Randolph AFB, TX 78150 DSN 487-6746, C210-652-67	Sunrise-Sunset	279
IR130	49 OSS/OSTA, 700 Delaware Ave., Holloman AFB, NM 88330-8017 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Daylight hours by NOTAM	28
IR131	49 OSS/OSTA, 700 Delaware Ave., Holloman AFB, NM 88330-8017 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Daylight hours by NOTAM	32
IR132	49 OSS/OSTA, 700 Delaware Ave., Holloman AFB, NM 88330-8017 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Daylight hours by NOTAM	32

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR133	49 OSS/OSOA, 700 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	0700-2300 local	329
IR134	49 OSS/OSOA, 700 Delaware Ave., Holloman AFB, NM 88440-8014 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Sunrise-0600Z++	205
IR135	COMTRAWING TWO, NAS Kingsville, TX 78363 DSN 876-6518/6283, C361-516-6518/6283/6	Same as Originating Activity	Sunrise-Sunset, daily	137
IR136	COMTRAWING TWO, NAS Kingsville, TX 78363 DSN 876-6518/6283, C361-516-6518/6283/6	Same as Originating Activity	Sunrise-Sunset, daily	162
IR137	58 OSS/DOO, Kirtland AFB, NM 87117-5861 DSN 263-5979/5888, C505-853-5979/5888/57	Same as Originating Activity	Continuous	219
IR139	301 OG/SUA, NAS JRB Fort Worth, TX 76127 DSN 739-6903/6904/6905, C817-782-6903/6	Same as Originating Activity	0600-2200 local, daily	102
IR141	49 OSS/OSTA, 700 Delaware Ave., Holloman AFB, NM 88330-8017 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Daylight hours by NOTAM	520
IR142	49 OSS/OSOA, 700 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Sunrise-0600Z++	206
IR145	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	25 FTS/DISP, Vance AFB, OK 73705-5202 DSN 448-6038, C580-213-6038.	30 min after Sunrise-30 min before Sunset and active days per local directives	187
IR146	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	25 FTS/DISP, Vance AFB, OK 73705-5202 DSN 448-6038, C580-213-6038.	30 min after Sunrise-30 min before Sunset and active days per local directives	185
IR147	COMTRAWING TWO, NAS Kingsville, TX 78363 DSN 876-6518/6283, C361-516-6518/6283/6	Same as Originating Activity	Sunrise to 30 minutes after Sunset, daily	122
IR148	COMTRAWING TWO, NAS Kingsville, TX 78363 DSN 876-6518/6283, C361-516-6518/6283/6	Same as Originating Activity	Daily 0600-2230 local	172
IR149	COMTRAWING TWO, NAS Kingsville, TX 78363 DSN 876-6518/6283, C361-516-6518/6283/6	Same as Originating Activity	Daily 0600-2230 local	213
IR150	7 OSS/OSOR, 966 Ave. D-4, Ste. 117, Dyess AFB, TX 79607 DSN 461-3666, C325-696-3	7 OSS/OSOR, 966 Ave. D-4, Ste. 117, Dyess AFB, TX 79607 DSN 461-3665, C325-696-3	Continuous	295
IR154	97 OSS/DOA, 400 N. Sixth Street, Bldg 164, Rm 4, Altus AFB, OK 73522 DSN 866-609	97 OSS/OSK, 516 S. Sixth Street, Ste A, Altus AFB, OK 73523 DSN 866-7110/6617.	0830-0230 local Mon-Fri	220
IR155	97 OSS/DOA, 400 N. Sixth Street, Bldg 164, Rm 4, Altus AFB, OK 73522 DSN 866-609	97 OSS/OSK, 516 S. Sixth Street, Ste A, Altus AFB, OK 73523 DSN 866-7110/6617.	0830-0230 local Mon-Fri	213
IR164	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	110
IR166	COMTRAWING TWO, NAS Kingsville, TX 78363 DSN 876-6518/6283, C361-516-6518/6283/6	Same as Originating Activity	0600-2400 local, daily	184

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Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR167	COMTRAWING TWO, NAS Kingsville, TX 78363 DSN 876-6518/6283, C361-516-6518/6283/6	Same as Originating Activity	0600-2400 local, daily	119
IR169	47 OSS/OSOR, 570 2nd Street, Ste. 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C	87 FTS/DOS, 570 2nd Street, Laughlin AFB, TX 78843 DSN 732-5484, C830-298-5484.	Sunrise-Sunset daily	175
IR170	47 OSS/OSOR, 570 2nd Street, Ste. 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C	87 FTS/DOS, 570 2nd Street, Laughlin AFB, TX 78843 DSN 732-5484, C830-298-5484.	Sunrise-Sunset daily	191
IR171	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	25 FTS/DISP, Vance AFB, OK 73705-5202 DSN 448-6038, C580-213-6038.	30 min after Sunrise-30 min before Sunset and active days per local directives	175
IR172	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	Same as Originating Activity.	30 min after Sunrise-30 min before Sunset and active days per local directives	165
IR173	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	Same as Originating Activity.	30 min after Sunrise-30 min before Sunset and active days per local directives	160
IR174	509 OSS/OSKA, 905 Spirit Blvd., Whiteman AFB, MO 65305 DSN 975-1713/1754, C660-6	Same as Originating Activity	Continuous	546
IR175	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	25 FTS/DISP, Vance AFB, OK 73705-5202 DSN 448-6038, C580-213-6038.	30 min after Sunrise-30 min before Sunset and active days per local directives	204
IR177	7 OSS/OSOR, 966 Ave. D-4, Ste. 117, Dyess AFB, TX 79607 DSN 461-3666, C325-696-3	7 OSS/OSOR, 966 Ave. D-4, Ste. 117, Dyess AFB, TX 79607 DSN 461-3665, C325-696-3	Continuous	363
IR178	7 OSS/A3R, 965 Ave. D-4, Ste. 109, Dyess AFB, TX 79606 DSN 461-3666, C325-696-36	Same as Originating Activity.	Continuous	1,027
IR180	7 OSS/A3R, 965 Ave. D-4, Ste. 109, Dyess AFB, TX 79606 DSN 461-3666, C325-696-36	7 OSS/A3R, 966 Ave. D-4, Ste. 109, Dyess AFB, TX 79606 DSN 461-3665, C325-696-36	Continuous	562
IR181	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	25 FTS/DISP, Vance AFB, OK 73705-5202 DSN 448-6038, C580-213-6038.	30 min after Sunrise-30 min before Sunset and active days per local directives	175
IR182	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	Same as Originating Activity.	30 min after Sunrise-30 min before Sunset and active days per local directives	165
IR183	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	Same as Originating Activity.	30 min after Sunrise-30 min before Sunset and active days per local directives	160
IR185	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	25 FTS/DISP, Vance AFB, OK 73705-5202 DSN 448-6038, C580-213-6038.	30 min after Sunrise-30 min before Sunset and active days per local directives	204

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Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR192	49 OSS/OSOA, 700 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Sunrise-0600Z++	562
IR193	97 OSS/DOA, 400 N Sixth St., Altus AFB, OK 73521 DSN 866-6098 C580-481-6098.	97 OSS/DOA, 400 N Sixth St., Ste 12, Altus AFB, OK 73521 DSN 866-7110.	0830-0230 local Mon-Fri	142
IR194	49 OSS/OSOA, 700 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Sunrise-0600Z++	564
IR195	49 OSS/OSOA, 700 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3244, C575-5	49 OSS/OSOS, 744 Delaware Ave., Holloman AFB, NM 88330-8014 DSN 572-3536, C575-5	Sunrise-0600Z++	198
IR200	Commander Naval Air Warfare Center, Weapons Division, Code P529800E, (Naval Base	Commander Naval Air Warfare Center, Weapons Division, Code P529800E, (Naval Base	Sunrise-Sunset by NOTAM	650
IR203	Commander Strike Fighter Wing, US. Pacific Fleet, 001 (K) Street, Room 121, NAS	Same as Originating Activity	Daylight hours, OT by NOTAM	410
IR206	Commander Naval Air Warfare Center, Weapons Division, Code P3524, NAWS, Pt. Mugu	Commander Naval Air Warfare Center, Weapons Division, Code P3506, NAWS, Pt. Mugu	Daylight hours by NOTAM	120
IR207	Commander Strike Fighter Wing, US. Pacific Fleet, 001 (K) Street, Room 121, NAS	Same as Originating Activity	Daylight hours, OT by NOTAM	449
IR211	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Continuous	152
IR212	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Continuous	136
IR213	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Continuous	269
IR214	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Even numbered days only	265
IR216	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Even numbered days- daylight only	53
IR217	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Continuous	283
IR218	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Continuous	229
IR234	Commander AFFTC, 412 OSS/OSAA, 235 S Flightline Rd, Edwards AFB, CA 93523-6460 D	Commander AFFTC, 412 OSS/OSR, 300 E Yeager Blvd, Edwards AFB, CA 93524 DSN 527-4	Daylight hours by NOTAM	164
IR235	Commander AFFTC, 412 OSS/OSAA, 235 S Flightline Rd, Edwards AFB, CA 93523-6460 D	Commander AFFTC, 412 OSS/OSR, 300 E Yeager Blvd, Edwards AFB, CA 93524 DSN 527-4	Daylight hours by NOTAM	164
IR236	Commander AFFTC, 412 OSS/OSAA, 235 S Flightline Rd, Edwards AFB, CA 93523-6460 D	Commander AFFTC, 412 OSS/OSR, 300 E Yeager Blvd, Edwards AFB, CA 93524 DSN 527-4	0600-2200 local, daily	320
IR237	Commander AFFTC, 412 OSS/OSAA, 235 S Flightline Rd, Edwards AFB, CA 93523-6460 D	Commander AFFTC, 412 OSS/OSR, 300 E Yeager Blvd, Edwards AFB, CA 93524 DSN 527-4	Daylight hours by NOTAM	130
IR238	Commander AFFTC, 412 OSS/OSAA, 235 S Flightline Rd, Edwards AFB, CA 93523-6460 D	Commander AFFTC, 412 OSS/OSCS, 306 E. Popson, Edwards AFB, CA 93524-6680 DSN 527	Daylight hours by NOTAM	130
IR250	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Daylight hours on even even numbered days	251
IR252	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Daylight hours on odd numbered days	158

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Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR254	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Daylight hours, Mon-Fri	99
IR255	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Daylight hours, daily	67
IR264	60 OSS/OSO, 611 E St., Travis AFB, CA 94535 DSN 837-1073, C707-424-1073.	60 OSS/OSO, 611 E St., Travis AFB, CA 94535 DSN 837-5582, C707-424-5582.	By NOTAM	339
IR266	7 OSS/OSOR, 966 Ave. D-4, Ste. 118, Dyess AFB, TX 79607 DSN 461-3666, C325-696-3	7 OSS/OSOR, 966 Ave. D-4, Ste. 117, Dyess AFB, TX 79607 DSN 461-3663, C325-696-3	Continuous	458
IR275	60 OSS/OSO, 611 E St., Travis AFB, CA 94535 DSN 837-1073, C707-424-1073.	60 OSS/OSO, 611 E St., Travis AFB, CA 94535 DSN 837-5582, C707-424-5582.	By NOTAM	379
IR279	57 OSS/OSM, Nellis AFB, NV 89191 DSN 682-7891, C702-652-7891.	57 OSS/OSOS, 4450 Tyndall Ave., Nellis AFB, NV 89191 DSN 682-2040, C702-652-2040	Continuous	48
IR280	60 OSS/OSO, 611 E St., Travis AFB, CA 94535 DSN 837-1073, C707-424-1073.	60 OSS/OSO, 611 E St., Travis AFB, CA 94535 DSN 837-5582, C707-424-5582.	By NOTAM	283
IR281	60 OSS/OSO, 611 E St., Travis AFB, CA 94535 DSN 837-1073, C707-424-1073.	60 OSS/OSO, 611 E St., Travis AFB, CA 94535 DSN 837-5582, C707-424-5582.	By NOTAM	296
IR282	60 OSS/OSO, 611 E St., Travis AFB, CA 94535 DSN 837-1073, C707-424-1073.	60 OSS/OSO, 611 E St., Travis AFB, CA 94535 DSN 837-5582, C707-424-5582.	By NOTAM	191
IR286	57 OSS/OSM, Nellis AFB, NV 89191 DSN 682-7891, C702-652-7891.	57 OSS/OSOS, 4450 Tyndall Ave., Nellis AFB, NV 89191 DSN 682-2040, C702-652-2040	Continuous	385
IR293	388 RANS/RST, 6606 Cedar Ln. bldg 1274, Hill AFB, UT 84056-5812 DSN 777-4401 C80	Same as Originating Activity.	By NOTAM	311
IR300	366 OSS/OSOS, Mountain Home AFB, ID 83648 DSN 728-2172/4607 C208-828-2172. Airsp	Same as Originating Activity. Scheduling requests 0730-1630 local Mon-Fri. After	By NOTAM	390
IR301	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise Air Terminal, ID 83705-8004 DSN 42	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise Air Terminal, ID 83705-8004 DSN 422	Continuous or by NOTAM	402
IR302	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise Air Terminal, ID 83705-8004 DSN 42	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise Air Terminal, ID 83705-8004 DSN 422	Continuous or by NOTAM	452
IR303	366 OSS/OSOS, Mountain Home AFB, ID 83648 DSN 728-2172/4607 C208-828-2172. Airsp	Same as Originating Activity. Scheduling requests 0730-1630 local Mon-Fri. After	By NOTAM	278
IR304	366 OSS/OSOS, Mountain Home AFB, ID 83648 DSN 728-2172/4607 C208-828-2172. Airsp	Same as Originating Activity. Scheduling requests 0730-1630 local Mon-Fri. After	By NOTAM	314
IR305	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise Air Terminal, ID 83705-8004 DSN 42	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise Air Terminal, ID 83705-8004 DSN 422	Continuous or by NOTAM	421
IR307	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise Air Terminal, ID 83705-8004 DSN 42	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise Air Terminal, ID 83705-8004 DSN 422	Continuous or by NOTAM	402
IR308	58 OSS/DOO, Kirtland AFB, NM 87117-5861 DSN 263-5979/5888, C505-853-5979/5888/57	Same as Originating Activity	Continuous	219

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Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR313	366 OSS/OSOA, 1050 Desert St., Building 2215, Mountain Home AFB, ID 83648 DSN 72	Same as Originating Activity. Scheduling requests 0730-1630 local Mon-Fri. After	By NOTAM	409
IR320	7 OSS/OSOR, 966 Ave. D-4, Ste. 118, Dyess AFB, TX 79607 DSN 461-3666, C325-696-3	7 OSS/OSOR, 1001 Ave. D-4, Ste. 107, Dyess AFB, TX 79607 DSN 461-3665, C325-696-	Continuous	853
IR324	62 OSS/OSK, 1172 Levitow Blvd., McCord AFB, WA 98438 DSN 382-3615, C253-982-3615	62 OSS/OSO, 100 Main St., McChord AFB, WA 98438 DSN 382-9925, C253-982-9925. Dut	Continuous	174
IR325	62 OSS/OSK, 1172 Levitow Blvd., McCord AFB, WA 98438 DSN 382-3615, C253-982-3615	62 OSS/OSO, 100 Main St., McChord AFB, WA 98438 DSN 382-9925, C253-982-9925. Dut	Continuous	162
IR326	62 OSS/OSK, 1172 Levitow Blvd., McCord AFB, WA 98438 DSN 382-3615, C253-982-3615	62 OSS/OSO, 100 Main St., McChord AFB, WA 98438 DSN 382-9925, C253-982-9925. Dut	Continuous	185
IR327	62 OSS/OSK, 1172 Levitow Blvd., McCord AFB, WA 98438 DSN 382-3615, C253-982-3615	62 OSS/OSO, 100 Main St., McChord AFB, WA 98438 DSN 382-9925, C253-982-9925. Dut	Continuous	167
IR328	62 OSS/OSK, 1172 Levitow Blvd., McCord AFB, WA 98438 DSN 382-3615, C253-982-3615	62 OSS/OSO, 100 Main St., McChord AFB, WA 98438 DSN 382-9925, C253-982-9925. Dut	Continuous	156
IR329	62 OSS/OSK, 1172 Levitow Blvd., McCord AFB, WA 98438 DSN 382-3615, C253-982-3615	62 OSS/OSO, 100 Main St., McChord AFB, WA 98438 DSN 382-9925, C253-982-9925. Dut	Continuous	156
IR330	62 OSS/OSK, 1172 Levitow Blvd., McCord AFB, WA 98438 DSN 382-3615, C253-982-3615	62 OSS/OSO, 100 Main St., McChord AFB, WA 98438 DSN 382-9925, C253-982-9925. Dut	Continuous	112
IR341	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave., Oak H	Same as Originating Activity. Scheduling hours 0700-1600 local, Mon-Fri only. Sa	Continuous	293
IR342	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave., Oak H	Same as Originating Activity. Scheduling hours 0700-1600 local, Mon-Fri only. Sa	Continuous	329
IR343	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave., Oak H	Same as Originating Activity. Scheduling hours 0700-1600 local, Mon-Fri only. Sa	Continuous	472
IR344	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave., Oak H	Same as Originating Activity. Scheduling hours 0700-1600 local, Mon-Fri only. Sa	Continuous	322
IR346	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave., Oak H	Same as Originating Activity. Scheduling hours 0700-1600 local, Mon-Fri only. Sa	Continuous	333
IR348	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave., Oak H	Same as Originating Activity. Scheduling hours 0700-1600 local, Mon-Fri only. Sa	Continuous	297
IR409	140th OG/CC Buckley ANGB Aurora, CO 80011-9546 DSN 847-9466, C720-847-9466.	140th OG/CC Buckley AFB Aurora, CO 80011-9546. Duty Hrs 0700-1700 DSN 847-9472,	0800-1600 local, Tue-Sat	194
IR414	140th Wing/Airspace Office Buckley AFB Aurora, CO 80011-9546 DSN 847-9470/9471,	140th Wing/Airspace Office Buckley AFB Aurora, CO 80011-9546. Duty Hrs 0700-1700	0800-1600 local, Tue-Sat; OT by NOTAM	106
IR415	140th OG/CC Buckley ANGB Aurora, CO 80011-9546 DSN 847-9466, C720-847-9466.	140th OG/CC Buckley AFB Aurora, CO 80011-9546. Duty Hrs 0700-1700 DSN 847-9472,	0800-1600 local, Tue-Sat; OT by NOTAM	174

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Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR416	140th Wing/Airspace Office Buckley AFB Aurora, CO 80011-9546 DSN 847-9470/9471,	140th Wing/Airspace Office Buckley AFB Aurora, CO 80011-9546. Duty Hrs 0700-1700	0800-1600 local, Tue-Sat; OT by NOTAM	320
IR418	388 RANS/RST, 6066 Cedar Lane, Hill AFB, UT 84056-5812 DSN 777-9384, C801-777-93	388 RANS/RST, 6066 Cedar Lane, Hill AFB, UT 84056-5812 DSN 777-4401, C801-777-44	0700-2400 local Mon-Thu, 0700-1800 local Fri, 0800-1700 local Sat	45
IR420	388 RANS/RST, 6066 Cedar Lane, Hill AFB, UT 84056-5812 DSN 777-9384, C801-777-93	388 RANS/RST, 6066 Cedar Lane, Hill AFB, UT 84056-5812 DSN 777-4401, C801-777-44	0700-2400 local Mon-Thu, 0700-1800 local Fri, 0800-1700 local Sat	40
IR424	140th Wing/Airspace Office Buckley AFB Aurora, CO 80011-9546 DSN 847-9470/9471,	140th Wing/Airspace Office Buckley AFB Aurora, CO 80011-9546. Duty Hrs 0700-1700	0800-1600 local, Tue-Sat; OT by NOTAM	152
IR425	Commander AFFTC, 412 OSS/OSAA, 235 S. Flightline Rd. Edwards AFB, CA 93523-6460	Commander AFFTC, 412 OSS/OSR, 300 E Yeager Blvd, Edwards AFB, CA 93524 DSN 527-4	Sunrise-Sunset by NOTAM	650
IR473	28 OSS/OSXA, 1956 Scott Dr., Ste. 201, Ellsworth AFB, SD 57706-4710 DSN 675-1230	28 OSS/OSXS, 1956 Scott Dr., Ste. 201, Ellsworth AFB, SD 57706-4710 DSN 675-4246	Continuous	708
IR479	120 FW/OSAD (ANG) 2800 Airport Ave. B, Great Falls, MT 59404 DSN 791-0186, C406-	Same as Originating Activity	By NOTAM	576
IR480	120 FW/OSAD (ANG) 2800 Airport Ave. B, Great Falls, MT 59404 DSN 791-0186, C406-	Same as Originating Activity	By NOTAM	418
IR485	28 OSS/OSXA, 1956 Scott Dr., Ste. 201, Ellsworth AFB, SD 57706-4710 DSN 675-1230	28 OSS/OSXS, 1956 Scott Dr., Ste. 201, Ellsworth AFB, SD 57706-4710 DSN 675-4246	Continuous	305
IR492	28 OSS/OSXA, 1956 Scott Dr., Ste. 201, Ellsworth AFB, SD 57706-4710 DSN 675-1230	28 OSS/OSXS, 1956 Scott Dr., Ste. 201, Ellsworth AFB, SD 57706-4710 DSN 675-4246	Continuous	582
IR499	28 OSS/OSXA, 1956 Scott Dr., Ste. 201, Ellsworth AFB, SD 57706-4710 DSN 675-1230	28 OSS/OSXS, 1956 Scott Dr., Ste. 201, Ellsworth AFB, SD 57706-4710 DSN 675-4246	Continuous	355
IR500	7 OSS/OSOR, 966 Ave. D-4, Ste. 117, Dyess AFB, TX 79607 DSN 461-3666, C325-696-3	7 OSS/OSOR, 966 Ave. D-4, Ste. 117, Dyess AFB, TX 79607 DSN 461-3665, C325-696-3	Continuous	542
IR501	7 OSS/OSOR, 966 Ave. D-4, Ste. 117, Dyess AFB, TX 79607 DSN 461-3666, C325-696-3	7 OSS/OSOR, 966 Ave. D-4, Ste. 117, Dyess AFB, TX 79607 DSN 461-3665, C325-696-3	Continuous	724
IR504	509 OSS/OSKA, 905 Spirit Blvd., Whiteman AFB, MO 65305 DSN 975-1713/1754, C660-6	Same as Originating Activity	Continuous	91
IR504	509 OSS/OSOS, 905 Spirit Blvd., Whiteman AFB, MO 65305 DSN 975-1713/1754, C660-6	Same as Originating Activity	Continuous	178
IR505	114 FW (ANG), Joe Foss Field, Siouz Falls, SD 57104-0264 DSN 798-7754/46, C605-9	Same as Originating Activity	Daylight hours, Mon-Sat, OT By NOTAM	138
IR508	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7745, C605-988-	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7754/7746, C605	Daylight hours, Mon-Sat, OT By NOTAM	239
IR509	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7745, C605-988-	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7754/7746, C605	Daylight hours, Tue-Sat, OT by NOTAM	306
IR513	DET 1, 184 IW, Smoky Hill ANG Range, 8429 W Farrelly Rd, Salina, KS 67401-9407.	Same as Originating Activity	Continuous	383
IR514	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7754/46, C605-9	Same as Originating Activity	Daylight hours, Tue-Sat, OT by NOTAM	223
IR518	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7745, C605-988-	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7754/7746, C605	Daylight hours, Mon-Sat, OT By NOTAM	239

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR526	DET 1, 184 IW, Smoky Hill ANG Range, 8429 W Farrelly Rd, Salina, KS 67401-9407.	Same as Originating Activity	Continuous	308
IR527	183 FW/OSF, Capital Airport, Springfield, IL 62707 DSN 892-8202.	Same as Originating Activity	Sunrise-Sunset	173
IR592	509 OSS/OSKA, 905 Spirit Blvd., Whiteman AFB, MO 65305 DSN 975-1713/1754, C660-6	509 OSS/OSOS, 905 Spirit Blvd., Whiteman AFB, MO 65305 DSN 975-1713/1754, C660-6	Continuous	649
IR605	148th FIG (ANG), Duluth Intl., MN 55811 DSN 825-7265.	Same as Originating Activity	Daily 1400-0500Z++, available OT	135
IR606	148th FIG (ANG), Duluth Intl., MN 55811 DSN 825-7265.	Same as Originating Activity	Daily 1400-0500Z++, Usage between 0500-1400Z++ is allowable	135
IR608	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ Mon-Fri, weekends by NOTAM	258
IR609	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2002/3527, C701-723-2002.	Continuous	795
IR610	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2002/3527, C701-723-2002/	Continuous	777
IR613	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7754/46, C605-9	Same as Originating Activity	Daylight hours, Tue-Sat, OT by NOTAM	198
IR614	183 FW/OSF, Capital Airport, Springfield, IL 62707 DSN 892-8202.	Same as Originating Activity	Daylight hours	135
IR618	181 FW (ANG), Hulman Regional Airport, 1100 S. Petercheff St., Tere Haute, IN 47	Same as Originating Activity	Sunrise-Sunset, Tue-Sun, OT by NOTAM	134
IR644	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2639/3527, C701-723-2639/	Continuous	606
IR649	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2639/3527, C701-723-2639/	Continuous	186
IR654	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2002/3527, C701-723-2002/	Continuous	688
IR655	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2002/3527, C701-723-2002/	Continuous	1,035
IR656	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2002/3527, C701-723-2002/	Continuous	940
IR678	5 OSS/A-3C, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2002/3527, C701-723-	Continuous	524
IR714	COMSTRKFIGHTWINGLANT, Oceana NAS, Virginia Beach, VA 23460 DSN 433-4013, C757-43	FACSFAC VACAPES, Oceana NAS, Virginia Beach, VA 23460 DSN 433-1228, C757-433-122	Continuous	335
IR715	COMSTRKFIGHTWINGLANT, Oceana NAS, Virginia Beach, VA 23460 DSN 433-4013, C757-43	FACSFAC VACAPES, Oceana NAS, Virginia Beach, VA 23460 DSN 433-1228, C757-433-122	Continuous	397
IR718	COMSTRKFIGHTWINGLANT, Oceana NAS, Virginia Beach, VA 23460 DSN 433-4013, C757-43	FACSFAC VACAPES, Oceana NAS, Virginia Beach, VA 23460 DSN 433-1228, C757-433-122	Continuous	493

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR719	COMSTRKFIGHTWINGLANT, Oceana NAS, Virginia Beach, VA 23460 DSN 433-4013, C757-43	FACSFAC VACAPES, Oceana NAS, Virginia Beach, VA 23460 DSN 433-1228, C757-433-122	Continuous	424
IR720	COMSTRKFIGHTWINGLANT, Oceana NAS, Virginia Beach, VA 23460 DSN 433-4013, C757-43	FACSFAC VACAPES, Oceana NAS, Virginia Beach, VA 23460 DSN 433-1228, C757-433-122	Continuous	407
IR721	20 OSS/OSOA, Shaw AFB, SC 29152-5000 DSN 965-1121/1122, C803-895-1121/1122, Fax	20 OSS/OSOS, Shaw AFB, SC 29152 Duty hrs DSN 965-1118/1119, C803-895-1118/1119.	Continuous	199
IR723	FACSFAC, Penscola, FL 32508-5217, DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ Mon-Fri, occasionally weekends	262
IR726	20 OSS/OSOA, Shaw AFB, SC 29152-5000 DSN 965-1121/1122, C803-895-1121/1122, Fax	20 OSS/OSOS, Shaw AFB, SC 29152-5000 Duty hours DSN 965-1118/1119, C803-895-1118	Continuous	144
IR743	20 OSS/OSOA, Shaw AFB, SC 29152-5000 DSN 965-1121/1122, C803-895-1121/1122, Fax	20 OSS/OSOS, Shaw AFB, SC 29152 Duty hrs DSN 965-1118/1119, C803-895-1118/1119.	Continuous	144
IR760	COMSTRKFIGHTWINGLANT, Oceana NAS, Virginia Beach, VA 23460 DSN 433-4013, C757-43	FACSFAC VACAPES, Oceana NAS, Virginia Beach, VA 23460 DSN 433-1228, C757-433-122	Continuous	362
IR761	COMSTRKFIGHTWINGLANT, Oceana NAS, Virginia Beach, VA 23460 DSN 433-4013, C757-43	FACSFAC VACAPES, Oceana NAS, Virginia Beach, VA 23460 DSN 433-1228, C757-433-122	Continuous	324
IR762	COMSTRKFIGHTWINGLANT, Oceana NAS, Virginia Beach, VA 23460 DSN 433-4013, C757-43	FACSFAC VACAPES, Oceana NAS, Virginia Beach, VA 23460 DSN 433-1228, C757-433-122	Continuous	324
IR800	104 FW, Barnes ANGB, Westfield, MA 01085-1385 DSN 636-9228/9229, C413-568-9151 e	Same as Originating Activity	Continuous	894
IR801	174 FW, Det 1, Ft. Drum, NY 13608 DSN 772-5990/2835, C315-772-5990.	Same as Originating Activity	Continuous	296
IR802	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2002/3527, C701-723-2002/	Continuous	542
IR803	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2002/3527, C701-723-2002/	Continuous	384
IR804	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2002/3527, C701-723-2002/	Continuous	1,217
IR805	5 OSS/OSTC, 300 Summit Dr., Minot AFB, ND 58705-5044 DSN 453-2967, C701-723-2967	23 BS/DOS, 300 Summit Dr., Minot AFB, ND 58705 DSN 453-2002/3527, C701-723-2002/	Continuous	587
IR850	Commander, Naval Air Warfare Center Weapons Division, Code 52E000E, NAWS, Pt. Mu	Commander, Naval Air Warfare Center Weapons Division, Code 52911GE, NAWS, Pt. Mu	Sunrise-Sunset by NOTAM	295
IR851	Commander, Naval Air Warfare Center Weapons Division, Code 52E000E, NAWS, Pt. Mu	Commander, Naval Air Warfare Center Weapons Division, Code 52911GE, NAWS, Pt. Mu	Daily Sunrise-Sunset	390
IR852	Commander, Naval Air Warfare Center Weapons Division, Code 52E000E, NAWS, Pt. Mu	Commander, Naval Air Warfare Center Weapons Division, Code 52911GE, NAWS, Pt. Mu	Sunrise-Sunset	199

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR900	611 AOG/CC, 9480 Pease Ave., Ste. 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	160
IR901	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	67
IR902	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	175
IR903	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	206
IR905	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	363
IR909	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	76
IR911	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	67
IR912	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	175
IR913	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	206
IR915	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	175
IR916	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	137
IR917	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	147
IR918	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	127
IR919	611 AOG/CC, 9480 Pease Ave., Ste. 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	207
IR921	611 AOG/CC, 9480 Pease Ave., Ste. 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	161
IR922	611 AOG/CC, 9480 Pease Ave., Ste. 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	106
IR923	611 AOG/CC, 9480 Pease Ave., Ste. 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	106
IR926	611 AOG/CC, 9480 Pease Ave., Ste. 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	101

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
IR927	611 AOG/CC, 9480 Pease Ave., Ste. 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	52
IR928	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	37
IR929	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	37
IR939	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	76
IR952	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	672
IR953	611 AOG/CC, 9480 Pease Ave., Ste. 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	477
IR983	PACAF/DOCS, 25 E ST, SUITE I232, HICKAM AFB, HI 96853-5426 DSN 449-4173.	36 OSS/OSA, UNIT 14035, APO AP 96542-4035 DSN(315)-366-2770.	Continuous	552
SR038	Base Operations, Lawson AAF, Fort Benning, Ga. DSN 835-3524/2857 C706-545-3524.	Same as Originating Activity	Continuous	159
SR039	Base Operations, Lawson AAF, Fort Benning, Ga. DSN 835-3524/2857 C706-545-3524.	Same as Originating Activity	Continuous	95
SR040	94/OSS Dobbins AFB, GA 30069-5009 DSN 625-3498, C678-655-3498.	Same as Originating Activity	1200-0300Z ++	107
SR059	118 AW, 240 Knapp Blvd, Nashville, TN 37217, DSN 778-6362/6342, C615-399-5662/56	Same as Originating Activity	Continuous	178
SR060	118 AW, 240 Knapp Blvd, Nashville, TN 37217, DSN 778-6362/6342, C615-399-5662/56	Same as Originating Activity	Continuous	173
SR061	118 AW, 240 Knapp Blvd, Nashville, TN 37217, DSN 778-6362/6342, C615-399-5662/56	Same as Originating Activity	Continuous	125
SR062	118 AW, 240 Knapp Blvd, Nashville, TN 37217, DSN 778-6362/6342, C615-399-5662/56	Same as Originating Activity	Continuous	122
SR069	908 OSF/DOO, 430 W Maxwell Blvd, Bldg 1050, Maxwell AFB, AL 36112-6591 DSN 493-7	Same as Originating Activity	1400-0400Z++	124
SR070	908 OSF/DOO, 430 W Maxwell Blvd, Bldg 1050, Maxwell AFB, AL 36112-6591 DSN 493-7	Same as Originating Activity	1400-0400Z++	155
SR071	908 OSF/DOO, 430 W Maxwell Blvd, Bldg 1050, Maxwell AFB, AL 36112-6591 DSN 493-7	Same as Originating Activity	1300-0500Z++	150
SR072	908 OSF/DOO, 430 W Maxwell Blvd, Bldg 1050, Maxwell AFB, AL 36112-6591 DSN 493-7	Same as Originating Activity	1300-0500Z++	156
SR073	164 AW (ANG), Memphis Intl, TN 38118 DSN 726-7131.	Columbus AFB, MS DSN 742-7840/7847 C662-434-7840/7847.	Continuous	148
SR074	164 AW (ANG), Memphis Intl, TN 38118 DSN 726-7131.	Columbus AFB, MS DSN 742-7840/7847 C662-434-7840/7847.	Continuous	164
SR075	164 AW (ANG), Memphis Intl, TN 38118 DSN 726-7131.	Columbus AFB, MS DSN 742-7840/7847 C662-434-7840/7847.	Continuous	120
SR1001	3 OSS/DOH, 10460 L Street, Elmendorf AFB, AK 99506-2670 DSN 317-552-4658, C907-5	3 OSS/DOTS, DSN 317-552-3457, C907-552-3457.	Continuous	172
SR1002	3 OSS/DOH, 10460 L Street, Elmendorf AFB, AK 99506-2670 DSN 317-552-4658, C907-5	3 OSS/DOTS, DSN 317-552-3457, C907-552-3457.	Continuous	77
SR1003	3 OSS/DOH, 10460 L Street, Elmendorf AFB, AK 99506-2670 DSN 317-552-4658, C907-5	3 OSS/DOTS, DSN 317-552-3457, C907-552-3457.	Continuous	109

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
SR1004	3 OSS/DOH, 10460 L Street, Elmendorf AFB, AK 99506-2670 DSN 317-552-4658, C907-5	3 OSS/DOTS, DSN 317-552-3457, C907-552-3457.	Continuous	77
SR1005	3 OSS/DOH, 10460 L Street, Elmendorf AFB, AK 99506-2670 DSN 317-552-4658, C907-5	3 OSS/DOTS, DSN 317-552-3457, C907-552-3457.	Continuous	139
SR1006	3 OSS/DOH, 10460 L Street, Elmendorf AFB, AK 99506-2670 DSN 317-552-4658, C907-5	3 OSS/DOTS, DSN 317-552-3457, C907-552-3457.	Continuous	53
SR1007	3 OSS/DOH, 10460 L Street, Elmendorf AFB, AK 99506-2670 DSN 317-552-4658, C907-5	3 OSS/DOTS, DSN 317-552-3457, C907-552-3457.	Continuous	71
SR1008	3 OSS/DOH, 10460 L Street, Elmendorf AFB, AK 99506-2670 DSN 317-552-4658, C907-5	3 OSS/DOTS, DSN 317-552-3457, C907-552-3457.	Continuous	110
SR1009	3 OSS/DOH, 10460 L Street, Elmendorf AFB, AK 99506-2670 DSN 317-552-4658, C907-5	3 OSS/DOTS, DSN 317-552-3457, C907-552-3457.	Continuous	182
SR101	16 OSS/DOO, Hurlburt Field, FL 32544 DSN 579-6877/7812, C850-884-6877/7812.	Same as Originating Activity	Continuous	907
SR1010	3 OSS/DOH, 10460 L Street, Elmendorf AFB, AK 99506-2670 DSN 317-552-4658, C907-5	3 OSS/DOTS, DSN 317-552-3457, C907-552-3457.	Continuous	147
SR102	16 OSS/DOO, Hurlburt Field, FL 32544 DSN 579-6877/7812, C850-884-6877/7812.	Same as Originating Activity	Continuous	291
SR103	16 OSS/DOO, Hurlburt Field, FL 32544 DSN 579-6877/7812, C850-884-6877/7812.	Same as Originating Activity	Continuous	433
SR104	16 OSS/DOO, Hurlburt Field, FL 32544 DSN 579-6877/7812, C850-884-6877/7812.	Same as Originating Activity	Continuous	823
SR105	16 OSS/DOO, Hurlburt Field, FL 32544 DSN 579-6877/7812, C850-884-6877/7812.	Same as Originating Activity	Continuous	227
SR106	16 OSS/DOO, Hurlburt Field, FL 32544 DSN 579-6877/7812, C850-884-6877/7812.	Same as Originating Activity	Continuous	426
SR119	16 OSS/DOO, Hurlburt Field, FL 32544 DSN 579-6877/7812, C850-884-6877/7812.	Same as Originating Activity	Continuous	800
SR137	14 OSS/OSOP, Columbus AFB, MS 39710-5000 DSN 742-7560/7633, C662-434-7560/7633.	37/41 FTS, Columbus AFB, MS 39710-5000 DSN 742-7666/7667, C662-434-7666/7667.	SR-SS, Daily	143
SR138	14 OSS/OSOP, Columbus AFB, MS 39710 DSN 742-7560/7633, C662-434-7560/7633.	37/41 FTS, Columbus AFB, MS 39710 DSN 742-7666/7667, C662-434-7666/7667.	SR-SS, Daily	143
SR166	437 OSS/OSTA, Charleston AFB, SC 29404-5054 DSN 673-5613, C843-963-5613.	20 OSS/OSOS, Shaw AFB, SC 29152-5000 DSN 965-1118/1119, C803-895-1118/1119, FAX	Continuous	153
SR200	58 OSS/DOO, Kirtland AFB, NM 87117-5861 DSN 263-5979/5888/5701, C505-853-5979/58	Same as Originating Activity	Continuous	242
SR201	58 OSS/DOO, Kirtland AFB, NM 87117-5861 DSN 263-5979/5888/5701, C505-853-5979/58	Same as Originating Activity	Continuous	421
SR205	97 OSS/DOA, 400 N. 6th Street, Altus AFB, OK 73521 DSN 866-6098, C580-481-6098.	97 OSS/OSK 400 N. 6th Street, Suite 12, Altus AFB, OK 73521 DSN 866-7110, C580-4	0830-0230 local Mon-Fri	88
SR206	97 OSS/DOA, 400 N. 6th Street, Altus AFB, OK 73521 DSN 866-6098, C580-481-6098.	97 OSS/OSK 400 N. 6th Street, Suite 12, Altus AFB, OK 73521 DSN 866-7110, C580-4	0830-0230 local Mon-Fri	99
SR208	97 OSS/DOA, 400 N. 6th Street, Altus AFB, OK 73521 DSN 866-6098, C580-481-6098.	97 OSS/OSK, 400 N. 6th Street, Suite 12, Altus AFB, OK DSN 866-7110, C580-481-71	0830-0230 local Mon-Fri	116
SR210	58 OSS/DOO, Kirtland AFB, NM 87117-5861 DSN 263-5979/5888/5701, C505-853-5979/58	Same as Originating Activity	Continuous	148
SR211	58 OSS/DOO, Kirtland AFB, NM 871175861 DSN 263-5979/5888/5701, C505-853-5979/588	Same as Originating Activity	Continuous	189
SR212	27 SOSS/OSTA, 110 E Sexton Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2521,	27 SOSS/OSTA, 110 E Sexton Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2276,	Continuous	230

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Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
SR213	27 SOSS/OSTA, 110 E Sexton Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2521,	27 SOSS/OSTA, 110 E Sexton Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2276,	Continuous	235
SR214	27 SOSS/OSTA, 110 E Sexton Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2521,	27 SOSS/OSTA, 110 E Sexton Ave., Suite 1081, Cannon AFB, NM 88103 DSN 681-2276,	Continuous	249
SR216	97 OSS/DOA, 400 N. 6th Street, Altus AFB, OK 73521 DSN 866-6098, C580-481-6098.	97 OSS/OSK, 400 N. 6th Street, Suite 12, Altus AFB, OK 73521 DSN 866-7110, C580-	0830-0230 local Mon-Fri	111
SR217	97 OSS/DOA, 400 N. 6th Street, Altus AFB, OK 73521 DSN 866-6098, C580-481-6098.	97 OSS/OSK, 400 N. 6th Street, Suite 12, Altus AFB, OK 73521 DSN 866-7110, C580-	0830-0230 local Mon-Fri	114
SR218	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	303
SR219	314 OSS/OSK, 380 Chief WilliamsDrive, Little Rock AFB, AR 72099-4976 DSN 731-330	Same as Originating Activity.	Continuous	262
SR220	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	198
SR221	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	840
SR222	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	131
SR223	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	137
SR224	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	292
SR225	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	362
SR226	314 OSS/OSK, 380 CMSGT Williams Street, Little Rock AFB, AR 72099-4976 DSN 731-3	314 OSS/OSK, 380 CMSGT Williams Street, Little Rock AFB, AR 72099-4976 DSN 731-3	Continuous	73
SR227	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	279
SR228	301 OG/SUA, NAS JRB Fort Worth, TX DSN 739-6903/6904/6905, C817-782-6903/6904/69	Same as Originating Activity	Continuous	193
SR229	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	248
SR230	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	311
SR231	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity.	Continuous	302
SR232	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	239
SR233	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	203
SR234	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	126
SR235	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850 C580-213-7850.	8 FTS/DOO, Vance AFB, OK 73705-5202 DSN 448-6037 C580-213-6037	Sunrise -Sunset and active days per local directives	126
SR236	317 AG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	196
SR237	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	107
SR238	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity	Continuous	98
SR239	314 OSS/OSK, 380 CMSGT Williams Street, Little Rock AFB, AR 72099-4976 DSN 731-3	314 OSS/OSK, 380 CMSGT Williams Street, Little Rock AFB, AR 72099-4976 DSN 731-3	Continuous	139

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Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
SR240	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	134
SR241	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850 C580-213-7850.	8 FTS/DOO, Vance AFB, OK 73705-5202 DSN 448-6037 C580-213-6037.	Sunrise-Sunset and active days per local directives	143
SR242	317 AG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	193
SR243	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	163
SR244	317 AG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	119
SR245	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	129
SR246	314 OSS/OSK, 380 Chief Williams Drive, Little Rock AFB, AR 72099-4976 DSN 731-33	Same as Originating Activity.	Continuous	230
SR247	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850 C580-213-7850.	8 FTS/DOO, Vance AFB, OK 73705-5202 DSN 448-6037 C580-213-6037.	Sunrise-Sunset and active days per local directives	143
SR249	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	197
SR250	317 AG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	81
SR251	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	73
SR253	71 FTS/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850 C580-213-7850.	8FTS/DOO, Vance AFB, OK 73705-5202 DSN 448-6037 C580-213-6037.	Sunrise-Sunset and active days per local directives	126
SR255	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	85
SR258	317 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	171
SR261	317 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	133
SR267	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	171
SR270	301 OG/SUA, NAS JRB Fort Worth, TX DSN 739-6903/6904/6905, C817-782-6903/6904/69	Same as Originating Activity	0700-2200 local	182
SR273	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	156
SR274	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	Same as Originating Activity	Sunrise to Sunset daily	169
SR275	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7850.	Same as Originating Activity	Sunrise to Sunset daily	169
SR276	47 OSS/OSOR, 570 2nd St., Ste 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C830-	86 FTS/DOS, 80 Rio Lobo Ln, Laughlin AFB, TX 78843 DSN 732-5584, C830-298-5584.	Sunrise-Sunset daily	184
SR277	47 OSS/OSOR, 570 2nd St., Ste. 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C830	86 FTS/DOS, 80 Rio Lobo Ln, Laughlin AFB, TX 78843 DSN 732-5584, C830-298-5584.	Sunrise-Sunset daily	183
SR280	7 WG, Dyess AFB, TX 79607 DSN 461-2318.	Same as Originating Activity	Continuous	47
SR281	47 OSS/OSOR, 570 2nd St., Ste 6, Laughlin AFB, TX 78843-5222 DSN 732-5864/5337,	85 FTS/DOS, 570 2nd St., Laughlin AFB, TX 78843-5220 DSN 732-5121/5429, C830-298	Sunrise-Sunset daily	761
SR282	47 OSS/OSOR, 570 2nd St., Ste. 6, Laughlin AFB, TX 78843-5222 DSN 732-5864/5337,	85 FTS/DOS, 570 2nd St., Laughlin AFB, TX 78843-5220 DSN 732-5121/5429, C830-298	Sunrise-Sunset daily	667

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Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
SR283	47 OSS/OSOR, 570 2nd St., Ste 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C830-	85 FTS/DOS, 570 2nd St., Laughlin AFB, TX 78843-5220 DSN 732-5121, C830-298-5121	Sunrise-Sunset daily	133
SR284	47 OSS/OSOR, 570 2nd St., Ste. 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C830	85 FTS/DOS, 570 2nd St., Laughlin AFB, TX 78843-5220 DSN 732-5121, C830-298-5121	Close UFN	133
SR286	12 OSS/OSOA, Randolph AFB, TX 78150-5000 DSN 487-5580, C210-652-5580.	559 FTS, Randolph AFB, TX 78150 DSN 487-5661, C210-652-5661.	Sunrise-Sunset Daily, except holidays	115
SR287	12 OSS/OSOA, Randolph AFB, TX 78150-5000 DSN 487-5580, C210-652-5580.	559 FTS, Randolph AFB, TX 78150 DSN 487-5661, C210-652-5661.	Sunrise-Sunset Daily, except holidays	117
SR290	12 OSS/OSOA, Randolph AFB, TX 78150-5000 DSN 487-5580, C210-652-5580.	559 FTS, Randolph AFB, TX 78150 DSN 487-5661, C210-652-5661.	Sunrise-Sunset Daily, except holidays	120
SR292	12 OSS/OSOA, Randolph AFB, TX 78150-5000 DSN 487-5580, C210-652-5580.	559 FTS, Randolph AFB, TX 78150 DSN 487-5661, C210-652-5661.	Sunrise-Sunset daily except holidays	114
SR293	12 OSS/OSOA, Randolph AFB, TX 78150-5000 DSN 487-5580, C210-652-5580.	559 FTS, Randolph AFB, TX 78150 DSN 487-5661, C210-652-5661.	Sunrise- Sunset daily	108
SR294	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850 C580-213-7850.	8 FTS/DOO, Vance AFB, OK 73705-5202 DSN 448-6037 C580-213-6037.	Sunrise-Sunset	198
SR295	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850 C580-213-7850.	8 FTS/DOO, Vance AFB, OK 73705-5202 DSN 448-6037 C580-213-6037.	Sunrise-Sunset	194
SR296	71 FTW/OSOP, Vance AFB, OK 73705-5202 DSN 448-7850 C580-213-7850.	8 FTS/DOO, Vance AFB, OK 73705-5202 DSN 448-6037 C580-213-6037.	Sunrise-Sunset	179
SR300	60 OSS/OSO, 611 E. St., Travis AFB, CA 94535 DSN 837-1075, C707-424-1075.	60 OSS/OSO, 611 E. St., Travis AFB, CA 94535 DSN 837-5582, C707-424-5582.	Continuous	763
SR301	60 OSS/OSO, 611 E. St., Travis AFB, CA 94535 DSN 837-1075, C707-424-1075.	60 OSS/OSO, 611 E. St., Travis AFB, CA 94535 DSN 837-5582, C707-424-5582.	Continuous	763
SR311	129 RQW/DOW, PO Box 103, Stop 14, Moffett Federal Afld, CA 94035-5000 DSN 359-93	Same as Originating Activity	Continuous	145
SR353	129 RQW/DOW, PO Box 103, Stop 14, Moffett Federal Afld, CA 94035-5000 DSN 359-93	Same as Originating Activity	Continuous	110
SR359	129 RQW/DOW, PO Box 103, Stop 14, Moffett Federal Afld, CA 94035-5000 DSN 359-93	Same as Originating Activity	Continuous	145
SR381	129 RQW/DOW, PO Box 103, Stop 14, Moffett Federal Afld, CA 94035-5000 DSN 359-93	Same as Originating Activity	Continuous	142
SR390	146 AW/DOXT (ANG), 106 Mulcahey Dr., Port Hueneme, CA 93041-4003 DSN 893-7590/75	Same as Originating Activity	Continuous	97
SR397	146 AW/DOXT (ANG), 106 Mulcahey Dr., Port Hueneme, CA 93041-4003 DSN 893-7590/75	Same as Originating Activity	Continuous	114
SR398	129 RQW/DOW, PO Box 103, Stop 14, Moffett Federal Afld, CA 94035-5000 DSN 359-93	Same as Originating Activity	Continuous	43
SR488	62 OSS/OSO, McChord AFB, WA 98438-1109 DSN 382-9925, C253-982-9925. During non-d	Same as Originating Activity	Continuous	30
SR489	62 OSS/OSO, McChord AFB, WA 98438-1109 DSN 382-9925, C253-982-9925. During non-d	Same as Originating Activity	Continuous	23
SR616	139 Airlift Wg., 705 Memorial Drive, St. Joseph, MO 64503-9307 DSN 356-3225/3470	Same as Originating Activity	1300-0500Z++ daily	148

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

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Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
SR617	139 Airlift Wg., 705 Memorial Drive, St. Joseph, MO 64503-9307 DSN 356-3225/3470	Same as Originating Activity	1300-0500Z++ daily	147
SR618	139 Airlift Wg., 705 Memorial Drive, St. Joseph, MO 64503-9307 DSN 356-3225/3470	Same as Originating Activity	1300-0500Z++ daily	129
SR619	139 Airlift Wg., 705 Memorial Drive, St. Joseph, MO 64503-9307 DSN 356-3225/3470	Same as Originating Activity	1300-0500Z++ daily	137
SR701	191 AG, Selfridge ANGB, MI 48045 DSN 273-4498/4441, C810-463-3664.	Same as Originating Activity	1600-0400Z++ Tue-Sat, 1600-2200Z++ Sun	177
SR702	191 AG, Selfridge ANGB, MI 48045 DSN 273-4498/4441, C810-463-3664.	Same as Originating Activity	1600-0400Z++ Tue-Sat, 1600-2200Z++ Sun	166
SR703	191 AG, Selfridge ANGB, MI 48045 DSN 273-4498/4441, C810-463-3664.	Same as Originating Activity	1600-0400Z++ Tue-Sat, 1600-2200Z++ Sun	75
SR707	179 AW, Mansfield Lahm Airport, OH 44903-0179 DSN 696-6165.	Same as Originating Activity	0700-2300 local daily	142
SR708	179 AW, Mansfield Lahm Airport, OH 44903-0179 DSN 696-6165.	Same as Originating Activity	0700-2300 local daily	164
SR709	179 AW, Mansfield Lahm Airport, OH 44903-0179 DSN 696-6165.	Same as Originating Activity	0700-2300 local daily	105
SR710	179 AW, Mansfield Lahm Airport, OH 44903-0179 DSN 696-6165.	Same as Originating Activity	0700-2300 local daily	110
SR711	179 AW, Mansfield Lahm Airport, OH 44903-0179 DSN 696-6165.	Same as Originating Activity	0700-2300 local daily	115
SR712	179 AW, Mansfield Lahm Airport, OH 44903-0179 DSN 696-6165.	Same as Originating Activity	0700-2300 local daily	140
SR713	179 AW, Mansfield Lahm Airport, OH 44903-0179 DSN 696-6165.	Same as Originating Activity	0700-2300 local daily	117
SR714	179 AW, Mansfield Lahm Airport, OH 44903-0179 DSN 696-6165.	Same as Originating Activity	0700-2300 local daily	88
SR715	179 AW, Mansfield Lahm Airport, OH 44903-0179 DSN 696-6165.	Same as Originating Activity	0700-2300 local daily	148
SR727	133 TAW, Minneapolis-St. Paul Intl, MN 55111, DSN 825-5680.	Same as Originating Activity	1930-2230 lcl Tue and Thu; 1000-1500 Lcl third Sat each month; OT by NOTAM	200
SR728	133 TAW, Minneapolis-St. Paul Intl, MN 55111, DSN 825-5680.	Same as Originating Activity	1930-2230 lcl Tue and Thu; 1000-1500 Lcl third Sat each month; OT by NOTAM	179
SR729	133 TAW, Minneapolis-St. Paul Intl, MN 55111, DSN 825-5680.	Same as Originating Activity	1930-2230 lcl Tue and Thu; 1000-1500 Lcl third Sat each month; OT by NOTAM	142
SR730	133 TAW, Minneapolis-St. Paul Intl, MN 55111, DSN 825-5680.	Same as Originating Activity	1930-2230 lcl Tue and Thu; 1000-1500 Lcl third Sat each month; OT by NOTAM	136
SR731	133 TAW, Minneapolis-St. Paul Intl, MN 55111, DSN 825-5680.	Same as Originating Activity	1930-2230 lcl Tue and Thu; 1000-1500 Lcl third Sat each month; OT by NOTAM	88
SR771	440 AW/DOO, General Mitchell IAP, Milwaukee, WI 53207, DSN 741-5155/5157, FAX DS	Same as Originating Activity	2200-0330Z++ Tue-Fri; 1500-2200Z++ Sat-Sun	255
SR776	440 AW/DOO, General Mitchell IAP, Milwaukee, WI 53207, DSN 741-5155/5157, FAX DS	Same as Originating Activity	2000-0400Z++ Tue-Fri; 1600-2200Z++ Sat-Sun	159
SR781	Alpena CRTC/OTM (ANG), 5884 A Street, Alpena MI 49707-8125 DSN 741-3509/3226.	Same as Originating Activity	0700-2300 local daily	118
SR782	Alpena CRTC/OTM (ANG), 5884 A Street, Alpena MI 49707-8125 DSN 741-3509/3226.	Same as Originating Activity	0700-2300 local daily	152

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
SR785	440 AW/DOO, General Mitchell IAP, Milwaukee, WI 53207, DSN 741-5155/5157, FAX DS	Same as Originating Activity	2000-0400Z++ Tue-Fri; 1600-2200Z++ Sat-Sun	141
SR800	166 OSF/OSK, 2805 Spruance Drive, New Castle 19720-1615 DSN 445-7554 C302-323-35	Same as Originating Activity	0800-2300 local	156
SR801	166 OSF/OSK, 2805 Spruance Drive, New Castle 19720-1615 DSN 445-7554 C302-323-35	Same as Originating Activity	0800-2300 local	208
SR802	167 AW, Eastern West Virginia Regional, Martinsburg, WV 25401 DSN 242-5250.	Same as Originating Activity	Continuous	81
SR803	167 AW, Eastern West Virginia Regional, Martinsburg, WV 25401 DSN 242-5250.	Same as Originating Activity	Continuous	87
SR804	167 AW, Eastern West Virginia Regional, Martinsburg, WV 25401 DSN 242-5250.	Same as Originating Activity	Continuous	95
SR805	166 OSF/OSK, 2805 Spruance Drive, New Castle 19720-1615 DSN 445-7554 C302-323-35	Same as Originating Activity	0800-2300 local	156
SR806	167 AW, Eastern West Virginia Regional, Martinsburg, WV 25401 DSN 242-5250.	Same as Originating Activity	Continuous	122
SR807	167 AW, Eastern West Virginia Regional, Martinsburg, WV 25401 DSN 242-5250.	Same as Originating Activity	Continuous	141
SR808	167 AW, Eastern West Virginia Regional, Martinsburg, WV 25401 DSN 242-5250.	Same as Originating Activity	Continuous	171
SR820	166 OSF/OSK, 2805 Spruance Drive, New Castle 19720-1615 DSN 445-7554 C302-323-35	Same as Originating Activity	0900-2300 local daily	141
SR821	166 OSF/OSK, 2805 Spruance Drive, New Castle 19720-1615 DSN 445-7554 C302-323-35	Same as Originating Activity	0900-2300 local daily	129
SR822	911 AW, Pittsburgh Intl, PA DSN 277-8722/8761.	Same as Originating Activity	1000-0300Z Mon-Sat	125
SR823	914 AW/328 AS,10460 Wagner Dr, Niagra Falls Intl Airport, NY 14304-5010, DSN 238	Same as Originating Activity	1500-0300Z++	183
SR825	914 AW/328 AS,10460 Wagner Dr, Niagra Falls Intl Airport, NY 14304-5010, DSN 238	Same as Originating Activity	1500-0300Z++	181
SR835	166 OSF/OSK, 2805 Spruance Drive, New Castle 19720-1615 DSN 445-7554 C302-323-35	Same as Originating Activity	0900-2300 local	132
SR844	166 Airlift Gp, 166 OSF/DOW, 2600 Spruance Dr, Corporate Commons, New Castle, DE	Same as Originating Activity	0800-2359 local	153
SR845	166 Airlift Gp, 166 OSF/DOW, 2600 Spruance Dr, Corporate Commons, New Castle, DE	Same as Originating Activity	0800-2359 local	200
SR846	166 Airlift Gp, 166 OSF/DOW, 2600 Spruance Dr, Corporate Commons, New Castle, DE	Same as Originating Activity	0800-2359 local	111
SR847	166 Airlift Gp, 166 OSF/DOW, 2600 Spruance Dr, Corporate Commons, New Castle, DE	Same as Originating Activity	0800-2359 local	67
SR867	Commander, Ft Pickett, VA 23824-5000 DSN 438-8506, C804-292-8506.	Same as Originating Activity	Continuous	196
SR871	130 AG (ANG), Kanawha County, Charleston, WV 25311 DSN 366-6291.	Same as Originating Activity	0800-2300 local	150
SR872	130 AG (ANG), Kanawha County, Charleston, WV 25311 DSN 366-6291.	Same as Originating Activity	0800-2300 local	156
SR873	130 AG (ANG), Kanawha County, Charleston, WV 25311 DSN 366-6291.	Same as Originating Activity	0800-2300 local	155
SR874	130 AG (ANG), Kanawha County, Charleston, WV 25311 DSN 366-6291.	Same as Originating Activity	0800-2300 local	130
SR900	143 AW/Operations, 7 Flightline Dr, North Kingstown, RI 02852-7548 DSN 476-3405,	Same as Originating Activity	1200-0400Z++ Daily	153
SR901	143 AW/Operations, 7 Flightline Dr, North Kingstown, RI 02852-7548 DSN 476-3405,	Same as Originating Activity	1200-0400Z++ Daily	98
SR902	143 AW/Operations, 7 Flightline Dr, North Kingstown, RI 02852-7548 DSN 476-3405,	Same as Originating Activity	1200-0400Z++ Daily	160
SR904	143 AW/Operations, 7 Flightline Dr, North Kingstown, RI 02852-7548 DSN 476-3405,	Same as Originating Activity	1000-2200 local	184
SR905	143 AW/Operations, 7 Flightline Dr, North Kingstown, RI 02852-7548 DSN 476-3405,	Same as Originating Activity	1000-2200 local	97

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR025	GA ANG/CRTC/OTR Townsend Range P.O. BOX 220, GA 31331 DSN 860-3303 C912-963-3303	GA ANG/CRTC/OTR Townsend Range P.O. BOX 220, GA 31331 DSN 860-3007 C912-963-3007	0700-2200 LCL, other times by NOTAM	55
VR041	4 OSS/OSOR, Seymour Johnson AFB, NC 27531-5004 DSN 722-2672, C919-722-2672.	4 OSS/OSOS, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129/	Continuous	424
VR042	4 OSS/OSOR, Seymour Johnson AFB, NC 27531-5004 DSN 722-2672, C919-722-2672.	4 OSS/OSOS, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129/	Continuous	503
VR043	4 OSS/OSOR, Seymour Johnson AFB, NC 27531-5004 DSN 722-2672, C919-722-2672.	4 OSS/OSOS, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129/	Continuous	369
VR045	GA ANG/CRTC/OTR Townsend Range, P.O.BOX 220, Townsend, GA 31331, DSN 860-3007 C9	GA ANG/CRTC/OTR Townsend Range, P.O.BOX 220, Townsend, GA 31331, DSN 860-3303 C9	0700-2200 LCL, Mon-Fri, other time by NOTAM	55
VR054	4 OSS/OSR, Seymour Johnson AFB, NC 27531-5004 DSN 722-2672, C919-722-2672.	4 OSS/OSOSF, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129	0700-2100 local Mon-Fri, OT by NOTAM	34
VR058	20 OSS/OSTA, Shaw AFB, SC 29152 DSN 965-1121/1122, C803-895-1121/1122, Fax DSN 9	20 OSS/OSOS, Shaw AFB, SC 29152 DSN 965-1118/1119, C803-895-1118/1119. Non-duty	Continuous (Jan, Mar, May, Jul, Sep, Nov) VR-092 reverse direction other months	199
VR060	187 FW, 5187 Selma Highway , Montgomery, AL 36108-4824 DSN 358-9255, C334-394-72	Same as Originating Activity	0700-1700 Local or by NOTAM	123
VR071	4 OSS/OSR, Seymour Johnson AFB, NC 27531-5004 DSN 722-2672, C919-722-2672.	4 OSS/OSOSF, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129	0700-2100 local Mon-Fri, OT by NOTAM	29
VR073	4 OSS/OSR, Seymour Johnson AFB, NC 27531-5004 DSN 722-2672, C919-722-2672.	4 OSS/OSOSF, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129	Continuous	222
VR083	4 OSS/OSE, Seymour Johnson AFB, NC 27531 DSN 722-2672, C919-722-2672	4 OSS/OSOSF, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129	Continuous	238
VR084	4 OSS/OSR, Seymour Johnson AFB, NC 27531-5004 DSN 722-2672, C919-722-2672.	4 OSS/OSOSF, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129	Continuous	204
VR085	4 OSS/OSR, Seymour Johnson AFB, NC 27531 DSN 722-2672, C919-722-2672.	4 OSS/OSOSF, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129	Continuous	168
VR086	4 OSS/OSR, Seymour Johnson AFB, NC 27531 DSN 722-2672, C919-722-2672.	4 OSS/OSOSF, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129	Continuous	203
VR087	20 OSS/OSTA, Shaw AFB, SC 29152 DSN 965-1121/1122, C803-895-1121/1122, Fax DSN 9	20 OSS/OSOS, Shaw AFB, SC 29152 Duty hrs DSN 965-1118/1119, C803-895-1118/1119.	Continuous	185
VR088	20 OSS/OSTA, Shaw AFB, SC 29152 DSN 965-1121/1122, C803-895-1121/1122, Fax DSN 9	20 OSS/OSOS, Shaw AFB, SC 29152 Duty hrs DSN 965-1118/1119, C803-895-1118/1119.	Continuous	164
VR092	20 OSS/OSTA, Shaw AFB, SC 29152 DSN 965-1121/1122, C803-895-1121/1122, Fax DSN 9	20 OSS/OSOS, Shaw AFB, SC 29152 Duty hrs DSN 965-1118/1119, C803-895-1118/1119.	Continuous (Feb, Apr, Jun, Aug, Oct, Dec) VR-058 opposite direction other months	199
VR093	20 OSS/OSTA, Shaw AFB, SC 29152 DSN 965-1121/1122, C803-895-1121/1122, Fax DSN 9	20 OSS/OSOS, Shaw AFB, SC 29152 Duty hrs DSN 965-1118/1119, C803-895-1118/1119.	Continuous	210

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR094	1st Aviation Group (GA ARNG), Dobbins ARB, GA 30069, DSN 753-3609, C678-569-3609	1st Aviation Group (GA ARNG), Dobbins ARB, GA 30069, DSN 753-3602/3611, C678-569	Continuous	152
VR095	1st Aviation Group (GA ARNG), Dobbins ARB, GA 30069 DSN 753-3609, C678-569-3609,	1st Aviation Group (GA ARNG), Dobbins ARB, GA 30069 DSN 753-3602/3611 C678-569-3	Continuous	267
VR096	4 OSS/OSR, Seymour Johnson AFB, NC 27531 DSN 722-2672, C919-722-2672.	4 OSS/OSOSF, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129	Continuous	145
VR097	20 OSS/OSTA, Shaw AFB, SC 29152 DSN 965-1121/1122, C803-895-1121/1122, Fax DSN 9	20 OSS/OSOS, Shaw AFB, SC 29152, Duty hrs DSN 965-1118/1119, C803-895-1118/1119.	0600-2400 local daily	341
VR100	27 SOSS/OSTA, 110 E. Sextant Ave, Suite 1081, Cannon AFB, NM 88103 DSN 681-2521.	27 SOSS/OSOS, 110 E. Sextant Ave, Suite 1080, Cannon AFB, NM 88103 DSN 681-2276.	Continuous	318
VR1001	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	389
VR1002	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	434
VR1003	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	488
VR1004	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	569
VR1005	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	280
VR1006	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	682
VR1007	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	173
VR1008	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	74
VR1009	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	76
VR101	301 OG/SUA, NAS JRB, Fort Worth, TX 76127 DSN 739-6903/04/05, C817-782-6903/04/0	Same as Originating Activity	0700-2200 local	72
VR1010	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	26
VR1013	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	62
VR1014	14 OSS/OSOP, Columbus AFB, MS 39710-5000 DSN 742-7560/7633, C662-434-7560/7633.	37/41 FTS, Columbus AFB, MS 39710-5000 DSN 742-7666/7667, C662-434-7666/7667.	Sunrise-Sunset daily	177
VR1016	14 OSS/OSOP Columbus AFB, MS 39710 DSN 742-7560/7633 C662-434-7560/7633	48 FTS Columbus AFB, MS 39710 DSN 742-7840/7847 C662-434-7840/7847	Sunrise-Sunset daily	395
VR1017	187 FW, 5187 Selma Highway, Montgomery, AL 36108-4824 DSN 358-9255, C334-394-725	Same as Originating Activity	0700-1730 local, OT by NOTAM	175
VR1020	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ weekdays, occasional weekends	147
VR1021	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ weekdays, occasional weekends	418
VR1022	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ weekdays, occasional weekends	173

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR1023	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ weekdays, occasional weekends	300
VR1024	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0400Z++ weekdays, occasional weekends	297
VR1030	COMTRAWING ONE, NAS MERIDIAN, MS 39309-0136 DSN 637-2487, C601-679-2487.	Same as Originating Activity	1100-0600Z++ daily	255
VR1031	COMTRAWING ONE, NAS MERIDIAN, MS 39309-0136 DSN 637-2487, C601-679-2487.	Same as Originating Activity	1100-0600Z++ daily	341
VR1032	COMTRAWING ONE, NAS MERIDIAN, MS 39309 DSN 637-2854, C601-679-2854.	Same as Originating Activity	1100-0600Z++ daily	211
VR1033	COMTRAWING ONE, NAS MERIDIAN, MS 39309 DSN 637-2854, C601-679-2854.	Same as Originating Activity	1100-0600Z++ daily	322
VR1039	FACSFACJAX, P.O. Box 40, NAS Jacksonville, FL 32212-0040 DSN 942-2004/2005, C904	Same as Originating Activity	Continuous	8
VR104	301 OG/SUA, NAS JRB, Fort Worth, TX 76127 DSN 739-6903/04/05, C817-782-6903/04/0	Same as Originating Activity	0700-2200 local	220
VR1040	CG MCAS CHERRY POINT, ATTN RAC-DIROPS, Cherry Point, NC 28533 DSN 582-3466, C252	Central Scheduling Division MCAS Cherry Point, NC 28533 DSN 582-4040/4041, C252-	Continuous	420
VR1041	CG MCAS CHERRY POINT, ATTN RAC-DIROPS, Cherry Point, NC 28533 DSN 582-3466, C252	Central Scheduling Division MCAS Cherry Point, NC 28533 DSN 582-4040/4041, C252-	Continuous	383
VR1043	CG MCAS CHERRY POINT, ATTN RAC-DIROPS, Cherry Point, NC 28533 DSN 582-3466, C252	Central Scheduling Division MCAS Cherry Point, NC 28533 DSN 582-4040/4041, C252-	0700-2300 local daily	455
VR1046	CG MCAS CHERRY POINT, ATTN RAC-DIROPS, Cherry Point, NC 28533 DSN 582-3466, C252	Central Scheduling Division MCAS Cherry Point, NC 28533 DSN 582-4040/4041, C252-	0600-1800 Local Mon-Fri	243
VR1050	14 OSS/OSOP, Columbus AFB, MS 39710-5000 DSN 742-7560/7633, C662-434-7560/7633.	48 FTS, Columbus AFB, MS 39710-5000 DSN 742-7840/7847, C662-434-7840/7847.	0700-2300 local daily	359
VR1051	14 OSS/OSOP, Columbus AFB, MS 39710-5000 DSN 742-7560/7633, C662-434-7560/7633.	48 FTS, Columbus AFB, MS 39710-5000 DSN 742-7840/7847, C662-434-7840/7847.	0700-2300 local daily	440
VR1052	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0500Z++	358
VR1054	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1300-0500Z++ daily	293
VR1055	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1300-0500Z++ 7 days a week	299
VR1056	FACSFAC, Pensacola, FL 32508-5217 DSN 922-2735, C850-452-2735.	Same as Originating Activity	1200-0500Z++	358
VR1059	20 OSS/OSTA, Shaw AFB, SC 29152 DSN 965-1121/1122, C803-895-1121/1122, Fax DSN 9	20 OSS/OSOS, Shaw AFB, SC 29152 Duty hrs DSN 965-1118/1119, C803-895-1118/1119.	Continuous	312
VR106	97 OSS/DOA, 400 N Sixth St., Altus AFB, OK 73521 DSN 866-6098, C580-481-6098.	97 OSS/OSK, 400 N Sixth St. Suite 12, Altus AFB, OK 73521 DSN 866-7110.	0830-0230 local Mon-Fri	142
VR1061	4 OSS/OSR, Seymour Johnson AFB, NC 27531 DSN 722-2672, C919-722-2672.	4 OSS/OSOSF, Seymour Johnson AFB, NC 27531-5004 DSN 722-2129/2124, C919-722-2129	Continuous	150
VR1065	347 OSS/OSOS, Moody AFB, GA 31699-1899 DSN 460-4544/3531, C229-257-4544/3531.	347 OSS/OSOS, Moody AFB, GA 31699-1899 DSN 460-4544/3531 C229-257-4544/3531. Mon	0700-2400L daily	163

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR1066	347 OSS/OSKA, Moody AFB, GA 31699-1899 DSN 460-4131, C229-257-4131.	347 OSS/OSOS, Moody AFB, GA 31699-1899 DSN 460-4544/3531, C229-257-4544/3531. Mo	0700-0000 local daily	207
VR1070	187 FW, 5187 Selma Highway, Montgomery, AL 36108-4824 DSN 358-9255 C334-394-7255	Same as Originating Activity	0700-2000 local, OT by NOTAM	99
VR1072	14 OSS/OSOP, Columbus AFB, MS 39710-5000 DSN 742-7560/7633, C662-434-7560/7633.	48 FTS, Columbus AFB, MS 39710-5000 DSN 742-7840/7847, C662-434-7840/7847.	Normally SR-2100 local, use OT not prohibited	240
VR1076	156 AW (PRANG) Muniz ANGB, 200 Jose A. (Tony) Santana Ave., Carolina, Puerto Ric	Same as Originating Activity	1100-0000Z++ (DAILY)	117
VR1077	156 AW (PRANG) Muniz ANGB, 200 Jose A. (Tony) Santana Ave., Carolina, Puerto Ric	Same as Originating Activity	1100-0000Z++ (DAILY)	197
VR1078	156 AW (PRANG) Muniz ANGB, 200 Jose A. (Tony) Santana Ave., Carolina, Puerto Ric	Same as Originating Activity	1100-0000Z++ (DAILY)	245
VR1079	156 AW (PRANG) Muniz ANGB, 200 Jose A. (Tony) Santana Ave., Carolina, Puerto Ric	Same as Originating Activity	1100-0000Z++(DAILY)	209
VR108	27 SOSS/OSTA, 110 E. Sextant Ave, Suite 1081 Cannon AFB, NM 88103 DSN 681-2521.	27 SOSS/OSOS, 110 E. Sextant Ave, Suite 1080 Cannon AFB, NM 88103 DSN 681-2276.	Continuous	236
VR1080	156 AW (PRANG) Muniz ANGB, 200 Jose A. (Tony) Santana Ave., Carolina, Puerto Ric	Same as Originating Activity	1100-0000Z++ (DAILY)	117
VR1081	156 AW (PRANG) Muniz ANGB, 200 Jose A. (Tony) Santana Ave., Carolina, Puerto Ric	Same as Originating Activity	1100-0000Z++ (DAILY)	177
VR1082	46 OSS/OSCM, 505 North Barrancas Ave, Suite 104, Eglin AFB, FL 32542-6818 DSN 87	46 OSS/OSCS, 505 North Barrancas Ave, Suite 104, Eglin AFB, FL 32542-6818 DSN 87	Normally 1200-2300Z++ Mon-Fri, available OT	189
VR1083	USAFAWC-79 Test and Evaluation Group/CD, Eglin AFB, FL 32542 DSN 872-2024, C904-	85 Test and Evaluation Squadron/DOOS, Eglin AFB, FL 32542 DSN 872-2622, C904-882	Normally 1200-2300Z++ Mon-Fri, route usage is allowable OT	209
VR1084	USAFAWC-79 Test and Evaluation Group/CD, Eglin AFB, FL 32542 DSN 872-2024, C904-	85 Test and Evaluation Squadron/DOOS, Eglin AFB, FL 32542 DSN 872-2622, C904-882	Normally 1200-2300Z++ Mon-Fri, route usage is allowable OT	101
VR1085	46 OSS/OSCM, 505 North Barrancas Ave, Suite 104, Eglin AFB, FL 32542-6818 DSN 87	46 OSS/OSCS (ROCC), 505 North Barrancas Ave, Suite 104, Eglin AFB, FL 32542-6818	Normally 1200-2300Z++ Mon-Fri, route usage is allowable OT	287
VR1087	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	Normally 0900-2400Z++ daily, available OT	90
VR1088	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	Normally 0900-2400Z++ daily, available OT	83
VR1089	347 Rescue Wing, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347 Rescue Wing, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	Normally 0900-2400Z++ daily, available OT	107
VR1097	347 WG, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33621-5205	347 WG, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 33621-5205	Continuous	68
VR1098	347th Rescue WG, Detachment 1/RO, 8707 North Golf Course St., MacDill AFB, FL 33	347th Rescue WG, Detachment 1/ROA, 8707 North Golf Course St., MacDill AFB, FL 3	Continuous	167
VR1102	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	83
VR1103	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	120

* Data fields are limited to 80 characters in the source database (National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File)); therefore, some data field entries are not complete. Please refer to DoD Flight Information Publications for complete originating and scheduling activity information.

** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR1104	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	109
VR1105	149 FTR GP (TX-ANG), Kelly AFB, TX 78241 DSN 945-5934, C210-925-5934.	Same as Originating Activity	0800-1830 local daily	93
VR1106	149 FTR GP (TX-ANG), Kelly AFB, TX 78241 DSN 969-5934.	Same as Originating Activity	0800-1830 local daily	93
VR1107	150 FW OG/CC, 2251 Air Guard Rd. SE, Kirtland AFB, NM 87117-5875 DSN 246-7426.	Same as Originating Activity	Sunrise-2200 local daily	243
VR1108	47 OSS/OSOR, 570 2nd St., Ste 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C830-	87 FTS/DOS, 570 2nd St., Laughlin AFB, TX 78843 DSN 732-5484, C830-298-5484. Sch	Sunrise-Sunset only	125
VR1109	47 OSS/OSOR, 570 2nd St., Ste. 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C830	87 FTS/DOS, 570 2nd St., Laughlin AFB, TX 78843 DSN 732-5484, C830-298-5484. Sch	Sunrise-Sunset daily	114
VR1110	301 OG/SUA, NAS JRB, Fort Worth, TX 76127 DSN 739-6903/04/05, C817-782-6903/04/0	Same as Originating Activity	0600-2200 local daily	80
VR1113	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	117
VR1113	188FW Arkansas ANG, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 72 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	71
VR1116	OC-ALC/10 FLTS, 4805 West Dr, Tinker AFB, OK 73145-3300 DSN 336-7719/7710, C405-	Same as Originating Activity	Daylight hours only	164
VR1117	47 OSS/OSOR, 570 2nd St., Ste. 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C830	87 FTS/DOS, 570 2nd St., Laughlin AFB, TX 78843 DSN 732-5484, C830-298-5484. Sch	Sunrise-Sunset Sat-Sun	114
VR1120	149 FW (TX ANG), 107 Hensley Street, Kelly AFB, TX 78241-5544 DSN 945-5934, C210	Same as Originating Activity	Sunrise-Sunset	128
VR1121	149 FW (TX ANG), 107 Hensley Street, Kelly AFB, TX 78241-5544 DSN 945-5934, C210	Same as Originating Activity	Sunrise-Sunset	128
VR1122	149 FW (TX ANG), 107 Hensley Street, Kelly AFB, TX 78241-5544 DSN 945-5934, C210	Same as Originating Activity	Sunrise-Sunset	193
VR1123	149 FW (TX ANG), 107 Hensley Street, Kelly AFB, TX 78241-5544 DSN 945-5934, C210	Same as Originating Activity	Sunrise-Sunset	193
VR1124	301 OG/SUA, NAS JRB, Fort Worth, TX 76127 DSN 739-6903/04/05, C817-782-6903/04/0	Same as Originating Activity	0600-2200 local daily	57
VR1128	301 OG/SUA, NAS JRB, Fort Worth, TX 76127 DSN 739-6903/04/05, C817-782-6903/04/0	Same as Originating Activity	0600-2200 local daily	206
VR1130	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	109
VR1137	301 OG/SUA, NAS JRB, Fort Worth, TX 76127 DSN 739-6903/04/05, C817-782-6903/04/0	Same as Originating Activity	0600-2200 local daily	193
VR1138	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	193
VR1139	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB,TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	210
VR114	27 SOSS/OSTA, 110 E. Sextant Ave, Suite 1081, Cannon AFB, NM 88103 DSN 681-2521.	27 SOSS/OSOS, 110 E. Sextant Ave, Suite 1080, Cannon AFB, NM 88103 DSN 681-2276.	Continuous	172
VR1140	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	210

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR1141	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	217
VR1142	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	217
VR1143	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	248
VR1144	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	248
VR1145	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	230
VR1146	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	230
VR1175	OC-ALC/10 Flight Test Sqdn, 4805 West Dr, Tinker AFB, OK 73145-3300 DSN 336-7719	Same as Originating Activity	Sunrise-Sunset	315
VR1176	OC-ALC/10 Flight Test Sqdn, 4805 West Dr, Tinker AFB, OK 73145-3300 DSN 336-7719	Same as Originating Activity	Sunrise-Sunset	315
VR118	301 OG/SUA, NAS JRB, Fort Worth, TX 76127 DSN 739-6903/04/05, C817-782-6903/04/0	Same as Originating Activity	Sunrise-Sunset Mon-Sat	82
VR1182	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous	187
VR119	71 OSS/OSOP, 301 Gritz Street, Vance AFB, OK 73705-5202 DSN 448-7850, C580-213-7	32 FTS/DOOT, Vance AFB, OK 73705-5202 DSN 448-6251, C580-213-6251.	Sunrise-Sunset daily	165
VR1195	150 FW OG/CC, 2251 Air Guard Rd. SE, Kirtland AFB, NM 87117-5875 DSN 246-7426.	Same as Originating Activity	Sunrise-2200 local daily	243
VR1196	ANG CRTC-Gulfport/OSA, 4715 Hewes Ave, Gulfport, MS 39507-4324 DSN 363-6027, C22	Same as Originating Activity	Continuous	201
VR1205	COMMANDER AFFTC, 412 OSS/OSAA, 235 E. Flightline Rd., Edwards AFB, CA 93523-6460	COMMANDER AFFTC, 412 OSS/OSR, 300 E. Yeager Blvd., Edwards AFB, CA 93524 DSN 527	Continuous	193
VR1206	COMMANDER AFFTC, 412 OSS/OSAA, 235 S. Flightline Rd, Edwards AFB, CA 93523-6460	COMMANDER AFFTC, 412 OSS/OSR, 300 E. Yeager Blvd, Edwards AFB, CA 93524 DSN 527-	Continuous	45
VR1211	452 OSS/DOT, March Fld, CA 92518 DSN 447-3846, C909-655-3846.	22 OSS/DOB, March Fld, CA 92518 DSN 447-4404/2422, C951-655-4404/2422.	Continuous	106
VR1214	COMMANDER AFFTC, 412 OSS/OSAA, 235 S. Flightline Rd, Edwards AFB, CA 93523-6460	COMMANDER AFFTC, 412 OSS/OSR, 300 E. Yeager Blvd, Edwards AFB, CA 93524 DSN 527-	Continuous	224
VR1215	COMMANDER AFFTC, 412 OSS/OSAA, 235 S. Flightline Rd, Edwards AFB, CA 93523-6460	COMMANDER AFFTC, 412 OSS/OSR, 300 E. Yeager Blvd, Edwards AFB, CA 93524 DSN 527-	Sunrise-Sunset daily	118
VR1217	COMMANDER AFFTC, 412 OSS/OSAA, 235 S. Flightline Rd, Edwards AFB ,CA 93523-6460	COMMANDER AFFTC, 412 OSS/OSR, 300 E. Yeager Blvd, Edwards AFB, CA 93524 DSN 527-	Sunrise-Sunset daily	111
VR1218	COMMANDER AFFTC, 412 OSS/OSAA, 235 S. Flightline Rd, Edwards AFB, CA 93523-6460	COMMANDER AFFTC, 412 OSS/OSR, 300 E. Yeager Blvd, Edwards AFB, CA 93524 DSN 527-	Sunrise-Sunset daily	207

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR1233	355 OSS/OSOA, 3895 S. 6th St. Suite 200, Davis-Monthan AFB, AZ 85707 DSN 228-468	355 OSS/OSOSO, Davis-Monthan AFB, AZ 85707 1500-2300Z Mon-Fri, no earlier than o	1300-0530Z	275
VR125	27 SOSS/OSTA, 110 E.Sextant Ave, Suite 1081, Cannon AFB, NM 88103 DSN 681-2521.	27 SOSS/OSOS, 110 E.Sextant Ave, Suite 1080, Cannon AFB, NM 88103 DSN 681-2276.	Continuous	318
VR1250	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	355
VR1251	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	518
VR1252	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	185
VR1253	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	443
VR1254	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	246
VR1255	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	296
VR1256	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	91
VR1257	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, Rm 121, NAS Le	Same as Originating Activity	Daylight hours, OT by NOTAM	437
VR1259	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	425
VR1260	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	293
VR1261	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	386
VR1262	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	339
VR1264	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	150
VR1265	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Continuous	406
VR1266	Commanding Officer, Yuma MCAS, Box 99160 Yuma, AZ 85369-9160 DSN 269-2326/2077,	Same as Originating Activity	0700-1800 local (daylight hours)	158
VR1267	Commanding Officer, Yuma MCAS, Box 99160 Yuma, AZ 85369-9160 DSN 269-2326/2077,	Same as Originating Activity	0700-1800 local	216
VR1267A	Commanding Officer, Yuma MCAS, Box 99160 Yuma, AZ 85369-9160 DSN 269-2326/2077,	Same as Originating Activity	0700-1800 local	101
VR1268	Commanding Officer, Yuma MCAS, Box 99160 Yuma, AZ 85369-9160 DSN 269-2326/2077,	Same as Originating Activity	0700-1800 local	371
VR1293	COMMANDER AFFTC, 412 OSS/OSAA, 235 S. Flightline Rd, Edwards AFB, CA 93523-6460	COMMANDER AFFTC, 412 OSS/OSR, 300 E. Yeager Blvd, Edwards AFB, CA 93524 DSN 527-	Continuous	20
VR1300	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5310, C208-	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5348, C208-4	Continuous or by NOTAM	421
VR1301	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5310, C208-	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5348, C208-4	Continuous	319
VR1302	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5310, C208-	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5348, C208-4	Continuous	190
VR1303	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5310, C208-	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5348, C208-4	Continuous or by NOTAM	432

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR1304	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5310, C208-	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5348, C208-4	Continuous or by NOTAM	452
VR1305	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5310, C208-	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5348, C208-4	Continuous or by NOTAM	452
VR1350	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave, Oak Ha	Same as Originating Activity	Continuous	261
VR1351	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave, Oak Ha	Same as Originating Activity	Continuous	373
VR1352	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave, Oak Ha	Same as Originating Activity	Continuous	315
VR1353	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave, Oak Ha	Same as Originating Activity	Continuous	315
VR1354	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave, Oak Ha	Same as Originating Activity	Continuous	129
VR1355	Commanding Officer (N38), NAS Whidbey Island, 3730 N. Charles Porter Ave, Oak Ha	Same as Originating Activity	Continuous	222
VR138	DET 1, 184 IW, Smokey Hill Ang Range, 84 W Farrelly Rd, Salina, KS 67401-9407. P	Same as Originating Activity	Continuous	190
VR140	12 OSS/OSOA, 501 I Street East, Randolph AFB, TX 78150-4333 DSN 487-5580, C210-6	560 FTS, 1450 5th Street East, Randolph AFB, TX 78150, DSN 487-3518, C210-652-35	Sunrise-Sunset, daily	241
VR142	12 OSS/OSOA, 501 I Street East, Randolph AFB, TX 78150-4333 DSN 487-5580, C210-6	99 FTS, 1450 5th Street East, Randolph AFB, TX 78150-5000 DSN 487-6746.	Sunrise-Sunset, daily	177
VR1422	388 RANS/RST, 6606 Cedar Lane, Hill AFB, UT 84056-5812, DSN 777-4401, C801-777-4	Same as Originating Activity.	0700-2400 lcl Mon-Thurs, 0700-1800 lcl Fri, 0800-1700 lcl Sat	152
VR1423	388 RANS/RST, 6606 Cedar Lane, Hill AFB, UT 84056-5812, DSN 777-4401, C801-777-4	Same as Originating Activity.	0700-2400 lcl Mon-Thurs, 0700-1800 lcl Fri, 0800-1700 lcl Sat	90
VR1427	140th Wing /DOT, Buckley ANGB, Aurora, CO 80011-9546 DSN 847-9466, C303-340-9470	140th Wing /DOT, Buckley ANGB, Aurora, CO 80011-9546 DSN 847-9472, C720-847-9472	0800-1600 local Tue-Sat, OT by NOTAM	196
VR143	301 OG/SUA, NAS JRB, Fort Worth, TX 76127 DSN 739-6903/04/05, C817-782-6903/04/0	Same as Originating Activity	0700-2200 local	371
VR144	97 OSS/DOA, 400 N Sixth St., Altus AFB, OK 73521 DSN 866-6098, C580-481-6098.	97 OSS/OSK, 400 N Sixth St. Suite 12, Altus AFB, OK 73521 DSN 866-7110.	0830-0230 local Mon-Fri	72
VR1445	388 RANS/RST, 6606 Cedar Lane, Hill AFB, UT 84056-5812, DSN 777-4401, C801-777-4	Same as Originating Activity.	0700-2400 lcl Mon-Thurs, 0700-1800 lcl Fri, 0800-1700 lcl Sat	10
VR1446	388 RANS/RST, 6606 Cedar Lane, Hill AFB, UT 84056-5812, DSN 777-4401, C801-777-4	Same as Originating Activity.	0700-2400 lcl Mon-Thurs, 0700-1800 lcl Fri, 0800-1700 lcl Sat	10
VR151	COMTRAWING TWO, NAS Kingsville, TX 78363 DSN 876-6518/6283, C361-516-6518/6283/6	Same as Originating Activity	Daily 0600-2200 local	137
VR151	COMTRAWING TWO, NAS Kingsville, TX 78363 DSN 876-6518, C361-516-6518.	Same as Originating Activity. Scheduling hrs-0800-1600 local Mon-Fri ONLY (exclu	Daily 0600-2200 local	91
VR152	DET 1, 184 IW, Smokey Hill Ang Range, 84 W Farrelly Rd, Salina, KS 67401-9407. P	Same as Originating Activity	Continuous	190
VR1520	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7745/7746, C605	Same as Originating Activity.	Daylight hours, Mon-Sat, OT By NOTAM	279

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR1521	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7745/7746, C605	Same as Originating Activity.	Daylight hours, Mon-Sat, OT By NOTAM	279
VR1525	509 OSS/OSKA, 905 Spirit Blvd, Whiteman AFB, MO 65305 DSN 975-1713/1754, C660-68	Same as Originating Activity	Sunrise-Sunset Tue-Sun	124
VR1546	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous (except Sunday 1000-1200 local)	123
VR156	149 FTR GP (TX-ANG), Kelly AFB, TX 78241 DSN 945-5934, C210-925-5934.	Same as Originating Activity	0800-1830 local daily, Prior coordination required for Sun-Mon operations	210
VR158	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri; OT by NOTAM	210
VR159	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	206
VR1616	ANG CRTC, Camp Douglas, WI 54618-5001 DSN 871-1445 C608-427-1445.	Same as Originating Activity	Sunrise to Sunset Mon-Sat, OT by NOTAM	169
VR1617	180th TFG/DO (ANG), Toledo Express Airport, Swanton, OH 43558 DSN 580-4084.	Same as Originating Activity	Sunrise-2100 local	190
VR162	80th Flying Training Wing, 1911 J. Ave. STE 6, Sheppard AFB, TX 76311-2056 DSN73	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C817-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	233
VR1624	127th OG/CC, Selfridge ANGB, MI 48045-5029 DSN 273-5055.	Same as Originating Activity	Sunrise-Sunset	233
VR1625	127th OG/CC, Selfridge ANGB, MI 48045-5029 DSN 273-5055.	Same as Originating Activity	Sunrise-Sunset	167
VR1626	127th OG/CC, Selfridge ANGB, MI 48045-5029 DSN 273-5055/5719.	Same as Originating Activity	Sunrise-Sunset	145
VR1627	127th OG/CC, Selfridge ANGB, MI 48045-5029 DSN 273-5055.	Same as Originating Activity	Sunrise-Sunset	226
VR1628	127th OG/CC, Selfridge ANGB, MI 48045-5029 DSN 273-5055.	Same as Originating Activity	Sunrise-Sunset	283
VR1629	127th OG/CC, Selfridge ANGB, MI 48045 DSN 273-5055/5719.	Same as Originating Activity	Sunrise-Sunset	218
VR163	80th Flying Training Wing, 1911 J. Ave. Ste 6, Sheppard AFB, TX 76311-2056 DSN 7	90 FTS/DOTOD, Sheppard AFB, TX 76311 DSN 736-2675/4995, C940-676-2675/4995.	Sunrise-Sunset Mon-Fri, OT by NOTAM	195
VR1631	123 ACS, Blue Ash, OH 45242 DSN 340-2950, C513-936-2950.	Same as Originating Activity	Continuous	230
VR1632	123 ACS, Blue Ash, OH 45242 DSN 340-2950, C513-936-2950.	Same as Originating Activity	Continuous	202
VR1633	123 ACS, Blue Ash, OH 45242 DSN 340-2950, C513-936-2950.	Same as Originating Activity	Continuous	217
VR1635	183 FW/OSF, Capital Airport, Springfield, IL 62707 DSN 892-8202.	Same as Originating Activity	Sunrise-Sunset only	135
VR1636	Alpena CRTC/OTM (ANG), 5884 A. Street, Alpena, MI 49707-8125 DSN 741-3509/3226.	Same as Originating Activity	Continuous	137
VR1638	180TH TFG/DO, Toledo Express Airport, Swanton, OH 43558 DSN 580-4084.	Same as Originating Activity	Sunrise-2100 local	152
VR1639	127th OG/CC, Selfridge ANGB, MI 48045 DSN 273-5055.	Same as Originating Activity	Sunrise-Sunset	218
VR1640	122 FW, Ft. Wayne IAP, IN 46809-0122 DSN 786-1202.	Same as Originating Activity	1300-0300Z++ daily	228
VR1641	122 FW, Ft. Wayne IAP, IN 46809-0122 DSN 786-1202.	Same as Originating Activity	1300-0300Z++ daily	135
VR1642	122 FW, Ft. Wayne IAP, IN 46809-0122 DSN 786-1202.	Same as Originating Activity	1300-0100Z++ daily	176

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR1644	127th OG/CC, Selfridge ANGB, MI 48045-5029 DSN 273-5055.	Same as Originating Activity	Sunrise-Sunset	190
VR1645	127th OG/CC, Selfridge ANGB, MI 48045-5029 DSN 273-5055.	Same as Originating Activity	Sunrise-Sunset	167
VR1647	127th OG/CC, Selfridge ANGB, MI 48045-5029 DSN 273-5055.	Same as Originating Activity	Sunrise-Sunset	226
VR1648	127th OG/CC, Selfridge ANGB, MI 48045-5029 DSN 273-5055.	Same as Originating Activity	Sunrise-Sunset	283
VR1650	ANG CRTC, Camp Douglas, WI 54618-5001 DSN 871-1445 C608-427-1445.	Same as Originating Activity	0730 local-Sunset Tue-Sat, OT by NOTAM	84
VR1666	Alpena CRTC/OTM (ANG), 5884 A. Street, Alpena, MI 49707-8125 DSN 741-3509/3226.	Same as Originating Activity	Continuous	137
VR1667	180 TFG/DO, Toledo Express Airport, Swanton, OH 43558 DSN 580-4084.	Same as Originating Activity	Sunrise - 0200Z++	190
VR1668	180 TFG/DO, Toledo Express Airport, Swanton, OH 43558 DSN 580-4084.	Same as Originating Activity	Sunrise-2100 local	152
VR1679	181st TFG (ANG), Hulman Regional, Terre Haute, IN 47803 DSN 724-1234.	Same as Originating Activity	Sunrise-Sunset Tue-Sun, OT by NOTAM	264
VR168	COMTRAWING TWO, NAS Kingsville, TX 78363 DSN 876-6518/6283, C361-516-6518/6283/6	Same as Originating Activity	0600-2400 local daily	248
VR1709	177th FW/Det 1 (ANG), Atlantic City ANGB, NJ 08234-9500 DSN 455-6707. E-mail wgr	Same as Originating Activity	Sunrise-Sunset daily	294
VR1711	113 WG, Andrews AFB, MD 20331 DSN 857-3307/08, C240-857-3307/3308/4190.	Same as Originating Activity	0730 local-Sunset daily	158
VR1712	113 WG, Andrews AFB, MD 20331 DSN 857-3307/08, C240-857-3307/3308/4190.	Same as Originating Activity	0730 local-Sunset daily	186
VR1713	113 WG, Andrews AFB, MD 20331 DSN 857-3307/08, C240-857-3307/3308/4190.	Same as Originating Activity	0730 local-Sunset daily	194
VR1721	20 OSS/OSTA, Shaw AFB, SC 29152 DSN 965-1121/1122, C803-895-1121/1122, Fax DSN 9	20 OSS/OSOS, Shaw AFB, SC 29152-5000 DSN 965-1118/1119, C803-895-1118, Fax DSN 9	Continuous	172
VR1722	192nd FG (ANG), Byrd Intl, Richmond, VA 23150 DSN 864-6411/6410.	Same as Originating Activity	Sunrise-Sunset	303
VR1726	20 OSS/OSTA, Shaw AFB, SC 29152 DSN 965-1121/1122, C803-895-1121/1122, Fax DSN 9	20 OSS/OSOS, Shaw AFB, SC 29152-5000 DSN 965-1118/1119, C803-895-1118, Fax DSN 9	Continuous	144
VR1743	20 OSS/OSTA, Shaw AFB, SC 29152 DSN 965-1121/1122, C803-895-1121/1122, Fax DSN 9	20 OSS/OSOS, Shaw AFB, SC 29152-5000 DSN 965-1118/1119, C803-895-1118, Fax DSN 9	Continuous	144
VR1753	COMSTRKFIGHTWINGLANT NAS Oceana, Virginia Beach, VA 23460-5200 DSN 433-4013, C75	FACSFAC/VACAPES, NAS Oceana, Virginia Beach, VA 23460 DSN 433-1228 C757-433-1228	Continuous	172
VR1754	COMSTRKFIGHTWINGLANT NAS Oceana, Virginia Beach, VA 23460-5200 DSN 433-4013, C75	FACSFAC/VACAPES, NAS Oceana, Virginia Beach, VA 23460 DSN 433-1228 C757-433-1228	Continuous	371
VR1755	COMSTRKFIGHTWINGLANT, NAS Oceana, Virginia Beach, VA 23460-5200 DSN 433-4013, C7	FACSFAC/VACAPES, NAS Oceana, Virginia Beach, VA 23460 DSN 433-1228 C757-433-1228	Continuous	224
VR1756	COMSTRKFIGHTWINGLANT, NAS Oceana, Virginia Beach, VA 23460-5200 DSN 433-4013, C7	FACSFAC/VACAPES, NAS Oceana, Virginia Beach, VA 23460 DSN 433-1228 C757-433-1228	Continuous	362
VR1757	COMSTRKFIGHTWINGLANT, NAS Oceana, Virginia Beach, VA 23460-5200 DSN 433-4013, C7	FACSFAC/VACAPES, NAS Oceana, Virginia Beach, VA 23460 DSN 433-1228 C757-433-1228	Continuous	168
VR1759	COMSTRKFIGHTWINGLANT, NAS Oceana, Virginia Beach, VA 23460-5200 DSN 433-4013, C7	FACSFAC/VACAPES, NAS Oceana, Virginia Beach, VA 23460 DSN 433-1228, C757-433-122	Continuous	194

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR176	150 FW OG/CC 2251, Air Guard Rd. SE, Kirtland AFB, NM 87117-5875 DSN 246-7426.	Same as Originating Activity	Normally 1500-2400Z++ daily, usage between 2400-1500Z++ is available	470
VR179	ANG CRTC-Gulfport/OSA, 4715 Hewes Ave, Gulfport, MS 39507-4324 DSN 363-6027, C22	Same as Originating Activity	Continuous	171
VR1800	174th FW, 6001 E. Molloy Rd, Syracuse, NY 13211-7099 DSN 489-9217.	174th FW, Det. 1, Ft. Drum, NY 13608 DSN 772-5990/2835 C315-772-5990.	0800 local-Sunset daily	136
VR1801	174th FW, 6001 E. Molloy Rd, Syracuse, NY 13211-7099 DSN 489-9217.	174th FW, Det. 1, Ft. Drum, NY 13608 DSN 772-5990/2835, C315-772-5990.	0800 local-Sunset daily	130
VR184	97 OSS/DOA, 400 N. Sixth Street, Altus AFB, OK 73521 DSN 866-6098 C580-481-6098.	97 OSS/OSK, 400 N. Sixth Street, Suite 12, Altus AFB, OK 73521 DSN 866-7110.	0830-0230 local, Mon-Fri	71
VR186	301 OG/SUA, NAS JRB, Fort Worth, TX 76127 DSN 739-6903/04/05, C817-782-6903/04/0	Same as Originating Activity	0700-2200 local	295
VR187	12 OSS/OSOA, 501 I Street East, Randolph AFB, TX 78150-4333 DSN 487-5580, C210-6	99 FTS, 1450 5th Street East, Randolph AFB, TX 78150-5000 DSN 487-6746.	Sunrise-Sunset, daily	243
VR188	12 OSS/OSOA, 501 I Street East, Randolph AFB, TX 78150-4333 DSN 487-5580, C210-6	99 FTS, 1450 5th Street East, Randolph AFB, TX 78150-5000 DSN 487-6746.	Sunrise-Sunset, daily	213
VR189	188 FW, 4850 Leigh Ave., Fort Smith, AR 72903-6096 DSN 778-5502.	Same as Originating Activity. Route scheduled no more than 24 hr in advance. Min	Continuous	219
VR190	97 OSS/DOA, 400 N. Sixth Street, Altus AFB, OK 73521 DSN 866-6098 C580-6098.	97 OSS/OSK, 400 N. Sixth Street, Suite 12, Altus AFB, OK 73521 DSN 866-7110.	0830-0230 local Mon-Fri	152
VR1900	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 C907-377-3005 DSN 317-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	160
VR1902	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406 C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	175
VR1905	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	372
VR1909	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 C907-377-3005 DSN 317-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	76
VR191	97 OSS/DOA, 400 N. Sixth Street, Altus AFB, OK 73521 DSN 866-6098 C580-6098.	97 OSS/OSK, 400 N. Sixth Street,Suite 12, Altus AFB, OK 73521 DSN 866-7110.	0830-0230 local Mon-Fri	152
VR1912	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	175
VR1915	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	339
VR1916	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	137

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR1926	611 AOG/CC, 9480 Pease Ave., Ste 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-2	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	101
VR1927	611 AOG/CC, 9480 Pease Ave., Ste 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-2	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	52
VR1928	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	37
VR1929	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	37
VR1939	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	76
VR196	47 OSS/OSOR, 570 2nd Street, Ste. 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C	86 FTS/DOS, 307 2nd St, Laughlin AFB, TX 78843 DSN 732-5584, C830-298-5584. Sche	Sunrise-Sunset daily	189
VR197	47 OSS/OSOR, 570 2nd Street, Ste. 6, Laughlin AFB, TX 78843-5222 DSN 732-5864, C	86 FTS/DOS, 307 2nd St, Laughlin AFB, TX 78843 DSN 732-5584, C830-298-5584. Sche	Sunrise-Sunset daily	189
VR198	97 OSS/DOA, 400 N. 6th St., Ste. A, Altus AFB, OK 73521 DSN 866-6098, C580-481-6	Same as Originating Activity	0600-0300 local, Mon-Fri, OT by NOTAM	195
VR199	97 OSS/DOA, 400 N. 6th St., Ste. A, Altus AFB, OK 73521 DSN 866-6098, C580-481-6	Same as Originating Activity	0600-0300 local, Mon-Fri, OT by NOTAM	195
VR201	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	168
VR202	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	312
VR208	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	0800-1630 local	194
VR209	Commander, Strike Fighter Wing, U.S. Pacific Fleet, 001 K Street, NAS Lemoore, C	Same as Originating Activity	Daylight hours, OT by NOTAM	593
VR222	57 OSS/OSOS, Nellis AFB, NV 89191-7001 DSN 682-2040, C702-652-2040.	Same as Originating Activity	Continuous	359
VR223	56 RMO/ASM, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-5855, C623-856-	56 RMO/ASMS, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-7654, C623-856	0600-2400 Mon-Fri local, Wkend/hol when sked with Goldwater Rng/Sell MOA Msn	127
VR231	56 RMO/ASM, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-5855, C623-856-	56 RMO/ASMS, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-7654, C623-856	0600-2400 Mon-Fri local, Wkend/hol when sked with Goldwater Rng/Sell MOA Msn	109
VR239	56 RMO/ASM, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-5855, C623-856-	56 RMO/ASMS, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-7654, C623-856	0600-2400 Mon-Fri local, Wkend/hol when sked with Goldwater Rng/Sell MOA Msn	300
VR241	56 RMO/ASM, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-5855, C623-856-	56 RMO/ASMS, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-7654, C623-856	0600-2400 Mon-Fri local, Wkend/hol when sked with Goldwater Rng/Sell MOA Msn	218
VR242	56 RMO/ASM, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-5855, C623-856-	56 RMO/ASMS, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-7654, C623-856	0600-2400 Mon-Fri local, Wkend/hol when sked with Goldwater Rng/Sell MOA Msn	217

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR243	56 RMO/ASM, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-5855, C623-856-	56 RMO/ASMS, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-7654, C623-856	0600-2400 Mon-Fri local, Wkend/hol when sked with Goldwater Rng/Sell MOA Msn	269
VR244	56 RMO/ASM, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-5855, C623-856-	56 RMO/ASMS, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-7654, C623-856	0600-2400 Mon-Fri local, Wkend/hol when sked with Goldwater Rng/Sell MOA Msn	272
VR245	56 RMO/ASM, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-5855, C623-856-	56 RMO/ASMS, 7224 N. 139th Drive, Luke AFB, AZ 85309-1420 DSN 896-7654, C623-856	0600-2400 Mon-Fri local, Wkend/hol when sked with Goldwater Rng/Sell MOA Msn	208
VR249	G-3, 3D MAW, MCAS Miramar, San Diego, CA 92145 DSN 267-9462, C858-577-9462. Non-	Same as Originating Activity	Continuous	101
VR259	162 FW/OGC, 1660 E. El Tigre Way, Tucson, AZ 85706-6086 DSN 844-6371, C520-295-6	Same as Originating Activity	Continuous	309
VR260	162 FW/OGC, 1660 E. El Tigre Way, Tucson, AZ 85706-8086 DSN 844-6371 C520-295-63	Same as Originating Activity	Continuous	276
VR263	162 FW/OGC, 1660 E. El Tigre Way, Tucson, AZ, 85706-6086 DSN 844-6371 C520-295-6	Same as Originating Activity	Continuous	433
VR267	355 OSS/OSOA, 3895 S. 6th St. Suite 200, Davis-Monthan AFB, AZ 85707 DSN 228-468	355 OSS/OSOSO, Davis-Monthan AFB, AZ 85707 1500-2300Z Mon-Fri, no earlier than o	1300-0530Z	199
VR268	355 OSS/OSOA, 3895 S. 6th St. Suite 200, Davis-Monthan AFB, AZ 85707 DSN 228-468	355 OSS/OSOSO, Davis-Monthan AFB, AZ 85707 1500-2300Z Mon-Fri, no earlier than o	1300-0530Z++	155
VR269	355 OSS/OSOA, 3895 S. 6th St. Suite 200, Davis-Monthan AFB, AZ 85707 DSN 228-468	355 OSS/OSOSO, Davis-Monthan AFB, AZ 85707 1500-2300Z Mon-Fri, no earlier than o	1300-0530Z++	181
VR288	452 OSS/OSK, March ARB, CA 92518 DSN 447-4376, C909-655-4376.	452 OSS/OSAA, March ARB, CA 92518 DSN 447-4404/2422, C951-655-4404/2422.	Continuous	110
VR289	452 OSS/OSK, March ARB, CA 92518 DSN 447-4376, C909-655-4376.	452 OSS/OSAA, March ARB, CA 92518 DSN 447-4404/2422, C951-655-4404/2422.	Continuous	157
VR296	452 OSS/OSK, March ARB, CA 92518 DSN 447-4404/2422, C909-655-4404/2422.	452 OSS/OSAA, March ARB, CA 92518 DSN 447-4404/2422, C909-655-4404/2422.	Continuous	226
VR299	452 OSS/DOT, March Fld, CA 92518 DSN 447-3846, C951-655-3846.	22 OSS/DOB, March Fld, CA 92518 DSN 447-4404/2422, C951-655-4404/2422.	Continuous	208
VR316	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5310, C208-	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5348, C208-4	Continuous or by NOTAM	301
VR319	124 WG/OGAM (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5310, C208-	124 WG/OSS (ANG), 3996 W. Aeronca St., Boise, ID 83705-8004 DSN 422-5348, C208-4	Continuous or by NOTAM	301
VR331	62 OSS/OSK, 1172 Levitow Blvd., McChord AFB, WA 98438 DSN 382-3615, C253-982-361	62 OSS/OSO, 100 Main St., McChord AFB, WA 98438 DSN 382-9925, C253-982-9925. Dut	Continuous	179
VR410	140th Wing /Airspace Office, Buckley AFB, Aurora Co, 80011-9546 DSN 847-9470/947	Same as Originating Activity.	0800-1600 local Tue-Sat, OT by NOTAM	15
VR411	140th Wing /Airspace Office, Buckley AFB, Aurora Co, 80011-9546 DSN 847-9470/947	Same as Originating Activity.	0800-1600 local Tue-Sat, OT by NOTAM	15

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** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR413	140th Wing /Airspace Office, Buckley AFB, Aurora Co, 80011-9546 DSN 847-9470/947	140th Wing /Airspace Office, Buckley AFB, Aurora Co, 80011-9546 DSN 847-9470/947	0800-1600 local Tue-Sat, OT by NOTAM	184
VR510	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7754/7746, C605	Same as Originating Activity	Daylight Hours Tue-Sat, OT by NOTAM	315
VR511	132 FW OG/CC (ANG), 3100 McKinley Ave, Des Moines, IA 50321-2799 DSN 256-8250 C5	Same as Originating Activity	By NOTAM, (2 hr prior notification required)	264
VR512	132 FW OG/CC (ANG), 3100 McKinley Ave, Des Moines, IA 50321-2799 DSN 256-8250 C5	Same as Originating Activity	By NOTAM, 2hr prior notification required	264
VR531	DET 1, 184 IW, Smokey Hill Ang Range, 84 W Farrelly Rd, Salina, KS 67401-9407. P	Same as Originating Activity	Continuous	181
VR532	DET 1, 184 IW, Smokey Hill Ang Range, 84 W Farrelly Rd, Salina, KS 67401-9407. P	Same as Originating Activity	Continuous	329
VR533	DET 1, 184 IW, Smokey Hill Ang Range, 84 W Farrelly Rd, Salina, KS 67401-9407. P	Same as Originating Activity	Continuous	165
VR534	DET 1, 184 IW, Smokey Hill Ang Range, 84 W Farrelly Rd, Salina, KS 67401-9407. P	Same as Originating Activity	Continuous	169
VR535	DET 1, 184 IW, Smokey Hill Ang Range, 84 W Farrelly Rd, Salina, KS 67401-9407. P	Same as Originating Activity	Continuous	179
VR536	DET 1, 184 IW, Smokey Hill Ang Range, 84 W Farrelly Rd, Salina, KS 67401-9407. P	Same as Originating Activity	Continuous	157
VR540	132 FW OG/CC (ANG), 3100 McKinley Ave, Des Moines, IA 50321-2799 DSN 256-8250 C5	Same as Originating Activity	By NOTAM, 2 hr prior notification required	319
VR541	132 FW OG/CC (ANG), 3100 McKinley Ave, Des Moines, IA 50321-2799 DSN 256-8250 C5	Same as Originating Activity	By NOTAM, 2 hr prior notification required	289
VR544	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7754/7746, C605	Same as Originating Activity	By NOTAM, 2 hours and 15 minutes prior to entry time required	121
VR545	114 FW (ANG), Joe Foss Field, Sioux Falls, SD 57104-0264 DSN 798-7754/7746, C605	Same as Originating Activity	By NOTAM, 2 hours and 15 minutes prior to entry time required	121
VR552	DET 1, 184 IW, Smokey Hill Ang Range, 84 W Farrelly Rd, Salina, KS 67401-9407. P	Same as Originating Activity	Continuous	190
VR604	148TH FIG (ANG), Duluth Intl, MN 55811 DSN 825-7265.	Same as Originating Activity	1400-0500Z++ daily, 0500-1400Z++ allowable	680
VR607	148TH FIG (ANG), Duluth Intl, MN 55811 DSN 825-7265.	Same as Originating Activity	1400-0500Z++ daily, 0500-1400Z++ allowable	680
VR615	183 FW/OSF, Capital Airport, Springfield, IL 62707 DSN 892-8202.	Same as Originating Activity	Daylight hours	167
VR619	181 TFG (ANG), Hulman Rigional Airport, Terre Haute, IN 47803 DSN 724-1234.	Same as Originating Activity	Sunrise-Sunset Tue-Sun, OT by NOTAM	136
VR634	Alpena CRTC/OTM (ANG), 5884 A. Street, Alpena, MI 49707-8125 DSN 741-3509/3226.	Same as Originating Activity	Continuous	180
VR664	Alpena CRTC/OTM (ANG), 5884 A. Street, Alpena, MI 49707-8125 DSN 741-3509/3226.	Same as Originating Activity	Continuous	181
VR704	DET 1, 193 SOG, 26139 Ammo Road, Annville, PA 17003-5180 C717-861-2475/2912 Toll	Same as Originating Activity	0800 local to Sunset daily	285
VR705	DET 1, 193 SOG, 26139 Ammo Road, Annville, PA 17003-5180 C717-861-2475/2912 Toll	Same as Originating Activity	0800 local-Sunset daily	214
VR707	DET 1, 193 SOG, 26139 Ammo Road, Annville, PA 17003-5180 C717-861-2475/2912 Toll	Same as Originating Activity	0800 local-Sunset daily	287
VR708	175 FG (ANG), Baltimore, MD 21220-2899 DSN 243-6375.	Same as Originating Activity	Sunrise-Sunset	126
VR724	174th FW, 6001 E. Molloy Rd, Syracuse, NY 13211-7099 DSN 489-9217.	174 FW, Det 1, Ft. Drum, NY 13608 DSN 772-5990/2835, C315-772-5990.	0800-Sunset daily, OT by NOTAM	141

* Data fields are limited to 80 characters in the source database (National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File)); therefore, some data field entries are not complete. Please refer to DoD Flight Information Publications for complete originating and scheduling activity information.

** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

Military Training Route	Originating Agency*	Scheduling Agency*	Effective Times	Length (NM)**
VR725	174th FW, 6001 E. Molloy Rd, Syracuse, NY 13211-7099 DSN 489-9217.	174 FW, Det 1. Ft. Drum, NY 13608 DSN 772-5990/2835, C315-772-5990.	0800-Sunset daily, OT by NOTAM	114
VR840	104 FW, Barnes ANGB, Westfield, MA 01085-1482 DSN 698-1228/1229, C413-568-9151 e	Same as Originating Activity	0800 local-Sunset daily	175
VR841	104 FW, Barnes ANGB, Westfield, MA 01085-1482 DSN 698-1228/1229, C413-568-9151 e	Same as Originating Activity	0800 local-Sunset daily	97
VR842	104 FW, Barnes ANGB, Westfield, MA 01085-1482 DSN 698-1228/1229, C413-568-9151 e	Same as Originating Activity	0800 local-Sunset daily	87
VR931	611 AOG/CC, 9480 Pease Ave., Ste 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-2	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	67
VR932	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	67
VR933	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	206
VR934	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	3 OSS/OSOS, Elmendorf AFB, AK 99506-2130 DSN 317-552-2406, C907-552-2406.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	206
VR935	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	193
VR936	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	210
VR937	611 AOG/CC, 9480 Pease Ave., Ste 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-2	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	184
VR938	611 AOG/CC, 9480 Pease Ave., Ste 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-2	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	167
VR940	611 AOG/CC, 9480 Pease Ave., Ste 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-2	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	106
VR941	611 AOG/CC, 9480 Pease Ave., Ste 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-2	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	106
VR954	611 AOG/CC, 9480 Pease Ave., Ste 102, Elmendorf AFB, AK 99506-2100 DSN 317-552-2	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	371
VR955	611 AOC/CC, Elmendorf AFB, 10471 20th St, Ste. 160, AK 99506 DSN 317-552-2430, C	353 CTS/JSO, Eielson AFB, AK 99702 DSN 317-377-3005, C907-377-3005.	Normal use 0800-2000 local Mon-Fri, Not available 2200-0700 local	271

* Data fields are limited to 80 characters in the source database (National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File)); therefore, some data field entries are not complete. Please refer to DoD Flight Information Publications for complete originating and scheduling activity information.

** Length calculations were performed using an the appropriate Universal Transverse Mercator zones.

Source: Department of Defense based on data from the National Geospatial-Intelligence Agency (Digital Aeronautical Flight Information File, (effective: May 2010)).

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Table C-3 Special Use Airspace (SUA) Inventory

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
A211	USA, CAIRNES APP	Fort Rucker	005000AMSL	SURFACE	USA	4580
A311	FAA, HONOLULU CERAP	Schofield, Kahuku, Kawailoa	000500AGL	SURFACE	USA	71
A371	USA, CAMPBELL AAF APP	Fort Campbell	002000AMSL	SURFACE	USA	1193
A531	USA, FORT BRAGG	Fort Bragg	001500AGL	00200AGL	USA	698
A685	FAA, ATLANTA ARTCC	Camp Merrill	000700AGL	SURFACE	USA	490
BENNING MOA, GA	FAA, COLUMBUS TWR	Fort Benning	008000AMSL	00500AGL	USA	107
CAMPBELL 1 MOA, KY	FAA, MEMPHIS ARTCC	Fort Campbell	010000AMSL	00500AGL	USA	396
CAMPBELL 2 MOA, KY	FAA, MEMPHIS ARTCC	Fort Campbell	010000AMSL	01500AGL	USA	311
DRUM 1 MOA, NY	USA, WHEELER SACK APP	Fort Drum	005000AMSL	00500AGL	USA	95
DRUM 2 MOA, NY	USA, WHEELER SACK APP	Fort Drum	005999AMSL	00100AGL	USA	84
FORT BRAGG NORTH AREA A MOA, NC	FAA, FAYETTEVILLE TWR	Fort Bragg	006000AMSL	00500AGL	USA	42
FORT BRAGG NORTH AREA B MOA, NC	FAA, FAYETTEVILLE TWR	Fort Bragg	006000AMSL	04000AMSL	USA	30
FORT BRAGG SOUTH AREA A MOA, NC	FAA, FAYETTEVILLE TWR	Fort Bragg	006000AMSL	00500AGL	USA	53
FORT BRAGG SOUTH AREA B MOA, NC	FAA, FAYETTEVILLE TWR	Fort Bragg	006000AMSL	01500AGL	USA	36
FORT STEWART B1 MOA, GA	FAA, JACKSONVILLE ARTCC	Fort Stewart	004999AMSL	00500AGL	USA	146
FORT STEWART B2 MOA, GA	FAA, JACKSONVILLE ARTCC	Fort Stewart	010000AMSL	05000AMSL	USA	146
FORT STEWART C1 MOA, GA	FAA, JACKSONVILLE ARTCC	Fort Stewart	002999AMSL	00500AGL	USA	31
FORT STEWART C2 MOA, GA	FAA, JACKSONVILLE ARTCC	Fort Stewart	010000AMSL	03000AMSL	USA	70
GRAY MOA, TX	FAA, HOUSTON ARTCC	Fort Hood	010000AMSL	02000AMSL	USA	28
HILL MOA, VA	FAA, POTOMAC APP	Fort A.P. Hill	003000AMSL	SURFACE	USA	36
HOG HIGH NORTH MOA, AR	FAA, MEMPHIS ARTCC	Fort Smith	018000AMSL	06000AMSL	USA	685
HOG HIGH SOUTH MOA, AR	FAA, MEMPHIS ARTCC	Fort Smith	018000AMSL	06000AMSL	USA	1295
HOG JRTC MOA, AR	FAA, MEMPHIS ARTCC	Fort Smith	018000AMSL	00100AGL	USA	25
HOG LOW NORTH MOA, AR	FAA, MEMPHIS ARTCC	Fort Smith	005999AMSL	00100AGL	USA	685
HOG LOW SOUTH MOA, AR	FAA, MEMPHIS ARTCC	Fort Smith	005999AMSL	00100AGL	USA	817
HOOD MOA, TX	FAA, HOUSTON ARTCC	Fort Hood	010000AMSL	02000AMSL	USA	267
HOWARD EAST MOA, IL	FAA, KANSAS CITY ARTCC	Springfield	018000AMSL	09000AMSL	USA	1853
HOWARD WEST MOA, IL	FAA, KANSAS CITY ARTCC	Springfield	018000AMSL	10000AMSL	USA	322
LAKE ANDES MOA, SD	FAA, MINNEAPOLIS ARTCC	Sioux Falls	018000AMSL	06000AMSL	USA	3498
PICKETT 1 MOA, VA	FAA, WASHINGTON, DC ARTCC	Fort Pickett	006000AMSL	00500AGL	USA	45
PICKETT 2 MOA, VA	FAA, WASHINGTON, DC ARTCC	Fort Pickett	010000AMSL	00500AGL	USA	93
PICKETT 3 MOA, VA	FAA, WASHINGTON, DC ARTCC	Fort Pickett	010000AMSL	04000AMSL	USA	23
PINON CANYON MOA, CO	FAA, DENVER ARTCC	Fort Carson	010000AMSL	00100AGL	USA	1031

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
PRUITT A MOA, IL	FAA, KANSAS CITY ARTCC	Springfield	006000AMSL	00500AGL	USA	980
PRUITT B MOA, IL	FAA, KANSAS CITY ARTCC	Springfield	003000AMSL	00500AGL	USA	426
R2101	FAA, ATLANTA ARTCC	Anniston Army Depot	005000AMSL	SURFACE	USA	2
R2102A	FAA, ATLANTA ARTCC	Fort McClellan	008000AMSL	SURFACE	USA	27
R2102B	FAA, ATLANTA ARTCC	Fort McClellan	014000AMSL	08000AMSL	USA	27
R2102C	FAA, ATLANTA ARTCC	Fort McClellan	FL240	14000AMSL	USA	27
R2103A	USA, CAIRNS APP	Fort Rucker	009999AMSL	SURFACE	USA	50
R2103B	FAA, JACKSONVILLE ARTCC	Fort Rucker	015000AMSL	10000AMSL	USA	50
R2104A	FAA, MEMPHIS ARTCC	Redstone Arsenal	012000AMSL	SURFACE	USA	17
R2104B	FAA, MEMPHIS ARTCC	Redstone Arsenal	002400AMSL	SURFACE	USA	4
R2104C	FAA, MEMPHIS ARTCC	Redstone Arsenal	012000AMSL	SURFACE	USA	4
R2104D	FAA, MEMPHIS ARTCC	Redstone Arsenal	FL300	12000AMSL	USA	17
R2104E	FAA, MEMPHIS ARTCC	Redstone Arsenal	FL300	12000AMSL	USA	4
R2202A	FAA, ANCHORAGE ARTCC	Fort Greely	009999AMSL	SURFACE	USA	170
R2202B	FAA, ANCHORAGE ARTCC	Fort Greely	009999AMSL	SURFACE	USA	395
R2202C	FAA, ANCHORAGE ARTCC	Fort Greely	FL310	10000AMSL	USA	565
R2202D	FAA, ANCHORAGE ARTCC	Fort Greely	UNLTD	FL310	USA	566
R2203A	FAA, ANCHORAGE TWR	Fort Richardson	011000AMSL	SURFACE	USA	6
R2203B	FAA, ANCHORAGE TWR	Fort Richardson	011000AMSL	SURFACE	USA	20
R2203C	FAA, ANCHORAGE TWR	Fort Richardson	005000AMSL	SURFACE	USA	1
R2205	FAA, FAIRBANKS APP	Fort Richardson	020000AMSL	SURFACE	USA	137
R2302	FAA, ALBUQUERQUE ARTCC	Navajo Ordnance Depot	010000AMSL	SURFACE	USA	4
R2303A	FAA, ALBUQUERQUE ARTCC	Fort Huachuca	015000AMSL	SURFACE	USA	266
R2303B	FAA, ALBUQUERQUE ARTCC	Fort Huachuca	FL300	08000AMSL	USA	495
R2303C	FAA, ALBUQUERQUE ARTCC	Fort Huachuca	FL300	15000AMSL	USA	233
R2306A	FAA, LOS ANGELES ARTCC	Yuma Proving Ground	FL800	SURFACE	USA	208
R2306B	FAA, LOS ANGELES ARTCC	Yuma Proving Ground	FL800	SURFACE	USA	165
R2306C	FAA, LOS ANGELES ARTCC	Yuma Proving Ground	FL400	SURFACE	USA	37
R2306D	FAA, LOS ANGELES ARTCC	Yuma Proving Ground	FL230	SURFACE	USA	15
R2306E	FAA, LOS ANGELES ARTCC	Yuma Proving Ground	FL800	SURFACE	USA	65
R2307	FAA, LOS ANGELES ARTCC	Yuma Proving Ground	UNLTD	SURFACE	USA	292
R2308A	FAA, LOS ANGELES ARTCC	Yuma Proving Ground	FL800	01500AGL	USA	552
R2308B	FAA, LOS ANGELES ARTCC	Yuma Proving Ground	FL800	SURFACE	USA	77
R2308C	FAA, LOS ANGELES ARTCC	Yuma Proving Ground	FL230	01500AGL	USA	29

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
R2310A	FAA, ALBUQUERQUE ARTCC	Florence Training Site	010000AMSL	SURFACE	USA	29
R2310B	FAA, ALBUQUERQUE ARTCC	Florence Training Site	017000AMSL	10000AMSL	USA	18
R2310C	FAA, ALBUQUERQUE ARTCC	Florence Training Site	FL350	17000AMSL	USA	15
R2311	YUMA APP, YUMA MCAS	Yuma Proving Ground	003500AMSL	SURFACE	USA	62
R2401A	FAA, MEMPHIS ARTCC	Chaffee	FL300	SURFACE	USA	16
R2401B	FAA, MEMPHIS ARTCC	Chaffee	FL300	SURFACE	USA	2
R2402	FAA, MEMPHIS ARTCC	Chaffee	FL300	SURFACE	USA	63
R2502E	FAA, HI-DESERT TRACON, EDWARDS AFB	Fort Irwin	UNLTD	SURFACE	USA	180
R2502N	FAA, HI-DESERT TRACON, EDWARDS AFB	Fort Irwin	UNLTD	SURFACE	USA	561
R2504	FAA, OAKLAND ARTCC	Camp Roberts	015000AMSL	SURFACE	USA	27
R2513	FAA, OAKLAND ARTCC	Fort Hunter-Leggett	FL240	SURFACE	USA	114
R2530	FAA, OAKLAND ARTCC	Sierra Army Deport	008600AMSL	SURFACE	USA	4
R2601A	FAA, DENVER ARTCC	Fort Carson	012499AMSL	SURFACE	USA	123
R2601B	FAA, DENVER ARTCC	Fort Carson	022499AMSL	12500AMSL	USA	123
R2601C	FAA, DENVER ARTCC	Fort Carson	034999AMSL	22500AMSL	USA	123
R2601D	FAA, DENVER ARTCC	Fort Carson	059999AMSL	35000AMSL	USA	123
R3002A	FAA, ATCT, COLUMBUS	Fort Benning	004000AMSL	SURFACE	USA	104
R3002B	FAA, ATCT, COLUMBUS	Fort Benning	008000AMSL	04000AMSL	USA	104
R3002C	FAA, ATCT, COLUMBUS	Fort Benning	014000AMSL	08000AMSL	USA	104
R3002D	FAA, ATCT, COLUMBUS	Fort Benning	008000AMSL	SURFACE	USA	79
R3002E	FAA, ATCT, COLUMBUS	Fort Benning	014000AMSL	08000AMSL	USA	79
R3002F	FAA, ATLANTA ARTCC	Fort Benning	FL250	14000AMSL	USA	118
R3002G	FAA, ATLANTA TRACON	Fort Benning	004000AMSL	SURFACE	USA	14
R3004A	FAA, ATLANTA ARTCC	Fort Benning	007000AMSL	SURFACE	USA	31
R3004B	FAA, ATLANTA ARTCC	Fort Benning	016000AMSL	007001AMSL	USA	31
R3005A	FAA, JACKSONVILLE ARTCC	Fort Stewart	FL290	SURFACE	USA	71
R3005B	FAA, JACKSONVILLE ARTCC	Fort Stewart	FL290	SURFACE	USA	46
R3005C	FAA, JACKSONVILLE ARTCC	Fort Stewart	FL290	SURFACE	USA	107
R3005D	FAA, JACKSONVILLE ARTCC	Fort Stewart	FL290	SURFACE	USA	50
R3005E	FAA, JACKSONVILLE ARTCC	Fort Stewart	FL290	SURFACE	USA	35
R3103	FAA, HONOLULU CERAP	Pohakuloa Training Area	030000AMSL	SURFACE	USA	124
R3109A	FAA, HONOLULU TWR	Schofield-Makua	008999AMSL	SURFACE	USA	9
R3109B	FAA, HONOLULU TWR	Schofield-Makua	018999AMSL	09000AMSL	USA	15
R3109C	FAA, HONOLULU TWR	Schofield-Makua	008999AMSL	SURFACE	USA	6

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
R3110A	FAA, HONOLULU TWR	Schofield-Makua	008999AMSL	SURFACE	USA	11
R3110B	FAA, HONOLULU TWR	Schofield-Makua	018999AMSL	09000AMSL	USA	21
R3110C	FAA, HONOLULU TWR	Schofield-Makua	008999AMSL	SURFACE	USA	10
R3203D	FAA, SALT LAKE CITY ARTCC	Boise	FL220	SURFACE	USA	23
R3401A	FAA, INDIANAPOLIS ARTCC	Indianapolis	FL400	SURFACE	USA	43
R3401B	FAA, INDIANAPOLIS ARTCC	Indianapolis	014000AMSL	01200AGL	USA	35
R3403A	FAA, INDIANAPOLIS ARTCC	Indianapolis	FL430	SURFACE	USA	53
R3403B	FAA, INDIANAPOLIS ARTCC	Indianapolis	FL180	01200AGL	USA	27
R3602A	FAA, KANSAS CITY ARTCC	Fort Riley	FL290	SURFACE	USA	49
R3602B	FAA, KANSAS CITY ARTCC	Fort Riley	FL290	SURFACE	USA	59
R3701	USA, CAMPBELL AAF APP	Fort Campbell	005000AMSL	SURFACE	USA	8
R3702A	FAA, MEMPHIS ARTCC	Fort Campbell	006000AMSL	SURFACE	USA	93
R3702B	FAA, MEMPHIS ARTCC	Fort Campbell	FL220	06000AMSL	USA	93
R3702C	FAA, MEMPHIS ARTCC	Fort Campbell	FL270	FL220	USA	93
R3704A	FAA, STANDIFORD TWR, LOUISVILLE	Fort Knox	010000AMSL	SURFACE	USA	113
R3704B	FAA, STANDIFORD TWR, LOUISVILLE	Fort Knox	FL220	10000AMSL	USA	113
R3803A	FAA, HOUSTON ARTCC	Fort Polk	FL180	SURFACE	USA	41
R3803B	FAA, HOUSTON ARTCC	Fort Polk	034999AMSL	FL180	USA	41
R3804A	FAA, HOUSTON ARTCC	Fort Polk	FL180	SURFACE	USA	100
R3804B	FAA, HOUSTON ARTCC	Fort Polk	003000AMSL	SURFACE	USA	14
R3804C	FAA, HOUSTON ARTCC	Fort Polk	034999AMSL	FL180	USA	100
R4001A	FAA, WASHINGTON, DC ARTCC	Aberdeen Proving Ground	UNLTD	SURFACE	USA	105
R4001B	FAA, WASHINGTON, DC ARTCC	Aberdeen Proving Ground	010000AMSL	SURFACE	USA	28
R4101	FAA, CAPE APP	Camp Edwards	009000AMSL	SURFACE	USA	14
R4102A	FAA, BOSTON ARTCC	Devens Reserve Forces Training Area	001999AMSL	SURFACE	USA	6
R4102B	FAA, BOSTON ARTCC	Devens Reserve Forces Training Area	003995AMSL	02000AMSL	USA	6
R4201A	FAA, MINNEAPOLIS ARTCC	Camp Grayling	FL230	SURFACE	USA	64
R4201B	FAA, MINNEAPOLIS ARTCC	Camp Grayling	009000AMSL	SURFACE	USA	41
R4202	FAA, MINNEAPOLIS ARTCC	Camp Grayling	008200AMSL	SURFACE	USA	5
R4301	FAA, MINNEAPOLIS ARTCC	Camp Riley	FL270	SURFACE	USA	64
R4501A	FAA, KANSAS CITY ARTCC	Fort Leonard Wood	002199AMSL	SURFACE	USA	21
R4501B(A)	FAA, KANSAS CITY ARTCC	Fort Leonard Wood	002200AMSL	SURFACE	USA	10
R4501B(B)	FAA, KANSAS CITY ARTCC	Fort Leonard Wood	001500AMSL	SURFACE	USA	0
R4501C	FAA, KANSAS CITY ARTCC	Fort Leonard Wood	005000AMSL	02200AMSL	USA	34

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
R4501D	FAA, KANSAS CITY ARTCC	Fort Leonard Wood	012000AMSL	05000AMSL	USA	34
R4501E	FAA, KANSAS CITY ARTCC	Fort Leonard Wood	FL180	12000AMSL	USA	34
R4501F	FAA, KANSAS CITY ARTCC	Fort Leonard Wood	003200AMSL	SURFACE	USA	4
R4501H	FAA, KANSAS CITY ARTCC	Fort Leonard Wood	003200AMSL	SURFACE	USA	15
R4808N	FAA, LOS ANGELES ARTCC	Nellis AFB	UNLTD	SURFACE	DOE	1280
R4808S	FAA, LOS ANGELES ARTCC	Nellis AFB	UNLTD	SURFACE	DOE	24
R4809	FAA, LOS ANGELES ARTCC	Nellis AFB	UNLTD	SURFACE	DOE	393
R4811	FAA, OAKLAND ARTCC	Hawthorne Army Ammunition Plant	015000AMSL	SURFACE	USA	7
R5001A	FAA, NEW YORK ARTCC	Fort Dix	004000AMSL	SURFACE	USA	23
R5001B	FAA, NEW YORK ARTCC	Fort Dix	008000AMSL	04000AMSL	USA	21
R5103(D)	FAA, ALBUQUERQUE ARTCC	Fort Bliss	UNLTD	01501AGL	USA	6
R5103(E)	FAA, ALBUQUERQUE ARTCC	Fort Bliss	UNLTD	01501AGL	USA	5
R5103A	FAA, ALBUQUERQUE ARTCC	Fort Bliss	018000AMSL	SURFACE	USA	43
R5103B	FAA, ALBUQUERQUE ARTCC	Fort Bliss	012500AMSL	SURFACE	USA	235
R5103C	FAA, ALBUQUERQUE ARTCC	Fort Bliss	UNLTD	SURFACE	USA	653
R5107A	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	SURFACE	USA	281
R5107B	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	SURFACE	USA	3140
R5107C	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	09000AMSL	USA	892
R5107D	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	022000AMSL	SURFACE	USA	551
R5107E	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	SURFACE	USA	127
R5107F	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	FL450	FL240	USA	1195
R5107G	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	FL450	FL240	USA	957
R5107H	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	009000AMSL	SURFACE	USA	814
R5107J	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	009000AMSL	SURFACE	USA	77
R5109A	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	24000AMSL	USA	1682
R5109B	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	24000AMSL	USA	1004
R5111A	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	13000AMSL	USA	404
R5111B	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	013000AMSL	SURFACE	USA	404
R5111C	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	13000AMSL	USA	318
R5111D	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	012999AMSL	SURFACE	USA	318
R5117	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	SURFACE	USA	22
R5119	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	FL350	USA	393
R5121	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	FL200	USA	38
R5123	FAA, ALBUQUERQUE ARTCC	White Sands Missile Range	UNLTD	SURFACE	USA	152

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
R5201	FAA, BOSTON ARTCC	Fort Drum	023000AMSL	SURFACE	USA	110
R5206	FAA, NEW YORK APP	West Point	005000AMSL	SURFACE	USA	4
R5311A	FAA, WASHINGTON, DC ARTCC	Fort Bragg	006999AMSL	SURFACE	USA	122
R5311B	FAA, WASHINGTON, DC ARTCC	Fort Bragg	011999AMSL	07000AMSL	USA	122
R5311C	FAA, WASHINGTON, DC ARTCC	Fort Bragg	028999AMSL	12000AMSL	USA	122
R5601A	FAA, FORT WORTH ARTCC	Fort Sill	FL400	SURFACE	USA	34
R5601B	FAA, FORT WORTH ARTCC	Fort Sill	FL400	SURFACE	USA	55
R5601C	FAA, FORT WORTH ARTCC	Fort Sill	FL400	SURFACE	USA	18
R5601D	FAA, FORT WORTH ARTCC	Fort Sill	FL400	00500AGL	USA	36
R5601E	FAA, FORT WORTH ARTCC	Fort Sill	006000AMSL	00500AGL	USA	9
R5801	FAA, WASHINGTON, DC ARTCC	Letterkenny Ordnance Depot	004000AMSL	SURFACE	USA	2
R5802A	FAA, NEW YORK ARTCC	Fort Indiantown Gap	005000AMSL	00200AGL	USA	12
R5802B	FAA, NEW YORK ARTCC	Fort Indiantown Gap	013000AMSL	SURFACE	USA	14
R5802C	FAA, NEW YORK ARTCC	Fort Indiantown Gap	016999AMSL	00500AGL	USA	33
R5802D	FAA, NEW YORK ARTCC	Fort Indiantown Gap	021999AMSL	17000AMSL	USA	33
R5802E	FAA, NEW YORK ARTCC	Fort Indiantown Gap	FL250	FL220	USA	97
R5803	FAA, WASHINGTON, DC ARTCC	Letterkenny Ordnance Depot	004000AMSL	SURFACE	USA	3
R6001A	FAA, JACKSONVILLE ARTCC	Fort Jackson	003200AMSL	SURFACE	USA	38
R6001B	FAA, JACKSONVILLE ARTCC	Fort Jackson	FL230	03200AMSL	USA	40
R6302A	FAA, HOUSTON ARTCC	Fort Hood	FL300	SURFACE	USA	126
R6302B	FAA, HOUSTON ARTCC	Fort Hood	011000AMSL	SURFACE	USA	15
R6302C	FAA, HOUSTON ARTCC	Fort Hood	FL300	SURFACE	USA	40
R6302D	FAA, HOUSTON ARTCC	Fort Hood	FL300	SURFACE	USA	24
R6302E	FAA, HOUSTON ARTCC	Fort Hood	FL450	FL300	USA	121
R6403	FAA, SALT LAKE CITY ARTCC	Tooele Army Depot	009000AMSL	SURFACE	USA	2
R6601	FAA, RICHMOND TWR	Fort A.P. Hill	005000AMSL	SURFACE	USA	40
R6602A	FAA, WASHINGTON, DC ARTCC	Fort Lee	003999AMSL	SURFACE	USA	36
R6602B	FAA, WASHINGTON, DC ARTCC	Fort Lee	010999AMSL	04000AMSL	USA	33
R6602C	FAA, WASHINGTON, DC ARTCC	Fort Lee	018000AMSL	11000AMSL	USA	33
R6714A	FAA, SEATTLE ARTCC	Fort Lewis	028999AMSL	SURFACE	USA	229
R6714B	FAA, SEATTLE ARTCC	Fort Lewis	028999AMSL	SURFACE	USA	25
R6714C	FAA, SEATTLE ARTCC	Fort Lewis	028999AMSL	SURFACE	USA	30
R6714D	FAA, SEATTLE ARTCC	Fort Lewis	028999AMSL	SURFACE	USA	4
R6714E	FAA, SEATTLE ARTCC	Yakima	054999AMSL	29000AMSL	USA	319

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
R6714F	FAA, SEATTLE ARTCC	Fort Lewis	028999AMSL	SURFACE	USA	14
R6714G	FAA, SEATTLE ARTCC	Fort Lewis	028999AMSL	SURFACE	USA	21
R6714H	FAA, SEATTLE ARTCC	Fort Lewis	005499AMSL	SURFACE	USA	26
R6901A	FAA, MINNEAPOLIS ARTCC	Fort McCoy	FL200	SURFACE	USA	46
R6901B	FAA, MINNEAPOLIS ARTCC	Fort McCoy	FL200	SURFACE	USA	21
R7001A	FAA, DENVER ARTCC	Camp Guernsey	007999AMSL	SURFACE	USA	46
R7001B	FAA, DENVER ARTCC	Camp Guernsey	023500AMSL	08000AMSL	USA	46
R7001C	FAA, DENVER ARTCC	Camp Guernsey	FL300	23500AMSL	USA	46
RAINIER 1 MOA, WA	FAA, SEATTLE-TACOMA APP CON	Fort Leonard Wood	009000AMSL	02000AMSL	USA	27
RAINIER 2 MOA, WA	FAA, SEATTLE-TACOMA APP CON	Fort Leonard Wood	009000AMSL	02000AMSL	USA	49
RAINIER 3 MOA, WA	FAA, SEATTLE-TACOMA APP CON	Fort Leonard Wood	009000AMSL	02000AMSL	USA	15
RILEY MOA, KS	CO, 24 Infantry Div	Fort Riley	FL180	07000AMSL	USA	325
SHIRLEY 1 MOA, AR	FAA, MEMPHIS ARTCC	Fort Smith	018000AMSL	10000AMSL	USA	3069
SILVER MOA NORTH, CA	FAA, LOS ANGELES ARTCC	Fort Irwin	009000AMSL	00200AGL	USA	360
SILVER MOA SOUTH, CA	FAA, LOS ANGELES ARTCC	Fort Irwin	007000AMSL	00200AGL	USA	19
WARRIOR 1 HIGH MOA, LA	FAA, HOUSTON ARTCC	Fort Polk	018000AMSL	10000AMSL	USA	1599
WARRIOR 1 LOW MOA, LA	FAA, HOUSTON ARTCC	Fort Polk	009999AMSL	00100AGL	USA	1599
WARRIOR 2 HIGH MOA, LA	FAA, HOUSTON ARTCC	Fort Polk	018000AMSL	10000AMSL	USA	885
WARRIOR 2 LOW MOA, LA	FAA, HOUSTON ARTCC	Fort Polk	009999AMSL	00100AGL	USA	885
WARRIOR 3 HIGH MOA, LA	FAA, HOUSTON ARTCC	Fort Polk	018000AMSL	10000AMSL	USA	1009
WARRIOR 3 LOW MOA, LA	FAA, HOUSTON ARTCC	Fort Polk	009999AMSL	00100AGL	USA	1009
R4401A	FAA, HOUSTON ARTCC	Camp Shelby	004000AMSL	SURFACE	USA(ARNG)	87
R4401B	FAA, HOUSTON ARTCC	Camp Shelby	018000AMSL	04000AMSL	USA(ARNG)	87
R4401C	FAA, HOUSTON ARTCC	Camp Shelby	FL290	18000AMSL	USA(ARNG)	87
R5401	FAA, MINNEAPOLIS ARTCC	Camp Grafton	005000AMSL	SURFACE	USA(ARNG)	3
R6412A	FAA, SALT LAKE CITY TRACON	Camp Williams	009000AMSL	SURFACE	USA(ARNG)	18
R6412B	FAA, SALT LAKE CITY TRACON	Camp Williams	010000AMSL	09000AMSL	USA(ARNG)	18
R6412C	FAA, SALT LAKE CITY TRACON	Camp Williams	009000AMSL	SURFACE	USA(ARNG)	13
R6412D	FAA, SALT LAKE CITY TRACON	Camp Williams	010000AMSL	09000AMSL	USA(ARNG)	13
RACER A MOA, IN	HQ IN ANG Det 1	Camp Atterbury	004000AMSL	00500AGL	USA(ARNG)	130
RACER B MOA, IN	HQ IN ANG, Det 1, CAMP ATTERBURY, IN	Camp Atterbury	008000AMSL	04000AMSL	USA(ARNG)	130
RACER C MOA, IN	HQ IN ANG, Det 1, CAMP ATTERBURY, IN	Camp Atterbury	018000AMSL	00500AGL	USA(ARNG)	36
(RO)W173	USAF, CFAO KADENA AB	Okinawa Range Complex	UNLTD	SURFACE	USAF	6077
(RO)W182	USAF, CFAO KADENA AB	Okinawa Range Complex	004000AMSL	SURFACE	USAF	78

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
A220	USAF, MCGUIRE AFB RAPCON	McGuire AFB	004500AMSL	SURFACE	USAF	457
A231	FAA, ALBUQUERQUE ARTCC	Luke AFB	006500AMSL	00500AGL	USAF	516
A260	USAF ACADEMY	USAF Academy	017500AMSL	SURFACE	USAF	31
A440	USAF, 14 FTW COLUMBUS AFB	Columbus AFB	006500AMSL	SURFACE	USAF	217
A481	USAF, NELLIS AFB	Nellis AFB	017000AMSL	07000AMSL	USAF	252
A561	USAF, SHEPPARD AFB	Sheppard AFB	004000AMSL	SURFACE	USAF	145
A562A	USAF, VANCE AFB	Vance AFB	010000AMSL	SURFACE	USAF	119
A562B	USAF, VANCE AFB	Vance AFB	010000AMSL	SURFACE	USAF	156
A633A	USAF, LAUGHLIN AFB	Laughlin AFB	007000AMSL	SURFACE	USAF	548
A633B	USAF, LAUGHLIN AFB	Laughlin AFB	004000AMSL	SURFACE	USAF	153
A635	USAF, RANDOLPH AFB	Randolph AFB	004000AMSL	01500AMSL	USAF	139
A636	USAF, SHEPPARD AFB	Sheppard AFB	004000AMSL	SURFACE	USAF	529
A638	USAF, RANDOLPH AFB	Randolph AFB	003000AMSL	SURFACE	USAF	129
A639A	USAF, USAF ACADEMY	USAF Academy	012000AMSL	03000AGL	USAF	730
A639B	USAF, USAF ACADEMY	USAF Academy	012000AMSL	03000AGL	USAF	136
A640	USAF, RANDOLPH AFB	Randolph AFB	007500AMSL	00200AGL	USAF	2493
A682(A)	USAF, TRAVIS AFB	Travis AFB	006000AMSL	SURFACE	USAF	206
A682(B)	USAF, TRAVIS AFB	Travis AFB	003000AMSL	SURFACE	USAF	116
ADA EAST MOA, KS	FAA, KANSAS CITY ARTCC	Vance AFB	018000AMSL	07000AMSL	USAF	1124
ADA WEST MOA, KS	FAA, KANSAS CITY ARTCC	Vance AFB	018000AMSL	07000AMSL	USAF	1065
ANNE HIGH MOA, AR	FAA, FORT WORTH ARTCC	Barksdale AFB	018000AMSL	07000AMSL	USAF	683
ANNE LOW MOA, AR	FAA, FORT WORTH ARTCC	Barksdale AFB	006999AMSL	00100AGL	USAF	683
AVON EAST MOA, FL	FAA, MIAMI ARTCC	MacDill AFB	013999AMSL	00500AGL	USAF	38
AVON NORTH MOA, FL	FAA, MIAMI ARTCC	MacDill AFB	018000AMSL	05000AMSL	USAF	94
AVON SOUTH MOA, FL	FAA, MIAMI ARTCC	MacDill AFB	018000AMSL	05000AMSL	USAF	116
BAGDAD 1 MOA, AZ	FAA, ALBUQUERQUE ARTCC	Luke AFB	018000AMSL	07000AMSL	USAF	1067
BAKERSFIELD MOA, CA	FAA, LOS ANGLES ARTCC	Edwards AFB	018000AMSL	02000AGL	USAF	301
BARSTOW MOA, CA	FAA, HI-DESERT TRACON, EDWARDS, CA	Edwards AFB	018000AMSL	00200AGL	USAF	162
BASINGER MOA, FL	FAA, MIAMI ARTCC	MacDill AFB	005000AMSL	00500AGL	USAF	42
BEAK A MOA, NM	FAA, ALBUQUERQUE ARTCC	Holloman AFB	018000AMSL	12500AMSL	USAF	690
BEAK B MOA, NM	FAA, ALBUQUERQUE ARTCC	Holloman AFB	018000AMSL	12500AMSL	USAF	606
BEAK C MOA, NM	FAA, ALBUQUERQUE ARTCC	Holloman AFB	018000AMSL	12500AMSL	USAF	636
BIRCH MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	005000AMSL	00500AGL	USAF	424
BISHOP MOA, CA	FAA, LOS ANGLES ARTCC	Edwards AFB	018000AMSL	00200AGL	USAF	128

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
BRONCO 1 MOA, TX	FAA, FORT WORTH ARTCC	Cannon AFB	018000AMSL	08000AMSL	USAF	1041
BRONCO 2 MOA, TX	FAA, FORT WORTH ARTCC	Cannon AFB	018000AMSL	10000AMSL	USAF	609
BRONCO 3 MOA, TX	FAA, FORT WORTH ARTCC	Cannon AFB	018000AMSL	10000AMSL	USAF	1739
BRONCO 4 MOA, TX	FAA, FORT WORTH ARTCC	Cannon AFB	018000AMSL	10000AMSL	USAF	1764
BUCKHORN MOA, CA	FAA, LOS ANGELES ARTCC	Edwards AFB	018000AMSL	00200AGL	USAF	58
BUFFALO MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	006999AMSL	00300AGL	USAF	1648
BULLDOG A MOA, GA	FAA, ATLANTA ARTCC	Shaw AFB	009999AMSL	00500AGL	USAF	1052
BULLDOG B MOA, GA	FAA, ATLANTA ARTCC	Shaw AFB	018000AMSL	10000AMSL	USAF	1677
BULLDOG D MOA, GA	FAA, ATLANTA ARTCC	Shaw AFB	017000AMSL	00500AGL	USAF	79
CATO MOA, NM	FAA, ALBUQUERQUE ARTCC	Kirtland AFB	018000AMSL	13500AMSL	USAF	2655
CHINA MOA, CA	FAA, OAKLAND ARTCC	Beale AFB	018000AMSL	03000AGL	USAF	625
CLAIBORNE A MOA, LA	USA, POLK APP CON	Claiborne	009999AMSL	00100AGL	USAF	80
CLAIBORNE B MOA, LA	USA, POLK APP CON	Claiborne	018000AMSL	10000AMSL	USAF	80
COLUMBUS 1 MOA, MS	FAA, MEMPHIS ARTCC	Columbus AFB	018000AMSL	08000AMSL	USAF	2707
COLUMBUS 2 MOA, MS	FAA, MEMPHIS ARTCC	Columbus AFB	018000AMSL	08000AMSL	USAF	643
COLUMBUS 3 MOA, MS	FAA, MEMPHIS ARTCC	Columbus AFB	018000AMSL	08000AMSL	USAF	2664
COLUMBUS 4 MOA, MS	FAA, MEMPHIS ARTCC	Columbus AFB	018000AMSL	10000AMSL	USAF	1376
CRYSTAL MOA, TX	FAA, HOUSTON ARTCC	Laughlin AFB	018000AMSL	06000AMSL	USAF	1377
CRYSTAL NORTH MOA, TX	FAA, HOUSTON ARTCC	Laughlin AFB	018000AMSL	06000AMSL	USAF	410
DESERT MOA, NV	FAA, LOS ANGELES ARTCC	Nellis AFB	018000AMSL	00100AGL	USAF	5543
DEVILS LAKE EAST MOA, ND	FAA, MINNEAPOLIS ARTCC	McChord AFB	018000AMSL	03500AMSL	USAF	1773
DEVILS LAKE WEST MOA, ND	FAA, MINNEAPOLIS ARTCC	McChord AFB	018000AMSL	04000AMSL	USAF	1739
EGLIN A EAST MOA, FL	FAA, JACKSONVILLE ARTCC	Eglin AFB	018000AMSL	01000AGL	USAF	98
EGLIN A WEST MOA, FL	FAA, JACKSONVILLE ARTCC	Eglin AFB	018000AMSL	01000AGL	USAF	90
EGLIN B MOA, FL	FAA, JACKSONVILLE ARTCC	Eglin AFB	018000AMSL	01000AGL	USAF	222
EGLIN C MOA, FL	FAA, JACKSONVILLE ARTCC	Eglin AFB	018000AMSL	01000AGL	USAF	144
EGLIN D MOA, FL	FAA, JACKSONVILLE ARTCC	Eglin AFB	003000AMSL	01000AGL	USAF	133
EGLIN E MOA, FL	FAA, JACKSONVILLE ARTCC	Eglin AFB	018000AMSL	SURFACE	USAF	1143
EGLIN F MOA, FL	FAA, JACKSONVILLE ARTCC	Eglin AFB	018000AMSL	SURFACE	USAF	5
EIELSON MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	00100AGL	USAF	720
EVERS MOA, WV	FAA, WASHINGTON, DC ARTCC	Langley AFB	018000AMSL	01000AGL	USAF	479
FARMVILLE MOA, VA	FAA, WASHINGTON, DC ARTCC	Langley AFB	005000AMSL	00300AGL	USAF	1188
FOX 1 MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	05000AGL	USAF	1132
FOX 2 MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	07000AMSL	USAF	94

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
FOX 3 MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	05000AMSL	USAF	3705
FUZZY MOA, AZ	FAA, ALBUQUERQUE ARTCC	Barry M. Goldwater Range	009999AMSL	00100AGL	USAF	444
GALENA MOA, AK	FAA, ANCHORAGE ARTCC	Elmendorf AFB	018000AMSL	01000AMSL	USAF	3910
GAMECOCK A MOA, NC	FAA, WASHINGTON, DC ARTCC	Shaw AFB (20 OSS/OSOS)	018000AMSL	07000AMSL	USAF	555
GAMECOCK B MOA, SC	FAA, JACKSONVILLE ARTCC	Shaw AFB	018000AMSL	10000AMSL	USAF	248
GAMECOCK C MOA, SC	FAA, JACKSONVILLE ARTCC	Shaw AFB	010000AMSL	00100AGL	USAF	623
GAMECOCK D MOA, SC	FAA, JACKSONVILLE ARTCC	Shaw AFB	018000AMSL	10000AMSL	USAF	839
GAMECOCK I MOA, SC	FAA, JACKSONVILLE ARTCC	Shaw AFB	006000AMSL	00100AGL	USAF	405
GANDY MOA, UT	FAA, SALT LAKE CITY ARTCC	Hill AFB	018000AMSL	00100AGL	USAF	832
GLADDEN 1 MOA, AZ	FAA, ALBUQUERQUE ARTCC	Luke AFB	018000AMSL	05000AGL	USAF	1872
HACKETT MOA, LA	FAA, FORT WORTH ARTCC	Barksdale AFB	018000AMSL	07000AMSL	USAF	1235
HOLLIS MOA, OK	FAA, FORT WORTH ARTCC	Sheppard AFB	018000AMSL	11000AMSL	USAF	1204
ISABELLA MOA, CA	FAA, HI-DESERT TRACON, EDWARDS AFB	Edwards AFB	018000AMSL	00200AGL	USAF	2684
JARBIDGE MOA, ID	FAA, SALT LAKE CITY ARTCC	Mt. Home AFB	018000AMSL	00100AGL	USAF	1836
JENA 1 MOA, LA	FAA, HOUSTON ARTCC	Barksdale AFB	005000AMSL	00100AGL	USAF	1075
LAKE PLACID MOA, FL	FAA, MIAMI ARTCC	MacDill AFB	018000AMSL	07000AMSL	USAF	1085
LANCER MOA, TX	FAA, FORT WORTH ARTCC	Dyess AFB	018000AMSL	06200AMSL	USAF	3225
LAUGHLIN 1 MOA, TX	FAA, HOUSTON ARTCC	Laughlin AFB	018000AMSL	09000AMSL	USAF	4972
LAUGHLIN 2 MOA, TX	FAA, HOUSTON ARTCC	Laughlin AFB	018000AMSL	07000AMSL	USAF	2279
LAUGHLIN 3 HIGH MOA, TX	FAA, HOUSTON ARTCC	Laughlin AFB	FL180	15000AMSL	USAF	420
LAUGHLIN 3 LOW MOA, TX	FAA, HOUSTON ARTCC	Laughlin AFB	014999AMSL	07000AMSL	USAF	420
LIVE OAK MOA, FL	FAA, JACKSONVILLE ARTCC	Moody AFB	018000AMSL	08000AMSL	USAF	1208
LUCIN A MOA, UT	FAA, SALT LAKE CITY ARTCC	Hill AFB	009000AMSL	00100AGL	USAF	1532
LUCIN B MOA, UT	FAA, SALT LAKE CITY ARTCC	Hill AFB	007500AMSL	00100AGL	USAF	992
LUCIN C MOA, UT	FAA, SALT LAKE CITY ARTCC	Hill AFB	006500AMSL	00100AGL	USAF	120
MARIAN MOA, FL	FAA, MIAMI ARTCC	MacDill AFB	005000AMSL	00500AGL	USAF	204
MAXWELL 1 MOA, CA	FAA, OAKLAND ARTCC	Beale AFB	018000AMSL	11000AMSL	USAF	877
MAXWELL 2 MOA, CA	FAA, OAKLAND ARTCC	Beale AFB	018000AMSL	11000AMSL	USAF	926
MAXWELL 3 MOA, CA	FAA, OAKLAND ARTCC	Beale AFB	018000AMSL	11000AMSL	USAF	926
MOODY 1 MOA, GA	FAA, JACKSONVILLE ARTCC	Moody AFB	018000AMSL	08000AMSL	USAF	4714
MOODY 2 NORTH MOA, GA	FAA, JACKSONVILLE ARTCC	Moody AFB	007999AMSL	00500AGL	USAF	318
MOODY 2 SOUTH MOA, GA	FAA, JACKSONVILLE ARTCC	Moody AFB	007999AMSL	00100AGL	USAF	405
MOODY 3 MOA, GA	FAA, JACKSONVILLE ARTCC	Moody AFB	018000AMSL	08000AMSL	USAF	1258
MT DORA EAST HIGH MOA, NM	FAA, ALBUQUERQUE ARTCC	Cannon AFB	018000AMSL	11000AMSL	USAF	1163

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
MT DORA EAST LOW MOA, NM	FAA, ALBUQUERQUE ARTCC	Cannon AFB	010999AMSL	01500AGL	USAF	1163
MT DORA NORTH HIGH MOA, NM	FAA, ALBUQUERQUE ARTCC	Cannon AFB	018000AMSL	11000AMSL	USAF	1264
MT DORA NORTH LOW MOA, NM	FAA, ALBUQUERQUE ARTCC	Cannon AFB	010999AMSL	01500AGL	USAF	1264
MT DORA WEST HIGH MOA, NM	FAA, ALBUQUERQUE ARTCC	Cannon AFB	018000AMSL	11000AMSL	USAF	1607
MT DORA WEST LOW MOA, NM	FAA, ALBUQUERQUE ARTCC	Cannon AFB	010999AMSL	01500AGL	USAF	1607
NAKNEK 1 MOA, AK	FAA, ANCHORAGE ARTCC	Elmendorf AFB	018000AMSL	03000AGL	USAF	3894
NAKNEK 2 MOA, AK	FAA, ANCHORAGE ARTCC	Elmendorf AFB	018000AMSL	03000AGL	USAF	2758
ONTONAGON MOA, MI	FAA, MINNEAPOLIS ARTCC	Offutt AFB	018000AMSL	00500AGL	USAF	863
OWENS MOA, CA	FAA, HI-DESERT TRACON, EDWARDS AFB	Edwards AFB	018000AMSL	00200AGL	USAF	2014
OWYHEE MOA, ID	FAA, SALT LAKE CITY ARTCC	Mt. Home AFB	018000AMSL	00100AGL	USAF	1988
PANAMINT MOA, CA	FAA, HI-DESERT TRACON, EDWARDS AFB	Edwards AFB	018000AMSL	03001AGL	USAF	2051
PARADISE EAST MOA, NV	FAA, SALT LAKE CITY ARTCC	Mt. Home AFB	018000AMSL	14500AMSL	USAF	1608
PARADISE WEST MOA, OR	FAA, SALT LAKE CITY ARTCC	Mt. Home AFB	018000AMSL	14500AMSL	USAF	1840
PHELPS A MOA, NC	FAA, WASHINGTON, DC ARTCC	Seymour-Johnson AFB	018000AMSL	06000AMSL	USAF	211
PHELPS B MOA, NC	FAA, WASHINGTON, DC ARTCC	Seymour-Johnson AFB	018000AMSL	10000AMSL	USAF	77
PHELPS C MOA, NC	FAA, WASHINGTON, DC ARTCC	Seymour-Johnson AFB	018000AMSL	15000AMSL	USAF	44
POINSETT MOA, SC	USAF, SHAW APP CON	Shaw AFB	002500AMSL	00300AGL	USAF	145
PORTERVILLE MOA, CA	FAA, LOS ANGELES ARTCC	Edwards AFB	018000AMSL	02000AGL	USAF	465
POWDER RIVER A MOA, MT	FAA, SALT LAKE CITY ARTCC	Ellsworth AFB	018000AMSL	SURFACE	USAF	3047
POWDER RIVER B MOA, WY	FAA, DENVER ARTCC	Ellsworth AFB	018000AMSL	01000AGL	USAF	1385
R2206	FAA, ANCHORAGE ARTCC	13th Missile Wing	008800AMSL	SURFACE	USAF	10
R2211	FAA, ANCHORAGE ARTCC	Eielson AFB	FL310	SURFACE	USAF	134
R2301E	FAA, ALBUQUERQUE ARTCC	Luke AFB	FL800	SURFACE	USAF	1552
R2304	FAA, ALBUQUERQUE ARTCC	Luke AFB	FL240	SURFACE	USAF	345
R2305	FAA, ALBUQUERQUE ARTCC	Luke AFB	FL240	SURFACE	USAF	187
R2309	FAA, LOS ANGELES ARTCC	Yuma Proving Ground	015000AMSL	SURFACE	USAF	7
R2312	LIBBY AAF TWR	McChord AFB	014999AMSL	SURFACE	USAF	9
R2508	FAA, HI-DESERT TRACON, EDWARDS AFB	R-2508 Complex	UNLTD	FL200	USAF	12127
R2515	FAA, HI-DESERT TRACON, EDWARDS AFB	Edwards AFB	UNLTD	SURFACE	USAF	1368
R2516	FAA, LOS ANGELES ARTCC	Vandenberg AFB	UNLTD	SURFACE	USAF	134
R2517	FAA, LOS ANGELES ARTCC	Vandenberg AFB	UNLTD	SURFACE	USAF	95
R2534A	FAA, LOS ANGELES ARTCC	Vandenberg AFB	UNLTD	00500AGL	USAF	52
R2534B	FAA, LOS ANGELES ARTCC	Vandenberg AFB	UNLTD	00500AGL	USAF	54
R2602	FAA, DENVER ARTCC	Colorado Springs Training Site	SURFACE	01000AGL	USAF	1

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
R2901A	FAA, MIAMI ARTCC	Avon Park	014000AMSL	SURFACE	USAF	166
R2901B	FAA, MIAMI ARTCC	Avon Park	FL180	14000AMSL	USAF	145
R2901C	FAA, MIAMI ARTCC	Avon Park	014000AMSL	SURFACE	USAF	25
R2901D	FAA, MIAMI ARTCC	Avon Park	004000AMSL	00500AMSL	USAF	28
R2901E	FAA, MIAMI ARTCC	Avon Park	004000AMSL	01000AMSL	USAF	90
R2901F	FAA, MIAMI ARTCC	Avon Park	005000AMSL	04000AMSL	USAF	15
R2901G	FAA, MIAMI ARTCC	Avon Park	005000AMSL	SURFACE	USAF	27
R2901H	FAA, MIAMI ARTCC	Avon Park	004000AMSL	01000AMSL	USAF	32
R2901I	FAA, MIAMI ARTCC	Avon Park	004000AMSL	01500AMSL	USAF	31
R2905A	TYNDALL AFB RADAR APP	Tyndall AFB	010000AMSL	SURFACE	USAF	15
R2905B	TYNDALL AFB RADAR APP	Tyndall AFB	010000AMSL	SURFACE	USAF	25
R2914A	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	387
R2914B	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	08500AMSL	USAF	71
R2915A	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	208
R2915B	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	46
R2915C	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	08500AMSL	USAF	34
R2916	FAA, MIAMI ARTCC	Tyndall AFB	014000AMSL	SURFACE	USAF	9
R2917	USAF, EGLIN AFB APP	Eglin AFB	022999AMSL	SURFACE	USAF	20
R2918	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	16
R2919A	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	48
R2919B	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	08500AMSL	USAF	84
R2932	FAA, MIAMI ARTCC	Cape Canaveral Range Complex	004999AMSL	SURFACE	USAF	115
R2933	FAA, MIAMI ARTCC	Cape Canaveral Range Complex	UNLTD	05000AMSL	USAF	115
R2934	FAA, MIAMI ARTCC	Cape Canaveral Range Complex	UNLTD	SURFACE	USAF	169
R2935	FAA, MIAMI ARTCC	Cape Canaveral Range Complex	UNLTD	11000AMSL	USAF	404
R3008A	USAF, VALDOSTA APP	Moody AFB	010000AMSL	SURFACE	USAF	6
R3008B	USAF, VALDOSTA APP	Moody AFB	010000AMSL	00100AGL	USAF	20
R3008C	USAF, VALDOSTA APP	Moody AFB	010000AMSL	00500AGL	USAF	67
R3008C(A)	USAF, VALDOSTA APP	Moody AFB	001500AGL	SURFACE	USAF	3
R3008D	USAF, VALDOSTA APP	Moody AFB	022999AMSL	10000AMSL	USAF	93
R3202(H)	FAA, SALT LAKE CITY ARTCC	Mountain Home AFB	FL290	FL180	USAF	226
R3202(L)	FAA, SALT LAKE CITY ARTCC	Mountain Home AFB	018000AMSL	SURFACE	USAF	226
R3204A	FAA, SALT LAKE CITY ARTCC	Mountain Home AFB	000100AGL	SURFACE	USAF	14
R3204B	FAA, SALT LAKE CITY ARTCC	Mountain Home AFB	018000AMSL	00100AGL	USAF	78

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
R3204C	FAA, SALT LAKE CITY ARTCC	Mountain Home AFB	FL290	FL180	USAF	78
R3801A	FAA, HOUSTON ARTCC	Barksdale AFB	010000AMSL	SURFACE	USAF	101
R3801B	FAA, HOUSTON ARTCC	Barksdale AFB	FL180	10000AMSL	USAF	101
R3801C	FAA, HOUSTON ARTCC	Barksdale AFB	FL230	FL180	USAF	101
R3807	FAA, HOUSTON ARTCC	Tyndall AFB	015000AMSL	SURFACE	USAF	28
R4105A	FAA, CAPE APP	Barnes ANGB	009999AMSL	SURFACE	USAF	28
R4105B	FAA, CAPE APP	Barnes ANGB	018000AMSL	10000AMSL	USAF	28
R4305	FAA, MINNEAPOLIS ARTCC	Offutt AFB	FL450	SURFACE	USAF	1242
R4806E	FAA, LOS ANGELES ARTCC	Nellis AFB	UNLTD	00100AGL	USAF	291
R4806W	FAA, LOS ANGELES ARTCC	Nellis AFB	UNLTD	SURFACE	USAF	1179
R4807A	FAA, LOS ANGELES ARTCC	Nellis AFB	UNLTD	SURFACE	USAF	1698
R4807B	FAA, LOS ANGELES ARTCC	Nellis AFB	UNLTD	SURFACE	USAF	100
R5104A	FAA, ALBUQUERQUE ARTCC	Cannon AFB	018000AMSL	SURFACE	USAF	209
R5104B	FAA, ALBUQUERQUE ARTCC	Cannon AFB	023000AMSL	18000AMSL	USAF	209
R5105	FAA, ALBUQUERQUE ARTCC	Cannon AFB	010000AMSL	SURFACE	USAF	139
R5115	FAA, ALBUQUERQUE ARTCC	McChord AFB	015000AMSL	SURFACE	USAF	10
R6002A	FAA, JACKSONVILLE ARTCC	Shaw AFB	012999AMSL	SURFACE	USAF	54
R6002B	FAA, JACKSONVILLE ARTCC	Shaw AFB	018000AMSL	13000AMSL	USAF	54
R6002C	FAA, JACKSONVILLE ARTCC	Shaw AFB	FL230	FL180	USAF	54
R6316	FAA, HOUSTON ARTCC	McChord AFB	015000AMSL	SURFACE	USAF	21
R6317	FAA, HOUSTON ARTCC	McChord AFB	015000AMSL	SURFACE	USAF	21
R6318	FAA, ALBUQUERQUE ARTCC	McChord AFB	014000AMSL	SURFACE	USAF	9
R6402A	FAA, SALT LAKE CITY ARTCC	Hill AFB	FL580	SURFACE	USAF	987
R6402B	FAA, SALT LAKE CITY ARTCC	Hill AFB	FL580	00100AGL	USAF	35
R6404A	FAA, SALT LAKE CITY ARTCC	Hill AFB	FL580	SURFACE	USAF	1120
R6404B	FAA, SALT LAKE CITY ARTCC	Hill AFB	013000AMSL	SURFACE	USAF	202
R6404C	FAA, SALT LAKE CITY ARTCC	Hill AFB	FL280	00100AGL	USAF	168
R6404D	FAA, SALT LAKE CITY ARTCC	Hill AFB	FL250	13000AMSL	USAF	202
R6405	FAA, SALT LAKE CITY ARTCC	Hill AFB	FL580	00100AGL	USAF	1946
R6406A	FAA, SALT LAKE CITY ARTCC	Hill AFB	FL580	SURFACE	USAF	851
R6406B	FAA, SALT LAKE CITY ARTCC	Hill AFB	FL580	00100AGL	USAF	47
R6407	FAA, SALT LAKE CITY ARTCC	Hill AFB	FL580	SURFACE	USAF	652
R6413	FAA, DENVER ARTCC	White Sands Missile Range	UNLTD	SURFACE	USAF	204
RANDOLPH 1A MOA, TX	FAA, HOUSTON ARTCC	Randolph AFB	018000AMSL	08000AMSL	USAF	1418

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
RANDOLPH 1B MOA, TX	FAA, SAN ANTONIO TRACON	Randolph AFB	018000AMSL	07000AMSL	USAF	754
RANDOLPH 2A MOA, TX	FAA, HOUSTON ARTCC	Randolph AFB	018000AMSL	09000AMSL	USAF	1443
RANDOLPH 2B MOA, TX	FAA, HOUSTON ARTCC	Randolph AFB	018000AMSL	14000AMSL	USAF	316
REVEILLE NORTH MOA, NV	FAA, SALT LAKE CITY ARTCC	Nellis AFB	018000AMSL	00100AGL	USAF	1245
REVEILLE SOUTH MOA, NV	FAA, SALT LAKE CITY ARTCC	Nellis AFB	018000AMSL	00100AGL	USAF	439
ROSE HILL MOA, AL	FAA, JACKSONVILLE ARTCC	Eglin AFB	018000AMSL	08000AMSL	USAF	649
SALINE MOA, CA	FAA, HI-DESERT TRACON, EDWARDS AFB	Edwards AFB	018000AMSL	00200AGL	USAF	1690
SELLS 1 MOA, AZ	FAA, ALBUQUERQUE ARTCC	Luke AFB	018000AMSL	10000AMSL	USAF	3665
SELLS LOW MOA, AZ	FAA, ALBUQUERQUE ARTCC	Luke AFB	009999AMSL	03000AGL	USAF	3133
SEVIER A MOA, UT	FAA, SALT LAKE CITY ARTCC	Hill AFB	014500AMSL	00100AGL	USAF	1011
SEVIER B MOA, UT	FAA, SALT LAKE CITY ARTCC	Hill AFB	009500AMSL	00100AGL	USAF	2200
SEVIER C MOA, NV	FAA, SALT LAKE CITY ARTCC	Hill AFB	018000AMSL	14500AMSL	USAF	1011
SEVIER D MOA, UT	FAA, SALT LAKE CITY ARTCC	Hill AFB	018000AMSL	09500AMSL	USAF	2200
SEYMOUR JOHNSON ECHO MOA, NC	FAA, WASHINGTON, DC ARTCC	Seymour-Johnson AFB	018000AMSL	07000AMSL	USAF	1036
SHEPPARD 1 MOA, TX	FAA, FORT WORTH ARTCC	Sheppard AFB	018000AMSL	08000AMSL	USAF	1033
SHEPPARD 2 MOA, TX	FAA, FORT WORTH ARTCC	Sheppard AFB	018000AMSL	08000AMSL	USAF	1264
SHOSHONE MOA, CA	FAA, LOS ANGELES ARTCC	R-2508 Complex	018000AMSL	03001AGL	USAF	1170
STONY A MOA, AK	FAA, ANCHORAGE ARTCC	Elmendorf AFB	018000AMSL	00100AGL	USAF	4068
STONY B MOA, AK	FAA, ANCHORAGE ARTCC	Elmendorf AFB	018000AMSL	02000AGL	USAF	2393
SUNNY MOA, AZ	FAA, DENVER ARTCC	Luke AFB	018000AMSL	12000AMSL	USAF	2330
SUSITNA MOA, AK	FAA, ANCHORAGE ARTCC	Elmendorf AFB	018000AMSL	10000AMSL	USAF	2474
TAIBAN MOA, NM	FAA, ALBUQUERQUE ARTCC	Cannon AFB	010999AMSL	00500AGL	USAF	235
TALON EAST HIGH MOA, NM	FAA, ALBUQUERQUE ARTCC	Holloman AFB	018000AMSL	12500AMSL	USAF	661
TALON LOW MOA, NM	FAA, ALBUQUERQUE ARTCC	Holloman AFB	012499AMSL	00300AGL	USAF	1027
TALON WEST HIGH MOA, NM	FAA, ALBUQUERQUE ARTCC	Holloman AFB	018000AMSL	12500AMSL	USAF	972
TEXON MOA, TX	FAA, HOUSTON ARTCC	Randolph AFB	018000AMSL	06000AMSL	USAF	1156
TIGER NORTH MOA, ND	FAA, MINNEAPOLIS ARTCC	McChord AFB	018000AMSL	00300AGL	USAF	2225
TIGER SOUTH MOA, ND	FAA, MINNEAPOLIS ARTCC	McChord AFB	018000AMSL	06000AMSL	USAF	1715
TOMBSTONE A MOA, AZ	FAA, ALBUQUERQUE ARTCC	David-Monthan AFB	014499AMSL	00500AGL	USAF	520
TOMBSTONE B MOA, AZ	FAA, ALBUQUERQUE ARTCC	David-Monthan AFB	014499AMSL	00500AGL	USAF	1299
TOMBSTONE C MOA, AZ	FAA, ALBUQUERQUE ARTCC	David-Monthan AFB	018000AMSL	14500AMSL	USAF	3002
TRUMAN A MOA, MO	FAA, KANSAS CITY ARTCC	Whiteman AFB	018000AMSL	08000AMSL	USAF	1107
TRUMAN B MOA, MO	FAA, KANSAS CITY ARTCC	Whiteman AFB	018000AMSL	08000AMSL	USAF	731
TRUMAN C MOA, MO	FAA, KANSAS CITY ARTCC	Whiteman AFB	018000AMSL	00500AGL	USAF	608

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
TYNDALL B MOA, FL	USAF, TYNDALL RADAR APP CON	Tyndall AFB	018000AMSL	09000AMSL	USAF	347
TYNDALL C MOA, FL	USAF, TYNDALL RADAR APP CON	Tyndall AFB	006000AMSL	00300AGL	USAF	559
TYNDALL D MOA, FL	USAF, TYNDALL RADAR APP CON	Tyndall AFB	006000AMSL	00300AGL	USAF	311
TYNDALL E MOA, FL	USAF, TYNDALL RADAR APP CON	Tyndall AFB	018000AMSL	00300AGL	USAF	893
TYNDALL F MOA, FL	USAF, TYNDALL RADAR APP CON	Tyndall AFB	018000AMSL	00300AGL	USAF	297
TYNDALL G MOA, FL	USAF, TYNDALL RADAR APP CON	Tyndall AFB	018000AMSL	01000AGL	USAF	224
TYNDALL H MOA, FL	USAF, TYNDALL RADAR APP CON	Tyndall AFB	018000AMSL	09000AMSL	USAF	559
VALENTINE MOA, TX	FAA, ALBUQUERQUE ARTCC	Holloman AFB	018000AMSL	15000AMSL	USAF	2462
VANCE 1A MOA, OK	FAA, KANSAS CITY ARTCC	Vance AFB	018000AMSL	10000AMSL	USAF	2038
VANCE 1B MOA, OK	FAA, KANSAS CITY ARTCC	Vance AFB	018000AMSL	07000AMSL	USAF	2236
VIPER A MOA, AK	FAA, FAIRBANKS TWR	Eielson AFB	010000AMSL	00500AGL	USAF	105
VIPER B MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	10000AMSL	USAF	105
W147A	FAA, HOUSTON ARTCC	Ellington Field	022999AMSL	05000AMSL	USAF	4484
W147B	FAA, HOUSTON ARTCC	Ellington Field	FL500	FL230	USAF	4484
W147D	FAA, HOUSTON ARTCC	Ellington Field	FL500	SURFACE	USAF	5469
W147E	FAA, HOUSTON ARTCC	Ellington Field	FL500	FL260	USAF	1923
W151A	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	2555
W151B	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	2521
W151C	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	1728
W151D	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	2113
W151E	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	531
W151F	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	810
W161A	FAA, JACKSONVILLE ARTCC	Shaw AFB	FL620	SURFACE	USAF	1265
W161B	FAA, JACKSONVILLE ARTCC	Shaw AFB	FL240	SURFACE	USAF	562
W168	FAA, MIAMI ARTCC	MacDill AFB	UNLTD	SURFACE	USAF	7264
W177A(A)	FAA, JACKSONVILLE ARTCC	Shaw AFB	FL500	SURFACE	USAF	1666
W177A(B)	FAA, JACKSONVILLE ARTCC	Shaw AFB	FL500	06001AMSL	USAF	210
W177B	FAA, JACKSONVILLE ARTCC	Shaw AFB	FL240	SURFACE	USAF	758
W470A	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	2022
W470B	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	2128
W470C	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	1147
W470D	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	422
W470E	FAA, MIAMI ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	1011
W470F	FAA, JACKSONVILLE ARTCC	Eglin AFB	UNLTD	SURFACE	USAF	263

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
W497A	FAA, MIAMI ARTCC	Patrick AFB	UNLTD	SURFACE	USAF	2422
W497B	FAA, MIAMI ARTCC	Patrick AFB	UNLTD	SURFACE	USAF	21756
W506	FAA, NEW YORK ARTCC	NE ADS/DOOS, NY ANG	FL500	SURFACE	USAF	1796
W612	FAA, ANCHORAGE ARTCC	Elmendorf AFB	FL290	SURFACE	USAF	2556
W93(A)	FAA, SEATTLE ARTCC	McChord AFB	FL500	SURFACE	USAF	4987
W93(B)	FAA, SEATTLE ARTCC	McChord AFB	FL500	SURFACE	USAF	978
WASHITA MOA, OK	FAA, FORT WORTH ARTCC	Sheppard AFB	018000AMSL	08000AMSL	USAF	966
WESTOVER 1 MOA, TX	FAA, FORT WORTH ARTCC	Sheppard AFB	018000AMSL	09000AMSL	USAF	1986
WESTOVER 2 MOA, TX	FAA, FORT WORTH ARTCC	Sheppard AFB	018000AMSL	10000AMSL	USAF	2180
WHITMORE 1 MOA, CA	FAA, OAKLAND ARTCC	Beale AFB	018000AMSL	11000AMSL	USAF	584
WHITMORE 2 MOA, CA	FAA, OAKLAND ARTCC	Beale AFB	018000AMSL	11000AMSL	USAF	618
WHITMORE 3 MOA, CA	FAA, OAKLAND ARTCC	Beale AFB	018000AMSL	11000AMSL	USAF	618
YUKON 1 MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	00100AGL	USAF	3747
YUKON 2 MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	00100AGL	USAF	4929
YUKON 3 HIGH MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	10000AMSL	USAF	2267
YUKON 3A LOW MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	009999AMSL	00100AGL	USAF	2267
YUKON 3B MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	02000AGL	USAF	1523
YUKON 4 MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	00100AGL	USAF	3355
YUKON 5 MOA, AK	FAA, ANCHORAGE ARTCC	Eielson AFB	018000AMSL	05000AGL	USAF	2707
A683	WICHITA TRACON	McConnell AFB (184 ARW, KS ANG)	004500AMSL	SURFACE	USAF(ANG)	114
AIRBURST A MOA, CO	FAA, DENVER ARTCC	Buckley ANGB	018000AMSL	01500AGL	USAF(ANG)	167
AIRBURST B MOA, CO	FAA, DENVER ARTCC	Buckley ANGB	018000AMSL	00500AGL	USAF(ANG)	14
AIRBURST C MOA, CO	FAA, DENVER ARTCC	Buckley ANGB	008499AMSL	00500AGL	USAF(ANG)	11
BEAVER MOA, MN	FAA, MINNEAPOLIS ARTCC	148 FIG, MN ANG	018000AMSL	00300AGL	USAF(ANG)	2494
BIG BEAR MOA, MI	FAA, MINNEAPOLIS ARTCC	148 FIG, MN ANG	018000AMSL	00500AMSL	USAF(ANG)	1751
BIRMINGHAM 2 MOA, AL	FAA, ATLANTA ARTCC	187 FW, AL ANG	009999AMSL	00500AGL	USAF(ANG)	1135
BIRMINGHAM MOA, AL	FAA, ATLANTA ARTCC	187 FW, AL ANG	018000AMSL	10000AMSL	USAF(ANG)	1165
BRUSH CREEK MOA, OH	FAA, INDIANAPOLIS ARTCC	123 ACS, OH ANG	004999AMSL	00100AGL	USAF(ANG)	721
BUCKEYE MOA, OH	FAA, INDIANAPOLIS ARTCC	123 ACS, OH ANG	018000AMSL	05000AMSL	USAF(ANG)	1653
CAMDEN RIDGE MOA, AL	FAA, ATLANTA ARTCC	187 FW, AL ANG	009999AMSL	00500AGL	USAF(ANG)	2154
CANNON A MOA, MO	FAA, KANSAS CITY ARTCC	131 TFW, Det 1, MO ANG	018000AMSL	00300AGL	USAF(ANG)	232
CANNON B MOA, MO	FAA, KANSAS CITY ARTCC	131 TFW, Det 1, MO ANG	018000AMSL	00100AGL	USAF(ANG)	16
CHEYENNE HIGH MOA, CO	FAA, DENVER ARTCC	Buckley ANGB	018000AMSL	09000AMSL	USAF(ANG)	1863
CHEYENNE LOW MOA, CO	FAA, DENVER ARTCC	Buckley ANGB	008999AMSL	00300AGL	USAF(ANG)	1701

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
CONDOR 1 MOA, ME	FAA, BOSTON ARTCC	NE ADS/DOOS, NY ANG	018000AMSL	07000AMSL	USAF(ANG)	2424
CONDOR 2 MOA, ME	FAA, BOSTON ARTCC	NE ADS/DOOS, NY ANG	018000AMSL	07000AMSL	USAF(ANG)	614
CRYPT CENTRAL MOA, IA	FAA, MINNEAPOLIS ARTCC	132 FW, IA ANG	018000AMSL	08000AMSL	USAF(ANG)	1479
CRYPT NORTH MOA, IA	FAA, MINNEAPOLIS ARTCC	132 FW, IA ANG	018000AMSL	08000AMSL	USAF(ANG)	1777
CRYPT SOUTH MOA, IA	FAA, MINNEAPOLIS ARTCC	132 FW, IA ANG	018000AMSL	08000AMSL	USAF(ANG)	1325
DEEPWOODS MOA, ME	FAA, BANGOR APP CON	CO, Army Avn Support Fac/ME ANG	003000AMSL	SURFACE	USAF(ANG)	205
DUKE MOA, PA	FAA, CLEVELAND ARTCC	112 ACS/DOT, PA ANG	018000AMSL	08000AMSL	USAF(ANG)	1643
EUREKA HIGH MOA, KS	FAA, KANSAS CITY ARTCC	McConnell AFB (184 ARW, KS ANG)	018000AMSL	06000AMSL	USAF(ANG)	1648
EUREKA LOW MOA, KS	FAA, KANSAS CITY ARTCC	McConnell AFB (184 ARW, KS ANG)	005999AMSL	02500AMSL	USAF(ANG)	1648
FALLS 1 MOA, WI	FAA, MINNEAPOLIS ARTCC	Volk Field ANGB	018000AMSL	00500AGL	USAF(ANG)	832
FALLS 2 MOA, WI	FAA, MINNEAPOLIS ARTCC	Volk Field ANGB	018000AMSL	00500AGL	USAF(ANG)	526
GOOSE NORTH MOA, OR	FAA, SEATTLE ARTCC	Kingsley Fld	018000AMSL	03000AGL	USAF(ANG)	1387
GOOSE SOUTH MOA, OR	FAA, SEATTLE ARTCC	Kingsley Fld	018000AMSL	10000AMSL	USAF(ANG)	738
HART NORTH MOA, OR	FAA, SEATTLE ARTCC	173 FW, OR ANG	018000AMSL	11000AMSL	USAF(ANG)	660
HART SOUTH MOA, OR	FAA, SEATTLE ARTCC	173 FW, OR ANG	018000AMSL	11000AMSL	USAF(ANG)	1825
HAYS MOA, MT	FAA, SALT LAKE CITY ARTCC	120 FW, MT ANG	018000AMSL	00300AGL	USAF(ANG)	5368
HERSEY MOA, MI	FAA, MINNEAPOLIS ARTCC	110 TASG, MI ANG	018000AMSL	05000AMSL	USAF(ANG)	576
JACKAL LOW MOA, AZ	FAA, ALBUQUERQUE ARTCC	162 FW, AZ ANG	010999AMSL	00100AGL	USAF(ANG)	677
JACKAL MOA, AZ	FAA, ALBUQUERQUE ARTCC	162 FW, AZ ANG	018000AMSL	11000AMSL	USAF(ANG)	3562
LA VETA HIGH MOA, CO	FAA, DENVER ARTCC	Buckley ANGB	018000AMSL	13000AMSL	USAF(ANG)	1266
LA VETA LOW MOA, CO	FAA, DENVER ARTCC	Buckley ANGB	013000AMSL	01500AGL	USAF(ANG)	203
LINCOLN MOA, NE	FAA, MINNEAPOLIS ARTCC	155 TRG, NE ANG	018000AMSL	08000AMSL	USAF(ANG)	1306
LINDBERGH A MOA, MO	FAA, KANSAS CITY ARTCC	131 FW, MO ANG	018000AMSL	07000AMSL	USAF(ANG)	2302
LINDBERGH B MOA, MO	FAA, KANSAS CITY ARTCC	131 FW, MO ANG	018000AMSL	08000AMSL	USAF(ANG)	811
LINDBERGH C MOA, MO	FAA, KANSAS CITY ARTCC	131 FW, MO ANG	018000AMSL	08000AMSL	USAF(ANG)	611
MINNOW MOA, WI	FAA, CHICAGO ARTCC	Volk Field ANGB	018000AMSL	10000AMSL	USAF(ANG)	1741
MISTY 1 MOA, NY	FAA, CLEVELAND ARTCC	174 FW, NY ANG	018000AMSL	04000AMSL	USAF(ANG)	599
MISTY 2 MOA, NY	FAA, CLEVELAND ARTCC	174 FW, NY ANG	018000AMSL	00300AGL	USAF(ANG)	717
MISTY 3 MOA, NY	FAA, CLEVELAND ARTCC	174 FW, NY ANG	018000AMSL	11000AMSL	USAF(ANG)	522
MORENCI MOA, AZ	FAA, ALBUQUERQUE ARTCC	162 FW, AZ ANG	018000AMSL	01500AGL	USAF(ANG)	1757
O NEILL MOA, SD	FAA, MINNEAPOLIS ARTCC	185 FW, IA ANG	018000AMSL	00500AGL	USAF(ANG)	2204
OUTLAW MOA, AZ	FAA, ALBUQUERQUE ARTCC	162 FW, AZ ANG	018000AMSL	08000AMSL	USAF(ANG)	1984
R3007A	FAA, JACKSONVILLE ARTCC	Townsend	013000AMSL	SURFACE	USAF(ANG)	7
R3007B	FAA, JACKSONVILLE ARTCC	Townsend	013000AMSL	1200AGL	USAF(ANG)	32

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
R3007C	FAA, JACKSONVILLE ARTCC	Townsend	013000AMSL	100AGL	USAF(ANG)	134
R3007D	FAA, JACKSONVILLE ARTCC	Townsend	FL250	013000AMSL	USAF(ANG)	167
R4207	FAA, MINNEAPOLIS ARTCC	Phelps-Collins ANGB	FL450	SURFACE	USAF(ANG)	1009
R6903	FAA, CHICAGO ARTCC	Volk Field ANGB	FL450	SURFACE	USAF(ANG)	943
R6904A	FAA, MINNEAPOLIS ARTCC	Volk Field ANGB	FL230	00150AGL	USAF(ANG)	69
R6904B	FAA, MINNEAPOLIS ARTCC	Volk Field ANGB	FL230	SURFACE	USAF(ANG)	12
RED HILLS MOA, IN	FAA, INDIANAPOLIS ARTCC	181 TFG, IN ANG, Terre Haute	018000AMSL	06000AMSL	USAF(ANG)	1371
RESERVE MOA, AZ	FAA, ALBUQUERQUE ARTCC	162 FW, AZ ANG	018000AMSL	05000AGL	USAF(ANG)	2531
RUBY 1 MOA, AZ	FAA, ALBUQUERQUE ARTCC	162 FW, AZ ANG	018000AMSL	10000AMSL	USAF(ANG)	581
SALEM MOA, MO	FAA, KANSAS CITY ARTCC	131 TFW, Det 1, MO ANG	006999AMSL	SURFACE	USAF(ANG)	1459
SNOOPY EAST MOA, MN	FAA, MINNEAPOLIS ARTCC	148 FIG, MN ANG	018000AMSL	00300AGL	USAF(ANG)	1074
SNOOPY WEST MOA, MN	FAA, MINNEAPOLIS ARTCC	148 FIG, MN ANG	018000AMSL	06000AMSL	USAF(ANG)	2773
TWO BUTTES HIGH MOA, CO	FAA, DENVER ARTCC	Buckley ANGB	018000AMSL	10000AMSL	USAF(ANG)	1435
TWO BUTTES LOW MOA, CO	FAA, DENVER ARTCC	Buckley ANGB	009999AMSL	00300AGL	USAF(ANG)	1435
VOLK EAST MOA, WI	FAA, CHICAGO ARTCC	Volk Field ANGB	018000AMSL	08000AMSL	USAF(ANG)	1866
VOLK SOUTH MOA, WI	FAA, CHICAGO ARTCC	Hardwood (Volk Field)	018000AMSL	00500AGL	USAF(ANG)	514
VOLK WEST MOA, WI	FAA, MINNEAPOLIS ARTCC	Volk Field ANGB	018000AMSL	00100AGL	USAF(ANG)	514
W453	FAA, HOUSTON ARTCC	ANG CRTC GULFPORT, Gulfport, MS	FL500	SURFACE	USAF(ANG)	1260
YANKEE 1 MOA, NH	FAA, BOSTON ARTCC	103 TFG/DOC, CT ANG	018000AMSL	09000AMSL	USAF(ANG)	1921
YANKEE 2 MOA, NH	FAA, BOSTON ARTCC	103 TFG/DOC, CT ANG	008999AMSL	00100AGL	USAF(ANG)	775
(RO)R177	USMC, CAMP SMEDLEY D. BUTLER	Okinawa Range Complex	003000AMSL	SURFACE	USMC	12
(RO)R201	USMC, COMDR MCB JA, OPS AND TRNG	Okinawa Range Complex	002000AMSL	SURFACE	USMC	18
(RO)R202	USMC, COMDR MCB JA, OPS AND TRNG	Okinawa Range Complex	001000AMSL	SURFACE	USMC	17
(RO)R203	USMC, COMDR MCB JA, OPS AND TRNG	Okinawa Range Complex	001000AMSL	SURFACE	USMC	1
(RO)W178A	USMC, CAMP SMEDLEY D. BUTLER	Okinawa Range Complex	013000AMSL	SURFACE	USMC	287
A530	USMC, CHERRY POINT APP	Cherry Point/Camp Lejeune Range Complex	018000AMSL	SURFACE	USMC	405
ABEL BRAVO MOA, CA	FAA, LOS ANGELES ARTCC	Yuma Range Complex	018000AMSL	07000AMSL	USMC	89
ABEL EAST MOA, CA	FAA, LOS ANGELES ARTCC	Yuma Range Complex	012999AMSL	05000AMSL	USMC	309
ABEL NORTH MOA, CA	FAA, LOS ANGELES ARTCC	Yuma Range Complex	018000AMSL	07000AMSL	USMC	664
ABEL SOUTH MOA, CA	FAA, LOS ANGELES ARTCC	Yuma Range Complex	018000AMSL	07000AMSL	USMC	258
BEAUFORT 1 MOA, SC	FAA, JACKSONVILLE ARTCC	MCAS Beaufort/Townsend Range Complex	010000AMSL	00100AGL	USMC	255
BEAUFORT 2 MOA, SC	FAA, JACKSONVILLE ARTCC	MCAS Beaufort/Townsend Range Complex	007000AMSL	00100AGL	USMC	417
BEAUFORT 3 MOA, SC	FAA, JACKSONVILLE ARTCC	MCAS Beaufort/Townsend Range Complex	002000AMSL	00100AGL	USMC	276
BRISTOL MOA, CA	FAA, LOS ANGELES ARTCC	Twentynine Palms Range Complex	018000AMSL	05000AMSL	USMC	404

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
DEMO 1 MOA, VA	FAA, POTOMAC TRACON	Quantico Range Complex	005000AMSL	00500AMSL	USMC	84
DEMO 2 MOA, VA	FAA, POTOMAC TRACON	Quantico Range Complex	015000AMSL	10000AMSL	USMC	55
DEMO 3 MOA, VA	FAA, POTOMAC TRACON	Quantico Range Complex	015000AMSL	05000AMSL	USMC	84
DOME MOA, AZ	FAA, LOS ANGELES ARTCC	Yuma Range Complex	018000AMSL	06000AMSL	USMC	193
HATTERAS F MOA, NC	FAA, WASHINGTON, DC ARTCC	Cherry Point/Camp Lejeune Range Complex	013000AMSL	03000AMSL	USMC	102
KANE EAST MOA, CA	FAA, LOS ANGELES ARTCC	Yuma Range Complex	018000AMSL	10000AMSL	USMC	469
KANE SOUTH MOA, CA	FAA, LOS ANGLES ARTCC	Yuma Range Complex	018000AMSL	10000AMSL	USMC	72
KANE WEST MOA, CA	FAA, LOS ANGELES ARTCC	Yuma Range Complex	018000AMSL	10000AMSL	USMC	611
QUAIL MOA, AZ	FAA, LOS ANGELES ARTCC	Yuma Range Complex	018000AMSL	10000AMSL	USMC	1057
R2301W	FAA, LOS ANGELES ARTCC	Yuma Range Complex	FL800	SURFACE	USMC	1176
R2501E	FAA, LOS ANGELES ARTCC	Twentynine Palms Range Complex	UNLTD	SURFACE	USMC	237
R2501N	FAA, LOS ANGELES ARTCC	Twentynine Palms Range Complex	UNLTD	SURFACE	USMC	305
R2501S	FAA, LOS ANGELES ARTCC	Twentynine Palms Range Complex	UNLTD	SURFACE	USMC	197
R2501W	FAA, LOS ANGELES ARTCC	Twentynine Palms Range Complex	UNLTD	SURFACE	USMC	76
R2503A	FAA, LOS ANGELES ARTCC	Camp Pendleton Range Complex	002000AMSL	SURFACE	USMC	72
R2503B	FAA, LOS ANGELES ARTCC	Camp Pendleton Range Complex	015000AMSL	SURFACE	USMC	108
R2503C	FAA, LOS ANGELES ARTCC	Camp Pendleton Range Complex	FL270	15000AMSL	USMC	85
R2503D	FAA, SOCAL TRACON	Camp Pendleton Range Complex	11000AMSL	002000AMSL	USMC	72
R2507E	FAA, LOS ANGELES ARTCC	Yuma Range Complex	FL400	SURFACE	USMC	111
R2507N	FAA, LOS ANGELES ARTCC	Yuma Range Complex	FL400	SURFACE	USMC	214
R2507S	FAA, LOS ANGELES ARTCC	Yuma Range Complex	FL400	SURFACE	USMC	243
R5303A	USMC, CHERRY POINT APP	Cherry Point/Camp Lejeune Range Complex	006999AMSL	SURFACE	USMC	25
R5303B	USMC, CHERRY POINT APP	Cherry Point/Camp Lejeune Range Complex	009999AMSL	07000AMSL	USMC	25
R5303C	FAA, WASHINGTON, DC ARTCC	Cherry Point/Camp Lejeune Range Complex	018000AMSL	10000AMSL	USMC	25
R5304A	USMC, CHERRY POINT APP	Cherry Point/Camp Lejeune Range Complex	006999AMSL	SURFACE	USMC	24
R5304B	USMC, CHERRY POINT APP	Cherry Point/Camp Lejeune Range Complex	009999AMSL	07000AMSL	USMC	24
R5304C	FAA, WASHINGTON, DC ARTCC	Cherry Point/Camp Lejeune Range Complex	018000AMSL	10000AMSL	USMC	24
R5306A	USMC, CHERRY POINT APP	Cherry Point/Camp Lejeune Range Complex	018000AMSL	SURFACE	USMC	816
R5306C	USMC, CHERRY POINT APP	Cherry Point/Camp Lejeune Range Complex	018000AMSL	01200AMSL	USMC	164
R5306D	USMC, CHERRY POINT APP	Cherry Point/Camp Lejeune Range Complex	018000AMSL	SURFACE	USMC	98
R5306E	USMC, CHERRY POINT APP	Cherry Point/Camp Lejeune Range Complex	018000AMSL	SURFACE	USMC	4
R6608A	FAA, POTOMAC TRACON	Quantico Range Complex	010000AMSL	SURFACE	USMC	11
R6608B	FAA, POTOMAC TRACON	Quantico Range Complex	010000AMSL	SURFACE	USMC	27
R6608C	FAA, POTOMAC TRACON	Quantico Range Complex	010000AMSL	SURFACE	USMC	17

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
SUNDANCE MOA, CA	FAA, LOS ANGELES ARTCC	Twentynine Palms Range Complex	010000AMSL	00500AGL	USMC	50
TURTLE MOA, AZ	FAA, LOS ANGELES ARTCC	Yuma Range Complex	018000AMSL	11000AMSL	USMC	1718
W74(A)	FAA, JACKSONVILLE ARTCC	MCAS Beaufort/Townsend Range Complex	010000AMSL	SURFACE	USMC	173
W74(B)	FAA, JACKSONVILLE ARTCC	MCAS Beaufort/Townsend Range Complex	010000AMSL	03000AMSL	USMC	9
(RJ)R104	USN, COMAFLOATRAGRUWESTPAC	Japan Range Complex	020000AMSL	SURFACE	USN	606
(RJ)R105	USN, COMAFLOATRAGRUWESTPAC	Japan Range Complex	UNLTD	SURFACE	USN	671
(RJ)R116A	USN, COMAFLOATRAGRUWESTPAC	Japan Range Complex	UNLTD	SURFACE	USN	558
(RJ)R116B	USN, COMAFLOATRAGRUWESTPAC	Japan Range Complex	012000AMSL	SURFACE	USN	464
(RJ)R116C	USN, COMAFLOATRAGRUWESTPAC	Japan Range Complex	009000AMSL	SURFACE	USN	59
(RJ)R121	USN, COMAFLOATRAGRUWESTPAC	Japan Range Complex	035000AMSL	SURFACE	USN	516
(RJR599)A	COMNAVFORJAPAN	Japan Range Complex	UNLTD	SURFACE	USN	6995
(RJR599)B	COMNAVFORJAPAN	Japan Range Complex	UNLTD	SURFACE	USN	1449
(RO)W173	USN, CFAO KADENA AB	Okinawa Range Complex	UNLTD	SURFACE	USN	6089
(RO)W173D	USN, CFAO KADENA AB	Okinawa Range Complex	UNLTD	SURFACE	USN	1048
(RO)W173E	USN, CFAO KADENA AB	Okinawa Range Complex	UNLTD	SURFACE	USN	2866
(RO)W173F	USN, CFAO KADENA AB	Okinawa Range Complex	UNLTD	SURFACE	USN	2164
(RO)W175	USN, CFAO KADENA AB	Okinawa Range Complex	004000AMSL	SURFACE	USN	0.01
(RO)W181	USN, CFAO KADENA AB	Okinawa Range Complex	004000AMSL	SURFACE	USN	3501
(RO)W183A	USN, CFAO KADENA AB	Okinawa Range Complex	UNLTD	SURFACE	USN	3706
(RO)W184	USN, CFAO KADENA AB	Okinawa Range Complex	UNLTD	SURFACE	USN	6835
(RO)W185	USN, CFAO KADENA AB	Okinawa Range Complex	UNLTD	SURFACE	USN	2769
A292	USN, COMTRAWING SIX	NAS Pensacola	003000AMSL	SURFACE	USN	3440
A632A	USN, CORPUS CHRISTI NAS	NAS Corpus Christi	018000AMSL	06000AMSL	USN	2073
A632B	USN, CORPUS CHRISTI NAS	NAS Corpus Christi	018000AMSL	SURFACE	USN	1329
A632C	USN, CORPUS CHRISTI NAS	NAS Corpus Christi	018000AMSL	SURFACE	USN	513
A632D	USN, CORPUS CHRISTI NAS	NAS Corpus Christi	010999AMSL	06000AMSL	USN	1856
A632E	USN, CORPUS CHRISTI NAS	NAS Corpus Christi	008999AMSL	06000AMSL	USN	901
A632F	USN, CORPUS CHRISTI NAS	NAS Corpus Christi	018000AMSL	03000AGL	USN	412
A680	USN, WHIDBEY NAS APP	Whidbey Island Range Complex	003000AMSL	SURFACE	USN	28
AUSTIN 1 MOA, NV	FAA, SALT LAKE CITY ARTCC	Fallon Range Complex	FL350	00200AGL	USN	2407
AUSTIN 2 MOA, NV	FAA, SALT LAKE CITY ARTCC	Fallon Range Complex	FL350	00200AGL	USN	843
BOARDMAN MOA, OR	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	018000AMSL	04000AMSL	USN	358
BRADY HIGH MOA, TX	FAA, HOUSTON ARTCC	Fort Worth NAS JRB	018000AMSL	06000AMSL	USN	966
BRADY LOW MOA, TX	FAA, HOUSTON ARTCC	Fort Worth NAS JRB	005999AMSL	00500AGL	USN	966

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2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
BRADY NORTH MOA, TX	FAA, FORT WORTH ARTCC	Fort Worth NAS JRB	018000AMSL	03600AMSL	USN	156
BROWNWOOD 1 EAST MOA, TX	FAA, FORT WORTH ARTCC	Fort Worth NAS JRB	018000AMSL	07000AMSL	USN	570
BROWNWOOD 1 WEST MOA, TX	FAA, FORT WORTH ARTCC	Fort Worth NAS JRB	018000AMSL	07000AMSL	USN	555
BROWNWOOD 2 EAST MOA, TX	FAA, FORT WORTH ARTCC	Fort Worth NAS JRB	018000AMSL	07000AMSL	USN	457
BROWNWOOD 2 WEST MOA, TX	FAA, FORT WORTH ARTCC	Fort Worth NAS JRB	018000AMSL	07000AMSL	USN	592
BROWNWOOD 3 MOA, TX	FAA, FORT WORTH ARTCC	Fort Worth NAS JRB	018000AMSL	13000AMSL	USN	697
BROWNWOOD 4 MOA, TX	FAA, FORT WORTH ARTCC	Fort Worth NAS JRB	018000AMSL	13000AMSL	USN	321
CARSON MOA, NV	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	00500AGL	USN	131
CHINOOK A MOA, WA	USN, WHIDBEY IS NAS APP	Whidbey Island Range Complex	005000AMSL	00300AMSL	USN	23
CHINOOK B MOA, WA	USN, WHIDBEY IS NAS APP	Whidbey Island Range Complex	005000AMSL	00300AMSL	USN	33
CHURCHILL HIGH MOA, NV	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	09000AMSL	USN	63
CHURCHILL LOW MOA, NV	FAA, OAKLAND ARTCC	Fallon Range Complex	009000AMSL	00500AGL	USN	71
D3002	NASSAU, ACC	AUTEC	00500AMSL	SURFACE	USN	94
D3003A	NASSAU, ACC	AUTEC	UNLTD	SURFACE	USN	237
D3003B	NASSAU, ACC	AUTEC	UNLTD	SURFACE	USN	146
D3003C	NASSAU, ACC	AUTEC	UNLTD	SURFACE	USN	143
DOLPHIN NORTH MOA, OR	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	018000AMSL	11000AMSL	USN	5719
DOLPHIN SOUTH MOA, OR	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	018000AMSL	11000AMSL	USN	1766
FOOTHILL 1 MOA, CA	FAA, OAKLAND ARTCC	NAS Lemoore	018000AMSL	02000AGL	USN	826
FOOTHILL 2 MOA, CA	FAA, OAKLAND ARTCC	NAS Lemoore	018000AMSL	02000AGL	USN	869
GABBS CENTRAL MOA, NV	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	00100AGL	USN	921
GABBS NORTH MOA, NV	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	00100AGL	USN	2695
GABBS SOUTH MOA, NV	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	00100AGL	USN	286
HUNTER HIGH MOA, CA	FAA, OAKLAND ARTCC	NAS Lemoore	018000AMSL	11000AMSL	USN	997
HUNTER LOW A MOA, CA	FAA, OAKLAND ARTCC	NAS Lemoore	010999AMSL	00200AGL	USN	492
HUNTER LOW B MOA, CA	FAA, OAKLAND ARTCC	NAS Lemoore	010999AMSL	02000AGL	USN	147
HUNTER LOW C MOA, CA	FAA, OAKLAND ARTCC	NAS Lemoore	010999AMSL	03000AGL	USN	82
HUNTER LOW D MOA, CA	FAA, OAKLAND ARTCC	NAS Lemoore	006000AMSL	01500AGL	USN	207
HUNTER LOW E MOA, CA	FAA, OAKLAND ARTCC	NAS Lemoore	003000AMSL	01500AGL	USN	69
KINGSVILLE 1 MOA, TX	FAA, HOUSTON ARTCC	GOMEX Range Complex	018000AMSL	08000AMSL	USN	3324
KINGSVILLE 2 MOA, TX	FAA, HOUSTON ARTCC	GOMEX Range Complex	018000AMSL	13000AMSL	USN	383
KINGSVILLE 3 MOA, TX	FAA, HOUSTON ARTCC	GOMEX Range Complex	018000AMSL	08000AMSL	USN	1840
KINGSVILLE 4 MOA, TX	FAA, HOUSTON ARTCC	GOMEX Range Complex	018000AMSL	09000AMSL	USN	2067
Lemoore MOA A	FAA,OAKLAND ARTCC	NOCAL Range Co mplex	FL180	05000AMSL	USN	321

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2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
Lemoore MOA B	FAA,OAKLAND ARTCC	NOCAL Range Co mplex	FL180	13000AMSL	USN	441
Lemoore MOA C	FAA,OAKLAND ARTCC	NOCAL Range Co mplex	FL180	16000AMSL	USN	551
Lemoore MOA D	FAA,OAKLAND ARTCC	NOCAL Range Co mplex	FL180	05000AMSL	USN	367
Lemoore MOA E	FAA,OAKLAND ARTCC	NOCAL Range Co mplex	FL180	05000AMSL	USN	311
MAYPORT HIGH MOA, FL	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	018000AMSL	03000AMSL	USN	68
MAYPORT LOW MOA, FL	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	002999AMSL	00500AMSL	USN	68
MERIDIAN 1 EAST MOA, MS	FAA, MEMPHIS ARTCC	Meridian Complex	018000AMSL	08000AMSL	USN	709
MERIDIAN 1 WEST MOA, MS	FAA, MEMPHIS ARTCC	Meridian Complex	018000AMSL	08000AMSL	USN	3936
OKANOGAN A MOA, WA	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	018000AMSL	09000AMSL	USN	2604
OKANOGAN B MOA, WA	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	008999AMSL	00300AGL	USN	961
OKANOGAN C MOA, WA	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	008999AMSL	00300AGL	USN	741
OLYMPIC A MOA, WA	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	018000AMSL	06000AMSL	USN	921
OLYMPIC B MOA, WA	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	018000AMSL	06000AMSL	USN	698
PALATKA 1 MOA, FL	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	018000AMSL	03000AGL	USN	458
PALATKA 2 MOA, FL	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	018000AMSL	03000AGL	USN	280
PAMLICO A MOA, NC	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	018000AMSL	08000AMSL	USN	227
PAMLICO B MOA, NC	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	018000AMSL	08000AMSL	USN	855
PENSACOLA NORTH MOA, FL	FAA, JACKSONVILLE ARTCC	GOMEX Range Complex	018000AMSL	10000AMSL	USN	1213
PENSACOLA SOUTH MOA, FL	FAA, PENSACOLA TOWER	GOMEX Range Complex	018000AMSL	10000AMSL	USN	1408
PINE HILL EAST MOA, MS	FAA, ATLANTA ARTCC	Meridian Complex	018000AMSL	10000AMSL	USN	1261
PINE HILL WEST MOA, MS	FAA, ATLANTA ARTCC	Meridian Complex	018000AMSL	10000AMSL	USN	1059
R1002	CDR, NS Guantanamo Bay	Guantanamo Complex	050000AMSL	SURFACE	USN	56
R2505	FAA, HI-DESERT TRACON, EDWARDS AFB	China Lake Range Complex	UNLTD	SURFACE	USN	779
R2506	FAA, HI-DESERT TRACON, EDWARDS AFB	China Lake Range Complex	006000AMSL	SURFACE	USN	48
R2510A	FAA, LOS ANGELES ARTCC	El Centro Range Complex	015000AMSL	SURFACE	USN	181
R2510B	FAA, LOS ANGELES ARTCC	El Centro Range Complex	FL400	15000AMSL	USN	124
R2512	FAA, LOS ANGELES ARTCC	El Centro Range Complex	FL230	SURFACE	USN	75
R2519	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	UNLTD	SURFACE	USN	21
R2524	FAA, HI-DESERT TRACON, EDWARDS AFB	China Lake Range Complex	UNLTD	SURFACE	USN	707
R2535A	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	100000AMSL	SURFACE	USN	63
R2535B	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	100000AMSL	SURFACE	USN	37
R2906	FAA, JACKSONVILLE TRACON	Jacksonville Range Complex	014000AMSL	SURFACE	USN	75
R2907A	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	FL230	SURFACE	USN	89
R2907B	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	009000AMSL	SURFACE	USN	52

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2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
R2908	FAA, PENSACOLA TRACON	Jacksonville Range Complex	012000AMSL	SURFACE	USN	52
R2910	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	FL230	SURFACE	USN	78
R2910(A)	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	009000AMSL	SURFACE	USN	13
R2910(B)	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	009000AMSL	SURFACE	USN	26
R2910(C)	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	006000AMSL	SURFACE	USN	57
R3101	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	UNLTD	SURFACE	USN	52
R3107	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	FL180	SURFACE	USN	28
R3404	FAA, HULMAN TWR, TERRE HAUTE	Naval Ammunitions Depot, Crane	002500AMSL	SURFACE	USN	3
R4002	FAA, WASHINGTON, DC ARTCC	Patuxent River Complex	FL220	SURFACE	USN	40
R4005	FAA, WASHINGTON, DC ARTCC	Patuxent River Complex	024999AMSL	SURFACE	USN	316
R4006	FAA, WASHINGTON, DC ARTCC	Patuxent River Complex	024999AMSL	03500AMSL	USN	1458
R4007	FAA, WASHINGTON, DC ARTCC	Patuxent River Complex	004999AMSL	SURFACE	USN	163
R4008	FAA, WASHINGTON, DC ARTCC	Patuxent River Complex	FL850	FL250	USN	1300
R4009	FAA, WASHINGTON, DC ARTCC	Patuxent River Complex	012500AMSL	05000AMSL	USN	28
R4404A	FAA, MEMPHIS ARTCC	Meridian Complex	011500AMSL	SURFACE	USN	4
R4404B	FAA, MEMPHIS ARTCC	Meridian Complex	011500AMSL	01200AGL	USN	78
R4404C	FAA, MEMPHIS ARTCC	Meridian Complex	014500AMSL	11500AMSL	USN	78
R4803	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	SURFACE	USN	28
R4804A	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	SURFACE	USN	88
R4804B	FAA, OAKLAND ARTCC	Fallon Range Complex	FL350	FL180	USN	88
R4810	FAA, OAKLAND ARTCC	Fallon Range Complex	017000AMSL	SURFACE	USN	87
R4812	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	SURFACE	USN	107
R4813A	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	SURFACE	USN	417
R4813B	FAA, OAKLAND ARTCC	Fallon Range Complex	FL350	FL180	USN	417
R4816N	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	01500AGL	USN	406
R4816S	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	00500AGL	USN	331
R5113	FAA, ALBUQUERQUE ARTCC	Office of Naval Research, Atmospheric Sciences	FL450	SURFACE	USN	19
R5301	FAA, WASHINGTON ARTCC	VACAPES Range Complex	014000AMSL	SURFACE	USN	6
R5302A	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	014000AMSL	SURFACE	USN	11
R5302B	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	014000AMSL	00100AGL	USN	67
R5302C	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	003000AMSL	00100AGL	USN	11
R5313A	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	018000AMSL	SURFACE	USN	21
R5313B	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	013000AMSL	00100AGL	USN	78
R5313C	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	013000AMSL	00100AGL	USN	22

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
R5313D	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	013000AMSL	00500AGL	USN	61
R5314A	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL205	SURFACE	USN	24
R5314B	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL205	00500AGL	USN	65
R5314C	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL205	00500AGL	USN	18
R5314D	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL205	SURFACE	USN	30
R5314E	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL205	SURFACE	USN	60
R5314F	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL205	00500AGL	USN	25
R5314H	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	010000AMSL	00500AGL	USN	77
R5314J	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	006000AMSL	01000AGL	USN	211
R5701(A)	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	FL200	SURFACE	USN	78
R5701(B)	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	010000AMSL	SURFACE	USN	11
R5701(C)	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	006000AMSL	SURFACE	USN	31
R5701(D)	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	010000AMSL	SURFACE	USN	21
R5701(E)	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	006000AMSL	SURFACE	USN	64
R5706	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	010000AMSL	03500AMSL	USN	107
R6312(A)	FAA, HOUSTON ARTCC	GOMEX Range Complex	023000AMSL	01000AGL	USN	7
R6312(B)	FAA, HOUSTON ARTCC	GOMEX Range Complex	023000AMSL	SURFACE	USN	67
R6312(C)	FAA, HOUSTON ARTCC	GOMEX Range Complex	023000AMSL	SURFACE	USN	79
R6606	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL510	SURFACE	USN	33
R6609	FAA, WASHINGTON, DC ARTCC	Patuxent River Complex	FL200	SURFACE	USN	125
R6611A	FAA, WASHINGTON, DC ARTCC	NAVSEA Dahlgren	FL400	SURFACE	USN	22
R6611B	FAA, WASHINGTON, DC ARTCC	NSWC Dahlgren	FL600	FL400	USN	22
R6612	FAA, WASHINGTON, DC ARTCC	NAVSEA Dahlgren	007000AMSL	SURFACE	USN	6
R6613A	FAA, WASHINGTON, DC ARTCC	NAVSEA Dahlgren	FL400	SURFACE	USN	18
R6613B	FAA, WASHINGTON, DC ARTCC	NSWC Dahlgren	FL600	FL400	USN	18
R6701	USN, WHIDBEY ISLAND NAS APP	Whidbey Island Range Complex	005000AMSL	SURFACE	USN	21
R6703A	FAA, SEATTLE-TACOMA APP	Whidbey Island Range Complex	014000AMSL	SURFACE	USN	14
R6703B	FAA, SEATTLE-TACOMA APP	Whidbey Island Range Complex	005000AMSL	SURFACE	USN	4
R6703C	FAA, SEATTLE-TACOMA APP	Whidbey Island Range Complex	014000AMSL	SURFACE	USN	20
R6703D	FAA, SEATTLE-TACOMA APP	Whidbey Island Range Complex	005000AMSL	SURFACE	USN	5
R7201	FAA, GUAM CENTER/RAPCON	Marianas Range Complex	FL600	SURFACE	USN	28
RANCH HIGH MOA, NV	FAA, OAKLAND ARTCC	Fallon Range Complex	013000AMSL	09000AMSL	USN	98
RANCH MOA, NV	FAA, OAKLAND ARTCC	Fallon Range Complex	009000AMSL	00500AMSL	USN	315
RENO MOA, NV	FAA, OAKLAND ARTCC	Fallon Range Complex	018000AMSL	13000AMSL	USN	1016

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
ROBERTS MOA, CA	FAA, OAKLAND ARTCC	Whidbey Island Range Complex	014999AMSL	00500AGL	USN	87
ROOSEVELT A MOA, WA	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	018000AMSL	09000AMSL	USN	3149
ROOSEVELT B MOA, WA	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	008999AMSL	00300AGL	USN	2191
STUMPY POINT MOA, NC	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	007999AMSL	SURFACE	USN	123
TORTUGAS MOA, FL	FAA, MIAMI ARTCC	Key West Range Complex	018000AMSL	05000AMSL	USN	1116
W1001	CDR, NS Guantanamo Bay	Guantanamo Complex	045000AMSL	SURFACE	USN	13118
W102H	FAA, BOSTON ARTCC	Boston Range Complex	FL600	17001AMSL	USN	3443
W102L	FAA, BOSTON ARTCC	Boston Range Complex	017000AMSL	SURFACE	USN	3443
W103	FAA, BOSTON ARTCC	Boston Range Complex	002000AMSL	SURFACE	USN	1479
W104A	FAA, BOSTON ARTCC	Boston Range Complex	010000AMSL	SURFACE	USN	315
W104B	FAA, BOSTON ARTCC	Boston Range Complex	018000AMSL	SURFACE	USN	1508
W104C	FAA, BOSTON ARTCC	Boston Range Complex	UNLTD	FL180	USN	1508
W105A	FAA, BOSTON ARTCC	Narragansett Range Complex	FL500	SURFACE	USN	10326
W105B	FAA, BOSTON ARTCC	Narragansett Range Complex	FL180	SURFACE	USN	1318
W106A	FAA, BOSTON ARTCC	Narragansett Range Complex	003000AMSL	SURFACE	USN	358
W106B	FAA, BOSTON ARTCC	Narragansett Range Complex	008000AMSL	SURFACE	USN	506
W106C	FAA, BOSTON ARTCC	Narragansett Range Complex	010000AMSL	SURFACE	USN	227
W106D	FACSFAC, VACAPES, OCEANA NAS	Narragansett Range Complex	005999AMSL	SURFACE	USN	270
W107A	FAA, WASHINGTON, DC ARTCC	Atlantic City Range Complex	UNLTD	SURFACE	USN	4810
W107B	FAA, WASHINGTON, DC ARTCC	Atlantic City Range Complex	001999AMSL	SURFACE	USN	226
W107C	FAA, WASHINGTON, DC ARTCC	Atlantic City Range Complex	018000AMSL	SURFACE	USN	550
W110	USN, FACSFAC, VACAPES	VACAPES Range Complex	FL230	SURFACE	USN	1858
W122(1)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	883
W122(10)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	657
W122(11)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	838
W122(12)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	776
W122(13)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	1090
W122(14)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	1087
W122(15A)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	953
W122(15B)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	41
W122(16)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	979
W122(17)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	741
W122(18)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	820
W122(19)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	890

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
W122(2)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	1062
W122(20)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	789
W122(21)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	1029
W122(22)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	614
W122(23)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	443
W122(3)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	931
W122(4)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	688
W122(5)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	644
W122(6)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	797
W122(7)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	798
W122(8)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	505
W122(9)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	665
W132A	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	UNLTD	SURFACE	USN	1007
W132B	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	FL240	SURFACE	USN	364
W133	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	004500AMSL	SURFACE	USN	1744
W134	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	UNLTD	04500AMSL	USN	1744
W155A	FAA, JACKSONVILLE ARTCC	GOMEX Range Complex	FL600	SURFACE	USN	2241
W155B	FAA, JACKSONVILLE ARTCC	GOMEX Range Complex	FL600	SURFACE	USN	2674
W155C	FAA, JACKSONVILLE ARTCC	GOMEX Range Complex	FL600	SURFACE	USN	525
W157A	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	FL430	SURFACE	USN	8104
W157B	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	FL240	SURFACE	USN	2311
W157C	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	005000AMSL	SURFACE	USN	10400
W158A	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	FL430	SURFACE	USN	5797
W158B	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	FL240	SURFACE	USN	2800
W158C	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	UNLTD	FL430	USN	22011
W158E	FAA, JACKSONVILLE NAS TRACON	Jacksonville Range Complex	001200AMSL	SURFACE	USN	545
W158F	FAA, JACKSONVILLE NAS TRACON	Jacksonville Range Complex	001700AMSL	01200AMSL	USN	172
W159A	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	FL430	SURFACE	USN	1963
W159B	FAA, JACKSONVILLE ARTCC	Jacksonville Range Complex	FL240	SURFACE	USN	1039
W174A	FAA, MIAMI ARTCC	Key West Range Complex	FL700	SURFACE	USN	3343
W174B(A)	FAA, MIAMI ARTCC	Key West Range Complex	FL700	SURFACE	USN	10203
W174B(B)	FAA, MIAMI ARTCC	Key West Range Complex	005500AMSL	SURFACE	USN	211
W174C(A)	FAA, MIAMI ARTCC	Key West Range Complex	FL700	SURFACE	USN	1001
W174C(B)	FAA, MIAMI ARTCC	Key West Range Complex	005500AMSL	SURFACE	USN	397

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
W174D	FAA, MIAMI ARTCC	Key West Range Complex	FL700	SURFACE	USN	2795
W174D(A)	FAA, MIAMI ARTCC	Key West Range Complex	FL700	05500AMSL	USN	431
W174E	FAA, MIAMI ARTCC	Key West Range Complex	010000AMSL	SURFACE	USN	281
W174F	FAA, MIAMI ARTCC	Key West Range Complex	FL700	SURFACE	USN	807
W174G	FAA, MIAMI ARTCC	Key West Range Complex	FL700	SURFACE	USN	457
W186	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	009000AMSL	SURFACE	USN	755
W187	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	FL180	SURFACE	USN	78
W188	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	UNLTD	SURFACE	USN	35535
W189	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	UNLTD	SURFACE	USN	8003
W190	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	UNLTD	SURFACE	USN	1613
W191	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	003000AMSL	SURFACE	USN	292
W192	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	UNLTD	SURFACE	USN	3469
W193	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	UNLTD	SURFACE	USN	4558
W194	FAA, HONOLULU CERAP	Hawaiian Islands Range Complex	UNLTD	SURFACE	USN	4071
W196	FAA, HONOLULU TWR	Hawaiian Islands Range Complex	002000AMSL	SURFACE	USN	91
W228A	FAA, HOUSTON ARTCC	GOMEX Range Complex	FL450	SURFACE	USN	1319
W228B	FAA, HOUSTON ARTCC	GOMEX Range Complex	FL450	SURFACE	USN	1124
W228C	FAA, HOUSTON ARTCC	GOMEX Range Complex	FL450	SURFACE	USN	3604
W228D	FAA, HOUSTON ARTCC	GOMEX Range Complex	FL450	SURFACE	USN	1937
W237A(HI)	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	FL500	FL230	USN	2039
W237A(LO)	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	FL230	SURFACE	USN	2039
W237B(HI)	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	FL500	FL230	USN	1520
W237B(LO)	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	FL230	SURFACE	USN	1520
W237C	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	UNLTD	SURFACE	USN	1542
W237D	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	UNLTD	SURFACE	USN	1631
W237E	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	FL270	SURFACE	USN	1823
W237F	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	UNLTD	SURFACE	USN	3904
W237G	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	UNLTD	SURFACE	USN	2327
W237H	FAA, OAKLAND ARTCC	Whidbey Island Range Complex	FL270	SURFACE	USN	5902
W237J	FAA, OAKLAND ARTCC	Whidbey Island Range Complex	FL270	SURFACE	USN	4301
W260	FAA, OAKLAND ARTCC	Northern California Range Complex	FL600	SURFACE	USN	5681
W283	FAA, OAKLAND ARTCC	Northern California Range Complex	FL600	SURFACE	USN	5912
W285A	FAA, OAKLAND ARTCC	Northern California Range Complex	FL450	SURFACE	USN	1838
W285B	FAA, OAKLAND ARTCC	Northern California Range Complex	FL450	08000AMSL	USN	745

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
W289	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	UNLTD	SURFACE	USN	11787
W289N	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	FL240	SURFACE	USN	108
W290	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	FL800	SURFACE	USN	474
W291	FAA, LOS ANGELES ARTCC	SOCAL Range Complex	FL800	SURFACE	USN	112821
W386	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	UNLTD	SURFACE	USN	9614
W386(A)	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL230	SURFACE	USN	151
W387A	USN, FACSFAC VACAPES	VACAPES Range Complex	023999AMSL	SURFACE	USN	2296
W387B	USN, FACSFAC VACAPES	VACAPES Range Complex	UNLTD	FL240	USN	2296
W412	FAA, LOS AGELES ARTCC	Pt. Mugu Range Complex	003000AMSL	SURFACE	USN	376
W465A	FAA, MIAMI ARTCC	Key West Range Complex	FL700	SURFACE	USN	1474
W465B	FAA, MIAMI ARTCC	Key West Range Complex	FL700	SURFACE	USN	1452
W465C	FAA, MIAMI ARTCC	Key West Range Complex	FL700	FL210	USN	844
W50A	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL750	SURFACE	USN	27
W50B	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL750	SURFACE	USN	63
W50C	FAA, WASHINGTON, DC ARTCC	VACAPES Range Complex	FL750	SURFACE	USN	33
W513	FAA, OAKLAND ARTCC	San Francisco Range Complex	FL600	SURFACE	USN	574
W517	FAA, GUAM CERAP	Marianas Range Complex	UNLTD	SURFACE	USN	8698
W532N	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	UNLTD	SURFACE	USN	4054
W532S	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	UNLTD	SURFACE	USN	1428
W532E	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	UNLTD	SURFACE	USN	3977
W537	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	UNLTD	SURFACE	USN	3079
W54A	FAA, HOUSTON ARTCC	New Orleans NAS JRB	FL400	SURFACE	USN	1321
W54B	FAA, HOUSTON ARTCC	New Orleans NAS JRB	FL240	SURFACE	USN	367
W54C	FAA, HOUSTON ARTCC	New Orleans NAS JRB	FL400	FL240	USN	367
W570	FAA, SEATTLE ARTCC	Whidbey Island Range Complex	FL500	SURFACE	USN	4485
W59A	FAA, HOUSTON ARTCC	New Orleans NAS JRB	FL500	05000AMSL	USN	2527
W59B	FAA, HOUSTON ARTCC	New Orleans NAS JRB	027999AMSL	05000AMSL	USN	3400
W59C	FAA, HOUSTON ARTCC	New Orleans NAS JRB	FL500	FL280	USN	3400
W60	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	UNLTD	SURFACE	USN	788
W602	FAA, HOUSTON ARTCC	Pt. Mugu Range Complex	FL250	SURFACE	USN	10451
W61	FAA, LOS ANGELES ARTCC	Pt. Mugu Range Complex	UNLTD	SURFACE	USN	1472
W72(13)A	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	001999AMSL	SURFACE	USN	318
W72(13)B	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	FL600	USN	318
W72(1A)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	482

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

2011 SUA Name	Controlling Agency	Range Complex/ Installation Name	Upper Altitude	Lower Altitude	Military Service	Area (nm2)*
W72(1B)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	647
W72(1C)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	733
W72(1D)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	795
W72(1E)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	801
W72(1F)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	889
W72(20)A	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	001999AMSL	SURFACE	USN	313
W72(20)B	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	FL600	USN	313
W72(2A)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	513
W72(2B)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	694
W72(2C)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	790
W72(2D)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	861
W72(2E)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	871
W72(2F)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	972
W72(3A)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	569
W72(3B)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	895
W72(3C)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	1118
W72(3D)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	1274
W72(3E)	FAA, WASHINGTON, DC ARTCC	Cherry Point Range Complex	UNLTD	SURFACE	USN	1107
W92	FAA, HOUSTON ARTCC	GOMEX Range Complex	FL400	SURFACE	USN	2607

* Area calculations were performed using the appropriate Universal Transverse Mercator zones.

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D

Acronym List

A

A-A	Air-to-Air
AAR	After Action Review
AAV	Amphibious Assault Vehicle
AAW	Anti-Air Warfare
ABW	Air Base Wing
ACC	Air Combat Command
ACE	Aviation Combat Element
ACHP	Advisory Council on Historic Preservation
ACM	Air Combat Maneuvers
ACP	Army Campaign Plan
ACUB	Army Compatible Use Buffer
AD	Armored Division
ADA BDE	Air Defense Artillery Brigade
ADIZ	Air Defense Identification Zone
AFB	Air Force Base
AFC	Area Frequency Coordinator
AFFTC	Air Force Flight Test Center
AFI	Air Force Instruction
AFP	Artillery Firing Positions
AFRIC	Air Force Range Investment Council
AFRL	Air Force Research Laboratory
A-G	Air-to-Ground
AGL	Above Ground Level
AGM	Air-to-Ground Tactical Missile
AGR	Aerial Gunnery Range
AICUZ	Air Installations Compatible Use Zones
AIMS	Army Innovative Mitigation Strategy
AKO	Army Knowledge Online
ALCUP	Airport Land Use Compatibility Plan
AMCOM	Aviation and Missile Command
AMP	Assault Maneuver Positions
AMW	Amphibious Warfare
ANG	Air National Guard
AO	Area of Operations
AOC	Air and Space Operations Center
AOTC	Army Operational Test Command
APAFR	Avon Park Air Force Range
AR	Army Regulation
ARC	Airspace Range Council
ARC	Armored Reconnaissance Course
ARFORGEN	Army Force Generation
ARNG	Army National Guard

ARTCC	Air Route Traffic Control Center
ASOS	Air Support Operations Squadron
ASW	Anti-Submarine Warfare
ASUW	Anti-Surface Warfare
ATC	Air Traffic Control
ATCAA	Air Traffic Control Assigned Airspace
ATR	Atlantic Test Range
ATV	All-Terrain Vehicle
AUTEC	Atlantic Undersea Test and Evaluation Center
AWSS	Aviation Weapon Scoring System

B

BAX	Battle Area Complex
BCT	Brigade Combat Team
BDE	Brigade
BDU	Bomb Dummy Unit
BES	Battle Effects Simulators
B&G	Bombing and Gunnery
BI	Business Intelligence
BLM	Bureau of Land Management
BMGR	Barry M. Goldwater Range
BO	Biological Opinion
BOEMRE	Bureau of Ocean Energy Management, Regulation and Enforcement
BRAC	Base Realignment and Closure
BS	Bomb Squadron
BSA	Basic Surface Attack
BSRC	Bob Stump Range Complex
BTS	Brown Tree Snake
BUDS	Basic Underwater Demolition/SEAL
BW	Bomb Wing

C

C2	Command and Control
CAA	Clean Air Act
CAF	Combat Air Force
CAS	Close Air Support
CATC	Combined Arms Training Center
CCAFS	Cape Canaveral Air Force Station
CCD	Combat Capability Document
CES	Civil Engineer Squadron
CFGI	Contingency Forge Generation Installation
CFA	Controlled Firing Area
CFR	Code of Federal Regulations
CLUS	Camp Lejeune Land Use Study
CMAGR	Chocolate Mountains Aerial Gunnery Range
CNIC	Commander, Naval Installations Command
CNMI	Commonwealth of the Northern Mariana Islands
CNO	Chief of Naval Operations
CNRSW	Commander Navy Region Southwest
COA	Course of Action
COCOM	Combatant Command
COE	Corps of Engineers
COEFOR	Contemporary Operating Environment Force
CONUS	Continental United States
COSCOM	Corps Support Command
COSMC	Corporate Operating Space Management Construct
CPLO	Community Plans and Liaison Office
CPF	Commander Pacific Fleet
CQC	Close Quarter Combat
CQD	Close Quarter Defense
CRTC	Combat Readiness Training Center
CSAR	Combat Search and Rescue
CSE	Center Scheduling Enterprise
CSH	Combat Support Hospital

CSSE	Combat Service Support Element
CTA	Central Training Area
CTC	Combat Training Center
CTR	Combat Training Range
CWC	Composite Warfare Commander
CY	Calendar Year

D

DA	Department of the Army
DAGIR	Digital Air-Ground Integration Range
DAMO-TRS	Army Training Support Systems Division
DCA	Defensive Counterair
DCAST	Data Collection and Scheduling Tool
DCBR	Dare County Bombing Range
DDS	Display and Debriefing Subsystem
DEAD	Destruction of Enemy Air Defenses
DENIX	Defense Environmental Network Information Exchange
DENTAC	Dental Activity
DESI	Diesel Electric Submarine Initiative
DFAC	Dining Facilities
DHS	Department of Homeland Security
DIADS	Digital Integrated Air Defense System
DIO	DRRS Implementation Office
DMO	Distributed Mission Operations
DMPRC	Digital Multi-Purpose Range Complex
DMPTR	Digital Multi-Purpose Training Range
DPRI	Defense Policy Review Initiative
DoD	Department of Defense
DoDD	Department of Defense Directive
DOFAW	Division of Forestry and Wildlife
DOI	Department of the Interior
DOT	Department of Transportation
DOT&E	Director, Operational Test and Evaluation
DPG	Dugway Proving Ground
DPW	Directorate of Public Works
DRRS	Defense Readiness Reporting System
DTA	Donnelly Training Area
DT&E	Developmental Test and Evaluation
DTRA	Defense Threat Reduction Area
DZ	Drop Zone

E

EA	Environmental Assessment
EAP	Encroachment Action Plan
EC	Electronic Combat
EC&C	Electronic Control & Countermeasures
ECCM	Electronic Counter-Countermeasures
ECP	Encroachment Control Plan
EER	Extended Echo Range
EFH	Essential Fish Habitat
EFTR	Edwards Flight Test Range
EFV	Expeditionary Fighting Vehicle
EIMS	Environmental Information Management System
EIS	Environmental Impact Statement
ELMR	Enterprise Land Mobile Radio
EMP	Enhanced Marksmanship Program
EMS	Electromagnetic Spectrum
EMW	Expeditionary Maneuver Warfare
EOD	Explosives Ordnance Disposal
EP	Encroachment Partnering
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESORTS	Enhanced Status of Resources and Training Systems
ETTC	Eglin Test and Training Range
EW	Electronic Warfare

F

FAA	Federal Aviation Administration

FACSFACSD	Fleet Area Control and Surveillance Facility, San Diego
FCC	Federal Communications Commission
FCLP	Field Carrier Landing Practice
FDM	Farallon de Medinilla
FDNF	Forward Deployed Naval Forces
FDRLO	Fort Drum Regional Liaison Organization
FEMA	Federal Emergency Management Agency
FORSCOM	U.S. Army Force Command
FL	Flight Level
FM	Frequency Modulation
FMC	Fully Mission Capable
FRTP	Fleet Response Training Plan
FRP	Fleet Response Plan
FRS	Fleet Replacement Squadron
FRTP	Fleet Response Training Plan
FS	Fighter Squadron
FSO	Full Spectrum Operations
FTRC	Fallon Training Range Complex
FTS	Fighter Training Squadron
FTU	Formal Training Unit
FTX	Forward Training Exercise
FW	Fighter Wing
FWS	Fish and Wildlife Service
FY	Fiscal Year
FYDP	Future Years Defense Program

G

GAF	German Air Force
GAO	Government Accountability Office
GBTE	Gull-Billed Tern
GCE	Ground Combat Element
GCTS	Ground Combat Training Squadron
GDPR	Global Defense Posture and Realignment
GDSCC	Goldstone Deep Space Communications Complex
GIS	Geographic Information System
GLCP	Georgia Land Conservation Program
GOJ	Government of Japan
GPS	Global Positioning System
GRASI	Gulf Regional Airspace Strategic Initiative
GSU	General Service Unit

H

HAHO	High Altitude High Opening (parachute training)
HALO	High Altitude Low Opening (parachute training)
HARM	High-Speed Anti-Radiation Missile
HASC	House Armed Services Committee
HBCT	Heavy Brigade Combat Team
HEI	High-Explosive Incendiary
HIANG	Hawaii National Guard
HRC/PMRF	Hawaiian Range Complex/Pacific Missile Range Facility
HQ	Headquarters
HQDA	Headquarters Department of Army
HQ USAF	Headquarters United States Air Force
H.R.	House Report
HWAD	Hawthorne Ammunition Depot

I

IADS	Integrated Air Defense System
IAW	In Accordance With
IBCT	Infantry Brigade Combat Team
ICEMAP	Installation Complex Encroachment Management Action Plan
ICRMP	Integrated Cultural Resource Management Plan
ID	Infantry Division
IED	Improvised Explosive Device
IFDS	Integrated Frequency Deconfliction System
IFF	Introduction to Fighter Fundamentals

IGI&S	Installation Geospatial Information and Services
IGPBS	Integrated Global Presence and Basing Strategy
INRMP	Integrated Natural Resource Management Plan
IO	Information Operation
IPR	In-Process Review
IPT	Integrated Product Team
IR	Infrared
IRSS	Integrated Range Status System
ISR	Intelligence, Surveillance, and Reconnaissance
ITAM	Integrated Training Area Management
ITESS	Instrumented Tactical Engagement Simulation System
ITWSS	Track While Scan Simulator
IWG	Integrated Working Group

J

JAEC	Joint Assessment and Enabling Capability
JAWSS	Joint Advanced Weapons Scoring System
JBLM	Joint Base Lewis-McChord
JDAM	Joint Direct Attack Munition
JFO	Joint Fires Observer
JLUS	Joint Land Use Study
JMETL	Joint Mission Essential Task List
JNTC	Joint National Training Capability
JPARC	Joint Pacific Alaska Range Complex
JRFL	Joint Restricted Frequency List
JRTC	Joint Readiness Training Center
JSF	Joint Strike Fighter
JSOW	Joint Standoff Weapon
JTAC	Joint Terminal Attack Controller
JTFEX	Joint Task Force Exercise
JTIDS	Joint Tactical Information Distribution System
JTE	Joint Threat Emitter

K

KSC	Kennedy Space Center

L

LCAC	Landing Craft Air Cushion
LETE	California Least Tern
LFA	Low Frequency Active
LFAM	Live-Fire and Maneuver
LFE	Large Force Employments
LFS	Lead-Free Slug
LFTIS	Live Fire Training Investment Strategy
LGB	Laser-Guided Bomb
LMR	Land Mobile Radio
LOA	Letter of Agreement
LOMAH	Location of Misses and Hits Range
LVC	Live, Virtual, and Constructive
LZ	Landing Zone

M

MAEWR	Mid-Atlantic Electronic Warfare Range
MAG-31	USMC Beaufort
MAGTF	Marine Air-Ground Task Force
MAGTFTC	Marine Air-Ground Task Force Training Center
MAJCOM	Major Command
MANPAD	Man Portable Air Defense System
MCA	Mission Critical Area, Navy
MCA	Military Construction, Army
MCAGCC	Marine Corps Air-Ground Combat Center
MCAS	Marine Corps Air Station
MCB	Marine Corps Base
MCI	Marine Corps Installation
MCLB	Marine Corps Logistics Base
MCM	Mine Counter Measures

MCMWTC	Marine Corps Mountain Warfare Training Center
MCOE	Maneuver Center of Excellence
MCOLF	Marine Corps Outlying Landing Field
MCRD	Marine Corps Recruit Depot
MCRP	Marine Corps Reference Publication
MDS	Mission Design Series
MEB	Marine Expeditionary Brigade
MEDDAC	Medical Support Activity
MEF	Marine Expeditionary Force
MET	Mission Essential Task
METL	Mission Essential Task List
MEU	Marine Expeditionary Unit
MFA	Mid-Frequency Active
MHRC	Mountain Home Range Complex
MILCON	Military Construction
MILES	Multiple Integrated Laser Engagement System
MIRC	Mariana Islands Range Complex
MMPA	Marine Mammal Protection Act
MMRP	Military Munitions Response Program
MOA	Memorandum Of Agreement/Military Operating Area
MOS	Military Occupational Specialty
MOUT	Military Operations in Urban Terrain
MPA	Marine Protected Area
MPMG	Multi-Purpose Machine Gun
MPPEH	Material Potentially Possessing an Explosive Hazard
MPRC	Multi-Purpose Range Craft
MPTR	Multi-Purpose Training Range
MR	Management Review
MRTFB	Major Range and Test Facility Base
M&S	Modeling and Simulation
MSL	Mean Sea Level
MSR	Main Supply Route
MTR	Military Training Route
MW	Mine Warfare
MWR	Morale, Welfare, and Recreation

N

NACD	National Association of Conservation Districts
NACo	National Association of Counties
NAF	Naval Air Facility
NALF	Naval Auxiliary Landing Field
NARC	National Association of Regional Councils
NAS	National Airspace System
NAS	Naval Air Station
NASA	National Aeronautical and Space Administration
NAWC	Naval Air Warfare Center
NAWCWPNS	Naval Air Warfare Center Weapons Division
NCO	Non-Commissioned Officer
NCSL	National Conference of State Legislatures
NDAA	National Defense Authorization Act
NEPA	National Environmental Policy Act
NEW	Net Explosive Weight
NEXRAD	Next Generation Weather Radar
NFC	Numbered Fleet Commander
NG	National Guard
NGA	National Geospatial-Intelligence Agency
NGO	Non-Governmental Organization
NHPA	National Historic Preservation Act
NMAC	Naval Mine and Anti-Submarine Warfare Command
NMC	Not Mission Capable
NMFS	Navy and National Marine Fisheries Service
NOCAL	Northern California
NOV	Notice of Violation
NRDC	Natural Resources Defense Council

NSFS	Naval Surface Fire Support
NSAWC	Naval Strike Air Warfare Center
NSW	Naval Special Warfare
NTIA	National Telecom and Information Administration
NTC	National Training Center
NTTR	Nevada Test and Training Range
NSW	Naval Special Warfare
NUWC	Naval Undersea Weapons Center
NVG	Night Vision Goggle
NVD	Night Vision Device
NWSTF	Naval Weapons System Training Facility

O

OASN(I&E)	Office of the Assistant Secretary of the Navy (Installations and Environment)
OCA	Offensive Counterair
OCO	Overseas Contingency Operations
OCS	Outer Continental Shelf
ODUSD(I&E)	Office of the Deputy Under Secretary of Defense (Installations & Environment)
ODUSD(R)	Office of the Deputy Under Secretary of Defense (Readiness)
OEA	Office of Economic Adjustment
OEF	Operation Enduring Freedom
OEIS	Overseas Environmental Impact Statement
OIF	Operation Iraqi Freedom
OIPT	Overarching Integrated Product Team
OLF	Outlying Landing Field
O&M	Operations and Maintenance
OMA	Operation and Maintenance - Army
OMCM	Organic Mine Counter Measures
OMFTS	Operational Maneuver from the Sea
OODA	Observe-Orient-Decide-Act
OPAREA	Operating Area
OPFOR	Opposing Forces
OPNAV	Office of the Chief of Naval Operations
OPTEMPO	Operation Tempo
OSD	Office of the Secretary of Defense
OT&E	Operation Test and Evaluation
OTICC	OSD Test Investment Coordinating Committee
OUSD(P&R)	Office of the Under Secretary of Defense (Personnel and Readiness)

P

PACFLT	Pacific Fleet
PAO	Public Affairs Office
PACNORWEST	Pacific Northwest
PCMS	Pinon Canyon Maneuver Site
PGM	Precision Guided Munition
PMC	Partially Mission Capable
PNs	Project Numbers
POM	Program Objective Memorandum
PPBE	Planning, Programming, Budgeting, and Execution
PTA	Poinsett Transition Area
PTA	Pohakuloa Training Area
PTAE	Pre-mobilization Training and Assistance Element
PTR	Primary Training Range
PUTR	Portable Undersea Tracking Range

Q

QAP	Quality Assurance Plan
QA/QC	Quality Assurance/Quality Control

R

RAICUZ	Range Air Installations Compatible Use Zones
RRAM	Range Assessment Module
RAND	Research and Development
RANS	Range Squadron

RCD	Required Capabilities Document
RCMP	Range Complex Master Plan
RCO	Range Control Officer
RCW	Red-Cockaded Woodpecker
RDT&E	Research, Development, and Testing and Evaluation
REPI	Readiness and Environmental Protection Initiative
RFA	Radio Frequency Authorizations
RIE	Range Information Enterprise
RIMPAC	Rim of the Pacific
RLA	Recovery Land Acquisition
ROC	Range Operations Center
ROA	Range Operating Agency
ROCC	Range Operation Control Center
ROD	Record of Decision
ROMO	Range of Military Operations
ROTC	Reserve Officer Training Corps
RPA	Remotely Piloted Aircraft
RPV	Remotely Piloted Vehicle
RRPB	Requirements Review Prioritization Board
RSB	Reserve Craft Beach
RSC	Regional Support Center
RTAM	Range and Training Area Management
RTAMS	Range and Training Area Management System
RTKN	Real Time Kill Notification
RTLS	Range and Training Land Strategy
RTPP	Readiness and Training Policy and Programs

S

S-A	Surface-to-Air
SADL	Situation Awareness Data Link
SAF/IE	Secretary of the Air Force/Installations and Environment
SAM	Surface to Air Missile
SAR	Search and Rescue
SBCT	Stryker Brigade Combat Team
SCI	San Clemente Island
SCINI	Senior Commanders Installation Needs and Issues
SCIRC	San Clemente Island Range Complex
SCORE	Southern California Offshore Range
SCUBA	Self Contained Underwater Breathing Apparatus
SDB	Small Diameter Bomb
SDZ	Surface Danger Zone
SEAD	Suppression of Energy Air Defenses
SERPPAS	Southeast Regional Partnership for Planning and Sustainability
SHANGR	Smoky Hill Air National Guard Range
SHOBA	Shore Bombardment Area
SHPO	State Historic Preservation Office
SIMCAS	Simulated Close Air Support
SIPRNET	Secret Internet Protocol Router Network
SNPL	Western Snowy Plover
SOCAL	Southern California Range Complex
SOF	Special Operations Forces
SOP	Standard Operating Procedure
SOS	Special Operations Squadron
SOUC	Special Operations Urban Complex
SPECOPS	Special Operations
SPOE	Seaport of Embarkation
SRI	Sustainable Ranges Initiative
SRM	Sustainment, Restoration and Modernization
SROC	Senior Readiness Oversight Council
SRP	Sustainable Range Program
SRR	Sustainable Ranges Report
SSTC	Silver Strand Training Complex
STOM	Ship to Objective Maneuver
STW	Strike Warfare

STX	Situational Training Exercise
SUA	Special Use Airspace
SUBPAC	Submarine Force U.S. Pacific Fleet
SWAG	Shockwave Action Generator

T

TACP	Tactical Air Control Party
TACTS	Tactical Aircrew Combat Training System
TAP	Tactical Training Theater Assessment Planning
TAPR	Tactical Training Theater Assessment Planning Repository
TAPR	TAP Repository
TC	Training Circular
TCTS	Tactical Combat Training System
T&E	Test & Evaluation
TECOM	Training and Education Command
TENA	Training Enabling Architecture
TERF	Terrain Flight
TES	Test and Evaluation
TESS	Tactical Engagement Simulation System
TFI	Total Force Integration
TPL	Trust for Public Land
TRADOC	US Army Training and Doctrine Command
T&R/ITS	Training Readiness/Individual Training Standards
TRAMS	Testing Ranges Repository and Management System
TSPI	Time and Space Position Information
TSS	Training Support Systems
TSV	Theater Support Vessel
TTP	Tactics Techniques and Procedures
TYCOM	Type Commander

U

UAS	Unmanned Aerial System
UAV	Unmanned Aerial Vehicle
USAF	United States Air Force
USAFE	U.S. Air Forces in Europe
USAG-HI	U.S. Army Garrison Hawaii
USARPAC	U.S. Army Pacific
USASOC	U.S. Army Special Operations Command
UFR	Un-Funded Requirement
UHF	Ultra High Frequency
UJTL	Universal Joint Task List
ULT	Unit Level Training
UOC	Urban Operations Complex
U.S.	United States
USAR	United States Army Reserve
USDA	U.S. Department of Agriculture
USFF	U.S. Fleet Forces
USFJ	U.S. Forces Japan
USFS	U.S. Forestry Service
USFWS	U.S. Fish and Wildlife Service
USMC	United States Marine Corps
USAMAA	U.S. Army Manpower Analysis Agency
U.S.C.	United States Code
USWTR	Undersea Warfare Center Training Range
UTTR	Utah Test and Training Range
UXO	Unexploded Ordnance

V

VACAPES	Virginia Capes
VDGIF	Virginia Department of Game and Inland Fisheries
VHF	Very High Frequency

W

WDZ	Weapons Danger Zone
WGA	Western Governors' Association
WGEF	Wind Generated Energy Farm
WIPT	Working Integrated Product Team

WISS	Weapons Impact Scoring System
WMA	Wildlife Management Area
WRETS	Wideband Remote Emitter Threat System
WRP	Western Regional Partnership

Y

YTC	Yakima Training Center

E DoD and Service Sustainable Ranges Policy and Guidance

The following tables identify and describe overarching Departmental and Service range sustainment policy and guidance.

Table E-1 Overarching DoD Range Sustainment Policy and Guidance

DoD Range Sustainment Policy and Guidance	Description
DoD Directive 3200.11, Major Range and Test Facility Base (MRTFB)	Establishes policy and assigns responsibilities for the sizing, operation, and maintenance of the MRTFB.
DoD Directive 3200.15, Sustainment of Ranges and Operating Areas	Establishes policy and assigns responsibilities for the sustainment of training and test ranges and OPAREAs in DoD. It includes information and requirements focused on operational and mission requirements, encroachment concerns, data needs, planning and budgeting, range management, and stakeholder involvement.
DoD Instruction 3200.16, Operational Range Clearance	Assigns responsibilities and prescribes procedures for conducting range clearance. It includes information on the use and management of operational ranges in ways that ensure their safety and long-term sustainability, and a requirement to periodically review operational range management policies and procedures to determine the degree and frequency of range clearance required to support DoD's Sustainable Range Management Program.
DoD Directive 4715.11, Environmental and Explosives Safety Management on Operational Ranges Within the United States	Establishes policy and assigns responsibilities for the sustainable use and management of operational ranges located within the United States (U.S.), and for the protection of DoD personnel and the public from explosive hazards on operational ranges located within the U.S. It includes information and requirements focused on managing operational ranges in a manner that maintains readiness, ensures the long-term viability of operational ranges, limits the potential for explosives mishaps and damages, and addresses environmental issues surrounding munitions constituents.
DoD Directive 4715.12, Environmental and Explosives Safety Management on Operational Ranges Outside the United States	Assigns responsibilities for the sustainable use and management of operational ranges located outside the U.S., and for the protection of DoD personnel and the public from explosive hazards on operational ranges located outside the U.S. It includes information and requirements focused on managing operational ranges in a manner that maintains readiness, ensures the long-term viability of operational ranges, limits the potential for explosives mishaps and damages, and addresses environmental issues surrounding munitions constituents.
DoD Directive 4715.13, Department of Defense Noise Program	Establishes policy and assigns responsibilities for a coordinated DoD Noise Program. It also provides for establishment of a DoD Noise Working Group. For the purposes of this instruction, noise is defined as unwanted sound generated from the operation of military weapons or weapons systems (e.g., aircraft, small arms, tank guns, artillery, missiles, bombs, rockets, mortars, and explosives) that affects either people, animals (domestic or wild), or structures on or in areas in proximity of a military installation; occupational noise exposure and underwater sound associated with ship testing and training activities are specifically excluded from this definition. The program focuses on identifying, researching, and effectively reducing adverse effects from the noise associated with military test and training operations consistent with maintaining military readiness, without degrading mission capabilities.

Table E-1 Overarching DoD Range Sustainment Policy and Guidance (continued)

DoD Range Sustainment Policy and Guidance	Description
DoD Instruction 4715.14, Operational Range Assessments	Establishes and implements procedures to assess the potential environmental impacts of military munitions use on operational ranges. The purpose of these procedures is to assist Components in determining whether there has been a release or substantial threat of a release of munitions constituents from operational ranges to off-range areas, and whether that release or substantial threat of a release creates an unacceptable risk to human health or the environment.
DoD Instruction 3030.3, Joint Land Use Study (JLUS) Program	Implements policies, assigns responsibilities, and prescribes procedures for executing the JLUS Program as administered by the Department of Defense, Office of Economic Adjustment (OEA). The purpose of the JLUS Program is to help local communities fund comprehensive plan development to resolve perceived community/ installation land use incompatibilities. The JLUS program also can provide technical and financial assistance to the planning agencies for developing master plans that are consistent (when economically feasible) with the noise, accident potential, and safety concerns of the local installation.

Table E-2 Army Range Sustainment Policy and Guidance

Army Range Sustainment Policy and Guidance	Description
Army Regulation 350-19, *The Army Sustainable Range Program*	Published in August 2005 by the Office of the Deputy Chief of Staff G3. The regulation defines responsibilities and prescribes policies for implementing the Sustainable Range Program (SRP) on Army controlled training and test ranges and lands. The regulation assigns responsibilities and provides policy for programming, funding, and execution of the Army's SRP, which is made up of its two core programs: the Range and Training Land Program, which includes range modernization and range operations, and the Integrated Training Area Management Program for land maintenance and repair. The regulation also provides policy and guidance on integrated planning to support sustainable ranges at the installation level, a focused Outreach Communications Campaign, and tools for identifying and assessing current and future encroachment challenges.

Table E-3 Marine Corps Range Sustainment Policy and Guidance

Marine Corps Range Sustainment Policy and Guidance	Description
Marine Corps Range Operations Order (OpOrd)	Will be a comprehensive, Service-level plan to sustain and modernize Marine Corps ranges and training areas. The objective of the OpOrd is to integrate and synchronize range and training area initiatives at Headquarters, Marine Corps and Training and Education Command (TECOM)/RTAM with Marine Corps operational training requirements and range current and planned required capabilities. The OpOrd is a coordinated family of documents that addresses the status of Marine Corps training ranges, their future development, and the administration and resourcing of range management. The OpOrd will include a review of Marine Corps training requirements, Marine Corps range policies and planning initiatives, Marine Corps range capabilities and shortfalls, JNTC and Joint Universal Task List requirements, and other Marine Corps-specific range issues.
Marine Corps Order (MCO) 3550.10, Range Management and Control	Establishes the responsibilities, policies, and procedures pertaining to the safety and management of operational ranges, training areas, and associated training facilities within the Marine Corps. It further defines and describes the functions associated with ranges and training areas, and the responsibilities attendant to those functions.
MCO 3550.9, Range Certification and Recertification	An integral part of the Marine Corps' overarching ground range safety program. Range certification is the function by which safety and environmental compliance are enhanced without compromising training requirements and standards. The order defines the certification and re-certification process that meets an approved set of requirements applicable to an assigned role and mission. Applied appropriately, the range certifications/re-certification will allow for the effective and efficient use of existing training ranges while not compromising safety and the environment.
MCO 3570.1B, Range Safety	Establishes the range safety policies and responsibilities for all Marine Corps ranges and training areas. It establishes the minimum safety standards through Surface Danger Zones (SDZ), and institutes the requirements for individual range safety programs for all live fire and non-live fire ranges and training areas. The order establishes a risk-management process to identify and control range hazards by defining the principles and deviation authorities that control range operations.
MCO 3550.12 Operational Range Clearance Program	Establishes policies and procedures for management of the range clearance program at headquarters, regional, and installation levels.
Range Environmental Vulnerability Assessment (REVA) Reference Manual	Dated May 2009. A key component of the Marine Corps Sustainable Range Program is the REVA program. REVA was developed to help Marine Corps understand the potential environmental impacts of range operations and identify actions that will keep ranges operational while protecting human health and the environment. It is a proactive program that supports Marine Corps and DoD goals and policies.
MCO 11011.22B Policies and Procedures for Encroachment Control Management	Establishes responsibilities for planning, preventing, and controlling encroachment

Table E-4 Navy Range Sustainment Policy and Guidance

Navy Range Sustainment Policy and Guidance	Description
Navy's Mid-Frequency Active Sonar Effects Analysis Interim	Established 6 March 2006. Provides consistent interim policy and internal guidance to Fleet Commanders and other Echelon II commands to assess potential effects of mid-frequency (1 kHz–10 kHz) active sonar use incident to Navy military readiness and scientific research activities. The policy establishes deadlines by which affected commands must develop and submit plans and programming requests to implement this Interim Policy.
OPNAV Instruction 11010.40, *Encroachment Management Program*	Forms the foundation of the Navy's Encroachment Management Program. The instruction defines the roles and responsibilities of certain Navy Commands, defines encroachment challenges and impacts, establishes a database to capture issues, establishes the Encroachment Action Plan process, and establishes the Encroachment Partnering Program.
OPNAV Instruction 3550.1A, *RAICUZ Program*	A joint instruction with the Marine Corps, was updated on 28 January 2008. The revision is to provides more technical details on establishing range compatibility zones and revises the roles and responsibilities within the Department of Navy.
Draft Range Sustainment Policy	Defines roles and responsibilities of Navy Commands with respect to range sustainment and the Navy's TAP programs. The range sustainment policy also establishes deadlines for completion of range sustainment programs to include RSEPA, RCMPs, and environmental planning documents.
Draft Range Sustainability Environmental Program Assessment (RSEPA) Policy Implementation Manual	RSEPA is the Navy's program for assessing the environmental condition of land-based training and test ranges within the U.S. and its territories. The manual outlines roles and responsibilities for the RSEPA program, and establishes standards for how the program should be implemented.

Table E-5 Air Force Range Sustainment Policy and Guidance

Air Force Range Sustainment Policy and Guidance	Description
Transforming the Air Force—The Relevant Range…Enabling Air Force Operations	The Air Force's strategic vision for its ranges and airspace. This document provides guidance for building and sustaining relevant ranges to meet the needs of the warfighter. This document emphasizes the development of comprehensive range planning, which includes MAJCOM roadmaps and individual comprehensive range plans, based upon key investment areas. The investment areas provide the foundation for supporting a relevant range and a mechanism to articulate range and airspace requirements. This document also implements a continuous review process, linked to the programming cycle, to ensure that the vision, policy and guidance, roadmaps, and range management plans remain current and resourced for the future.
Air Force Policy Directive 13-2, Air Traffic Control, Airspace, Airfield, and Range Management	Encourages the sustainment of a flying environment that promotes safety and permits realistic training by providing policies to govern the use of airspace, training weapons ranges, and support facilities and equipment controlled by the Air Force, the Air National Guard (ANG), and the U.S. Air Force Reserve.
Air Force Instruction (AFI) 13-201, Air Force Airspace Management	Provides guidance and procedures for developing and processing Special Use Airspace (SUA). It covers aeronautical matters governing the efficient planning, acquisition, use, and management of airspace required to support Air Force flight operations. It applies to activities that have operational or administrative responsibility for using airspace. It establishes practices to decrease disturbances from flight operations that might cause adverse public reaction, and provides flying unit Commanders with general guidance for dealing with local problems.
AFI 13-212, Range Planning and Operations	Sets forth an integrated operational and engineering approach to range management. It is the primary document governing Air Force planning as it relates to training and test ranges. AFI 13-212 consists of three volumes, each addressing a different aspect of range management: Volume 1, Range Planning and Operations; Volume 2, Range Construction and Maintenance; and Volume 3, SAFE-RANGE Program Methodology.
Operational Range Assessment Plan (ORAP)	Developed to provide Air Force facilities with guidance for consistently completing a defensible assessment of potential environmental impacts to off-range receptors from military munitions used on training and test ranges and range complexes. Headquarters U.S. Air Force, Office of the Civil Engineer, Asset Management and Operations Division (HQ USAF/A7CA) developed the ORAP as part of the Air Force Operational Range Environmental Program. The program's goal is to ensure that the operational range natural infrastructure is capable and available to support the Air Force's test and training mission. In order to ensure the long-term viability of training and test ranges, a standardized and scientifically defensible methodology is required for assessing off-range munitions constituent migration and for responding to any associated threats to human health. This plan complies with requirements set forth in DoDD 4715.11, DoDI 4715.11, and DoDI 4715.12.

Table E-5 Air Force Range Sustainment Policy and Guidance (continued)

Air Force Range Sustainment Policy and Guidance	Description
Operational Range Integrated Program Plan	The Air Force is committed to sustaining its operational training and test ranges. As a demonstration of this commitment, HQ USAF/A7CA developed an Integrated Program Plan to assist Air Force installations with a systematic approach for aligning environmental asset planning and management with mission requirements for training and test ranges. This approach is necessary to satisfy natural infrastructure management responsibilities, a fundamental element of the Air Force's overall Range Sustainment Initiative framework. The time period for the Integrated Program Plan is FY2006 through FY2010. It details the Air Force Operational Range Environmental programmatic vision, mission, overall and specific interim goals, and the near, and mid-term strategic actions required for success. Each strategic objective is documented to include background details, performance measures, and specific steps necessary to accomplish the objective. The plan will be updated annually based on a combination of performance measurement and evaluation and application of the knowledge gained through execution of range sustainment activities.
Air Force Natural Infrastructure Assessment (NIA) Guide **See Update*	HQ USAF/A7CA developed a Natural Infrastructure Assessment Guide which was finalized and distributed in FY2007. It provides HQ USAF, MAJCOM, and installations with a methodology for conducting and maintaining the NIA. The NIA provides a series of indicators that illustrates the relative degree of encroachment for each NI asset. These indicators shall be considered by senior leaders, at all levels, in making subsequent management decisions regarding the sustainment, restoration, and modernization of NI assets to support mission requirements within the existing planning, programming, and budgeting system.


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