

UNITED STATES AIR FORCE
PLAYAS MILITARY OPERATING AREA AND RED
FLAG-RESCUE
SUPPLEMENTAL ANALYSIS

Introduction

The United States Air Force (“Air Force”) is supplementing the Final Environmental Assessment (EA), “*Tactical Recovery of Air Craft & Personnel (TRAP). Training and Readiness Certification Exercise (CERTEX), Playas Temporary Military Operating Area (PLAYAS TMOA)*” (“*CERTEX EA*”) (Appendix A) and the FAA’s Finding of No Significant Impact (FONSI), August 3, 2017 (Appendix B. The Air Force Supplemental Analysis (SA) is entitled, “*Playas Temporary Military Operating Area*” (“*Red Flag-Rescue SA*”).

The previous Marine Corps and Air Force prepared CERTEX EA analyzed the potential environmental impacts associated with the temporary activation of Playas MOA, which was primarily focused on the airspace component of the CERTEX. Playas TMOA was centered on the Playas Training and Research Center (PTRC), located in Grant and Hidalgo Counties, southwestern New Mexico and provides realistic military training immersion in a simulated environment.

PTRC was established as a primary training and readiness support facility for the Department of Homeland Security (DHS), state law enforcement agencies, as well as Department of Defense and associated national defense/security forces. The PTRC facility is owned, operated and managed by the Energetic Materials Research and Testing Center (EMRTC) of New Mexico Institute of Mining and Technology, Socorro, New Mexico.

The CERTEX EA and this *Red Flag-Rescue SA*, were both prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) (Public Law 91-190, 42 United States Code (U.S.C.) Sections 4321 - 4347), as amended (42 United States Code (U.S.C.) § 4321, et seq.); the “Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the NEPA” (40 C.F.R. Parts 1500 -15080), and the Air Force “Environmental Impact Analysis Process” (EIAP) (32 C.F.R. Part 989). As a Cooperating Agency, the Federal Aviation Administration (FAA) has reviewed the CERTEX EA and this supplemental analysis to insure compliance with FAA Order 1050.1F, “Environmental Impacts: Policies and Procedures.”

The CERTEX EA adequately analyzed the potential environmental impacts of the activation of the Playas TMOA, a 20 nautical mile x 20 nautical mile block of special use airspace. See Figure 1.

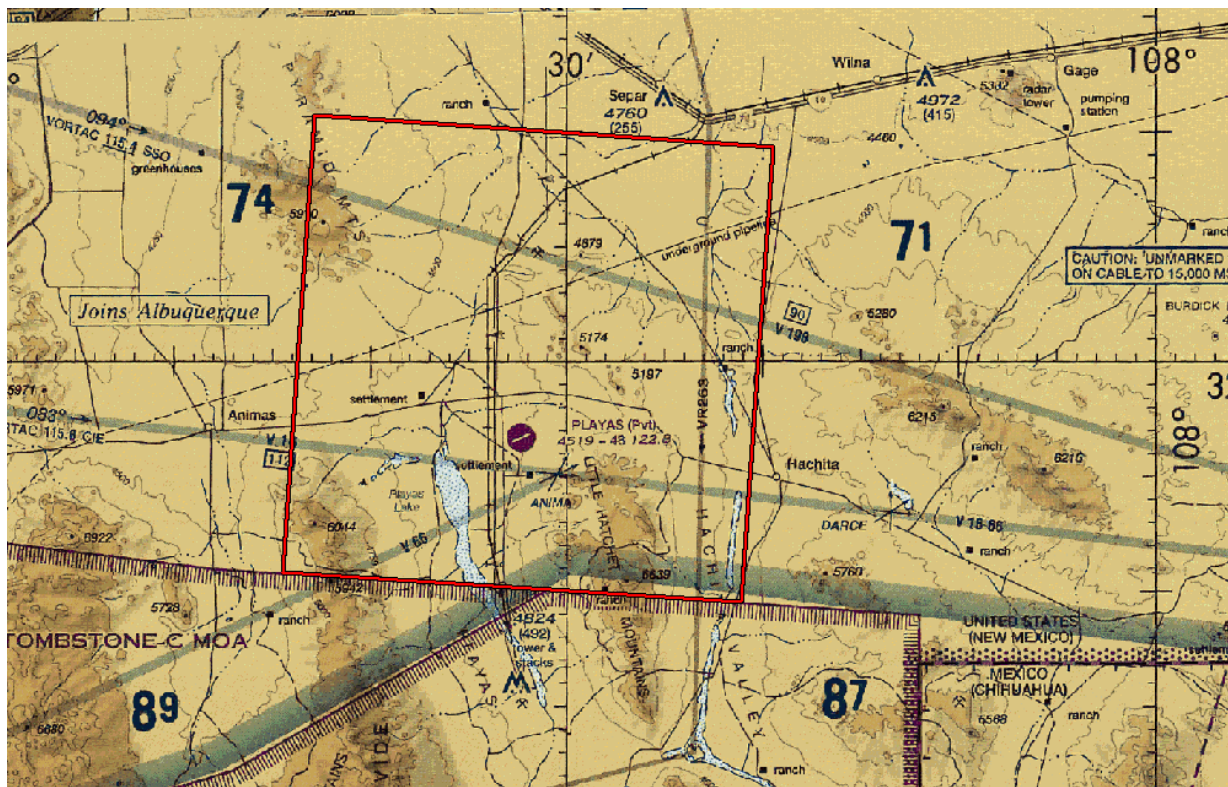


Figure 1 Playas Temporary MOA

The CERTEX EA analyzed the use of the PTRC for combat search and rescue and the use of the Playas MOA for the aircraft portion of the training. The CERTEX EA evaluated 14 environmental impact categories identified in FAA Order 1050 1F to determine if they were relevant to the action. The following were not carried forward for additional analysis: land use, DOT, Section 4(f) issues, socioeconomics, environmental justice, climate, coastal resources, farmlands, hazardous materials, solid waste, pollution prevention, natural resources and energy supply, visual effects and light emissions (aesthetics,), and water resources. The CERTEX EA also did not carry forward several resource areas for analysis (CERTEX EA, pg. 10-13). The CERTEX EA did include airspace, noise, air quality, cultural resources and biological resources. The Marine Corps concluded that there were no significant impacts associated CERTEX.

Background

Proposed Action

The Air Force proposed *Red Flag-Rescue*, as set forth and analyzed in this supplemental analysis, would allow combat air forces the opportunity to practice effective integrations with ground forces, which is critical to the success of real-world combat search and rescue missions. *Red Flag-Rescue* is designed to provide personnel recovery training for U.S. combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers, and personnel from the Joint Personnel Recovery Center.

The central focus of this *Red Flag-Rescue* supplemental analysis supports aerial activities that consist of MOA flight operations that include tactical combat maneuvering by fighter, and rotary wing aircraft involving changes in altitude, attitude, and directions of flight.

Maximum flight ceiling is up to 18,000 feet Mean Sea Level (FL180), approximately 13,500 feet

Above Ground Level (AGL) in the vicinity of PTRC and the floor of the MOA will be 300 feet AGL. Operations include free-fall and static line parachute operations at all altitudes, non-standard formation flights; rescue escort maneuvering above participating rotary wing aircraft; and close air support; all up to FL200. Visual Flight Rules (VFR) aerial helicopter refueling will be accomplished up to 10,000 feet MSL or 5,800 feet AGL, within the Tombstone Military Operating Area MOA.

This Red Flag-Rescue training exercise is proposed to be conducted at the PTRC in New Mexico as it offers the best and most realistic training scenario available using actual houses and other types of buildings to support a variety of training including combat rescue, urban warfare training among other training scenarios, not otherwise available outside a fully populated urban setting. To conduct combat search and rescue, a temporary MOA is necessary to ensure a safe airspace environment protecting both civil and military aircraft during the times, each day that, training will be conducted.

As stated previously, Playas TMOA (as defined by the Air Force Aeronautical Proposal (Appendix C) is above the PTRC training facility, and is located approximately 20 miles (32 Km) south of Interstate-10, and approximately 60 miles (97 Km) north of the United States/Mexico border. The nearest communities (small towns) are Animas (population 240 residents), located approximately 18 miles (29Km) miles west, and Hachita (population 50 residents), and located approximately 14 miles (22.5 Km) east of PTRC (Figure 2).

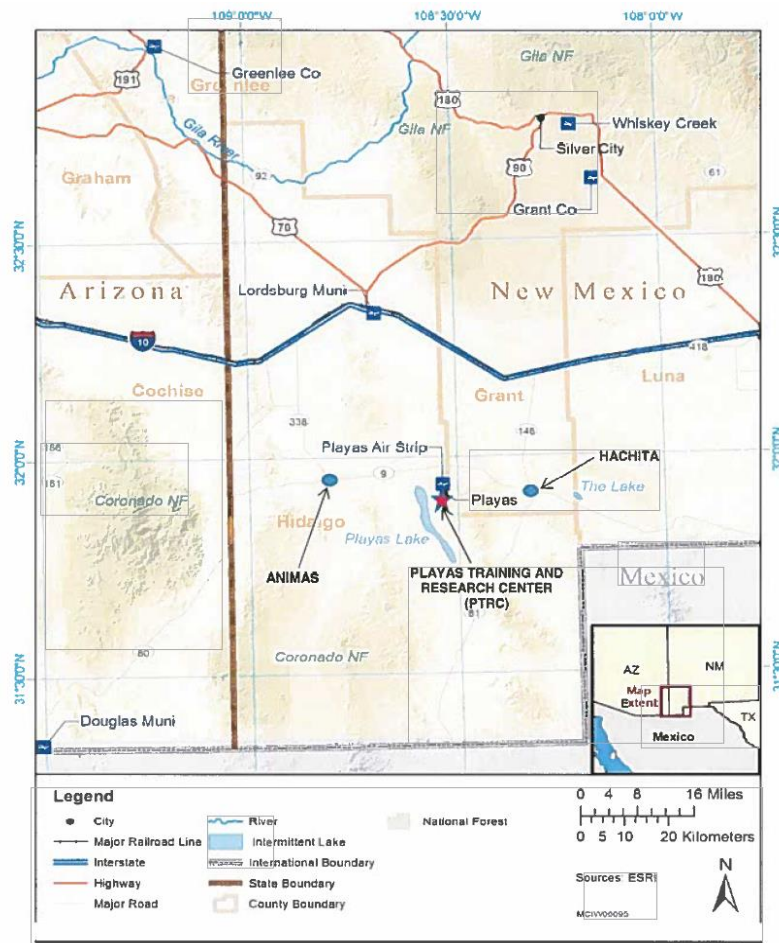


Figure 2 Regional and Vicinity Map

Aircraft participating in the Red-Flag-Rescue training include: F-16s, A-10s, HC-130s, and HH-60 helicopters. According to the Air Force's Aeronautical Proposal, the Playas TMOA will be needed for

only five days during an 18 day window from 2-19 May 2018, to be determined based on immediate, case by case, tasking basis. The Playas TMOA will be activated by publishing a Notice to Airman (NOTAM). Each day of use will consist of up to two a four-hour training periods (known as a “vul”¹ period) and will involve the aircraft associated with either aircraft package 1 or 2 or as listed in Table 1.

Table 1 Aircraft Package Composition

PACKAGE 1			PACKAGE 2	
4	F-16		6	F-16
2	A-10		1	HC-130
1	HC-130		2	HH-60
2	HH-60			

The Aeronautical Proposal listed other aircraft types as participating in the exercise; however, UH-1Y, MV-22 participation in the Red Flag– Rescue exercise is not anticipated.

The Proposed Action will be the same as the ground-based employment discussed in the CERTEX EA (pages 6-8).

Purpose and Need

The purpose of the proposed action is to provide an integrated, properly configured, realistic military training airspace with adequate dimension and size to support combat search and rescue training for U.S. and allied air-combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers and Joint Personnel Recover Center personnel. The need for the proposed action is driven by the need to conduct realistic combat rescue training.

Alternatives

The Tombstone, Ruby, Fuzzy and Sells MOAs were considered but eliminated from consideration because realistic ground training infrastructure necessary to conduct required combat rescue training does not exist under the these MOAs.

No-Action Alternative: The no action alternative reflects the conditions that would exist at the Playas Training Center and the associated MOA without the Red Flag-Rescue. The Affected Environment described in the resource evaluation section of the CERTEX EA reflects the condition for the No-Action Alternative of this supplemental analysis.

Resource Areas Considered and Evaluated

The resource areas that are the focus of this supplemental analysis are the same as the CERTEX EA (Pg. 10-20), including airspace, noise and air quality. The Air Force also assessed the following categories in accordance with CEQ regulations, and found that they did not warrant further analysis in the EA: Coastal Resources, Construction Impacts, Farmlands, Floodplains, Light Emissions, Hazardous Materials, Hazardous Waste and Solid Waste, Natural Resources and Energy Supply, Water Quality, Wetlands, Wild and Scenic Rivers.

¹ The “vul” period is the period of vulnerable time a search and rescue crew is on alert to be called for an immediate tasking to conduct a rescue.

The remainder of the CERTEX EA is incorporated by reference and cited to as necessary in the body of this supplemental analysis and focuses on airspace, noise and air quality.

Airspace

Affected Environment. In order for Air Force to conduct the proposed Red Flag-Rescue training the Playas TMOA would be activated by the FAA above the PTRC, where the ground portion of the search and rescue training would take place. As noted in the CERTEX EA (Pages 13) several Victor Routes (V66, V-16, V16-66 [T 306] and V198) traverse the Playas MOA (CERTEX EA, Figure 3 Page 4).

Environmental Consequence. Activation of the Playas TMOA by the FAA would be in effect by NOTAM during the time periods that aircraft operations in support of the Red Flag-Rescue training will take place. The activation of the TMOA enhances the safety of the National Airspace System.

Strategy for Analyzing Noise and Air Quality Impacts:

In order to capture cumulative impacts, the number of vul periods and numbers of days are different from what was described in the aeronautical proposal or proposed actions. As discussed in the description of the Proposed Action section, each vul period will consist of either aircraft Package 1 or 2. Each vul time will be activated by NOTAM at least 6 hours in advance for a total of 18 vul times during six days of use, but no more than 4 vul times will occur between the hours of 2200 – 0700 local times.

Aircraft will enter into the Playas TMOA for between 30 to 60 minutes before exiting. The HC-130 will operate outside the proposed Playas TMOA. Mission profiles were developed for each aircraft (including airspeed, power settings, and time in altitude blocks between 300 feet AGL up to FL180) except the HH-60 which will operate from ground level to 2000 feet AGL See Table 2 for altitude distribution.

Table 2 Altitude Distribution and Times for Packages 1 and 2

Package 1				
Aircraft	F-16	F-16	A-10	HH-60
# of Aircraft	2	2	4	2
Altitude Band 1	300' AGL - 2000' AGL	2000' AGL - 10000' MSL	300' AGL - 2000' AGL	SFC - 2000' AGL
Time in Band 1 (Min)	10	6	15	30
Altitude Band 2	2000' AGL - 10000' MSL	10000' MSL - 18000' MSL	2000' AGL - 10000' MSL	
Time in Band 2	10	54	15	
Altitude Band 3	10000' MSL - 18000' MSL			
Time in Band 3	10			

Package 2				
Aircraft	F-16	F-16	F-16	HH-60
# of Aircraft	2	2	2	2
Altitude Band 1	300' AGL - 2000' AGL	2000' AGL - 10000' MSL	300' AGL - 2000' AGL	SFC - 2000' AGL
Time in Band 1 (Min)	10	6	15	30
Altitude Band 2	2000' AGL - 10000' MSL	10000' MSL - 18000' MSL	2000' AGL - 10000' MSL	
Time in Band 2	10	54	15	
Altitude Band 3	10000' MSL - 18000' MSL			
Time in Band 3	10			

Although participation of Marine Corps aircraft are not anticipated, to evaluate the potential cumulative annual impacts (which includes a second Red Flag-Rescue exercise and/or a potential future Marine Corps CERTEX). The analysis for noise and air emissions used 3 vul times per day, during 6 days, over two exercises per year, for a total of 36 vuls per year, with 20 percent planned to occur during the “acoustic” night time period (2200-0700).

The analysis included 36 vuls periods using Package 1 or 36 vul periods of Package 2. Additionally, a third combination consisting of a mix of 18 aircraft of each Package 1 and 2. This is analyzed to allow for flexibility relative to the mix of aircraft used for training.

The third vul per day and the additional day that was analyzed might be needed if conditions (weather, mechanical, etc.) drive the need to conduct more training than originally anticipated during the hours that the MOA is activated, or would need an extra day. If these conditions occur, the Air Force would coordinate with the FAA.

Noise

Affected Environment. As described in the CERTEX EA (Page 14), the normal aircraft activities that occur in the regional airspace and the area defined for the proposed MOA are generally a mix of private (general aviation); local, state or other federal agency; or military aircraft. These existing sources of noise are consistent with known, FAA-approved flight routes and are typical for small, rural, and/or outlying airspace use and resulting in aircraft noise being episodic in nature.

As noted in the description of the Proposed Action, there are no formally recognized towns lying under the proposed TMOA. There may be scattered ranches or agricultural activity but the majority of the area is open undeveloped land.

The American National Standards Institute (ANSI) provides typical background noise levels for various land use categories, as presented in Table 3. The area beneath and surrounding the Playas Temporary MOA most similar to rural or remote areas with estimated ambient DNL less than 49 dBA.

Table 3. Estimated Background Noise Levels

Example Land Use Category	Average Residential Intensity (people per acre)	DNL (dBA)
Rural or remote areas	<2	<49
Quiet suburban residential	2	49
	4	52
	4.5	52
Quiet urban residential	9	55
Quiet commercial, industrial, and normal urban residential	16	58
	20	59

Source: ANSI 2013. Quantities and Procedures for Description and Measurement of Environmental Sound.

Environmental Consequences. Military aircraft utilizing Special Use Airspace (SUA) such as MOAs generate a noise environment somewhat different from that associated with airfield operations. As opposed to the patterned or continuous noise environments associated with an airfield, flight activity in SUA is highly sporadic and often seasonal ranging from a few flights per hour to less than one per week. Individual military overflight events also differ from typical airfield noise events in that noise from a low-altitude, high-air-speed flyovers can have a higher onset of noise, exhibiting a rate of increase in sound level.

The metric used for portraying noise levels for aircraft operations, in special use airspace, and used for analyzing their impacts is the “Onset Rate-Adjusted Monthly Day-Night Sound Level”, depicted by the symbol L_{dnmr} . The Onset Rate-Adjusted Monthly Day-Night Sound Level metric is similar to the “day night level represented by the symbols L_{dn} or DNL used at military and civilian airfields, in that it includes the same 10 decibel (dB) penalty (i.e., adjustment) for aircraft operations that occurs after 10 p.m. at night.

However, because flight operations in MOAs may result in noise levels increasing rapidly for a short period of time, another adjustment may be incorporated to account for the high onset rate of aircraft noise (sometimes referred to as the “surprise” effect). Aircraft events exhibiting a high onset rate are assessed a penalty ranging from 0-11 dB. The L_{dnmr} is calculated from the month with the most aircraft operations because airspace activity varies more than airfield activity.

All noise metrics are weighted. Weighted sound levels have been shown to correlate moderately well with the human response to noise to emphasize the range of the frequency spectrum. When A-weighting is applied to noise levels, very high and very low sound frequencies that are outside the range of human hearing are screened out, thereby weighting the sound to reflect what people actually hear. All metrics (L_{dn} and L_{dnmr}) used for aircraft noise are A-weighted.

The modeling of aircraft operation for Red Flag-Rescue was performed using the Version 3 of the Military Operating Area and Range Noise Model (MR_NMAP) modeling software. The modeling included operations associated with the two Red Flag-Rescue training events that occur at the PTRC to

ensure the cumulative noise impacts of both training exercises were captured.

Based on the modeling results, the Proposed Action would not have a significant impact on the environment. The annual average L_{dnmr} for the various packages is shown in Table 3.

Table 3. Results of Noise Analysis

Average annual Day L_{dnmr}	
Package 1	47.3
Package 2	50.5
Package 3 (A mix of 1 and 2)	49.2

Mitigations for Noise. The Central Service Area (CSA) office of the FAA received two comments from the Cascabel Conservation Association for an area outside the proposed during the circularization of the Special Use Airspace proposal for the Red Flag-Rescue (November, 2017)

. The comments pertained to low flying aircraft overflights transiting to and from the PTRC in previous training exercises, as well as local flying from the base disturbing the natural peace and creating a hazard when ranchers are working with live stock, and were not associated with Playas MOA. Although over ninety miles from the proposed temporary MOA, the CSA considers these substantive comments associated with the proposed action. The CSA recommended a 500' AGL minimum altitude over the impacted area to provide adequate mitigation of their concerns. The Air Force will restrict the participants in the Red Flag-Rescue training exercise to be above 500' AGL in this area.

Air Quality

Affected Environment: The EPA has designated eight (8) Air Quality Control Regions (AQCR) in New Mexico. The Arizona-New Mexico Southern Border Intrastate Air Quality Control Region 012 is located in the southwestern part of the state and covers an area of 10,374 square miles. The counties within the region include Grant, Hidalgo and Luna. The Playas TMOA, as well as the PTRC facility itself, is situated within a portion of AQCR-012. AQCR-012 is currently in full attainment status for all monitored criteria pollutants; both gaseous and particulate matter air contaminants. At present, only Particulate Matter-10 (PM_{10}) contaminants are being monitored during and after major storm and wind events. (CERTX EA, Page 16)

Environmental Consequences. The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, Air Quality Compliance and Resource Management; and the General Conformity Rule (GCR, 40 CFR 93 Subpart B).

Calculations were done by zeroing out all time in modes except climb out (intermediate or military), and altering climb out to reflect the information provided below. Trim tests were also zeroed out. ACAM does not have rotary aircraft built into its modeling, so emissions calculations were done manually in Microsoft Excel using emission factors from the Air Emissions Guide for Air Force Mobile Sources

September 2017. These totals were added to the ACAM summary report, so the totals annually reflect emissions for the F-16s, A-10s, and UH-60s.

Based on the attainment status of Hidalgo/Grant Counties, the requirements of the General Conformity Rule are not applicable. None of the estimated emissions associated with the three aircraft packages are above the GCR indicators, indicating no significant impact to air quality. The detailed analysis can be found in Appendix D.

Public Involvement

As accomplished for the CERTEx EA and circularization for the Red Flag-Rescue aeronautical proposal (e.g., Playas Temporary MOA).

APPENDIX A

USMC Tactical Recover of Aircraft & Personnel (TRAP)
Training and Readiness Certification Exercise (CERTEX)
Playas Temporary Military Operating Area (Playas TMOA)
Environmental Assessment

ENVIRONMENTAL ASSESSMENT



Tactical Recovery of Aircraft & Personnel (TRAP)

Training and Readiness Certification Exercise (CERTEX)

Playas Temporary Military Operating Area (PLAYAS TMOA)



Playas, NM

3 August 2017

INTRODUCTION

Project Overview

The Proposed Action described herein is the temporary activation the Playas Military Operating Area (Playas TMOA) by the Federal Aviation Administration (FAA), in support of the United States Marine Corps (USMC) – United States Air Force (USAF) training and readiness Certification Exercise (CERTEX) known as a “Tactical Recovery of Aircraft and Personnel” (or TRAP).

For the purpose of detailed discussion and analysis, this Environmental Assessment (EA) is focused on the use of the airspace component primarily, as the use of the ground component is limited to an existing, developed commercial facility known at the Playas Training and Research Center (PTRC), located in Grant and Hidalgo Counties, in the southwestern corner of the State of New Mexico. The PTRC facility provides realistic military training immersion in a simulated environment. It was established as a primary training and readiness support facility for the Department of Homeland Security (DHS), local and state law enforcement agencies, as well as Department of Defense military and associated national defense/security forces. The PTRC facility is owned, operated and managed by the Energetic Materials Research and Testing Center (EMRTC) of New Mexico Tech, a public university located in Socorro, New Mexico.

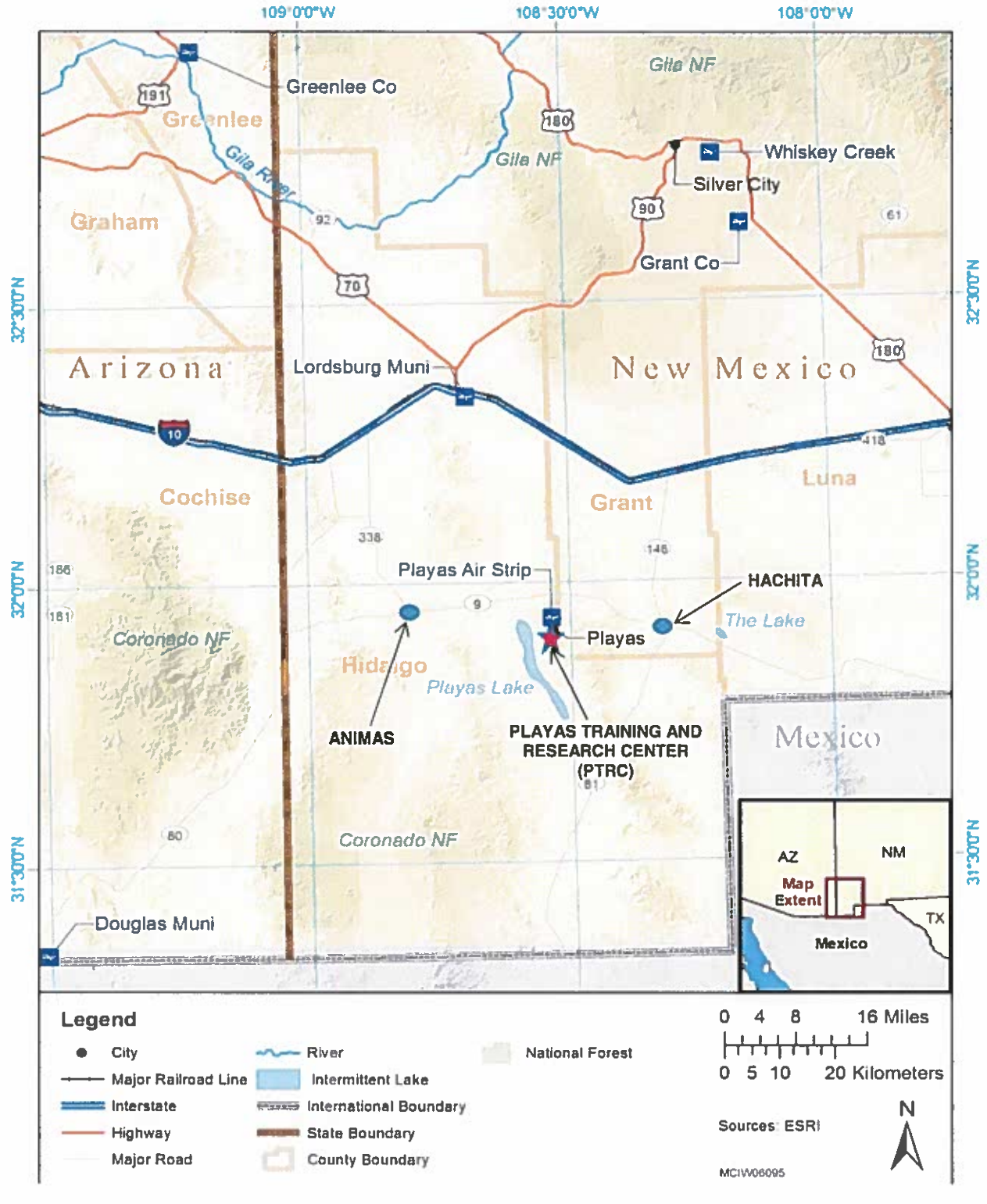
The Playas TMOA is a key component in the effective use of the PTRC facility for military and related training events. The Playas TMOA has been activated on many occasions since its establishment in 2006. The Playas TMOA is a 20NM x 20NM block of special use airspace centered on Playas, New Mexico.

This TRAP CERTEX EA evaluates the potential environmental impacts of the temporary activation of the Playas TMOA for a period not-to-exceed 4.5 hours, from approximately 1500 (3:00PM) to approximately 1930 (7:30PM) on 9 August 2017.

Proposed Action Location and Action Area

The Playas TMOA sits atop the PTRC training facility, which is located in Playas, New Mexico. The PTRC is located approximately 20 miles (32 Km) south of Interstate-10, and approximately 60 miles (97 Km) north of the United States/Mexico border. The nearest communities (small towns) are Animas (population 240 residents), located approximately 18 miles (29Km) miles west, and Hachita (population 50 residents), located approximately 14 miles (22.5 Km) east of PTRC (FIGURE 1).

FIGURE 1: REGIONAL & VICINITY MAP



For the purpose of this EA, the Action Area is the three dimensional airspace within the Playas TMOA itself, from ground level up 18,000' above ground level (AGL) immediately above the PTRC facility. The Playas TMOA is a 20 nautical miles (NM) x 20 NM block of special use airspace that sits atop the PTRC (FIGURES 2 AND 3). With the exception of the PTRC and associated facilities, much of the land below the Playas TMOA is open and sparsely populated, with few settlements and no urban areas within 20 miles. The Playas TMOA would only be activated for aircraft participating in the Proposed Action exercises, and only for the 4.5-hour time block identified above.

Environmental Requirement

The USMC is preparing this EA in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [U.S.C.] §4321, et seq.); the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and FAA Order 1050.1F, Environmental Impacts: Policies and Procedures.

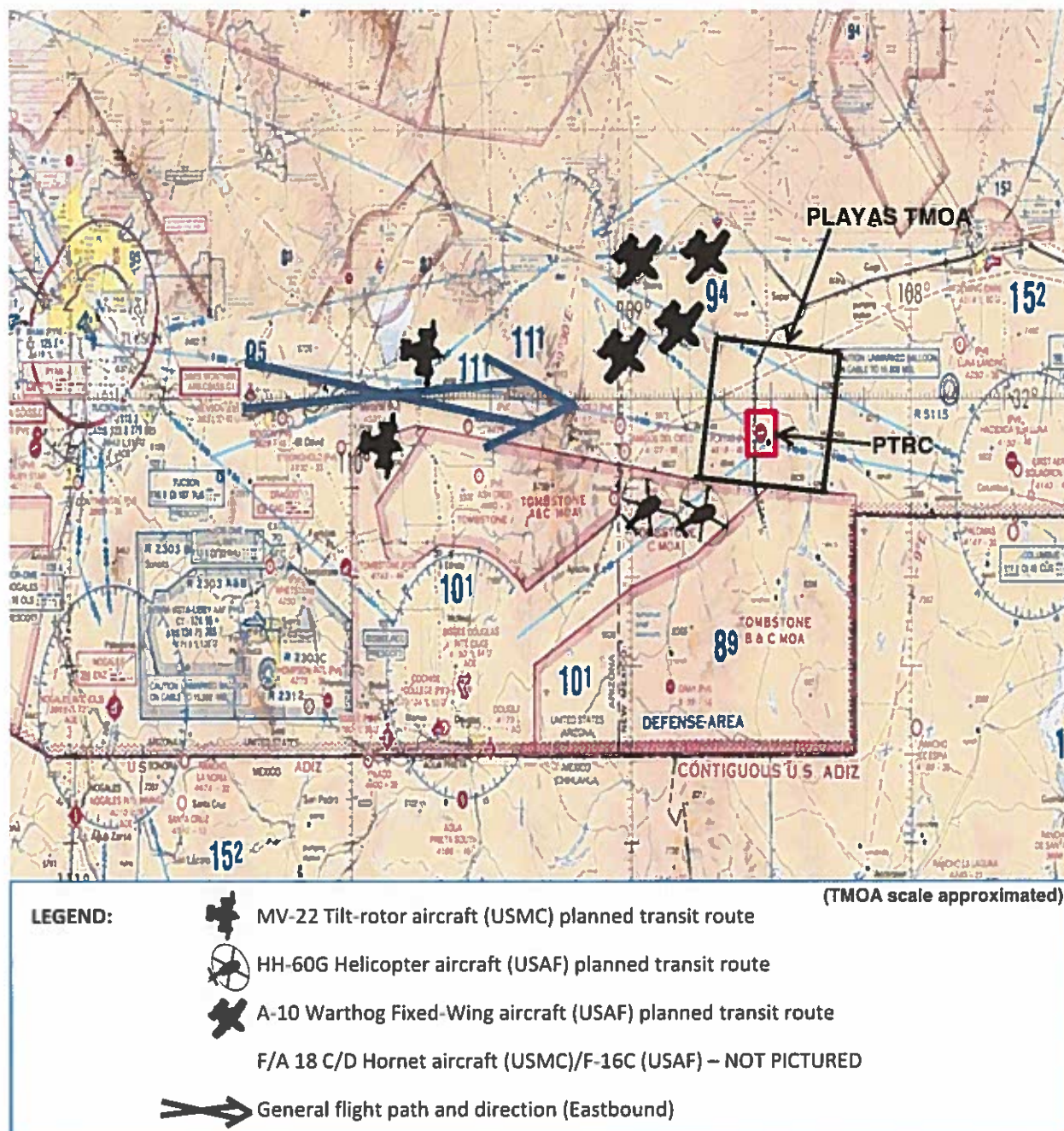
Purpose and Need/Public Involvement

Purpose and Need of the Proposed Action

The purpose of the TRAP CERTEX is to practice integrating both air and ground forces in conducting a joint services exercise. This requires additional, temporary military special use airspace atop the PTRC training and readiness facility to support training objectives. The TRAP CERTEX will provide the Special Purpose Marine Air Ground Task Force (SPMAGTF) an opportunity to conduct training in an unfamiliar environment during the final phase of its pre-deployment program. During CERTEX, the Special Purpose Marine Air Ground Task Force Crisis Response Central Command (SPMAGTF-CR-CC) will be required to perform a series of challenging and realistic training events to test its ability to conduct conventional and specialized missions, both in the air and on the ground. The TRAP CERTEX is but one of the planned training events requiring select members of the USMC and USAF to fully plan and execute the (TRAP) during a 5-hour time block between 09 and 10 August 2017.

The need for the Proposed Action is to meet the pre-deployment training and readiness requirements of the SPMAGTF-CR-CC CERTEX for Marine Expeditionary Unit (MEU) deployment. The activation of the Playas TMOA ensures the SPMAGTF-CR-CC CERTEX can be conducted with minimal risk to the operating forces, while managing risk to public health and safety (general aviation community).

FIGURE 2: PLAYAS TEMPORARY MILITARY OPERATING AREA (TMOA)- AIRSPACE MAP



In order to conduct TRAP CERTEX operations, which includes both air and ground (use of the PTTC facility for combat search and rescue operations) components, the USMC-USAF team must secure the airspace above the (PTTC) facility where the ground activities would be conducted. To that end, the USMC-USAF is requesting from the FAA a short-term, temporary activation (5-hours) of the Playas TMOA.

FIGURE 3: PLAYAS TEMPORARY MILITARY OPERATING AREA (TMOA)



(The requested Playas TMOA is a 20 NM X 20 NM box extending from 300 feet above the surface (AGL) up to but not including FL180 18000' AGL. Beginning at lat. 32°10'43"N., long. 108°42'48"W.; to lat. 32°09'20"N., long. 108°19'29"W.; to lat. 31°49'27"N., long. 108°21'03"W.; to lat. 31°50'48"N., long. 108°44'28"W.; to the point of beginning)

Public Involvement

The Marine Corps has conducted the following outreach and research efforts as part of the development of the Proposed Action:

- **U.S. Air Force (USAF):** Coordination with the Air Force in the planning and execution of the TRAP CERTEX and during the development of the EA, as this is a planned, joint USMC-USAF Proposed Action. The USMC also reviewed the USAF Angel Thunder Final EA and FONSI (May 2017).
- **Federal Aviation Administration (FAA):** Coordination with the FAA, as a Cooperating Agency, in the planning, review and development of the EA and supporting documentation. On-going coordination with FAA shall occur in issuing the NOTAM for activation/de-activation of the Playas TMOA prior to and during execution of the TRAP CERTEX, a joint USMC-USAF Proposed Action. The FAA will be notified upon completion of TRAP CERTEX airspace activities.

- [State of New Mexico, Historic Preservation Office \(NM-SHPO\)](#): Coordination with the NM-SHPO, resulting in a determination of “No Historic Properties Affected” (see attached NM-SHPO response, dated 23 May 2017) (**APPENDIX A**).
- [U. S. Fish and Wildlife Service \(USFWS\)](#): As the Action Proponent, the USMC made a “No Effects” determination for the Proposed Action (activation of the Playas TMOA), based on the project description (e.g., type, frequency, duration and intensity of the planned activities), and after a careful review of appropriate federal and state natural resource/wildlife databases regarding the potential presence of federally-listed threatened and endangered species within the local and regional area, as well as a review of previously conducted NEPA documentation. (**APPENDIX B**)

Alternatives

The Proposed Action

While the planned land use (on-the-ground, combat search and rescue, or CSAR) component of the Proposed Action is a primary training objective, the action proposed by the USMC-USAF team is the temporary activation of the Playas MOA by the FAA, a type of special use airspace located near Playas, New Mexico (**FIGURES 1-3**). In order to conduct TRAP CERTEX operations, the USMC-USAF team must secure the airspace above the (PTRC) facility where the ground activities (CSAR) would be conducted. To that end, the USMC-USAF is requesting from the FAA a short-term, temporary activation (4.5-hours) of the Playas TMOA, in support of military training objectives.

The USMC Expeditionary Operations Training Group (EOTG), I Marine Expeditionary Force (1 MEF) proposes to conduct a TRAP CERTEX for deployment of the MEU. The Proposed Action has both air and ground elements that would begin 07 AUG 2017 and continue through 11 AUG 2017, with the bulk of air (flight time, TMOA maneuvering, etc.) within the Playas TMOA on 9 August and all ground activities (‘staged’ pilot(s), tactical insert/extraction, CSAR) being conducted within the residential area complex of the PTRC on 8-9 August. The Proposed Action scheme of maneuver for the TRAP CERTEX includes the following:

- 1) Using existing paved road network and trails within the PTRCs residential housing complex (see **FIGURE 4** of **APPENDIX D**), the (simulated) downed pilot(s) would be “staged” somewhere within the residential complex area on approximately 8 August, before TRAP operations are set to begin on 9 August, from 1500 (3PM) – 1930 (730PM).
- 2) At approximately 1500 (3PM) on 9 August, the “staged” downed pilot(s) would make a “MAYDAY” call. Thereafter, USMC and USAF aircraft with search and rescue personnel would respond from their respective basing locations. Aircraft to be used in the TRAP CERTEX operations include two (2) MV-22s; two (2) F/A-18s C/D (USMC) and two (2) F-16C (USAF), or

four (4) A-10C (not both); one (1) HC-130J (for mid-air refueling, as needed); and two (2) HH-60G (USAF) (see Appendix E for pictures of military aircraft to be used in the exercise).

3) Two MV-22 (tilt-rotor) aircraft would transit to the Playas TMOA and PTRC facility from the San Diego area, entering the Playas TMOA from the west along established/approved FAA flight routes (see Figure 2)

4) MV-22 (tilt-rotor) aircraft would land in the two pre-designated landing zones near the housing complex and insert two small, squad-sized military search and rescue units to conduct ground operations to locate the downed pilot(s) and provide simulated medical attention, as needed. MV-22 aircraft will remain on the ground for only minutes, just long enough for the search and rescue units to disembark the aircraft (tactical insertion) and begin CSAR activities to locate the downed pilot(s). MV-22s would then take-off and remain airborne within the Playas TMOA until signaled by the CSAR team requesting extraction of the rescue team and downed pilot(s), about 1-2 hrs. after insertion). Only two military aircraft will actually land on the ground; once for inserting the search and rescue team, and another for extracting all military personnel involved in the TRAP CERTEX exercise. Time on the ground for the search and rescue operations would be up to two hours, at most. Total time on the ground for the aircraft is only a few minutes for both tactical insertion and subsequent tactical extraction of all military personnel.

5) All other military aircraft involved in the exercise would remain airborne within the Playas TMOA, in support of TRAP CERTEX operations being conducted on the ground. Military aircraft activities and altitudes during the 4.5 hour time block the Playas TMOA is active would include (typical MOA flight operations) tactical combat maneuvering (basic fighter maneuvers, simulated air-to-ground ordnance delivery, and tactical assault profiles) conducted by both fixed- and rotary-wing aircraft; and abrupt, unpredictable changes in altitude, attitude, and direction of flight by both fighter and transport category aircraft. Non-standard formation flights are also possible with all aircraft. Aerial training activities to be conducted within the PTRC include landing on unimproved surfaces. All aircraft refueling will be conducted in the air, while in-transit to/from the Playas TMOA along designated refueling routes approved by the FAA. No supersonic or surface-to-surface activities will be conducted. Maximum altitude is up to, but not including, FL180.

In summary, TRAP CERTEX operations would proceed as follows on 9 August 2017:

15:00 – Playas TMOA Activation (by FAA) goes into effect

15:15 – “MAYDAY” call goes out from downed pilot(s) that has been “staged” within the PTRC facility (residential housing complex area) the night before;

15:30 - 1700 – TRAP CERTEX operations initiated, with aircraft leaving air stations located in CA, AZ and NV in response to the “MAYDAY” call from the downed pilot(s) located at PTRC, flying

on established approved FAA flight routes from their respective basing locations to the Playas TMOA;

17:00 - 1900 – Search and rescue team insertion operations conducted via two MV-22 aircraft. Alternative CSAR insertion mode being considered includes para-rescue jumpers (PJ) parachuting into the PTRC housing area complex from MV-22 and/or C-130 fixed wing aircraft, depending on training requirements and local weather conditions at the time of the TRAP event. Once on the ground, CSAR operations are conducted by small, squad-sized military units to locate and provide security and simulated medical attention to the “staged” downed pilot(s);

19:00 – Downed pilot(s), along with all participating military rescue/recovery personnel are extracted from the PTRC via the two MV-22 tilt-rotor aircraft;

19:30 – All military aircraft exit the Playas TMOA. TMOA de-activation (by FAA) goes into effect. TRAP CERTEX completion upon safe arrival at home bases/stations of all military personnel involved in the exercise.

In order to conduct the CERTEX, the USMC must secure from the FAA a 4.5-hour time block (execution window) for 1500 (3PM) MST to 1930 (7:30PM) MST on 9 August 2017, within which to complete its TRAP CERTEX training and readiness objectives. The TRAP CERTEX is a mission essential task as part of the SPMAGTF-CR-CC for deployment of MEU.

Under the Proposed Action, the FAA would temporarily activate the airspace above the PTRC, a commercial training facility established shortly after the sites’ purchase in 1999 by New Mexico Tech University, by way of Department of Homeland Security (DHS) funding, to create a nationally recognized training and readiness center supporting national defense and DHS security demands and requirements. The USMC TRAP training and readiness exercise would originate from MCB Camp Pendleton, CA, home to the I MEF and 1st Marine Division (1st MARDIV), which is made up of three (3) MEUs; the 11th, 13th and 15th MEUs.

Training Location/Site Selection – The I MEF (G-7) is tasked with the certification of the SPMAGTF-CC-CR in Tactical Recovery of Aircraft and Personnel (TRAP). To meet existing mission requirements, the TRAP CERTEX must take place in an unfamiliar location a minimum of 450 miles from Camp Pendleton, CA. The distance requirement enables the TRAP operating forces the ability to meet a mission essential task (MET) utilizing realistic distances and varied, unfamiliar terrain to simulate realistic experiences during deployments.

The PTRC facility, which was established to support such an exercise, is well suited because of the distance from MCB Camp Pendleton (~630+ miles), and the number and kind of support facilities and related amenities it offers, including: an authentic, hyper-immersive training environment specifically designed to allow integration of joint tactical enablers supporting

distributed operation; airborne insertions (free fall and static line and heavy drop); air assault insertions; close-air support training; long distance communications (Command and Control); Military Operations in Urban Terrain (or MOUT) (simulated combat town operations) in an eastern (Iraq, Afghanistan, and Horn of Africa) environment; role players and key leader engagements replicating the people and cultures of Southwest and Central Asia, and the Horn of Africa. The PTRC is uniquely capable of supporting joint, special operations mission training, as well as mission-specific, pre-deployment training, as is presented in the Proposed Action described herein.

All training and readiness aviation operations (other than transit to and from and landing in the PTRC) would be conducted within Playas TMOA. All ground components of the TRAP CERTEX situated beneath the Playas TMOA would be conducted within the approximately 650-acre PTRC facility residential housing area complex, near the intersection of Cholla and Lomitas streets (see **FIGURE 4** of **APPENDIX D**). The two (helicopter) Landing Zones (LZs) will be selected within an empty dirt lot adjacent to existing housing and used for insertion and extraction operations only.

No Action

Under the no-action alternative, the training objectives established for the TRAP CERTEX would not be conducted within the Playas TMOA and the PTRC itself. More specifically, SPMAGTF-CR-CC CERTEX TRAP flight operations over the PTRC facility would not occur, resulting in reduced tactical realism and delayed/missed training objectives, and certain portions of the TRAP CERTEX being conducted in a simulated environment, or potentially moved to more familiar training environments where realism is drastically reduced. For other portions of the TRAP CERTEX activities, training objectives would go unattained (i.e., 450 mile distance requirement), as few full-service, top-rated commercial facilities such as the PTRC exist near the West Coast. This would result in both delays in completing the TRAP CERTEX, with potential loss of valuable training venues and resources, primarily for combat air crews expecting to deploy to real world combat zones in support of contingency operations. The No Action Alternative does not meet neither mission objectives, nor the purpose of and need for the Proposed Action.

Affected Environment and Environmental Consequences

There are 14 environmental impact categories identified by FAA Order 1050.1F. Per Chapter 4 of this FAA Order, if an environmental impact category is not relevant to the Proposed Action or any of the reasonable alternatives identified, no further analysis is required. Thus, for the following environmental impact categories, environmental analysis is not required because the resource is either not present within the action area (Proposed Action boundary) or would not be measurably affected by either the Proposed Action or the No Action Alternative:

- **Land use** – No changes to land use are expected as a result of aviation use of the Playas TMOA, and PTRC is a commercial training facility designed to support military type training. Land use designations would not change by its use, nor would any existing land use be modified by use of the PTRC and lands below the Playas TMOA.
- **Department of Transportation Act, Section 4(f)** -
- **Socioeconomics** – use of the Playas TMOA is not expected to affect commercial or general aviation in any measurably way. General aviation would use “see and avoid” precautions when transiting the area.
- **Environmental Justice** – See Environmental Justice section below
- **Climate** – Local, regional and global climate will not be measurably affected by aviation operations at the frequency, duration and intensity of planned military operations, including greenhouse gases, by aviation or ground operations.
- **Coastal Resources** - no coastal resources are present in the Action Area.
- **Farmlands** – no farmlands are present in the Action Area.
- **Hazardous Materials, Solid Waste, and Pollution Prevention** - no hazardous materials or solid waste will be used in or produced by implementing the Proposed Action.
- **Natural Resources and Energy Supply** – No depletion of natural and/or energy resources would be consumed beyond normal, typical, on-going military operations locally or regionally.
- **Visual Effects and Light Emissions (Aesthetics)** – Operations are to be conducted during daylight hours, so no lights are required. Other than small fugitive dust clouds produced by the downwash effect of MV-22s landing and taking off (two aircraft land and taking off 2x) visual effects at the PTRC are consistent with its on-going and approved commercial use. These effects are temporary and transient, last only minutes and are not expected to contribute in any substantive way to visual impacts.
- **Water Resources (Including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)** – Water resources are not present in the Action Area.

Other NEPA Considerations/Requirements and USMC Resource Areas

Possible Conflicts between the Proposed Action and the Objectives of Federal, State, Regional/Local Land Use Plans, Policies and Controls.

Implementation of the Proposed Action would comply with all applicable federal, state, and regional/local statutes and regulations, as well as all applicable federal, state, regional, and local policies and programs.

Climate Change and Greenhouse Gas Emissions.

Draft NEPA guidance on consideration of the effects of climate change and Greenhouse Gas Emissions issued by the CEQ on 18 February 2010 recommends incorporating impacts

associated with climate change as part of the standard cumulative impact analysis of all NEPA documents. However, the Council on Environmental Quality (CEQ) has recently withdrawn its final guidance for Federal agencies on how to consider greenhouse gas emissions and the effects of climate change in National Environmental Policy Act (NEPA) reviews, with a Notice of Availability published on August 5, 2016 (81 FR 51866). As explained in the Notice of Availability, the withdrawn guidance was not a regulation. Pursuant to Executive Order 13783, "Promoting Energy Independence and Economic Growth," of March 28, 2017, the guidance has been withdrawn for further consideration. (See Section on Air Quality)

Irreversible and Irretrievable Commitment of Resources.

Resources that are irreversibly or irretrievably committed to a project are those used on a long-term or permanent basis. This includes the use of non-renewable resources such as metal and fuel, and other natural or cultural resources. These resources are "irretrievable" when used for one project when another action could have used them for another purpose. Human labor is also an irretrievable resource. Another impact that falls under this category is the unavoidable destruction of natural resources that could limit the range of potential uses of that particular environment.

As this Proposed Action is almost entirely airspace based, with no increase to existing EOTG ground- or aviation-based training operations, there would be a negligible (no measurable) increase in the amount of irreversible or irretrievable resources used. No construction would occur, thus, there would be no consumption of materials typically associated with construction (e.g., metal, fuel, concrete) or irreversible loss of energy.

Relationship between Local, Short-Term Use of the Human Environment and Maintenance and Enhancement of Long-Term Productivity.

NEPA requires an analysis of the relationship between a project's short-term impacts on the environment and the effects that these impacts may have on the maintenance and enhancement of the long-term productivity of the affected environment. Impacts that narrow the range of beneficial uses of the environment are of particular concern. This refers to the possibility that choosing one development option reduces future flexibility in pursuing other options, or that designate a parcel of land or other resource to a certain use often eliminates the possibility of other uses.

The Proposed Action is almost entirely airspace-based. No changes to existing ground-based training activities within the PTRC would occur, as this training facility was established to support just this type of activity. In addition, there would be no change in existing training activities by the USMC; meaning the TRAP CERTEX will occur, in support of the 15th MEU forces impending deployment. Thus, the Proposed Action would not result in any impacts that would reduce environmental productivity, permanently narrow the range of beneficial uses of the environment, or pose any long-term risks to health, safety, or the welfare of the public.

Energy Requirements and Conservation Potential of Alternatives Including the Proposed Action and All Mitigation Measures Being Considered.

As discussed previously, the Proposed Action would meet all mission requirements and objectives and result in no significant effects to the human environment, including negligible impacts to civilian and commercial aircraft and transit routes in the Action Area. While the No Project Alternative would realize a greater energy conservation factor, this alternative does not meet the purpose of and need for the Proposed Action. Because no construction is involved with the Proposed Action, established Federal Energy Act compliance criteria for design, development, and construction would not apply. (See Mitigation section below)

Topography, Soils and Geology.

The Proposed Action does not include any ground disturbing activities other than the two rotary wing/tilt-rotor aircraft landings (CSAR team insertion and extraction) which will create downwash effects resulting in fugitive dust, as identified in the Air Quality section below. No off road driving activities are expected as a result of the Proposed Action. Walking and hiking in relatively small numbers (squad-sized units) may disturb the surface soil slightly, but no subsurface, below ground disturbance is expected. All military team members using the PTRC facility would comply with existing site rules and regulations, existing facilities uses and no construction would occur. As a result, impacts to Topography, Soils and Geology resources are not expected.

Utilities and Infrastructure.

TRAP CERTEX activities to be conducted under the Proposed Action would not require the use of utilities or infrastructure other than those associated with the PTRC itself; a commercial research, testing, and training and readiness facility owned, operated and managed by the Energetic Materials Research and Testing Center (EMRTC) of New Mexico Tech, a public university located in Socorro, NM.

The PTRC facility is a commercial site used by local, State, regional, and federal national and civil defense force units conducting training and readiness exercises. Users groups include but are not limited to; Homeland Security, Customs and Border Protection (CBP) and Department of Defense (DOD) forces to include the U.S. Marine Corps (USMC), U.S. Air Force (USAF) and U.S. Army (USAR). Because this is only a 4.5-hour planned activity, only two of which would be on the ground, impacts to public utilities and infrastructure are not expected.

Environmental Justice.

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, stipulates that "...each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on

minority populations and low-income populations...” . Minority populations are populations identified in census data as Hispanic or Latino, Black or African American, Asian, Native Hawaiian and other Pacific Islander, some other race, or two or more races. Low-income populations are families that are living below the U.S. poverty level.

The environmental justice Region of Influence (ROI) consists of census blocks that do not encompass the proposed PTRC training site. Census block groups represent the broadest areas within which potential effects could occur on minority or low-income populations. To ensure the potential for effects on communities within the Action Area are adequately assessed, available census population and demographics data were reviewed. Details on community demographics for communities surrounding the PTRC were evaluated using federal census tract data (USAF Angel Thunder Final EA, May 2017).

Census block groups are small, uniquely numbered areas that typically encompass between 600 and 3,000 inhabitants, none of which exist near the PTRC facility or under the Playas TMOA. Census block group data may be used to indicate population statistics for each block group, or may be combined to provide population statistics for an entire census tract, county, state or the country. The U.S. Census Bureau collects, maintains and publishes demographics data for the populations within each block group (USAF Angel Thunder Final EA, May 2017).

According to the USAF, there are no low-income and minority populations nearby the PTRC. As a result, no disproportionately high and adverse human health or environmental effects on low-income and minority populations would occur from the Proposed Action.

Resource Areas Considered and Evaluated

AIRSPACE.

Affected Environment - In order for the USMC-USAF project team to conduct the Proposed Action (TRAP CERTEX), the FAA must activate a temporary military operating area (TMOA), in this instance the Playas TMOA, which resides above the PTRC where ground CSAR activities would be conducted. Several Victor routes (V66, V16, V16-66 [T 306] and V198) traverse the Playas TMOA (FIGURE 3).

Environmental Consequences - Activation of the Playas TMOA by the FAA would be in effect continuously through execution of the TRAP CERTEX, in airspace from Ground Level up to, but not including, Flight Level 180 (18,000 ft. AGL), for a period not-to-exceed 4.5 hours on 9 August 2017, from approximately 1500 (3PM) to approximately 1930 (7:30PM), in coordination / cooperation with the FAA.

As proposed, the activation of the Playas TMOA for a period of approximately 4.5-hours would not measurably affect V66, V16, and V198, and T-306 flight route use by the general aviation

community, nor would it adversely affect general aviation use of the Playas airspace, in general, in any measurable way.

NOISE.

Affected Environment - Playas TMOA. Normal aircraft activities in the Playas TMOA airspace above (atop of) the PTRC facility are a mix of private (general aviation); local, state, or other federal agency; and/or military aircraft. These existing sources of noise are consistent with known, FAA-approved flight routes, and typically associated with small, rural, and/or outlying airfields, private airstrips, and auxiliary fields that see little activities, therefore noise is isolated and episodic, in nature.

As briefly discussed herein, the lands below the Playas MOA, both within and surrounding the Playas Training and Research Center and the airspace above it have no appreciable sources of noise, beyond the use of the PTRC facility itself.

Environmental Consequences - Aircraft operations at the Playas TMOA would be clearly audible to individuals under the flight path and potentially within several hundred to perhaps up to a thousand feet of the activities being conducted on/near the ground, particularly upon approach to and departure from a landing zone (LZ). This would be particularly so at night, and in remote areas like the PTRC, where ambient noise levels are generally lower than in larger, more populated locations. That being said, no night aviation operations, other than the “staging” of a downed pilot the evening before CSAR activities, are planned for the action proposed herein (TRAP CERTEX). Any audible noise would be temporary and transient, however, lasting only a few to several minutes at any given time. Ground activities would be limited to not more than two hours, being restricted to search and rescue operations by small, squad-sized units, with only two actual landings (one tactical insertion and one tactical extraction) by two MV-22 aircraft. While an increase in noise is anticipated during landings and take-off, this would be a short-term, transitory effect that is consistent with the baseline conditions of a commercial training and research facility such as the PTRC. Consistent with FAA Order 1050.1F, Desk Reference, Section 11.1.2, no significant noise increases are expected that would trigger the threshold for conducting a detailed noise analysis.

The USMC has evaluated noise levels for a variety of rotary wing and tilt-rotor aircraft, in particular, for use in similar training activities conducted on-Base, as well as off-installation actions on public lands (i.e., BLM and USFS) where aviation operations (landings and take-offs) often exceed several hundred annually per LZ, and have been for more than 40 years.

On installation, the threshold for ensuring no significant impacts occur to sensitive resources is the 65 dB DNL. This noise threshold has also been applied to off-installation landing zones (LZs) (e.g., in Hawaii, California, Arizona) as well, including the MV-22 West Coast Homebasing EIS, 2009; MV-22 Hawaii Homebasing EIS, 2012, and: the Rotary Wing and Tilt-Rotor Training

Operations (on Public Lands) EA, 2013), among others (**APPENDIX C**). In particular, the 2013 Off-Installation Training EA, and its associated FONSI, addresses noise impacts for 13 LZs on public lands (BLM) around El Centro, CA. This EA identifies the 65 dB DNL contour as the threshold for effect, and that this threshold typically would not extend more than approximately 1,000 ft. (305 m) in any direction from a proposed landing zone, depending on meteorological/weather conditions and local topography/geography.

Given the two proposed LZ locations deep within the PTRC residential area (see **FIGURE 4 in APPENDIX B**) for this TRAP CERTEX training event, the geographic isolation of the PTRC facility itself (with a lack of sensitive receptors in surrounding open space private and public (BLM) lands), the nature of on-going training activities at PTRC (baseline land use conditions), and the limited frequency, duration and intensity of the USMC-USAF Proposed Action (a one-time TRAP CERTEX event conducted within a 4.5 hours TMOA airspace operating window by a limited number of aircraft (nine total aircraft); two small, squad-size search and rescue units (troops) on the ground conducting CSAR operations for less than two (2) hours, and: only one tactical insertion and one tactical extraction (landings/take-offs) by two tilt-rotor MV-22s aircraft, noise levels are not expected to be greater than daily or annual baseline conditions at the PTRC, where the 65 dB DNL contours are not expected to extend beyond the residential housing area complex, nor the PTRC property boundary itself. All other aviation related noise would be limited to those aviation assets operating overhead within the Playas TMOA between 3,000 and 18,000 AGL for a period of approximately 2-hours, given transit times to and from the Playas TMOA and their respective places of origin.

In conclusion, at the altitude of the Proposed Action (training and readiness), the temporary nature of the proposed use of the airspace (Playas TMOA), no significant increase in noise is expected.

Additionally, noise levels on or near the-ground (immediately above the PTRC), are not expected to be significant, for the following reasons: 1) no sensitive receptors are present in the Action Area; 2) event duration - one 4.5-hour airspace event window (Playas TMOA activation) at normal operating elevations of ground level up to 18,000 ft., and one 2-hour, on-the-ground event window (for CSAR), and; 3) event intensity - a single training event conducted with a limited number of aircraft involved, only two small, squad-sized military units conducting pilot(s) rescue and recovery activities, and only two landings/take-offs [one insertion and one extraction] by up to two aircraft. Lastly, no construction and no live-fire activities will be conducted during execution of the TRAP CERTEX.

AIR QUALITY.

All emissions generated from, by or as a result of TRAP CERTEX activities analyzed in this EA are exclusively mobile source emissions from aircraft and ground vehicles (staging of the downed pilot(s)). No stationary sources are included as part of the TRAP exercise. Therefore, stationary

source air permitting under state and local air quality agencies, including Prevention of Significant Deterioration (PSD) and Title V, are not affected by this Proposed Action and are not discussed further in this EA.

Affected Environment - The EPA has designated eight (8) Air Quality Control Regions (AQCR) in New Mexico. The Arizona-New Mexico Southern Border Intrastate Air Quality Control Region 012 is located in the southwestern part of the state and covers an area of 10,374 square miles. The counties within the region include Grant, Hidalgo and Luna. The Playas TMOA, as well as the PTRC facility itself, is situated within a portion of AQCR-012. AQCR-012 is currently in full attainment status for all monitored criteria pollutants, both gaseous and particulate matter air contaminants. At present, only Particulate Matter-10 (PM10) contaminants are being monitored, primarily during and after major storm (wind) events (pers.comm. - New Mexico Environmental Department, Air Quality Bureau, 2 Aug 2017). (https://www.env.nm.gov/aqb/modeling/aqcr_map.html)

Environmental Consequences - The USMC has evaluated noise levels for a variety of rotary wing and tilt-rotor aircraft, in particular, for use in similar training activities conducted on-Base, as well as off-installation actions on public lands (i.e., BLM and USFS) where aviation operations (landings and take-offs) often exceed several hundred annually per LZ, and have been for more than 40 years.

Air quality impacts from proposed aircraft training operations would occur from the same types of emission sources as those associated with existing training operation operations at the PTRC. These sources include (1) the combustion of aviation fuel and (2) fugitive dust generated from pad landings on exposed soils. Air pollutant emissions would be generated as a result overhead aircraft activities (not more than 4.5 hours) and the two landings/take-offs on the PTRC facility, either from the aircraft themselves or the dust produced by the rotor downwash effect. These activities are expected to be short term and temporary in nature, as they involve aircraft operating for only a few hours within the Playas TMOA and at PTRC itself.

Most all aircraft involved in the TRAP CERTEX event would be operating at elevations well above 3,000 feet AGL. Aircraft operations, and therefore emissions, below 3,000 ft. would be limited to two tactical landing/ take-offs (insertion, then extraction), therefore impacts to local air quality would be temporary and transitory in nature, and not expected to generate any offsite effects.

Potential air quality impacts of the Proposed Action were evaluated for significance compared to federal, state, and local air pollution standards and regulations. For the purposes of this assessment, emissions were projected not to exceed any applicable conformity *de minimis* threshold, thus impacts are considered less than significant. This is consistent with the determinations reach in previous NEPA documentation efforts conducted by the USMC and Navy in analyzing similar training activities being conducted in similar desert environments in

California (Rotary Wing and Tilt-Rotor Aircraft Training Operations EA and FONSI, 2013) (**APPENDIX D**), in Arizona (MV-22 West Coast Homebasing EIS, 2009), and in Hawaii (MV-22 Hawaii Homebasing EIS, 2012).

CULTURAL RESOURCES/HISTORIC PROPERTIES.

Affected Environment - Consistent with the response from NM-SHPO provided in **APPENDIX A**, no historic properties would be affected by the Proposed Action, as no historic properties are present within the Action Area that would be potentially affected. The USMC-USAF project team also reviewed and assessed previously conducted Tribal coordination efforts for similarly situated, appropriately scaled (e.g., type, frequency, duration and intensity) military and similar training operations (i.e., USAF Angel Thunder Draft and Final EA [March/May 2017], and FONSI; PTRC Final EA and FONSI [March 2006]) conducted at the PTRC and within the Playas airspace above it. USAF and PTRC Tribal coordination efforts concluded no Tribal resources within the area or region would be adversely affected, as confirmed by correspondence received previously by the USAF and PTRC from not less than nine Tribal governments in the region, with the understanding that both the USAF and PTRC (NMTU) signed FONSI for their respective actions upon determining no significant impacts would occur to cultural resources or historic properties. This rationale forms the basis of our “no historic properties affected” determination for the action proposed herein, which is supported by the conclusion reached by NM-SHPO, dtd 25 May, 2017 (**APPENDIX A**).

Environmental Consequences - No historic properties would be affected by the Proposed Action.

BIOLOGICAL RESOURCES.

Affected Environment - A records search of the project location on the U.S. Fish and Wildlife web site yielded 20 listed species that may occur within the greater boot heel region of New Mexico. Of the 20 species:

- 14 are primarily associated with aquatic or riparian habitat. There is no riparian or aquatic habitat at the PTRC location;
- Three (3) are primarily associated with forested habitat. There is no forested habitat within the Action Area, Playas TMOA or the PTRC;
- Two (2) are bats. They would not be active (flying) during daylight hours when military training activities are planned/to be executed, and the PTRC facility is not likely to support any roosts, maternity sites, or hibernaculum;
- One (1) species is listed as experimental, non-essential and consultation under Section 7 of the Endangered Species Act is not required, and;

- No designated critical habitat exists within the Playas TMOA, or on or adjacent to the PTRC facility.

Environmental Consequences - No impacts to threatened or endangered species are expected as a result from the Proposed Action (APPENDIX B).

- There is no riparian or aquatic habitat within the Action Area, including the PTRC; therefore no impacts are anticipated to the 14 species associated with this habitat type.
- There is no forested habitat within the Action Area, including the PTRC; therefore no impacts are anticipated to the 3 species associated with this habitat type.
- Two of the 20 species are bats, which would not be active during daylight hours when all activities are planned. Since no night activities would be conducted, no impacts are expected. The likelihood of harm to individual bats from this exercise is insignificant and discountable.
- The last of the 20 species is listed as experimental and non-essential, therefore consultation under Section 7 of the Endangered Species Act is not required.
- There is no designated critical habitat (CH) at or adjacent to the project location, therefore no CH would be affected, and
Lastly, ground activities (CSAR) planned as part of the TRAP CERTEX would be confined to the PTRC facility itself. This commercial training and readiness facility (urban development) does not support much in the way of native vegetation or habitat, and therefore would not likely support foraging, breeding or juvenile rearing by any federally listed species known from the region. The likelihood of encountering a dispersing or migrating individual on the ground or in the air within the Action Area during the extremely brief exercise 4.5-hour TMOA activation time window is so low as to be insignificant and discountable.

Cumulative Effects

In addition to the evaluation (above) for potential direct and indirect impacts on the airspace, the Proposed Action was also analyzed for any potential cumulative impacts.

The geographic Region of Influence (ROI) is an important consideration when discussing cumulative effects. For the purposes of this analysis, the ROI is considered the immediate vicinity of the PTRC and overlying Playas TMOA.

At the macro level, when impacts of this TRAP CERTEX training event is considered in the context of past, present, and future training activities within the ROI, impacts to resources from the Proposed Action would be negligible when compared to all impacts associated with the military and related training activities, exclusive of the rapid development that continues to

occur throughout the Southwest, especially along the coastal environments from which the TRAP CERTEX originates (MCB Camp Pendleton).

A review of known USMC-USAF activities within the macro-ROI was undertaken in order to provide context to the no measurable impact determination. By example, Table 5-1 of the USAF Angel Thunder exercises (USAF Angel Thunder EA, May 2017) displays a series of military actions conducted by the USAF that represent past, present and future actions. The training action (projects) discussed covers a variety of activities from military training events. Within the training events, air operations represent a major portion of the activities. When summarized, the total number of annual sorties that result from past and present operations and are projected to continue into the future is in excess of 200,000 sorties per year.

The Proposed Action would represent only a minor fraction of the past, present and future actions under all projected training scenarios. Additionally, USAF operational activities in and of themselves represent only a minor portion of the overall regional activity, further minimizing the impact of the Proposed Action. For this reason, cumulative impacts of the Proposed Action are considered negligible (no measurable impact) when viewed at the macro level.

Airspace

No measurable cumulative impacts to airspace resources are expected as a result of the Proposed Action, given the 5-hour activation of the Playas TMOA, the limited aircraft operating within the Playas TMOA (action area) and the frequency of this planned event (2x/year).

Noise

No measurable cumulative impacts to noise are expected as a result of the Proposed Action, given the type, frequency, duration and intensity of the 5-hour activation of the Playas TMOA, the limited number and type of aircraft operating within the Playas TMOA, the 2-hour on-the-ground CSAR activities within the PTRC itself, and with no sensitive receptors known to occur within the Action Area, no measurable impacts are expected.

Air Quality

By its very nature, air pollution is largely a cumulative impact. A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future projects. Ambient air quality standards are violated or approach nonattainment levels when past development and increasing human activity forms the urban fabric of a region, with associated attainment standards jeopardized by increasing emissions generated by that urban activity.

The local and regional attainment status of southern New Mexico is the result of a lack of past and present development, the open, rural nature of the region and its minimal population levels (its' remoteness). As a result, cumulative impacts of the Proposed Action would add

negligibly (incrementally, but *de minimus*) to the regions' existing excellent air quality, and therefore the Proposed Action would not result in a cumulatively considerable net increase of any criteria pollutants. No measurable cumulative impacts to air quality are expected as a result of the Proposed Action.

Biological Resources

No impacts to threatened or endangered species are expected as a result from the Proposed Action; therefore no cumulative impacts would occur.

Cultural Resources/Historic Properties

No impacts to cultural resources /historic properties are expected as a result from the Proposed Action; therefore no cumulative impacts would occur.

MITIGATION

Standard Operating Procedures / Best Management Practices would be employed during activation of the Playas TMOA and conduct of the TRAP CERTEX, including the following:

- A dedicated, discrete exercise frequency (both UHF [primary] and VHF [backup]) will be established in cooperation with the USAF and FAA, and all participating aircraft will use that frequency during execution of the TRAP CERTEX.
- Exercise participants will monitor guard frequencies, as well as the Playas Airport Common Traffic Advisory Frequency.
- All activities will be contained within the Playas MOA using geographic references, inertial navigation, global positioning systems and TACAN radial/DME references.
- Malfunctions will be handled in accordance with aircraft technical orders, Service Directives, and FARs.
- Ordnance Trajectory Envelope is not applicable, as no live ordnance will be used.
- The land area below much of the Playas MOA is open, desolate, sparsely populated, high desert and range land, with very few developed areas and no urban centers or settlements. Isolated ranches, farms and residences dot the landscape. Regardless of published MOA altitude, FAR 91.119 minimum safe altitudes will be observed by all aircraft.
- The Playas airport will be closed to non-participating aircraft by airport management during exercise operations.

AGENCIES CONSULTED AND PERSONS CONTACTED

- FAA Central Service Area - CDR Arjuna Fields, NAVREP
- FAA Air Traffic Representative - Mr. Michael Rizzo, Central Service Center
- FAA Contract Support, AJV-C2, Fort Worth, TX - Karen L. Everitt
- Playas Training & Research Center - Josh Carrillo, PTRC Site Mgr.
- Davis-Monthan AFB - Kevin Wakefield, EIAP Program Manager
- New Mexico Tech University, Socorro, NM - Dr. Robert Abernathy,
- New Mexico Historic Preservation Office, Albuquerque, NM - Dr. Bob Estes
- Environmental Department/Air Quality Bureau, Santa Fe, NM - Kerwin Singleton and Roman Szkoda

APPENDICES

Appendix A: New Mexico SHPO Letter – *“No Historic Properties Affected”* Determination

Appendix B: Endangered Species Act, Section 7, Threatened and Endangered Species Assessment, USMC *“No Effect”* Determination

Appendix C: Noise Information and Supporting Data

Appendix D: Air Quality Information and Supporting Data

Appendix E: Military Aircraft Photos

APPENDIX A

STATE OF NEW MEXICO
STATE HISTORIC PRESERVATION OFFICE
COORDINATION-CONCURRENCE LETTER



UNITED STATES MARINE CORPS
MARINE CORPS INSTALLATIONS WEST-MARINE CORPS BASE
BOX 555010
CAMP PENDLETON, CALIFORNIA 92055-5010

105851

5090
ENV
23 May 17

Mr. Bob Estes
Staff Archaeologist
Department of Cultural Affairs
Historic Preservation Division
Bataan Memorial Bldg., Suite 236
Santa Fe, New Mexico 87501

No Historic Properties Affected

John A. Estes May 25, 2017
for NM State Historic Preservation Office

Dear Mr Estes,

SUBJECT: PLAYAS TEMPORARY MILITARY OPERATING AREA PROPOSED USE

The purpose of this correspondence is to provide you a description of the Marine Corps' planned activities in the proposed Playas Temporary Military Operating Area (Temp-MOA) 9 and 10 August 2017.

The proposed Temp-MOA purpose and need is in support of the Special Purpose Marine Air Ground Task Force Crisis Response Central Command (SPMAGTF-CR-CC) Certification Exercise (CERTEX). The CERTEX is a Commanding General, I Marine Expeditionary Force (I MEF) directed exercise to be conducted from 07-11 August 2017 at numerous training locations throughout the South-Western United States. The purpose of the exercise is to provide the SPMAGTF the opportunity to conduct training in unfamiliar environments during the final phase of its pre-deployment program. During CERTEX, the SPMAGTF-CR-CC will be required to conduct a series of challenging and realistic training events to test its ability to conduct conventional and specialized missions. The scheduled CERTEX will require select members of the United States Marine Corps (USMC) and United States Air Force (USAF) to plan and execute a Tactical Recovery of Aircraft and Personnel (TRAP) exercise from 09 to 10 August 2017 in order to recover downed pilots located at a training site in the proposed Playas Temporary MOA.

The USMC TRAP mission/exercise very closely resembles the U.S. Air Force (USAF) Personnel Recovery & Rescue Training exercises known as "Angel Thunder". As such, the USMC's proposed action is a smaller scale version of the individual actions proposed in the recently released "Angel Thunder" Environmental Assessment (EA). The USMC proposal is a single,

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short-term (5 hours or less) action at an existing training facility known as the Playas Training and Research Center (PTRC), located near Playas, New Mexico (Figure 1). The PTRC training facility was established shortly after the sites' purchase in 1999 by New Mexico Technical University (NMTU), in cooperation with the Department of Homeland Security, to support training actions by federal, state, and local law enforcement agencies, including but not limited to, the Department of Homeland Security and Department of Defense (DOD) military forces.

The FAA establishes MOAs in the National Airspace System to provide commercial and general aviation knowledge of high-density military activity in a specific area in order to provide a greater degree of separation from the activity thus enhancing everyone's safety. Typical MOA flight operations include tactical combat maneuvering (basic fighter maneuvers, simulated air-to-ground ordnance delivery, and tactical assault profiles) by fighter and transport category tilt rotary wing aircraft involving abrupt, unpredictable changes in altitude, attitude, and direction of flight.

The Playas MOA is a 20 NM X 20 NM box of airspace situated above the PTRC facility extending from 300 feet above the surface up to but not including FL 180. The proposed temporary Playas MOA boundary is N 32°10'43"W 108°42'48" to N 32°09'20" W 108°19'29" to N 31°49'27"W 108°21'03" to N 31°50'48"W 108°44'28" to the point of beginning. See (Figures 2 and 3).

The Overall Scheme of Maneuver for the CERTEX is to use the existing paved and unpaved road network and to emplace simulated downed pilot(s) for one night only inside of existing PTRC housing. Once the pilots are able to contact the exercise force and relay their situation, two 12-13 man (squad-sized) TRAP/Combat Search and Rescue (CSAR) military teams will be flown to and inserted into the PTRC by rotary wing and/or tilt-rotor aircraft landing into pre-approved landing zones (LZ) on/near the intersection of Cholla and Lomitas roads/streets (Playas Blvd/Playas Ave). (A site survey of the LZs to certify them as safe for operations will be conducted 24-48 hours prior conducting the exercise). Thereafter, the CSAR (combat search and rescue) teams will identify, locate and medically treat the (simulated) downed pilots and secure the area; no digging or related ground disturbing activities are planned.

The following is a recap of the planned actions on the ground in the PTRC and in the proposed Playas Temp-MOA.


Number and Types of Aircraft operating in the MOA during activation and conduct of the CERTEX. Aircraft to be used include: two (2) MV-22s; either two (2) F/A-18s C/D or two (2) F-16C; Four (4) A-10C; one (1) HC-130J; and Two (2) HH-60G.

Playas MOA Planned Activities and Altitudes. Proposed aerial activities will consist of typical MOA flight operations as described above. Maximum altitude is up to but not including FL180. No supersonic or surface to surface activities will be conducted.

Exercise Execution/timing (MOA activation [by FAA]). The Playas MOA will be temporarily activated for a five (5) hour time block, and w/in a 48-hr. window between 09 and 10 AUG 2017). The following is a notional timeline that is representative of how the CERTEX TRAP would proceed.:

~11:00 - Temporary MOA Activation (by FAA) goes into effect
~11:15 - MAYDAY call goes out from downed pilot(s) located within the PTRC facility compound (housing area)
~11:30 - TRAP exercise initiated, with aircraft leaving air stations located in
~11:30 - ~1300 - Aircraft respond to Playas Temporary MOA from their respect air stations
~13:00 - TRAP/CSAR teams inserted via two rotary/tilt-wing aircraft
~15:30 - TRAP/CSAR extraction [with pilot(s)] and all military rescue personnel via two rotary/tilt-rotor aircraft
~16:00 - Temporary MOA De-activation (by FAA) goes into effect

Point of contact: Mr. Michael Saunders, AC/S G-3/5 Deputy Aviation; 760-763-7354; michael.l.saunders@usmc.mil and Mr. Zachary Likens, Environmental Security; 760-763-7948; zachary.likens@usmc.mil.


J. L. MEEKER
Director Aviation Operations
By direction

Figures: 1. Regional Vicinity Map
 2. Playas Temporary MOA and Air Operations Map
 3. Playas Temporary MOA MAP
 4. Playas Training and Research Center

APPENDIX B

**US MARINE CORPS
ENDANGERED SPECIES ACT, SECTION 7
“NO EFFECT DETERMINATION”**



UNITED STATES MARINE CORPS
MARINE CORPS INSTALLATIONS WEST-MARINE CORPS BASE
BOX 555010
CAMP PENDLETON, CALIFORNIA 92055-5010

5090
ENV
26 May 17

Memorandum for Record

Subject: Determination of No Effects to Federally Listed Species resulting from the IMEF TRAP CERTEX at the Playas Training and Research Center (PTRC), New Mexico August 2017

References:

- a. Playas Training Center Environmental Assessment (2006)
- b. Air Force Operation Angel Thunder Environmental Assessment (2017)
- c. IMEF Playas CERTEX Environmental Assessment (2017). Prepared by USMC, MCI WEST for FAA
- d. Letter from USMC, MCI WEST (LtCol Meeker) to New Mexico State Historic Preservation Office dated 23 May 26, 2017

The town of Playas was purchased by New Mexico Tech and converted to a security and counterterrorism training center that is used by numerous security, law enforcement and military units throughout the year. As described in the IMEF Playas CERTEX Environmental Assessment (EA), Marine Corps and Air Force personnel are planning to conduct a Tactical Recovery of Aircraft and Pilot (TRAP) exercise at the PTRC in August 2017. The exercise will take place during a 5-hour period within a larger 48-hour block. The FAA has required the preparation of an EA prior to establishing a temporary Military Operations Area (MOA) for the 5-hour exercise. The TRAP scenario exercise is wholly consistent with the types of activities that occur routinely at PTRC. So the subject exercise does not present new or novel stimuli to the existing environmental conditions of the PTRC.

A records search of the project location on the U.S. Fish and Wildlife web site yielded 20 listed species that may occur within the greater boot heel region of New Mexico. Of the 20 species, 14 are primarily associated with aquatic or riparian habitat. There is no riparian or aquatic habitat at the project location. Three of the 20 species are primarily associated with forest habitat. There is no forest habitat at the project location. Two of the 20 species are bats and the project site is not expected to support any roosts, maternity sites, or hibernaculum for listed bats. Likelihood of harm to individual

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bats from this exercise is insignificant and discountable. The final species is listed as experimental, non-essential and consultation under Section 7 of the Endangered Species Act is not required. There is no designated critical habitat at or adjacent to the project location.

Ground activities during the Playas CERTEX will be confined to the Playas urban training facility within the PTRC. The urban facility does not support native habitats and therefore would not support foraging, breeding or juvenile rearing by any federally listed species. The likelihood of encountering a dispersing or migrating individual on the ground or in the air at the project location during the extremely brief exercise time window is so low as to be insignificant and discountable.

It is the determination of Marine Corps Installations West that the IMEF Playas CERTEX, as described in the EA prepared for the FAA, will have no effect on any species listed under the Endangered Species Act. Additionally the CERTEX will have no effect on any designated critical habitat.

Bill Berry
Regional Conservation Program Manager
Environmental Security Office
Marine Corps Installations West

FIGURE 1: REGIONAL-VICINITY MAP



FIGURE 2: PLAYAS TEMPORARY MOA / AIRSPACE MAP

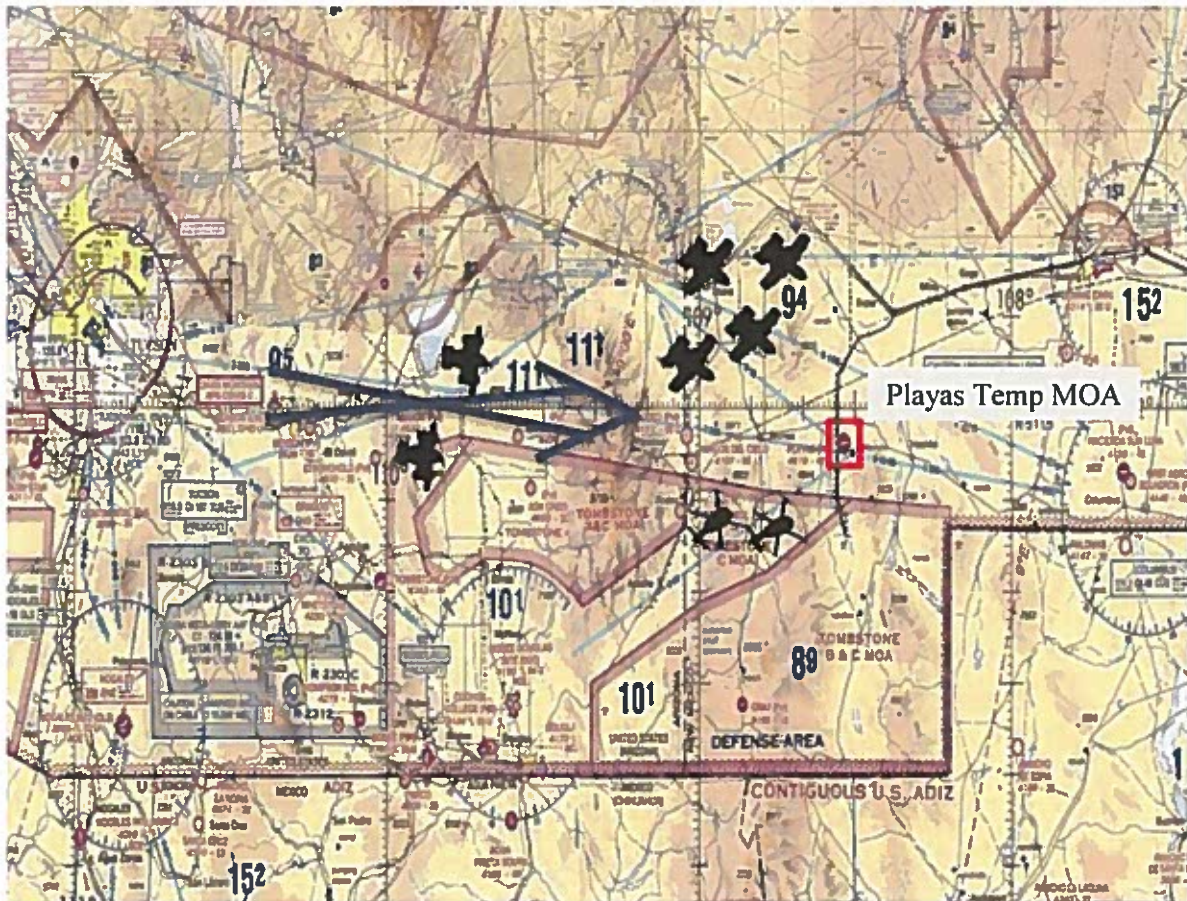
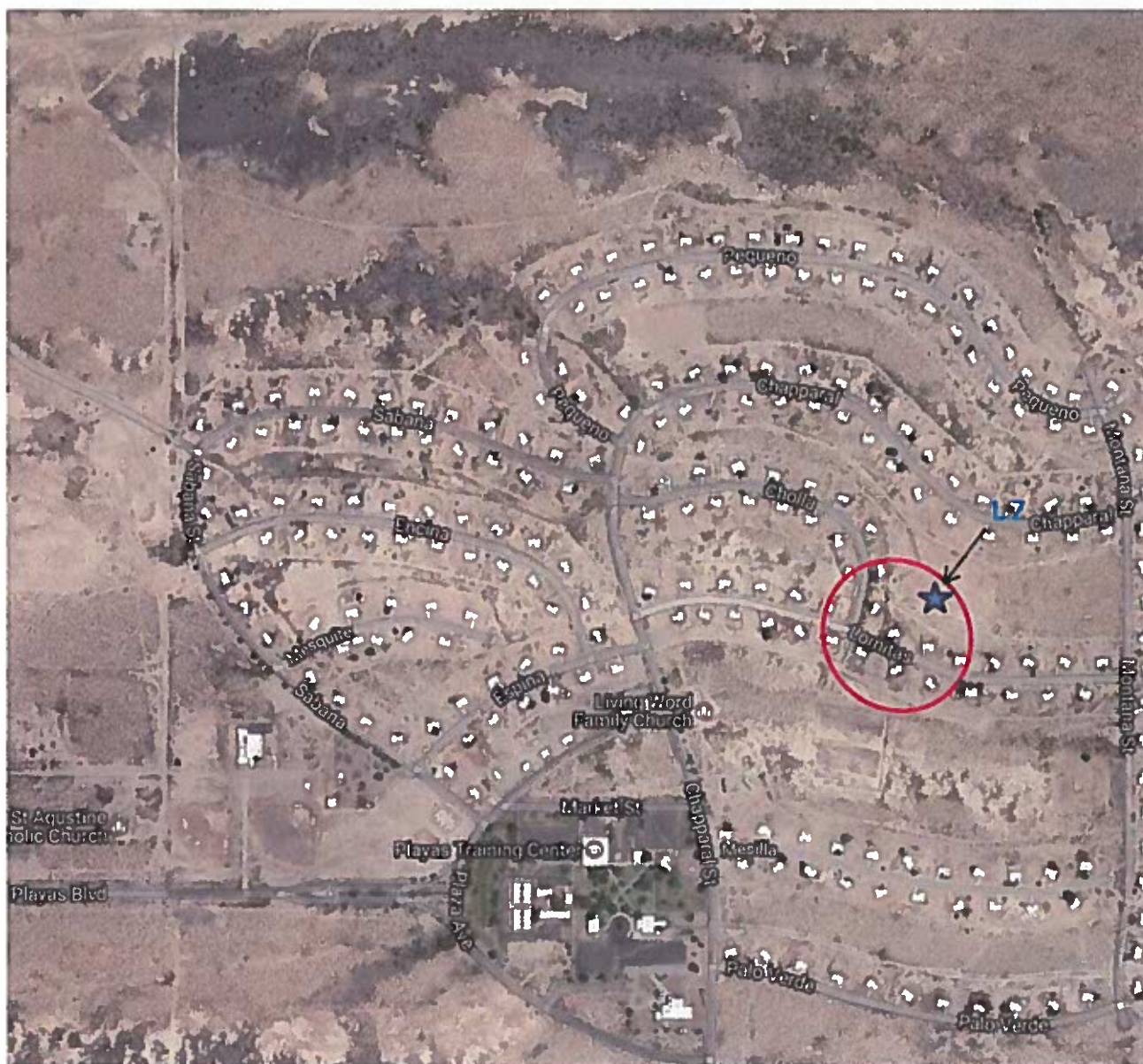


FIGURE 3: PLAYAS TEMPORARY MILITARY OPERATING AREA (MOA)



FIGURE 4: PLAYAS TRAINING & RESEARCH CENTER, RESIDENTIAL AREA



APPENDIX C

**NOISE INFORMATION, DATA & SUPPORTING
DOCUMENTATION**

*(Ref. Doc: USMC Rotary Wing and Tilt-Rotor Training
Operations on Public Lands within Southern California, 2013)*



UNITED STATES MARINE CORPS
MARINE CORPS INSTALLATIONS WEST-MARINE CORPS BASE
BOX 555010
CAMP PENDLETON, CALIFORNIA 92055-5010

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ENV/RGD
17 2 MAR 2013

MEMORANDUM FOR THE RECORD

From: Commanding General
To: Director, Environmental Security

Subj: FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR UNITED STATES
MARINE CORPS ROTARY WING AND TILT-ROTOR TRAINING
OPERATIONS ON PUBLIC LANDS WITHIN SOUTHERN CALIFORNIA

Ref: (a) National Environmental Policy Act of 1969 (42 U.S.C.
§§ 4321-4307h)
(b) Council on Environmental Quality NEPA Regulations (40
C.F.R. Parts 1500-1508)
(c) Environmental Assessment for Ranges 108 EOD Training
Facility of October 2012

1. Pursuant to Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508) implementing procedural provisions of the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §§ 4321-4370h); Department of the Navy Procedures for Implementing NEPA (32 CFR Part 775); and the Marine Corps Environmental Compliance and Protection Manual (Marine Corps Order P5090.2A, change 2), the United States Marine Corps (USMC) gives notice that an Environmental Assessment (EA) has been prepared and an Environmental Impact Statement (EIS) will not be prepared for USMC Rotary Wing and Tilt-Rotor Training Operations on Public Lands within Southern California.

2. The Marine Corps rotary wing (helicopter) training operations have been conducted on United States Forest Service (USFS) and Bureau of Land Management (BLM) managed lands in southern California for approximately 40 years. This includes practicing landing and takeoff operations at specified landing zones (LZs) on lands managed by the USFS Cleveland National Forest (Trabuco Ranger District) and the BLM El Centro Field Office. The use of these public lands is needed to develop and sustain critical pilot skills by achieving and maintaining required operational training that meet Marine Corps standards for certifications, safety, combat effectiveness, and combat

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survivability. Current Department of Defense installations and ranges are able to fulfill most mission requirements, but they do not offer the full variability needed to simulate real world conditions and often experience crowded airspace conditions. Therefore, continued use of these public lands is critical to the quality, variety, and quantity of training and the ability of the Marine Corps aviation to maintain readiness.

3. The purpose of the Proposed Action is to allow continued military training operations on USFS and BLM managed public lands in southern California. This includes continued rotary wing training by the Sea Knight (CH-46E), Super Stallion (CH-53E), Super Cobra (AH-1W), Viper (AH-1Z), Huey (UH-1N), and Venom (UH-1Y). Over time, the CH-46E training will decline and will be replaced by the MV-22B (Osprey), which is a new USMC tilt-rotor aircraft that can operate as a helicopter or turboprop airplane. The USMC proposes to conduct an estimated 2,502 annual sorties (a single flight from takeoff through landing), which equate to 15,861 individual landings at specified LZs in the Cleveland National Forest and on BLM El Centro managed lands. Overall, the number of proposed sorties at the Cleveland National Forest is expected to go down about seven percent compared to existing conditions (although the number of individual landings is expected to go up about three percent), and the proposed sorties and landings on BLM El Centro managed lands are expected to number about 170 sorties per month and an estimated annual sortie rate up to approximately 2,080.

4. The Marine Corps is seeking to obtain special use authorization from the Cleveland National Forest, pursuant to USFS regulations and consistent with a 1988 Master Agreement between the Department of Defense and the United States Department of Agriculture concerning the use of National Forest System lands for military activity. The USMC is also coordinating with the BLM El Centro Field Office, even though proposed flight activity on BLM managed land will be considered a "casual use level of activity" (BLM Instruction Memorandum No. 2001-030), and requires no further authorization from BLM.

5. To address USFS concerns about dust emissions from aircraft landing and takeoff operations, the Proposed Action includes implementation of dust abatement measures for undeveloped LZs (i.e., those with exposed soils) within the Cleveland National

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Forest. These measures will consist of application of a dust palliative (e.g., semi-permanent glue-like materials) that will reduce the amount of dust mobilized and dispersed by aircraft operations. The Marine Corps will coordinate with the USFS on selecting an appropriate material and on implementing a suitable monitoring plan. Monitoring will ensure that dust abatement measures are successful in reducing dust generation to a level that will not adversely affect the area surrounding the LZ, and that dust abatement practices themselves do not result in adverse effects on regulated resources.

6. The EA analyzed the potential environmental effects of two alternatives: Alternative 1 (Proposed Action) and the No Action Alternative. Alternative 1 is the Preferred Alternative and will result in the implementation of the Proposed Action, described above. Under the No Action Alternative, no Marine Corps rotary wing or tilt-rotor operations would occur on public lands managed by the Cleveland National Forest and the BLM El Centro Field Office. The No Action Alternative is not considered a reasonable alternative because it does not meet the purpose of and need for the Proposed Action. As part of the USMC's decision-making process, two alternatives (i.e., *Relocate Existing Training to Department of Defense Lands Alternative* and *Move Existing Training to Other Public Lands Alternative*) were considered but eliminated as not viable because they did not fulfill the purpose and need of the Proposed Action for reasons explained in the EA.

7. The EA analyzed the environmental effects that will potentially result from the implementation of Alternative 1 and the No Action Alternative. The resources that may be affected by the alternatives and thus were analyzed in the EA include the following: airspace; noise; land use and recreation; air quality; topography, geology and soils; water resources; biological resources; cultural resources; public health and safety; and aesthetics. Impacts to the following resources were considered negligible or non-existent and were not analyzed in-depth in the EA: socioeconomics; ground traffic and transportation; infrastructure and utilities; hazardous materials and waste; and environmental justice. None of the alternatives analyzed in the EA will result in significant direct, indirect, or cumulative impacts on the quality of the local environment.

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MARINE CORPS ROTARY WING AND TILT-ROTOR TRAINING
OPERATIONS ON PUBLIC LANDS WITHIN SOUTHERN CALIFORNIA

8. The USMC, in cooperation with the USFS and BLM, prepared and submitted a Biological Assessment and request for informal consultation to the United States Fish and Wildlife Service (USFWS) in accordance with Section 7 of the Endangered Species Act (ESA). The USFWS issued a concurrence letter on 4 September 2012. The USMC provided supplemental information to the USFWS, primarily regarding the implementation of proposed dust abatement measures within the Cleveland National Forest. The USFWS responded in a letter dated 17 December 2012 that these measures will further avoid and minimize potential effects to federally listed species and, therefore, they continue to concur that the Proposed Action is not likely to adversely affect federally listed species.

9. The Marine Corps in cooperation with the USFS and BLM, consulted with the California State Historic Preservation Office (SHPO) in accordance with 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act. The California SHPO issued a concurrence letter on 3 October 2012.

10. No avoidance, minimization, and/or mitigation measures are required beyond the dust abatement measures that were incorporated into the Proposed Action.

11. The Public Draft EA Public Notice was published in the Orange County Register, Press-Enterprise, and Imperial Valley Press on 29 June, 30 June, and 1 July 2012, and the Adelante Valle (Spanish language newspaper) on 29 June, 6 July, and 13 July 2012. The 30-day public comment period was from 2 to 31 July 2012. The USMC held two open house public meetings in southern California on 17 and 25 July 2012. Eleven comments were received: three website comments, one oral comment received during the public meetings, and seven mailed in written comments. The comments addressed concerns about cultural resources, public safety, hazardous materials and waste, and open space. Responses to comments are provided in the Final EA.

12. A Record of Non-Applicability for Clean Air Act General Conformity requirements has been prepared and approved for this project. There will not be any disproportionately high or adverse human health or environmental effects from the action on minority or low-income populations. Nor will there be any

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impacts associated with the protection of children from environmental health risks and safety risks. After careful review of the EA prepared in accordance with the requirements of NEPA, Council on Environmental Quality regulations, Department of Navy Procedures for Implementing NEPA (32 CFR 775) as described in MCO P5090.2A, I have selected Alternative 1 and find that it will not have a significant impact on the human environment, and therefore, an EIS is not required.

13. The EA and FONSI addressing this action may be obtained by interested parties by contacting Naval Facilities Engineering Command Southwest, 1220 Pacific Highway, Building 1 Central IPT, San Diego, California 92132 (Attn: Kelly Finn), telephone (619) 532-4452.



VINCENT A. COGLIANESE

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ENV

3.2 Noise

This section analyzes the potential noise generated by the proposed rotary wing and tilt-rotor activities that may result in a change in the immediate airborne noise environment on public lands managed by the Cleveland National Forest and the BLM El Centro Field Office. Changes in the noise environment may affect wildlife and people, particularly within recreational areas. This section defines *noise* and describes the existing noise sources and levels within the project area.

3.2.1 Definition of Noise

Sound is a physical phenomenon consisting of vibrations that travel through a medium, such as air or water, and are sensed by the human ear. Noise is defined as unwanted or annoying sound that interferes with or disrupts normal human activities. Although exposure to very high noise levels can cause hearing loss, the principal human response to noise is annoyance (see Appendix C). The response of different individuals to similar noise events is diverse and is influenced by the type of noise, the perceived importance of the noise, its appropriateness in the setting, the time of day, the type of activity during which the noise occurs, and the sensitivity of the individual. Noise may also affect wildlife through disruption of resting, foraging, migrating, and other life-cycle activities (noise impacts on wildlife are discussed in section 3.7, *Biological Resources*).

The predominant noise sources associated with the proposed action consist of aircraft operations, both at and around the Cleveland National Forest and BLM El Centro managed lands. Aircraft are not the only sources of noise in an urban or suburban environment, where interstate and local roadway traffic, rail, industrial, and neighborhood sources also contribute to or detract from the everyday quality of life. Nevertheless, aircraft are readily identified by their noise output and are typically given special attention. Consequently, aircraft noise often dominates analyses of environmental impacts. Additional background information on noise, including its effect on many facets of the environment, is provided in Appendix C.

Noise and sound are expressed in a logarithmic unit called the decibel (dB). All sounds have a spectral content, which means their magnitude or level changes with frequency, where frequency is measured in cycles per second or hertz (Hz). To mimic the human ear's non-linear sensitivity and perception of different frequencies of sound, the spectral content is weighted. For example, environmental noise measurements are usually on an "A-weighted" scale that filters out very low and very high frequencies to replicate human sensitivity. It is common to add the "A" to the measurement unit to identify that the measurement has been performed with this filtering process (dBA). In this document, the dB unit refers to A-weighted sound levels.

A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions (Figure 3.2-1). Normal speech has a sound level of approximately 60 dB. Sound levels above 120 dB begin to be felt inside the human ear as discomfort, and sound levels between 130 to 140 dB are felt as pain (Berglund and Lindvall 1995). The minimum change in the sound level of individual events that an average human ear can detect is about 3 dB. On average, a person perceives a doubling (or halving) of the sound's loudness when there is a 10 dB change in sound level.

In accordance with DoD guidelines and standard practice for environmental impact analysis documents, the noise analysis herein utilizes the following (A-weighted) noise descriptors or metrics: Maximum Sound Level (ALM), Sound Exposure Level (SEL), and Community Noise Equivalent Level (CNEL). ALM and SEL describe single noise events whereas CNEL is a time-averaged metric describing the cumulative noise environment of individual noise events over longer periods, usually up to 24 hours. CNEL, which is specific to California, also weights or penalizes those levels depending on the time period in which they occur, weighting evening (7:00 P.M. to 10:00 P.M.) sound with a penalty of 5 dBA and nighttime (10:00 P.M. to 7:00 A.M.) sound with a penalty of 10 dBA.

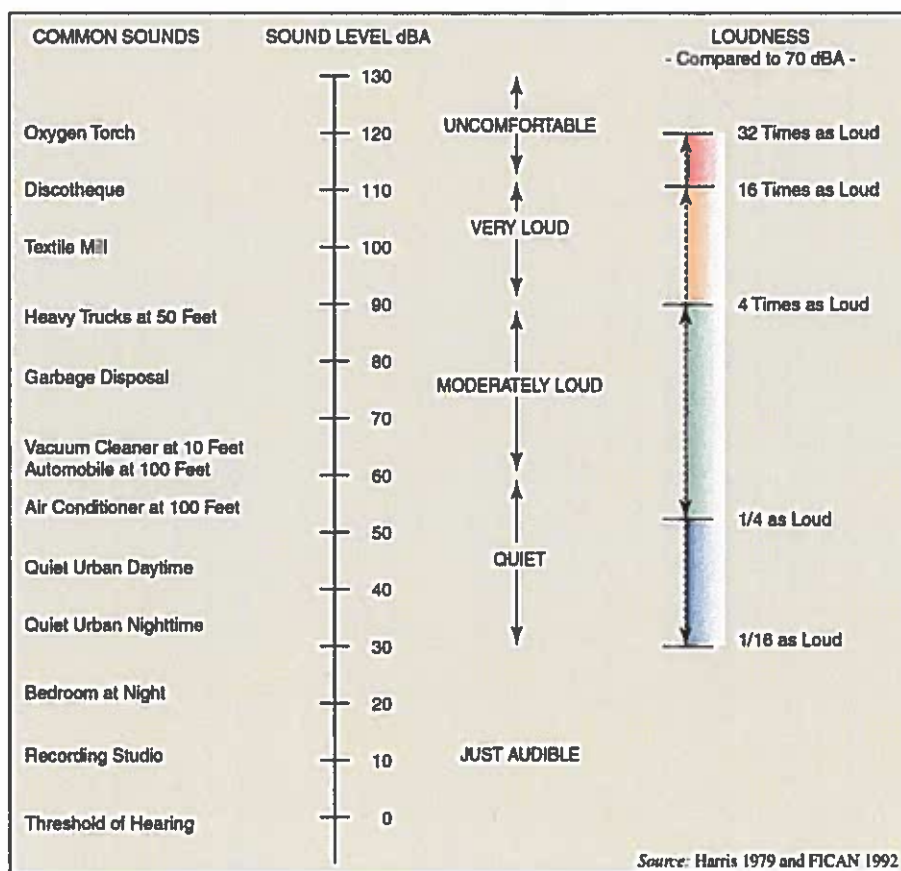


Figure 3.2-1. Typical A-Weighted Sound Levels of Common Sounds

The Onset-Rate Adjusted Monthly variant of CNEL, denoted $CNEL_{mr}$ is specifically utilized for describing cumulative aircraft noise exposure from airspace and range operations. Each descriptor, along with other noise metrics, is described in more detail in Appendix C.

It is important to note that all metrics and associated noise models draw from a database of actual aircraft noise measurements. As such, they describe and compare noise conditions without requiring noise monitoring.

3.2.2 Methodology

As noise from future aircraft operations cannot be physically measured in the present, this EA computes and estimates the noise generated by aircraft operations. Analysis of aircraft noise exposure and compatible land use around DoD airspace areas are typically accomplished using the Military Operating Area and Range Noise Model (MR_NMAP; Wyle 1997) suite of computer programs. For this EA, the Rotorcraft Noise Model (RNM; Wyle 2010) was also utilized to extract single-event noise levels for input into MR_NMAP. The programs allow for entry of airspace information, the horizontal distribution of operations, flight profiles (average power settings, altitude distributions, and speeds), and numbers of sorties. *Horizontal distribution of operations* refers to the modeling of lateral airspace utilization via three general representations: broadly distributed operations for modeling of Military Operations Area and range or LZ events; operations distributed among parallel tracks for modeling of Military Training Route events; and operations on specific tracks for modeling of unique Military Operations Area, range,

Military Training Route, or target area activity. The core program called MR_NMAP incorporates the number of monthly operations by time period, specified horizontal distributions, volume of the airspaces, and profiles of the aircraft to primarily calculate: (a) CNEL_{mr} at many points on the ground, (b) average CNEL_{mr} for entire airspaces, or (c) maximum CNEL_{mr} under MTRs or specific tracks. From calculations of CNEL_{mr} for many points on the ground, the NMPlot program draws contours of equal CNEL_{mr} for overlay onto land-use maps.

For airspace environments, CNEL_{mr} contours are plotted and/or are tabulated depending on the magnitude of the exposure, from the MR_NMAP program. This EA shows tabulated levels and focuses only on aircraft noise levels (not the non-aircraft ambient) and their change compared to existing conditions. Aircraft noise impacts would be considered potentially significant if the CNEL_{mr} relative to an affected residential population increases at least 1.5 dB compared to the baseline conditions within the alternative's 65 dB CNEL_{mr} contour (Federal Interagency Committee on Noise [FICON] 1992).

CNEL_{mr} is a noise metric based on average daily operations flown in the busiest month, so busy month operations are calculated by dividing the number of annual operations by 12, then multiplying by a busy month factor. For this EA, the busy month factor is 1.4 which means that a busy month contains 140 percent as many operations as an average month.

3.2.3 Affected Environment

This section describes the affected environment due to existing rotary wing training operations on public lands managed by the Cleveland National Forest and the BLM El Centro Field Office. The existing aircraft noise environment is based on the calendar year (CY) 2010 rotary wing operations totaling 935 annual sorties (USMC 2011). These sorties comprise both CAL and non-CAL type sorties. For this EA, non-CAL sorties include general navigation/tactical training conducted in the vicinity of an LZ, while landing and takeoff operations are considered CAL sorties. The existing aircraft noise environment for the Cleveland National Forest and for BLM El Centro managed lands is described in more detail below.

3.2.3.1 Cleveland National Forest

The existing aircraft noise environment at the Cleveland National Forest consists of 452 USMC annual sorties conducting operations at eight LZs (LZ Site 6 / LZ Site 6 Alt and LZ Site 9 / LZ Site 9 Alt were each modeled as a single LZ due to their proximity with each other). Approximately 31 and 6 percent of sorties occur during the CNEL evening and CNEL nighttime periods, respectively.

Currently, helicopter CAL training at the LZs in the Cleveland National Forest operate in small areas near the LZs. While lining up and conducting an approach, helicopters operate at altitudes between 200 and 1,000 feet (61 – 305 meters) above ground level for a duration of approximately 45 minutes within the modeled area. Helicopters approach either with an easterly or westerly heading towards the LZs resulting in an area best described by a rectangle oriented east to west and centered at each LZ. These sorties were distributed within a large rectangular area with a length of 3 nm (6 km) and a width of 2 nm (4 km). In addition to the approach to the LZs, helicopters also descend and land or hover in the direct vicinity of each LZ. The hover or landing portion of the CAL sortie is distributed within a circular area centered at each LZ with a diameter of 750 feet (229 meters). Within this circular area the helicopters operate between the surface and 200 feet (61 meters) above ground level. The altitude distribution and modeled average aircraft speeds are listed in Appendix C.

The current helicopter non-CAL training is conducted in the areas surrounding each LZ, which is represented by the 3 nm (6 km) by 2 nm (4 km) rectangle described above but non-CAL sorties do not include the landing or hover portion. Helicopter non-CAL sorties utilize both the same altitude

distribution between 200 and 1,000 feet (61 - 305 meters) above ground level and the same average aircraft speeds as the CAL sorties but have durations of only 15 minutes within the modeled areas.

Noise Exposure

The $CNEL_{mr}$ was calculated for the eight LZs and associated approach pattern described above. For the baseline scenario, five of the eight LZs experience sound levels greater than or equal to 65 dB $CNEL_{mr}$ as summarized in Table 3.2-1 and detailed in Appendix C. The maximum $CNEL_{mr}$ of 72 dB occurs at LZ Site 6 / LZ Site 6 Alt, while four LZs experience a maximum $CNEL_{mr}$ of 65 dB. The 65 dB $CNEL_{mr}$ contour associated with the CAL and non-CAL operations approximates a circle in shape and does not exceed a diameter of approximately 1,200 feet (366 meters) at each LZ. Outside of this circle, noise contours drop below 65 dB $CNEL_{mr}$, and, in particular, noise drops below 60 dB $CNEL_{mr}$ over surrounding residential communities.

Table 3.2-1. Maximum $CNEL_{mr}$ at Modeled Landing Zones in Cleveland National Forest for Baseline Conditions

<i>LZ Name</i>	<i>Estimated Existing Annual Sorties</i>	<i>Maximum $CNEL_{mr}$</i>	<i>Maximum $CNEL_{mr}$ Exposure Band</i>
Site 3	39	65	65-70
Site 5	39	65	65-70
Site 6 / 6 Alt	179	72	70-75
Site 7	39	65	65-70
Site 8	39	64	60-65
Site 9 / 9 Alt	39	64	60-65
Site 10	39	65	65-70
Site 11	39	64	60-65
<i>Note:</i> The 65 dB $CNEL_{mr}$ contour approximates a circle in shape and does not exceed a diameter of approximately 1,200 feet (366 meters).			

3.2.3.2 BLM El Centro Managed Lands

The existing aircraft noise environment on BLM El Centro managed land consists of 483 USMC annual sorties conducting operations at 12 LZs (LZ MW1 / LZ MW1 Option were modeled as a single LZ due to their proximity with each other). Approximately 46 and 9 percent of sorties occur during the $CNEL$ evening and $CNEL$ nighttime periods, respectively.

Currently, helicopter CAL training at the LZs on BLM El Centro managed land operate in a similar manner as the Cleveland National Forest operations described above except that helicopters approach each LZ from any heading direction. For this reason, the approach area was modeled as a circular area with a radius of 1.5 nm (2.8 km). While operating within these areas, helicopter altitudes vary between 200 and 1,000 feet (61 – 305 meters) above ground level for a duration of approximately 45 minutes. The hover or landing portion of the helicopter sortie is distributed within a circular area centered at each LZ with a diameter of 750 feet (229 meters). Within this smaller circular area the helicopters also operate between the surface and 200 feet (61 meters) above ground level. The altitude distribution and modeled average aircraft speeds are listed in Appendix C.

The current helicopter non-CAL training is conducted in the area surrounding each LZ, which is represented by the 1.5 nm (2.8 km) radius circle described above but does not include the landing or hover portion. Helicopter non-CAL sorties utilize both the same altitude distribution between 200 and 1,000 feet (61 - 305 meters) and the average aircraft speeds as the CAL sorties but have a duration of only 15 minutes within the modeled areas.

Noise Exposure

The $CNEL_{mr}$ was calculated for the 12 LZs and associated approach pattern described above. For the baseline scenario, three LZs experience sound levels greater than or equal to 65 dB $CNEL_{mr}$ as listed in Table 3.2-2 and detailed in Appendix C. The maximum $CNEL_{mr}$ of 68 dB occurs at LZs Bull, Pelican, and Sparrow. The remaining LZs experience maximum $CNEL_{mr}$ of less than 65 dB. For LZs Bull, Pelican, and Sparrow, the 65 dB $CNEL_{mr}$ contour associated with the CAL and non-CAL operations approximates a circle in shape and does not exceed approximately 1,300 feet (396 meters) in diameter at each LZ. Outside of this circle, noise contours drop below 65 dB $CNEL_{mr}$, and, in particular, noise drops below 60 dB $CNEL_{mr}$ over surrounding residential communities.

Table 3.2-2. Maximum $CNEL_{mr}$ at Modeled Landing Zones on BLM El Centro Managed Land under Baseline Conditions

<i>LZ Name</i>	<i>Estimated Existing Annual Sortie for All Aircraft</i>	<i>Maximum $CNEL_{mr}$</i>	<i>Maximum $CNEL_{mr}$ Exposure Band</i>
Bull	80	68	65-70
CI	27	63	60-65
Cupcake	27	62	60-65
Eider	27	63	60-65
IP1 Option	27	60	60-65
Mallard	27	62	60-65
ME3 Option	27	63	60-65
MW1 / MW1 Option	27	64	60-65
PC3	27	63	60-65
Pelican	80	68	65-70
Sparrow	80	68	65-70
Wolf	27	63	60-65

Note: The 65 dB $CNEL_{mr}$ contour approximates a circle in shape and does not exceed approximately 1,300 feet (396 meters) in diameter.

3.2.4 Environmental Consequences and Mitigation Measures

3.2.4.1 Alternative 1

This section describes the potential noise impacts due to proposed operations associated with Alternative 1. Alternative 1 includes the replacement of the CH-46E with the MV-22B. The MV-22B is expected to conduct 1,920 annual sorties with 55 and 7 percent occurring during CNEL evening and CNEL nighttime, respectively. The AH-1 would experience a decrease in annual sorties, UH-1 operations would experience a slight increase in annual sorties relative to the baseline scenario, and CH-53E operations would remain similar to existing conditions (USMC 2011). The AH-1, UH-1, and CH-53E operations under Alternative 1 were modeled as described above for the existing aircraft noise environment.

The MV-22B would conduct several different tactical approach pattern types, which are classified as CAL sorties, while training at LZs. The tactical approach patterns extend approximately 5 nm (9 km) along the path of approach towards the LZ with widths of approximately 2 nm (4 km). The MV-22B would operate at altitudes between 200 and 3,000 feet (61 – 914 meters) above ground level for a duration of approximately 45 minutes within the modeled areas. The MV-22B would also conduct a hover or landing portion of the CAL sorties at each LZ in the same manner as the helicopters. This is described further below for each training area.

Cleveland National Forest

The MV-22B is expected to conduct 106 annual sorties in the Cleveland National Forest, with approximately 55 and 7 percent occurring during the CNEL evening and nighttime periods, respectively. The MV-22B would utilize areas around LZs in a similar way as existing helicopters except it would require a larger airspace area. MV-22B CAL training was modeled as area-type operations distributed to a rectangle centered on each LZ, with a dimension of 10 nm (19 km) in length from east to west and 2 nm (4 km) in width from north to south. The MV-22B CAL sorties are modeled in this rectangular area with altitudes between 200 and 3,000 feet (61 – 914 meters) above ground level for a duration of approximately 45 minutes. Similar to the helicopters, the MV-22B would approach either with an easterly or westerly heading towards the LZs. In addition to the large approach area, the MV-22B would also descend and land or hover in the direct vicinity of each LZ. The landing or hover portion of the MV-22B sortie is modeled with the same area-type operation as the helicopters, distributed to a circular area centered at each LZ with a diameter of 750 feet (229 meters). Within this circular area the MV-22B would operate between the surface and 200 feet (61 meters) above ground level. The altitude distribution and modeled average aircraft speeds are listed in Appendix C.

The MV-22B non-CAL training would be conducted in the area surrounding each LZ and is modeled by the 10 nm (19 km) by 2 nm (4 km) rectangular area described above, but does not include a low altitude landing or hover portion. MV-22B non-CAL operations utilize both the same altitude distribution between 200 and 3,000 feet (61 – 914 meters) and the same average aircraft speeds as the MV-22B CAL sorties, but with a duration of only 15 minutes within the modeled areas.

The AH-1 would experience a decrease in annual sorties (from 228 to 154) and UH-1 operations would experience a slight increase in annual sorties (from 132 to 138) relative to the baseline scenario (USMC 2011). No change is expected for CH-53E operations. The AH-1, UH-1, and CH-53E operations under Alternative 1 were modeled as described above for the existing aircraft noise environment.

Noise Exposure

The CNEL_{mr} was calculated for the eight LZs and associated approach pattern described above. For the Alternative 1 scenario, only one LZ (LZ Site 6 / LZ Site 6 Alt) would experience sound levels greater than or equal to 65 dB CNEL_{mr} as listed in Table 3.2-3 and detailed in Appendix C. The highest maximum CNEL_{mr} (71 dB) would occur at LZ Site 6 / LZ Site 6 Alt. The remaining seven LZs would experience a maximum CNEL_{mr} below 65 dB. The 65 dB CNEL_{mr} contour at LZ Site 6 / LZ Site 6 Alt associated with the CAL and non-CAL operations approximates a circle in shape and would not exceed approximately 1,200 feet (366 meters) in diameter (see Figure C1-7 in Appendix C for the noise contours at LZ Site 6 / LZ Site 6 Alt). Outside of this circle, noise contours drop below 65 dB CNEL_{mr}, and, in particular, noise drops below 60 dB CNEL_{mr} over surrounding residential communities.

Table 3.2-3. Maximum CNEL_{mr} at Modeled Landing Zones in Cleveland National Forest for Alternative 1

LZ Name	Proposed Annual Sorties for All Aircraft	Maximum CNEL _{mr}	Change in Maximum CNEL _{mr} Relative to Baseline
Site 3	36	64	-1
Site 5	36	64	-1
Site 6/6 Alt	170	71	-1
Site 7	36	64	-1
Site 8	36	64	0
Site 9/9 Alt	36	64	0
Site 10	36	64	-1
Site 11	36	64	0
Note: The 65 dB CNEL _{mr} contour approximates a circle in shape and would not exceed approximately 1,200 feet (366 meters) in diameter.			

Under Alternative 1 relative to the existing conditions, five LZs would experience a decrease in maximum CNEL_{mr} of 1 dB and the remaining three LZs would experience no change in maximum CNEL_{mr}. These small decreases are due to the MV-22B being slightly quieter than the CH-46E, while operating in the approach portion of the CAL sorties at altitudes above 200 feet (61 meters) above ground level. Additionally, the decrease in noise exposure at the Cleveland National Forest under Alternative 1 is due to the 7 percent decrease in total annual sorties relative to existing conditions.

The change in noise exposure at the Cleveland National Forest under Alternative 1 would not cause a significant noise impact because noise exposure would either stay the same or decrease compared to existing conditions, and noise drops below 60 dB CNEL_{mr} over surrounding residential communities. Therefore, no significant noise impact would occur.

BLM El Centro Managed Lands

The MV-22B is expected to conduct 1,814 annual sorties over BLM managed lands with approximately 55 and 7 percent occurring during the CNEL evening and CNEL nighttime periods, respectively. The MV-22B is expected to conduct CAL and non-CAL training in a similar manner as the existing helicopters except the MV-22B would require a larger area for approaches to the LZs. The MV-22B CAL sorties would be distributed within a circular area with a radius of 5 nm (9 km). The MV-22B landing or hover portion would be distributed within a circular area with a diameter of 750 feet (229 meters). The MV-22B non-CAL sorties were modeled with the same 5 nm (9 km) radius circular area as the BLM El Centro CAL sorties but without a landing or hover portion.

The AH-1 would experience a decrease in annual sorties (from 49 to 37), UH-1 would experience a slight increase in annual sorties (from 31 to 33), and CH-53E may see a small decrease in annual sorties (from 197 to 196) relative to the baseline scenario (USMC 2011). The AH-1, UH-1, and CH-53E operations under Alternative 1 were modeled as described above for the existing aircraft noise environment.

Noise Exposure

The CNEL_{mr} was calculated for the 12 LZs and associated approach pattern described above. For the Alternative 1 scenario, 11 LZs would experience sound levels greater than or equal to 65 dB CNEL_{mr} as listed in Table 3.2-4 and detailed in Appendix C. The maximum CNEL_{mr} of 72 dB would occur at LZs Bull and Pelican, and the maximum CNEL_{mr} of 71 dB would occur at LZ Sparrow. Eight LZs would experience maximum CNEL_{mr} between 65 dB and 70 dB, and one LZ would remain below 65 dB (LZ IP1 Option). The 65 dB CNEL_{mr} contour associated with the CAL and non-CAL operations approximates a circle in shape and would not exceed approximately 1,300 feet (396 meters) in diameter at each LZ (see Figure C1-8 in Appendix C for the noise contours at an example BLM El Centro LZ). Outside of this circle, noise contours drop below 65 dB CNEL_{mr}, and, in particular, noise drops below 60 dB CNEL_{mr} over surrounding residential communities.

In comparing Alternative 1 to baseline conditions, eight LZs would now experience CNEL_{mr} between 65 dB and 70 dB, and three LZs (Bull, Sparrow, and Pelican) would now experience CNEL_{mr} between 70 dB and 75 dB. The typical increase in CNEL_{mr} would vary between 3 dB and 5 dB at each LZ (Table 3.2-4). This increase is primarily a result of the 331 percent increase in annual sorties relative to existing conditions.

Regarding significance, the change in maximum CNEL_{mr} for 11 LZs would exceed 1.5 dB compared to baseline conditions within the alternative's 65 dB CNEL_{mr} contour. However, this change would not affect a residential population because noise drops below 60 dB CNEL_{mr} over surrounding residential communities. Furthermore, regular, repeated, or continuous exposure to aircraft-generated noise by recreational users would be unlikely because routine training operations would vary on a daily basis.

Although disturbance of recreation activities (e.g., hiking, biking, etc.) near the LZs could occur, it would be short-term, consisting of isolated and infrequent landing and takeoff operations (see also section 3.3, *Land Use and Recreation*). Therefore, no significant noise impact would occur.

Table 3.2-4. Maximum CNEL_{mr} at Modeled Landing Zones on BLM El Centro Managed Land for Alternative 1

<i>LZ Name</i>	<i>Proposed Annual Sorties for All Aircraft</i>	<i>Maximum CNEL_{mr}</i>	<i>Change in Maximum CNEL_{mr} Relative to Baseline</i>
Bull	346	72	+4
C1	114	68	+5
Cupcake	116	66	+4
Eider	116	67	+4
IPI Option	116	64	+4
Mallard	116	66	+4
ME3 Option	116	66	+3
MW1 / MW1 Option	116	68	+4
PC3	116	66	+3
Pelican	346	72	+4
Sparrow	346	71	+3
Wolf	116	68	+5
<i>Note:</i> The 65 dB CNEL _{mr} contour approximates a circle in shape and would not exceed approximately 1,300 feet (396 meters) in diameter.			

Avoidance, Minimization and/or Mitigation Measures

Because there would be no significant noise impact, no avoidance, minimization, and/or mitigation measures are required.

3.2.4.2 No Action Alternative

Under the No Action Alternative, no USMC rotary wing or tilt-rotor operations would occur on public lands managed by the Cleveland National Forest and the BLM El Centro Field Office. However, other agencies, such as the Sheriff Department, Fire Department, and the U.S. Navy, may still use the LZs. Therefore, noise from aircraft operations would likely continue within the vicinity of the LZs, although at a lower rate than under existing conditions. Depending on how often the LZs are used by other agencies, this could be a beneficial impact.

3.3 Land Use and Recreation

3.3.1 Affected Environment

The proposed action and alternatives are located within the USFS (Cleveland National Forest, Trabuco Ranger District) and BLM (El Centro Field Office) jurisdiction. Land use management plans adopted by these jurisdictions identify the type of uses, including recreation, that could occur within the project site. Recreation activities typically include camping, picnicking, hiking, off-highway vehicle (OHV) use, wildlife viewing, hobby prospecting, sightseeing, photography, hunting, painting, bird watching, and biking.

3.3.1.1 Cleveland National Forest

The Cleveland National Forest is located on 420,983 acres (170,366 hectares) within Orange, Riverside, and San Diego Counties. The proposed LZs are located approximately 5 miles (8 km) from Mission Viejo (Highway 241 on east side) to the west and 11 miles (17 km) from Lake Elsinore to the east. The area to the west of the project area is located within Orange County and is within the jurisdiction of the Silverado-Modjeska Specific Plan. The Santa Ana Mountains are the dominant feature within this area. Elevations range from approximately 1,200 feet (366 meters) at the mouth of Silverado Canyon to over 5,600 feet (1,707 meters) at Santiago Peak. Land uses are primarily residential areas concentrated in the canyon bottoms, and residential development has encroached on nearby USFS land over the past 40 years. The area to the east of the project area is located within Riverside County, adjacent to the lands covered by the Temescal Canyon Specific Plan. Land uses within this area consist of mainly conservation and rural open space. Further east, the Interstate-15 corridor includes a variety of suburban residential and rural estate neighborhoods together with industrial uses and extensive areas of existing and potential mineral extraction.

The *Cleveland National Forest Land Management Plan (Forest Plan)* (USFS 2005a) serves as a guide for land management within this national forest. The Forest Plan designates land use zones to lands within the Cleveland National Forest. Land use zones are the primary tools used by the USFS to describe their strategic direction, such as the management intent and suitable uses for areas of the national forest where the zone is used.

There are seven land use zones designated in the Cleveland National Forest (Figure 3.3-1): Developed Area Interface; Back Country; Back Country, Motorized Use Restricted; Back Country, Non Motorized; Critical Biological; Recommended Wilderness; and Existing Wilderness (USFS 2005a). A description of these land use zones is provided in Table 3.3-1.

The proposed aircraft operations would occur at LZs located along the border between Orange and Riverside counties (see Figure 2.2-1). All of the LZs, with the exception of LZ Site 7, are located within areas of the Cleveland National Forest designated by the USFS as Back Country land use zone (Figure 3.3-1). LZ Site 7 is located within the Back Country, Non-Motorized land use zone. The San Mateo Canyon Wilderness is the only land use zone designated as Existing Wilderness within the Trabuco Ranger District, and this area is located approximately 11 miles (18 km) south of the project site. No Critical Biological land use zones are located within the Trabuco Ranger District.

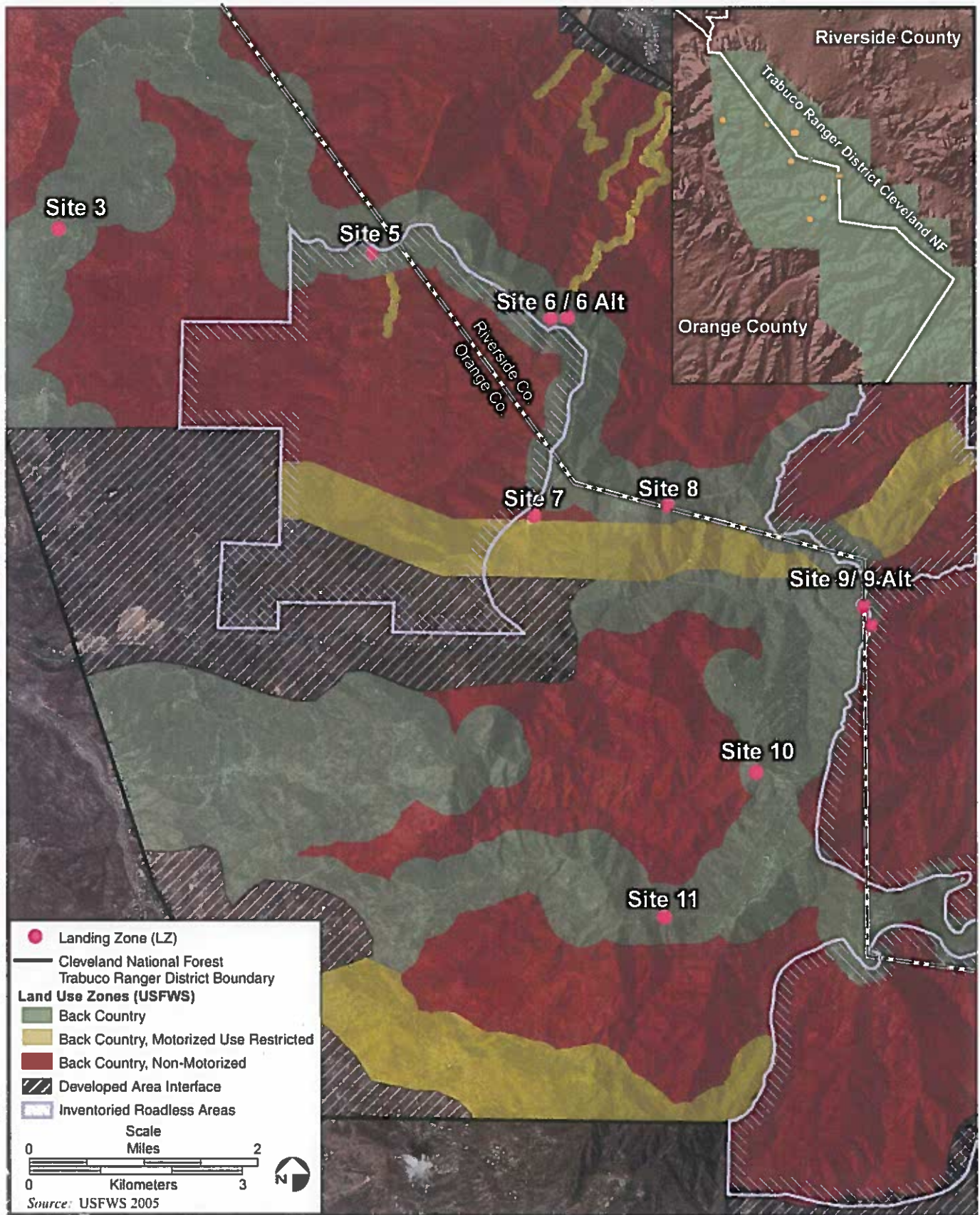


Figure 3.3-1. Locations of LZs within the Cleveland National Forest Land Use Zones

Table 3.3-1. Description of Land Use Zones within Cleveland National Forest

Land Use Zone	Description
Developed Area Interface	This zone includes areas adjacent to communities or concentrated developed areas with more scattered or isolated community infrastructure and is managed for motorized public access. A number of highly popular developed recreation facilities, recreation and non-recreation special uses facilities, and national forest administrative facilities may be included in this zone. The characteristic Recreation Opportunity Spectrum (ROS) objectives are Rural and Roaded Natural. The level of human use and infrastructure is typically higher than in other zones. This zone allows a broad range of higher intensity uses. However, the management intent is to limit the level and type of development. Development is limited to a slow increase of carefully designed facilities.
Back Country¹	This zone includes areas that are generally undeveloped with few roads and is managed for motorized public access on designated roads and trails. The characteristic ROS objectives are Semi-Primitive Motorized with limited areas of Roaded Natural. The level of human use and infrastructure is generally low to moderate. This zone allows a broad range of uses. However, the management intent is to retain the natural character inherent in this zone and limit the level and type of development. Development is limited to a slow increase of carefully designed facilities.
Back Country, Motorized Use Restricted	This zone includes areas that are generally undeveloped with few roads. The level of human use and infrastructure is low to moderate. The characteristic ROS objectives are Semi-Primitive Motorized and Semi-Primitive Non-Motorized. The zone is managed for non-motorized (mechanized, equestrian, and pedestrian) public access for a wide variety of non-motorized dispersed recreation opportunities including camping, hiking, biking, hunting, and fishing. Designated OHV use is not suitable in this zone. The management intent is to retain the natural character of the zone and limit the level and type of development.
Back Country, Non-Motorized¹	This zone includes areas that are undeveloped with few, if any, roads. The characteristic ROS objective is Semi-Primitive Non-Motorized. The level of human use and infrastructure is low. Developed facilities are minimal and generally limited to trails and signage. The zone is managed for non-motorized (mechanized, equestrian, and pedestrian) public access for a wide variety of non-motorized recreation opportunities including remote area camping, hiking, mountain biking, hunting, and fishing. Designated OHV use is not permitted in this zone. The management intent is to limit the level of development to a low level of increase. Facility construction (except trails) is generally not allowed.
Critical Biological	This zone includes areas to manage for the protection of species-at-risk. Facilities are minimal to discourage human use. The level of human use and infrastructure is low to moderate. The management intent is to retain the natural character and habitat characteristics in this zone and limit the level of human development. Low impact uses, such as hiking, mountain biking, and hunting are generally allowed.
Existing Wilderness	This zone includes Congressionally designated wilderness. Only uses consistent with all applicable wilderness legislation and with the primitive character are allowed in existing wildernesses. The ROS objective is Primitive with limited areas of Semi-Primitive Non-Motorized. The management intent is to administer the zone for the use and enjoyment of people while preserving its wilderness character and natural conditions.
Recommended Wilderness	This zone includes land that the USFS is recommending to Congress for wilderness designation and will be managed in the same manner as existing wilderness. The management intent is to administer this zone for the use and enjoyment of people while preserving its wilderness character and natural conditions.
<i>Note:</i> 1. Bolded text indicates land use zones for the proposed LZ sites. <i>Source:</i> USFS 2005a	

LZ Sites 5, 9, and 9 Alt are located within the Ladd and Coldwater Inventoried Roadless Areas (IRA), respectively. IRAs are a group of USFS lands without existing roads that have been identified as suitable for roadless area conservation. Road construction or reconstruction is allowed within the Ladd IRA, while no road construction or reconstruction is allowed within the Coldwater IRA. Currently the USFS is proposing to amend the land use zone allocations for specific areas within these IRAs as part of the Southern California National Forests Land Management Plan Amendment (USFS 2012a). This amendment is a result of a settlement agreement approved 3 January 2011 for *California Resources Agency, et al vs. United States Department of Agriculture, and Center for Biological Diversity, et al vs. United States Department of Agriculture*. Although LZ Sites 5, 9, and 9 Alt are located within the Ladd and Coldwater IRAs, the land use zone allocations associated with these sites are not expected to change under the proposed amendment (USFS 2012b).

In addition to land use zones, the Cleveland National Forest is divided into a series of geographical units referred to as *Places*. Each Place has a theme, setting, desired condition, and program emphasis. LZ Sites 3, 5, 7, 9, 9 Alt, 10, 11, and a portion of LZ Site 8 are located within the Silverado Place. The Silverado Place occupies the northwest side of the Trabuco Ranger District from the north national forest boundary down to and including Trabuco Canyon. Canyon communities, open-space links to surrounding communities, and trail-based recreation characterize this Place. The Silverado Place is an important day-use area for Orange County, particularly for hiking and mountain biking. Remote or backcountry camping is prohibited within the Trabuco Ranger District outside of the San Mateo Canyon Wilderness per Forest-Specific Design Criteria CNF S8 (USFS 2005a).

LZ Sites 6, 6 Alt, and a portion of LZ Site 8 are located within the Elsinore Place. The Elsinore Place includes the east-facing slopes of the Santa Ana Mountains and is almost entirely surrounded by urban development. Access to the Elsinore Place is limited. The majority of developed recreation sites (campgrounds and picnic areas) and special-use authorizations on the Trabuco Ranger District and the Wildomar OHV area are located within the Elsinore Place. OHV use, backcountry driving, horseback riding, hiking, mountain biking, hang-gliding, camping, and picnicking occur in this Place. A hang-gliding site exists above Lake Elsinore. Ortega Falls is a popular setting for seasonal waterplay. Recreation occurs throughout the week within the Elsinore Place; however, on weekends and holidays recreation sites along Ortega Highway are generally filled to capacity. Some hiking trails lead to this Place, but due to the lack of public access there are only a few trails located within the Place. Remote or backcountry camping within this Place is prohibited outside of the San Mateo Canyon Wilderness.

3.3.1.2 BLM El Centro Managed Lands

The BLM El Centro Office manages approximately 1.4 million acres (0.6 million hectares) of public lands spread across Imperial and San Diego counties and located within the California Desert Conservation Area (CDCA). The BLM is entrusted with the multiple use management of natural resources on public land, in accordance with the Federal Land Policy and Management Act (FLPMA). Specific, authorized uses are determined in the land use planning process, as prescribed in the FLPMA. The *California Desert Conservation Area Plan (CDCA Plan or Desert Plan)* is BLM's comprehensive desert-wide management plan for the CDCA (BLM 1980, as amended) prepared under FLPMA. It establishes four multiple-use classes, multiple-use class guidelines, and plan elements for specific resources or activities. The four multiple-use classes are Multiple-Use Class C, Multiple-Use Class L (Limited Use), Multiple-Use Class M (Moderate Use), and Multiple-Use Class I (Intensive Use). Some parcels within the CDCA Plan area have not been placed into multiple-use classes and are unclassified lands. These parcels are managed on a case-by-case basis. The proposed LZs are located in areas designated as unclassified lands.

General recreation activities on BLM-administered land in the CDCA include hobby prospecting, sightseeing, photography, hunting, painting, bird watching, biking, camping, picnicking, hiking, OHV use, and wildlife viewing (BLM 1980). The California Desert attracts several million visitors annually, participating in a wide range of recreational activities as noted above. The sheer landscape diversity provides a variety of settings in which to enjoy the desert's natural beauty and solitude away from the urban settings of southern California.

There are six specially managed use areas in the vicinity of the proposed action, as shown in Figure 3.3-2. The name, designation, and managing agency for each special management area is listed in Table 3.3-2. Several OHV areas are also located in the vicinity of the proposed action (Figure 3.3-2).

3.3.2 Environmental Consequences and Mitigation Measures

This section evaluates impacts of the proposed action on sensitive land uses. Sensitive land uses are defined as land uses that are susceptible to disturbances resulting from a project (e.g., noise, traffic, dust, etc.). For the purposes of this impact assessment, sensitive land uses are defined as residences, educational institutions, recreational facilities, and certain public facilities (e.g., religious facilities, health care facilities).

Land use analysis in this EA includes those that are located within the project site or in the project vicinity that would be affected by the proposed action, especially if they have national, regional, or local importance.

Land Use. The assessment of impacts on land use considers whether changes resulting from implementing the proposed action would displace a current use, change suitability of a location for its current or planned uses, or impede the management of land use resources according to authorized plans. Most of these effects are measured qualitatively, based on values implicit in plans; perceptibility of change; and local or widespread dependence on the affected resource. Where possible, the analysis uses proportional measures (such as time or extent of an effect) to quantify the degree or magnitude of an impact.

Recreation. The evaluation of impacts on recreation uses a similar approach as described above for land use. The analysis considers the anticipated effect of noise on the qualities of recreational areas and user experience based on sensitivity of the area or use, and on the spectrum of available recreational opportunity. It also considers how changes in public access, if any, would affect spatial and temporal availability to areas used for diverse recreational purposes.

3.3.2.1 Alternative 1

Cleveland National Forest

Alternative 1 was designed to allow continued military training operations on public lands managed by the USFS Cleveland National Forest, Trabuco Ranger District. No construction activities (including road reconstruction) are proposed under Alternative 1. Therefore, no construction-related impacts to land use and recreation would occur.

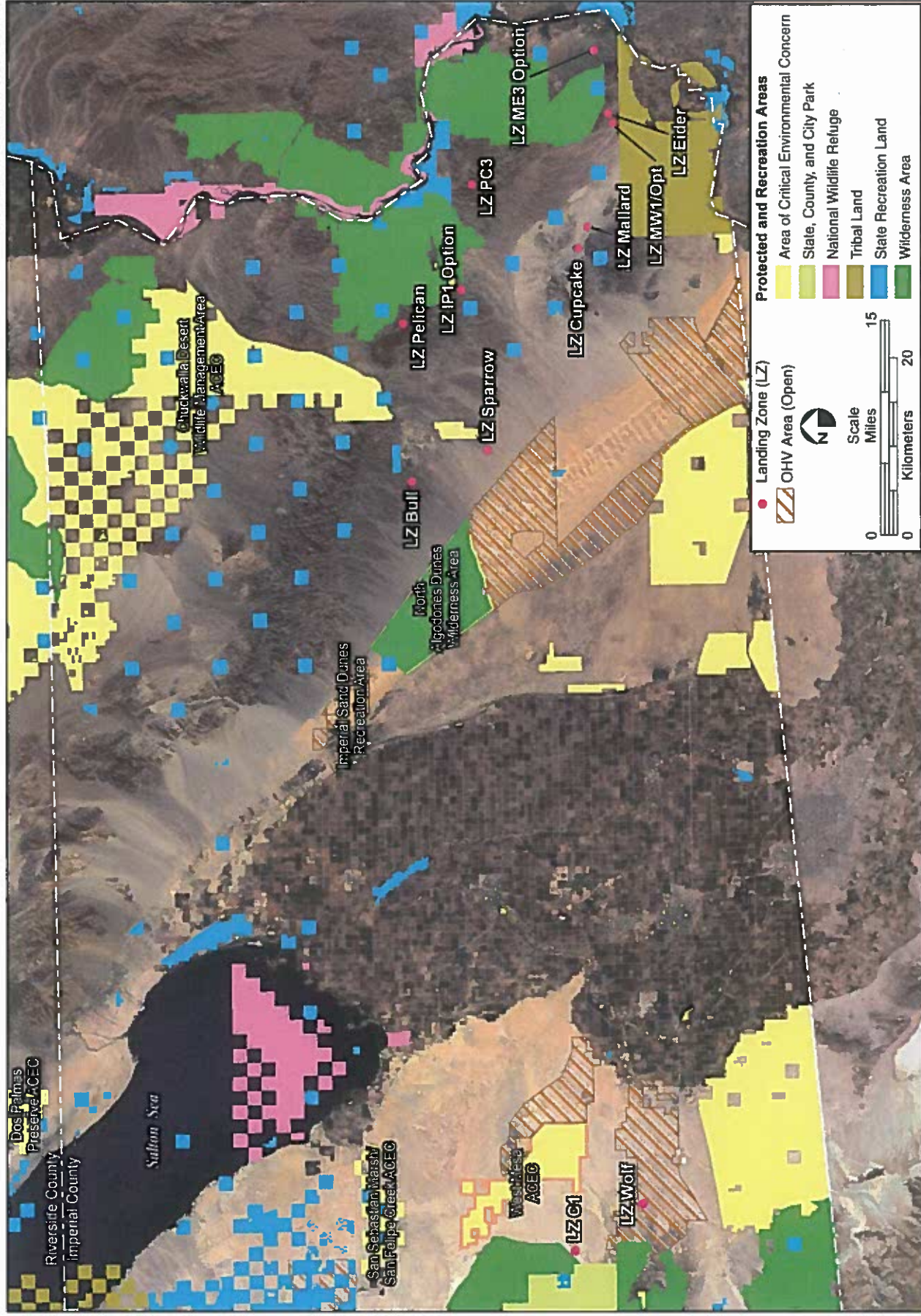


Figure 3.3-2. Special Use Areas in the Vicinity of the Proposed LZs within Lands Managed by BLM El Centro Field Office

Table 3.3-2. Special Use Areas in the Vicinity of the Proposed LZs within Lands Managed by the BLM El Centro Field Office

<i>Special Use Area</i>	<i>Managing Agency</i>	<i>Description</i>	<i>Proximity to Proposed Action</i>
Dos Palmas Preserve Area of Critical Environmental Concern (ACEC)	Cooperatively managed by the BLM, the California Department of Parks, the California Department of Fish and Game, and the Center for Natural Lands Management. BLM is the lead partner agency.	The Dos Palmas Preserve ACEC, located on 15,000 acres (6,070 hectares), was established to protect unique biological and cultural resources. Public visitation is encouraged, with several hiking opportunities available.	39 miles (63 km) from LZ C1; 50 miles from LZ Bull
North Algodones Dunes Wilderness Area	BLM	North Algodones Dunes Wilderness Area is 26,000 acres (10,522 hectares) of large sand dunes. Recreational activities allowed include camping, hiking/backpacking, horseback riding, hunting, and wildlife viewing.	5 miles (8 km) from LZ Bull and LZ Sparrow
Chuckwalla Desert Wildlife Management Area ACEC	BLM	This area was established to protect the federally listed desert tortoise.	4 miles (6 km) from LZ Pelican and LZ Bull
Imperial Sand Dunes Recreation Area	BLM	Imperial Sand Dunes Recreation area is located on 159,072 acres (64,374 hectares). The primary use is camping and OHV use. Other uses include photography, hiking, backpacking, nature studies, walking, hunting, rock collecting, right-of-way use for utility lines, canals and roads, filming, conservation activities, and horseback riding (BLM 2003).	2 miles (3 km) from LZ Sparrow
San Sebastian Marsh/San Felipe Creek ACEC	BLM	This ACEC primarily protects biological resources (i.e., critical habitat for the federally endangered desert pupfish). San Felipe Creek is also a registered National Natural Landmark. San Sebastian Marsh is closed to vehicle use, but open to hiking and is a popular area for nature study.	12 miles (19 km) from LZ C1
West Mesa ACEC	BLM	This ACEC primarily protects cultural and biological resources. The main uses include OHV, camping, hunting, biking, and horseback riding.	4 miles (6 km) from LZ C1
<i>Source:</i> USGS 2010			

Under Alternative 1, the overall number of proposed operations at the Cleveland National Forest is expected to decrease slightly compared to existing conditions (from 452 to 422 annual sorties), while the number of overall landings is expected to increase slightly (from 2,132 to 2,205 annual landings). Proposed operations on USFS land covered under this EA would not include ground troop movements or training, refueling operations, or the use of flares or ordnance. Ground access and travel is not affected by this proposed action; therefore, no direct spatial or temporal impacts to availability of recreational opportunities would

occur under this alternative. In addition, established airspace and existing LZ footprints would not be expanded with implementation of Alternative 1. The USMC would obtain a special use authorization from the Cleveland National Forest, Trabuco Ranger District concerning the use of National Forest System lands for military activity. The continued and newly proposed training operations (i.e., landing and takeoff operations) would be consistent with existing training operations within the Cleveland National Forest and would comply with the established Forest Plan and with proposed Land Management Plan amendments (USFS 2012b). Therefore, no significant impact to land use would occur.

The continued flight activity by the existing rotary wing inventory and new use by the MV-22B aircraft within the Cleveland National Forest would result in aircraft noise and dust generation within the proposed LZs and over adjacent lands during landing and takeoff operations. Because the overall number of proposed annual sorties and annual landings at the Cleveland National Forest is expected to change slightly compared to existing conditions (30 less annual sorties and 73 additional annual landings), Alternative 1 would result in only minor changes in noise exposure and dust generation from existing conditions, as described below.

As described in section 3.2 (*Noise*), the highest noise levels associated with proposed operations would be within about 600 feet (180 meters) of each LZ (see Figure C1-7 in Appendix C for the noise contours at LZ Site 6 / LZ Site 6 Alt). The primary impact of noise from aircraft overflight on human populations would be annoyance. Quietness and naturalness is an intrinsic part of some recreational experiences. Reactions to noise in a recreational setting vary. During routine training, aircraft activities at the proposed LZs would occur in low numbers and would be generally dispersed over broad geographic areas. Regular, repeated, or continuous exposure to aircraft-generated noise would be unlikely because routine training operations would vary on a daily basis. Therefore, the proposed impacts to land use and recreation due to aircraft noise at any individual LZ would be minimal and would be consistent with Forest Plan guidelines and Recreation Opportunity Spectrum (ROS) objectives for Back Country and Back Country, Non-Motorized land use zones.

Regarding dust generation, rotor wash from aircraft landing, takeoff, and hovering operations would result in dust and debris being scattered and becoming airborne in the immediate vicinity of the aircraft, although the extent of this dust disturbance would depend on local soil characteristics, presence of vegetation, and weather conditions. Dust would be visible to recreational users in the general area within sight of the LZ, but the airborne dust would disperse quickly and would likely be visible for only a few minutes (see Figure 3.10-1 in section 3.10, *Aesthetics*).

Although disturbance of recreation activities (e.g., hiking, biking, etc.) near the LZs could occur, it would be short-term, consisting of isolated and infrequent landing and takeoffs operations, and of low intensity (i.e., low numbers of aircraft). On approach to an LZ, pilots would perform clearance passes of each LZ before landing, and pilots would not land, or attempt to land, if civilians are present, consistent with standard avoidance measures used to minimize annoyance of persons on the ground (OPNAVINST 2710.7U subsection 5.5 [*Reducing Flight-Related Disturbances*]). Although recreation within the project area occurs throughout the week, scheduling would result in automatic separation of flight operations from weekend public recreation. Therefore, the potential for impacts on recreation is somewhat reduced. Given these characteristics, routine training activities would not be expected to result in permanent alteration of the area's recreation opportunity; therefore, activities would not result in a significant impact to recreation.

BLM El Centro Managed Lands

Alternative 1 would allow continued military training operations on public lands managed by the BLM El Centro Field Office, including the use of 13 designated LZs. No construction activities are proposed under Alternative 1. Therefore, no construction-related impacts to land use and recreation would occur.

Training operations for rotary wing aircraft would continue at approximate current levels except that CH-46E operations would decline over time (see Table 2.2-1). In addition, 1,814 MV-22B annual sorties would be added, which would increase the total number of annual sorties and LZ landings by over 300 percent compared to existing conditions for this area. Proposed operations on BLM land covered under this EA would not include ground troop movements or training, refueling operations, or the use of flares or ordnance. Ground access and travel is not affected by this proposed action; therefore, no direct spatial or temporal impacts to availability of recreational opportunities would occur under this alternative. In addition, established airspace and existing LZ footprints would not be expanded with implementation of Alternative 1. The types of landing and takeoff operations addressed under Alternative 1 are consistent with BLM's definition of "casual use level of activity." By definition, casual use activities do not have any adverse safety impacts on other public land uses, and have only minimal or transient environmental effect on relatively small areas of public land. Activities that qualify under casual use require no authorization from BLM. The continued and newly proposed training operations (i.e., landing and takeoff operations) would be consistent with existing training operations within land managed by the BLM El Centro Field Office and would be in conformance with the BLM's mandate to manage BLM land for multiple uses as outlined in the FLPMA. Therefore, no significant impact to land use would occur.

The continued flight activity by the existing rotary wing inventory and new use by the MV-22B aircraft within the public lands managed by the BLM El Centro Field Office would result in aircraft noise and dust generation within the proposed LZs and over adjacent lands during landing and takeoff operations. The overall number of proposed annual sorties and landings is expected to increase by over 300 percent compared to existing conditions (from about 483 to 2,080 annual sorties and from 2,760 to 13,656 annual landings). Therefore, Alternative 1 would result in an increase in noise exposure and dust generation compared to existing conditions, as described below.

As described in section 3.2 (*Noise*), the highest noise levels associated with proposed operations would be within about 650 feet (198 meters) of each LZ (see Figure CI-8 in Appendix C for the noise contours at an example BLM El Centro LZ). As described above for the Cleveland National Forest, the primary impact of noise from aircraft overflight on human populations would be annoyance. Quietness and naturalness is an intrinsic part of some recreational experiences. Reactions to noise in a recreational setting vary. During routine training, aircraft activities at the proposed LZs would occur in low numbers and would be generally dispersed over broad geographic areas. Regular, repeated, or continuous exposure to aircraft-generated noise would be unlikely because routine training operations would vary on a daily basis. Therefore, the proposed impacts to land use and recreation due to aircraft noise at any individual LZ would be minimal and would be consistent with BLM guidelines for casual use level of activity.

Regarding dust generation, rotor wash from aircraft landing, takeoff, and hovering operations would result in dust and debris being scattered and becoming airborne in the immediate vicinity of the aircraft, although the extent of this dust disturbance would depend on local soil characteristics, presence of vegetation, and weather conditions. Dust would be visible to recreational users in the general area within sight of the LZ, but the airborne dust would disperse quickly and would likely be visible for only a few minutes (see Figure 3.10-1 in section 3.10, *Aesthetics*).

Although disturbance of recreation activities (e.g., hiking, biking, etc.) near the LZs could occur, it would be short-term, consisting of isolated and infrequent landing and takeoff operations, and of low intensity (i.e., low numbers of aircraft). On approach to an LZ, pilots would perform clearance passes of each LZ before landing, and pilots would not land, or attempt to land, if civilians are present, consistent with standard avoidance measures used to minimize annoyance of persons on the ground (OPNAVINST 2710.7U subsection 5.5 [*Reducing Flight-Related Disturbances*]). Although recreation within the project area occurs throughout the week, scheduling would result in automatic separation of flight operations from weekend public recreation. Therefore, the potential for impacts on recreation is somewhat reduced. Given these

characteristics, routine training activities would not be expected to result in permanent alteration of the area's recreation opportunity; therefore, activities would not result in a significant impact to recreation.

Avoidance, Minimization and/or Mitigation Measures

Because there would be no significant land use or recreation impact, no avoidance, minimization, and/or mitigation measures are required. However, as discussed in section 2.2.1.3 (*Flight Activity within the Cleveland National Forest*), the USMC would work with the USFS to identify and implement appropriate dust abatement measures to minimize fugitive dust emissions. These measures would also reduce the potential for visible dust generation and further reduce the level of visual impacts on recreational users in the Cleveland National Forest.

3.3.2.2 No Action Alternative

Under the No Action Alternative, no USMC rotary wing or tilt-rotor operations would occur on public lands managed by the Cleveland National Forest and the BLM El Centro Field Office. However, other agencies, such as the Sheriff's Department, Fire Department, and the U.S. Navy, may still use the LZs. Therefore, minor impacts to recreation due to noise and dust generation would likely continue within the vicinity of the LZs, although at a lower rate than under existing conditions. Depending on how often the LZs are used by other agencies, this could be a beneficial impact.

APPENDIX D

**AIR QUALITY INFORMATION, DATA & SUPPORTING
DOCUMENTATION**

(Ref. Doc: *USMC Rotary Wing and Tilt-Rotor Training
Operations on Public Lands within Southern California, 2013*)

3.4 Air Quality

Existing air quality at a given location can be described by the concentrations of various pollutants in the atmosphere. Pollutants are defined as two general types: (1) criteria pollutants and (2) toxic compounds. Criteria pollutants have national and/or state ambient air quality standards. The U.S. Environmental Protection Agency (USEPA) establishes the National Ambient Air Quality Standards (NAAQS), while the California Air Resources Board (ARB) establishes the state standards, termed the California Ambient Air Quality Standards (CAAQS). The NAAQS represent maximum acceptable concentrations that generally may not be exceeded more than once per year, except the annual standards, which may never be exceeded. The CAAQS represent state maximum acceptable pollutant concentrations that are not to be equaled or exceeded. The national and state ambient air quality standards are shown in Table 3.4-1.

Table 3.4-1. California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards ^d	
			Primary ^{b,c}	Secondary ^{b,d}
O ₃	1-hour	0.09 ppm (180 µg/m ³)	—	—
	8-hour	0.070 ppm (137 µg/m ³)	0.075 ppm (147 µg/m ³)	Same as primary
CO	8-hour	9 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	—
	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	—
NO ₂	Annual	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	Same as primary
	1-hour	0.18 ppm (339 µg/m ³)	0.10 ppm (188 µg/m ³)	—
SO ₂	3-hour	—	—	0.5 ppm (1,300 µg/m ³)
	1-hour	0.25 ppm (655 µg/m ³)	0.075 ppm (105 µg/m ³)	—
PM ₁₀	Annual	20 µg/m ³	—	—
	24-hour	50 µg/m ³	150 µg/m ³	Same as primary
PM _{2.5}	Annual	12 µg/m ³	15 µg/m ³	—
	24-hour	—	35 µg/m ³	—
Lead	Rolling 3-month average	—	0.15 µg/m ³	Same as primary
	Quarterly Average	—	1.5 µg/m ³	Same as primary
	30-day average	1.5 µg/m ³	—	—

Notes:

- Standards other than the 8-hour O₃, 24-hour PM₁₀, 24-hour PM_{2.5}, and those based on annual averages are not to be exceeded more than once a year.
- Concentrations are expressed first in units in which they were promulgated. Equivalent units given in parenthesis.
- Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

O₃ = ozone; CO = carbon monoxide; NO₂ = nitrogen dioxide; SO₂ = sulfur dioxide; PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 2.5 microns in diameter; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter

Source: ARB 2010

Toxic air contaminants are compounds that have been determined to represent some level of acute or chronic health risk (cancer or non-cancer) to the general public. Units of concentration for these pollutants are generally expressed in parts per million (ppm) or micrograms per cubic meter (µg/m³).

The main pollutants of concern considered in this air quality analysis include volatile organic compounds (VOCs), ozone (O₃), carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter less than 10 microns in diameter (PM₁₀), and particulate matter less than 2.5 microns in diameter (PM_{2.5}). Although

VOCs or NO_x (other than nitrogen dioxide [NO₂]) have no established ambient standards, they are important as precursors to O₃ formation.

3.4.1 Affected Environment

Air emissions produced from the proposed action would affect air quality within the proposed Cleveland National Forest and BLM El Centro training areas and aircraft flight routes between these areas and aircraft basing locations in San Diego County. The analysis of proposed aircraft operations is limited to emissions that would occur within the lowest 3,000 feet (914 meters) of the atmosphere, as this is the typical depth of the atmospheric mixing layer where emissions released into this layer could affect ground-level pollutant concentrations. Emissions released above the mixing layer generally would not appreciably affect ground-level air quality. Since project helicopters would transit within 3,000 feet (914 meters) above ground level in San Diego County, this analysis considers the impact of emissions generated by this operation within this region, in addition to project impacts within the Cleveland National Forest and BLM El Centro project regions.

Identifying the region of influence for air quality requires knowledge of the pollutant type, source emission rates, the proximity of project emission sources to other emission sources, and local and regional meteorology. For inert pollutants (such as CO or dust particulates), the region of influence is generally limited to a few miles downwind from a source. The region of influence for reactive pollutants such as O₃ may extend much farther downwind than for inert pollutants. Ozone is formed in the atmosphere by photochemical reactions of previously emitted pollutants called precursors. Ozone precursors are mainly NO_x and photochemically reactive organic compounds, or VOCs. In the presence of solar radiation, the maximum effect of precursor emissions on O₃ levels usually occurs several hours after they are emitted and many miles from their source.

3.4.1.1 Regulatory Framework

The Federal Clean Air Act of 1970 (the CAA) and its subsequent amendments establish air quality regulations and the NAAQS and delegate the enforcement of these standards to the states. In California, the ARB is responsible for enforcing air pollution regulations. The ARB has in turn delegated the responsibility of regulating stationary emission sources to regional air agencies. The CAA establishes air quality planning processes and requires areas in nonattainment of a NAAQS to develop a State Implementation Plan (SIP) that details how the state will attain the standard within mandated time frames. The requirements and compliance dates for attainment are based on the severity of the nonattainment classification of the area. The following summarizes the air quality rules and regulations that apply to the proposed action.

Section 176(c) of the CAA, as articulated in the USEPA General Conformity Rule, states that a federal agency cannot issue a permit or support an activity unless the agency determines that it will conform to the most recent USEPA-approved SIP. This means that projects using federal funds or requiring federal approval in nonattainment or maintenance areas must not (1) cause or contribute to any new violation of a NAAQS, (2) increase the frequency or severity of any existing violation, or (3) delay timely attainment of any standard, interim emission reduction, or other milestone. Conformity determinations are required when the annual direct and indirect emissions from a federal action exceed an applicable *de minimis* threshold. Applicable *de minimis* levels vary by pollutant and the severity of nonattainment conditions.

The ARB is responsible for the coordination and administration of both federal and state air pollution control programs within California and implementation of the California Clean Air Act (CCAA). The CCAA required the ARB to establish the CAAQS (see Table 3.4-1). In general, the CAAQS are at least as stringent as the NAAQS. The CCAA requires local air districts in the state to achieve and maintain the

CAAQS by the earliest practical date. The CCAA specifies that local air districts should focus particular attention on reducing emissions from transportation and area-wide emission sources, and it gives districts the authority to regulate indirect sources of emissions.

Greenhouse Gases

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere by absorbing infrared radiation. Without this natural greenhouse effect, the average surface temperature of the Earth would be about 60°F (15.5°C) colder (U.S. Global Change Research Program 2009). Scientific evidence indicates a trend of increasing global temperature over the past century due to an increase in GHG emissions from human activities. The climate change associated with this global warming is predicted to produce environmental, economic, and social consequences across the globe.

Greenhouse gas emissions occur from natural processes and human activities. Water vapor is the most important and abundant GHG in the atmosphere. However, human activities produce only a very small amount of the total atmospheric water vapor. The most common GHGs emitted from natural processes and human activities include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). The main source of GHGs from human activities is the combustion of fossil fuels, such as crude oil and coal. Examples of GHGs created and emitted primarily through human activities include fluorinated gases (hydrofluorocarbons and perfluorocarbons) and sulfur hexafluoride. These six GHGs (CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) are regulated by the State of California.

Each GHG is assigned a global warming potential (GWP). The GWP is the ability of a gas or aerosol to trap heat in the atmosphere. The GWP rating system is standardized to CO₂, which has a value of one. For example, CH₄ has a GWP of 21, which means that it has a global warming effect 21 times greater than CO₂ on an equal-mass basis (Intergovernmental Panel on Climate Change 2007). To simplify GHG analyses, total GHG emissions from a source are often expressed as a CO₂ equivalent (CO₂e). The CO₂e is calculated by multiplying the emissions of each GHG by its GWP and adding the results together to produce a single, combined emission rate representing all GHGs. While CH₄ and N₂O have much higher GWPs than CO₂, CO₂ is emitted in such higher quantities that it is the overwhelming contributor to CO₂e from both natural processes and human activities.

Recent observed changes due to global warming include rising temperatures, shrinking glaciers and sea ice, thawing permafrost, a lengthened growing season, and shifts in plant and animal ranges. International, national, and state organizations independently confirm these findings (Intergovernmental Panel on Climate Change 2007; U.S. Global Change Research Program 2009; California Energy Commission 2009).

The most recent *California Climate Change Scenarios Assessment* predicts that temperatures in California will increase between 3°F to 10.5°F (1.7°C to 5.8°C) by 2100, based upon low and high GHG emission scenarios (California Energy Commission 2009). Predictions of long-term negative environmental impacts due to global warming include sea level rise, changing weather patterns with increases in the severity of storms and droughts, changes to local and regional ecosystems including the potential loss of species, and a substantial reduction in winter snow pack. In California, predictions of these effects include exacerbation of air quality problems, a reduction in municipal water supply from the Sierra snowpack, a rise in sea level that would displace coastal businesses and residences, an increase in wild fires, damage to marine and terrestrial ecosystems, and an increase in the incidence of infectious diseases, asthma, and other human health problems (California Energy Commission 2009).

Federal agencies on a national scale address emissions of GHGs by reporting and meeting reductions mandated in federal laws, Executive Orders (EOs), and agency policies. The most recent of these are EOs 13423 and 13514 and the *USEPA Final Mandatory Reporting of Greenhouse Gases Rule*. Several states

have promulgated laws as a means of reducing statewide levels of GHG emissions. In particular, the California Global Warming Solutions Act of 2006 (AB32) directs the State of California to reduce statewide GHG emissions to 1990 levels by the year 2020. Groups of states also have formed regionally-based collectives (such as the Western Climate Initiative) to jointly address GHG pollutants.

In an effort to reduce energy consumption, reduce dependence on petroleum, and increase the use of renewable energy resources in accordance with the goals set by EO 13423 and the Energy Policy Act of 2005, the DoN and USMC have implemented a number of renewable energy projects (NAVFAC 2006). The types of projects currently in operation within the NAVFAC Southwest region include thermal and photovoltaic solar systems, geothermal power plants, and wind generators. The military also purchases one-half of the biodiesel fuel sold in California. The DoN and USMC continue to promote and install new renewable energy projects within the NAVFAC Southwest region.

On 18 February 2010, the CEQ proposed for the first time draft guidance on how federal agencies should evaluate the effects of climate change and GHG emissions for NEPA documentation (CEQ 2010). The CEQ does not propose a reference point as an indicator of a level of GHG emissions that may significantly affect the quality of the human environment. In the analysis of the direct effects of a proposed action, the CEQ proposes that it would be appropriate to 1) quantify cumulative emissions over the life of the project; 2) discuss measures to reduce GHG emissions, including consideration of reasonable alternatives; and 3) qualitatively discuss the link between such GHG emissions and climate change. The CEQ accepted public comments on the draft guidance through 24 May 2010, and it is expected to issue final guidance in the near future.

The potential effects of proposed GHG emissions are by nature global and cumulative impacts because individual sources of GHG emissions are not large enough to have an appreciable effect on climate change. Therefore, the impact of proposed GHG emissions to climate change is discussed in the context of cumulative impacts, as presented in section 4.3.4 of this EA. Appendix B presents estimates of GHG emissions generated by the proposed action.

3.4.1.2 Cleveland National Forest

The Cleveland National Forest project area is located within the South Coast Air Basin (SCAB), which consists of Orange County and the urbanized areas of Los Angeles, Riverside, and San Bernardino Counties. Due to the combined air pollution sources from over 15 million people and meteorological and geographical effects that limit the dispersion of these pollutants, the SCAB can experience high air pollutant concentrations. Primary emissions transported from the SCAB are the main contributors to pollutant levels in the Cleveland National Forest project area. In addition, elevated levels of fugitive dust (PM₁₀ and PM_{2.5}) occasionally occur in localities within the project region due to the operation of vehicles on unpaved surfaces and the erosion of exposed earth surfaces during high wind events.

The USEPA designates all areas of the U.S. as having air quality better than (attainment) or worse than (nonattainment) the NAAQS (USEPA 2011a). A nonattainment designation generally means that a primary NAAQS has been exceeded more than once per year in a given area. With respect to the NAAQS, the SCAB presently is classified as extreme nonattainment for O₃, serious nonattainment for PM₁₀, nonattainment for PM_{2.5}, and in attainment for SO₂. The SCAB is also a maintenance area for NO₂ and CO. Based upon these designations, the applicable annual conformity *de minimis* thresholds for the Cleveland National Forest project area are (1) 10 tons of VOCs and NO_x, (2) 70 tons of PM₁₀, and (3) 100 tons of CO and PM_{2.5} (40 CFR Section 51.853(b)).

The ARB also designates areas of the state as either in attainment or nonattainment of the CAAQS (ARB 2011). An area is in nonattainment for a pollutant if its CAAQS has been exceeded more than once in three

years. With respect to the CAAQS, the SCAB presently is in extreme nonattainment for O₃ and nonattainment for PM₁₀ and PM_{2.5}.

Air quality within the SCAB and the project region has improved since the inception of air pollutant monitoring in 1976 by the South Coast Air Quality Management District (SCAQMD) (SCAQMD 2012). This improvement is due to the implementation of stationary source emission reduction strategies by the SCAQMD and lower-polluting on-road motor vehicles. This trend towards cleaner air has occurred in spite of continued population growth. For example, the number of days when O₃ concentrations monitored in the SCAB exceeded the 8-hour national standard (0.075 ppm) was 234 in 1979 and lowered to 109 in 2010 (SCAQMD 2012).

In the SCAB, the local air agency is the SCAQMD. The SCAQMD has developed air quality plans that are designed to bring the region into attainment of the national and state ambient air quality standards. Through this attainment planning process, the SCAQMD develops the *SCAQMD Rules and Regulations* to regulate stationary sources of air pollution in the SCAB (SCAQMD 2011). The applicable SCAQMD rules that would apply to the proposed action include the following:

- **SCAQMD Rule 402 – Nuisance.** This rule prohibits the discharge of air contaminants or other materials that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or have a natural tendency to cause injury or damage to business or property.
- **SCAQMD Rule 403 – Fugitive Dust.** The purpose of this Rule is to control the amount of particulate matter entrained in the atmosphere from man-made sources of fugitive dust. The rule prohibits emissions of fugitive dust from any active operation or disturbed surface area to be visible beyond the property line of an emission source. The rule requires any active operation to utilize applicable best available control measures to minimize fugitive dust emissions within the active operation.
- **SCAQMD Rule 1901 – General Conformity.** This rule implements the provisions of the USEPA General Conformity Rule.

The USFS implements a Land Management Plan for the Cleveland National Forest that includes objectives to promote sustainability and good health (social, economic and ecological) of the national forest (USFS 2005a). This plan proposes the following program strategies that pertain to air quality:

- **Air 1 - Minimize Smoke and Dust.** This strategy proposes to control and reduce smoke and fugitive dust to protect human health, improve safety and/or reduce or eliminate environmental impacts. The strategy would incorporate visibility requirements into project plans.
- **Air2 - Forest Air Quality Emissions.** This strategy would maintain and update the inventory for wildland fire emissions and other forest resource management emissions within the current SIP. The strategy would provide input to the SCAQMD on regional air quality issues for forest protection.

Air emissions due to current USMC rotary wing operations within the Cleveland National Forest project area occur from (1) the combustion of aviation fuel and (2) fugitive dust (PM₁₀/PM_{2.5}) generated from pad landings on exposed soils. Operational data used to estimate emissions from current operations are consistent with those evaluated in the noise analyses of this EA (see section 3.2, *Noise*), and include pad landings and cruising operations below 3,000 feet (914 meters) above ground level. Factors needed to derive helicopter engine emission rates were obtained from the Navy Aircraft Environmental Support Office (AESO) (AESO 2000a, 2000b, 2001a, 2001b, 2009a, 2009b, 2009c, and 2011). Fugitive dust

emissions generated by helicopter rotor wash during pad landings were estimated with methods identified in special studies conducted by the USEPA (USEPA 2006), soil conditions described in the project surveys conducted for the proposed LZs (SAIC 2012a, 2012b), and observations of dust emissions generated by helicopters at the existing LZs. Appendix B presents the methods used to estimate emissions from current USMC rotary wing operations within each project region.

Table 3.4-2 summarizes the annual air emission estimates for current USMC rotary wing operations within the Cleveland National Forest project region. These data show that helicopter pad landings generate the majority of combustive emissions from any type of operation. In addition, the main source of PM₁₀ emissions occurs from fugitive dust generated by rotor wash on exposed soils.

Table 3.4-2. Annual Emissions from Current Helicopter Operations within the Cleveland National Forest Project Region

Activity Type	Air Pollutant Emissions (Tons per Year)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Transit within the SCAB	0.03	0.29	0.19	0.01	0.11	0.11
Pad Landings	0.17	1.19	1.01	0.06	0.54	0.54
Fugitive Dust	-	-	-	-	0.16	0.02
Cruise (Non CAL Sorties)	0.02	0.26	0.19	0.01	0.11	0.11
Total Emissions	0.22	1.74	1.38	0.09	0.92	0.78

Notes: The above data pertain to aircraft operations that occur below 3,000 feet above ground level.

3.4.1.3 BLM El Centro Managed Lands

The BLM El Centro project region occurs within the Salton Sea Air Basin (SSAB), which includes all of Imperial County and the southwest third of Riverside County. The arid conditions in the region produce low soil moisture and a high potential for fugitive dust emissions, which is one of the main air pollution issues in the region.

With respect to the NAAQS, the entire Imperial County presently is classified as moderate nonattainment for O₃ and in attainment for CO and SO₂. The western two-thirds of Imperial County, which includes LZs C1 and Wolf in the west and LZs Bull, Pelican, and Sparrow in the east, is in serious nonattainment for PM₁₀. This nonattainment area is known as the Imperial Valley Planning Area (IVPA). Lastly, the south-central portion of Imperial County is in nonattainment for PM_{2.5}. This PM_{2.5} nonattainment area is affected by project helicopters that transit between San Diego County and the LZs in eastern Imperial County. Based on these designations, the applicable annual conformity *de minimis* thresholds for these regions are (1) 100 tons of VOCs, NO_x, and PM_{2.5} and (2) 70 tons of PM₁₀ (40 CFR Section 51.853(b)). With regard to the CAAQS, the SSAB attains the CAAQS for all criteria pollutants except O₃ and PM₁₀.

The local air agency in the BLM El Centro project region is the Imperial County Air Pollution Control District (ICAPCD). The ICAPCD has developed air quality plans that are designed to bring the region into attainment of the national and state ambient air quality standards. Through this attainment planning process, the ICAPCD develops the *ICAPCD Rules and Regulations* to regulate stationary sources of air pollution in Imperial County (ICAPCD 2011).

Table 3.4-3 summarizes the annual air emission estimates for current USMC rotary wing operations within the BLM El Centro project region. These data differentiate emissions into three distinct air quality regions of influence within Imperial County: (1) all of Imperial County to determine compliance with all pollutants except PM₁₀ and PM_{2.5}, (2) the IVPA PM₁₀ and PM_{2.5} nonattainment areas, and (3) the non-IVPA PM₁₀ and PM_{2.5} attainment areas of eastern Imperial County.

Table 3.4-3. Annual Emissions from Current Helicopter Operations within the BLM El Centro Project Region

Activity Type	Air Pollutant Emissions (Tons per Year)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Transit within Imperial County	0.15	1.42	1.23	0.07	0.51	0.51
Pad Landings	0.53	2.54	2.63	0.16	0.88	0.88
Fugitive Dust	-	-	-	-	2.37	0.36
Cruise (Non CAL Sorties)	0.05	0.35	0.46	0.03	0.15	0.15
Total Emissions - Imperial County (1)	0.73	4.22	4.32	0.26	3.91	1.89
Emissions within the IVPA (2)	0.46	2.88	2.86	0.17	2.39	1.25
Emissions outside the IVPA (3)	0.27	1.34	1.47	0.09	1.52	0.64

Notes: The above data pertain to aircraft operations that occur below 3,000 feet above ground level.

1. Project region for all pollutants except PM₁₀ and PM_{2.5}.
2. Portion of Imperial County that does not attain the NAAQS for PM₁₀ or PM_{2.5}.
3. Portion of Imperial County that attains the NAAQS for PM₁₀ and PM_{2.5}.

3.4.1.4 San Diego Air Basin

The San Diego County project region is synonymous with the San Diego Air Basin (SDAB). With respect to the NAAQS, the SDAB presently is classified as in nonattainment for O₃ and in attainment for all other pollutants. The SDAB is also a maintenance area for CO. Based on these designations, the applicable annual conformity *de minimis* thresholds for this region are 100 tons of VOCs, CO, and NO_x (40 CFR Section 51.853(b)). With regard to the CAAQS, the SDAB attains the CAAQS for all criteria pollutants except O₃, PM₁₀, and PM_{2.5}.

The San Diego County Air Pollution Control District (SDCAPCD) has developed air quality plans designed to reduce emissions to a level that will bring the SDAB into attainment of the ambient air quality standards. Control measures for stationary sources proposed in the air quality plans and adopted by the SDCAPCD are incorporated into the *SDCAPCD Rules and Regulations* (SDCAPCD 2011).

Table 3.4-4 summarizes the annual air emission estimates for current project USMC rotary wing aircraft within the SDAB project region. These data pertain to transit activities for flight destinations to both the Cleveland National Forest and BLM El Centro project regions.

Table 3.4-4. Annual Emissions from Current Helicopter Operations within the San Diego Air Basin Project Region

Activity Type	Air Pollutant Emissions (Tons per Year)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Transit to CNF	0.06	0.55	0.36	0.02	0.21	0.21
Transit to Imperial County West LZs	0.02	0.17	0.18	0.01	0.06	0.06
Transit to Imperial County East LZs	0.21	1.50	1.58	0.09	0.51	0.51
Total Emissions	0.29	2.22	2.12	0.12	0.78	0.78

Notes: The above data pertain to aircraft operations that occur below 3,000 feet above ground level.

3.4.2 Environmental Consequences and Mitigation Measures

Project air quality impacts were reviewed for significance compared to federal, state, and local air pollution standards and regulations. For the purposes of the present analysis, if proposed emissions were projected not to exceed an applicable conformity *de minimis* threshold within a project region, then impacts would be less than significant. If proposed emissions were projected to exceed an applicable conformity *de minimis* threshold within a project region, further analysis would be needed to determine whether impacts were significant. In such cases, if emissions conform to the approved SIP, then impacts

would be less than significant. In the case of a criteria pollutant for which a project region attains a NAAQS, the analysis used the USEPA Prevention of Significant Deterioration (PSD) threshold for new major sources of 250 tons per year as an indicator of significance of projected air quality impacts. Although the PSD permitting program is not applicable to mobile sources, PSD thresholds are used as criteria to measure air quality impacts under NEPA.

Air quality impacts from proposed aircraft training operations would occur from the same types of emission sources as those associated with existing helicopter operations. These sources include (1) the combustion of aviation fuel and (2) fugitive dust generated from pad landings on exposed soils. The project air quality impact analyses are based on the net change in emissions between proposed and existing aircraft operations. The analyses focus on the year when replacement of the CH-46E helicopter with the MV-22B aircraft is complete, or 2017.

Emissions from proposed aircraft operations were estimated with the same methods used to calculate emissions from existing helicopter operations. In addition, factors needed to derive proposed MV-22B emission rates were obtained from the AESO (AESO 2001c and 2001d). Appendix B presents the methods used to estimate emissions from aircraft operations proposed under each project alternative.

3.4.2.1 Alternative 1

Table 3.4-5 presents an estimate of the annual emissions that would occur with the implementation of Alternative 1. These data show that implementation would reduce emissions of VOCs and CO within each project region. In addition, Alternative 1 would reduce emissions from aircraft transit operations within the SDAB. This is because the alternative would replace the CH-46E, which transits below 3,000 feet above ground level, with the MV-22B, which would transit well above this level. Lastly, emissions from Alternative 1 would not exceed any applicable conformity *de minimis* or PSD threshold within any project region. Therefore, Alternative 1 would produce less than significant air quality impacts.

Avoidance, Minimization and/or Mitigation Measures

Although emissions from Alternative 1 would not exceed any applicable conformity *de minimis* or PSD threshold within any project region, aircraft pad landings on exposed soils would be a source of localized fugitive dust (PM₁₀ and PM_{2.5}) in the Cleveland National Forest. As discussed in section 2.2.1.3 (*Flight Activity within the Cleveland National Forest*), the USMC would work with the USFS to identify and implement appropriate dust abatement measures to minimize fugitive dust emissions that could temporarily affect local air quality from aircraft pad landings on exposed soils within the Cleveland National Forest. These measures would ensure the project is consistent with the air quality objectives in the Cleveland National Forest Land Management Plan (USFS 2005a).

3.4.2.2 No Action Alternative

Under the No Action Alternative, elimination of existing USMC helicopter operations would result in minor emission reductions within the Cleveland National Forest, BLM El Centro, and San Diego County project regions on the order of those identified in Tables 3.4-2 through 3.4-4. Therefore, the No Action Alternative would produce beneficial but less than significant air quality impacts.

Table 3.4-5. Annual Emissions due to the Operation of the USMC Rotary Wing and Tilt-Rotor Training Activities- Alternative 1

Project Region/Activity	Air Pollutant Emissions (Tons per Year)					
	VOC	CO	NOx	SOx	PM10	PM2.5
<i>Cleveland National Forest</i>						
Transit within the SCAB	0.01	0.16	0.15	0.01	0.09	0.09
Pad Landings	0.09	0.81	4.09	0.14	0.81	0.81
Fugitive Dust	-	-	-	-	0.41	0.06
Cruise (Non CAL Sorties)	0.01	0.16	0.18	0.01	0.09	0.09
Total Proposed Emissions	0.11	1.13	4.42	0.16	1.41	1.05
Existing Emissions	0.22	1.74	1.38	0.09	0.92	0.78
Total Net Change	-0.11	-0.61	3.04	0.07	0.49	0.27
Conformity De Minimis Level	10	100	10	NA	70	NA
<i>Imperial County</i>						
Transit within Imperial County	0.03	0.54	0.97	0.05	-	-
Pad Landings	0.36	2.97	56.68	1.60	-	-
Fugitive Dust	-	-	-	-	-	-
Cruise (Non CAL Sorties)	0.01	0.16	0.77	0.03	-	-
Total Proposed Emissions	0.40	3.67	58.42	1.68	-	-
Existing Emissions	0.73	4.22	4.32	0.26	-	-
Total Net Change	-0.33	-0.55	54.10	1.43	-	-
Conformity De Minimis Level	100	NA	100	NA	NA	NA
<i>Imperial County IVPA</i>						
Transit within IVPA	-	-	-	-	0.33	0.33
Pad Landings	-	-	-	-	3.64	3.60
Fugitive Dust	-	-	-	-	15.98	2.40
Cruise (Non CAL Sorties)	-	-	-	-	0.09	0.09
Total Proposed Emissions	-	-	-	-	20.04	6.42
Existing Emissions	-	-	-	-	2.39	1.25
Total Net Change	-	-	-	-	17.65	5.17
Conformity De Minimis Level	NA	NA	NA	NA	70	100
<i>Imperial County Non-IVPA</i>						
Transit within Non-IVPA	-	-	-	-	0.02	0.02
Pad Landings	-	-	-	-	2.87	2.84
Fugitive Dust	-	-	-	-	12.63	1.89
Cruise (Non CAL Sorties)	-	-	-	-	0.07	0.07
Total Proposed Emissions	-	-	-	-	15.59	4.83
Existing Emissions	-	-	-	-	1.52	0.64
Total Net Change	-	-	-	-	14.07	4.19
Conformity De Minimis Level	NA	NA	NA	NA	NA	NA
<i>San Diego County</i>						
Transit to CNF	0.02	0.30	0.29	0.02	0.17	0.17
Transit to Imperial County West LZs	0.00	0.05	0.16	0.01	0.05	0.05
Transit to Imperial County East LZs	0.03	0.45	1.36	0.07	0.41	0.41
Total Proposed Emissions	0.06	0.80	1.80	0.09	0.62	0.62
Existing Emissions	0.29	2.22	2.12	0.12	0.78	0.78
Total Net Change	-0.23	-1.42	-0.31	-0.03	-0.15	-0.15
Conformity De Minimis Level	100	100	100	NA	NA	NA
Notes: The above data pertain to aircraft operations that occur below 3,000 feet above ground level. "--" before a number indicates a reduction in emissions.						

APPENDIX E

PARTICIPATING MILITARY AIRCRAFT

V-22 “OSPREY” TILT-ROTOR AIRCRAFT (USMC & USAF)



EOTG TACTICAL RECOVERY OF AIRCRAFT & PERSONNEL (TRAP)
CERTIFICATION EXERCISE (CERTEX) - ENVIRONMENTAL ASSESSMENT
PLAYAS TMOA - PLAYAS TRAINING AND RESEARCH CENTER
3 August 2017

HH-60G “PAVE HAWK” HELICOPTER
(USAF)



HC-130J “HERCULES” (REFUELER)
(USMC & USAF)



EOTG TACTICAL RECOVERY OF AIRCRAFT & PERSONNEL (TRAP)
CERTIFICATION EXERCISE (CERTX) - ENVIRONMENTAL ASSESSMENT
PLAYAS TMOA - PLAYAS TRAINING AND RESEARCH CENTER
3 August 2017

F/A-18 C-D HORNET (USMC)



F-16 C FALCON (USAF)



A-10 WARTHOG (USAF)



EOTG TACTICAL RECOVERY OF AIRCRAFT & PERSONNEL (TRAP)
CERTIFICATION EXERCISE (CERTEX) - ENVIRONMENTAL ASSESSMENT
PLAYAS TMOA - PLAYAS TRAINING AND RESEARCH CENTER
3 August 2017

APPENDIX B

FAA Finding of No Significant Impact

For

USMC Tactical Recover of Aircraft & Personnel (TRAP)
Training and Readiness Certification Exercise (CERTEX)
Playas Temporary Military Operating Area (Playas TMOA)
Environmental Assessment

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

ADOPTION ENVIRONMENTAL ASSESSMENT and

FINDING OF NO SIGNIFICANT IMPACT

AND RECORD OF DECISION FOR

Establishing the Playas Temporary Military Operation Area

New Mexico

August 2017

Introduction

This document serves as the Federal Aviation Administration's (FAA) adoption of the airspace portion of the U.S. Marine Corps (USMC) Tactical Recovery of Aircraft and Personnel (TRAP) and Training Readiness Certification Exercise (CERTEX) for Playas, Temporary Military Operations Area (TMOA) Environmental Assessment (EA or *Playas EA*) (August 3 2017), Finding of no Significant Impact (FONSI) and Record of Decision.

The USMC's EA analyzed the potential environmental impacts associated with the temporary activation of FAA controlled airspace over the Playas, New Mexico Training and Research Center (PTRC).

The FONSI provides the environmental impact determination and resulting decisions. Pursuant to section 102(C) of the National Environmental Policy Act (NEPA) of 1969, and the Council on Environmental Quality (CEQ) regulations (40 CFR parts 1500-1508), the FAA announces its decision to adopt the TRAP-CERTEX Playas TMOA and FONSI for the purpose of temporary activation of the airspace over the PTRC to allow for a Training and Readiness Certification Exercise.

Background

On March 24, 2017, the FAA received a formal airspace proposal from the USMC for Playas, New Mexico. The letter requested the formal participation of the FAA as a cooperating agency in an EA for the creation of a TMOA at Playas, New Mexico.

A MOA is airspace designated outside of Class A airspace, to separate or segregate certain nonhazardous military activities from Instrument Flight Rules (IFR) traffic and to identify for Visual Flight Rules (VFR) traffic where these activities are conducted. MOAs are designed to contain nonhazardous, military flight activities including, but not limited to, air combat maneuvers, air intercepts, low altitude tactics, etc. According to FAA Order 7400.2L, Chapter 25, Section 25-1-7, a temporary MOA is defined as:

- a.** Temporary MOAs are designated to accommodate the military's need for additional airspace to periodically conduct exercises that supplement routine training. When existing airspace is inadequate to accommodate these short-term military exercises, temporary MOAs may be established for a period not to exceed 45 days. On a case-by-case basis, Airspace Regulations

and ATC Procedures Group may approve a longer period if the proponent provides justification for the increase.

b. When it is determined that the need for a temporary MOA will occur on a regular and continuing basis, the airspace should be considered for establishment as a permanent MOA with provisions **for activation by NOTAM/Special Notice** disseminated well in advance of scheduled exercises.

c. Once a temporary MOA is approved, the military must be responsible for publicizing the exercise within 100 miles of the affected airspace. The publicity may be accomplished through the public media, pilot forums, distribution of information bulletins to known aviation interests, etc.

As a cooperating agency, the FAA provided subject matter expertise to the USMC during its environmental review process. In accordance with FAA Order 1050.1F "*Policies and Procedures for Considering Environmental Impacts*," Paragraph 8-2.a, the FAA has independently evaluated the information contained in the USMC's proposal and reviewed the methodologies used by the USMC in examining impact categories outlined in FAA Order 1050.1F, and takes full responsibility for the scope and content that address FAA actions and the USMC's proposed use of FAA controlled airspace. The FAA evaluation also included all impact categories required by NEPA, and has found those to be in accordance with NEPA and its implementing regulations 40 CFR Part 1500-1508 and FAA Order 1050.1F.

Airspace Proposal

After consultation with the Central Service Center, the USMC submitted a proposal for the creation of a TMOA in June 2017. The USMC and U. S. Air Force (USAF) are requesting temporary activation of the Playas TMOA for a period not-to-exceed (NTE) 5 total hours for one day to conduct TRAP-CERTEX military training and readiness operations in support of a joint USMC-USAF training and readiness TRAP-CERTEX to be conducted at the PTRC. The PTRC is a developed commercial facility, located in Grant and Hidalgo Counties in the southwestern corner of New Mexico. The PTRC provides realistic military training immersion in a simulated environment and was established as a primary training and readiness support facility for the Department of Homeland Security, local and state law enforcement agencies, and Department of Defense military and associated national defense/security forces. The Playas TMOA is a 20NM x 20NM block of special use airspace above the PTRC.

Proposed Federal Action

FAA's proposed action is to provide temporary activation of the Playas TMOA for a period not to exceed 5 total hours for one day to conduct TRAP CERTEX military training and readiness operations. For scheduling of exercise execution, refer to the schedule on page 8 of the *Playas EA*. For specific dimensions of the requested TMOA, see Figure 3 of the *Playas EA*, August, 2017. The project location can be seen in Figures 1 and 2, below.

Figure 1:

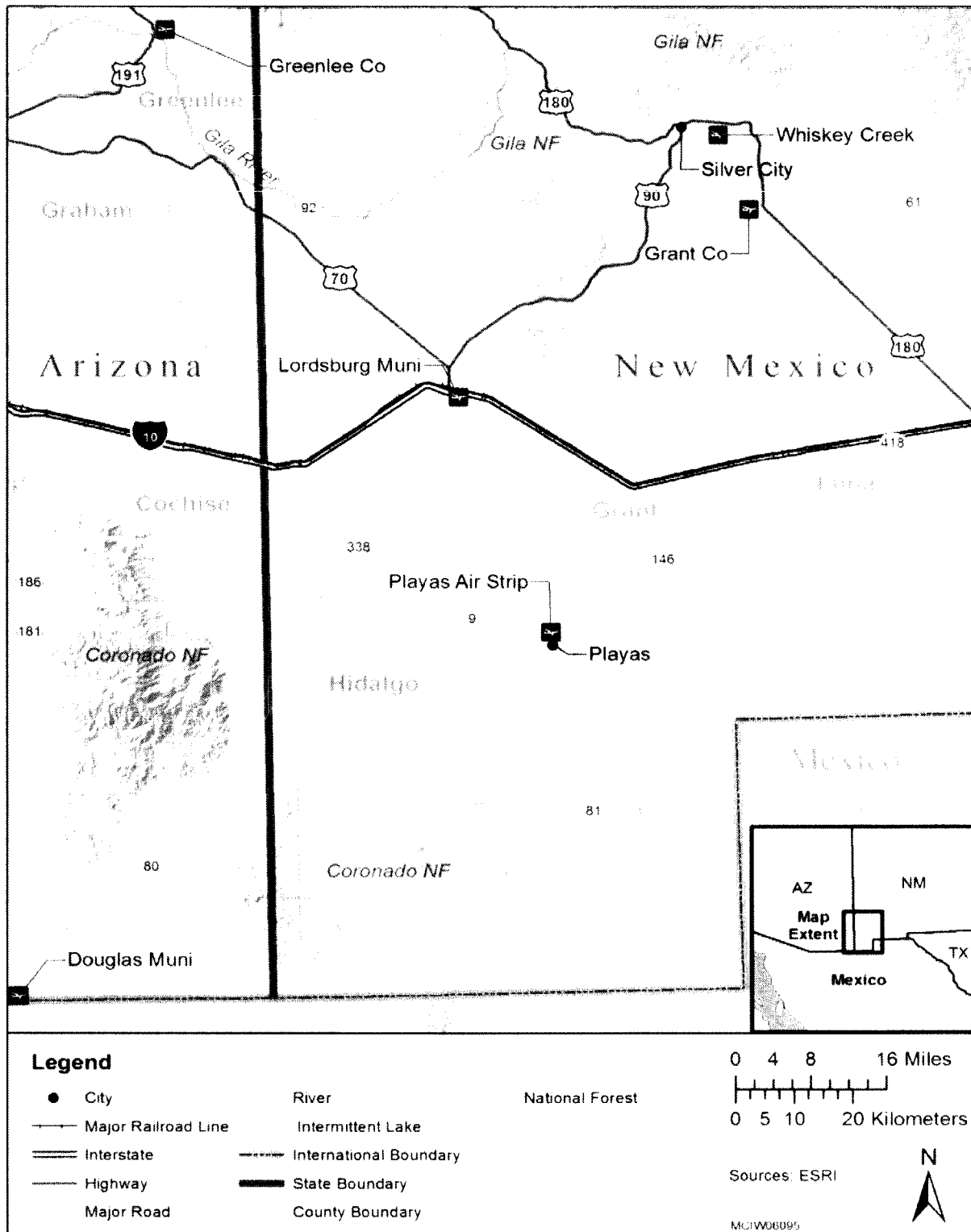
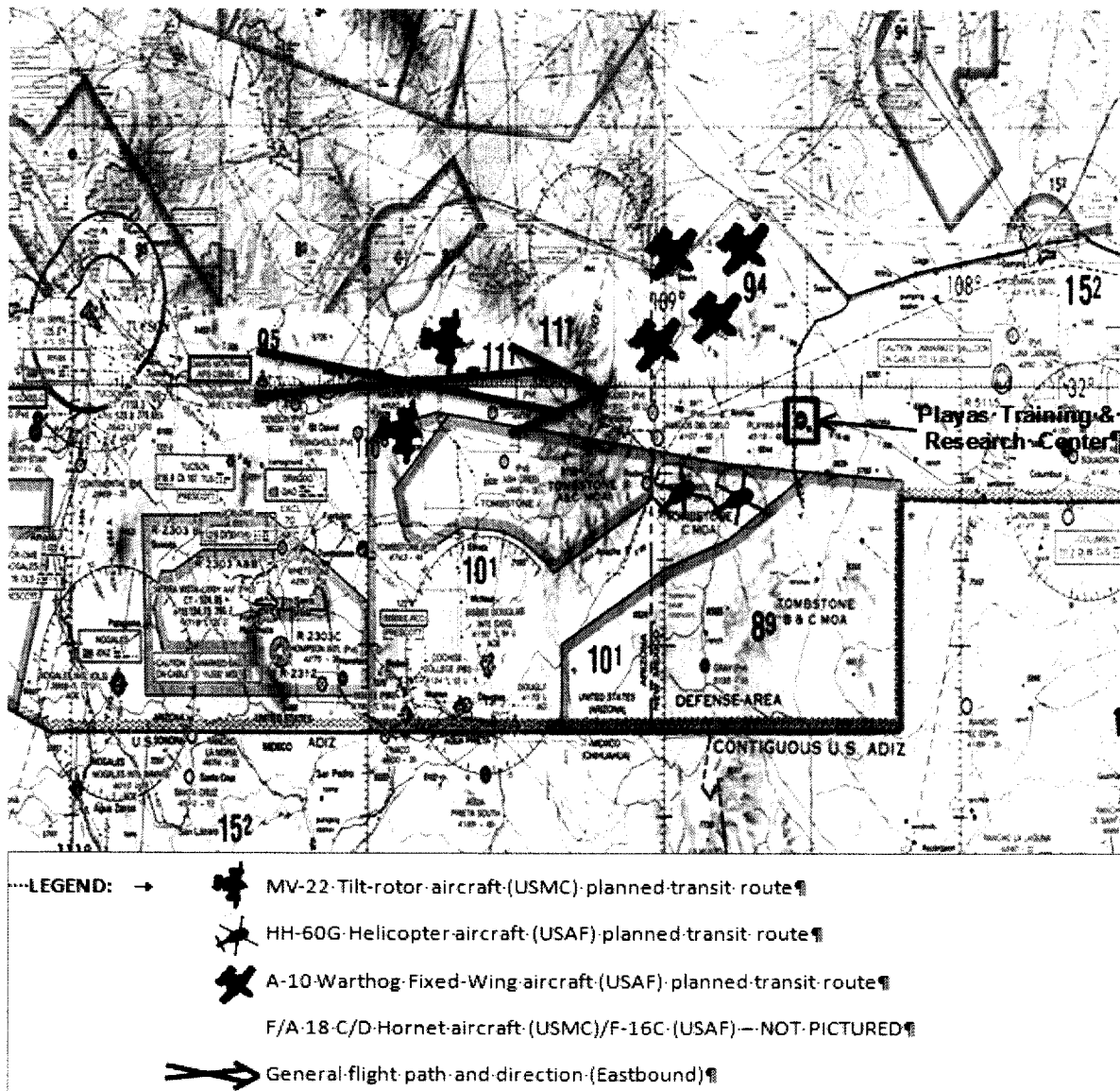


FIGURE 2: PLAYAS TEMPORARY MOA---AIRSPACE VICINITY MAP



Purpose and Need

The purpose of the TRAP CERTEX is to provide realistic training to integrate air and ground forces in a joint USAF and USMC exercise. The TRAP CERTEX will provide the Special Purpose Marine Air Ground Task Force (SPMAGTF) an opportunity to conduct training in an unfamiliar environment during the final phase of its pre-deployment program. During CERTEX, the Special Purpose Marine Air Ground Task Force Crisis Response Central Command (SPMAGTF-CR-CC) will be required to perform a series

of challenging and realistic training events to test its ability to conduct conventional and specialized missions, both in the air and on the ground. The TRAP CERTEX is one of the planned training events requiring select members of the USMC and USAF to fully plan and execute the (TRAP) during a 5-hour time block between 09 and 10 August 2017.

The need for the USMC's Proposed Action is to meet the pre-deployment training and readiness requirements of the SPMAGTF-CR-CC CERTEX for Marine Expeditionary Unit (MEU) deployment. The activation of the Playas TMOA ensures the SPMAGTF-CR-CC CERTEX can be conducted with minimal risk to the operating forces, while managing risk to public health and safety (general aviation community).

Alternatives

The NEPA, Council on Environmental Quality (CEQ), and FAA regulations (40 CFR 1502.14) require consideration of a No Action Alternative. Detailed environmental impact analysis was therefore completed for two alternatives: the No Action Alternative and the Proposed Action.

Based on the results of the *Playas EA*, the Proposed Action alternative was chosen as the preferred alternative.

Environmental Impacts

The following section contains the results of the FAA's independent evaluation regarding the potential environmental impacts associated with the Proposed Action:

Noise:

The *Playas EA* states that existing sources of noise at the PTRC are background or ambient noise associated with a small, rural town with a limited population, except when in use by a variety of end user groups (i.e., DOD, DHS, ICE, local law enforcement, etc.). When not in use, noise levels typically range from 48 to 60 dBA in the daytime and 42 to 54 dBA at night (USAF, Angel Thunder EA, May 2017, Table 3-3). When in use, aircraft operations make up much of the noise, as would be the case during the proposed action. Rotary wing and/or tilt-rotor aircraft would be audible to individuals under the flight path and within several hundred to a few thousand feet of the activities being conducted on/near the ground, particularly upon approach to and departure from a helicopter landing zone (HLZ). This would be particularly so at night, and in remote areas, where ambient noise levels are generally lower than in larger, more populated areas, especially daytime. That said, there are no night aviation operations (other than the "staging" of a downed pilot the evening before CSAR activities) are planned for the proposed action. Any audible noise would be temporary and transient, however, lasting only a few to several minutes at a given time. Ground activities would be limited to not more than two hours, being restricted to search and rescue operations by small, squad-sized units, with only two actual landings (one tactical insertion and one tactical extraction) by two MV-22 aircraft. While an increase is anticipated during landings and take-off, this would be a short-term, transitory effect that is consistent with the baseline conditions of a commercial training and research facility such as the PTRC.

Playas Temporary Military Operating Area (TMOA): Existing aircraft activities in the airspace above the PTRC facility are a mix of private (general aviation); local, state, or other federal agency; and/or military aircraft. These existing sources of noise are consistent with known, FAA-approved flight routes, and

often associated with small, rural, and/or outlying airfields, private airstrips, and auxiliary fields that see little activities, therefore noise is isolated and episodic, in nature.

Existing sources of noise within southern New Mexico, in general, consist of flight activities primarily involving occasional fixed-wing military aircraft (i.e., F-16s, A-10s and similar) flying at a range of altitudes and speeds. Examples of specific flight activities often include air combat maneuvering above 25,000 feet above ground level (AGL); flights of two or four aircraft flying low-altitude (200 to 5,000 feet AGL) transiting from one military installation to another, conducting a variety of military flight activities enroute, and helicopters performing periodic, low-altitude flight training.

Although individual overflights by all aircraft within the area can be loud, they are relatively infrequent, transient and not concentrated at any single location or time of day/night. For instance, the highest noise level on the Barry M. Goldwater Range (East) (BMGR-E) is 62 dBA DNL under R-2301E (the East Tactical Range), and the lowest noise level is less than 45 dBA DNL under the MOAs (USAF Angel Thunder EA, May 2017).

Military Operations in Urban Terrain, or MOUT, (simulated combat towns) training areas at the PTRC also has no appreciable continuous sources of noise (USAF, 2017).

Environmental Consequences - Due to the infrequent number of air activities overhead at the PTRC, their relative altitudes, and the limited number of sorties and actual landings planned for the Proposed Action, aircraft are not expected to generate noise greater than 65 dBA DNL beyond the Action Area; in this case, the PTRC facility itself. Also, with few people living near the PTRC, the closest community (a small town) (population of ~240 residents) is ~6-10 miles away. As a result, aircraft activities within the Action Area are expected to be compatible with existing, baseline land and airspace conditions.

Noise levels, both on-the-ground and in the airspace (Playas TMOA) above the PTRC, are not expected to be significant, for the following reasons: 1) no sensitive receptors are present, or nearby (closest population center is 6-10 miles away [Animas, NM], with ~ 88 families (~240 total residents), a school and a medical facility; 2) event frequency - a single training event conducted with only two sorties [one insertion and one extraction] by up to 4 helicopters; 3) duration - one 5-hour airspace event window (Playas TMOA activation) at normal operating elevations up to 18,000 feet, or one 2-hour on-the-ground event window (for search / rescue / recovery operation), and; 4) intensity - two small, squad-sized military units would conduct pilot(s) rescue and recovery activities, with no live-fire activities.

As a result, the Proposed Action would not generate significant noise impacts to the human environment outside the Action Area (PTRC facility and lands immediately surrounding the facility) that are substantially above ambient, background levels for more than a few minutes *on or near the ground* or up to only a few hours *in the air*, with most aerial activities occurring above 5,000' - 10,000' AGL.

Under FAA Order 1050.1F, an action would cause a significant noise effect if it “would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the 65DNL dB due to a 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe.” The Order also requires that special consideration be given to the evaluation of the significance of noise impacts on noise sensitive areas within certain specified types of properties, including national wildlife refuges and historic sites

“including traditional cultural properties” where the land use compatibility guidelines in 14 CFR part 150 are not relevant.

Per the *Playas EA* (pg. 13), the temporary nature (NTE 5-hours) and limited number aircraft involved in the Proposed Action would not result in any significant noise increases and would not trigger a significant noise threshold per FAA Order 1050.1F.

Air Quality:

Under FAA Order 1050.1F, an action would significantly affect air quality if it would “cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the Environmental Protection Agency under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.”

The Proposed Action does not include construction and there are very limited aircraft operations planned. Most all aircraft involved in the TRAP CERTEX event would be operating at elevations well above 3,000 feet AGC. Aircraft operations, and therefore emissions, below 3,000 feet would be limited to two tactical landing/take-offs (insertion and then extraction), therefore the impacts to local air quality would be temporary and transitory in nature, and not expected to generate any offsite effects. The amount of emissions generated by the joint exercise would be *de minimis*. The Proposed Action would not significantly affect air quality (*Playas EA*, pg. 14).

As stated in the EA, the area around Playas, New Mexico is designated as an attainment area. Therefore, EPA’s General Conformity Regulations do not apply.

Biological Resources (including Fish, Wildlife, and Plants):

Under FAA Order 1050.1F, an action would have a significant impact in this category if it is determined that the action would be likely to jeopardize the continued existence of a federally listed threatened or endangered species or would result in the destruction or adverse modification of federally designated critical habitat. The FAA has not established a significance threshold for non-listed species, but Exhibit 4-1 in Order 1050.1F lists several factors to consider.

The Playas EA (pg. 15) indicates there are 20 listed species that may occur within the Greater Boot Heel Region of New Mexico; however, the affected habitat of these species is not found within the Action Area. Of the two potential bat species within that same Boot Heel Region, neither should be present during activities as they will take place during daylight hours.

Historic Architectural, Archeological, and Cultural Resources:

The FAA has reviewed the documentation prepared by the USMC within the EA including consultation with the New Mexico State Historic Preservation Office (SHPO). The New Mexico SHPO issued a Letter of No-Effect on May 23, 2017, which can be found in Appendix A of the EA.

Extensive tribal outreach was conducted by the USAF (*Playas EA*, pg. 14).

Environmental Justice

As seen on page 13 of the EA, there are no Census block groups that exist near the PTRC facility or under the TMOA. The U.S. Census Bureau collects, maintains and published demographics data for the populations within each block group. According to the USAF, there are no low-income and/or minority populations within the vicinity of the PTRC, resulting in no disproportionally high or adverse human health or environmental effects on low income and minority populations.

Cumulative Impacts:

The proposed action will not result in a significant cumulative impact as a result of the establishment of the additional TMOA. When taking the temporary activities addressed in the USAF Angel Thunder EA into consideration, the temporary nature of 5 hour exercise for the TRAP CERTEX Playas will present any cumulative impacts. Analysis of the Proposed Action, when considered cumulatively with past, present, and reasonably foreseeable future actions would not result in adverse and/or significant impacts to noise, biological resources (including fish, wildlife, and plants); historical, architectural, archeological and cultural resources. Based on independent review of the airspace proposal, the FAA has determined there would be no significant cumulative impacts as a result of the establishment of the TMOA.

Additional Impact Categories:

As described on pg. 9 of the EA, the following NEPA impact categories were assessed and in accordance with CEQ regulations and FAA Order 1050.1F did not warrant further analysis in the EA: Land Use, Socioeconomics, Environmental Justice, Climate, Coastal Resources, Construction Impacts, Farmlands, Floodplains, Light Emissions, Hazardous Materials, Hazardous and Solid Waste, Natural Resources and Energy Supply, Water Quality, Wetlands, and Wild and Scenic Rivers.

Impact Analysis

Based on documentation contained in the EA, no significant adverse environmental impacts are associated with the Proposed Action. The attached EA addresses the effects of the Proposed Action on the human and natural environment and is made a part of this FONSI.

Because there are no environmental impacts associated with the Proposed Action that would exceed applicable thresholds of significance, the action is not one normally requiring preparation of an EIS, no special circumstances apply, and the brief duration of the proposed action, circulation and review of the Draft EA was not warranted in accordance with FAA Order 1050.1F, Environmental Impacts: Policies and Procedures.

Adoption

The FAA has conducted an independent evaluation of the EA. Based on its independent evaluation, the FAA has determined that the EA adequately assesses and discloses the environmental impacts of the TRAP CERTEX Playas TMOA and that adoption of the EA by the FAA is authorized under 40 C.F.R. § 1506.3 and FAA Order 1050.1F, paragraph 8-2.c.

Finding

The FAA has determined that no significant impacts would occur as a result of the Federal Action and therefore preparation of an Environmental Impact Statement is not warranted, and a Finding of No Significant Impact, in accordance with 40 CFR Part 1501.4 (e), is appropriate.

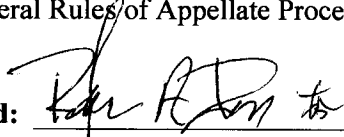
Statement

After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101 of the NEPA and other applicable environmental requirements will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2) (C) of NEPA.

Order and Right of Appeal

This decision to adopt the airspace portion of the USMC's *Playas EA* constitutes an order of the FAA Administrator pursuant to 49 U.S.C. § 40103. It is subject to review by the Courts of Appeal of the United States in accordance with 49 U.S.C. § 46110. Any party seeking to stay the implementation of this decision must file an application with the FAA prior to seeking judicial relief as provided by Rule 18(a) of the Federal Rules of Appellate Procedure.

Approved: _____



Date: _____

8/4/17

Rodger A. Dean, Manager
Airspace, Regulations, and ATC Procedures Group
Mission Support Services
Air Traffic Organization
Federal Aviation Administration

APPENDIX D

Air Quality Analysis

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, Air Quality Compliance And Resource Management; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: DAVIS-MONTHAN AFB
County(s): Hidalgo, Grant (New Mexico)
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Playas Temporary MOA

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2018

e. Action Description:

Calculations were done by zero-ing out all time in modes (TIMs) except climbout (intermediate or military), and altering climbout to reflect the information provided below. Trim tests were also zero-ed out.

*Please note that ACAM does not have rotary aircraft built into its modeling, so emissions calculations were done manually in Microsoft Excel using emission factors from the Air Emissions Guide For Air Force Mobile Sources September 2017. These totals were added to the ACAM summary report, so the totals annually reflect emissions for all 3 types of aircraft.

f. Point of Contact:

Name: Austin Naranjo
Title: Environmental Engineer - Air Quality Specialist
Organization: Solutio Environmental, Inc.
Email: Austin.Naranjo@Solutioenv.com
Phone Number: (210) 749-7000

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

_____ applicable
__X__ not applicable

Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions.

"Air Quality Indicators" were used to provide an indication of the significance of potential impacts to air quality. These air quality indicators are EPA General Conformity Rule (GCR) thresholds (de minimis levels) that are applied out of context to their intended use. Therefore, these indicators do not trigger a regulatory requirement; however, they provide a warning that the action is potentially significant. It is important to note that these indicators only provide a clue to the potential impacts to air quality.

Given the GCR de minimis threshold values are the maximum net change an action can acceptably emit in non-attainment and maintenance areas, these threshold values would also conservatively indicate an action's emissions within an attainment would also be acceptable. An air quality indicator value of 100 tons/yr is used based on the

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

GCR de minimis threshold for the least severe non-attainment classification for all criteria pollutants (see 40 CFR 93.153). Therefore, the worst-case year emissions were compared against the GCR Indicator and are summarized below.

Analysis Summary:

Annual Emission Totals

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.007	100	No
NOx	1.351	100	No
CO	0.450	100	No
SOx	0.098	100	No
PM 10	0.406	100	No
PM 2.5	0.004	100	No
Pb	0.000	100	No
NH3	0.000	100	No
CO2e	299.0		

None of estimated emissions associated with this action are above the GCR indicators, indicating no significant impact to air quality; therefore, no further air assessment is needed.



Austin Naranjo, Environmental Engineer - Air Quality Specialist

2/20/18

DATE

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, Air Quality Compliance And Resource Management; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: DAVIS-MONTHAN AFB
County(s): Hidalgo, Grant (New Mexico)
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Playas Temporary MOA

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2018

e. Action Description:

Calculations were done by zero-ing out all time in modes (TIMs) except climbout (intermediate or military), and altering climbout to reflect the information provided below. Trim tests were also zero-ed out.

*Please note that ACAM does not have rotary aircraft built into its modeling, so emissions calculations were done manually in Microsoft Excel using emission factors from the Air Emissions Guide For Air Force Mobile Sources September 2017. These totals were added to the ACAM summary report, so the totals annually reflect emissions for all 3 types of aircraft.

f. Point of Contact:

Name: Austin Naranjo
Title: Environmental Engineer - Air Quality Specialist
Organization: Solutio Environmental, Inc.
Email: Austin.Naranjo@Solutioenv.com
Phone Number: (210) 749-7000

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

_____ applicable
__X__ not applicable

Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions.

"Air Quality Indicators" were used to provide an indication of the significance of potential impacts to air quality. These air quality indicators are EPA General Conformity Rule (GCR) thresholds (de minimis levels) that are applied out of context to their intended use. Therefore, these indicators do not trigger a regulatory requirement; however, they provide a warning that the action is potentially significant. It is important to note that these indicators only provide a clue to the potential impacts to air quality.

Given the GCR de minimis threshold values are the maximum net change an action can acceptably emit in non-attainment and maintenance areas, these threshold values would also conservatively indicate an action's emissions within an attainment would also be acceptable. An air quality indicator value of 100 tons/yr is used based on the

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

GCR de minimis threshold for the least severe non-attainment classification for all criteria pollutants (see 40 CFR 93.153). Therefore, the worst-case year emissions were compared against the GCR Indicator and are summarized below.

Analysis Summary:

Annual Emission Totals

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.007	100	No
NOx	2.947	100	No
CO	0.505	100	No
SOx	0.132	100	No
PM 10	0.161	100	No
PM 2.5	0.146	100	No
Pb	0.000	100	No
NH3	0.000	100	No
CO2e	401.7		

None of estimated emissions associated with this action are above the GCR indicators, indicating no significant impact to air quality; therefore, no further air assessment is needed.



Austin Naranjo, Environmental Engineer - Air Quality Specialist

2/20/18

DATE

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, Air Quality Compliance And Resource Management; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: DAVIS-MONTHAN AFB
County(s): Hidalgo, Grant (New Mexico)
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Playas Temporary MOA

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2018

e. Action Description:

Calculations were done by zero-ing out all time in modes (TIMs) except climbout (intermediate or military), and altering climbout to reflect the information provided below. Trim tests were also zero-ed out.

*Please note that ACAM does not have rotary aircraft built into its modeling, so emissions calculations were done manually in Microsoft Excel using emission factors from the Air Emissions Guide For Air Force Mobile Sources September 2017. These totals were added to the ACAM summary report, so the totals annually reflect emissions for all 3 types of aircraft.

f. Point of Contact:

Name: Austin Naranjo
Title: Environmental Engineer - Air Quality Specialist
Organization: Solutio Environmental, Inc.
Email: Austin.Naranjo@Solutioenv.com
Phone Number: (210) 749-7000

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

_____ applicable
__X__ not applicable

Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions.

"Air Quality Indicators" were used to provide an indication of the significance of potential impacts to air quality. These air quality indicators are EPA General Conformity Rule (GCR) thresholds (de minimis levels) that are applied out of context to their intended use. Therefore, these indicators do not trigger a regulatory requirement; however, they provide a warning that the action is potentially significant. It is important to note that these indicators only provide a clue to the potential impacts to air quality.

Given the GCR de minimis threshold values are the maximum net change an action can acceptably emit in non-attainment and maintenance areas, these threshold values would also conservatively indicate an action's emissions within an attainment would also be acceptable. An air quality indicator value of 100 tons/yr is used based on the

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

GCR de minimis threshold for the least severe non-attainment classification for all criteria pollutants (see 40 CFR 93.153). Therefore, the worst-case year emissions were compared against the GCR Indicator and are summarized below.

Analysis Summary:

Annual Emission Totals

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.055	100	No
NOx	3.499	100	No
CO	1.548	100	No
SOx	0.235	100	No
PM 10	0.841	100	No
PM 2.5	0.576	100	No
Pb	0.000	100	No
NH3	0.000	100	No
CO2e	716.5		

None of estimated emissions associated with this action are above the GCR indicators, indicating no significant impact to air quality; therefore, no further air assessment is needed.



Austin Naranjo, Environmental Engineer - Air Quality Specialist

2/20/18

DATE

APPENDIX C

Air Force Aeronautical Proposal
For
Playas Temporary MOA

FAAO 7400.2 Section 3.

SUA PROPOSALS

21-3-3. PROPOSAL CONTENT

a. Proponent's Transmittal Letter.

1, Attached

b. Area Description.

1, **Title.** PLAYAS temporary MOA, NM

2. **Boundaries.** Beginning at lat. 32°10'43"N., long. 108°42'48"W.;;
to lat. 32°09'20"N., long. 108°19'29"W.;;
to lat. 31°49'27"N., long. 108°21'03"W.;;
to lat. 31°50'48"N., long. 108°44'28"W.;;
to the point of beginning.

3. **Altitudes.** From 300' AGL up to but not including FL180.

4. **Times of use.** By NOTAM, 2-19 May, 2018

5. **Controlling agency.** FAA, Albuquerque ARTCC.

6. **Using agency.** U.S. Air Force, Det 1, 414 CTS
Davis-Monthan AFB, AZ.

c. Airspace Statement of Need and Justification.

1. **Describe the purpose and need for the proposed airspace:** ANGEL THUNDER 18-2 is an Air Combat Command (ACC) directed large force exercise to be conducted from 2-19 May 2018 from Davis-Monthan AFB, AZ. The purpose of the exercise is to allow combat air forces the opportunity to practice effective integration with ground forces, which is critical to the success of the real-world Combat Search and Rescue (CSAR) mission. It is designed to provide Personnel Recovery training for both U.S. and allied foreign combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers, and Joint Personnel Recovery Center personnel. After extensive research and planning, Playas Training and Research Center (PTRC), NM is the most suitable area to maximize both the training objectives directed by higher headquarters and the desired learning objectives of the participating military units. PTRC will allow for challenging and unmatched planning and execution of PR for downed aircrew and isolated ground personnel in various scenarios. The Playas temporary MOA will only be activated during ANGEL THUNDER for aircraft participating in the exercise.

2. **Alternatives:** Det 1, 414 CTS explored the possibility of executing the ANGEL THUNDER 18-2 exercise operations within the Tombstone, Ruby, Fuzzy, and Sells MOAs. It was determined that the challenging, realistic amenities offered at Playas were not available in any existing MOA within the appropriate distance of Davis-Monthan AFB, AZ.
3. **No Action Alternative:** Under the no action alternative, the ANGEL THUNDER 18-2 exercise flight operations over PTRC may be cancelled resulting in the loss of a valuable training resource for both U.S. and allied foreign combat air and ground personnel expecting to deploy to real-world combat zones in support of contingency operations.
4. **Proposed Action:** The Playas temporary MOA is a 20 NM X 20 NM box from 300' AGL up to but not including FL180. The proposed boundary is 32°10'43"N 108°42'48"W to 32°09'20"N 108°19'29"W to 31°49'27"N 108°21'03"W to 31°50'48"N 108°44'28"W to the point of beginning. The proposed scheduling times are 2-19 May (Continuous).
5. **Joint Use Policy:** The FAA joint-use policy per FAAO 7400.2 para 21-1-8 will be recognized. Reasonable and timely aerial access below 1,200' AGL to private and public land below the proposed temporary Playas MOA by general aviation aircraft will not be restricted.

d. Air Traffic Control Assigned Airspace (ATCAA)

- 1, **Title.** PLAYAS temporary ATCAA, NM
2. **Boundaries.** Beginning at lat. 32°10'43"N., long. 108°42'48"W.;
to lat. 32°09'20"N., long. 108°19'29"W.;
to lat. 31°49'27"N., long. 108°21'03"W.;
to lat. 31°50'48"N., long. 108°44'28"W.;
to the point of beginning.
3. **Altitudes.** FL180 to FL200.
4. **Times of use.** By NOTAM, 2-19 May, 2018
5. **Controlling agency.** FAA, Albuquerque ARTCC.
6. **Using agency.** U.S. Air Force, Det 1, 414 CTS
Davis-Monthan AFB, AZ.

e. Activities

1. For areas that will contain aircraft operations:

i. The number and types of aircraft that will normally use the area:

Type	# acft	Base	Sortie/day	Hr/Sortie	total days
F-16	4	KDMA	1	1	5
F-16	2	KLVS	1	1	2
A-10	4	KDMA	1	1	5
UH-1Y	2	KDMA	1	1	5
MV-22	2	KDMA	1	1	5
HH-60	2	KDMA	1	1	5
HC-130	2	KDMA	1	1	5

ii. Specific activities and maximum altitudes required for each type activity:

Only 20% of exercise operation will fly between 2200 and 0700. Maximum flight activities within temp MOA/ATCAA is FL200. Proposed aerial activities will consist of typical MOA flight operations to include tactical combat maneuvering by fighter jet aircraft involving high speed, abrupt, unpredictable changes in altitude, attitude, and direction of flight. Associated exercise VFR flight operations not actually activating the temp MOA include transport and rotary wing aircraft flight operations and parachute drops.

- a. High speed combat maneuvering.
- b. Non-standard formation flights.
- c. Rescue escort (RESCORT) maneuvering above participating rotary wing aircraft.
- d. Close Air Support (CAS)
- e. Free-fall and static-line parachute operations
- f. VFR aerial helicopter refueling

iii. Supersonic Flight: None

iv. Surface to Surface: None

v. Surface to Air: None

vi. Air to Surface: None

f. Environmental Land Use information.

1. Mr. Kevin Wakefield
355 CES/CEIE
Davis-Monthan AFB, AZ 85707
(520) 228-4035

g. Communications and Radar.

1. Participating aircraft will monitor requested dedicated discrete exercise frequencies, which can be forwarded when published.
2. Additionally, participants will monitor guard frequencies and the Playas Airport Common Traffic Advisory Frequency. Radar service will not be available.
3. Military ATC will not be available.

h. Safety considerations.

1. Activity will be contained within the MOA using geographic references, inertial navigation, global positioning systems and TACAN radial/DME references.
2. Malfunctions will be handled in accordance with aircraft technical orders, Service Directives, and FARs.
3. Ordnance Trajectory Envelope. Not Applicable.
3. The area below the proposed MOA is open, desolate, sparsely populated, high desert range land with few small settlements. Regardless of published MOA altitude, all participants will adhere to FAR 91.119 and applicable service directives to determine minimum safe altitudes. Parachute operations will be conducted in accordance with FAR 105 and applicable service directives. The Playas airport will be closed to non-participating aircraft by airport management during exercise operations. No chaff or flares are authorized.

i. Coordination summary.

HAF/A3TI, Mr. Alan Shafer

HAF/A4CPI, Ms. Lynn Engelman

Air Combat Command/A3AA, Mr. Elliot Sanders

Air Combat Command/A3AA, Mr. James Nolden

AFCEC/CZN, Ms. Robin Divine

Det 1, 414 CTS, Mr. Harold Hicks

Det 1, 414 CTS, Lt Col Robert Rosebrough

FAA Air Traffic Representative, Mr. Richard Storaci, Arizona

FAA Air Traffic Representative, Mr. Michael Rizzo, New Mexico

Albuquerque ARTCC, Mr. Brett Stewart, Airspace & Procedures Manager

Albuquerque ARTCC, Mr. Craig Brenden, Airspace & Procedures Southwest Specialty

162 Wing, Lt Col David Stine, Airspace Manager

56 RMO, Mr. William Gillies, Airspace Manager

355 Fighter Wing, Mr. Gary Presley, Airspace Manager

355 OSS/OSO, Capt Michael Pak, Current Operations Officer

355 OSS/OSOS, Capt Weston Woldt, Wing Scheduling Officer

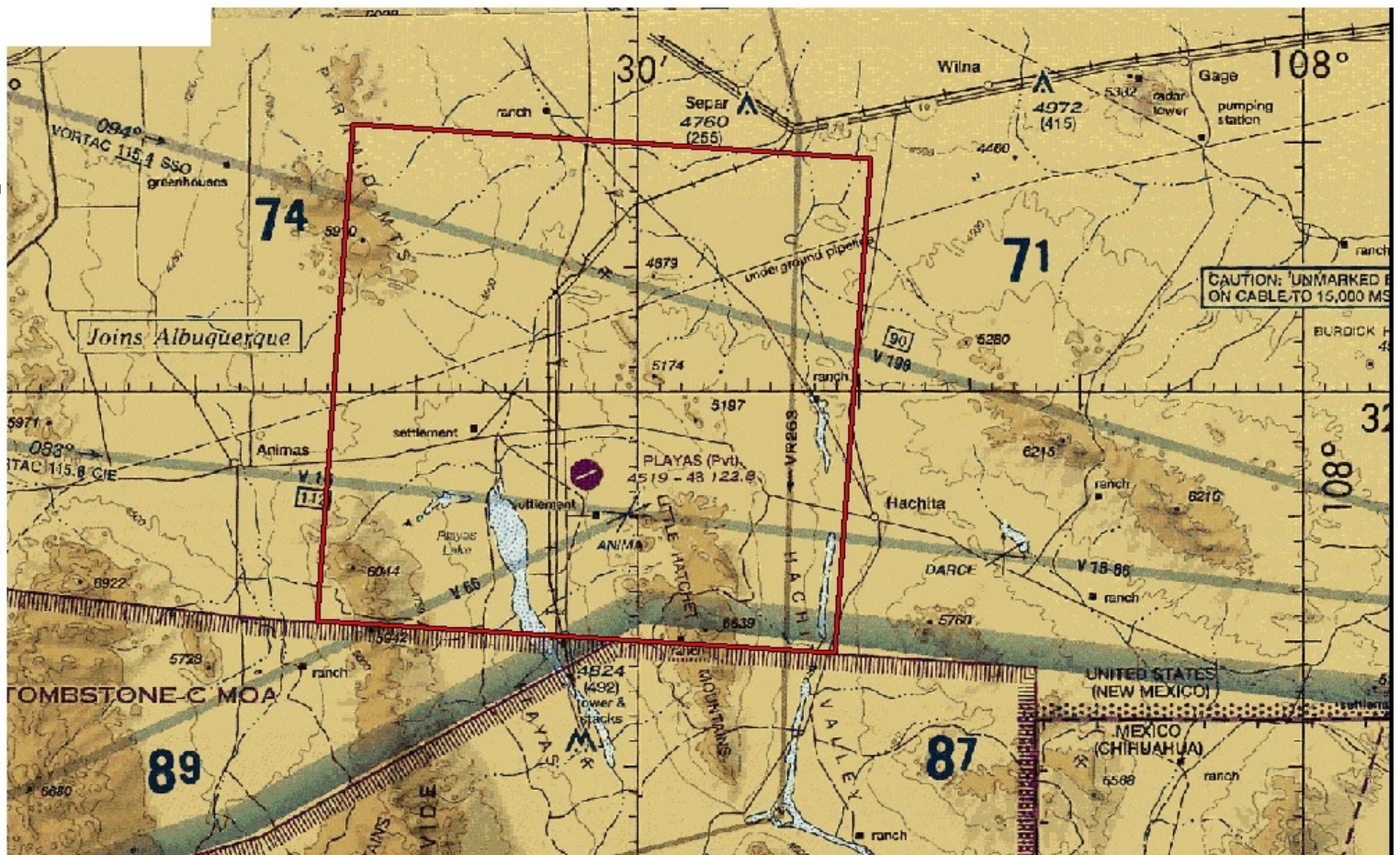
355 Civil Engineering Squadron, Mr. Kevin Wakefield, Environmental Specialist

Air Force Representative, Lt Col James Romag, FAA Central Service Area

Playas Training & Research Center, New Mexico Tech, Mr. Budge Jones

Arizona Military Airspace Working Group, Mr. William Gillies, Chairman

j. Graphic Depiction of the proposed airspace



k. Environmental Documents: See attached.

1. Environmental Assessment: Addressing the Angel Thunder Personnel Recovery/Rescue Training Exercise in the Southwestern United States Volume I
2. Environmental Assessment: Addressing the Angel Thunder Personnel Recovery/Rescue Training Exercise in the Southwestern United States Volume II
3. Finding of No Significant Impact (FONSI) and FINAL Environmental Assessment for Training Programs at the Playas Training Center, New Mexico

I. Graphic Notice Information

SPECIAL USE AIRSPACE

(Playas MOA, NM
[Temporary])

Effective Date:

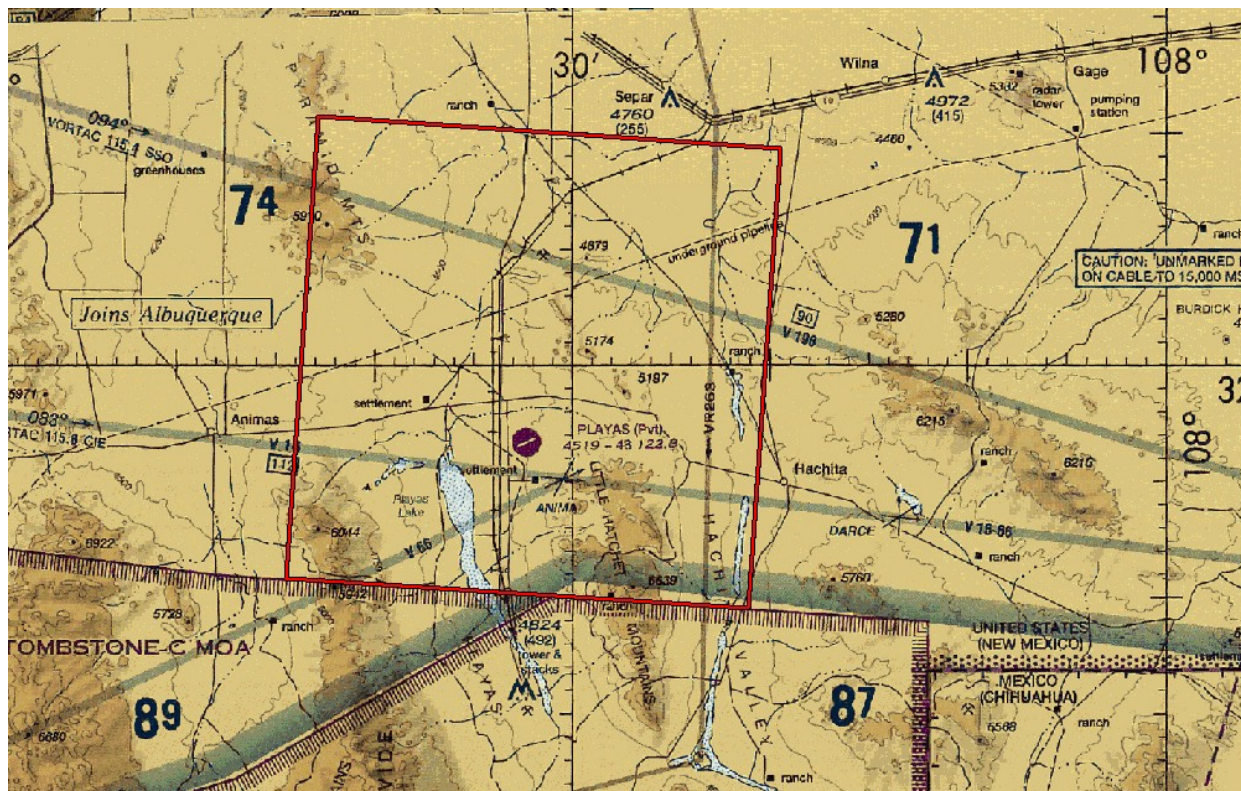
Boundaries. Beginning at lat. 32°10'43"N., long. 108°42'48"W.;
to lat. 32°09'20"N., long. 108°19'29"W.;
to lat. 31°49'27"N., long. 108°21'03"W.;
to lat. 31°50'48"N., long. 108°44'28"W.;
to the point of beginning.

Altitudes. 300' AGL to but not including 18,000' MSL.

Times of use. 2-19 May (Continuous)

Controlling agency. FAA, Albuquerque ARTCC

Using agency. U.S. Air Force, Det 1, 414 CTS, Davis-Monthan AFB, AZ



m. Other

The 355th FW Public Affairs office will issue a press release if desired that will assist in notifying the local populace of the training exercise and minimize the impact on the communities in which this exercise will take place.

APPENDIX E

FAA Circular of Air Force
Playas Temporary MOA Aeronautical Proposal
Documentation

**PROPOSED ESTABLISHMENT
Of
Playas Temporary Military Operations Areas (TMOA)
New Mexico**

AIRSPACE STUDY: 17-ASW-27-NR

SUMMARY: The Federal Aviation Administration (FAA) is considering a proposal by the United States Air Force to establish the Playas Temporary Military Operations Area (TMOA) in southern New Mexico in support of Exercise Angel Thunder, May 2-19, 2018.

The purpose of the exercise is to conduct combat search and rescue training for U.S. and allied aircrews, para-rescue, survival specialists, intelligence personnel, battle managers and Joint Personnel Recovery Center personnel. The requested TMOA boundaries are identical to the TMOA established in 2017 and previous years. Please refer to the enclosed copy of the Albuquerque Sectional for a graphical presentation of the proposal.

COMMENTS INVITED: The purpose of this notice is to invite interested persons to submit in writing any comments they may have regarding the overall aeronautical aspects of the proposal presented in this notice. Comments which provide a factual basis supporting the views and suggestions presented are the most helpful. Persons wishing to comment should submit correspondence to:

Manager, Operations Support Group, AJV-C2
Airspace Study 17-ASW-27-NR
Department of Transportation
Federal Aviation Administration
10101 Hillwood Parkway
Fort Worth, TX 76177

If preferred, individuals may submit an email to:

9-NATL-CSA-Public-Notice-Airspace@faa.gov

Subject: AIRSPACE STUDY 17-ASW-27-NR, Playas TMOA

Comments received by January 19, 2018 will be considered before final action is taken on the proposal. The proposal may be changed in light of comments received.

NOTICE DISTRIBUTION: Persons interested in being placed on a mailing list for future notices should submit such requests to the FAA at the address listed above.

PROPOSAL: Detailed descriptions of the MOAs are listed below. In addition, a graphical depiction of the area is enclosed.

1. DIMENSIONS FOR PLAYAS TMOA, NM

- a. Horizontal
Beginning at lat. 32°10'43"N, long. 108°42'48"W,
to lat. 32°09'20"N, long. 108°19'29"W,
to lat. 31°49'27"N, long. 108°21'03"W,
to lat. 31°50'48"N, long. 108°44'28"W,
to the point of beginning.
- b. Vertical 100 feet AGL to, but not including, FL 180.

2. USING AGENCY

U.S. Air Force, Det 1, 414 Combat Training Squadron, Davis-Monthan AFB, Arizona

3. CONTROLLING AGENCY

FAA, Albuquerque Air Route Traffic Control Center

4. TIME OF USE

Continuous, May 2-19, 2018

5. MISCELLANEOUS

Aeronautical activities will consist of A-10, F-16, HH-60, EC-725, MV-22, and HC-130 aircraft conducting Rescue Escort, Close Air Support, and helicopter refueling, along with free fall & static parachute drops.

ENVIRONMENTAL/LAND USE ASPECTS

Provide comments on the environmental and land use aspects of the proposal to:

Mr. Gary Presley
355 OSS/OSOA
Davis-Monthan AFB, AZ 85707
(520) 228-4680
gary.presley@us.af.mil

Christopher L. Southerland
Acting Manager, Operations Support Group
ATO Central Service Center

Enclosure
Map

cc: SEE ATCH; ASW-910; ASW-920; ASW-930; AJV-C24, AJV-11; AJV-32; Albuquerque
ARTCC-530



CASCABEL CONSERVATION ASSOCIATION

SUPPORTING CONSERVATION, COMMUNITY AND CONTEMPLATION
IN THE MIDDLE SAN PEDRO RIVER VALLEY

6146 N. Canyon Road, Cascabel, AZ 85602
(520) 212-5862 / www.cascabelconservation.org

Mr. Gary Presley

355 OSS/OSOA

Davis-Monthan AFB, AZ 85707

(520) 228-4680

Sent via e-mail to gary.presley@us.af.mil on Tuesday, January 16, 2018 10:00AM

Dear Mr. Presley,

The Cascabel Conservation Association has been advised of the Proposed Establishment of Playas Temporary Military Operations Areas New Mexico - Airspace Study: 17-ASW-27-NR.

We are a small volunteer community-based organization supporting education, contemplation and conservation. Because our geographical area of concern is the Lower San Pedro Valley east of Davis-Monthan, we do have concern with aircraft. When Operation Angel Thunder last practiced in NM, Cascabel was in its flight path. Consequences of low-flying aircraft, particularly C-130 aircraft, were notable. Among them were endangerment and harm to people working with panicked livestock. Such incidents have not been limited to Operation Angel Thunder - they also happen due to low-flying helicopters at any time during the year. Some are documented in our May 1, 2015 comments on the 563rd Rescue Group Personnel Recovery Draft Supplemental Environmental Assessment.

One way that Davis-Monthan could promote positive community relations and prevent worst-case incidents is to advise us well in advance of low-flying aircraft. This warning would allow people to make appropriate arrangements and most importantly, to not be working closely with livestock. Another way would be to be sure Commanders are well informed of such sensitive areas. We would be available to work with Davis-Monthan.

Thank you for considering our comments.

Pearl Mast Co-Chair Conservation Committee cpearlmast@gmail.com

Anna Lands Co-Chair Conservation Committee healing@rnsmtc.com



CASCABEL CONSERVATION ASSOCIATION

**SUPPORTING CONSERVATION, COMMUNITY AND CONTEMPLATION
IN THE MIDDLE SAN PEDRO RIVER VALLEY**

6146 N. Canyon Road, Cascabel, AZ 85602
(520) 212-5862 / www.cascabelconservation.org

Manager, Operations Support Group AJV-C2

Airspace Study 17-ASW-27-NR

Department of Transportation

Federal Aviation Administration

10101 Hillwood Parkway

Fort Worth, TX 76177

Submitted via e-mail to: 9-NATL-CSA-Public-Notice-Airspace@faa.gov January 19, 2018

Subject: AIRSPACE STUDY

The Cascabel Conservation Association (CCA) has been advised of the Proposed Establishment of Playas Temporary Military Operations Areas New Mexico - Airspace Study: 17-ASW-27-NR. We comment here on the overall aeronautical aspects of the proposal presented in this notice. We have already sent our comment on Environmental and Land Use Aspects to Mr. Gary Presley as per the Public Notice. Mr. Presley has informed us that he has forwarded our comment to your office.

We are a small volunteer community-based organization supporting education, contemplation and conservation. Our area of concern is the Lower San Pedro Valley east of Davis-Monthan. Although this area is not included in the designated area for Operation Angel Thunder, we experienced negative impacts when Operation Angel Thunder last practiced in New Mexico because of being on the flight path from Davis-Monthan to the Playas Temporary Military Operations Area. Effects of low-flying aircraft, particularly HC-130's were notable.

For the past 22 years CCA has been providing a space for solitary retreats in desert wildlands. Our retreat land is located in Sections 1 and 12 of Township 13S. Low-flying aircraft have a serious impact on the viability of this program. Retreatants have expressed disappointment in how even routine Davis-Monthan exercises affect their retreat experience, and this problem is compounded greatly with an intensified regime of low overflights as occurred here during the last Operation Angel Thunder.

Local residents also experienced adverse effects with the previous Operation Angel Thunder. This is a rural area with a mix of residential and range land. In residential areas, extremely low over-flights were frightening and disruptive to the quality of life expected here. For those whose livelihood involves working with livestock, which is common here, there is real danger when animals are spooked by low-flying aircraft. One such person was injured when she was pinned against the fence by a horse panicked on the approach of a very low-flying military craft on the flight path to the Playas Temporary MOA.

It is important to us that the administration and pilots recognize these issues and respect the safety and quality of life of our community. We request that either the flight path from Davis-Monthan to the Playas Temporary MOA be altered to avoid the area between Pomerene and Redington, or that the air traffic between Tucson and New Mexico during Operation Angel Thunder be required to maintain an altitude of 500', which would avoid the worst disturbance.

Thank you for your consideration of these comments.

Pearl Mast and Anna Lands, Co-Chairs, Conservation Committee

Cascabel Conservation Association <http://cascabelconservation.org/>

City of Lordsburg

"In the Land of Enchantment"



Councilors:
Glenda Greene
Roxann Randall
Ernest N. Gallegos

Mayor Arthur Clark Smith
Jeannie Palacios, City Clerk
Martha Salas, Finance Officer
Arthur J. De La Garza, Chief of Police

Councilors:
Alex De La Garza
Rodney Plowman
Alfredo Morelos, Jr

December 1, 2017

Mr. Gary Presley
355/OSS/OSOA
Davis-Monthan AFB, AZ 85707

Re: Environmental / Land Use Aspects-Airspace Study 17-ASW-27-NR

The City of Lordsburg supports this Airspace Study and in regards to the environmental /land aspects, we see no environmental hazards to the area including air and land.

Please feel free to contact me should you have any questions regarding the City of Lordsburg at 575-542-3421 or by email at mayor@cityoflordsburg.org.

Sincerely,

Arthur Clark Smith
Mayor

"For Business, Better Living and Fine Climate"

409 Wabash Street - Lordsburg, New Mexico 88045
Phone: 575.542.3421 ** Fax: 575.542.3507

Rizzo, Michael (FAA)

From: Setib <ssetib@gmail.com>
Sent: Wednesday, January 24, 2018 11:21 AM
To: 9-NATL-CSA-Public-Notice-Airspace (FAA)
Subject: Airspace Study 18-ASW-01-NR, Playas TMOA

To whom it my concern: Please use the existing ranges you have already taken from the public air space, there are many.

Thank you for asking,
Steve McCluskey

Sent from my iPad

From: Michael.Rizzo@faa.gov [mailto:Michael.Rizzo@faa.gov]
Sent: Wednesday, February 07, 2018 11:46 AM
To: DIVINE, ROBIN D CIV USAF AFMC AFCEC/CZN <robin.divine@us.af.mil>
Cc: Nan.L.Terry@faa.gov; ROMAG, JAMES L Lt Col US Air Force U S AIR FORCE HQ/A30J
<james.romag@us.af.mil>; Karen.CTR.Everitt@faa.gov
Subject: [Non-DoD Source] INFO: Playas docs

I'm putting the proposal and comments and mitigations in a single email to make it a little easier to handle. Mitigations are pasted directly from my draft service area recommendation to HQ:

Circularization (Attachment 5) of the aeronautical proposal resulted in four public comments. (Attachments 6-9). The first comment supports the proposal. The second comment recommends using existing airspace. Favorable geographic attributes along with infrastructure specifically developed for this type of training makes Playas an ideal location. No other sites within a reasonable distance of D-M fit military requirements. The last two comments are from the same organization in Cascabel, NM, and are similar in their objections. Low flying aircraft transiting to/from Playas in previous ANGEL THUNDER exercises (as well as routine local flying) disturb the natural peace, and more importantly create a hazard when farmers/ranchers are working with livestock. Although over ninety miles from the proposed TMOA, CSA considers this a substantive comment associated with the overall action. The author recommends a 500 feet AGL minimum altitude over the impacted area as an adequate mitigation. The proponent concurs. Aircrews participating in ANGEL THUNDER would be procedurally restricted to above 500 feet AGL in this area.

You'll notice that I circularized and had ZAB analyze a 100' AGL floor vs a 300' AGL floor from the original proposal. This was to give us flexibility to do a 100' test if necessary. Aeronautically, it's easy to move the floor higher. Much bigger deal to go the other way. Please let me know if you need anything else.

Michael D. Rizzo
ATREP

FAA, ATO Central Service Center
Operations Support Group, AJV-C2