

**Draft Environmental Assessment  
Playas Special Use Airspace  
Davis-Monthan Air Force Base, Arizona**

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April 2021



**United States Air Force  
Air Combat Command  
355<sup>th</sup> Wing  
Davis-Monthan Air Force Base, Arizona**



**PRIVACY ADVISORY**

This EA is provided for public comment in accordance with the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality (CEQ) NEPA Regulations (40 CFR §§ 1500–1508), and 32 CFR § 989, Environmental Impact Analysis Process (EIAP).

The EIAP provides an opportunity for public input on Air Force decision-making, allows the public to offer inputs on alternative ways for the Air Force to accomplish what it is proposing, and solicits comments on the Air Force's analysis of environmental effects.

Public commenting allows the Air Force to make better, informed decisions. Letters or other written or oral comments provided may be published in the EA. As required by law, comments provided will be addressed in the EA and made available to the public. Providing personal information is voluntary. Any personal information provided will be used only to identify your desire to make a statement during the public comment portion of any public meetings or hearings or to fulfill requests for copies of the EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of EA; however, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the EA.

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**COVER SHEET**  
**Draft Environmental Assessment for Playas Special Use Airspace**

- a. *Responsible Agency: United States Air Force (Air Force)*
- b. *Cooperating Agency: Federal Aviation Administration*
- c. *Proposals and Actions:*

The Air Force is proposing to establish a Special Use Airspace (SUA) in the form of a permanent Playas Military Operations Area (MOA) and Air Traffic Control-Assigned Airspace (ATCAA) above Playas, New Mexico. The proposed MOA/ATCAA would be activated as needed to support multi-service training requirements and would be managed and scheduled by the 355 Wing personnel at Davis-Monthan Air Force Base (AFB) in southeastern Arizona.

- d. *For Additional Information:* Kevin Wakefield, 355 CES/CEIE, 3775 South Fifth Street, Davis-Monthan AFB, Arizona. Phone: (520) 228-4035 or by email at [kevin.wakefield.1@us.af.mil](mailto:kevin.wakefield.1@us.af.mil).

- e. *Designation:* Draft EA

- f. *Abstract:*

This Environmental Assessment has been prepared pursuant to provisions of the National Environmental Policy Act, Title 42 of the United States Code, Sections 4321–4347, implemented by Council on Environmental Quality Regulations, Title 40, Code of Federal Regulations (CFR) §§ 1500–1508, and 32 CFR § 989, *Environmental Impact Analysis Process (EIAF)*. Potentially affected environmental resources were identified in coordination with local, state, and federal agencies. Specific environmental resources with the potential for environmental consequences include airspace management and use, operational noise, safety, electromagnetic spectrum, climate/air quality, cultural resources, hazardous materials and wastes, biological resources, environmental justice and protection of children, land use, and socioeconomics.

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 US and allied air-combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers, and Joint Personnel Recovery Center personnel. In conjunction, the purpose is to strengthen joint military operations, multi-national partnerships, and operations with other federal, state, and local agencies/organizations.

The analysis of the affected environmental and environmental consequences of implementing the Proposed Action concluded that by implementing standing environmental protection measures and Best Management Practices, there would be no significant adverse impacts from the Proposed Action and Alternatives in the Special Use Airspace on the resource areas analyzed. Further, significant cumulative impacts would not be anticipated from activities associated with the Proposed Action when considered with past, present, or reasonably foreseeable future actions.

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## DRAFT FINDING OF NO SIGNIFICANT IMPACT PLAYAS SPECIAL USE AIRSPACE

Pursuant to provisions of the National Environmental Policy Act (Volume 42 of the United States Code §§ 4321–4370h [NEPA]); Council on Environmental Quality Regulations at Title 40 of the Code of Federal Regulations [CFR] §§ 1500–1508; the Air Force environmental impact analysis process at 32 CFR § 989, *Environmental Impact Analysis Process (EIAP)*, and Federal Aviation Administration Order 1050.1F, *Environmental Impacts: Policies and Procedures*, the United States (US) Air Force (Air Force) prepared the attached Draft Environmental Assessment (EA) to address the potential environmental consequences associated with establishing a Playas Special Use Airspace (SUA) for use by Davis-Monthan Air Force Base (AFB) in Arizona.

### **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 US and allied air-combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers, and Joint Personnel Recovery Center personnel. In conjunction, the purpose is to strengthen joint military operations; multi-national partnerships; and operations with other federal, state, and local agencies/organizations. The Air Force has a need for realistic combat rescue training and pre-deployment training on a regular and continuing basis, with large-force integration of both airborne and ground-based assets. That need requires a permanent Military Operations Area (MOA) instead of the current temporary MOA.

### **Description of Proposed Action and Alternatives**

The Air Force is proposing to establish a SUA in the form of a permanent Playas MOA and Air Traffic Control-Assigned Airspace (ATCAA) above Playas, New Mexico. The proposed MOA/ATCAA would be activated as needed to support multi-service training requirements and would be managed and scheduled by the 355 Wing personnel at Davis-Monthan AFB in southeastern Arizona.

The proposed Playas MOA/ATCAA would be defined by the following coordinates:

- Latitude 32°10'43"N., Longitude 108°42'48"W.
- Latitude 32°09'20"N., Longitude 108°19'29"W.
- Latitude 31°49'31"N., Longitude 108°21'03"W.
- Latitude 31°50'49"N., Longitude 108°44'28"W.

The proposed Playas MOA/ATCAA would have the following characteristics:

- 20 nautical mile (nm) by 20 nm block of SUA centered on Playas, New Mexico
- MOA ceiling up to 17,999 feet mean sea level (up to, but not including flight level [FL] 180)
- Floor at 300 feet above ground level (AGL)
- ATCAA located directly above the MOA with altitudes from FL180 up to FL230.

At this time, the Air Force has not selected a preferred alternative.

### **Alternative 1**

Alternative 1 would establish the Playas MOA/ATCAA with the floor at 300 feet AGL and ceiling at FL 230. Training would consist of Red Flag-Rescue and Tactical Recovery of Aircraft & Personnel (TRAP). The proposed MOA/ATCAA would be activated for 34 days a year.

## **Alternative 2**

Alternative 2 would include Alternative 1 (34 days of training using the proposed MOA/ATCAA) with the addition of electronic warfare training, which would entail five (5) events per year with a duration of three (3) days per event. The proposed MOA/ATCAA would be activated for 49 days a year, an increase of 15 days when compared to Alternative 1.

## **No Action**

While NEPA requires an EA to include an analysis of the No Action Alternative, such analysis is beneficial as a benchmark for decisionmakers to compare the magnitude of the potential environmental effects of the Proposed Action. “No action” means that an action would not take place at this time, and the resulting environmental effects from taking no action are compared with the effects of moving forward with the proposed activity.

For this EA, the No Action Alternative has two components:

- The Air Force would continue to use the Playas Temporary Military Operations Area (TMOA)/ATCAA for Red Flag-Rescue activities. The TMOA only lasts two to three weeks for Red Flag; once that time has passed, the TMOA expires. Training would need to be planned months in advance for this window, with no flexibility in schedule or scope.
- If there is no TMOA available, training exercises would not continue in the airspace above the Playas Training and Research Center (PTRC). Ground-based training, outside the scope of this EA, would still occur at the PTRC.

## **Summary of Findings**

Potentially affected environmental resources were identified through communications with state and federal agencies and review of past environmental documentation. Specific environmental resources with the potential for environmental consequences include airspace management and use, noise, safety, electronic spectrum, air quality, cultural resources, hazardous materials and wastes, biological resources, environmental justice and protection of children, land use, and socioeconomics.

Under the Proposed Action, general aviation and other aircraft operating under instrument flight rules would have to remain clear of the proposed Playas MOA/ATCAA while active. Airspace management in the Tombstone MOAs would not be adversely impacted by the activation of the proposed Playas MOA/ATCAA, with the possible exception of the management of traffic on the V-66 Air Traffic Service (ATS) route.

When the proposed Playas MOA/ATCAA is activated, the using agency (United States Marine Corps or Air Force) would normally be using the Tombstone MOAs concurrently. Aircraft operating out of Thurmond and Luna Landing private airports, during periods of Playas MOA/ATCAA activation, may be affected. Those seeking an instrument flight rules (IFR) flight plan activation would need to stay clear of the Playas MOA/ATCAA in order to commence operation under IFR. Those operating visual flight rules (VFR) would not be required to avoid the MOA/ATCAA. The Lordsburg Municipal Airport and Deming Municipal Airport would have the same considerations. VFR traffic would not be restricted from use of the proposed Playas MOA/ATCAA airspace, while IFR traffic would be required to avoid it.

Operations within the proposed Playas MOA/ATCAA would increase the sound exposure from aircraft operations; however, the increase would result in negligible to minor impacts for both alternatives. Based on the analysis of proposed aircraft operations for both alternatives, the area under the proposed Playas MOA/ATCAA would be subject to up to a 3-decibel (dB) increase from existing conditions to 52 dB for onset rate adjusted day-night average sound level ( $L_{dnmr}$ ) and up to a 5-dB increase from existing conditions to 45 dB for day-night average sound level (DNL).

With an established crash-damaged or disabled aircraft recovery program and implementation of all applicable Air Force Office of Safety and Health and Occupational Safety and Health Administration requirements, no significant impacts to safety would be expected to occur from either alternative. Likewise,

no significant impacts would be expected to flight safety under the implementation of flight safety rules and bird/wildlife-aircraft strike hazard procedures.

Establishment of the Playas MOA/ATCAA as a permanent, charted MOA/ATCAA would not require changes to the electromagnetic (EM) spectrum used for air traffic control or military training under either alternative. Under the Proposed Action, there would be no significant impact to humans, animals, or other resources from EM energy.

Increased air emissions from the Proposed Action would not be considered significant. Implementation of the Proposed Action would not interfere with the region's ability to maintain compliance with National Ambient Air Quality Standards for attainment area pollutants and would not interfere with the ability to achieve compliance for pollutants that contribute to ozone nonattainment. None of the criteria pollutants emission rates exceeded the 100 tons per year *de minimis* threshold for either alternative; therefore, no impacts to air quality would be expected from the Proposed Action.

Effects on cultural resources would include indirect effects due to minor changes in subsonic noise intrusions and direct effects resulting from potential airplane crashes and vibration effects from subsonic flights. The potential for a direct effect due to an aircraft crash would be extremely low, and the potential for direct impact of a crash on any particular resource would not be considered reasonably foreseeable. Analyses of vibration effects associated with subsonic fixed-wing aircraft have indicated that overflights above 200 feet AGL do not generate significant levels of sound-induced structural vibration. Furthermore, the flights would be transient in nature and brief in duration; no impacts would occur to architectural properties and archaeological sites as a result of the Proposed Action.

Hazardous waste generation under the Proposed Action would not result in an increase in routine use, storage, or disposal of hazardous materials or waste. Any spills or leaks would be handled in compliance with Davis-Monthan AFB's Spill Prevention and Control Countermeasures Plan, Pollution Prevention Plan, and Hazardous Waste Management Plan, the respective military installation's regulations, policies, programs, and procedures, as well as all federal, state, and local regulations. Therefore, implementation of the Proposed Action would result in a less than significant impact to hazardous materials and hazardous waste management.

Under the Proposed Action, activities within the proposed Playas MOA/ATCAA would be entirely aerial; therefore, no vegetation or habitat for species would be disturbed or affected, and potential impacts would consist of noise impacts to sensitive wildlife species. The proposed training would not create a consistent, significant noise source in any one location. The predicted average annual DNL throughout the airspace from all of the aircraft operations would increase from 49 dB to 52 dB DNL. Noise impacts from increased operations would have a negligible, short-term and long-term effect on wildlife. The Air Force has found that there would be no impact to wildlife or habitats and has made a *no effect* determination for federally listed species and critical habitat.

The Proposed Action would result in no disproportionate impacts from increased noise on minority populations or low-income communities. There would be no disproportionate noise impacts to children in the community.

Land use under the proposed Playas MOA/ATCAA would not be negatively impacted by implementation of the Proposed Action. Based on the analysis of proposed aircraft operations for both alternatives, the area under the proposed Playas MOA/ATCAA would be subject to up to a 3-dB increase to 52 dB for  $L_{dnmr}$  and up to a 5-dB increase to 45 dB for DNL from existing conditions. These proposed sound levels would be consistent with existing conditions, and land uses under the MOA/ATCAA would remain compatible.

Because the Proposed Action would not involve construction, implementation of the proposed Playas MOA/ATCAA would not require a construction workforce or generate revenue to the local economy through the purchase of materials and supplies. No new military jobs would be generated and no new personnel would be relocated to Davis-Monthan AFB. Therefore, expenditures, employment, and population in the vicinity of the PTRC would be expected to remain at current levels.

**Cumulative Impacts**

The EA considered cumulative impacts that could result from the incremental impact of the Proposed Action when added to other past, present, or reasonably foreseeable future actions. No potentially significant cumulative impacts were identified for the proposed Playas MOA/ATCAA.

**Mitigation**

The EA analysis concluded that neither alternative would result in significant environmental impacts; therefore, no mitigation measures would be required.

**Conclusion**

***Finding of No Significant Impact.*** After review of the EA prepared in accordance with the requirements of NEPA, CEQ regulations, and 32 CFR § 989 and which are incorporated by reference, I have determined that the proposed activities to establish a SUA in the form of a permanent MOA and ATCAA above Playas, New Mexico, would not have a significant impact on the quality of the human or natural environment. Accordingly, an Environmental Impact Statement will not be prepared. This decision was made after considering all submitted information, including a review of agency comments submitted during the 30-day public comment period, and considering a full range of practical alternatives that meet project requirements and are within the legal authority of the US Air Force.

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**JOSEPH C. TURNHAM, Colonel, USAF**  
**Commander**

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**DATE**

## BORRADOR DE HALLAZGO DE NO IMPACTO SIGNIFICATIVO ESPACIO AÉREO DE USO ESPECIAL PLAYAS

De conformidad con las disposiciones de la Ley Nacional de Política Ambiental (Volumen 42 del Código de los Estados Unidos, §§ 4321–4370h [NEPA]); Consejo de Normas de Calidad Ambiental, título 40 del Código de Regulaciones Federales (CFR), §§ 1500–1508; el proceso de análisis de impacto ambiental de la Fuerza Aérea en 32 CFR § 989, *Proceso de Análisis de Impacto Ambiental (EIAP)*, y la Orden Federal de Administración de Aviación 1050.1F, *Impactos Ambientales: Políticas y Procedimientos*, la Fuerza Aérea (Air Force) de los Estados Unidos (US) preparó el borrador adjunto de Evaluación Ambiental (EA) para abordar las posibles consecuencias ambientales asociadas con el establecimiento de un Espacio Aéreo de Uso Especial Playas (SUA) para uso de la base Aérea Davis-Monthan (AFB) en Arizona.

### Propósito y Necesidad

El objetivo de la Acción Propuesta es proporcionar un espacio aéreo de entrenamiento militar integrado, debidamente configurado y realista con la dimensión y el tamaño adecuados para apoyar el entrenamiento de búsqueda, combate y rescate para las tripulaciones aéreas de combate estadounidenses y aliadas, los equipos de rescate, los especialistas en supervivencia, el personal de inteligencia, los administradores de batalla aérea, y personal del Centro Conjunto de Recuperación de Personal. En conjunto, el propósito es fortalecer las operaciones militares conjuntas, las alianzas multinacionales y las operaciones con otras agencias u organizaciones federales, estatales y locales. La Fuerza Aérea necesita una capacitación realista de entrenamiento de rescate y combate previo al despliegue de manera regular y continua, con una integración de gran fuerza de activos tanto aéreos como terrestres. Esa necesidad requiere un Área de Operaciones Militares (MOA, por sus siglas en inglés) permanente en lugar del MOA temporal actual.

### Descripción de la Acción Propuesta y Alternativas

La Fuerza Aérea propone establecer un SUA en forma de un MOA permanente en Playas y un Espacio Aéreo Asignado por Control de Tránsito Aéreo (ATCAA) sobre Playas, Nuevo México. El MOA/ATCAA propuesto se activaría según sea necesario para apoyar los requisitos de capacitación de servicios múltiples y sería administrado y programado por el personal de 355 Wing en la AFB Davis-Monthan en el sudeste de Arizona.

El proyecto propuesto Playas MOA/ATCAA se definiría mediante las siguientes coordenadas:

- Latitud 32°10'43"N., Longitud 108°42'48"W.
- Latitud 32°09'20"N., Longitud 108°19'29"W.
- Latitud 31°49'31"N., Longitud 108°21'03"W.
- Latitud 31°50'49"N., Longitud 108°44'28"W.

El proyecto propuesto Playas MOA/ATCAA tendría las siguientes características:

- Bloque de 20 millas náuticas (nm) por 20 nm de SUA centrado en Playas, Nuevo México
- Altura máxima de MOA de hasta 17.999 pies sobre el nivel del mar (hasta, pero sin incluir el nivel de vuelo [FL] 180)
- Piso a 300 pies sobre el nivel del suelo (AGL)
- ATCAA situado directamente sobre el MOA con altitudes desde FL180 hasta FL230.

En este momento, la Fuerza Aérea no ha seleccionado una alternativa preferida.

### Alternativa 1

La alternativa 1 establecería el Playas MOA/ATCAA con el piso a 300 pies AGL y el techo a FL 230. El entrenamiento sería de tipo Rescate de Bandera Roja y la Recuperación Táctica de Aeronaves y Personal (TRAP). El MOA/ATCAA propuesto se activaría durante 34 días al año.

## **Alternativa 2**

La alternativa 2 incluiría la alternativa 1 (34 días de entrenamiento usando el MOA/ATCAA propuesto) con la adición de entrenamiento de guerra electrónica, que implicaría cinco (5) eventos por año con una duración de tres (3) días por evento. El MOA/ATCAA propuesto se activaría durante 49 días al año, lo que supone un aumento de 15 días en comparación con la Alternativa 1.

## **No Acción**

Mientras que la NEPA requiere que un EA incluya un análisis de la Alternativa de No Acción, tal análisis es beneficioso como punto de referencia para que quienes toman la decisión comparen la magnitud de los efectos ambientales potenciales de la Acción Propuesta. "No Acción" significa que no se llevaría a cabo una acción en este momento, y los efectos ambientales resultantes de no tomar ninguna acción se comparan con los efectos de avanzar con la actividad propuesta.

Para este EA, la alternativa de No Acción tiene dos componentes:

- La Fuerza Aérea seguiría utilizando la Zona Temporal de Operaciones Militares de Playas (TMOA)/ATCAA para las actividades de Rescate de Bandera Roja. La TMOA sólo dura de dos a tres semanas para la Bandera Roja; una vez transcurrido ese tiempo, la TMOA expira. Los entrenamientos tendrían que planificarse con meses de antelación para esta ventana, sin flexibilidad en el calendario ni en el alcance.
- Si no hay ninguna TMOA disponible, los ejercicios de entrenamiento no continuarían en el espacio aéreo sobre el Centro de Entrenamiento e Investigación de Playas (PTRC). La capacitación sobre el terreno, fuera del alcance de este EA, seguiría ocurriendo en el PTRC.

## **Resumen de los Hallazgos**

Los recursos ambientales potencialmente afectados fueron identificados a través de comunicaciones con agencias estatales y federales y revisión de documentación ambiental pasada. Entre los recursos medioambientales específicos que pueden tener consecuencias medioambientales se incluyen la gestión y el uso del espacio aéreo, el ruido, la seguridad, el espectro electrónico, la calidad del aire, recursos culturales, materiales y desechos peligrosos, recursos biológicos, justicia ambiental y protección de los niños, uso de la tierra y socioeconomía.

En el marco de la Acción Propuesta, la aviación general y otras aeronaves que operan con arreglo a las normas de vuelo de instrumentos tendrían que mantenerse claras en cuanto al MOA/ATCAA de Playas propuesto mientras se mantiene activo. La gestión del espacio aéreo en los MOA de Tombstone no se vería afectada negativamente por la activación del MOA/ATCAA de Playas propuesto, con la posible excepción de la gestión del tráfico en la ruta V-66 Air Traffic Service (ATS).

Cuando se activa el MOA/ATCAA de Playas propuesto, la agencia que usa (Cuerpo de Infantería de Marina de los Estados Unidos o Fuerza Aérea) normalmente usaría los MOA de Tombstone al mismo tiempo. Las aeronaves que operen desde los aeropuertos privados de Thurmond y Luna Landing, durante los períodos de activación del MOA/ATCAA de Playas, pueden verse afectadas. Aquellos que buscan la activación de un plan de vuelo de reglas de vuelo de instrumentos (IFR) tendrían que mantenerse alejados del MOA/ATCAA de Playas para comenzar a operar bajo IFR. Quienes operan con normas de vuelo visual (VFR) no necesitan el MOA/ATCAA. El Aeropuerto Municipal de Lordsburg y el Aeropuerto Municipal de Deming tendrían las mismas consideraciones. El tráfico VFR no se vería restringido al uso del espacio aéreo propuesto del MOA/ATCAA de Playas, mientras que el tráfico IFR tendría que evitarlo.

Las operaciones dentro del MOA/ATCAA de Playas propuesto aumentarían la exposición al sonido de las operaciones de las aeronaves; sin embargo, el aumento daría lugar a impactos insignificantes o menores para ambas alternativas. Sobre la base del análisis de las operaciones de aeronaves propuestas para ambas alternativas, el área bajo el proyecto del MOA/ATCAA de Playas estaría sujeta a un aumento de hasta 3 decibelios (dB) respecto a las condiciones existentes a 52 dB para el nivel sonoro día - noche ( $L_{dnmr}$ ) y un aumento de hasta 5 dB de las condiciones existentes a 45 dB para el nivel de sonido día - noche (DNL).

Con un programa establecido de recuperación de aeronaves dañadas o desactivado por accidente y la aplicación de todos los requisitos aplicables de la Oficina de Seguridad y Salud de la Fuerza Aérea y de la Administración de Seguridad y Salud Ocupacional, no se espera que se produzcan impactos significativos en la seguridad de ninguna de las dos alternativas. De la misma manera, no se esperaría que la seguridad de los vuelos tenga efectos significativos en virtud de la aplicación de las normas de seguridad de los vuelos y los procedimientos de peligro de colisión entre aves/vida silvestre y aeronaves.

El establecimiento del MOA/ATCAA Playas como un MOA/ATCAA permanente y registrado no requeriría cambios en el espectro electromagnético (EM) utilizado para el control del tráfico aéreo o entrenamiento militar bajo ninguna de las alternativas. En virtud de la Acción Propuesta, no habría un impacto significativo en los seres humanos, los animales u otros recursos por la energía Electromagnética.

El aumento de las emisiones a la atmósfera a raíz de la Acción Propuesta no se consideraría significativo. La aplicación de la Acción Propuesta no interferiría con la capacidad de la región para mantener el cumplimiento de las Normas Nacionales de Calidad del Ambiente del Aire para la zona de cumplimiento de los contaminantes y no interferiría con la capacidad de lograr el cumplimiento de los contaminantes que contribuyen al incumplimiento del ozono. Ninguno de los criterios de los niveles de emisión de contaminantes excedió el umbral *mínimo* de 100 toneladas por año para cualquiera de las dos alternativas; por lo tanto, no se esperaría que la Acción Propuesta impacte en la calidad del aire.

Los efectos sobre los recursos culturales incluirían los efectos indirectos debidos a cambios menores en las intrusiones en el ruido subsónico y los efectos directos resultantes de posibles accidentes de avión y de los efectos de vibración de los vuelos subsónicos. El potencial de un efecto directo debido a un accidente aéreo sería extremadamente bajo, y el potencial de un impacto directo de un accidente en cualquier recurso en particular no se consideraría razonablemente previsible. Los análisis de los efectos de vibración asociados con aeronaves subsónicas de ala fija han indicado que los sobrevuelos por encima de 200 pies AGL no generan niveles significativos de vibración estructural inducida por el sonido. Además, los vuelos serían de carácter transitorio y de breve duración; no se produciría ningún impacto en las propiedades arquitectónicas y los sitios arqueológicos como resultado de la Acción Propuesta.

La generación de desechos peligrosos en el marco de la Acción Propuesta no daría lugar a un aumento del uso, almacenamiento o eliminación rutinarios de materiales o desechos peligrosos. Cualquier derrame o fuga se manejará de conformidad con el Plan de Prevención y Control de Derrames, el Plan de Prevención de la Contaminación y el Plan de Manejo de Desechos Peligrosos de la AFB de Davis-Monthan, las regulaciones, políticas, programas y procedimientos de la instalación militar respectiva, así como todas las regulaciones federales, estatales y locales. Por consiguiente, la aplicación de la Acción Propuesta tendría un impacto menos que significativo en la gestión de los materiales peligrosos y los desechos peligrosos.

En el marco de la Acción Propuesta, las actividades en el marco del MOA/ATCAA de Playas propuesto serían totalmente aéreas; por lo tanto, no se alteraría ni afectaría la vegetación ni el hábitat de las especies, y los posibles efectos consistirían en impactos sobre el ruido para las especies sensibles de la fauna silvestre. El entrenamiento propuesto no crearía una fuente de ruido consistente y significativo en ningún lugar. El promedio anual previsto de DNL en todo el espacio aéreo de todas las operaciones de aeronaves aumentaría de 49 dB a 52 dB DNL. Los efectos del ruido derivados del aumento de las operaciones tendrían un efecto insignificante, a corto y a largo plazo sobre la fauna y flora silvestres. La Fuerza Aérea ha encontrado que no habría impacto en la vida silvestre ni en los hábitats y ha hecho *una determinación de no efecto* para las especies incluidas en la lista federal y el hábitat crítico.

La Acción Propuesta no tendría efectos desproporcionados por el aumento del ruido en las poblaciones minoritarias o las comunidades de bajos ingresos. No habría efectos desproporcionados de ruido para los niños de la comunidad.

El uso de la tierra en el marco del MOA/ATCAA de Playas propuesto no se vería afectado negativamente por la aplicación de la Acción Propuesta. Sobre la base del análisis de las operaciones de aeronaves propuestas para ambas alternativas, el área bajo el proyecto del MOA/ATCAA de Playas estaría sujeta a

un aumento de hasta 3 decibelios dB) respecto a las condiciones existentes a 52 dB  $L_{dnmr}$  y un aumento de hasta 5 dB de las condiciones existentes a 45 dB DNL. Estos niveles sonoros propuestos serían consistentes con las condiciones existentes, y los usos de la tierra en el marco del MOA/ATCAA seguirían siendo compatibles.

Debido a que la Acción Propuesta no implicaría la construcción, la implementación del proyecto del MOA/ATCAA de Playas no requeriría una fuerza de trabajo de construcción ni generaría ingresos para la economía local a través de la compra de materiales y suministros. No se generarían nuevos empleos militares y no se reubicaría a personal nuevo en la AFB de Davis-Monthan. Por lo tanto, se espera que los gastos, el empleo y la población en las cercanías del PTRC se mantengan en los niveles actuales.

### **Impactos Acumulativos**

La EA consideró los impactos acumulativos que podrían resultar del impacto incremental de la Acción Propuesta cuando se agrega a otras acciones pasadas, presentes o razonablemente previsibles en el futuro. No se identificaron impactos acumulativos potencialmente significativos para el proyecto del MOA/ATCAA de Playas.

### **Mitigación**

El análisis de la EA concluyó que ninguna de las alternativas daría lugar a impactos ambientales significativos; por lo tanto, no se requerirían medidas de mitigación.

### **Conclusión**

**Hallazgo de No Impacto Significativo.** Tras la revisión de la EA preparada de conformidad con los requisitos de la NEPA, la normativa CEQ, y 32 CFR § 989 y que se incorporan por referencia, he determinado que las actividades propuestas para establecer un SUA en la forma de un MOA permanente y ATCAA sobre Playas, Nuevo México, no tendrían un impacto significativo en la calidad del medio ambiente humano o natural. Por consiguiente, no se preparará una Declaración de Impacto Ambiental. Esta decisión se tomó después de considerar toda la información presentada, incluyendo una revisión de los comentarios de la agencia presentados durante el período de comentarios públicos de 30 días, y considerando una gama completa de alternativas prácticas que cumplen con los requisitos del proyecto y están dentro de la autoridad legal de la Fuerza Aérea de los Estados Unidos.

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**JOSEPH C. TURNHAM, Colonel, USAF**  
Commander

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**DATE**

**DRAFT ENVIRONMENTAL ASSESSMENT (EA)  
FOR THE  
PLAYAS SPECIAL USE AIRSPACE  
DAVIS-MONTHAN AIR FORCE BASE, ARIZONA**

PREPARED FOR:

**Department of the Air Force**

*April 2021*

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## LIST OF ACRONYMS AND ABBREVIATIONS

ACAM	Air Conformity Applicability Model
ACC	Air Combat Command
AFB	Air Force Base
AGL	above ground level
Air Force	United States Air Force
ANSI	American National Standards Institute
APE	Area of Potential Effects
ATCAA	Air Traffic Control-Assigned Airspace
ATS	Air Traffic Service
BASH	Bird/Wildlife-Aircraft Strike Hazard
BG	block group
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BLS	Bureau of Labor Statistics
BMP	best management practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERTEX	Certification Exercise
CFR	Code of Federal Regulations
CT	census tract
CWA	Clean Water Act
DAFI	Department of the Air Force Instruction
dB	decibel
dBA	A-weighted decibel
DHS	Department of Homeland Security
DNL	Day-Night Average Sound Level
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EM	electromagnetic
EO	Executive Order
ESA	Endangered Species Act
EW	electronic warfare
°F	degrees Fahrenheit
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FONSI	Finding of No Significant Impact
FL	flight level
FW	Fighter Wing
GHG	greenhouse gas
GPS	global positioning system
Hz	Hertz
I	Interstate
IFR	instrument flight rules
IPaC	USFWS's Information for Planning and Consultation Service
km	kilometer
kts	knots
$L_{dnmr}$	Onset Rate Adjusted Day-Night Average Sound Level
$L_{max}$	Maximum Sound Level
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
MBTA	Migratory Bird Treaty Act
MOA	Military Operations Area

MOU	Memorandum of Understanding
MSL	mean sea level
MTR	Military Training Route
NAAQS	National Ambient Air Quality Standards
NAS	National Airspace System
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
nm	nautical mile(s)
NMFS	National Marine Fisheries Service
NOA	Notice of Availability
NOTAM	Notices to Airman
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PEL	permissible exposure limit
PM <sub>x</sub>	particulate matter with particulates less than or equal to x micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTRC	Playas Training and Research Center
RF	radio frequency
RNAV	Area Navigation
ROAA	Record of Air Analysis
ROI	region of influence
RPM	revolutions per minute
RWY	runway
SEL	Sound Exposure Level
SHPO	State Historic Preservation Office
SUA	Special Use Airspace
TMOA	Temporary Military Operations Area
TO	Technical Order
TRAP	Tactical Recovery of Aircraft & Personnel
US	United States
USC	United States Code
USCB	United States Census Bureau
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USMC	United States Marine Corps
USFWS	United States Fish and Wildlife Service
VFR	Visual Flight Rules
VOC	volatile organic compound
VOR	very high frequency omnidirectional range

## CHAPTER 1 PURPOSE AND NEED FOR ACTION

The United States (US) Air Force (Air Force), Air Combat Command (ACC), prepared this Environmental Assessment (EA) in accordance with the requirements of the National Environmental Policy Act (Volume 42 of the United States Code §§ 4321–4370h [NEPA]); Council on Environmental Quality Regulations at Title 40 of the Code of Federal Regulations [CFR] §§ 1500–1508; the Air Force Environmental Impact Analysis Process at 32 CFR § 989, *Environmental Impact Analysis Process (EIAP)*, and Federal Aviation Administration (FAA) Order 1050.1F, *Environmental Impacts: Policies and Procedures*. The Air Force also considered other pertinent environmental statutes, regulations, and compliance requirements during the preparation of this EA. These authorities are addressed in various sections throughout this EA as relevant.

### 1.1 INTRODUCTION

The Air Force is proposing to establish an Air Traffic Control-Assigned Airspace (ATCAA) and a Special Use Airspace (SUA) in the form of a permanent Military Operations Area (MOA) above Playas, New Mexico. The proposed MOA and ATCAA would be activated as needed to support multi-service training requirements and would be managed and scheduled by the 355 Wing personnel at Davis-Monthan Air Force Base (AFB) in southeastern Arizona.

Aircraft operations associated with training activities would occur in conjunction with a wide range of ground training that takes place at the Playas Training and Research Center (PTRC). PTRC was created by New Mexico Tech University in 2003, which leased the 250-unit homesite and nearby copper smelter from 1971 to 1999. The PTRC was established as a primary training and readiness support facility for the US Department of Homeland Security (DHS), state law enforcement agencies, as well as the US Department of Defense (DoD) and associated national defense and security forces. All of the ground-based activities discussed in this EA in and around the PTRC, which include limited recovery of airdropped personnel or equipment primarily using existing paved or dirt roads, were previously analyzed as part of the Angel Thunder Exercise EA (May 2017) and Personnel Recovery Training Program EA (January 2020). There would be no change in any ground activities as part of this Air Force proposal.

A SUA consists of defined dimensions of airspace, wherein activities must be confined because of their nature or when limitations are imposed upon non-participating aircraft operations, or both.

A MOA is a type of SUA outside of Class A airspace to separate or segregate certain nonhazardous military activities from instrument flight rules (IFR) traffic. Activities in MOAs include, but are not limited to, air combat maneuvers, air intercepts, and low-altitude tactics. The defined vertical and lateral limits vary for each MOA.

ATCAA is assigned to air traffic control to segregate air traffic between specified activities being conducted within the assigned airspace and other IFR traffic. This airspace is not depicted on any chart but is often an extension of a MOA to higher altitudes and usually referred to by the same name. This airspace remains under control of the Federal Aviation Administration when not in use to support general aviation activities. Although ATCAAs are typically associated with SUAs, they are not a type of SUA.

The Air Force, Departments of the Army and Navy, and US Marine Corps (USMC) use the PTRC to conduct training in an urban environment. As a self-contained facility isolated from population centers, the PTRC provides a representative setting to safely and securely provide urban training. There is no permanent MOA or ATCAA established above the PTRC, and airspace training exercises are currently conducted under a temporary Military Operations Area (TMOA) and ATCAA.

Several EAs related to activities at the PTRC have been prepared. This EA incorporates by reference relevant information from the following EAs:

- Tactical Recovery of Aircraft and Personnel (TRAP) Training and Readiness Certification Exercise (CERTEX) Playas Temporary Military Operating Area (Playas TMOA) EA, dated August 3, 2017 (USMC, 2017). This EA evaluated training activities in the Playas TMOA.

- Angel Thunder Exercise Environmental Assessment, dated May 2, 2017 (Air Force, 2017a). This EA evaluated the following types of training to be conducted at the PTRC: drop zone: helicopter land zone, landing zone, driving, and military operations in urban terrain.
- Davis-Monthan Air Force Base Personnel Recovery Training Program, dated January 2020 (Air Force, 2020a). This EA evaluated the establishment of the Playas TMOA for separate Red Flag training events for a period not to exceed 45 days, over a four-year period. Each training event is anticipated to last two to three weeks. The FAA adopted this EA in February 2020.

### 1.1.1 Location

The proposed Playas MOA/ATCAA includes the same airspace that has previously been activated as the Playas TMOA/ATCAA. The proposed MOA/ATCAA would be centered above the PTRC, located in Grant and Hidalgo counties in southwestern New Mexico. The PTRC training facility is approximately 20 miles (32 kilometers [km]) south of Interstate (I)-10, and approximately 40 miles (32 km) north of the US–Mexico border. Located in the Playas Valley, the town site of Playas sits cradled by the Little Hatchet Mountains to the east and the Animas Mountains to the west. A seasonal lake bed (the "playa" from which the valley and town derived their names) lies in the valley to the west of the PTRC, filled mainly by annual monsoons in July. The level fluctuates with precipitation during the year and is often dry. The Little Hachet Mountains hosted several mines during the mining peak from the late 1880s through the early 1900s. Davis-Monthan AFB is approximately 130 miles from the PTRC. Communities near the PTRC are Animas, New Mexico (population 240 residents), approximately 18 miles (29 km) miles to the west, and Hachita, New Mexico (population 50 residents), approximately 14 miles (22.5 km) to the east (**Figures 1-1** and **1-2**).

## 1.2 NEED FOR THE PROPOSED ACTION

The Air Force has a need for realistic combat rescue training and pre-deployment training on a regular and continuing basis, with large-force integration of both airborne and ground-based assets. The Air Force has access to a unique training location at the PTRC that can be limited in the time, frequency, and duration of use without the establishment of a permanent MOA. A MOA centered above the PTRC is needed to support the noted training requirements by protecting fast-moving aircraft, tiltrotor aircraft, and helicopters in training exercises and eliminating speed restrictions to allow for combat maneuvering and cloud penetration. Selection criteria for the Proposed Action are provided in **Section 2.2**.

## 1.3 PURPOSE OF THE PROPOSED ACTION

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 US and allied air-combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers, and Joint Personnel Recovery Center personnel. In conjunction, the purpose is to strengthen joint military operations; multi-national partnerships; and operations with other federal, state, and local agencies/organizations.

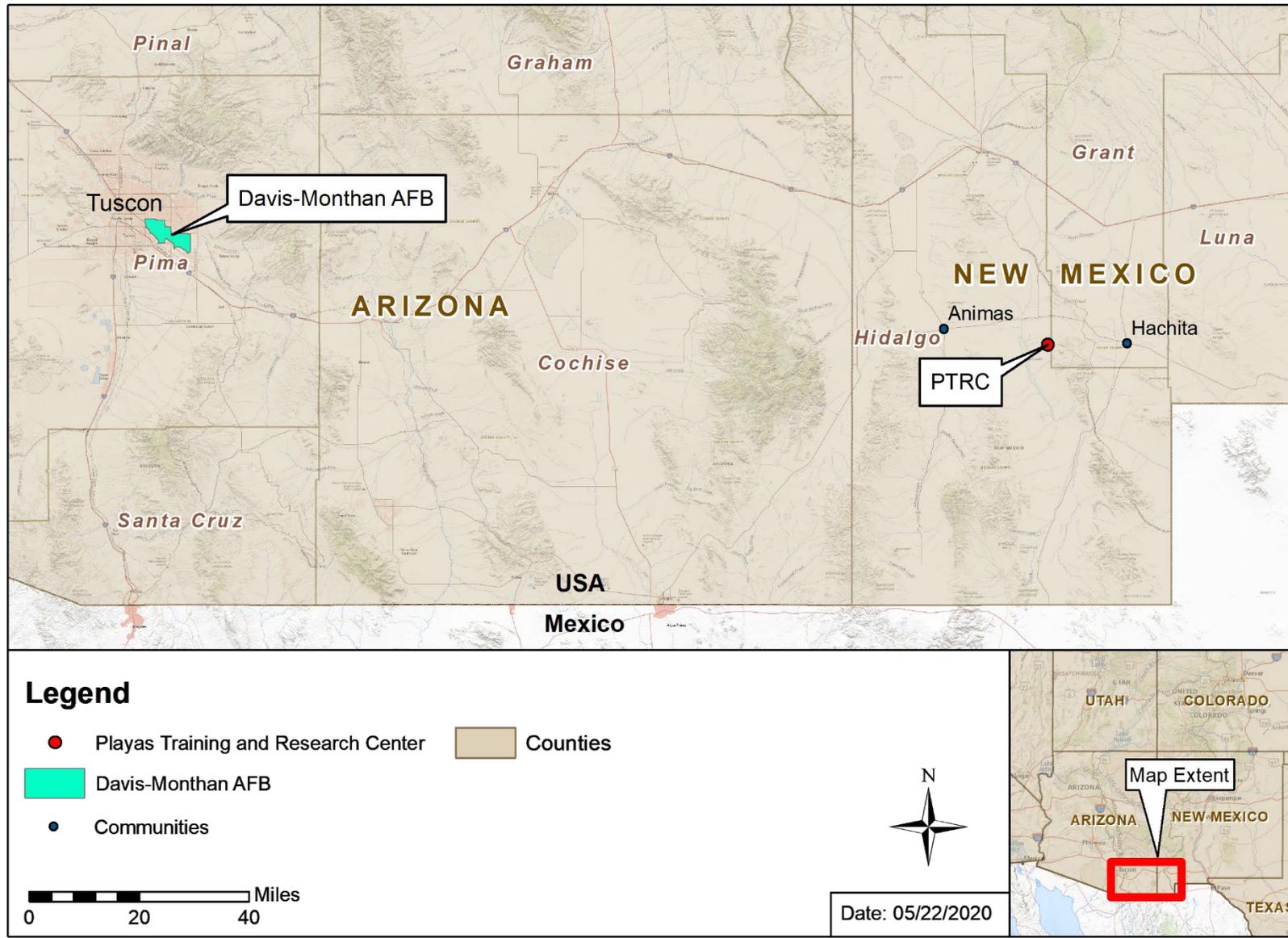


Figure 1-1. Vicinity Map

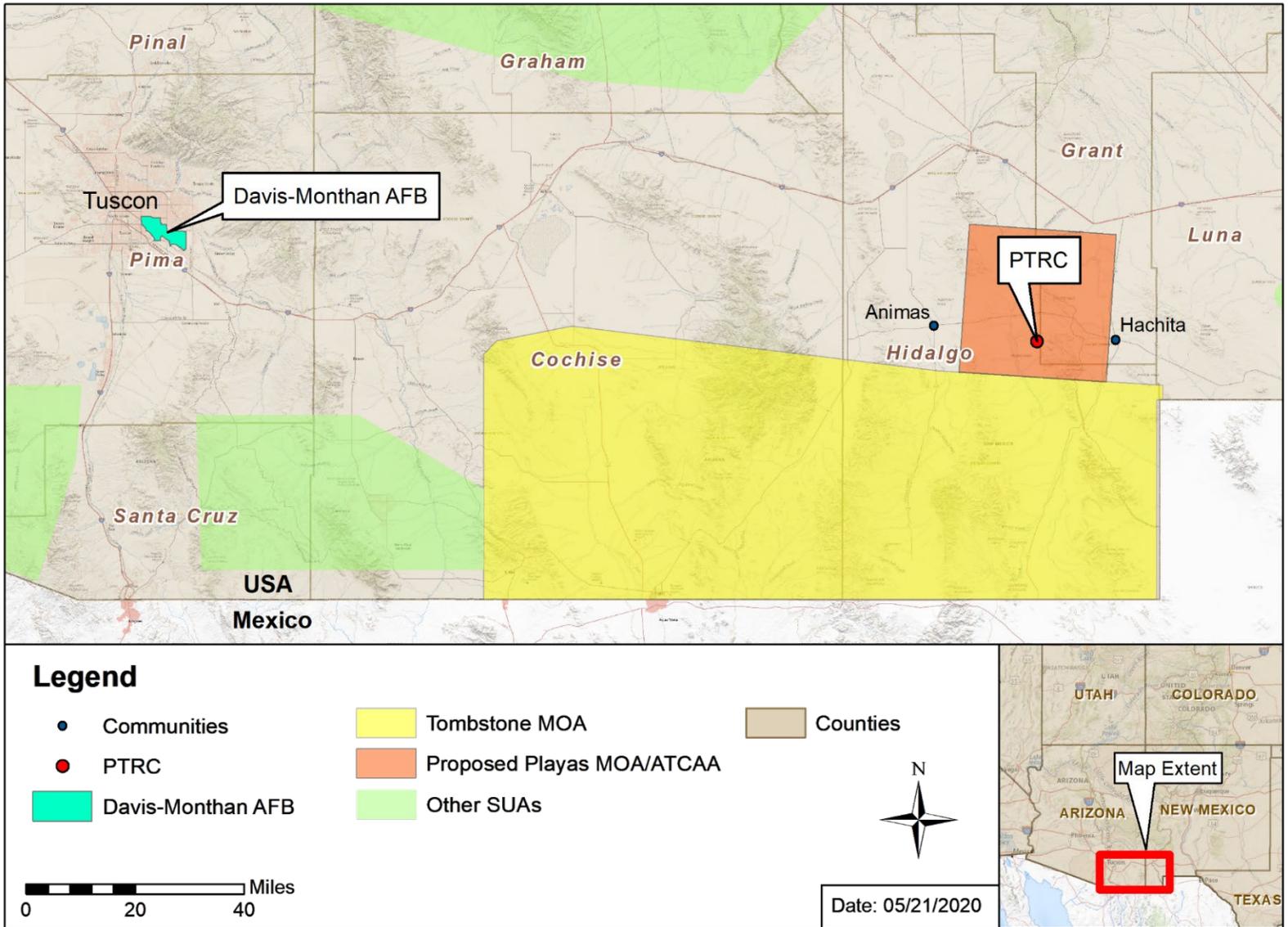


Figure 1-2. Special Use Airspace

## 1.4 SCOPE OF THE ENVIRONMENTAL ANALYSIS

This EA has been prepared in accordance with the NEPA, CEQ regulations at 40 §§ 1500–1508, the Air Force EIAP at 32 CFR § 989, and FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*. NEPA is the basic national requirement for identifying environmental consequences of major federal actions. NEPA ensures that environmental information, including the anticipated environmental consequences of a proposed action, is available to the public, federal and state agencies, and the decisionmaker before decisions are made and before actions are taken.

Consistent with the CEQ regulations, this EA is organized as follows:

- Chapter 1, Purpose and Need for Proposed Action, includes an introduction, location, purpose and need statements, scope of environmental analysis, decision to be made, interagency and intergovernmental coordination and consultations, applicable laws and environmental regulations, and a description of public and agency review of the EA.
- Chapter 2, Description of the Proposed Action and Alternatives, includes a description of the Proposed Action, alternative selection standards, screening of alternatives, alternatives eliminated from further consideration, a description of the selected alternatives, summary of potential environmental consequences, and mitigation and environmental commitments.
- Chapter 3, Affected Environment, includes a description of the natural and manmade environments within and surrounding PTRC and the airspace that may be affected by the Proposed Action and alternatives.
- Chapter 4, Environmental Consequences, includes definitions and discussions of direct and indirect impacts and environmental commitments.
- Chapter 5, Cumulative Effects, considers the potential cumulative impacts on the environment that may result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions.
- Chapter 6, List of Preparers, provides a list of the preparers of this EA.
- Chapter 7, References, contains bibliographic references for studies, data, and other resources used in the preparation of this EA.
- Appendices provide relevant correspondence, studies, modeling results, and public review information.

NEPA requires federal agencies to consider alternatives to a proposed action and analyze potential impacts of such alternatives. Potential impacts of the Proposed Action and its alternatives in this EA were assessed in accordance with the Air Force EIAP (32 CFR § 989), which requires that impacts to resources be analyzed in terms of their context, duration, and intensity. To help the public and decisionmakers understand the implications of the Proposed Action and alternatives, this EA described potential impacts in the short and long term, cumulatively, and within context.

**Table 1-1** identifies the environmental resource areas analyzed in this EA. The Region of Influence (ROI) for this EA is the proposed Playas MOA/ATCAA, which includes and extends beyond the PTRC. This EA analyzes the following resource areas: airspace management and use, operational noise, safety, electromagnetic (EM) spectrum, climate and air quality, cultural resources, hazardous materials and wastes, biological resources, environmental justice and protection of children, land use, and socioeconomics.

Because the Proposed Action would not involve ground-disturbing or construction activities, there would be no potential for impacts to farmlands, water resources, geology and soils, or infrastructure/utilities. Section 4(f) of the US Department of Transportation (USDOT) Act was eliminated from consideration because the designation of airspace for military flight operations is exempt from Section 4(f) of the USDOT Act. Under the 1997 DoD reauthorization, “no military flight operations (including a military training flight), or

designation of airspace for such an operation, may be treated as a transportation program or project for purposes of 49 USC § 303(c)(Public Law 105-85).” Therefore, this EA eliminated those resource areas from detailed analysis.

Likewise, visual effects were eliminated from further analysis. While the Proposed Action would involve aircraft engaged in the training activities in the proposed MOA/ATCAA airspace, the duration of the exercises would be short lived and not sufficient enough to cause adverse visual or audible effects. Furthermore, commercial and civilian aircraft currently fly within this airspace, exposing observers on the ground to random, infrequent overflights. There are no recreation areas/uses within 0.5 mile of the proposed Playas MOA/ATCAA, so there would be no visual or audible effects that would affect users of recreation areas.

**Table 1-1. Environmental Resource Areas Analyzed in this EA**

Resource Area	Resource Areas to be Analyzed
Airspace Management and Use	✓
Operational Noise	✓
Safety	✓
Electromagnetic Spectrum	✓
Climate/Air Quality	✓
Cultural Resources	✓
Hazardous Materials and Wastes	✓
Biological Resources	✓
Environmental Justice and Protection of Children	✓
Land Use	✓
Socioeconomics	✓
Department of Transportation Section 4(f)	
Farmlands	
Water Resources	
Geology and Soils	
Infrastructure/Utilities	
Visual Resources	

Note:  
FAA Impact Categories are discussed in **Section 1.6.3** and **Table 1-2**.

## **1.5 INTERAGENCY AND INTERGOVERNMENTAL COORDINATION AND CONSULTATIONS**

### **1.5.1 Interagency/Intergovernmental Coordination and Consultation**

The environmental analysis process, in compliance with NEPA, includes public and agency review of information pertinent to the Proposed Action and alternatives. Scoping is an early and open process for developing the breadth of issues to be addressed in an EA and for identifying significant concerns related to an action. In accordance with the requirements of the Intergovernmental Cooperation Act of 1968 (42 USC § 4231[a]) and Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, federal, state, and local agencies with jurisdiction that could potentially be affected by the Proposed Action and alternatives were notified during the development of this EA. Interagency and Intergovernmental Coordination for Environmental Planning letters and responses are included in **Appendix A**.

### **1.5.2 Agency Consultations**

Implementation of the Proposed Action or an alternative would involve coordination with several organizations and agencies. Compliance with Section 7 of the Endangered Species Act of 1973, as amended (16 USC § 1531, et seq.) (ESA) and its implementing regulations at 50 CFR § 402 require consultation with the US Fish and Wildlife Service (USFWS) and/or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) when a federal action could affect federally listed threatened or endangered species and a conference when the action is likely to jeopardize a species

proposed for listing. Informal consultation begins when an agency requests from USFWS and/or NMFS a list of endangered or threatened species that may occur in the project ROI. If any of these species is present, the agency determines whether its Proposed Action would have an effect on them and consults with USFWS and/or NMFS to avoid or minimize adverse effects. If no ESA-protected species would be affected by the Proposed Action or alternatives, no additional consultation is required. The Air Force sent letters to the appropriate USFWS office (NMFS is not applicable) as well as relevant state agencies, informing them of the Proposed Action and requesting data regarding applicable protected species.

The Air Force will coordinate with the appropriate state government agencies and planning districts regarding cultural and historic resources. Compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (54 USC § 306108) (NHPA) and its implementing regulations at 36 CFR § 800 will be accomplished through the New Mexico State Historic Preservation Office (SHPO).

All agency correspondence is included in **Appendix A**.

### **1.5.3 Cooperating Agencies**

Because of the FAA's jurisdiction by law, the FAA accepted the Air Force's request for participation as a cooperating agency (40 CFR 1501.6) in the preparation of this EA via letter dated February 14, 2020. The FAA's Proposed Action would involve establishing the proposed Playas MOA/ATCAA. This participation is also in accordance with the October 2019 Memorandum of Understanding between the FAA and DOD regarding environmental review of SUA actions (FAA, 2020a).

FAA SUA actions are subject to environmental impact analysis pursuant to NEPA as implemented by the CEQ regulations. The FAA action only involves establishing the proposed Playas MOA/ATCAA. As a cooperating agency, the FAA coordinates closely with the Air Force and actively participates in the preparation of the Draft and Final EA. In accordance with its applicable FAA Order 1050.1F, the FAA conducts an independent evaluation and analysis of this EA and may adopt the EA for purposes of making its decision regarding the FAA's Proposed Action pursuant to 40 CFR 1506.3.

Table 1-2 shows the correspondence between FAA impact categories and the impact categories in this EA.

**Table 1-2.  
Comparison of FAA Impact Categories and EA Resource Areas**

FAA Impact Category	EA Resource Area	EA Section Number
Air Quality	Air Quality	3.5
Biological Resources	Biological Resources	3.8
Climate	Air Quality	3.5
Coastal Resources	N/A <sup>a</sup>	N/A <sup>a</sup>
Department of Transportation Act, Section 4(f)	N/A <sup>a</sup>	N/A <sup>a</sup>
Farmlands	N/A <sup>a</sup>	N/A <sup>a</sup>
Hazardous Materials, Solid Waste, and Pollution Prevention	Hazardous Materials and Hazardous Waste Management	3.7
Historical, Architectural, Archaeological, and Cultural Resources	Cultural Resources	3.6
Land Use	Land Use	3.10
Natural Resources and Energy Supply	Irreversible and Irretrievable Commitment of Resources	
Noise and Compatible Land Use	Noise	3.2 and 3.10
Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety	Safety Socioeconomics Environmental Justice and Protection of Children	3.9 and 3.11
Visual Effects (including light emissions)	N/A <sup>a</sup>	N/A <sup>a</sup>
Water Resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)	N/A <sup>a</sup>	N/A <sup>a</sup>

Note:

- a. N/A = Not Applicable; indicates that the impact area will not be analyzed in the EA based on the discussion provided in **Section 1.4** and **Table 1-1**.

#### 1.5.4 Government to Government Consultation

In addition to requiring coordination with the SHPO, the NHPA and its regulations at 36 CFR § 800 direct federal agencies to consult with Native American tribes when a Proposed Action or alternative may have an effect on tribal lands or on properties of religious and cultural significance to a tribe. Consistent with the NHPA, DoD Instruction 4710.02, *Interactions with Federally-Recognized Tribes*, and Department of the Air Force Instruction (DAFI) 90-2002, *Interactions with Federally Recognized Tribes*, federally recognized tribes that are historically affiliated with lands in the vicinity of the Proposed Action and alternatives have been invited to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. The tribal consultation process is distinct from NEPA consultation or the interagency coordination process, and it requires separate notification to all relevant tribes. The timelines for tribal consultation are also distinct from those of other consultations. The Davis-Monthan AFB point of contact for Native American tribes is the Wing Commander. The point of contact for consultation with the Tribal Historic Preservation Officer and the Advisory Council on Historic Preservation is the Davis-Monthan AFB Cultural Resources Manager. Government-to-government consultation is included in **Appendix A**.

#### 1.6 APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS

Implementation of the Proposed Action or alternative would require compliance with several laws and regulations. The following is a brief summary of NEPA and the EIAP. **Chapter 3** of this EA provides a detailed analysis related to adherence to the requirements of specific laws, regulations, best management practices, and necessary permits.

### 1.6.1 National Environmental Policy Act

NEPA requires that federal agencies consider potential environmental consequences of proposed actions. The Act's intent is to protect, restore, or enhance the environment through well-informed federal decisions. The CEQ was established under NEPA for the purposes of implementing and overseeing federal policies as they relate to this process. In 1978, the CEQ issued implementing regulations (40 CFR §§ 1500–1508)<sup>1</sup> to specify that an EA be prepared to:

- briefly provide sufficient analysis and evidence for determining whether to prepare an EIS or a FONSI;
- aid in an agency's compliance with NEPA when no EIS is necessary; and
- facilitate preparation of an EIS when one is necessary.

Further, to comply with other relevant environmental requirements (e.g., the ESA and NHPA) and to assess potential environmental impacts, the EIAP and decisionmaking process for the Proposed Action and alternatives involves a thorough examination of environmental issues potentially affected by government actions subject to NEPA.

### 1.6.2 The Environmental Impact Analysis Process

The EIAP is the process by which the Air Force facilitates compliance with environmental regulations (in accordance with 32 CFR § 989), including NEPA, which is the primary legislation affecting the agency's decisionmaking process.

## 1.7 PUBLIC AND AGENCY REVIEW OF ENVIRONMENTAL ASSESSMENT

A Notice of Availability (NOA) of the Draft EA and FONSI was published in the Arizona Daily Star, Las Cruces Sun-News, and Wilcox Range News newspapers, announcing the availability of the EA for review. The NOA invited the public to review and comment on the draft EA. The public and agency review period begins on 19 April 2021 and ends on 18 May 2021. The Draft EA was also placed in the following libraries: Lordsburg-Hildago Library, Lordsburg, NM; Silver City Public Library, Silver City, NM; Bayard Public Library, Bayard, NM; and Gila Valley Library, Gila, NM. The public and agency comments are provided in **Appendix A**.

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<sup>1</sup> On July 16, 2020, the CEQ issued a final rule to update its regulations for federal agencies to implement NEPA (see Volume 85 of the Federal Register, page 43304). The effective date for the new regulations is September 14, 2020. Because this EA was initiated before that effective date, this EA has been prepared in accordance with the original 1978 CEQ regulations.

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## CHAPTER 2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

### 2.1 PROPOSED ACTION

The Air Force is proposing to establish a SUA in the form of a permanent Playas MOA and ATCAA above Playas, New Mexico. The proposed MOA/ATCAA would be activated as needed to support multi-service training requirements and would be managed and scheduled by the 355 Wing personnel at Davis-Monthan AFB in southeastern Arizona.

The proposed Playas MOA/ATCAA would be defined by the following coordinates:

- Latitude 32°10'43"N., Longitude 108°42'48"W.
- Latitude 32°09'20"N., Longitude 108°19'29"W.
- Latitude 31°49'31"N., Longitude 108°21'03"W.
- Latitude 31°50'49"N., Longitude 108°44'28"W.

The proposed Playas MOA/ATCAA would have the following characteristics:

- 20 nautical mile (nm) by 20 nm block of SUA centered on Playas, New Mexico;
- MOA ceiling up to 17,999 feet mean sea level (MSL) (up to, but not including flight level [FL] 180);
- Floor at 300 feet above ground level (AGL); and
- ATCAA located directly above the MOA with altitudes from FL180 up to FL230.

MSL is altitude in feet measured above the average level of the surface of one or more bodies of water. AGL is altitude in feet measured above the surface of the ground. When flying over land, both MSL and AGL are used to delineate airspace structure. FL is vertical altitude expressed in hundreds of feet.

For context, the elevation at PRTC and the western portion of the MOA is generally 4,500 ft MSL; therefore, the ATCAA floor is generally 13,500 ft AGL. There are mountains to the west of PRTC, resulting in less AGL elevation in some areas of the eastern part of the MOA.

The proposed Playas MOA/ATCAA would include the same airspace that has previously been temporarily activated as the Playas TMOA/ATCAA. The proposed MOA/ATCAA would be centered above the PTRC, located in Grant and Hidalgo counties in southwestern New Mexico (see **Figure 1-1**). The PTRC was established as a primary training and readiness support facility for the DHS, state law enforcement agencies, as well as DoD and associated national defense and security forces. The PTRC facility is owned, operated, and managed by the Energetic Materials Research and Testing Center of the New Mexico Institute of Mining and Technology in Socorro, New Mexico.

The proposed MOA/ATCAA would only be used during a specified timeframe during each training event, with specific times of use announced via Notices to Airman (NOTAM). When needed, the 355 Wing personnel would notify FAA personnel at Albuquerque Air Traffic Control Center and request that FAA NOTAMs be published for the activation. The proposed MOA/ATCAA would support nonhazardous military flight activities including, but not limited to, tactical combat maneuvering by fighter, transport, and rotary wing aircraft; nonstandard formation flights; rescue escort maneuvering above participating rotary wing aircraft; tiltrotor aircraft, close air support; freefall and static line parachute operations; and visual flight rule (VFR) aerial helicopter refueling. The proposed boundaries and altitudes of the Playas MOA/ATCAA would remain the same across training events. Specific training activities are discussed in **Section 2.1.1** below.

Under the Proposed Action, no personnel would be added to Davis-Monthan AFB. There would be no land acquisition and no new construction or demolition of on-ground facilities. Additional training activities in the proposed Playas MOA/ATCAA would occur as described in **Section 2.1.1** below.

### 2.1.1 Training Activities

In conjunction with the establishment of the proposed Playas MOA/ATCAA, training activities would occur at the PTRC and associated airspace. **Table 2-1** provides a summary of potential annual activities that could occur within the proposed Playas MOA/ATCAA under the Proposed Action. The potential annual activities described in **Sections 2.1.1.1 through 2.1.1.3** were used to develop the action alternatives that are listed in **Sections 2.5.1 and 2.5.2**. Details of each activity are discussed below the table. Please note that the total days in the proposed Playas MOA/ATCAA for an activity may be less than the listed duration because the MOA/ATCAA may not be used every day. Each activity has components that occur outside the proposed Playas MOA/ATCAA that are outside the scope of this EA.

**Table 2-1.  
Annual Potential Activities in the Proposed Playas MOA/ATCAA**

Activity	Events per Year	Duration	Total Days in Proposed Playas MOA/ATCAA	Previous Action in a TMOA/ATCAA
Red Flag-Rescue	2	3 weeks	28	Yes
TRAP/CERTEX	6	12 hours	6	Yes
Electronic warfare	5	3 days	15	No

Note:

ATCAA = Air Traffic Control-Assigned Airspace; CERTEX = Certification Exercise; MOA = Military Operations Area; TMOA = Temporary Military Operations Area; TRAP = Tactical Recovery of Aircraft and Personnel

#### 2.1.1.1 Air Force Red Flag-Rescue

The Air Force-proposed Red Flag-Rescue 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 US air-combat crews, para-rescue teams, survival specialists, intelligence personnel, air battle managers, and personnel from the Joint Personnel Recovery Center. Red Flag-Rescue would occur twice a year for three (3) weeks per event. **Table 2-2** provides the annual sorties in the proposed Playas and/or the Tombstone MOAs/ATCAA and the associated aircraft as a result of the Red Flag-Rescue training.

Operations would include free-fall and static-line parachute operations at all altitudes, nonstandard formation flights, rescue escort maneuvering above participating rotary wing aircraft, and close air support, all up to FL 230. VFR aerial helicopter refueling would be accomplished up to 10,000 feet MSL within the Tombstone MOAs. There would be no supersonic flights, use of chaff and flares, surface-to-surface or surface-to-air weapons firing, or aerial refueling operations conducted within the proposed Playas MOA/ATCAA.

**Table 2-2.  
Proposed Red Flag-Rescue Annual Sorties in the Proposed Playas MOA/ATCAA**

Aircraft Type	Sorties in Playas per Day	Duration (minutes) in Proposed Playas MOA/ATCAA	Additional Minutes in other MOAs (e.g., Tombstone)
A-10	8	120	30
AV-8	4	120	30
F-15	4	120	30
F-15E	4	120	30
F-16	4	120	30
F-18	4	120	30
F-22	4	120	30
F-35	4	120	30
Foreign fighters	4	120	30
M/HH-60	2	120	30
UH-1	2	120	30
MH-6	2	120	30
AH-64	2	120	30
CH/MH-47	2	120	30
AH-1	2	120	30
C-23	2	120	30
SC-7	2	120	30
C-2	2	120	30
CH-53	2	120	30
CV/MV-22	2	120	30
EC-725	2	120	60
Foreign helicopters	2	120	30
MQ-1	2	120	30
MQ-9	2	120	30
HC-130	2	120	30
MC-12	2	120	30
MC-130	2	120	30
AC-130	2	120	30
U-28	2	120	30
UH-72	2	120	30

Note:  
ATCAA = Air Traffic Control-Assigned Airspace; MOA = Military Operations Area

### 2.1.1.2 US Marine Corps Tactical Recovery of Aircraft and Personnel

TRAP/CERTEX is a USMC Special-Purpose Marine Air-Ground Task Force Central Command mission-essential task performed by assigned and briefed aircrews for the specific purpose of recovery of personnel, equipment, and/or aircraft in a tactical situation when survivors and the location have been confirmed. Commonly known as a simulated rescue of a downed pilot, TRAP/CERTEX requires use of aircraft and ground forces in a closely coordinated set of actions to execute the rescue of personnel on the ground. **Table 2-3** lists the proposed annual sorties in the Playas MOA/ATCAA and the associated aircraft as a result of the TRAP/CERTEX.

Proposed aerial activities would include tactical combat maneuvering (basic fighter maneuvers, simulated air-to-ground ordnance delivery, and tactical landing profiles) by fighter and transport category tiltrotor and rotary wing aircraft involving abrupt, unpredictable changes in altitude, attitude, and direction of flight. Nonstandard formation flights are possible. There would be no supersonic flights, use of chaff and flares, surface-to-surface or surface-to-air weapons firing, or aerial refueling operations conducted within the proposed Playas MOA/ATCAA.

**Table 2-3.  
Proposed TRAP/CERTEX Annual Sorties in the Proposed Playas MOA/ATCAA**

Aircraft Type	Sorties in Playas per Day	Duration (minutes) in Proposed Playas MOA/ATCAA	Additional Minutes in other MOAs (e.g., Tombstone)
MV-22B	2	120	180
KC-130J	1	120	180
AH-1Z	2	120	180
UH-1Y	2	120	180
AV-8B / F-35B	2	120	180
FA-18CD / F-35BC	2	120	180
A-10	2	120	180

Note:

ATCAA = Air Traffic Control-Assigned Airspace; CERTEX = Certification Exercise; MOA = Military Operations Area; TRAP = Tactical Recovery of Aircraft and Personnel

### 2.1.1.3 Electronic Warfare Training

Electronic warfare (EW) uses the EM spectrum to attack an enemy, or impede enemy actions by denying the use of the EM spectrum, while not impacting friendly forces. This additional training, in conjunction with PTRC activities, would entail five (5) events per year with a duration of three (3) days per event (for a total of 15 days per year). **Table 2-4** provides the aircraft that would be used during this training and the number of sorties per day inside the proposed Playas MOA/ATCAA. The EW aircraft would be outside the proposed Playas MOA/ATCAA but would work in coordination with other faster, maneuvering aircraft that would need the proposed MOA/ATCAA (as listed in **Table 2-4**). Activities outside of the proposed MOA/ATCAA are not within the scope of this EA.

**Table 2-4.  
Proposed Electronic Attack Annual Sorties in the Proposed Playas MOA/ATCAA**

Aircraft Type	Sorties in Playas per Day	Duration (minutes) in Proposed Playas MOA/ATCAA	Additional Minutes in other MOAs (e.g., Tombstone)
A-10	8	120	30
AV-8	4	120	30
F-15	4	120	30
F-15E	4	120	30
F-16	4	120	30
F-18	4	120	30
F-22	4	120	30
F-35	4	120	30
Foreign fighters	4	120	30
M/HH-60	2	120	30
UH-1	2	120	30
MH-6	2	120	30
AH-64	2	120	30
CH/MH-47	2	120	30
AH-1	2	120	30
C-23	2	120	30
SC-7	2	120	30
C-2	2	120	30
CH-53	2	120	30
CV/MV-22	2	120	30
EC-725	2	120	60
Foreign helicopters	2	120	30
MQ-1	2	120	30
MQ-9	2	120	30
HC-130	2	120	30
MC-12	2	120	30
MC-130	2	120	30
AC-130	2	120	30
U-28	2	120	30
UH-72	2	120	30

Note:  
ATCAA = Air Traffic Control-Assigned Airspace; MOA = Military Operations Area

## 2.2 SELECTION STANDARDS

Under the Proposed Action, the Air Force would establish a permanent Playas MOA/ATCAA in order to provide an integrated, properly configured, realistic military training airspace with adequate dimension and size to support combat search and rescue training for US and allied air-combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers and Joint Personnel Recovery Center personnel.

The Proposed Action must meet the following selection standards:

- Adjacent to an existing MOA/ATCAA (near an adjacent larger airspace). This allows for a smaller footprint for the proposed MOA/ATCAA and allows the Air Force to conduct other training activities on the way. Leveraging existing airspace would allow the new airspace to be more compact, while still supporting the training mission requirements.
- Capability for large force (greater than 10 aircraft) integration of both airborne and ground-based assets.
- Realistic suburban settings with infrastructure that allows for lighting and other realistic representation of an inhabited area.

- The airspace needs to be within 150 nm of Davis-Monthan AFB.

### 2.3 SCREENING OF ALTERNATIVES

The Air Force considered the following potential alternatives that might meet the purpose and need for agency action:

- Alternative 1—Would establish the Playas MOA/ATCAA over the PTRC with the floor at 300 feet AGL as defined in **Section 2.1**. Training would consist of Air Force Red Flag-Rescue and USMC TRAP/CERTEX. The MOA/ATCAA would be activated for 34 days a year.
- Alternative 2—Would include Alternative 1 with the addition of electronic warfare training. This additional training would involve five (5) events per year with a duration of three (3) days per event. The MOA/ATCAA would be activated for 49 days a year.
- Alternative 3—Would be the same as the Proposed Action as described in **Section 2.1**, with an additional two (2) events of TRAP/CERTEX training. The MOA/ATCAA would be activated 51 days a year.
- Alternative 4—Air Force Red Flag-Rescue and USMC TRAP/CERTEX training would occur at airspace near Marine Corps Air Ground Combat Center (29 Palms, California). The Playas MOA/ATCAA would not be established.
- Alternative 5—Air Force Red Flag-Rescue and USMC TRAP/CERTEX training would occur at airspace near Fort Irwin, California. The Playas MOA/ATCAA would not be established.

Application of the screening criteria to the alternatives is presented in **Table 2-5**.

**Table 2-5.  
Comparison of Selection Standards**

Alternatives	Selection Standards			
	The proposed MOA needs to be adjacent to an existing MOA	Capability of large force (greater than 10 aircraft) integration of both airborne and ground-based assets	Realistic suburban settings with infrastructure that allows for lighting and other realistic representation of an inhabited area	Airspace needs to be within 150 nm of Davis-Monthan AFB
	(1)	(2)	(3)	(4)
Alternative 1	Yes	Yes	Yes	Yes
Alternative 2	Yes	Yes	Yes	Yes
Alternative 3	Yes	Yes	Yes	Yes
Alternative 4	Yes	Yes	No	No
Alternative 5	No	No	No	No

Notes:  
AFB = Air Force Base, MOA = Military Operations Area; nm = nautical mile

Upon screening the potential alternatives against the selection criteria, Alternatives 1, 2, and 3 were the only alternatives that met the critical distance requirements. However, Alternative 3 was eliminated during the alternative development process because the USMC determined that only six (6) TRAP/CERTEX events per year were likely. **Section 2.4** provides more details on the rationale for eliminating Alternatives 3, 4, and 5.

## 2.4 ALTERNATIVE ACTIONS ELIMINATED FROM FURTHER CONSIDERATION

Three alternatives were considered and eliminated from further consideration because they would not meet the purpose and need for the action or the selection standards (refer to **Section 2.3**):

- Alternative 3 was eliminated because the USMC determined that eight (8) TRAP/CERTEX events per year is not reasonably foreseeable. The additional two (2) TRAP/CERTEX events per year were deemed not likely to occur.
- Alternative 4 was eliminated because it does not meet Standards 3 and 4. This alternative would not be located within a realistic urban setting nor be within 150 nm of Davis-Monthan AFB.
- Alternative 5 does not meet Standards 1, 2, 3, and 4. This alternative would not be within 150 nm of the Davis-Monthan AFB. This alternative does not have a ground-based training area near or adjacent to an existing MOA.

An alternative consisting of partial or complete training with simulators was eliminated from detailed consideration because it does not provide realistic training. Simulators are used at DMAFB to the extent practicable, but simulation cannot replace real-world training.

## 2.5 DETAILED DESCRIPTION OF THE SELECTED ALTERNATIVES

NEPA and the CEQ regulations mandate the consideration of reasonable alternatives to the Proposed Action. “Reasonable alternatives” are those that also could be utilized to meet the purpose and need for the agency action. The NEPA process is intended to support flexible, informed decisionmaking; the analysis provided by this EA and feedback from the public and other agencies will inform decisions made about whether, when, and how to execute the Proposed Action.

Two alternatives met the selection standards and are described in **Sections 2.5.1** and **2.5.2**. Both of the alternatives described below were carried forward for analysis in this EA.

### 2.5.1 Alternative 1

Alternative 1 would establish the Playas MOA/ATCAA with the floor at 300 feet AGL and ceiling at FL 230, as defined in **Section 2.1**. Training would consist of Air Force Red Flag-Rescue and USMC TRAP/CERTEX, as described in **Sections 2.1.1.1** and **2.1.1.2**, respectively. The proposed MOA/ATCAA would be activated for 34 days a year, as shown in **Table 2-6**.

**Table 2-6.**  
**Alternative 1 – Annual Potential Activities in the Proposed Playas MOA/ATCAA**

Activity	Events per Year	Duration	Total Days
Red Flag-Rescue	2	3 weeks	28
TRAP	6	12 hours	6
<b>Total</b>			<b>34</b>

Note:

ATCAA = Air Traffic Control-Assigned Airspace; MOA = Military Operations Area; TRAP = Tactical Recovery of Aircraft and Personnel

### 2.5.2 Alternative 2

Alternative 2 would include Alternative 1 (34 days of training using the proposed MOA/ATCAA) with the addition of EW training, which would entail five (5) events per year with a duration of three (3) days per event. Alternative 2 would establish the Playas MOA/ATCAA with the floor at 300 feet AGL and ceiling at FL 230 as defined in **Section 2.1**. Training would consist of Air Force Red Flag-Rescue, USMC TRAP/CERTEX, and EW training, as described in **Sections 2.1.1.1**, **2.1.1.2**, and **2.1.1.3**, respectively. The

proposed MOA/ATCAA would be activated for 49 days a year, as shown in **Table 2-7**, an increase of 15 days when compared to Alternative 1.

**Table 2-7.**  
**Alternative 2 – Annual Potential Activities in the Proposed Playas MOA/ATCAA**

Activity	Events per year	Duration	Total Days
Red Flag-Rescue	2	3 weeks	28
TRAP/CERTEX	6	12 hours	6
EW	5	3 days	15
<b>Total</b>			<b>49</b>

Note: ATCAA = Air Traffic Control-Assigned Airspace; CERTEX = Certification Exercise; EW = Electronic Warfare; MOA = Military Operations Area; TRAP = Tactical Recovery of Aircraft and Personnel

## 2.6 NO ACTION ALTERNATIVE

While NEPA requires an EA to include an analysis of the No Action Alternative, such analysis is beneficial as a benchmark for decisionmakers to compare the magnitude of the potential environmental effects of the Proposed Action. “No action” means that an action would not take place at this time, and the resulting environmental effects from taking no action are compared with the effects of moving forward with the proposed activity.

For this EA, the No Action Alternative has two components:

- The Air Force would continue to use the Playas TMOA/ATCAA for Red Flag-Rescue activities, as described in **Section 1.1**. The Air Force has previously completed a NEPA analysis for the use of a TMOA/ATCAA over the next four (4) years (Air Force, 2020). For consistency with this prior analysis, the No Action Alternative for this EA would include USMC TRAP/CERTEX activities, as described in **Section 1.1**. The USMC has not completed a NEPA analysis for future use of a TMOA/ATCAA and would be required to do so. Therefore, the Air Force and USMC would be responsible for submitting aeronautical proposals for each requested establishment of the TMOA/ATCAA and ensure NEPA requirements are fulfilled. Each individual TMOA/ATCAA request to activate the TMOA/ATCAA is its own independent airspace action from an aeronautical perspective.<sup>2</sup> Training would need to be planned months in advance with no flexibility in schedule or scope.
- If there is no TMOA available, training exercises would not continue in the airspace above the PTRC. Ground-based training, outside the scope of this EA, would still occur at the PTRC.

## 2.7 SUMMARY OF POTENTIAL ENVIRONMENTAL CONSEQUENCES

**Table 2-8** summarizes the potential impacts from Alternative 1, Alternative 2, and the No Action Alternative. The table provides a concise summary of the detailed impacts analysis presented in **Chapter 4** of this EA.

<sup>2</sup> NEPA review for a TMOA may cover multiple exercises if the proposed action is described accordingly.

Table 2-8. Summary of Potential Environmental Consequences

Resource Area/ Alternative	Airspace Management and Use	Operational Noise	Safety	Electro-magnetic Spectrum	Climate/ Air Quality	Cultural Resources	Hazardous Materials and Waste	Biological Resources	Environmental Justice and Protection of Children	Land Use	Socio-economics
<b>Alternative 1</b>	● No significant impacts to airspace management and use in the SUAs	● No significant impacts to noise setting in the SUA	● No significant impacts to ground, explosive, or flight safety	● No significant impacts to electro-magnetic spectrum	● No significant impact on the region's ability to meet NAAQS for all regulated pollutants	● No significant impacts to historic buildings or archaeological deposits	● No significant impacts to hazardous materials and wastes, contaminated sites, and toxic substances	● No significant impacts on biological resources	● No significant impacts to minority or low-income populations. No significant impacts to children	● No significant impact to land use	● No significant impacts to socio-economics
<b>Alternative 2</b>	● Same as Alternative 1	● Same as Alternative 1	● Same as Alternative 1	● Same as Alternative 1	● Same as Alternative 1	● Same as Alternative 1	● Same as Alternative 1	● Same as Alternative 1	● Same as Alternative 1	● Same as Alternative 1	● Same as Alternative 1
<b>No Action Alternative</b>	● No change to airspace management and use in the SUAs	● No change to noise setting in the SUA	● No change to ground, flight, or explosive safety in the SUA	● No significant impacts to electro-magnetic spectrum	● No change to air quality in the SUA	● No change to cultural resources in the SUA	● No change to hazardous materials and wastes, contaminated sites, and toxic substances	● No change to biological resources in the SUA	● No change to disproportionate impacts for minority, low-income, or children in the community in the SUA	● No change to land use in the SUA	● No change to socio-economics

Notes:  
NAAQS = National Ambient Air Quality Standards; SUA = Special Use Airspace

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## CHAPTER 3           AFFECTED ENVIRONMENT

### 3.1   AIRSPACE MANAGEMENT AND USE

#### 3.1.1   Definition of the Resource

Airspace management considers how airspace is designated, used, and administered in a manner that best accommodates the individual and common needs of military, commercial, general aviation, and other users of the airspace.

##### 3.1.1.1   Regulatory Framework

In the US, airspace is managed and controlled by the FAA. The FAA is solely responsible for developing plans and policy for the use of airspace and for managing airspace in such a manner that it ensures the safety of flight and that all users of the National Airspace System (NAS) can operate in a safe, secure, and efficient manner (49 USC § 40103[b]). The FAA considers multiple and sometimes competing demands for airspace in relation to airport operations, Air Traffic Service (ATS) routes, military training airspace, and other special needs to determine how the NAS can best be structured to address all user requirements.

The DoD requests airspace from the FAA and schedules and uses airspace in accordance with the processes and procedures detailed in DoD Directive 5030.19, *DoD Responsibilities on Federal Aviation*, and FAA regulations. SUA identified for military and other governmental activities is charted and published by the National Aeronautical Charting Office in accordance with FAA Order JO 7400.2, *Procedures for Handling Airspace Matters* (FAA, 2020b). Descriptions of approved SUA, except temporary areas and controlled firing areas, are compiled and published annually in FAA Order JO 7400.10, *SUA* (current version effective February 14, 2020). Airspace designated for military use is released to the FAA when the airspace is not needed for military requirements (DoD, 2017).

Procedures governing the use of training areas and airspace operated and controlled by the Air Force are included in Air Force Policy Directive 13-2 *Air Traffic, Airfield, Airspace and Range Management* and its implementing regulations. The Air Force manages airspace in accordance with processes and procedures detailed in Department of the Air Force Manual (DAFMAN) 13-201, *Airspace Management*. DAFMAN 13-201 also provides the guidance and procedures used to develop and process SUA actions. It governs planning, acquisition, use, and management of the airspace required to support the flight training necessary to ensure pilot proficiency (Air Force, 2020b).

The ROI for airspace includes the airspace centered above the PTRC, located in Grant and Hidalgo counties in southwestern New Mexico (see **Figure 1-2**).

##### 3.1.1.2   Airspace Classification

Airspace is a three-dimensional resource defined by latitude, longitude, and altitude. There are six classes of airspace—A, B, C, D, E (controlled), and G (uncontrolled)—available to all users (civilian and military). The airspace classes dictate pilot qualification requirements, rules of flight that must be followed, and the type of equipment necessary to operate within that airspace (see **Table 3-1** and **Figure 3-1**).

“Controlled airspace” is airspace of defined dimensions within which air traffic control service is provided (FAA, 2019). Controlled airspace is categorized into Classes A through E. Controlled airspace is airspace that supports airport operations and includes airways supporting en-route transit from place to place.

“Uncontrolled airspace” is designated as Class G airspace. Within the Continental US and out to 12 nm off shore, Class G airspace includes all airspace up to 14,500 feet MSL that has not been designated as Class A, B, C, D, or E. Class G airspace has no specific prohibitions associated with its use. Class G airspace is described as uncontrolled because there are no entry requirements and air traffic control service is not guaranteed.

**Table 3-1.  
Airspace Classification Requirements**

Airspace	Class A	Class B	Class C	Class D	Class E	Class G
General Definition	Controlled airspace from 18,000 feet MSL up to and including FL 600	Controlled airspace from the surface to 10,000 feet MSL surrounding the Nation's busiest airports	Controlled airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower and are serviced by radar approach control	Controlled airspace that extends upward from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower	Controlled airspace designated to serve a variety of terminal or en-route purposes  Class E airspace is often designated for an airport where instrument procedures exist without the presence of a control tower and as extensions to Class B, C, D, and E surface areas	Uncontrolled airspace that has not been designated as Class A, B, C, D, or E
Entry Requirements	Air Traffic Control clearance	Air Traffic Control clearance	Air Traffic Control clearance for IFR  Two-way radio communication with Air Traffic Control required	Air Traffic Control Clearance for IFR. All require radio contact	None for VFR  Air Traffic Control Clearance and two-way radio for IFR	None
Two-Way Radio Communication	Required	Required	Required	Required	Required only under IFR flight plan <sup>1</sup>	Not required <sup>a</sup>
VFR Visibility Minimum <sup>b</sup>	N/A	3 SM	3 SM	3 SM	Below 10,000 feet, MSL 3 SM  At or above 10,000 feet, MSL: 5 SM	Below 1,200 feet AGL (regardless of MSL): Day: 1 SM; Night: 3 SM  Above 1,200 feet AGL and less than 10,000 feet MSL: Day: 1 SM; Night: 3 SM; At or Above 10,000 MSL: 5 SM
Traffic Advisories	Yes	Yes	Yes	Workload Permitting	Workload Permitting	Workload Permitting

Source: FAA, 2019

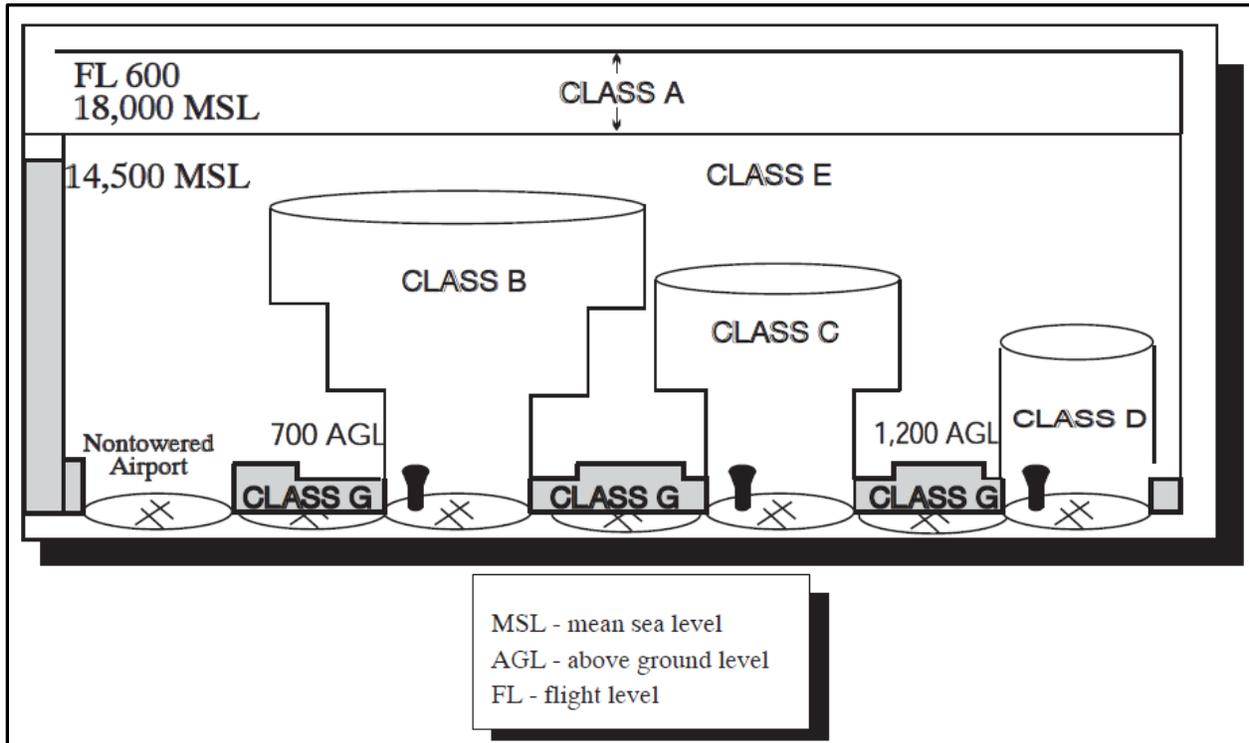
Notes:

a Unless a temporary tower is present.

b Minimum distance from clouds varies by airspace class and altitude.

AGL=above ground level, FL=Flight Level, IFR=Instrument Flight Rules; MSL = mean sea level; N/A = not applicable; SM = statute mile; VFR=visual flight rule

Using these airspace classifications, MOAs are located in areas that would otherwise be Class E and G airspace. ATCAAs are located in Class A airspace.



Source: FAA, 2019.

**Figure 3-1. Cross Section of Airspace Classes and Relationship**

### 3.1.2 Baseline Conditions

The proposed Playas MOA/ATCAA would include the same airspace that has previously been temporarily activated as the Playas TMOA/ATCAA. The proposed MOA/ATCAA would be centered above the PTRC, located in Grant and Hidalgo counties in southwestern New Mexico (Figure 1-1). The proposed location of the Playas MOA is depicted and described in Section 2.1. Figure 3-2 depicts this location, along with the other existing airspace management measures that currently exist.

#### 3.1.2.1 Existing Special Use Airspace

The proposed location of the Playas MOA/ATCAA is identical to the location of the TMOA that has been established on occasion to support both Air Force Red Flag-Rescue and USMC TRAP/CERTEX. A TMOA differs from a MOA in that the TMOA is activated only for specific, limited times, and is published by NOTAM. A TMOA is not charted on aviation charts, meaning that other possible users of that airspace will not see a depiction of the TMOA on charts, either paper or electronic. The Air Force published an EA for use of the Playas TMOA for up to two (2) exercises per year each until 2024. USMC would need to complete NEPA review for the use of the Playas TMOA for future exercises, but, as noted in Section 2.6, would be expected to conduct TRAP/CERTEX exercises twice a year, consistent with the description in Section 1.1. This is a component of the current baseline condition of this airspace: use as a TMOA on a more limited basis than under the Proposed Action.

The proposed Playas MOA/ATCAA is located just to the north of the Tombstone MOAs, as depicted in Figure 3-2. This location makes the Playas MOA/ATCAA particularly useful in that the other SUA can be used in conjunction with the proposed Playas MOA/ATCAA to increase the realism and utility of training.

Restricted area R-5115 is located about 25 miles east of the proposed Playas MOA/ATCAA and is also shown in **Figure 3-2**.

### 3.1.2.2 Military Training Routes

Local airspace is currently crossed by Military Training Route (MTR) VR-263, also shown in **Figure 3-2**. MTR VR-263 is operated and scheduled by the 162<sup>nd</sup> Fighter Wing (FW) at Morris Air National Guard Base, Tucson International Airport. It can currently be used in conjunction with the Tombstone MOAs and/or the Playas TMOA, or parts of it can be used independent of the SUA.

### 3.1.2.3 Air Traffic Service Routes

There are four (4) published ATS routes that intersect the area of the proposed Playas MOA/ATCAA. There are three (3) “Victor” routes (V-198, V-16, and V-66), and one (1) “Tango” route (T-306). These are shown in **Figure 3-2**. Victor and Tango routes are both “low en-route” ATS routes. Victor routes are more traditional and primarily use very high-frequency omnidirectional range (VOR) navigational aids. Tango routes are more modern and primarily use global positioning system (GPS) for navigation.

### 3.1.2.4 Airports

There is one (1) airport inside the proposed Playas MOA/ATCAA referred to as the Playas airstrip. This private airstrip is on federal property and is part of the PTRC complex. Two other private airfields are in the vicinity: Thurmond, which is about three (3) miles west of the proposed Playas MOA/ATCAA, and Luna Landing, about 25 miles to the east.

Lordsburg Municipal Airport is about nine (9) miles north-northwest of the proposed Playas MOA/ATCAA. It is a non-tower airfield with a single 5,000-foot asphalt runway. Lordsburg has an average of 92 operations per week (46 takeoffs and landings each), mostly general aviation, with 12 percent listed as transient military (AirNav, 2020).

Deming Municipal Airport is about 30 miles east-northeast of the Playas TMOA. It is a non-tower asphalt airfield with two runways: one 8,000 feet, and one 5,700 feet. Deming has an average of 78 operations per day, mostly general aviation, with 32 percent listed as transient military (AirNav, 2020). There are approximately 11 aircraft based at Deming.

### 3.1.3 Air Traffic Control-Assigned Airspace

The airspace immediately above the proposed Playas MOA/ATCAA, from FL 180 to FL 230, approximately 18,000 feet MSL to 23,000 feet MSL, includes airspace used for the lower altitudes of ATS routes Q-2, Q-4, J-4, J-2, J-50. These are shown in **Figure 3-3**. J and Q routes are both “high en-route” ATS routes. J, or Jet, routes are more traditional and primarily use VOR navigational aids. Q routes are more modern and primarily use GPS for navigation.

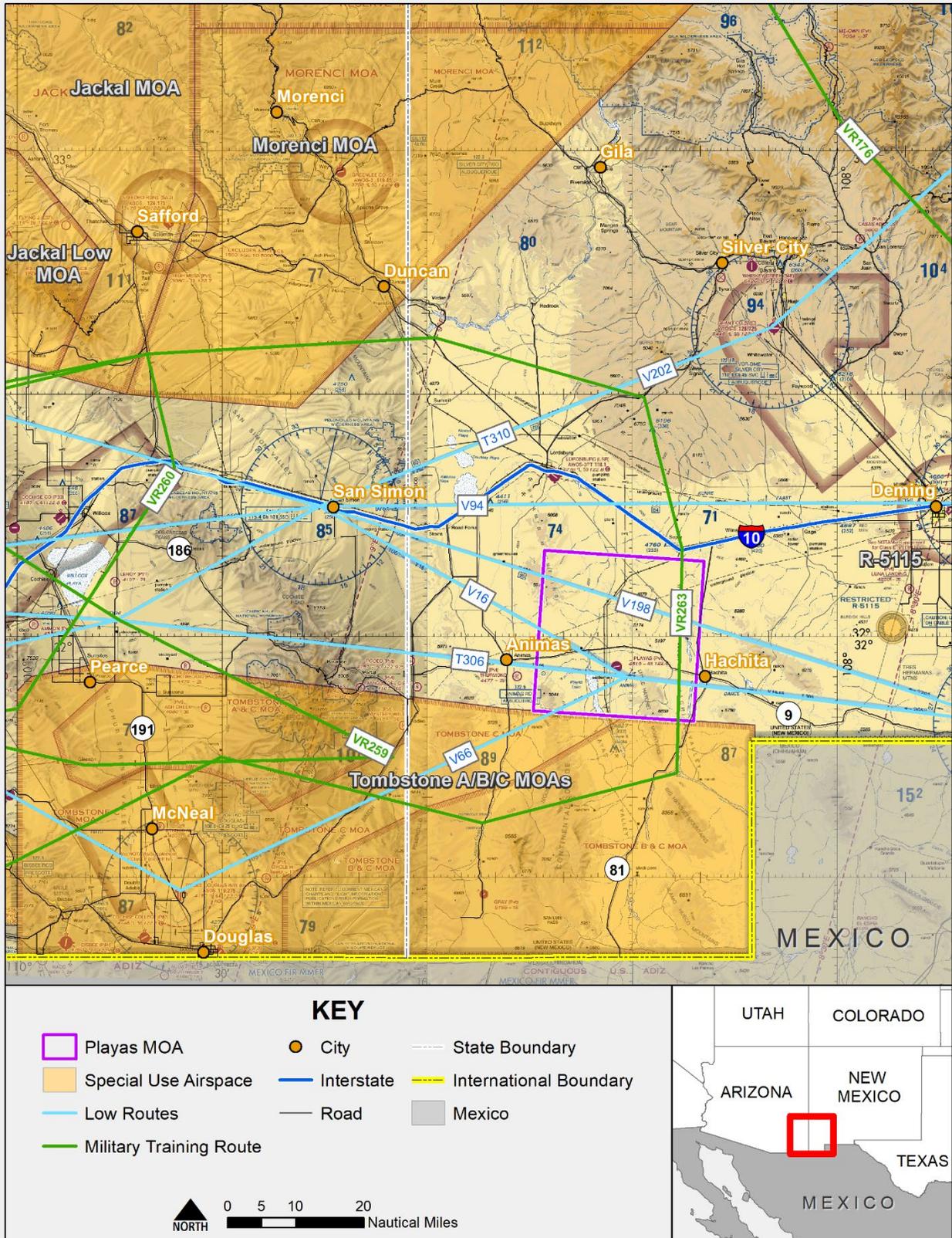


Figure 3-2. Area of Proposed Playas MOA – Below 18,000 feet MSL

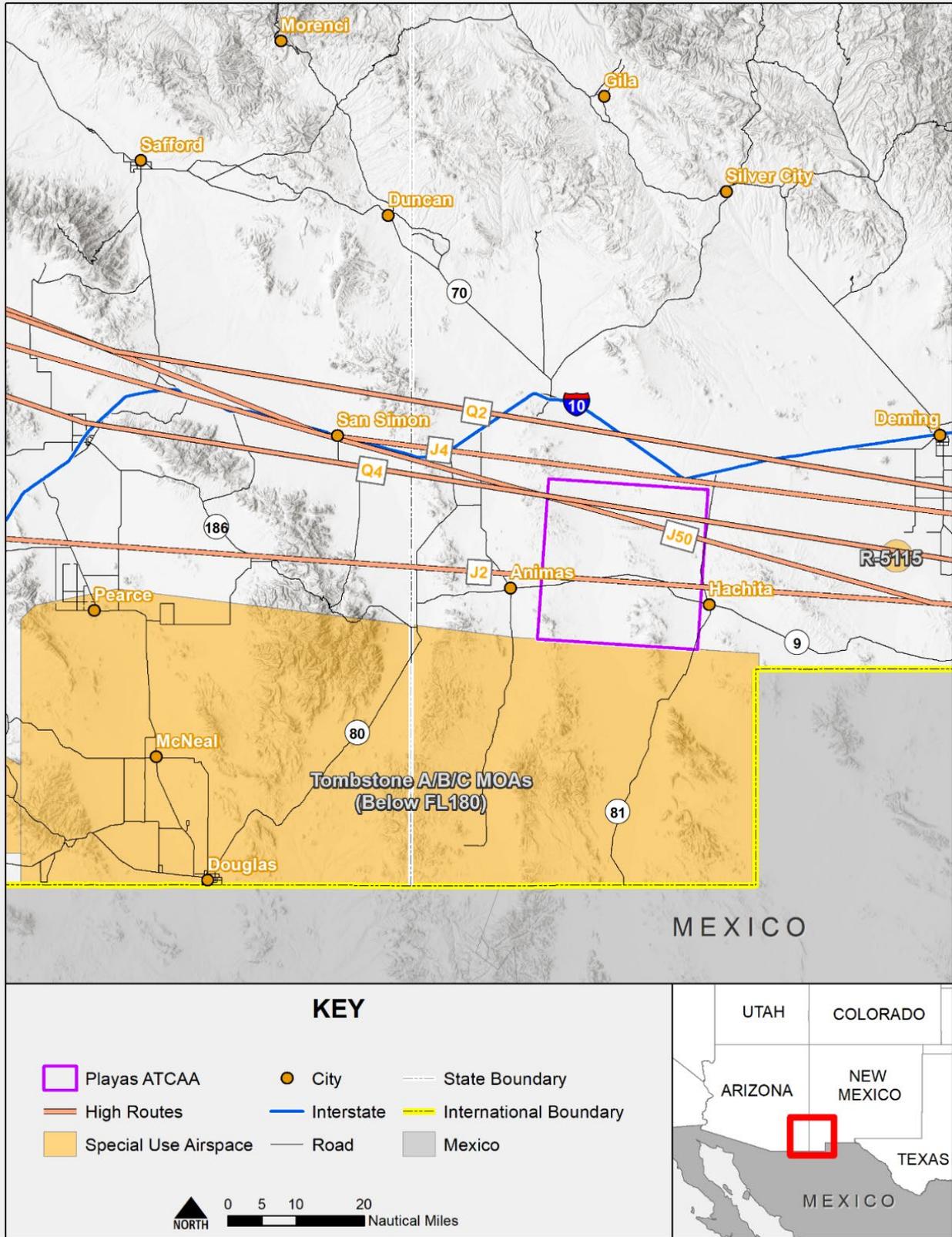


Figure 3-3. Area of Proposed Playas MOA – Above Flight Level 180

## 3.2 OPERATIONAL NOISE

### 3.2.1 Definition of Resource

Noise is considered unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. Sound is intermittent or continuous, steady or impulsive. It may also be stationary or transient. Stationary sources of sound are normally related to specific land uses, such as an amusement park or industrial plants. Transient sound sources move through the environment, either along relatively established paths (e.g., highways, railroads, and aircraft flight tracks around airports) or randomly. There is wide diversity in responses to sound that not only vary according to the type of sound and the characteristics of the source, but also according to the sensitivity and expectations of the receptor, the time of day, and the distance between the source (e.g., an aircraft) and the receptor (e.g., a person or animal).

The physical characteristics of sound include its intensity, frequency, and duration. Sound is created by acoustic energy, which produces minute pressure waves that travel through a medium, like air or water, and are sensed by the eardrum. This may be likened to the ripples in water that would be produced when a stone is dropped into it. As the acoustic energy increases, the intensity or amplitude of these pressure waves increases, and the ear senses louder sound. The unit used to measure the intensity of sound is the decibel (dB). Sound intensity varies widely (from a soft whisper to a jet engine) and is measured on a logarithmic scale to accommodate this wide range. The logarithm, and its use, is nothing more than a mathematical tool that simplifies dealing with very large and very small numbers. For example, the logarithm of the number 1,000,000 is 6, and the logarithm of the number 0.000001 is -6 (minus 6). As more zeros are added before or after the decimal point, converting these numbers to their logarithms greatly simplifies calculations that use these numbers. Human hearing ranges from 0 dB (barely audible) to 120 dB, where physical discomfort is caused by the sound.

The frequency of sound is measured in cycles per second, or hertz (Hz). This measurement reflects the number of times per second the air vibrates from the acoustic energy. Low-frequency sounds are heard as rumbles or roars, and high-frequency sounds are heard as screeches. Sound measurement is further refined through the use of “weighting.” The average human ear can detect sounds that range in frequency from about 20 Hz to 20,000 Hz. However, not all sounds throughout this range are heard equally well. Because the human ear is most sensitive to frequencies in the 1,000 to 4,000 Hz range, sound meters may be calibrated to emphasize frequencies in this range. Sounds measured with these instruments are termed “A-weighted,” and are indicated in terms of A-weighted decibels (dBA). A-weighting simply accounts for the frequency sensitivity of the human ear. The dB is also appropriate for measuring continuous sounds. Because the use of A-weighting is understood, the “A weighted” is omitted and the unit dB used. Unless otherwise stated, for this EA, dB units refer to A-weighted sound levels.

The duration of an event and the number of times events occur are also important considerations in assessing noise impacts. As a basis for comparison when single-event sound levels are considered, it is useful to note that at a distance of about three (3) feet, noise from normal human speech ranges from 63 to 65 dB, operating kitchen appliances range from about 83 to 88 dB, and rock bands approach 110 dB.

Military aircraft generate two general types of sound. One is subsonic, which is continuous sound generated both by the aircraft’s engines and also by air flowing over the aircraft itself. Subsonic sound is generated at airfields any time the aircraft is flying or if the engines are running on the ground, as well as in-flight in training airspace. The other type is supersonic sound, which can manifest in sonic booms if there are aircraft operating at supersonic speeds under certain conditions. Under the Proposed Action, there would not be supersonic flight; thus, there would not be sonic booms.

Federal, state, and local governments regulate sound to prevent noise sources from affecting noise sensitive areas, such as residences, hospitals, and schools, and to protect human health and welfare. Federal agencies, such as the Department of Housing and Urban Development, have established health-based maximum sound exposure recommendations. Local agencies, including cities and counties, are responsible for defining and enforcing land use compatibility in various noise environments.

The ROI for operational noise includes the land under the proposed Playas MOA/ATCAA (see **Figure 1-2**).

### 3.2.2 Noise Metrics

The word “metric” is used to describe a standard of measurement. Many different types of sound metrics have been developed by researchers attempting to represent the effects of operational noise. Each metric used in operational noise analysis has a different physical meaning or interpretation. The primary metrics supporting the assessment of operational noise from aircraft operations in this EA are the Day-Night Average Sound Level (DNL) and Onset Rate Adjusted Day-Night Average Sound Level ( $L_{dnmr}$ ). Each metric is briefly discussed below.

**DNL and ( $L_{dnmr}$ ).** The DNL is an A-weighted cumulative noise metric that reports sound levels based on annual average daily aircraft operations. DNL is the standard noise metric for the FAA. Because some military activities are exercise-based (with intense activities for short periods of time), the DoD uses the  $L_{dnmr}$  metric for describing cumulative sound levels in airspace and on military training routes.  $L_{dnmr}$  is based on the activity in the “busy month” of the year, as if that heavier usage occurred in all months.  $L_{dnmr}$  is also adjusted for the onset rate of the sound. If the observer experiences a rapid onset rate (i.e., the sound shifts from “quiet” to “loud” rapidly, as can be the case with low-flying, fast aircraft), there is an adjustment or “penalty” to the value of that event to compensate for the perception that such sounds can be more annoying because of a “scare/shock” factor. The more rapid the onset of the sound is, the greater the adjustment or “penalty” in the metric. Monthly variation in operations under the Proposed Action would be significant since the proposed operations are exercise-based and would involve periods of inactivity interspersed with periods of greater activity. In this case, the DNL and  $L_{dnmr}$  are noticeably different. Since  $L_{dnmr}$  is the DoD standard for modeling the cumulative sound exposure and assessing operational noise impacts in airspace, the subsonic noise exposure in this EA is reported in  $L_{dnmr}$  to meet DoD requirements. Additionally, since DNL is the FAA’s standard for modeling the cumulative noise exposure and assessing community noise impacts in airspace, the subsonic noise exposure in this EA is also reported in DNL to meet FAA requirements. FAA is a Cooperating Agency to the Air Force in this EA, and the environmental impacts must be considered using both these variations of cumulative metrics.

The DNL (and  $L_{dnmr}$ ) metrics have two distinct acoustical time periods of interest: daytime and nighttime. Daytime hours are from 7:00 a.m. to 10:00 p.m. local time. Nighttime hours are from 10:00 p.m. to 7:00 a.m. local time. The DNL weights operations occurring during its nighttime period by adding or applying a 10-dB increase to each single event. Note that “daytime” and “nighttime” in calculation of DNL are sometimes referred to as “acoustic day” and “acoustic night” and always correspond to the times given above. This is often different than “day” and “night” used commonly in military aviation, which are directly related to the times of sunrise and sunset and vary throughout the year with the seasonal changes.

### 3.2.3 Baseline Conditions

The proposed location of the Playas MOA/ATCAA is identical to the location of the TMOA that has been established on occasion to support both Air Force Red Flag-Rescue and USMC TRAP/CERTEX. **Section 3.2.3.1** provides an operational noise baseline with Playas TMOA included. **Section 3.2.3.2** provides a baseline discussion without the Playas TMOA (ambient noise levels of a rural area). Note that the impacts analysis for operational noise (**Section 4.2**) evaluates existing conditions without a TMOA/ATCAA.

#### 3.2.3.1 Baseline with Temporary Playas MOA Included

The operational noise baseline for analysis includes the occasional use of the Playas TMOA/ATCAA. These effects were analyzed previously in EAs for the USMC TRAP/CERTEX exercise (USMC, 2018) and the Air Force Red Flag-Rescue exercise (Air Force, 2017b). These two EAs included operational noise analyses (**Tables 3-2** and **3-3**, respectively). The baseline of the Proposed Action includes two of each exercise (Air Force Red Flag-Rescue and USMC TRAP/CERTEX) per year.

**Table 3-2.  
USMC TRAP/CERTEX Baseline Operational Noise**

L <sub>dnmr</sub> (busy month)	DNL (annual)
44	33

Source: USMC, 2018

Notes:

Values in A-weighted decibels.

CERTEX = Certification Exercise; DNL = Day-Night Average Sound Level; L<sub>dnmr</sub> = Onset Rate-Adjusted Monthly Day-Night Average Sound Level; TRAP = Tactical Recovery of Aircraft and Personnel

**Table 3-3.  
Air Force Red Flag-Rescue Exercise Baseline Operational Noise**

Package	L <sub>dnmr</sub>
1	47.3
2	50.5
3	49.2

Source: Air Force, 2017b

Notes:

Values in A-weighted decibels.

L<sub>dnmr</sub> = Onset Rate-Adjusted Monthly Day-Night Average Sound Level

The values in **Table 3-3** are based on the assumptions that one Air Force Red Flag-Rescue exercise would activate the Playas TMOA/ATCAA for five (5) days out of an 18-day period, each with either one or two, four (4)-hour periods of use with one of the aircraft packages shown in **Table 3-4**. Package 3 (see **Table 3-3**) is derived by mixing Packages 1 and 2 equally for the various active periods.

**Table 3-4.  
Baseline Air Force Red Flag-Rescue Exercise Aircraft Packages**

Aircraft	Package 1	Package 2	Package 3
F-16	4	6	5
A-10	2	0	1
HC-130	1	1	1
HH-60	2	2	2

Source: USAF, 2017b

The Air Force baseline results (**Table 3-3**) provide only the L<sub>dnmr</sub> metric (Air Force, 2017b). The calculation required to convert L<sub>dnmr</sub> to DNL in this case would take the two (2) single months (each a “busy” month) and spread the operations out over a full year, effectively making a month (on average) one sixth as busy as one of the busy months. On a logarithmic scale, this is a 8dB adjustment from L<sub>dnmr</sub> to DNL. This results in a baseline noise between 39 dB (Package 1) and 43 dB (Package 2). With a mixture (Package 3), the baseline DNL from baseline Red Flag-Rescue exercises in the Playas TMOA/ATCAA would be about 41 dB. These are the Air Force-only baseline numbers measured in DNL dB and are derived from the L<sub>dnmr</sub> values given in the EA (Air Force, 2017b)

The previous analysis of the USMC and Air Force actions were conducted in separate documents (Air Force 2017b; USMC, 2018); the following section represents the combined effect. Selection of a baseline can affect later determination of environmental impacts. It is prudent to select a baseline to ensure that the results are transparent and indicate that the proponent considered all possible impacts. The most conservative estimate would lead to selecting Air Force Package 1 as the baseline. Because the Red Flag-Rescue exercise is partially driven by A-10 requirements, it is clear that the A-10 involvement is a key element of the condition. Therefore, the most reasonable condition is Package 3. Additionally, since Air Force Red Flag-Rescue exercises are planned for a period of 18 days, and there is a possibility of weather or maintenance factors that could extend this period, it is likely that USMC and Air Force activations of the Playas TMOA would occur in separate months.

**Table 3-5** shows the combined noise levels from USMC and Air Force actions based on past NEPA actions for the Playas TMOA. The  $L_{dnmr}$  value is based on the Air Force exercise being run during a busy month, with Package 3. As stated above, because the exercise is largely A-10 oriented, and it is not likely that the most conservative scenario of flying without any A-10s would be undertaken over the course of 18 days, the  $L_{dnmr}$  value in the baseline for this action would therefore be 49 dB. The DNL value is based on the annualizations of the Air Force (39 dB DNL under Package 1) and USMC (33 dB DNL) actions, per existing plans that call for each to conduct two exercises per year. To be clear, in combining these baselines, the  $L_{dnmr}$  is taken from the busy month during the year. In this case, that busy month is the same as the busy month for the Red Flag-Rescue exercise. For the “busy month” basis used for  $L_{dnmr}$ , it does not matter what happens in the other months. This is a straight use of the Package 3 Red Flag-Rescue  $L_{dnmr}$  result. For the DNL metric, every operation during the year is included in figuring the average annual day; in this case, the DNL results for running two (2) USMC TRAP/CERTEX exercises and two (2) Air Force Red Flag-Rescue exercises is added logarithmically from the results in the respective EAs. Therefore, the numbers in **Table 3-5** below represent the combined effects of two (2) of each exercise per year, expressed in the primary DoD metric ( $L_{dnmr}$ ) and the primary FAA metric (DNL).

**Table 3-5.  
Baseline Noise due to Combined Air Force-USMC use of Playas Temporary MOA<sup>a</sup>**

$L_{dnmr}$ (busy month)	DNL (annual)
49	40

Source: Cardno, 2020

Notes:

Values in A-weighted decibels.

$L_{dnmr}$  = Onset Rate-Adjusted Monthly Day-Night Average Sound Level; DNL = Day-Night Average Sound Level

### 3.2.3.2 Baseline without Temporary Playas MOA

Since the baseline condition for this action includes some TMOA usage, it may be of value to show the underlying condition that might exist if there was not a TMOA at Playas. **Table 3-6** lists the American National Standards Institute (ANSI) standard land use areas and the expected standard background noise levels.

**Table 3-6.  
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 commercial, industrial, and normal urban residential	9	55
	16	58
	20	59

Source: ANSI, 2013

Note:

dBA = A-weighted decibel; DNL = Day-Night Average Sound Level

**Table 3-6** indicates that even for the rural area in which the Proposed Action would occur, under the expected activity in the baseline condition (with occasional exercises conducted by Air Force and USMC), the calculated values for the metric DNL (from previous Playas TMOA analyses) are at or below the ANSI level expected for a rural or remote area (less than 49 dB DNL). Note that standard methods of calculation for these values are not exact at the very low sound levels. On an annual basis, the effect of a relatively small number of aircraft events is spread out in a way that makes them small, compared to local existing natural sound (e.g., wind, birds, and insects). At these levels, the models are able to state that the effects are small, but are less precise in predicting how small.

For context, a normal verbal conversation (continuous) from a distance of about three (3) feet would result in a DNL of 60 to 65 dB. In the case of a rural area, that would be expected to be at least 11 dB above the background noise but could be more (e.g., a speaker speaking louder or a conversation in a quieter [i.e., rural] geographic area).

### 3.3 SAFETY

This section addresses ground and flight safety associated with activities conducted by units operating within the existing Playas TMOA. Ground safety includes activities associated with crash response and fire risk and management. Flight safety considers aircraft flight risks such as aircraft mishaps and bird/wildlife-aircraft strikes.

#### 3.3.1 Resource Definition

The Air Force practices operational risk management, as outlined in AFI 90-802, *Operational Risk Management* (Air Force, 2018). Requirements outlined in this AFI provide for a process to maintain readiness in peacetime and achieve success in combat while safeguarding people and resources. The safety analysis contained in the following sections addresses issues related to the health and well-being of both military personnel and civilians under the training airspace. Specifically, this section provides information on aircraft mishaps and bird/wildlife-aircraft strike hazard (BASH).

The FAA is responsible for ensuring safe and efficient use of US airspace by military and civilian aircraft and for supporting national defense requirements. To fulfill these requirements, the FAA has established safety regulations, airspace management guidelines, a civil-military common system, and cooperative activities with the DoD. The primary safety concern with regard to military training flights is the potential for aircraft mishaps (i.e., crashes) to occur, which could be caused by mid-air collisions with other aircraft or objects, weather difficulties, mechanical failures, pilot error, or bird/wildlife-aircraft strikes.

The ROI for safety includes the land under the proposed Playas MOA/ATCAA (see **Figure 1-2**).

#### 3.3.2 Affected Environment

##### 3.3.2.1 Ground Safety

The primary public concern with regard to ground safety is the potential for aircraft accidents and the effects on the land below the mishap. Ground safety considerations addressed include crash response and fire risk management. Overall, the purpose of response planning is to:

- save lives, property, and material by timely and correct response to mishaps;
- quickly and accurately report mishaps to higher Headquarters; and
- investigate the mishap to preclude the reoccurrence of the same or a similar mishap.

##### Crash Response

Davis-Monthan AFB maintains detailed emergency and mishap response plans to react to an aircraft accident, should one occur. These plans assign agency responsibilities and prescribe functional activities necessary to react to major mishaps, whether on or off base. Response would normally occur in two phases. The initial response focuses on rescue, evacuation, fire suppression, safety, elimination of explosive devices, ensuring security of the area, and other actions immediately necessary to prevent loss of life or further property damage. This involves the following personnel: Fire Chief, who will normally be the first on-scene commander, fire-fighting and crash-rescue personnel, medical personnel, security police, and crash-recovery personnel. The second response team is composed of personnel from relevant organizations based on the circumstances of the mishap and actions required. After the initial response, the investigation phase is conducted.

Davis-Monthan AFB also maintains Mutual Aid Agreements with local cities, towns, and counties. Under these Mutual Aid Agreements, the Air Force agrees to provide fire protection and hazardous materials response to the city or county upon request. Likewise, the local municipalities agree to respond to a military aircraft mishap when in proximity to that municipality. Davis-Monthan AFB Fire Emergency Service responds to any Air Force aircraft incident within a 25-mile radius of Davis-Monthan AFB. If an incident occurs outside of the 25-mile radius, Davis-Monthan AFB Fire Emergency Service would establish a convoy and respond to the incident if warranted.

Regardless of the agency initially responding to the accident, efforts are directed at stabilizing the situation and minimizing further damage. If the accident occurs on non-federal property, a National Defense Area would be established around the accident scene, and the site would be secured to protect classified information, DoD equipment, and/or material for the investigation phase.

After all required investigations and related actions on the site are complete, the aircraft would be removed. The Base Civil Engineer is responsible for site cleanup.

### **Fire Risk Management**

The land area under the proposed Playas MOA/ATCAA is managed by a variety of separate entities, including the US Bureau of Land Management (BLM). Fire suppression of wildland fires on federal lands is the responsibility of the entity that owns/manages that land and is geared toward protecting lives and suppressing wildfire.

#### **3.3.2.2 Flight Safety**

Aircraft flight operations in the proposed MOA/ATCAA are governed by standard rules of flight. Additionally, specific procedures applicable to local operations are contained in detailed standard operation procedures that must be followed by all aircrews operating from the installation (Davis-Monthan AFB Instruction 11-250).

The primary public concern with regard to flight safety is the potential for aircraft accidents. Such mishaps may occur as a result of mid-air collisions, collisions with manmade structures or terrain, weather-related accidents, mechanical failure, pilot error, or bird/wildlife-aircraft collisions. Flight risks apply to all aircraft; they are not limited to the military. Flight safety considerations addressed include aircraft mishaps and bird/wildlife-aircraft strikes.

### **Aircraft Mishaps**

Aircraft mishaps and their prevention are of paramount concern to the Air Force. The Air Force defines four categories of aircraft mishaps: Classes A, B, C, and D (DoD, 2011), as shown in **Table 3-7**. Class A mishaps are of primary concern because of their potentially catastrophic results.

Class A mishaps, the most severe, provide an indicator of aircraft safety. Based on historical data on mishaps at all installations and under all conditions of flight, the military services calculate Class A mishap rates per 100,000 flying hours for each type of aircraft in the inventory to provide the basis for evaluating risks among different aircraft and levels of operations. These mishap rates do not consider combat-related losses. The existing Playas TMOA is used by a large variety of aircraft. **Table 3-8** shows some sample aircraft types and the mishap rates for the lifetime of the aircraft program, as well as the rate over the last 10-year period (through the last complete fiscal year).

**Table 3-7.  
Aircraft Class Mishaps**

Mishap Class	Total Property Damage	Fatality/Injury
A	\$2,000,000 or more and/or aircraft destroyed	Fatality or permanent total disability
B	\$500,000 or more but less than \$2,000,000	Permanent partial disability or three or more persons hospitalized as inpatients
C	\$50,000 or more but less than \$500,000	Nonfatal injury resulting in loss of one or more days from work beyond day/shift when injury occurred
D	\$20,000 or more but less than \$50,000	Recordable injury or illness not otherwise classified as A, B, or C

Source: DoD, 2011

**Table 3-8.  
Representative Class A Mishap Rates for Air Force Aircraft**

Aircraft	Number of Lifetime Hours	Year Introduced	Class A Mishap Rate – Lifetime	Class A Mishap Rate – Last Ten Years
A-10	5 Million +	1972	1.88	0.45
F-16	11 Million +	1975	3.35	1.84
F-15	6 Million +	1972	2.31	1.67
H-60	700k +	1982	3.48	2.08
C-130	19 Million +	1955	0.82	0.45

Source: AFSEC, 2018d

### Bird/Wildlife-Aircraft Strike Hazard

Bird-aircraft strikes constitute a safety concern because they can result in damage to aircraft or injury to aircrews or local populations if it results in an aircraft crash. Aircraft may encounter birds at altitudes of FL 300 or higher. However, most birds fly close to the ground. Over 98 percent of reported bird-aircraft strikes occur below 5,000 feet AGL (AFSEC, 2018a). Approximately 49 percent of bird-aircraft strikes happen in the airport environment (i.e., climb-out, traffic pattern, approach and landing), and about 42 percent occur during low-altitude flight training (AFSEC, 2018b).

Migratory waterfowl (e.g., ducks, geese, and swans) are the most hazardous birds to low-flying aircraft because of their size and their propensity for migrating in large flocks at a variety of elevations and times of day. Waterfowl vary considerably in size, from 1 to 2 pounds for ducks, 5 to 8 pounds for geese, and up to 20 pounds for most swans. There are two normal migratory seasons: fall and spring. Waterfowl are usually only a hazard during migratory seasons. These birds typically migrate at night and generally fly between 1,500 and 3,000 feet AGL during the fall migration and from 1,000 to 3,000 feet AGL during the spring migration.

In addition to waterfowl, raptors, shorebirds, gulls, herons, songbirds, and other birds also pose a hazard. In considering severity, the results of bird-aircraft strikes in restricted areas show that strikes involving raptors result in the majority of Class A and Class B mishaps related to bird-aircraft strikes. Peak migration periods for raptors, especially eagles, are from October to mid-December and from mid-January to the beginning of March. In general, flights above 1,500 feet AGL would be above most migrating and wintering raptors.

Songbirds are small birds, usually less than one (1) pound. During nocturnal migration periods, they navigate along major rivers, typically between 500 and 3,000 feet AGL. The potential for bird-aircraft strikes is greatest in areas used as migration corridors (flyways) or where birds congregate for foraging or resting (e.g., open water bodies, rivers, and wetlands).

While any bird-aircraft strike has the potential to be serious, many result in little or no damage to the aircraft, and only a minute portion result in a Class A mishap. During the years 1985 through 2014, the Air Force BASH Team documented 108,670 bird-aircraft strikes worldwide (AFSEC, 2018b). Of these, 16 resulted in Class A mishaps where the aircraft was destroyed (AFSEC, 2018d).

### **3.4 ELECTROMAGNETIC SPECTRUM**

#### **3.4.1 Definition of Resource**

The EM spectrum is made up of all frequencies (or wavelengths) of EM energy, including the radio frequency (RF) band. There are a multitude of civilian and military systems that employ EM radiation. Many of these are common in everyday life: cell phones, Global Positioning Systems (GPS), Wi-Fi, Bluetooth, and garage-door openers. Aviation uses two-way radios, radar, navigational aids, weather detection, and identification systems (transponders), among others. Military aircraft sometimes train using portable ground-based threat emitters to simulate enemy threats. Anything with an antenna transmits and/or receives EM radiation in the form of radio waves or microwaves.

The ROI for EM spectrum includes the land under the proposed Playas MOA/ATCAA (see **Figure 1-2**).

##### **3.4.1.1 Regulatory Environment**

Without organization and oversight, the potential for anyone to emit any type of unapproved EM signal would be chaotic at best and dangerous at worst. Therefore, the US Government oversight of the EM spectrum is important to make sure that signals are deconflicted (usually authorized by limiting power output or specifying frequency range) from each other and that specific uses are licensed based on ensuring public safety (47 USC et seq.). The Federal Communications Commission (FCC), through a permitting/licensing process, strictly regulates the use of EM energy by all users, including the DoD and FAA. In the US, the FCC assigns specific frequencies to other departments for management. The Air Force manages the spectrums assigned to them through the Military Assignment Group in accordance with AFI 7-220, *Spectrum Management* (Air Force, 2017c). The FAA Technical Operations ATC Spectrum Engineering Services is responsible for managing frequency bands supporting aviation in accordance with FAA Order 67050.32B, *Spectrum Management Regulations and Procedures Manual* (FAA, 2005). All frequency bands used by aircraft operating in the NAS are coordinated and approved through the FAA, ensuring the safety of all users of the NAS. This coordination ensures that EM interference with the proper functioning of electronic device by EM means does not occur. For instance, children's toys/private small drones that use EM frequencies do not interfere with navigational aids or pilot communications, and aircraft operations do not interfere with public radio or television.

##### **3.4.2 Existing Condition**

Military aviation uses the EM spectrum for many purposes, including all of the above examples (common to civil use) and others that are military specific. Military requirements include the need for EW systems, which include the ability to surveil various signals, protect their own EM systems from an enemy's interference, and be capable of attacking enemy systems (i.e., to deny or jam an enemy fire-control radar system). Training often includes threat simulation emitter radars that operate in the RF bands that prevent damage or injury to personnel and the general public. Thresholds based on frequency and power output have been determined for EM energy sources to determine hazardous levels of EM energy to humans, munitions, and fuel (DoD, 2002, 2009; Air Force, 2014).

In the area of the Playas TMOA/ATCAA, which is the same as the proposed Playas MOA/ATCAA, a full complement of all of these uses is present, with EM frequencies appropriately deconflicted and approved through the FAA Technical Operations ATC Spectrum Engineering Services, Military Assignment Group, and FCC rules. EW training is further limited to certain power levels to ensure safety of military personnel and the public. Military training, which includes being able to find and identify signals of interest from a background that includes other EM signals (e.g., weather radar, civil radars, radio communication), is

improved by the presence of these other signals, as it makes the training more challenging. In the immediate vicinity of the proposed Playas MOA/ATCAA, there is other SUA in which various EW training occurs. Standard operating procedures to avoid excessive exposures of EM energy from military aircraft establish minimum separation distances between EM energy emitters and people, munitions, and fuels (DoD, 2009). Best management practices are in place to protect the public and industry from EM interference. These practices include establishing safe operating levels when radar systems are operational and establishing avoidance areas over population areas, windmill farms, and other industries where blasting operations may occur. Permanent avoidance areas are mapped for tall structures such as wind generation equipment or tall smokestacks. Unique frequencies assigned to the FAA are used to control all aircraft operations in a safe and efficient manner and ensure the safety of all military and civilian aircraft using the NAS. DoD is not authorized to intentionally jam civil communications bands and continually acts to responsibly use the DoD-authorized spectrum for testing and training while avoiding significant impact on other spectrum users.

### 3.5 CLIMATE/AIR QUALITY

#### 3.5.1 Definition of Resource

Ambient air quality refers to the atmospheric concentration of a specific compound (amount of pollutants in a specified volume of air) that occurs at a particular geographic location. The ambient air quality levels measured at a particular location are determined by the interaction of emissions, meteorology, and chemistry. Meteorological considerations include wind and precipitation patterns affecting the distribution, dilution, and removal of pollutant emissions. Chemical reactions can transform pollutant emissions into other chemical substances.

Air pollution is a threat to human health and damages trees, crops, other plants, lakes, and animals. It creates haze or smog that reduces visibility in national parks and cities and interferes with aviation. To improve air quality and reduce air pollution, Congress passed the Clean Air Act (42 USC § 7401) (CAA) and its amendments in 1970 and 1990, which set regulatory limits on air pollutants and help to ensure basic health and environmental protection from air pollution.

##### 3.5.1.1 Criteria Pollutants

In accordance with CAA requirements, the air quality in a given region or area is measured by the concentration of various pollutants in the atmosphere. Measurements of these “criteria pollutants” in ambient air are expressed in units of parts per million (ppm) or in units of micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Regional air quality is a result of the types and quantities of atmospheric pollutants and pollutant sources in an area as well as surface topography and prevailing meteorological conditions.

The CAA directed the US Environmental Protection Agency (USEPA) to develop, implement, and enforce environmental regulations that would ensure clean and healthy ambient air quality. To protect public health and welfare, the USEPA developed numerical concentration-based standards, the National Ambient Air Quality Standards (NAAQS), for pollutants that have been determined to impact human health and the environment and established both primary and secondary NAAQS under the provisions of the CAA. NAAQS are currently established for the following air pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, respirable particulate matter (including particulates equal to or less than 10 microns in diameter [ $\text{PM}_{10}$ ], particulates equal to or less than 2.5 microns in diameter [ $\text{PM}_{2.5}$ ]), and lead. The primary NAAQS represent maximum levels of background air pollution that are considered safe, with an adequate margin of safety to protect public health. Secondary NAAQS represent the maximum pollutant concentration necessary to protect vegetation, crops, and other public resources in addition to maintaining visibility standards. The primary and secondary NAAQS for the criteria pollutants are presented in **Table 3-9**.

**Table 3-9.  
National Ambient Air Quality Standards for Criteria Pollutants**

Criteria Pollutant	Primary/ Secondary <sup>a,b</sup>	Averaging Time	Level	Form
Carbon Monoxide	primary	8 hours	9 ppm	Not to be exceeded more than once per year
		1 hour	35 ppm	
Lead	primary and secondary	Rolling 3-month average	0.15 µg/m <sup>3</sup>	Not to be exceeded
Nitrogen Dioxide	primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	primary and secondary	1 year	0.053 ppm	Annual Mean
Ozone	primary and secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
PM <sub>2.5</sub>	primary	1 year	12 µg/m <sup>3</sup>	annual mean, averaged over 3 years
	secondary	1 year	15 µg/m <sup>3</sup>	annual mean, averaged over 3 years
	primary and secondary	24 hours	35 µg/m <sup>3</sup>	98 <sup>th</sup> percentile, averaged over 3 years
PM <sub>10</sub>	primary and secondary	24 hours	150 µg/m <sup>3</sup>	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide	primary	1 hour	75 ppb	99 <sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over 3 years
	secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Source: USEPA, 2016a

Notes:

- a. Primary Standards: the levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than three (3) years after that state's implementation plan is approved by the USEPA.
  - b. Secondary Standards: the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Concentrations are expressed first in units in which they were promulgated.
- mg/m<sup>3</sup> = milligrams per cubic meter; µg/m<sup>3</sup> = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion

The criteria pollutant ozone is not usually emitted directly into the air but is formed in the atmosphere by photochemical reactions involving sunlight and previously emitted pollutants, or "ozone precursors." These ozone precursors consist primarily of nitrogen oxides and volatile organic compounds (VOCs) that are directly emitted from a wide range of emissions sources. For this reason, regulatory agencies limit atmospheric ozone concentrations by controlling VOC pollutants (also identified as reactive organic gases) and nitrogen oxides.

The USEPA has recognized that particulate matter emissions can have different health affects depending on particle size and, therefore, developed separate NAAQS for coarse particulate matter (PM<sub>10</sub>) and fine particulate matter (PM<sub>2.5</sub>). The pollutant PM<sub>2.5</sub> can be emitted from emission sources directly as very fine dust and/or liquid mist or formed secondarily in the atmosphere as condensable particulate matter, typically forming nitrate and sulfate compounds. Secondary (indirect) emissions vary by region depending upon the predominant emission sources located there and thus which precursors are considered significant for PM<sub>2.5</sub> formation and identified for ultimate control.

The CAA and USEPA delegated responsibility for ensuring compliance with NAAQS to the states and local agencies. As such, each state must develop air pollutant control programs and promulgate regulations and rules that focus on meeting NAAQS and maintaining healthy ambient air quality levels.

The ROI for this analysis includes airspace in Hidalgo and Grant counties in New Mexico. The areas where the SUA would be located in New Mexico is in attainment for all criteria pollutants. **Table 3-10** provides the 2017 annual emissions inventory for Hidalgo and Grant counties, portions of which would underlie the proposed Playas MOA/ATCAA.

**Table 3-10.  
2017 Annual Emissions Inventory for Grant and Hidalgo Counties, New Mexico**

Location	Total Annual Emissions in Tons						
	VOCs	CO	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2e</sub>
Hidalgo County	21,678	6,889	1,962	11	1,125	249	200,805
Grant County	21,392	9,620	1,989	40	5,624	864	281,969

Source: USEPA, 2020a

Notes:

CO = carbon monoxide; CO<sub>2e</sub> = carbon dioxide equivalent; NO<sub>x</sub> = nitrogen oxides; PM<sub>10</sub> = particulate matter less than or equal to 10 micrometers; PM<sub>2.5</sub> = particulate matter with particulates less than or equal to 2.5 micrometers; SO<sub>2</sub> = sulfur dioxide; VOC = volatile organic compound

Mixing height is another factor used in defining the ROI for various pollutants. The mixing height is the upper vertical limit of the volume of air in which emissions may affect air quality. Emissions released above the mixing height are typically restricted from affecting ground-level ambient air quality in the region, while emissions of pollutants released below the mixing height may affect ground-level concentrations. The portion of the atmosphere that is completely mixed begins at ground level and may extend up to heights of a few thousand feet. Mixing height varies from region to region based on daily temperature changes, amount of sunlight, and other climatic factors. The USEPA has defined a default mixing height as 3,000 feet AGL, which this EA used for the aircraft operations emissions analysis for criteria pollutants.

The proposed Playas MOA/ATCAA is located less than 40 miles from Chiricahua National Monument Wilderness Area and Chiricahua Wilderness Area in Arizona. The wilderness areas are categorized as Class I Areas, identified in the CAA as protected from impairment of visibility resulting from manmade air pollution. Prevailing winds in southern New Mexico are usually from the west, which would move air emissions from activity in the Playas MOA away from the Chiricahua area.

### 3.5.1.2 Hazardous Air Pollutants

In addition to the NAAQS for criteria pollutants, national standards exist for hazardous air pollutants, which are regulated under Section 112(b) of the 1990 CAA Amendments.

Aircraft gas turbine engines burn fuel more efficiently than most mobile sources. Because most fuel is consumed at higher power settings and most operational time is spent at cruise, greater than 99 percent of fuel undergoes complete combustion and is efficiently converted to carbon dioxide and water. Hazardous air pollutant emissions are greatest under idle conditions, when the engines are operating in a less-efficient cycle. This condition would occur in the airfield environment and not within airspace; therefore, hazardous air pollutants are not addressed further in this EA.

### 3.5.1.3 Greenhouse Gases

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. These emissions are generated by both natural processes and human activities. The accumulation of GHGs in the atmosphere helps regulate the earth's temperature and contribute to global climate change. GHGs include water vapor, carbon dioxide, methane, nitrous oxide, ozone, and several hydrocarbons and chlorofluorocarbons. Each GHG has an estimated global warming potential, which is a function of its atmospheric lifetime and its ability to absorb and radiate infrared energy emitted from the earth's surface. The global warming potential of a particular gas provides a relative basis for calculating its carbon dioxide equivalent or the amount of carbon dioxide equivalent to the emissions of that gas. Carbon dioxide has a global warming potential of one and is, therefore, the standard by which all other GHGs are measured. The potential effects of proposed GHG

emissions are by nature global and result in cumulative impacts because most individual anthropogenic sources of GHG emissions are not large enough to have a noticeable effect on climate change. Therefore, the impact of proposed GHG emissions to climate change is discussed in the context of cumulative impacts in **Section 4.5**.

## **3.5.2 Existing Condition**

### **3.5.2.1 Regional Climate**

Southwestern New Mexico is characterized by wide day-night temperature fluctuations, seasonal strong winds, and bright, clear skies. High temperatures in the summer generally exceed 81 degrees Fahrenheit (°F), and winter ranges from late November to late February, with daily highs typically below 58 °F. Relative humidity is low, below 40 percent most of the year. On a typical summer afternoon, the relative humidity is less than 20 percent; on a winter afternoon, close to 0 percent. The windiest period is the first half of the year, with speeds averaging approximately 8 to 10 miles per hour. The second half of the year is calmer, with an average wind speed of approximately 6 to 8 miles an hour. The area averages approximately 12 inches of rain in a year, and about 4 inches of snow during winter.

### **3.5.2.2 Analysis Methodology**

Emissions sources and the approach used to estimate emissions under the Proposed Action for the air quality analysis were based on information from Air Force subject matter experts and established aircraft operations. Emissions were assessed to identify whether the Proposed Action would result in a violation of one or more NAAQS.

The air quality analysis in this EA considered the aircraft operations below 3,000 feet AGL. Emission estimates were derived using the Air Force's Air Conformity Applicability Model (ACAM) and include low-altitude flight in the proposed airspace. Aircraft emissions are based on operations data Davis-Monthan AFB provided and represent the most recent data available on flight operations. These data were then input into ACAM to generate the total estimated annual emissions under the Proposed Action.

## **3.6 CULTURAL RESOURCES**

### **3.6.1 Definition of Resource**

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture or community for scientific, traditional, religious, or other purposes. These resources are protected and identified under several federal laws and EOs.

Cultural resources include the following subcategories:

- Archaeological (i.e., prehistoric or historic sites where human activity has left physical evidence of that activity, but no structures remain standing);
- Architectural (i.e., buildings or other structures or groups of structures, or designed landscapes that are of historic or aesthetic significance); and
- Traditional cultural properties (resources of traditional, religious, or cultural significance to Native American tribes).

Significant cultural resources are those that have been listed on the National Register of Historic Places (NRHP) or determined to be eligible for listing. To be eligible for the NRHP, properties must be 50 years old and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They must possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to convey their historical significance and meet at least one of four criteria:

1. Associated with events that have made a significant contribution to the broad patterns of our history (Criterion A);
2. Associated with the lives of persons significant in our past (Criterion B);
3. Embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C); and/or
4. Have yielded or be likely to yield information important in prehistory or history (Criterion D).

Properties that are less than 50 years old can be considered eligible for the NRHP under Criteria Consideration G, *Properties that Have Achieved Significance Within the Past Fifty Years*, if they possess exceptional historical importance. Those properties must also retain historic integrity and meet at least one of the four NRHP criteria for evaluation (Criteria A, B, C, or D).

Federal laws protecting cultural resources include the Archaeological and Historic Preservation Act of 1960 (16 USC § 469) as amended, the American Indian Religious Freedom Act of 1978 (42 USC § 1996), the Archaeological Resources Protection Act of 1979 (16 USC § 470aa–470mm), the Native American Graves Protection and Repatriation Act of 1990 (25 USC § 3001, et seq.), and the NHPA, as amended, through 2016, and associated regulations (36 CFR § 800). The NHPA requires federal agencies to consider effects of federal undertakings on historic properties prior to making a decision or taking an action and integrate historic preservation values into their decisionmaking process. Federal agencies fulfill this requirement by completing the NHPA Section 106 consultation process, as set forth in 36 CFR § 800. Section 106 of the NHPA also requires agencies to consult with federally recognized American Indian tribes with a vested interest in the undertaking.

Section 106 of the NHPA requires all federal agencies to seek to avoid, minimize, or mitigate adverse effects to historic properties (36 CFR § 800.1[a]). For cultural resources analysis, the ROI is the Area of Potential Effects (APE), defined as the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR § 800.16[d]) and thereby diminish their historic integrity. The APE encompasses direct and indirect effects for the Proposed Action and includes the area under the proposed Playas MOA/ATCAA.

### 3.6.2 Existing Condition

The aerial extent of the proposed Playas MOA/ATCAA (and associated APE) is 520 square miles, which encompasses and extends beyond the PTRC and is located above Grant and Hidalgo counties in southwestern New Mexico. Information on cultural resources within the APE was derived from conducting background research to identify NRHP and State of New Mexico Register of Historic Places properties beneath the affected airspace; national historic landmarks; national battlefields; national historic trails; any cultural landscapes, historic forts, or historic ranches recorded or known within the same area; and American Indian Reservations, sacred areas, or traditional use areas. Aircraft operations are most likely to affect historic buildings, structures, and districts where setting is an important aspect of a property’s significance and where overpressures from sonic booms pose potential effects to those types of resources.

The Air Force sent coordination letters to the Arizona and New Mexico SHPOs and regional offices of the BLM (**Appendix A**). Government-to-government consultation was initiated with the Native American Tribes and Pueblos located beneath or near the affected airspace or that may have traditional ties to these lands.

#### 3.6.2.1 Architectural Properties and Archeological Sites

As shown in **Table 3-11**, an online search of the NRHP website indicates 25 listed architectural properties and archaeological sites in Hidalgo County and 47 listed architectural properties or archaeological sites in Grant County. While the exact location of these sites cannot be released to the public, sites for Hidalgo County are listed as being in the towns of Animas and Lordsburg, which are located approximately 16 and 32 miles from Playas, respectively. None of the properties in Grant and Hidalgo counties are within the ROI.

**Table 3-11.**  
**Sites listed in the National Register of Historic Places**

Property Name	NRHP Listed Date	County	Within ROI
Woodrow Ruin	7/9/1970	Grant	No
Andazola, Trinidad, House	5/16/1988	Grant	No
Baca, Ramon, House	6/17/1988	Grant	No
Eby, Tom, Storage Building	5/16/1988	Grant	No
NAN Ranch	5/16/1988	Grant	No
Soliz--Baca House	6/17/1988	Grant	No
Trujillo, Maria J. and Juan, House	5/16/1988	Grant	No
L. C. Ranch Headquarters	12/6/1978	Grant	No
Hooks--Moore Store	5/16/1988	Grant	No
Huechling, Otto, House	5/16/1988	Grant	No
Mattocks Site	12/9/1980	Grant	No
Mimbres School	5/16/1988	Grant	No
Redding, William, House	5/16/1988	Grant	No
Sibole, George, Store	5/16/1988	Grant	No
Valencia, Ysabel, House	5/16/1988	Grant	No
Wood, Dr. Granville, House	5/16/1988	Grant	No
Pinos Altos Historic District	5/21/1984	Grant	No
Reeds Peak Lookout Tower	1/28/1988	Grant	No
San Juan Historic District	5/16/1988	Grant	No
Valencia, Jesus, House	5/16/1988	Grant	No
Wheaton-Smith Site	7/23/1980	Grant	No
Acklin Store	5/16/1988	Grant	No
Grijalva, Luciana B., House	5/16/1988	Grant	No
Janss Site	7/23/1980	Grant	No
Menard--Galaz House	5/16/1988	Grant	No
Portillo, Mauricio, House	5/16/1988	Grant	No
San Lorenzo Historic District	5/16/1988	Grant	No
Torres, Antonio, House	5/16/1988	Grant	No
Fort Bayard Historic District	7/7/2002	Grant	No
Perrault, George O., House	5/16/1988	Grant	No
San Juan Teacherage	5/16/1988	Grant	No
Ailman, H. B., House	5/12/1975	Grant	No
Bowden Hall	9/22/1988	Grant	No
Bullard Hotel	7/11/1988	Grant	No
Chihuahua Hill Historic District	1/23/1984	Grant	No
Fleming Hall	9/22/1988	Grant	No
Graham Gymnasium	9/22/1988	Grant	No
Heating Plant	9/22/1988	Grant	No
Light Hall	9/22/1988	Grant	No
Ritch Hall	9/22/1988	Grant	No
Silver City Historic District	5/23/1978	Grant	No
Silver City Historic District (Boundary Increase)	9/25/2013	Grant	No
Silver City Historic District North Addition	2/17/1983	Grant	No
Silver City Water Works Building	1/26/1984	Grant	No
Silver City Woman's Club	9/2/2003	Grant	No
St. Mary's Academy Historic District	9/15/1983	Grant	No
Burro Springs Site	12/31/1974	Grant	No
Alamo Hueco Site	1/28/1993	Hidalgo	No
Archeological Site No. LA 54021	1/23/1993	Hidalgo	No
Archeological Site No. LA 54042	1/23/1993	Hidalgo	No
Archeological Site No. LA 54049	1/23/1993	Hidalgo	No
Archeological Site No. LA 54050	1/23/1993	Hidalgo	No
Box Canyon Site	1/28/1993	Hidalgo	No
Brushy Creek Ruin	1/28/1993	Hidalgo	No

Property Name	NRHP Listed Date	County	Within ROI
Clanton Draw Site	1/28/1993	Hidalgo	No
Culberson Ruin	1/28/1993	Hidalgo	No
Double Adobe Creek Site	1/28/1993	Hidalgo	No
Fortress--Stewart Ranch Site	1/23/1993	Hidalgo	No
Hoskins Site	1/28/1993	Hidalgo	No
Joyce Well Site	1/28/1993	Hidalgo	No
Little Site	1/28/1993	Hidalgo	No
Lunch Box Site	1/28/1993	Hidalgo	No
Metate Ruin	1/28/1993	Hidalgo	No
Pendleton Ruin	1/28/1993	Hidalgo	No
Pigpen Creek Site	1/28/1993	Hidalgo	No
Saddle Bronc--Battleground Site	1/28/1993	Hidalgo	No
Sycamore Well Site	1/28/1993	Hidalgo	No
Timberlake Ruin--Walnut Creek Site	1/28/1993	Hidalgo	No
Hidalgo County Courthouse	12/7/1987	Hidalgo	No
Lordsburg High School	9/17/2015	Hidalgo	No
Lordsburg--Hidalgo County Library	2/4/2004	Hidalgo	No
Shakespeare Ghost Town	7/16/1973	Hidalgo	No

Note:

NRHP = National Register of Historic Places; ROI = Region of Influence

In a letter dated November 10, 2020, the New Mexico Department of Cultural Affairs Historic Preservation Division identified one historic property within the APE. The Old Hatchet Mine and the American Mill (State Register 721) is located approximately six (6) miles east of Playas. The area of Old Hachita and the Old Hatchet Mine contains about a dozen crumbling stone and/or adobe structures, both commercial and residential. Included in these remains is the American Mill, a large melting adobe that still contains the ruins of a rare flotation process mill and its associated machinery. Scattered about the edge of Old Hachita are several large headframes and mine dumps.

While there are no known tribal artifacts, sites, or deposits within the region of the PTRC, the local area has been inhabited by native persons for thousands of years. Examples of the types of artifacts that may be found in the region include petroglyphs, lithic scatter, flaked and ground stone artifacts, projectile points, stone milling tools, midden sites, storage pits, maize remains, and ceramics.

### 3.7 HAZARDOUS MATERIALS AND WASTES

#### 3.7.1 Definition of Resource

Hazardous materials are identified and regulated under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 USC § 9601) (CERCLA); the Occupational Safety and Health Act of 1970 (29 USC. § 651, et seq); and the Emergency Planning and Community Right-to-Know-Act of 1986 (42 USC §§ 11001–11050). Hazardous materials analyses typically consider the use and disposal of hazardous materials at a particular facility and discuss the total amount of material on the installation, environmental cleanup sites, and standard operating procedures in processing hazardous materials. This EA considers the potential introduction of hazardous materials within the proposed Playas MOA/ATCAA. The introduction of hazardous materials into the environment could occur by an aircraft mishap or crash. While aircraft mishaps are rare (see **Section 3.3** of this EA), this section focuses on the hazardous materials that could be released and the emergency response procedures that would be followed in the unlikely event of an aircraft mishap or crash.

CERCLA, as amended by the Superfund Amendments and Reauthorization Act and the Toxic Substances Control Act, defines hazardous materials as any substance with physical properties of ignitability, corrosivity, reactivity, or toxicity that might cause an increase in mortality, serious irreversible illness, and incapacitating reversible illness, or that might pose a substantial threat to human health or the environment. The Occupational Safety and Health Administration (OSHA) is responsible for enforcement and

implementation of federal laws and regulations pertaining to worker health and safety under 29 CFR § 1910. OSHA also includes the regulation of hazardous materials in the workplace and ensures appropriate training in their handling.

Hazardous waste is defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and further amended by the Hazardous and Solid Waste Amendments, as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes, that pose a substantial present or potential hazard to human health or the environment. In general, both hazardous materials and hazardous wastes include substances that, because of their quantity; concentration; or physical, chemical, or infectious characteristics, might present substantial danger to public health and welfare or the environment when released or otherwise improperly managed.

The ROI for hazardous materials and hazardous waste is the area under the proposed Playas MOA/ATCAA.

### 3.7.2 Existing Condition

Since no ground activities are included as part of the Proposed Action, ground-based hazardous waste activities in the vicinity of the PTRC and Davis-Monthan AFB are not discussed. While the generation of hazardous waste would not be part of the Proposed Action, this section provides an overview of potential hazardous waste generation associated with the potential mishaps discussed in **Section 3.3**.

A Hazardous Aerospace Material Mishap Emergency Response Integrated Process Team was chartered in 2000 by the Deputy Assistant Secretary of the Air Force for Environmental, Safety, and Occupational Health. The goals of the Hazardous Aerospace Material Mishap Emergency Response project were to identify and inventory all hazardous aerospace materials on Air Force weapons systems and ensure procedures were in place to protect personnel from safety/health hazards associated with aerospace vehicle mishaps. Air Force Technical Order (TO) 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information*, addresses specific emergency response procedures for aircraft mishaps involving hazardous materials (Air Force, 2006). The TO identifies the hazards associated with the parts and equipment on an aircraft and the potential changes to health and safety characteristics after a fire resulting from an aircraft mishap.

Emergency procedures include how to respond to known solid, liquid, and gaseous products; radioactive materials; composite materials; radar absorbing and conventional coatings materials; and other materials and situations that can pose health and safety hazards. Hazardous materials associated with most aircraft include jet fuels, ethylene glycol, and hydraulic fluid. In addition to these common materials, the emergency power unit for the single engine F-16 fighter jet uses hydrazine, a highly volatile propellant, to restart the engine in case of emergency. Hydrazine is also used in agricultural chemicals, chemical blowing agents, pharmaceuticals, photography chemicals, boiler water treatment, and textile dyes. Acute (short-term) exposure to high levels of hydrazine may include irritation of the eyes, nose, and throat; dizziness; headache; nausea; pulmonary edema; seizures; and coma in humans (USEPA, 2000).

## 3.8 BIOLOGICAL RESOURCES

### 3.8.1 Definition of Resource

Biological resources include native or invasive plants and animals; sensitive and protected floral and faunal species; and the habitats, such as wetlands, forests, and grasslands, in which they exist. Habitat can be defined as the resources and conditions in an area that support a defined suite of organisms. The ROI for biological resources includes the land under the proposed Playas MOA/ATCAA (see **Figure 1-2**).

The following sections briefly describe the primary federal statutes that form the regulatory framework for the evaluation of biological resources.

### 3.8.1.1 Endangered Species Act

The ESA of 1973 (16 USC § 1531, et seq.) established protection over and conservation of threatened and endangered species and the ecosystems upon which they depend. Sensitive and protected biological resources include plant and animal species listed as threatened, endangered, or special status by the USFWS and NMFS. Under the ESA (16 USC § 1536), an “endangered species” is defined as any species in danger of extinction throughout all, or a large portion, of its range. A “threatened species” is defined as any species likely to become an endangered species in the foreseeable future. The USFWS maintains a list of species considered to be candidates for possible listing under the ESA. The ESA also allows the designation of geographic areas as critical habitat for threatened or endangered species. Although candidate species receive no statutory protection under the ESA, the USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and may warrant protection under the ESA.

### 3.8.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 USC § 703) (MBTA) makes it unlawful for anyone to take migratory birds or their parts, nests, or eggs unless permitted to do so by regulations. Per the MBTA, “take” is defined as “pursue, hunt, shoot, wound, kill, trap, capture, or collect” (50 CFR § 10.12). Birds protected under the MBTA include nearly all species in the US, with the exception of nonnative/human introduced species and some game birds.

EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, requires all federal agencies undertaking activities that may negatively impact migratory birds to follow a prescribed set of actions to further implement the MBTA. EO 13186 directs federal agencies to develop a Memorandum of Understanding (MOU) with the USFWS that promotes the conservation of migratory birds. On September 5, 2014, the DoD signed a five-year MOU with the USFWS. In accordance with the MOU, and to the extent possible per law and budgetary considerations, EO 13186 encourages agencies to implement a series of conservation measures aimed at reinforcing and strengthening the MBTA.

The National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314, 116 Stat. 2458) provided the Secretary of the Interior the authority to prescribe regulations to exempt the armed forces from the incidental take of migratory birds during authorized military-readiness activities. Congress defined military-readiness activities as all training and operations of the US armed forces that relate to combat and the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use. Further, in October 2012, the Authorization of Take Incidental to Military Readiness Activities was published in the federal register (50 CFR § 21.15), authorizing incidental take during military-readiness activities unless such activities may result in significant adverse effects on a population of a migratory bird species.

### 3.8.1.3 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (16 USC §§ 668–668c) (BGEPA) prohibits the “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof.” Per the BGEPA, a “take” is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb,” and “disturb” is defined as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, injury to an eagle, a decrease in productivity by substantially interfering with the eagle’s normal breeding, feeding or sheltering behavior, or nest abandonment by substantially interfering with the eagle’s normal breeding, feeding or sheltering behavior.” The BGEPA also prohibits activities around an active or inactive nest site that could result in disturbance to returning eagles.

### 3.8.1.4 Clean Water Act

The Clean Water Act of 1972 (33 USC § 1251, et seq.) (CWA) regulates discharges of pollutants in surface waters of the US. Section 404 of the CWA establishes a program to regulate the discharge of dredged and fill material into waters of the US, including wetlands. The US Army Corps of Engineers defines “wetlands” as “those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions” (Environmental Laboratory, 1987). Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR § 328).

### 3.8.2 Existing Condition

Ecoregions describe areas of similar type, quality, and quantity of environmental resources (USEPA, 2020b). Ecoregions are assigned hierarchical levels to delineate regions spatially based on different levels of planning and reporting needs. The ROI for the Proposed Action is located within two Level III Ecoregions (**Figure 3-4**). The proposed Playas MOA/ATCAA is located entirely within four ecoregions: Chihuahuan Basins and Playas, Low Mountains and Bajadas, Apachian Valleys and Low Hills, Lower Madrean Woodlands. This EA uses Level IV Ecoregions to describe the ecosystems within the ROI. Level IV Ecoregion descriptions were used because they provide a regional perspective and are more specifically oriented for environmental monitoring, assessment and reporting, and decisionmaking (Commission for Environmental Cooperation, 1997). The vegetation and wildlife common within the ecoregions under the proposed Playas MOA/ATCAA are described below.

Ecoregion 24a, Chihuahuan Basins and Playas, includes alluvial fans, internally drained basins, and river valleys mostly below 4,500 feet. The major Chihuahuan basins formed during Tertiary Basin and Range tectonism when the earth’s crust stretched and fault collapse resulted in sediment-filled basins. These areas are some of the hottest and most arid habitats in the state. The playas and basin floors have saline or alkaline soils and areas of salt flats, dunes, and windblown sand. The typical desert shrubs and grasses, the dominant creosote bush, along with tarbush, four-wing saltbush, acacias, gyp grama, and alkali sacaton, must withstand large seasonal and diurnal ranges in temperature, low available moisture, and a high evapotranspiration rate. Horse creeper and other cacti are common (USEPA, 2020b).

Ecoregion 24c, Low Mountains and Bajadas, includes several disjunct hilly areas that have a mixed geology. The mountainous terrain has shallow soil, exposed bedrock, and coarse rocky substrates. Alluvial fans of rubble, sand, and gravel build at the base of the mountains and often coalesce to form bajadas (i.e., hillside alluvial fans formed by mountain runoff). Vegetation includes mostly desert shrubs, such as sotol, lechuguilla, yucca, ocotillo, lotebush, tarbush, and pricklypear, with a sparse intervening cover of black grama and other grasses. At higher elevations, there may be scattered one-seeded juniper and pinyon pine. Strips of gray oak, velvet ash, and little walnut etch the patterns of intermittent and ephemeral drainages, and oaks may spread up north-facing slopes from the riparian zones. The varied habitats provide cover for mule deer, bobcat, javelina, and Montezuma quail (USEPA, 2020b).

Ecoregion 79a, Apachian Valleys and Low Hills, is very similar to Chihuahuan Basins and Playas discussed above. Vegetation in this ecoregion is mostly sideoats grama, black grama, cane beardgrass, plains lovegrass, blue grama, hairy grama, sand dropseed, vine mesquite, curly mesquite, false mesquite, Mormon-tea, mimosa, yucca, ocotillo, cacti, and agave (USEPA, 2020b).

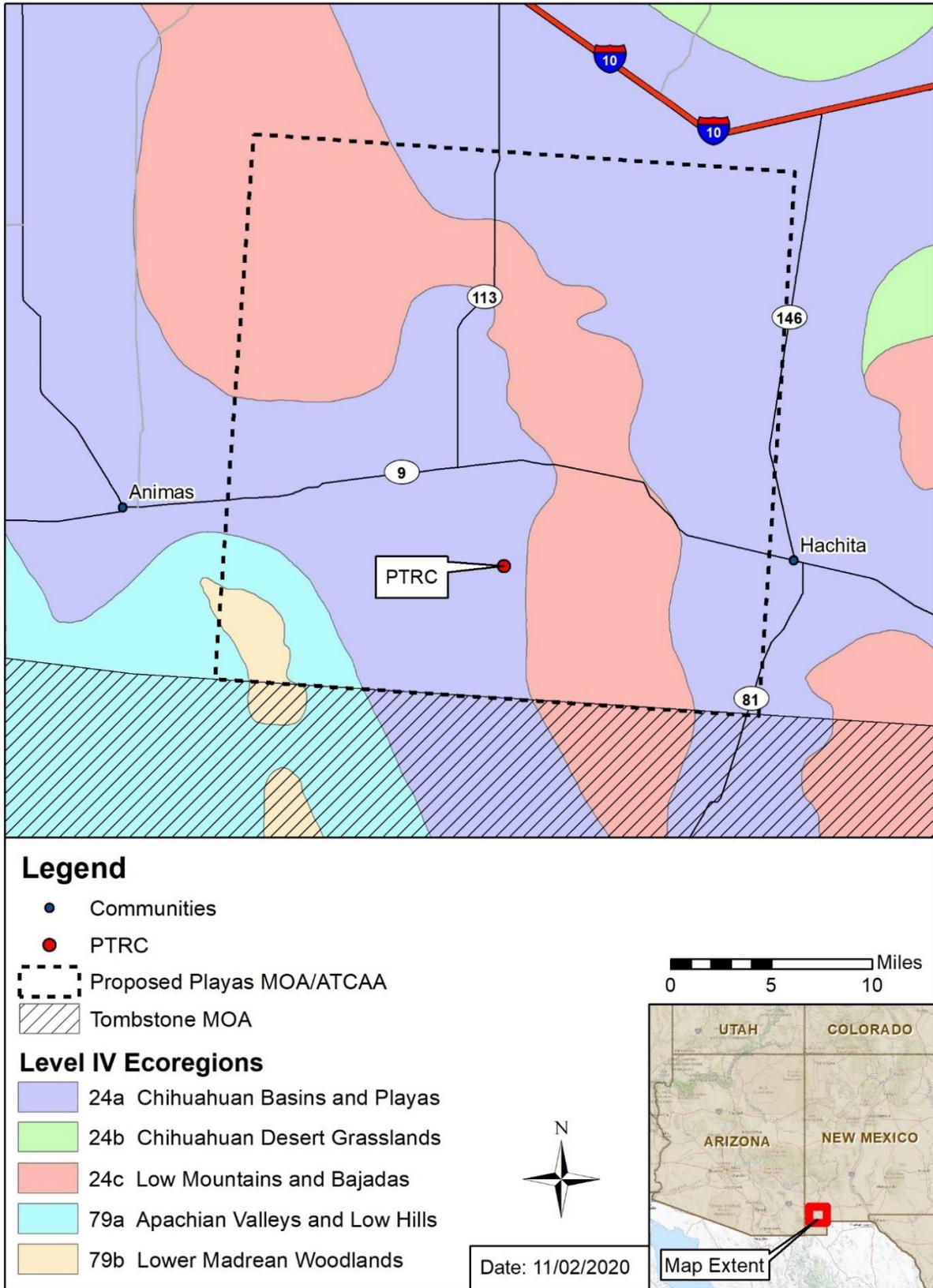


Figure 3-4. Level Ecoregions under the Proposed Playas MOA/ATCAA

Ecoregion 79b, Lower Madrean Woodlands, occurs at intermediate elevations, generally above 5,000 feet. It is a mild winter-wet summer woodland, shrubby in places. Emory, silverleaf, Tourney, and Arizona white oaks occur, along with scattered pinyon, juniper, mesquite, and chaparral species (USEPA, 2020b).

### 3.8.2.1 Threatened and Endangered Species

**Table 3-12** provides a list of threatened and endangered species that could potentially be found within the ROI. The list was obtained from USFWS's Information for Planning and Consultation Service (IPaC) (USFWS, 2020).

The Proposed Action would not involve ground-based activities; any proposed activities would be limited to aircraft overflights in the airspace where noise and visual cues could cause behavioral changes in birds and mammals. There would be no impacts on aquatic species (i.e., fish); therefore aquatic species are not identified or discussed further in this EA.

Currently, no critical habitat for any federally or state-protected species is located in the ROI.

**Table 3-12.**  
**Federally and State-Listed Species with the Potential to be Affected by the Proposed Action**

Species	Species Name	Federal Status	State Status	Critical Habitat in ROI
White-sided Jackrabbit	<i>Lepus callotis</i>		Threatened	None
Arizona Shrew	<i>Sorex arizonae</i>		Endangered	None
Mexican Long-nosed Bat	<i>Leptonycteris nivalis</i>	Endangered	Endangered	None
Lesser Long-nosed Bat	<i>Leptonycteris yerbabuenae</i>		Threatened	None
Western Yellow Bat	<i>Dasypterus xanthinus</i>		Threatened	None
Spotted Bat	<i>Euderma maculatum</i>		Threatened	None
Mexican Gray Wolf	<i>Canis lupus baileyi</i>	Endangered	Endangered	None
Gray Wolf	<i>Panthera once</i>	Proposed Endangered		None
Jaguar	<i>Panthera onca</i>	Endangered		None
Southern Pocket Gopher (New Mexico population)	<i>Thomomys umbrinus intermedius</i>		Threatened	None
Gould's Wild Turkey	<i>Meleagris gallopavo mexicana</i>		Threatened	None
Common Ground Dove	<i>Columbina passerina</i>		Endangered	None
Yellow-billed Cuckoo (western population)	<i>Coccyzus americanus occidentalis</i>		Threatened	None
Buff-collared Nightjar	<i>Antrostomus ridgwayi</i>		Endangered	None
Lucifer Hummingbird	<i>Calothorax lucifer</i>		Threatened	None
Costa's Hummingbird	<i>Calypte costae</i>		Threatened	None
Broad-billed Hummingbird	<i>Cynanthus latirostris</i>		Threatened	None
Violet-crowned Hummingbird	<i>Amazilia violiceps</i>		Threatened	None
White-eared Hummingbird	<i>Hylocharis leucotis</i>		Threatened	None
Neotropic Cormorant	<i>Phalacrocorax brasilianus</i>		Threatened	None
Brown Pelican	<i>Pelecanus occidentalis</i>		Endangered	None
Bald Eagle	<i>Haliaeetus leucocephalus</i>		Threatened	None
Common Black Hawk	<i>Buteogallus anthracinus</i>		Threatened	None
Whiskered Screech-Owl	<i>Megascops trichopsis</i>		Threatened	None
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	Threatened		None
Elegant Trogon	<i>Trogon elegans</i>		Endangered	None
Gila Woodpecker	<i>Melanerpes uropygialis</i>		Threatened	None
Aplomado Falcon	<i>Falco femoralis</i>	Endangered	Endangered	None
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened		None
Peregrine Falcon	<i>Falco peregrinus</i>		Threatened	None
Northern Beardless-Tyrannulet	<i>Camptostoma imberbe</i>		Endangered	None
Thick-billed Kingbird	<i>Tyrannus crassirostris</i>		Endangered	None

Species	Species Name	Federal Status	State Status	Critical Habitat in ROI
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	Endangered	Endangered	None
Bell's Vireo	<i>Vireo bellii</i>		Threatened	None
Gray Vireo	<i>Vireo vicinior</i>		Threatened	None
Arizona Grasshopper Sparrow	<i>Ammodramus savannarum ammoregus</i>		Endangered	None
Yellow-eyed Junco	<i>Junco phaeonotus</i>		Threatened	None
Baird's Sparrow	<i>Centronyx bairdii</i>		Threatened	None
Abert's Towhee	<i>Melospiza aberti</i>		Threatened	None
Varied Bunting	<i>Passerina versicolor</i>		Threatened	None
Slevin's Bunchgrass Lizard	<i>Sceloporus slevini</i>		Threatened	None
Gray-checked Whiptail	<i>Aspidoscelis dixonii</i>		Endangered	None
Giant Spotted Whiptail	<i>Aspidoscelis stictogramma</i>		Threatened	None
Mountain Skink	<i>Plestiodon callicephalus</i>		Threatened	None
Reticulate Gila Monster	<i>Heloderma suspectum suspectum</i>		Endangered	None
Green Rat Snake	<i>Senticolis triaspis</i>		Threatened	None
Mexican Gartersnake	<i>Thamnophis eques</i>	Threatened	Endangered	None
Narrow-headed Gartersnake	<i>Thamnophis rufipunctatus</i>	Threatened	Threatened	None
New Mexico Ridge-nosed Rattlesnake	<i>Crotalus willardi obscurus</i>	Threatened	Endangered	None
Sonoran Desert Toad	<i>Incilius alvarius</i>		Threatened	None
Chiricahua Leopard Frog	<i>Lithobates chiricahuensis</i>	Threatened		None
Lowland Leopard Frog	<i>Lithobates yavapaiensis</i>		Endangered	None
Gila Chub	<i>Gila intermedia</i>	Endangered	Endangered	None
Chihuahua Chub	<i>Gila nigrescens</i>	Threatened	Endangered	None
Roundtail Chub (lower Colorado River populations)	<i>Gila robusta</i>		Endangered	None
Spikedace	<i>Meda fulgida</i>	Endangered	Endangered	None
Loach Minnow	<i>Rhinichthys cobitis</i>	Endangered	Endangered	None
Gila Trout	<i>Oncorhynchus gilae</i>	Threatened	Threatened	None
Gila Topminnow	<i>Poeciliopsis occidentalis occidentalis</i>	Endangered	Threatened	None
Shortneck Snaggletooth Snail	<i>Gastrocopta dalliana</i>		Threatened	None
Hacheta Grande Woodlandsnail	<i>Ashmunella hebardi</i>		Threatened	None
Gila Springsnail	<i>Pyrgulopsis gilae</i>		Threatened	None
New Mexico Hot Springsnail	<i>Pyrgulopsis thermalis</i>		Threatened	None

Source: US Fish and Wildlife Service IPaC.

Note:

ROI = Region of Influence

### 3.8.2.2 Wetlands

Wetlands are an important natural system and habitat because of the diverse biologic and hydrologic functions they perform. These functions include water quality improvement, groundwater recharge and discharge, pollution mitigation, nutrient cycling, wildlife habitat detention, and erosion protection. Wetlands are protected as a subset of the “the waters of the United States” under Section 404 of the CWA. The term “waters of the United States” has a broad meaning under the CWA and besides navigable waters, incorporates deep-water aquatic habitats and wetlands. Section 404(b)(1) of the CWA directs the USEPA to develop guidelines for the placement of dredged or fill material (33 USC § 1341[b]). These USEPA guidelines are known as the “404(b)(1) Guidelines” and are located at 40 CFR § 230. The stated purpose of the Guidelines is to “restore and maintain the chemical, physical, and biological integrity of waters of the US through the control of discharges of dredged or fill material” (40 CFR § 230.1[a]).

Overflight activities from the Proposed Action would have no impacts on wetlands or waters of the US; therefore, since there would be no possibility of fill activities or indirect impacts on wetlands from the Proposed Action, wetlands are not addressed further.

### 3.9 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

#### 3.9.1 Definition of Resource

Executive Orders direct federal agencies to address disproportionate environmental and human health effects in minority and low-income communities and to identify and assess environmental health and safety risks to children.

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, pertains to environmental justice issues and relates to various socioeconomic groups and disproportionate impacts that could be imposed on them. The EO requires that federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. EO 12898 was enacted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

For the purposes of this analysis, minority populations are defined as Alaska Natives and American Indians, Asians, Blacks or African-Americans, Native Hawaiians, and Pacific Islanders or persons of Hispanic origin (of any race); low-income populations include persons living below the poverty threshold as determined by the US Census Bureau (USCB); and youth populations are children under the age of 18 years.

The ROI for Environmental Justice includes the proposed Playas MOA/ATCAA and the surrounding environs, which incorporates portions of Grant and Hidalgo counties. Minority, low-income, and youth populations that could be disproportionately impacted by the project are addressed for the counties in the ROI and are compared to those populations in New Mexico and the United States.

#### 3.9.2 Existing Condition

An evaluation of minority and low-income populations in the area of the proposed Playas MOA/ATCAA, which includes portions of USCB census tract (CT) 9648, block group (BG) 1 (Grant County), and CT 9700 BG 1 (Hidalgo County), forms a baseline for this analysis. CTs are small, relatively permanent statistical subdivisions of a county as delineated by the USCB, while BGs are subdivisions within the larger CT. Because of the rural nature of the ROI, detailed data on race, poverty levels, and age are only available from the 2010 Census; more recent information is not available. The percentage of minorities in the population in 2010 was lower in CT 9648 BG 1 (41.8 percent) than in Grant County (51.1 percent) or New Mexico (59.6 percent). The percentage of minorities in CT 9700 BG 1 in 2010 (33.6 percent) is lower than the percentages for Hidalgo County (55.8 percent) and New Mexico (59.6 percent). Overall, both BGs have a percent minority that is lower than that of their respective counties and lower than the state of New Mexico, while CT 9648 BG 1 has a higher percentage of minorities than the United States (37.8 percent) and CT 9700 BG 1 has a lower percentage of minorities than the United States (**Table 3-13**) (USCB, 2010).

The percentage of the overall population that were children in the state of New Mexico (24.8 percent) and the United States (24 percent) was similar to the percentages found in CT 9648 BG 1 (22.9 percent) and

CT 9700 BG 1 (24.3 percent) (USCB, 2010). Grant County’s overall average of 21.7 percent is lower than that of CT 9648 BG 1, New Mexico, and the United States, while Hidalgo County’s percentage of 26.6 percent is higher than that of CT 9700 BG 1, New Mexico, and the United States (**Table 3-13**) (USCB, 2010).

The percent below the poverty level for BGs in the proposed Playas MOA/ATCAA was not available, so poverty was evaluated at the county level. Grant County’s percentage of the population in poverty, at 14.8 percent, was slightly lower than that of the United States (15.3 percent) and significantly lower than New Mexico (18.4 percent). The percent of the population below the poverty level in Hidalgo County was 22.6 percent, while the percent of the population below the poverty level in the state of New Mexico was 18.4 percent and 15.3 percent for the United States (USCB, 2010).

**Table 3-13.  
Total Population and Populations of Concern**

Geographic Area	Total Population	Percent Minority	Percent Hispanic or Latino <sup>a</sup>	Percent Below Poverty	Percent Youth <sup>b</sup>
CT 9648 BG 1 (Grant County)	1,056	41.8	40.2	N/A	22.9
CT 9700 BG 1 (Hidalgo County)	2,187	33.6	31.3	N/A	24.3
Grant County	29,706	51.1	48.0	14.8	21.7
Hidalgo County	4,964	57.8	55.8	22.6	26.6
New Mexico	2,065,932	59.6	46.3	18.4	24.8
United States	308,745,538	37.8	16.3	15.3	24.0

Source: USCB, 2010

Note:

- a. Hispanic and Latino denote a place of origin.
  - b. Percent youth are all persons under the age of 18.
- BG = block group; CT = census tract; N/A = not applicable

### 3.10 LAND USE

#### 3.10.1 Definition of Resource

The term “land use” refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. In many cases, land use descriptions are codified in local zoning laws; however, no nationally recognized convention or uniform terminology has been adopted for describing land use categories. As a result, the meanings of various land use descriptions, labels, and definitions vary among jurisdictions.

Land use describes ownership and management of land that lies beneath the airspace affected by the Proposed Action and examines any conflicts that may exist between the Proposed Action and land use plans and policies for the area potentially affected. The compatibility of existing and planned land use with aviation is usually associated with acoustic environment (noise), which is described in **Sections 3.2** and **4.2** of this EA.

The ROI for land use includes the land underneath the proposed Playas MOA/ATCAA within the airfield noise contours and safety zones.

#### 3.10.2 Existing Condition

The area beneath the proposed Playas MOA/ATCAA in southern New Mexico is predominantly rural. Extractive industries including oil production, forestry, and grazing operations are common in the region. Land use in Grant and Hidalgo counties is shaped by traditional uses, including agriculture and ranching. Agriculture plays a modest role in the local economy, but is historically an important industry, and the preservation of active agricultural lands remains vital to the cultural landscape. Ranching in Grant and Hidalgo counties depends heavily on the availability of land, as the climate dictates a high number of acres

per head of cattle. Ranchers utilize both their own land and access land managed by the State of New Mexico, the BLM, and the US Forest Service to ensure sufficient feed and grazing grounds. Unincorporated areas of Grant County are composed of vast swaths of rugged forest lands in the north and high plains grasslands in the south, interspersed with small communities. The landscape in Grant County is also marked by the presence of large mines. Mining activities spurred much of the growth in the County over the late 19th and early 20th centuries and remains vital to the economy today.

The area under the proposed Playas MOA/ATCAA in Grant County is defined as rural (Grant County, 2017). The area within Hidalgo County is predominantly rural. In addition, there are no recreation areas/uses or scenic areas within the ROI.

As shown in **Figure 3-5**, the majority of the land in the ROI is managed by the BLM. The BLM manages land for multiple uses, including minerals management, grazing, fire management, and recreation, while providing for protection of natural resources.

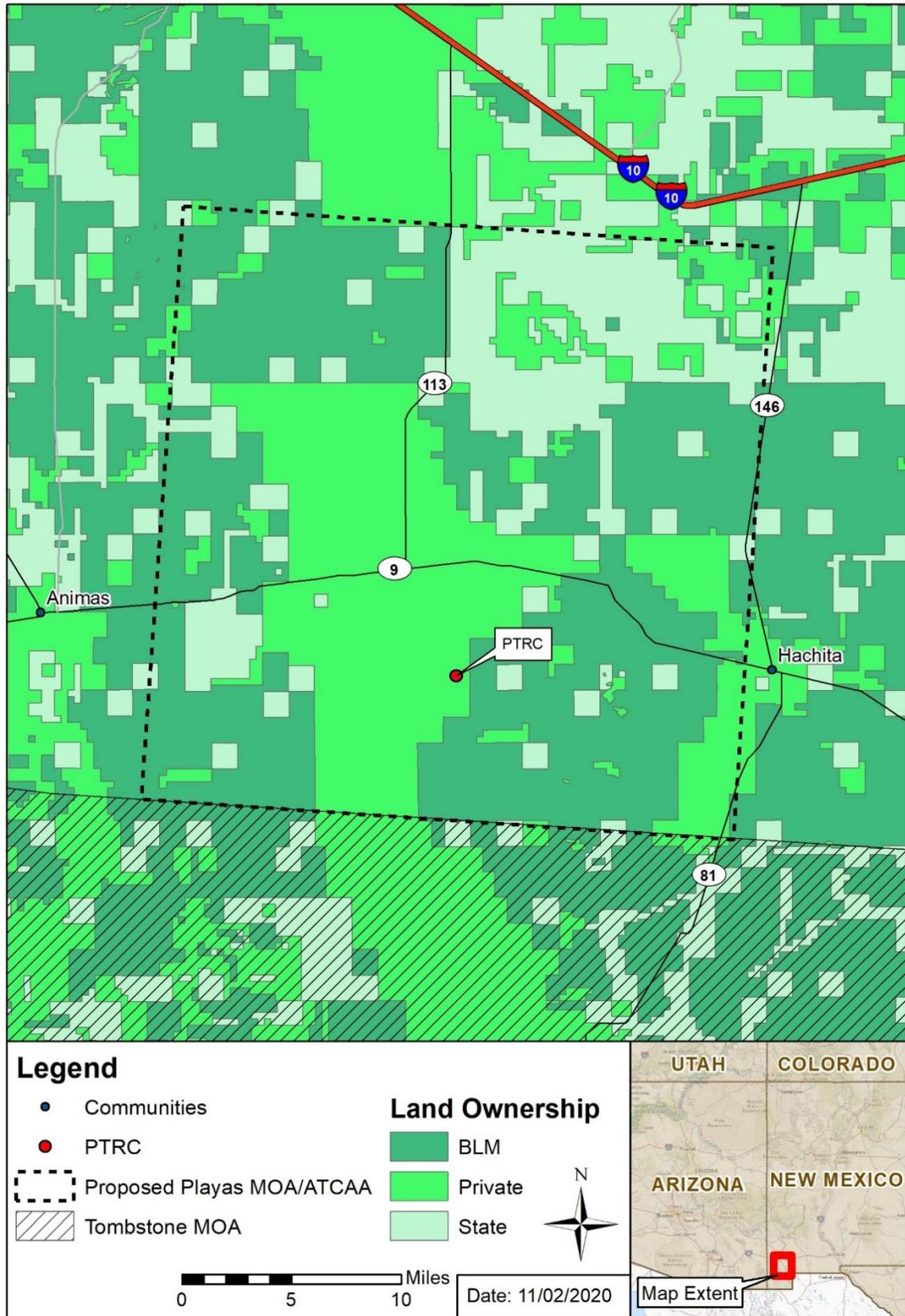


Figure 3-5. Land Ownership in the Region of Influence

### 3.11 SOCIOECONOMICS

#### 3.11.1 Definition of the Resource

Socioeconomics is the relationship between economics and social elements, such as population levels and economic activity. There are several factors that can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of families living below the poverty level, employment, and housing data. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region. Socioeconomic data are typically presented at county, state, and US levels to characterize baseline socioeconomic conditions in the context of regional, state, and national trends.

The ROI for socioeconomics includes the Playas MOA/ATCAA and the surrounding environs, which incorporates portions of Grant and Hidalgo counties.

#### 3.11.2 Existing Conditions

##### 3.11.2.1 Population

Grant and Hidalgo counties have both declined in population since 2010 (**Table 3-14**). Grant County declined in population by 5.5 percent between 2010 and 2018, and Hidalgo County declined in population by 11.9 percent. By contrast, New Mexico’s population grew by a modest 1.3 percent during the same time period, while the United States saw a population increase of 4.6 percent. The two BGs located within the ROI reported differing population trends for 2010–2018; CT 9648 BG 1 saw its small population increase by 7.8 percent, while CT 9700 BG 1 saw its population decline by 15.1 percent. In 2018 (the most recently published population data), Hidalgo County had a population of approximately 4,371 residents, while Grant County had a population of 28,061 residents (USCB, 2018a). The majority of Grant County’s population is located in the Silver City area, located approximately 60 miles from the proposed Playas MOA/ATCAA.

**Table 3-14.**  
**Populations in the Region of Influence, New Mexico, and the United States (2010–2018)**

Geographic Area	2010	2018	Total Growth 2010-2018 (percent)
CT 9648 BG 1	1,056	1,139	7.8
CT 9700 BG 1	2,187	1,856	-15.1
Grant County	29,706	28,061	-5.5
Hidalgo County	4,964	4,371	-11.9
New Mexico	2,065,932	2,092,434	1.3
United States	308,745,538	322,903,030	4.6

Sources: USCB, 2010, 2018a

Note:

CT=census tract; BG=block group

##### 3.11.2.2 Employment

The annual average labor force in 2019 in Grant County was 9,146 persons, and the average unemployment rate was 4.8 percent (589 unemployed). The Grant County unemployment rate was slightly lower than the New Mexico average unemployment rate (4.9 percent) and was well above the national average unemployment rate of 3.7 percent (US Bureau of Labor Statistics [BLS], 2019a,2019b). The annual average labor force in 2019 in Hidalgo County was 1,631 persons, and the average unemployment rate was 4.3 percent (89 unemployed). The Hidalgo County unemployment rate was lower than the New Mexico average unemployment rate (4.9 percent) and was well above the national average unemployment rate of 3.7 percent (BLS, 2019a,2019b).

Data and information on the region’s largest employers show that employment in Grant County is dominated by the Health Care and Social Assistance sector; followed by the Mining, Quarrying, and Oil and Gas Extraction sector; and Retail Trade sector. The Health Care and Social Assistance/Education and Mining, Quarrying, and Oil and Gas Extraction sectors are responsible for creating 62 percent of all new jobs in Grant County, as well as 40 percent of all new businesses created. The largest employer in the region is Freeport-McMoRan, a mining company that employs 1,400 people (Silver City Grant County Chamber of Commerce, 2020). The Chino Copper Mine, operated by Freeport-McMoRan, is located in the city of Hurley, and is one of the largest open-pit copper mines in the world (New Mexico State University, 2015).

Hidalgo County’s largest industries are Government and Government Enterprises, Retail Trade, and Agriculture. The Government and Government Enterprises sector employs a total of 664 people in Hidalgo County, or 31.44 percent of the workforce. Retail Trade employs 230 people, or 10.89 percent of the workforce, and Agriculture employs 193 people, or 9.14 percent of the workforce (New Mexico State University, 2017).

### 3.11.2.3 Housing

USCB estimates show that housing vacancy rates in Grant County for homeowner housing was slightly above both the New Mexico and national averages in 2018; during the same period, the rental housing vacancy rate was above the national average and below the New Mexico average (**Table 3-15**). Housing vacancy rates in Hidalgo County for homeowner housing were slightly below the New Mexico average and slightly above the national average. There are more than 3,010 vacant units in Grant County and 693 vacant units in Hidalgo County. The percentage of homes that are owner-occupied for Grant County and Hidalgo County (both 70.3 percent) is higher than the percentage of owner-occupied homes in New Mexico (67.6 percent) and the United States (63.8 percent).

**Table 3-15.  
Housing**

Housing Type	Grant County	Hidalgo County	New Mexico	United Stated
Total Units	15,013	2,446	932,818	136,384,292
Owner-occupied	70.3%	70.3%	67.6%	63.8%
Renter-occupied	29.7%	29.7%	32.4%	36.2%
Vacant Units	3,010	693	157,167	16,654,164
Homeowner Vacancy Rate <sup>a</sup>	2.5%	2.1%	2.2%	1.7%
Rental Vacancy Rate <sup>b</sup>	6.8%	9.4%	8.4%	6.1%
Median Value <sup>c</sup>	\$126,700	\$83,400	\$166,800	\$204,900

Source: USCB, 2018b

Notes:

- a Homeowner vacancy rate is the proportion of the homeowner inventory that is vacant “for sale.”
- b Rental vacancy rate is the proportion of the rental inventory that is vacant ‘for rent’.
- c Median value of owner-occupied units.

### 3.11.2.4 Schools

The Animas Public School District covers all students in grades preschool through 12<sup>th</sup> grade who reside in the areas of Animas, Hachita, Playas, Rodeo, and Cotton City. Due to the rural nature of the area, students are bussed to school from as far away as 60 miles, and the school operates on a four-day week, with students attending classes Monday through Thursday. The Animas Public School District maintains two campuses, including Animas Elementary School, which instructs students in preschool through 4<sup>th</sup> grade, and Animas Middle and High School, which serves students in grades 5 through 12. Enrollment in Animas Public Schools totaled 182 students in the most recent fully recorded school year (2017–2018), which represents the same number of enrolled students as 2016–2017, but a slight increase in enrollment over previous years (New Mexico Public Education Department, 2018). The closest private schools are located in Silver City, which is approximately 60 miles from the ROI. The closest institution of higher education is Western New Mexico University–Mimbres Valley, an extension campus of Western New Mexico University, which is located in Deming, New Mexico.

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## CHAPTER 4 ENVIRONMENTAL IMPACTS

This chapter presents a detailed analysis of the potential environmental impacts associated with the proposed and alternative actions as described in **Chapter 2**. Impacts are described for each ROI previously described in **Chapter 3**. The specific criteria for evaluating impacts and assumptions for the analyses are presented under each resource area. Evaluation criteria for most potential impacts were obtained from standard criteria; federal, state, or local agency guidelines and requirements; and/or legislative criteria. Proposed environmental commitments and best management practices (BMPs) to reduce potential impacts are included for each resource area, as appropriate.

Impacts are defined in general terms and are qualified as adverse or beneficial, and as short term or long term. For the purposes of this EA, short-term impacts are generally considered those impacts that would have temporary effects. Long-term impacts are generally considered those impacts that would result in permanent effects.

Impacts may be direct or indirect and are described in terms of type, context, duration, and intensity, which is consistent with the CEQ regulations. “Direct effects” are caused by an action and occur at the same time and place as the action. “Indirect effects” are caused by the action and occur later in time or are farther removed from the place of impact but are reasonably foreseeable. Impacts are defined as:

- negligible, the impact is localized and not measurable or at the lowest level of detection;
- minor, the impact is localized and slight but detectable;
- moderate, the impact is readily apparent and appreciable; or
- major, the impact is severely adverse or highly noticeable and considered to be significant.

Major impacts are considered significant and receive the greatest attention in the decision-making process. The significance of an impact is assessed based on the relationship between context and intensity. Major impacts require application of a mitigation measure to achieve a less-than-significant impact. Moderate impacts may not meet the criteria to be classified as significant, but the degree of change is noticeable and has the potential to become significant if not effectively mitigated. Minor impacts have little to no effect on the environment and are not easily detected; impacts defined as negligible are the lowest level of detection and generally not measurable. Beneficial impacts provide desirable situations or outcomes.

CEQ regulations at 40 CFR § 1508.20 define mitigation in the following five ways, in order of preference:

- 1) Avoiding the impact altogether by not taking a certain action or parts of an action;
- 2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- 3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- 4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
- 5) Compensating for the impact by replacing or providing substitute resources or environments.

Direct and indirect effects and their significance, as well as the means (e.g., BMPs or environmental commitments) for reducing adverse environmental impacts are also discussed for each resource.

### 4.1 AIRSPACE MANAGEMENT AND USE

#### 4.1.1 Evaluation Criteria

Adverse impacts to airspace might include modifications to SUAs or significantly increasing flight operations within airspaces as a result of implementation of the alternative actions. For the purposes of this EA, an impact is considered significant if it modifies airspace location, dimensions, or aircraft operational capacity.

One main benefit of the Proposed Action is the Playas MOA/ATCAA would be charted, allowing the public and airspace users to see it on the chart so they can comply with procedures to ensure safety. The Playas TMOA is published by NOTAM only, and only those users are informed of the activity.

#### 4.1.2 Alternative 1

Under Alternative 1, general aviation and other aircraft operating under IFRs would be required to remain clear of the proposed Playas MOA/ATCAA while active. While some of the activations would be for less than a whole day, a conservative analysis considers a 24-hour period. This section addresses potential impacts to airspace management and operations in each of these areas.

##### 4.1.2.1 Existing Special Use Airspace

Airspace management in the Tombstone MOAs would not be adversely impacted by the activation of the proposed Playas MOA/ATCAA, with the possible exception of the management of traffic on the V-66 ATS route (see **Section 4.1.2.3** below). When the proposed Playas MOA/ATCAA is activated, the using agency (USMC or Air Force) would normally be using the Tombstone MOAs concurrently.

Management of the R-5115 Restricted Area would not be affected by activation of proposed Playas MOA/ATCAA. Use of R-5115 is not dependent on or related to the proposed Playas MOA/ATCAA users.

##### 4.1.2.2 Military Training Routes

Management of the VR-263 MTR would not be adversely impacted by the establishment of the Playas MOA/ATCAA. The scheduling authority (162FW) would establish procedures to ensure that other military units could not schedule the VR-263 MTR, except in conjunction with exercises in the proposed Playas MOA/ATCAA during the times that the Playas MOA/ATCAA would be activated. Normal operations during the exercises in the proposed Playas MOA/ATCAA may involve use of the VR-263 MTR as part of the exercise itself, in which case the military aircraft would assume authority for separation of aircraft using normal procedures.

##### 4.1.2.3 Air Traffic Service Routes

ATS routes are discussed separately for the proposed Playas MOA and Playas ATCAA.

#### Playas Military Operations Area

The low altitude en-route ATS routes (V and T routes) that would be affected by the Playas MOA activation are shown in **Table 4-1**.

**Table 4-1.  
Low Altitude ATS Routes Intersecting the Proposed Playas MOA**

ATS Route	Affected Route Segment (Fix or NAVAID)		Normal Distance (nm)	New Distance Avoiding Playas (nm)	Change (nm)
	West	East			
V-198	SSO	CUS	90	92	2
V-16	SSO	CUS	92	92	0
V-66	DUG	DMN	110	TBD	TBD
V-66	DUG	CUS	100	TBD	TBD
T-306	NOCHI	CUS	112	117	5

Notes:

ATS = Air Traffic Service; CUS = Columbus; DMN = Deming; DUG = Douglas; NAVAID = navigational aids; nm = nautical mile;  
NOCHI = Airspace fix along the T-306 Route; SSO = San Simon; TBD = to be determined

The V-66, heading northeast out of Douglas, Arizona, travels through a “tunnel” in the Tombstone MOAs. A procedure may be established to allow IFR traffic to re-route during times of Playas MOA activation. No

procedures have been identified and have not been required in the past; if a procedure is required, it would be resolved in a MOA with the FAA. This procedure could include time deconfliction, short-term suspension of military training in the Playas MOA, or routing to the west. Under Alternative 1, this could happen on any of the days that the MOA is activated (up to 34 days per year). Due to the size of the proposed Playas MOA, impacts from proposed changes in distance on these routes (i.e., two to five nm) would be small. The procedure for this has not been established yet. This is something that will be established by the Albuquerque Air Route Traffic Control Center after there is a decision on this environmental assessment. The impact of this procedure is not known at this time.

**Playas Air Traffic Control-Assigned Airspaces**

The high altitude en-route ATS routes (J and Q routes) that would be affected by the proposed Playas ATCAA activation are shown in **Table 4-2**.

**Table 4-2.  
High Altitude ATS Routes Intersecting the Proposed Playas ATCAA**

ATS Route	Affected Route Segment (Fix or NAVAID)		Normal Distance (nm)	New Distance Avoiding Playas (nm)	Change (nm)
	West	East			
Q-2	ITUCO fix	EWM	181	181	0
Q-4	SKTTR fix	ELP	184	184	1
J-4	SSO	EWM	154	154	0
J-2	TUS	ELP	237	240	3
J-50	SSO	ELP	155	155	0

Note:  
ATS = Air Traffic Service; ELP = El Paso; EWM = Newman; ITUCO = airspace fix; NAVAID – navigational aids; nm = nautical mile; SKTTR = airspace fix; SSO = San Simon; TUS = Tucson-Columbus

The changes shown in **Table 4-2** would apply to IFR traffic operating between the altitudes of FL 180 and FL 230 during times that the Playas ATCAA is activated (up to 34 days per year). At all times, the aircraft operating above these altitudes would be unaffected, even when the Playas ATCAA is activated. Therefore, there would be negligible impacts from activation of the Playas ATCAA. Aircraft could fly over the Playas MOA at FL240 or above, or go to the north of it, with the added distance of three (3) miles or less from the changes to the routes over segments ranging from 155 to 240 miles.

**4.1.2.4 Airports**

When the Playas MOA is activated, the Playas airstrip would be contained within it. Since the airstrip is a part of the Playas Training Complex, it would be part of the facility being used for the exercise in the proposed Playas MOA/ATCAA, and its containment in the activated MOA would not affect civil aircraft or other airspace users in the ROI.

Aircraft operating out of Thurmond (private) during periods of the proposed Playas MOA/ATCAA activation may be affected. Those seeking an IFR flight plan activation would need to stay clear of the proposed Playas MOA/ATCAA in order to commence operation under IFR. Those operating VFR would not be required to avoid the MOA/ATCAA, but with the charting of the Playas MOA/ATCAA under the Proposed Action, the pilots operating from here would be aware of the status of the airspace, which would be active 34 days per year.

Similarly, aircraft operating from Luna Landing (private) would be routed around the proposed Playas MOA/ATCAA if operating under IFR, with similar considerations.

The Lordsburg Municipal Airport and Deming Municipal Airport would have the same considerations. VFR traffic would not be restricted from use of the proposed Playas MOA/ATCAA airspace, while IFR traffic would be required to avoid it. Consideration of the use of the IFR routes in the vicinity are discussed above in **Section 4.1.2.3**.

### 4.1.3 Alternative 2

All of the impacts described in **Section 4.1.2** would be the same for Alternative 2, except that the proposed Playas MOA/ATCAA would be activated for 49 days per year instead of 34. The difference of 15 days per year would not be considered a significant increase in terms of airspace resources.

### 4.1.4 No Action Alternative

As outlined in **Section 2.5.3**, the No Action Alternative would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above PTRC. Ground-based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

If Red Flag-Rescue training continued at the Playas TMOA/ATCAA, temporary airspace would continue to be used over a four (4)-year period for training activities as previously discussed in **Section 3.1.2**. The Playas TMOA/ATCAA could continue to be published by NOTAM only. If the TMOA is not available, no impacts would occur.

## 4.2 NOISE

### 4.2.1 Evaluation Criteria

A noise impact analysis typically evaluates potential changes to existing noise environments that would result from implementation of the Proposed Action. As described in **Chapter 2**, the action alternatives consist of a varying number of exercises per year, executed by the Air Force, USMC, and supporting/allied services. The three types of exercises contemplated are the Air Force Red Flag-Rescue, the USMC TRAP/CERTEX event, and the Air Force EW training exercise.

### 4.2.2 Noise Modeling Process

The DoD prescribes use of the NOISEMAP suite of computer programs containing the core computational programs called “NMAP,” version 7.3, and “MRNMap,” version 3.0 for environmental analysis of aircraft noise. For this EA, the NOISEMAP suite of programs refers to Base Operations as the input module and MRN<sub>Map</sub> as the noise model used to predict noise exposure in the proposed SUA. **Appendix B** provides more detail on the noise modeling process. As indicated in **Table 4-3**, the grid spacing used for calculating noise exposure for each model was 1,000 feet.

**Table 4-3.  
Noise Modeling Parameters**

Software	Analysis	Version
MR_NMAP	Airspace Noise	3.0
Parameter	Description	
Receiver Grid Spacing	1,000 ft in x and y	
Metrics	L <sub>dnmr</sub> DNL	
Basis	Busy Month (L <sub>dnmr</sub> ) AAD Operations (DNL)	
Modeled Weather (Monthly Averages 2019; October selected)		
Temperature	68.9 °F	
Relative Humidity	48%	
Barometric Pressure	24.72 in Hg	

Source: Cardno, 2020b

Note:

AAD = Average Annual Day; DNL = Day-Night Average Sound Level; ft = feet; in Hg = inches Mercury; L<sub>dnmr</sub> = Onset-Rate Adjusted Monthly Day-Night Average Sound Level; °F = degrees Fahrenheit

### 4.2.2.1 Air Force Red Flag-Rescue

The Air Force Red Flag-Rescue exercise consists of 14 days of training per exercise with the aircraft types listed in **Table 4-4**. Note that some of the aircraft mix would vary from day to day. For instance, while the A-10 would participate in each training day, other fighters may be of varying types. A period of training lasting two (2) hours would have a total of four (4) other fighters on station for the duration. The last column in **Table 4-4** shows the aircraft type(s) used in the model. In general, a mix was chosen that defaults to the noisier aircraft to ensure impacts are not under estimated.

**Table 4-4.**  
**Proposed Red Flag-Rescue – Daily Sorties in the Proposed Playas MOA/ATCAA**

Aircraft Type	Sorties in Playas per Day	Duration (minutes) in Proposed Playas MOA/ATCAA	Aircraft Type in Noise Model
A-10	8	120	A-10
Other fighters: AV-8, F-15,F-15E, F-16, F-18, F-22, F-35, foreign fighters	4	120	Equal mix: F-22, F-18E, and F-35
Light Turboprops: C-23, SC-7, C-2, MC-12, U-28	2	120	C-12
Turboprops (heavy): MC-130, AC-130, HC-130	2	120	C-130J
Heavy helicopters: CH/MH-47, CH-53, C/MV-22	2	120	Equal mix: CH-47, and C-130J (simulating V-22 in airplane mode)
Light helicopters: M/HH-60, UH-1, MH-6, AH-64, AH-1, EC-725, UH-72, foreign helicopters	2	120	Equal mix: AH-64 and H-60

Note:

ATCAA = Air Traffic Control-Assigned Airspace; MOA = Military Operations Area

### 4.2.2.2 US Marine Corps Tactical Recovery of Aircraft and Personnel

The USMC TRAP/CERTEX is a one-day exercise that includes the aircraft types listed in **Table 4-5**. The last column in **Table 4-5** shows the aircraft type(s) used in the model. MRNMap does not have the MV-22 available, so the surrogate used was a combination of KC-130 and CH-53, depending on the mode of flight for the MV-22. Similarly, substitutions were made for the AH-1 and UH-1 to use the latest version available in the model. For fighter aircraft, the combination of L-class ship-based aircraft (F-35B and legacy AV-8B) and CVN-class ship-based aircraft (F-35C and legacy FA-18C), plus FA-18D, are all modeled using the F-35B to ensure impacts are not underestimated.

**Table 4-5** presents the sorties and durations that would occur in the proposed Playas MOA/ATCAA. These exercises may also use current airspace, either adjacent or otherwise, that is already approved for use and thus would not contribute to an increase in use for those existing blocks of airspace.

**Table 4-5.  
Proposed TRAP/CERTEX – Daily Sorties in the Proposed Playas MOA/ATCAA**

Aircraft Type	Sorties in Playas per Day	Duration (minutes) in Proposed Playas MOA/ATCAA	Aircraft Type in Noise Model
MV-22B	2	120	CH-53 for Conversion mode, KC-130J for Airplane mode
CH-53	2	120	CH-53
KC-130J	1	120	C-130J
AH-1Z	2	120	AH-1G
UH-1Y	2	120	UH-1N
AV-8B / F-35B	2	120	F-35B
FA-18CD / F-35C	2	120	F-35B
A-10	2	120	A-10

Note:

ATCAA = Air Traffic Control-Assigned Airspace; CERTEX = Certification Exercise; MOA = Military Operations Area; TRAP = Tactical Recovery of Aircraft and Personnel

#### 4.2.2.3 Air Force Electronic Warfare Exercise

The EW training exercise consists of three (3) days of training per exercise with the aircraft types listed in **Table 4-6**. Note that some of the aircraft mix would vary from day to day. For instance, while the A-10 would participate in each training day, other fighters may be of varying types. A period of training lasting two (2) hours would have a total of four (4) other fighters on station for the duration. The last column in **Table 4-6** shows the aircraft type(s) used in the model. In general, if there is doubt about the type of aircraft, a mix was chosen that defaults to the noisier aircraft to ensure impacts are not under-estimated. These exercises may also use current airspace, either adjacent or otherwise, that is already approved for use and thus would not contribute to an increase in use for those existing blocks of airspace.

**Table 4-6.  
Proposed EW Training Exercise – Daily Sorties in the Proposed Playas MOA/ATCAA**

Aircraft Type	Sorties in Playas per Day	Duration (minutes) in Proposed Playas MOA/ATCAA	Aircraft Type in Noise Model
A-10	8	120	A-10
Other fighters: AV-8, F-15, F-15E, F-16, F-18, F-22, F-35, foreign fighters	4	120	Equal mix: F-22, F-18E, and F-35
Light turboprops: C-23, SC-7, C-2, MC-12, U-28	2	120	C-12
Turboprops (heavy): MC-130, AC-130, HC-130	2	120	C-130J
Heavy helicopters: CH/MH-47, CH-53, C/MV-22	2	120	Equal mix: CH-47D, and C-130J (simulating V-22 in airplane mode)
Light helicopters: M/HH-60, UH-1, MH-6, AH-64, AH-1, EC-725, UH-72, foreign helicopters	2	120	Equal mix: AH-64 and H-60

Note:

ATCAA = Air Traffic Control-Assigned Airspace; EW = electronic warfare; MOA = Military Operations Area

### 4.2.3 Alternative 1

Under Alternative 1, the proposed Playas MOA/ATCAA would be used for two (2) annual Air Force Red Flag-Rescue exercises (each consisting of 14 days of Playas MOA/ATCC activation over a three (3)-week period) and six (6) USMC TRAP/CERTEX events (each consisting of 12 hours in one day of Playas MOA/ATCAA activation). These values are shown in **Table 4-7**.

**Table 4-7.**  
**Alternative 1 – Annual Potential Activities in the Proposed Playas MOA/ATCAA**

Activity	Events per year	Duration	Days per Event
Red Flag-Rescue	2	3 weeks	14
TRAP/CERTEX	6	12 hours	1

Note:

ATCAA = Air Traffic Control-Assigned Airspace; CERTEX = Certification Exercise; MOA = Military Operations Area;  
TRAP = Tactical Recovery of Aircraft and Personnel

The  $L_{dnmr}$  metric (see **Section 3.2** of this EA) is the DoD standard for evaluating the operational noise footprint beneath training airspace.  $L_{dnmr}$  adjusts for the higher onset rate of sounds from low-flying aircraft. It is ideal for exercise-related activity since it uses a “busy month” basis, which gives an account of what an observer would be exposed to during the exercise. This basis ensures that months of zero-to-little activity do not reduce the modeled sound levels from the proposed action. The analysis in this EA assumes that the busy month would include both an Air Force Red Flag-Rescue exercise and a USMC TRAP/CERTEX in the same month. This would mean 15 total days of MOA activation during the busy month. Modeling results show that under Alternative 1, the sound level in the proposed Playas MOA/ATCAA would be 52 dB  $L_{dnmr}$  (see **Table 4-8**). Therefore, The impacts of operational noise under Alternative 1 would be less than significant.

The DNL metric (see **Section 3.2** of this EA) is the FAA standard for evaluating the impact of proposed activities on an annual basis. The DNL metric is the national standard that provides guidelines and recommendations for land use within noise zones that may conflict with recreational, residential, and workplace activities. The analysis in this EA includes all annual activities from conducting two (2) annual Air Force Red Flag-Rescue exercises (14 days each) and six (6) annual USMC TRAP/CERTEX events (one day each), for a total of 34 days of proposed MOA/ATCAA activation over the course of the year for this alternative. The DNL metric represents the average annual day of the noise produced, equally distributed throughout the year. Modeling results show that under Alternative 1, the sound level in the proposed Playas MOA/ATCAA would be 44 dB DNL (see **Table 4-8**). The impacts of operational noise under Alternative 1 would be less than significant.

**Table 4-8.**  
**Comparison of Expected Noise Values Under Various Alternatives (dB)**

Metric	Baseline	Alternative 1	Alternative 2
$L_{dnmr}$ (Air Force)	49	52	52
DNL (FAA)	40	44	45

Notes:

dB = decibel; DNL = Day-Night Average Sound Level (yearly);  $L_{dnmr}$  = Onset Rate-Adjusted Monthly Day-Night Average Sound Level

### 4.2.4 Alternative 2

Under Alternative 2, the Playas MOA/ATCAA would be used for two (2) annual Air Force Red Flag-Rescue exercises (each consisting of 14 days of MOA activation over a three (3)-week period), six (6) USMC TRAP/CERTEX events (each involving activation of the proposed Playas MOA for 12 hours in one day), and five (5) Air Force EW training exercises (each requiring three (3) days of Playas MOA/ATCAA activation). These values are shown in **Table 4-9**.

**Table 4-9.**  
**Alternative 2 - Annual Potential Activities in the Proposed Playas MOA/ATCAA**

Activity	Events per Year	Duration	Days per Event
Red Flag-Rescue	2	3 weeks	14
TRAP/CERTEX	6	1 day	1
EW Training Exercise	5	3 days	3

ATCAA = Air Traffic Control-Assigned Airspace; CERTEX = Certification Exercise; EW = electronic warfare, MOA = Military Operations Area; TRAP = Tactical Recovery of Aircraft and Personnel

The Ldnmr metric (see Section 3.2 of this EA) uses the “busy month” basis. The analysis in this EA assumes that the busy month would include an Air Force Red Flag-Rescue exercise, a USMC TRAP/CERTEX event, and one EW training exercise, all in the same month. This would mean 18 total days of MOA/ATCAA activation during the busy month. Modeling results show that under Alternative 2, the sound level in the proposed Playas MOA/ATCAA would be 52 dB Ldnmr (see Table 4-8). Adverse noise effects would not occur; therefore, there would be no significant impacts from Alternative 2. The DNL metric (see Section 3.2 of this EA) uses the “average annual day” basis. This analysis includes all annual activities from conducting two (2) annual Air Force Red Flag-Rescue exercises (14 days each) and six (6) annual USMC TRAP/CERTEX events (one day each), and five (5) EW training exercises (three (3) days each) for a total of 49 days of proposed MOA/ATCAA activation over the course of the year for this alternative. The DNL metric represents the average annual day of the noise produced, equally distributed throughout the year. Modeling results show that under Alternative 2, the sound level in the proposed Playas MOA/ATCAA would be 45 dB DNL (see Table 4-8). The impacts of operational noise under Alternative 2 would be less than significant.

#### 4.2.5 No Action Alternative

As outlined in **Section 2.5.3**, the No Action Alternative for the proposed project would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above PTRC. Ground based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

If Red Flag-Rescue training continued at the Playas TMOA/ATCAA, the sound level associated with the current existing conditions for the TMOA would be as described in **Table 3-5**, an L<sub>dnmr</sub> of 49 and DNL (annual) of 40. If the TMOA is not available, there would be no operational noise impacts, and the ambient noise level would be expected to be characteristic of rural areas, that is, less than 49 dB for both L<sub>dnmr</sub> and DNL.

### 4.3 SAFETY

#### 4.3.1 Evaluation Criteria

Impacts from implementation of the alternative actions are assessed according to the potential to increase or decrease in safety risks to personnel, the public, property, or the environment. Adverse impacts to safety might include implementing contractor flight procedures that result in greater safety risk or constructing new buildings within established Q-D safety arcs. Q-D safety arcs are defined clearance distances around munitions storage areas, and other locations subject to explosive mishaps identified to protect personnel, the public, and assets against exposure to blasts, thermal hazards, and shrapnel from explosives. For the purposes of this EA, an impact is considered significant if Air Force Office of Safety and Health or OSHA criteria are exceeded or if established or proposed safety measures are not properly implemented, resulting in unacceptable safety risk to personnel.

This section considers safety concerns associated with ground, explosive, and flight activities. Ground safety considers issues associated with ground operations and maintenance activities that support operations, including arresting gear capability, jet blast/maintenance testing, and safety danger zones.

Ground safety also considers the safety of personnel and facilities on the ground that may be placed at risk from flight operations in the vicinity of the airfield and in the airspace.

Numerous federal, civil, and military laws and regulations govern operational safety for Air Force and USMC units. Individually and collectively, these laws and regulations prescribe measures, processes, and procedures to ensure safe operations and to protect the public, military, and property. This EA evaluates elements of the Proposed Action with a potential to affect safety to determine the degree to which such elements would increase or decrease safety risks.

## 4.3.2 Alternatives 1 and 2

### 4.3.2.1 Ground Safety

Under Alternatives 1 and 2, the ground operations and maintenance procedures conducted by Air Force and USMC personnel would not change from current conditions. All activities would continue to be conducted in accordance with applicable regulations, TOs, and Occupational Safety and Health standards. There would be no aspects of the Proposed Action that would be expected to create new or unique ground-safety issues or create additional risk. Any ground-safety emergency that involves a life-flight transporting time-critical patients or donated organs receives priority status through any airspace unit when the pilot provides a call sign to the air traffic controller. FAA Order JO 7110.65X, *Air Traffic Control*, states that operational priority is given to civilian air ambulance flights when verbally requested. Priority to life-flight status would not change with implementation of Alternative 1 or 2. Military training in the affected airspace would be stopped during such an event. Operations within the proposed Playas MOA/ATCAA would not be expected to create any ground-safety issues.

### Crash Response

Davis-Monthan AFB has the capability to provide crash response; this capability would remain in place under Alternatives 1 and 2. In the unlikely event of a crash within the proposed Playas MOA/ATCAA, local first responders would likely be first on the scene given the distance from Davis-Monthan AFB. Davis-Monthan AFB crash response would continue to follow standard procedures and plans as described in **Section 3.3** of this EA. There would be no changes to crash-response procedures from implementation of Alternatives 1 or 2.

It is impossible to predict the precise location of an aircraft accident. Major considerations in any accident are loss of life and damage to property. The aircrew's ability to exit from a malfunctioning aircraft is dependent on the type of malfunction encountered. The probability of an aircraft crashing into a populated area is extremely low, but it cannot be totally discounted. Several factors are relevant: the location of the proposed Playas MOA/ATCAA and the immediate surrounding areas have relatively low population densities; pilots of aircraft are instructed to avoid direct overflight of population centers at very low altitudes; and the limited amount of time the aircraft is over any specific geographic area limits the probability that impact of a disabled aircraft in a populated area would occur.

Should a mishap occur, response and recovery operations could require such activities as the use of motorized vehicles and excavation to contain contamination. When responding to a crash site, the Air Force would consult with the appropriate land use manager to minimize direct damage and coordinate actions. Due to the myriad factors in such an occurrence, detailed steps cannot be foreseen. Each crash response would be considered on a case-by-case basis to minimize the intrusiveness to the maximum extent practicable, consistent with national security considerations and the need to protect life and property from further risk. Secondary effects of an aircraft crash include the potential for fire (discussed below).

### Fire Risk and Management

The extent of secondary effects from a crash or mishap is situationally dependent and is therefore difficult to quantify. The regional terrain that would be overflowed under Alternatives 1 and 2 is largely barren, sparsely vegetated land. Land within the proposed Playas MOA/ATCAA would continue to be managed for fire risk by local owners and agencies that manage that land. Military operations currently occur within and

adjacent to this airspace and have not presented an increased fire risk nor has the Air Force/USMC aircraft activity been the cause of a fire. Alternatives 1 and 2 would be similar in nature to the existing operations in nearby SUAs and would not constitute a novel or increased fire risk for the land under the proposed Playas MOA/ATCAA under Alternatives 1 or 2.

#### **4.3.2.2 Flight Safety**

As stated in **Section 3.3** of this EA, the Class A mishap rate for the variety of aircraft that would use the proposed Playas MOA/ATCAA range from less than 1 to less than 5 Class “A” mishaps per 100,000 flying hours over the lifetime of the programs. The type of training proposed would be similar to what is performed currently, and there would be no aspect of either Alternative 1 or 2 that would increase the accident rate.

A Class “A” mishap can also result in metal debris on the ground. The extent of the debris field depends upon the aircraft accident. Both for reconstructing the cause of the accident and for restoring the accident site as much as possible, the Air Force would make every effort to locate, document, and then clean up debris from any accident.

#### **Bird/Wildlife-Aircraft Strike Hazard**

Under the Alternatives 1 and 2, Air Force and USMC aircrews would operate in the same general airspace environments of New Mexico as they do currently. As such, the overall potential for bird-aircraft strikes would not be anticipated to be statistically different than under current conditions. Aircrews operating in the proposed Playas MOA/ATCAA would be required to follow applicable procedures outlined in their respective Wings’ BASH Plans. Adherence to these programs have minimized bird-aircraft strikes. When safety procedures identify an increased risk, limits are placed on low-altitude flights and some types of training (e.g., multiple approaches, closed pattern work). Establishing the proposed Playas MOA/ATCAA would not be expected to significantly increase the overall amount of flying, and would therefore not change the incidence of BASH events.

#### **4.3.3 No Action Alternative**

As outlined in **Section 2.5.3**, the No Action Alternative would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above PTRC. Ground-based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

If Red Flag-Rescue training continued at the Playas TMOA/ATCAA, impacts would include the potential for direct effects from airplane crashes and vibration effects from subsonic flights. If the TMOA is not available, no impacts to safety would occur.

### **4.4 ELECTROMAGNETIC SPECTRUM**

#### **4.4.1 Evaluation Criteria**

RF energy is non-ionizing energy and is absorbed macroscopically by an animal or the human body in the form of heat and is defined as an increase in the mean kinetic energy of the molecules. The result is a temperature increase. At relatively low RF energy intensities, the heat induced can usually be accommodated by the thermoregulatory capabilities of the species exposed. Thus, any effects produced would generally be reversible. At high intensities, the thermoregulatory capabilities of any given species may be exceeded (i.e., heat gain is more rapid than natural heat loss), which could lead to thermal distress or even irreversible thermal damage to biologic tissue.

The effects of RF energy on humans depend on the frequency of the energy field, the polarization of the field, the size and shape of the individual, and the individual’s ability to dissipate the absorbed energy by a normal biological response. DoD Instruction 6055.1, *DoD Safety and Occupational Health (SOH) Program*, has set permissible exposure limits (PELs) for personnel (DoD, 2020). These PELs represent conditions

under which it is believed that humans may be repeatedly exposed without adverse effects regardless of age, sex, or childbearing status. For example, for personnel working in a designated controlled environment where a threat emitter is operating, the maximum allowable PEL-to-RF energy is 10 milliwatts per square centimeter over any continuous six (6)-minute period. For persons in an uncontrolled environment (i.e., the public), the PEL is 5 milliwatts per square centimeter over any continuous six (6)-minute period. Repetitive exposures to these levels that are less than six (6) minutes each would not be expected to be harmful. Most studies have shown that, in general, people can be exposed to up to 10 times the above-stated PEL without any deleterious health effects (Air Force, 1989).

Animal studies on immune system response to RF absorption (using power densities well above the PEL) have yielded mixed results, varying from slight decreases in immune response to increased longevity. The possibility that other effects result from RF energy absorption, including malignancy and developmental and genetic effects, has been investigated in animal studies. Some such effects have been found at high-power densities that also produce thermal effects, but they have not been shown to occur at exposure levels below the PELs (Air Force, 1989).

#### **4.4.2 Alternative 1**

Alternative 1 does not include the dedicated “EW exercise,” so the only EM-related activities under this alternative would be the myriad uses of the EM spectrum that regularly and routinely occur in existing adjacent airspace and in the Playas MOA, all of which are currently permitted.. Use of the EM spectrum is routine under nearly all military training, and those activities would not be restricted.

#### **4.4.3 Alternative 2**

Unlike Alternative 1, Alternative 2 would include the dedicated “EW exercise” training, which incorporates additional activities utilizing the electronic spectrum. EW training currently occurs in SUAs adjacent to proposed Playas MOA/ATCAA. Regionally, the amount of EW training would not increase. There would be no new types of activities (types of training and types of aircraft) in the region specific to the proposed Playas MOA/ATCAA.

Acceptable energy levels and safe separation distances vary depending on the frequency and transmitted power of the RF emitter. RF emitters used on aircraft would pose no hazard to the public due to the aircraft's altitude, the energy levels used by the equipment, and the speed of the aircraft. Ground based threat emitters, are operated under strict safety control measures that are determined for each system. These measures could include installing warning signs, erecting rope or chain barriers, and keeping the equipment and the surrounding area under constant observation while it is operating. Emitters would only operate during scheduled training and on frequencies specifically selected to avoid interference with any other private or commercial RF transmission sources. In all cases, mobile units would be located in remote areas and based on studies that have been performed to determine the required separation distances between people and the RF emitters, and then emit skyward. They are not pointed at the ground or along roadways. Adherence to these established safety standards ensure no health or safety impacts would occur (Air Force 1998).

In accordance with current rules and regulations exercise participants would not be engaging in any practices or procedures that are different from those already authorized and safely practiced in adjacent airspace. Under either proposed action alternative, aircraft flying in the proposed Playas MOA/ATCAA would continue to be bound by the rules and regulations established for safe military training. Establishment of the Playas MOA as a permanent, charted MOA would not require changes the EM spectrum used for air traffic control or military training. No significant impact would occur to humans and animals. No EM energy impacts would occur to other resources.

#### 4.4.4 No Action Alternative

As outlined in **Section 2.5.3**, the No Action Alternative would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above PTRC. Ground-based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

Under the No Action Alternative, after the availability of the Playas TMOA expires, the local area would continue to host military aircraft training in the airspace around the Playas area (in other SUA), with approximately the same aircraft types and same training types, to include EW training. The use of the EM spectrum would continue regionally, and the impacts would continue to be negligible.

### 4.5 CLIMATE/AIR QUALITY

#### 4.5.1 Evaluation Criteria

Potential impacts to air quality are evaluated with respect to the extent, context, and intensity of the impact in relation to relevant regulations, guidelines, and scientific documentation. The CEQ defines significance in terms of context and intensity in 40 CFR § 1508.27. This requires that the significance of the action must be analyzed with respect to the setting of the Proposed Action and based relative to the severity of the impact. The CEQ NEPA regulations (40 CFR § 1508.27[b]) provide 10 key factors to consider in determining an impact's intensity.

The environmental impact methodology for both operational noise and air quality impacts presented in this EA are derived by utilizing the same operational data developed as directed by AF Manual 32-7002, *Environmental Compliance and Pollution Prevention*, dated February 4, 2020. The air analysis for aircraft operations factors in the engine types used in the aircraft, the time spent at or below 3,000 feet AGL at specific engine power settings, the emission factors associated with those flight modes, and other relevant details. These data are then input into ACAM, which is used for the analysis of fixed-wing aircraft. ACAM (version 5.0.16b) provides estimated air emissions from proposed federal actions for fixed-wing aircraft for each specific criteria and precursor pollutant, as defined in the NAAQS. The Air Force Air Emissions Guide for Air Force Mobile Sources (AFCEC, 2018) was used for the AH-1A/UH-1Y aircraft, and data published by the US Navy Aircraft Environmental Support Office (AESO, 2015) was used for the CH-53K aircraft. These data, along with information on the affected environment and the Proposed Action were used to produce a consistent determination of environmental consequences. The air quality impacts analysis at the locations evaluated in this EA has factored in each mode of flight operations that occur at or below the mixing layer, which is defined as the default value of 3,000 feet AGL (USEPA, 1972).

Potential impacts to air quality are evaluated with respect to the extent, context, and intensity of the impact in relation to relevant regulations, guidelines, and scientific documentation. The CEQ defines significance in terms of context and intensity in 40 CFR § 1508.27. This requires that the significance of an action be analyzed with respect to the setting of the action and be based relative to the severity of the impact. For attainment area criteria pollutants, the project air quality analysis used the USEPA's Prevention of Significant Deterioration (PSD) permitting threshold of 250 tons per year as an initial indicator of the local significance of potential impacts to air quality. It is important to note that these indicators only provide a clue to the potential impacts to air quality. In the context of criteria pollutants for which the ROI is in attainment, the analysis compared the annual net increase in emissions estimated for Alternatives 1 and 2 to the 250 tons per year PSD permitting threshold. The PSD permitting threshold represents the level of potential new emissions below which a new or existing minor non-listed stationary source may acceptably emit without triggering the requirement to obtain a permit. Thus, if the intensity of any net emissions increase for a project alternative is below 250 tons per year in the context of an attainment criteria pollutant, the indication is the air quality impacts would not be significant for that pollutant.

The air quality analysis assumes that the proposed Playas MOA/ATCAA will be fully operational by January 2022, allowing for steady-state operations for that calendar year.

### 4.5.2 Alternative 1

Under Alternative 1, the proposed Playas MOA/ATCAA would be established over the PTRC with the floor at 300 feet AGL. Training activities occurring in the airspace would include the Air Force Red Flag-Rescue and TRAP/CERTEX exercises. In order to accommodate these actions, the proposed Playas MOA/ATCAA would be activated for 34 days a year. Aircraft engaged in flight below 3,000 feet AGL during the Red Flag-Rescue training exercise would include A-10s; light, heavy, and attack helicopters represented by the AH-1Z and UH-1Y helicopters; tiltrotor aircraft represented by the MV-22B; and smaller turboprop aircraft represented by the C-2. For the TRAP/CERTEX event, these aircraft were used as representative of the aircraft that would train in the proposed Playas MOA/ATCAA.

**Table 4-10** provides estimated air emissions of criteria pollutants and carbon dioxide equivalent and compares them to the current activities that are occurring in the Playas TMOA/ATCAA, as described in the *United States Air Force Playas Military Operating Area and Red Flag-Rescue Supplemental Environmental Assessment*, May 2019. Alternative 1 estimates represent emissions from the proposed low-altitude aircraft operations (see **Section 2.5.1**). Estimated emissions are evaluated against the initial indicator of significance for the criteria pollutants. Helicopter emissions were calculated separately because ACAM does not include rotary wing aircraft.

**Table 4-10.  
Emission Estimates for Alternative 1 Aircraft Operations**

Activity	Total Annual Emissions in Tons						
	VOC	CO	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2e</sub>
<b>Annual</b>							
Current training operations	0.15	1.90	3.72	0.30	1.01	0.75	812
Proposed Operations under Alternative 1	0.07	2.38	6.77	0.62	1.19	0.79	1,859
<b>Total Proposed Net Change in Emissions</b>	<b>-0.07</b>	<b>0.48</b>	<b>3.05</b>	<b>0.33</b>	<b>0.18</b>	<b>0.03</b>	<b>1,047</b>
Initial Indicator of Significance	250	250	250	250	250	250	N/A
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>N/A</b>

Note:

CO = Carbon monoxide; CO<sub>2e</sub> = carbon dioxide equivalent; N/A = not applicable; NO<sub>x</sub> = nitrogen oxides; PM<sub>2.5</sub> = particulate matter with particulates less than or equal to 2.5 microns; PM<sub>10</sub> = particulate matter less than or equal to 10 microns; SO<sub>2</sub> = sulfur dioxide; VOC = volatile organic compound

Emissions would increase with Alternative 1 activity, but the proposed net changes would be less than the initial indicator of significance. Therefore, the increases in these pollutant emissions would not be significant.

### 4.5.3 Alternative 2

Alternative 2 is identical to Alternative 1 with the addition of EW training. This would increase the proposed Playas MOA/ATCAA use by 15 days per year, for an annual total of 49 days. Aircraft engaged in this training at low altitude would include the A-10s; light, heavy, and attack helicopters; tiltrotor aircraft; and smaller turboprop aircraft. **Table 4-11** compares estimated air emissions of criteria pollutants and carbon dioxide equivalent for Alternative 2. The estimates represent emissions from the proposed low-altitude aircraft operations (see **Section 2.5.2**). As with Alternative 1, helicopter emissions were calculated separately because ACAM does not include rotary wing aircraft.

Emissions would increase under Alternative 2 activity, but the proposed net changes would be less than the initial indicator of significance. Therefore, the increases in these pollutant emissions would not be significant.

**Table 4-11.  
Emission Estimates for Alternative 2 Aircraft Operations**

Activity	Total Annual Emissions in Tons						
	VOC	CO	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2e</sub>
<b>Annual</b>							
Current training operations	0.15	1.90	3.72	0.30	1.01	0.75	812
Proposed Operations under Alternative 2	0.10	3.43	9.47	0.90	1.78	1.17	2,677
<b>Total Proposed Net Change in Emissions</b>	<b>-0.05</b>	<b>1.53</b>	<b>5.75</b>	<b>0.60</b>	<b>0.78</b>	<b>0.41</b>	<b>1,865</b>
Initial Indicator of Significance	250	250	250	250	250	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Note:

CO = Carbon monoxide; CO<sub>2e</sub> = carbon dioxide equivalent; NO<sub>x</sub> = nitrogen oxides; PM<sub>2.5</sub> = particulate matter with particulates less than or equal to 2.5 microns; PM<sub>10</sub> = particulate matter less than or equal to 10 microns; SO<sub>2</sub> = sulfur dioxide; VOC = volatile organic compound

#### 4.5.4 No Action Alternative

As outlined in **Section 2.5.3**, the No Action Alternative for the proposed project would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above PTRC. Ground based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

If training continued at the Playas TMOA/ATCAA for Red Flag-Rescue, the emissions associated with the current existing conditions for the TMOA would likely remain at a similar level for at least the foreseeable future and up to four (4) years. If the TMOA is not available, no impacts to air quality would occur.

#### 4.5.5 Climate Change Considerations

The state of New Mexico has warmed at least one degree Fahrenheit in the last century. Throughout the southwestern United States, heat waves are becoming more common, and snow is melting earlier in spring. The changing climate is decreasing snowpack, which could further limit the supply of water. Soils are likely to be drier, and periods without rain are likely to become longer, making droughts more severe. Higher temperatures and drought increase the severity, frequency, and extent of wildfires in New Mexico, which could harm property, livelihoods, and human health (USEPA, 2016b).

GHG annual emissions for Alternatives 1 and 2 are presented in **Table 4-12**. The GHG emissions calculated for aircraft operations only include activities below the mixing height of 3,000 feet AGL. Unlike criteria pollutants, GHG emissions impacts are not restricted to the mixing height; however, it is not possible to ascertain the flight movements for the numerous training operations that occur annually; therefore, GHGs are only modeled for the airfield and airspace areas where low-altitude flight is below the mixing height.

Implementing Alternative 1 would increase GHG emissions below 3,000 ft AGL by 235 tons per year; implementing Alternative 2 would increase GHG emissions by 1,865 tons per year. Under the No Action Alternative, operations would remain the same as existing conditions for up to four (4) years, but would then cease and no GHG emission would be generated in the Playas TMOA from aircraft training. This would represent a reduction compared to existing conditions.

**Table 4-12.  
Greenhouse Gas Emissions for Action Alternative**

Activity	Total Annual Emissions in Tons (CO <sub>2</sub> e)
Existing Conditions	812
Alternative 1	1,859
Alternative 2	2,677
Net Change Alternative 1	1,047
Net Change Alternative 2	1,865

Note:  
CO<sub>2</sub>e = carbon dioxide equivalent

Climate change presents a global problem caused by increasing concentrations of GHG emissions. While climate change results from the incremental addition of GHG emissions from millions of individual sources, the significance of an individual source alone is impossible to assess on a global scale beyond the overall need for global GHG emission reductions to avoid catastrophic global outcomes. Therefore, the quantitative analysis of carbon dioxide equivalent emissions in this EA is for disclosing the net increase for Alternatives 1 and 2.

## 4.6 CULTURAL RESOURCES

### 4.6.1 Evaluation Criteria

Adverse impacts on cultural resources might include physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate enforceable restrictions or conditions to ensure preservation of the property's historic significance. For the purposes of this EA, an impact is considered major if it alters the integrity of a NRHP-listed resource or potentially impacts Traditional Cultural Properties.

### 4.6.2 Alternatives 1 and 2

Under Alternatives 1 and 2, effects upon cultural resources would include indirect effects due to minor changes in visual and subsonic noise intrusions and direct effects resulting from airplane crashes and vibration effects from subsonic flights. The potential for a direct effect due to an aircraft crash within the APE is extremely low, and the potential for direct impact of a crash on any particular resource is not considered reasonably foreseeable.

There are 25 listed architectural properties and archaeological sites in Hidalgo County and 47 listed architectural properties or archaeological sites in Grant County. However, none of the properties in Grant and Hidalgo counties is within the APE. As stated in **Section 3.6.2**, the Old Hatchet Mine and the American Mill (State Register 721) are located approximately six (6) miles east of Playas. No Traditional Cultural Properties have yet been identified in the ROI through tribal consultations.

Analyses of vibration effects associated with subsonic fixed-wing aircraft have indicated that overflights above 200 feet AGL do not generate significant levels of noise-induced structural vibration. Furthermore, the flights are transient in nature and brief in duration, and direct vibrational impacts to the Old Hatchet Mine and the American Mill are expected to be negligible. Therefore, no impacts would occur to architectural properties and archaeological sites under Alternatives 1 and 2.

Consultation under Section 106 of the NHPA began in October 2020. Letters were sent to potentially affected tribes inviting participation in government-to-government consultation pursuant to Section 106 of the NHPA. Likewise, a letter was sent to the New Mexico SHPO initiating consultation pursuant to Section

106 of the NHPA. Copies of letters sent to the tribes and SHPO, as well as the mailing list, can be found in **Appendix A**.

To date, responses have been received from the New Mexico SHPO and the White Mountain Apache Tribe. The response from the New Mexico SHPO indicated that effects to the Old Hatchet Mine should be included in the EA analysis (see discussion above). Consultation with the New Mexico SHPO will continue with release of the Draft EA for public/agency comment.

The White Mountain Apache Tribe indicated the tribe had reviewed the information provided and determined the project will “Not have an Adverse Effect” on the tribe’s cultural heritage resources and/or traditional cultural properties. Although the White Mountain Apache Tribe indicated that no further consultation is necessary and/or required, a copy of this Draft EA will be provided to the tribe for comment.

### **4.6.3 No Action Alternative**

As outlined in **Section 2.5.3**, the No Action Alternative would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above the PTRC. Ground-based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

If training continued at the Playas TMOA/ATCAA for Red Flag-Rescue and TRAP/CERTEX, impacts would include indirect effects due to minor changes in visual and subsonic noise intrusions and direct effects resulting from airplane crashes and vibration effects from subsonic flights. If the TMOA is not available, no impacts to cultural resources would occur.

## **4.7 HAZARDOUS MATERIALS AND WASTES**

### **4.7.1 Evaluation Criteria**

Impacts on hazardous material management would be considered adverse if the federal action resulted in noncompliance with applicable federal and state regulations, or increased the amounts of hazardous material generated or procured beyond current Davis-Monthan AFB waste management procedures and capacities.

### **4.7.2 Alternatives 1 and 2**

Alternatives 1 and 2 would not result in an increase in hazardous materials or waste in quantities beyond the capacity of current management procedures. Any spills or leaks would be handled in accordance with Davis-Monthan AFB’s Spill Prevention and Control Countermeasures Plan, Pollution Prevention Plan, and Hazardous Waste Management Plan; as well as all federal, state, and local regulations. Therefore, implementation of the Proposed Action would result in a less than significant impact to hazardous materials and hazardous waste management.

### **4.7.3 No Action Alternative**

As outlined in **Section 2.5.3**, the No Action Alternative would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above PTRC. Ground-based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

If Air Force Red Flag-Rescue training continued at the Playas TMOA/ATCAA, impacts would be negligible since no hazardous waste is routinely generated during training activities. If the TMOA is not available, no impacts to hazardous materials and wastes would occur.

## 4.8 BIOLOGICAL RESOURCES

### 4.8.1 Evaluation Criteria

The level of impact on biological resources is based on the following:

- importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource;
- proportion of the resource that would be affected relative to its occurrence in the region;
- sensitivity of the resource to the proposed activities; and
- duration of potential ecological ramifications.

The impacts on biological resources are considered adverse if species or habitats of high concern are negatively affected over relatively large areas. Impacts are also considered adverse if disturbances cause reductions in population size or distribution of a species of high concern.

As a requirement under the ESA, federal agencies must provide documentation that ensures that agency actions do not adversely affect the existence of any threatened or endangered species. The ESA requires that all federal agencies avoid “taking” federally threatened or endangered species (which includes jeopardizing threatened or endangered species habitat). Section 7 of the ESA establishes a consultation process with USFWS that ends with USFWS concurrence or a determination of the risk of jeopardy from a federal agency project.

### 4.8.2 Alternatives 1 and 2

Under Alternatives 1 and 2, activities within the proposed Playas MOA/ATCAA would be entirely aerial; therefore, no vegetation or habitat for species would be disturbed or affected, and potential impacts would consist of noise impacts to sensitive wildlife species. The proposed training would not create a consistent, significant noise source in any one location within the ROI. The predicted average annual DNL throughout the airspace from all aircraft operations would increase from 49 dB to 52 dB.

Bird species protected under the MBTA and the BGEPA have the potential to occur within the ROI. Migrating birds could have a greater potential of encountering aircraft during training operations, especially those that migrate at altitudes above 2,000 ft; however, given the large area and high altitude where training would occur, and that most migratory song birds migrate at altitudes less than 2,000 ft (Kerlinger, 2008), the likelihood for birds to encounter aircraft during training operations is low. Research has also shown that raptors (e.g., peregrine falcons, prairie falcons, golden eagles) showed very little response to low-level, mid-level, and high-level flyovers or sonic booms, resulting in no change in productivity (Ellis et al., 1991). For these reasons, the increase in aircraft movement under Alternatives 1 and 2 would have negligible impacts on avian species. The increase aircraft movement in the training areas would have no significant impacts on terrestrial animals.

#### 4.8.2.1 Threatened and Endangered Species

Since no construction would occur, the potential impact to threatened and endangered species would be disturbance from aircraft noise. No terrestrial animals would be impacted by the Alternatives 1 and 2. The four threatened or endangered bird species that potentially occur beneath the proposed Playas MOA/ATCAA, as listed in **Table 3-12**, would not be expected to be significantly affected by the noise associated with the proposed training. The proposed training would not create a consistent, significant noise source in any one location. Based on the analysis of proposed aircraft operations for both alternatives, the area under the proposed Playas MOA/ATCAA would be subject to up to a 3-decibel (dB) increase to 52 dB for onset rate adjusted day-night average sound level ( $L_{dnmr}$ ). For Alternative 1, a 4-dB increase to 44 dB for day-night average sound level (DNL) would not cause adverse impacts. For Alternative 2, a 5-dB increase to 45 dB for day-night average sound level (DNL) would not cause adverse impacts.

In accordance with Section 7 of the ESA, the Air Force has determine no effect and sent letters to USFWS for concurrence (refer to **Appendix A**). The Air Force will consult with USFWS on the Proposed Action to gain concurrence with the Air Force's effects determinations.

### 4.8.3 No Action Alternative

As outlined in **Section 2.5.3**, the No Action Alternative would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above PTRC. Ground-based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

If Air Force Red Flag-Rescue training continued at the Playas TMOA/ATCAA, impacts would include indirect effects to wildlife and biological resources due to minor changes in visual and subsonic noise intrusions. While indirect effects would occur, a  $L_{dnmr}$  value of 49 dB for both combined Air Force Red Flag-Rescue and TRAP/CETEX activities within the Playas TMOA (**Section 3.2.3**) indicates that impacts to wildlife would be negligible. If the TMOA is not available, no impacts to biological resources would occur.

## 4.9 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

### 4.9.1 Evaluation Criteria

Environmental justice analysis applies to potential disproportionate effects on minority, low-income, and youth populations. Environmental justice issues could occur if an adverse environmental or socioeconomic consequence to the human population fell disproportionately upon minority, low-income, or youth populations. Ethnicity and poverty status were examined and compared to state and national data to determine if these populations could be disproportionately affected by the Proposal Action.

#### 4.9.1.1 Alternatives 1 and 2

No disproportionate impacts to minority or low-income populations would be anticipated under Alternatives 1 and 2. Although Hidalgo County has a higher percentage of the population below poverty than New Mexico or the US, no disproportionate impacts to environmental justice populations would be anticipated to occur. No construction, on-ground training activities, or other potential impacts would occur. Implementation of Alternatives 1 and 2 would not be anticipated to impact any schools, daycare centers, or residential areas where children are likely to be found; therefore, impacts to children would not be anticipated.

#### 4.9.1.2 No Action Alternative

As outlined in **Section 2.5.3**, the No Action Alternative would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above PTRC. Ground-based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

If Air Force Red Flag-Rescue training continued at the Playas TMOA/ATCAA, no disproportionate impacts to minority or low-income populations would be anticipated to occur as a result. No construction, on-ground training activities, or other potential impacts would occur. There would be no impacts to schools, daycare centers, or residential areas where children are likely to be found. If the TMOA is not available, no impacts would occur.

## 4.10 LAND USE

### 4.10.1 Evaluation Criteria

Potential impacts on land use are based on the level of land use sensitivity in areas potentially affected by the Proposed Action as well as compatibility of those actions with existing conditions. In general, a land use impact would be adverse if it met one of the following:

- inconsistency or noncompliance with existing land use plans or policies
- precluded the viability of existing land use
- precluded continued use or occupation of an area
- incompatibility with adjacent land use to the extent that public health or safety is threatened
- conflict with planning criteria established to ensure the safety and protection of human life and property

### 4.10.2 Alternatives 1 and 2

Land use under the proposed Playas MOA/ATCAA would not be negatively impacted by implementation of Alternative 1 or 2 because land use would not change. Based on the analysis of proposed aircraft operations for both alternatives, the area under the proposed Playas MOA/ATCAA would be subject to up to a 3-dB increase to 52 dB for  $L_{dnmr}$  and up to a 5-dB increase to 45 dB for DNL. These proposed operational noise levels would be consistent with existing conditions, and land uses under the proposed MOA/ATCAA would remain compatible. Land use below the affected airspace would experience projected DNL levels well below the 65 DNL threshold for land use control.

### 4.10.3 No Action Alternative

As outlined in **Section 2.5.3**, the No Action Alternative would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above PTRC. Ground-based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

If Air Force Red Flag-Rescue training continued at the Playas TMOA/ATCAA, impacts would include indirect effects due to minor changes in subsonic noise intrusions and direct effects resulting from airplane crashes and vibration effects from subsonic flights. If the TMOA is not available, no impacts would occur.

## 4.11 SOCIOECONOMICS

Consequences to socioeconomic resources were assessed in terms of the potential impacts on the local economy from implementation of Alternatives 1 and 2. The level of impacts from expenditures associated with the alternatives was assessed in terms of direct impacts on the local economy and related impacts on other socioeconomic resources (e.g., housing, employment). The magnitude of potential impacts can vary greatly depending on the location of an action. For example, implementation of an action that creates 10 employment positions might be unnoticed in an urban area but might have significant impacts in a rural region. In addition, if potential socioeconomic changes from a proposed action resulted in substantial shifts in population trends or in adverse effects on regional spending and earning patterns, they may be considered adverse.

### 4.11.1 Alternative 1

No construction would be associated with Alternative 1; therefore, implementation of Alternative 1 would not be anticipated to in-migrate temporary construction workers to the local region or generate revenue to the local economy through the purchase of materials and supplies. No new military jobs would be generated

as a result of implementation of the Alternative 1, and no new personnel would be relocated to Davis-Monthan AFB. Therefore, it would be anticipated that expenditures, employment, and population in the vicinity of the PTRC would remain near current levels.

In terms of socioeconomic impacts on civil aviation, with a ceiling of FL230, there is plenty of room for civilian airliners to fly over the MOA and ATCAA when they are activated. In terms of small aircraft flying at lower levels, such as ranchers gathering cattle with small helicopters or small fixed-wing aircraft, the MOA would only be activated by NOTAM, so there would be advance notice. Also, VFR traffic is allowed in the MOA. Cattle would not be gathered during IFR conditions because visibility is needed. Also, under the alternatives, the MOA would not be active for 331 and 316 days per year, respectively.

#### **4.11.2 Alternative 2**

Potential impacts under Alternative 2 would be identical to potential impacts under Alternative 1. That is, the addition of EW training would not result in in-migrating temporary construction workers in the local region or generating revenue to the local economy through the purchase of materials and supplies. No new military jobs would be generated and no new personnel would be relocated to Davis-Monthan AFB.

#### **4.11.3 No Action Alternative**

As outlined in **Section 2.5.3**, the No Action Alternative for the proposed project would involve the continued use of the Playas TMOA/ATCAA for Air Force Red Flag-Rescue activities for the next four (4) years. If the TMOA is not available, training exercises would not continue in the airspace above PTRC. Ground based training, which is outside the scope of this EA, would still continue to occur at the PTRC.

If Air Force Red Flag-Rescue training continued at the Playas TMOA/ATCAA, no construction would occur. No new temporary construction workers would be needed. No new military jobs would be generated. Therefore, expenditures, employment, and population in the vicinity of the PTRC would be expected to remain near current levels. If the TMOA is not available, no impacts to socioeconomic resources would occur.

## CHAPTER 5 CUMULATIVE IMPACTS

This section includes an analysis of the potential cumulative impacts by considering past, present, and reasonably foreseeable future actions; potential unavoidable adverse impacts; the relationship between short-term uses of resources and long-term productivity; and irreversible and irretrievable commitment of resources.

The 1978 CEQ regulations stipulate that the cumulative effects analysis consider the potential environmental consequences resulting from “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR § 1508.7). In addition, CEQ’s guidance for addressing and analyzing cumulative impacts under NEPA, *Considering Cumulative Effects Under the National Environmental Policy Act*, January 1997, provides additional guidance for conducting an effective and informative cumulative impacts analysis.

The baseline conditions at the PTRC and the Playas TMOA/ATCAA were discussed in **Chapter 3**. The potential for environmental consequences related to the Proposed Action was addressed in **Chapter 4**. This section identifies and evaluates past, present, and reasonably foreseeable future projects that could cumulatively affect environmental resources in conjunction with the Proposed Action. The ROI for cumulative analysis is the same as defined for each resource in **Chapter 4**.

Assessing cumulative effects begins with defining the scope of other actions and their potential interrelationship with the Proposed Action. Other activities or projects that coincide with the location and timetable of the Proposed Action are evaluated. Actions not identified in **Chapter 2** as part of the Proposed Action but that could be considered as actions connected in time or space (40 CFR § 1508.25) may include projects that affect areas under the proposed Playas MOA/ATCAA.

An effort has been made to identify actions that are being considered or are in the planning phase at this time. To the extent that details regarding such actions exist and the actions have a potential to interact with the Proposed Action, these actions are included in this cumulative analysis. This approach enables decisionmakers to have the most current information available so that they can evaluate the potential environmental consequences of the Proposed Action.

### 5.1 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

Past, present, and reasonably foreseeable actions by the Air Force near the PTRC as well as in the region and airspace were considered.

#### 5.1.1 Air Force Actions

Recent past and ongoing military actions at or near the PTRC were considered as part of the baseline or existing condition in the ROI. Each project summarized in this section was reviewed to consider the implication of each action with the Proposed Action. Potential overlap in the affected area and project timing were considered.

The past, present, and reasonably foreseeable future major Air Force projects anticipated to occur on the are listed in **Table 5-1**. **Table 5-1** also notes those resource areas could potentially result in a cumulative effect when considering the added potential effects of the Proposed Action.

**Table 5-1.  
Past, Present, Reasonably Foreseeable Future Projects**

Scheduled Project	Project Summary	Implementation Date	Relevance to Proposed Action	Interaction with Resources
<b>Past Actions</b>				
Environmental Assessment Addressing the Angel Thunder Personnel Recovery/Rescue Training Exercise in the Southwestern United States	Proposed biannual, three-week Angel Thunder exercise throughout southwestern US using DoD and non-DoD properties as landing zones, helicopter landing zones, drop zones, ground training sites, and aircraft training sorties	2018–2019	Use of the PTRC for training and the use of a Playas TMOA for part of the training.	Airspace management and use, noise, air quality
<b>Present Actions</b>				
PTRC ongoing land-based training	The PTRC provides an ongoing training location for DoD and DHS participants	Ongoing	Use of the PTRC for training and the use of a Playas TMOA for part of the training.	Noise, cultural resources, biological resources, socioeconomics
CATEX to amend SNDIA Three Arrival Area Navigation (RNAV) (FAA, 2020c)	The FAA's proposal to amend SNDIA Three Arrival RNAV Standard Terminal Arrival flight procedure route at the Albuquerque International Airport in Albuquerque, New Mexico	2020	Publication of existing air traffic control procedures that do not essentially change existing tracks	Airspace management and use
CATEX Four Corners Regional Airport in Farmington, New Mexico (FAA, 2020d)	The FAA's proposal to amend the current Instrument Landing System or Localizer Runway (RWY) 25, RNAV GPS RWY 25, and RNAV GPS RWY 23 approach procedures at Four Corners Regional Airport in Farmington, New Mexico, due to relocated displaced runway thresholds.	2020	Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more AGL	Airspace management and use
<b>Future Actions</b>				
EIS for Regional Special Use Airspace Optimization to Support Air Force Missions in Arizona (date unknown, action is under development)	Proposal to optimize existing MOAs in Arizona to include Sunny, Bagdad, Gladden, Outlaw, Jackal, Reserve, Morenci, Tombstone, Ruby, Fuzzy, and Sells	TBD	The proposal would optimize SUAs near the Playas MOA/ATCAA	Airspace management and use, noise, air quality
Air Force Research Laboratory Electronic Attack Training	Air Force Research Laboratory will support research, development, and operation of the Playas Electronic Attack & Cyber Environment in Playas, New Mexico, through October 2026	2019–2026	Additional Air Force training occurring at the PTRC	Electronic spectrum

Note:

AGL = above ground level; ATCAA = Air Traffic Control-Assigned Airspace; CATEX = categorical exclusion; DHS = Department of Homeland Security; DoD = Department of Defense; EIS = Environmental Impact Statement; FAA = Federal Aviation Administration; GPS = Global Positioning System; PTRC = Playas Training and Research Center; RNAV = Area Navigation; SNDIA = airspace fix used for approach into Albuquerque; SUA = Special Use Airspace; TMOA = Temporary Military Operations Area

### 5.1.2 Other Federal Actions

Construction of the new Customs Border Patrol border barrier along the U.S.–Mexico border and other border security enhancements were intended to reduce illegal border-related activities and traffic, thus reducing the potential cumulative public health and safety risks under the Playas MOA. While the border wall will also have adverse visual effects and effects on certain species, it is about 35 miles south of the southern boundary of the Playas MOA. Also, only a partial section of border wall was constructed in this area. Given the distance and the fact that the Playas MOA would primarily consist of air operations, there is negligible cumulative effects of both actions considered cumulatively.

### 5.1.3 Non-Federal Actions

Non-federal actions, such as new development or construction projects occurring in the area surrounding the Playas MOA and PTRC were considered for potential cumulative impacts. No projects that would interact with the Proposed Action were identified.

## 5.2 CUMULATIVE EFFECTS ANALYSIS

The following analysis considers how projects identified in **Table 5-1** could cumulatively result in potential environmental consequences with the Proposed Action.

### 5.2.1 Airspace Management and Use

Cumulative impacts on airspace from the Proposed Action, in addition to past, present, and reasonably foreseeable future actions within the ROI, would be expected to be minor. The airspace proposed for use has the capacity and is in locations with the dimensions necessary to support the additional sorties proposed.

### 5.2.2 Noise

The Proposed Action, in addition to past, present, and reasonably foreseeable future actions within the ROI, would potentially result in negligible cumulative impacts related to operational noise. Activities within the proposed Playas MOA/ATCAA would subsequently cause a long-term, minor sound increase for subsonic operations; however, this increase would be expected to be negligible compared to current conditions.

### 5.2.3 Air Quality

The Proposed Action, in addition to past, present, and reasonably foreseeable future actions within the ROI, would increase emissions, but the proposed net changes would be less than the initial indicator of significance. No major sources of emissions were identified in **Table 5-1**. When added to past, present, and foreseeable future actions, the Proposed Action would result in minimal increases in air emissions from mobile sources. These actions would not be expected to result in any adverse effects on air quality. As such, no significant cumulative effects on air quality is expected.

### 5.2.4 Cultural Resources

The Proposed Action, in addition to past, present, and reasonably foreseeable future actions within the ROI, would not be anticipated to result in incremental cumulative impacts to cultural resources, archaeological resources, historic resources, or Native American Traditional Cultural Properties.

### **5.2.5 Biological Resources**

The Proposed Action, in addition to past, present, and reasonably foreseeable future actions within the ROI, would result in negligible impacts to biological resources. When added to past, present, and foreseeable future actions, the Proposed Action would result in minimal increases in BASH risk, wildfire risk, and noise disturbance to wildlife. These actions would not be expected to result in any adverse effects on threatened and endangered species. As such, no significant cumulative effects on biological resources would be expected.

### **5.2.6 Hazardous Materials and Wastes**

The Proposed Action would not routinely generate any on ground hazardous materials and would result in negligible impacts related to hazardous materials and wastes; therefore, there would be no cumulative impacts.

### **5.2.7 Environmental Justice and Protection of Children**

The Proposed Action, in addition to past, present, and reasonably foreseeable future actions within the ROI, would not be expected to have a disproportionate cumulative impact on minority and low-income populations or children. Activities with the proposed MOA/ATCAA would subsequently cause a long-term, minor noise increase for subsonic operations; however, this increase would be expected to be negligible compared to current conditions. Therefore, no cumulative effect to minority and low-income populations or children would be anticipated.

### **5.2.8 Land Use**

The Proposed Action, in addition to past, present, and reasonably foreseeable future actions, would not be expected to impact land use. Therefore, cumulative land use impacts would not be significant.

### **5.2.9 Socioeconomics**

The Proposed Action, in addition to past, present, and reasonably foreseeable future actions within the ROI, would not be expected to result in an adverse cumulative impact to the region's population, employment, housing, or educational opportunities.

## **5.3 RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY**

The 1978 CEQ regulations (40 CFR § 1502.16) specify that NEPA analyses must address “the relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity.” Attention should be given to impacts that narrow the range of beneficial uses of the environment in the long term or pose a long-term risk to human health or safety. This section evaluates the short-term benefits of the Proposed Action compared to the long-term productivity derived from not pursuing the Proposed Action.

Short-term effects to the environment are generally defined as a direct consequence of a project in its immediate vicinity. For example, short-term effects could include localized disruptions from construction. Environmental commitments and best management practices in place for each project should reduce potential impacts or disruptions. Under the Proposed Action, these short-term uses would have a negligible cumulative effect.

The Proposed Action would involve establishment of permanent airspace to support aircraft activities; no ground disturbing activities would occur. As such, there would be no short-term construction-related impacts or changes to land use as a result of implementing the Proposed Action. The majority of activities addressed in this EA would be categorized as long-term actions. The proposed Playas MOA/ATCAA would continue to receive repeated use for the foreseeable future. Wildlife and special-status species inhabiting areas

beneath the airspace may be temporarily disturbed by the new aircraft activity; however, noise levels would not be anticipated to exceed 52 DNL. Implementation of the Proposed Action would not be expected to result in the types of impacts that would reduce environmental productivity, affect biodiversity, or permanently narrow the range of beneficial uses of the environment. Land use below the affected airspace would experience projected DNL levels well below the 65 DNL threshold for land use restrictions. Additionally, with no ground disturbing activities proposed, cultural resources underlying the airspace would not be affected.

#### **5.4 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects result primarily from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable timeframe. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action.

The Proposed Action would involve establishment of permanent airspace to support aircraft activities and would result in an irreversible and irretrievable commitment of airspace resources. No ground disturbing activities would occur. Training operations would involve consumption of nonrenewable resources, such as jet fuel; however, none of these uses would be expected to significantly decrease the availability of minerals or petroleum resources. With no ground disturbing activities, no irreversible or irretrievable effects would be expected for natural, land, or cultural resources.

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**APPENDIX A.  
INTERAGENCY AND INTERGOVERNMENTAL AGENCY COORDINATION  
AND CONSULTATION**

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**Appendix A-1.**  
**Interagency and Intergovernmental Coordination for Environmental Planning –**  
**Coordination Letters**

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DEPARTMENT OF THE AIR FORCE  
355TH CIVIL ENGINEER SQUADRON (ACC)  
DAVIS-MONTHAN AIR FORCE BASE, ARIZONA

October 16, 2020

Dr. Jeff Pappas  
New Mexico State Historic Preservation Division  
Bataan Memorial Building  
407 Galisteo Street, Suite 236  
Santa Fe, NM 87501

MEMORANDUM FOR: NEW MEXICO STATE HISTORIC PRESERVATION DIVISION

FROM: 355 Civil Engineer Squadron, Environmental Element Chief

SUBJECT: Environmental Assessment for Proposed Playas Special Use Airspace

Dear Dr. Pappas,

The purpose of this letter is twofold: to give you an opportunity to review and comment on a proposed action in which the State Historic Preservation Office (SHPO) may have an interest; and to initiate consultation pursuant to Section 106 of the National Historic Preservation Act and 36 CFR Section 800.3.

The United States Air Force (Air Force) is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to evaluate the potential impacts associated with the establishment of airspace in the form of a permanent military operations area (MOA), which is a type of special use airspace (SUA), and air traffic control assigned area (ATCAA) centered over the Playas Training and Research Center (PTRC) in Grant and Hidalgo Counties, New Mexico.

Under the Proposed Action, the floor of the MOA will be 300 feet Above Ground Level (AGL). Operations would 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 17,999 feet Mean Sea Level (MSL) (up to, but not including Flight Level [FL] 180). The focus of this EA is the permanent airspace action; therefore, no personnel would be added, and no land acquisition or on-the-ground activities such as new construction or demolition would occur. Because we already sought input and performed the environmental analysis in the recent Personnel Recovery Training Program EA, we are not seeking inputs on limited vehicular recovery of paratropped personnel and cargo, which would occur predominantly using existing paved and dirt roads.

Taking into account various environmental concerns, the Air Force is engaging early with the appropriate resource and regulatory agencies as it formulates the undertaking. Pursuant to 36 CFR Sections 800.4(a) and (b), we request your assistance defining the Area of Potential Effects (APE) and information on any historic properties located therein that may be affected by our undertaking. Location maps are included as part of the attachment to this letter. Your comments will help us develop the scope of our environmental review.

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The Air Force has a need for realistic combat rescue training and a need to meet pre-deployment training and readiness requirements on a regular and continuing basis, with large force integration of both airborne and ground based assets. The Air Force has access to a unique training location at the PTRC that cannot be used to fulfill this need because of a lack of permanent airspace. A MOA centered above the PTRC is needed to support the training requirements noted above by protecting fast moving aircraft and helicopters in training exercises and eliminating speed restrictions to allow for combat maneuvering and cloud penetration.

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 US and allied air-combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air bottle managers and Joint Personnel Recovery Center personnel.

The EA will assess the potential environmental consequences associated with the Proposed Actions and alternatives. Potential impacts identified during the initial planning stages include effects on airspace management and use, noise, safety, electromagnetic spectrum, air quality, cultural resources, hazardous materials and wastes, biological resources, and environmental justice and protection of children. The EA will also examine the cumulative effects when combined with past, present, and any reasonably foreseeable future actions. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

We intend to provide your agency with a copy of the Draft EA when the document is completed. Please inform us if additional copies are needed or if someone else within your agency other than you should receive the Draft EA. We will also provide you with a 36 CFR 800.4 effects determination after we have completed the historic property identification process.

Please reach out to my point of contact, provided below on any issues or concerns you have in the development of this EA. We ask your assistance in identifying any issues or concerns of which we may be unaware, particularly those that may be affected by this proposal.

The Air Force Point of Contact for this project is Mr. Kevin Wakefield, EIA/ Program Manager. Please send him your comments and concerns to 3775 South Fifth Street, Davis-Monthan AFB, AZ, 85707-3012, or by email or phone at kevin.wakefield.1@us.af.mil or (520) 228-4035. I look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely,



CHRISTOPHER L. BREWSTER, PE  
Chief, Environmental

Attachment:  
Summary of the Description of the Proposed Action and Alternatives



DEPARTMENT OF THE AIR FORCE  
355TH CIVIL ENGINEER SQUADRON (ACC)  
DAVISMONTHAN AIR FORCE BASE, ARIZONA

October 16, 2020

Aubrey Dunn  
Commissioner of Public Lands  
New Mexico State Land Office  
PO Box 1148  
Santa Fe, NM 87504

MEMORANDUM FOR: STAKEHOLDERS

FROM: 355 Civil Engineer Squadron, Environmental Element Chief

SUBJECT: Environmental Assessment for Proposed Playas Special Use Airspace

Dear Ms. Dunn,

The United States Air Force (Air Force) is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to evaluate the potential impacts associated with the establishment of airspace in the form of a permanent military operations area (MOA), which is a type of special use airspace (SUA), and air traffic control assigned area (ATCAA) centered over the Playas Training and Research Center (PTRC) in Grant and Hidalgo Counties, New Mexico.

Under the Proposed Action, the floor of the MOA will be 300 feet Above Ground Level (AGL). Operations would 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 17,999 feet Mean Sea Level (MSL) (up to, but not including Flight Level [FL] 180). The focus of this EA is the permanent airspace action; therefore, no personnel would be added, and no land acquisition or on-the-ground activities such as new construction or demolition would occur. Because we have already sought input and performed the environmental analysis in the recent Personnel Recovery Training Program EA, we are not seeking inputs on limited vehicular recovery of paratropped personnel and cargo, which would occur predominantly using existing paved and dirt roads.

The Air Force has a need for realistic combat rescue training and a need to meet pre-deployment training and readiness requirements on a regular and continuing basis, with large force integration of both airborne and ground based assets. The Air Force has access to a unique training location at the PTRC that cannot be used to fulfill this need because of a lack of permanent airspace. A MOA centered above the PTRC is needed to support the training requirements noted above by protecting fast moving aircraft and helicopters in training exercises, and eliminating speed restrictions to allow for combat maneuvering and cloud penetration.

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 US and allied air-combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers and Joint Personnel Recovery Center personnel.

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Sample general correspondence letter. The complete mailing list is included on page A-39

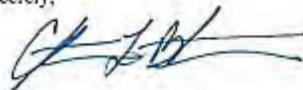
The EA will assess the potential environmental consequences associated with the Proposed Action and alternatives. Potential impacts identified during the initial planning stages include effects on airspace management and use, noise, safety, electromagnetic spectrum, air quality, cultural resources, hazardous materials and wastes, biological resources, and environmental justice and protection of children. The EA will also examine the cumulative effects when combined with past, present, and any reasonably foreseeable future actions. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

We intend to provide your agency with a copy of the Draft EA when the document is completed. Please inform us if additional copies are needed or if someone else within your agency other than you should receive the Draft EA.

Please reach out to my point of contact, provided below on any issues or concerns you have in the development of this EA. We ask your assistance in identifying any issues or concerns of which we may be unaware, particularly those that may be affected by this proposal.

The Air Force Point of Contact for this project is Mr. Kevin Wakefield, EIAP Program Manager. Please send him your comments and concerns to 3775 South Fifth Street, Davis-Monthan AFB, AZ, 85707-3012, or by email or phone at kevin.wakefield.1@us.af.mil or (520) 228-4035. I look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely,



CHRISTOPHER L. BREWSTER, PE  
Chief, Environmental

Attachment:  
Summary of the Description of the Proposed Action and Alternatives

Sample general correspondence letter. The complete mailing list is included on page A-39



DEPARTMENT OF THE AIR FORCE  
355TH CIVIL ENGINEER SQUADRON (ACC)  
DAVIS-MONTHAN AIR FORCE BASE, ARIZONA

October 16, 2020

Wally Murphy  
Field Supervisor  
USFWS - New Mexico Ecological Services  
2105 Osuna Rd NE  
Albuquerque, NM 87113

MEMORANDUM FOR: STAKEHOLDERS

FROM: 355 Civil Engineer Squadron, Environmental Element Chief

SUBJECT: Environmental Assessment for Proposed Playas Special Use Airspace

Dear Mr. Murphy,

The United States Air Force (Air Force) is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to evaluate the potential impacts associated with the establishment of airspace in the form of a permanent military operations area (MOA), which is a type of special use airspace (SUA), and air traffic control assigned area (ATCAA) centered over the Playas Training and Research Center (PTRC) in Grant and Hidalgo Counties, New Mexico.

Under the Proposed Action, the floor of the MOA will be 300 feet Above Ground Level (AGL). Operations would 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 17,999 feet Mean Sea Level (MSL) (up to, but not including Flight Level [FL] 180). The focus of this EA is the permanent airspace action; therefore, no personnel would be added, and no land acquisition or on-the-ground activities such as new construction or demolition would occur. Because we have already sought input and performed the environmental analysis in the recent Personnel Recovery Training Program EA, we are not seeking inputs on limited vehicular recovery of paratropped personnel and cargo, which would occur predominantly using existing paved and dirt roads.

The Air Force has a need for realistic combat rescue training and a need to meet pre-deployment training and readiness requirements on a regular and continuing basis, with large force integration of both airborne and ground based assets. The Air Force has access to a unique training location at the PTRC that cannot be used to fulfill this need because of a lack of permanent airspace. A MOA centered above the PTRC is needed to support the training requirements noted above by protecting fast moving aircraft and helicopters in training exercises, and eliminating speed restrictions to allow for combat maneuvering and cloud penetration.

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 US and allied air-combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers and Joint Personnel Recovery Center personnel.

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Sample USFWS correspondence letter. The complete mailing list is included on page A-39

The EA will assess the potential environmental consequences associated with the Proposed Action and alternatives. Potential impacts identified during the initial planning stages include effects on airspace management and use, noise, safety, electromagnetic spectrum, air quality, cultural resources, hazardous materials and wastes, biological resources, and environmental justice and protection of children. The EA will also examine the cumulative effects when combined with past, present, and any reasonably foreseeable future actions. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

We intend to provide your agency with a copy of the Draft EA when the document is completed. Please inform us if additional copies are needed or if someone else within your agency other than you should receive the Draft EA.

Please reach out to my point of contact, provided below on any issues or concerns you have in the development of this EA. We ask your assistance in identifying any issues or concerns of which we may be unaware, particularly those that may be affected by this proposal.

The Air Force Point of Contact for this project is Mr. Kevin Wakefield, EIAP Program Manager. Please send him your comments and concerns to 3775 South Fifth Street, Davis-Monthan AFB, AZ, 85707-3012, or by email or phone at kevin.wakefield.1@us.af.mil or (520) 228-4035. I look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely,



CHRISTOPHER L. BREWSTER, PE  
Chief, Environmental

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Sample USFWS correspondence letter. The complete mailing list is included on page A-39



DEPARTMENT OF THE AIR FORCE  
355TH CIVIL ENGINEER SQUADRON (ACC)  
DAVIS-MONTHAN AIR FORCE BASE, ARIZONA

October 16, 2020

U.S. Department of the Interior Fish and Wildlife Service - Southwest Regional Office  
PO Box 1306  
Albuquerque, NM 87103

MEMORANDUM FOR: U.S. FISH AND WILDLIFE SERVICE

FROM: 355 Civil Engineer Squadron, Environmental Element Chief

SUBJECT: Environmental Assessment for Proposed Playas Special Use Airspace

Dear Sir/Madam,

The United States Air Force (Air Force) is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to evaluate the potential impacts associated with the establishment of airspace in the form of a permanent military operations area (MOA), which is a type of special use airspace (SUA), and air traffic control assigned area (ATCAA) centered over the Playas Training and Research Center (PTRC) in Grant and Hidalgo Counties, New Mexico.

Under the Proposed Action, the floor of the MOA will be 300 feet Above Ground Level (AGL). Operations would 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 17,999 feet Mean Sea Level (MSL) (up to, but not including Flight Level [FL] 180). The focus of this EA is the permanent airspace action; therefore, no personnel would be added, and no land acquisition or on-the-ground activities such as new construction or demolition would occur. Because we already sought input and performed the environmental analysis in the recent Personnel Recovery Training Program EA, we are not seeking inputs on limited vehicular recovery of paratropped personnel and cargo, which would occur predominantly using existing paved and dirt roads.

The Air Force has a need for realistic combat rescue training and a need to meet pre-deployment training and readiness requirements on a regular and continuing basis, with large force integration of both airborne and ground based assets. The Air Force has access to a unique training location at the PTRC that cannot be used to fulfill this need because of a lack of permanent airspace. A MOA centered above the PTRC is needed to support the training requirements noted above by protecting fast moving aircraft and helicopters in training exercises, and eliminating speed restrictions to allow for combat maneuvering and cloud penetration.

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 US and allied air-combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers and Joint Personnel Recovery Center personnel.

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Sample USFWS correspondence letter. The complete mailing list is included on page A-39

The EA will assess the potential environmental consequences associated with the Proposed Action and alternatives. Potential impacts identified during the initial planning stages include effects on airspace management and use, noise, safety, electromagnetic spectrum, air quality, cultural resources, hazardous materials and wastes, biological resources, and environmental justice and protection of children. The EA will examine the cumulative effects when combined with past, present, and any reasonably foreseeable future actions. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

Taking into account various environmental concerns, the Air Force is engaging early with the appropriate resource and regulatory agencies as it formulates the undertaking. The Air Force will follow the instructions for determining whether a proposed project may affect threatened and endangered species or designated critical habitat as outlined in the "Guidance for Completing Project Reviews Under the Endangered Species Act", U.S. Fish and Wildlife Service, New Mexico Ecological Services Division, December 9, 2019. We intend to provide your agency with a copy of the Draft EA when the document is completed. Please inform us if additional copies are needed or if someone else within your agency other than you should receive the Draft EA.

The Air Force Point of Contact for this project is Mr. Kevin Wakefield, FIAP Program Manager. Please send him your comments and concerns to 3775 South Fifth Street, Davis-Monthan AFB, AZ, 85707-3012, or by email or phone at kevin.wakefield.1@us.af.mil or (520) 228-4035. I look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely,



CHRISTOPHER L. BREWSTER, PE  
Chief, Environmental

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Summary of the Description of the Proposed Action and Alternatives

Sample USFWS correspondence letter. The complete mailing list is included on page A-39



DEPARTMENT OF THE AIR FORCE  
355TH WING (ACC)  
DAVIS-MONTHAN AIR FORCE BASE ARIZONA

October 16, 2020

Colonel Joseph C. Turnham, USAF  
Commander  
355th Wing  
3405 South Fifth Street  
Davis-Monthan AFB AZ 85707-3012

Gwendena Gatewood  
Chairwoman  
White Mountain Apache Tribe of the Fort Apache Reservation, Arizona  
PO Box 700  
Whiteriver AZ 85941

Subject: Environmental Assessment for Proposed Playas Special Use Airspace

Dear Chairwoman Gatewood

The purpose of this letter is twofold: to give you an opportunity to review and comment on a proposed action in which the San Carlos Apache Tribe of the San Carlos Reservation, Arizona may have an interest; and to invite the San Carlos Apache Tribe of the San Carlos Reservation, Arizona to participate in government-to-government consultation with the United States Air Force (Air Force) pursuant to Section 106 of the National Historic Preservation Act.

The Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to evaluate the potential impacts associated with the establishment of airspace in the form of a permanent Military Operations Area (MOA), which is a type of Special Use Airspace (SUA), and Air Traffic Control Assigned Area (ATCAA) centered over the Playas Training and Research Center (PTRC) in Grant and Hidalgo Counties, New Mexico. Under the Proposed Action, the floor of the MOA will be 300 feet Above Ground Level (AGL). Operations would 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 17,999 feet Mean Sea Level (MSL) (up to, but not including Flight Level [FL] 180). The focus of this EA is the permanent airspace action; therefore, no personnel would be added, and no land acquisition or on-the-ground activities such as new construction or demolition would occur. Because we already sought input and performed the environmental analysis in the recent Personnel Recovery Training Program EA, we are not seeking inputs on limited vehicular recovery of paratropped personnel and cargo, which would occur predominantly using existing paved and dirt roads.

Pursuant to Section 106 of the NHPA, implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we request government-to-government consultation on this proposed action. In particular, we invite you, pursuant to 36 CFR Section 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the San Carlos Apache Tribe of the San Carlos Reservation, Arizona chooses to consult on this project, the Air Force will comply with the Native American Graves Protection

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and Repatriation Act by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the New Mexico State Historic Preservation Division.

The Air Force has a need for realistic combat rescue training and a need to meet pre-deployment training and readiness requirements on a regular and continuing basis, with large force integration of both airborne and ground based assets. The Air Force has access to a unique training location at the PTRC that cannot be used to fulfill this need because of a lack of permanent airspace. A MOA centered above the PTRC is needed to support the training requirements noted above by protecting fast moving aircraft and helicopters in training exercises, and eliminating speed restrictions to allow for combat maneuvering and cloud penetration.

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 US and allied air-combat aircrews, para-rescue teams, survival specialists, intelligence personnel, air battle managers and Joint Personnel Recovery Center personnel.

The EA will assess the potential environmental consequences associated with the Proposed Action and alternatives. Potential impacts identified during the initial planning stages include effects on airspace management and use, noise, safety, electromagnetic spectrum, air quality, cultural resources, hazardous materials and wastes, biological resources, and environmental justice and protection of children. The EA will examine the cumulative effects when combined with past, present, and any reasonably foreseeable future actions. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

We intend to provide you with a copy of the Draft EA when the document is completed. Please inform us if additional copies are needed or if someone else within your agency other than you should receive the Draft EA.

Please reach out to my point of contact, provided below on any issues or concerns you have in the development of this EA. We ask your assistance in identifying any issues or concerns of which we may be unaware, particularly those that may be affected by this proposal.

The Air Force Point of Contact for this project is Mr. Kevin Wakefield, EIAP Program Manager. Please send him your comments and concerns to 3775 South Fifth Street, Davis-Monthan AFB, AZ, 85707-3012, or by email or phone at kevin.wakefield.1@us.af.mil or (520) 228-4035. I look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely



JOSEPH C. TURNHAM, Colonel, USAF  
Commander

Attachment:  
Summary of the Description of the Proposed Action and Alternatives



DEPARTMENT OF THE AIR FORCE  
355TH WING (ACC)  
DAVIS-MONTHAN AIR FORCE BASE ARIZONA

October 16, 2020

Colonel Joseph C. Turnham, USAF  
Commander  
355th Wing  
3405 South Fifth Street  
Davis-Monthan AFB AZ 85707-3012

Jeri DeCola  
Chairwoman  
Tonto Apache Tribe of Arizona  
Tonto Apache Reservation 30  
Payson AZ 85541

Subject: Environmental Assessment for Proposed Playas Special Use Airspace

Dear Chairwoman DeCola

The purpose of this letter is twofold: to give you an opportunity to review and comment on a proposed action in which the Tonto Apache Tribe of Arizona may have an interest; and to invite the Tonto Apache Tribe of Arizona to participate in government-to-government consultation with the United States Air Force (Air Force) pursuant to Section 106 of the National Historic Preservation Act.

The Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to evaluate the potential impacts associated with the establishment of airspace in the form of a permanent military operations area (MOA), which is a type of special use airspace (SUA), and air traffic control assigned area (ATCAA) centered over the Playas Training and Research Center (PTRC) in Grant and Hidalgo Counties, New Mexico. Under the Proposed Action, the floor of the MOA will be 300 feet Above Ground Level (AGL). Operations would 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 17,999 feet Mean Sea Level (MSL) (up to, but not including Flight Level [FL] 180). The focus of this EA is the permanent airspace action; therefore, no personnel would be added, and no land acquisition or on-the-ground activities such as new construction or demolition would occur. Because we already sought input and performed the environmental analysis in the recent Personnel Recovery Training Program EA, we are not seeking inputs on limited vehicular recovery of paratropped personnel and cargo, which would occur predominantly using existing paved and dirt roads.

Pursuant to Section 106 of the NHPA, implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we request government-to-government consultation on this proposed action. In particular, we invite you, pursuant to 36 CFR Section 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Tonto Apache Tribe of Arizona chooses to consult on this project, the Air Force will comply with the Native American Graves Protection and Repatriation Act by

TRAIN, DEPLOY, WIN  
RESCUE & ATTACK!

informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the New Mexico State Historic Preservation Division.

The Air Force has a need for realistic combat rescue training and a need to meet pre-deployment training and readiness requirements on a regular and continuing basis, with large force integration of both airborne and ground based assets. The Air Force has access to a unique training location at the PTRC that cannot be used to fulfill this need because of a lack of permanent airspace. A MOA centered above the PTRC is needed to support the training requirements noted above by protecting fast moving aircraft and helicopters in training exercises, and eliminating speed restrictions to allow for combat maneuvering and cloud penetration.

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JOSEPH C. TURNHAM, Colonel, USAF  
Commander

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DEPARTMENT OF THE AIR FORCE  
355TH WING (ACC)  
DAVIS-MONTHAN AIR FORCE BASE ARIZONA

October 16, 2020

Colonel Joseph C. Turnham, USAF  
Commander  
355th Wing  
3405 South Fifth Street  
Davis-Monthan AFB AZ 85707-3012

Mark Altaha  
THPO  
White Mountain Apache Tribe, Historic Preservation Office Program  
PO Box 1032  
Fort Apache AZ 85926

Subject: Environmental Assessment for Proposed Playas Special Use Airspace

Dear Mr. Altaha

The purpose of this letter is twofold: to give you an opportunity to review and comment on a proposed action in which the San Carlos Apache Tribe of the San Carlos Reservation, Arizona may have an interest; and to invite the San Carlos Apache Tribe of the San Carlos Reservation, Arizona to participate in government-to-government consultation with the United States Air Force (Air Force) pursuant to Section 106 of the National Historic Preservation Act.

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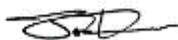
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DEPARTMENT OF THE AIR FORCE  
355TH WING (ACC)  
DAVIS-MONTHAN AIR FORCE BASE ARIZONA

October 16, 2020

Colonel Joseph C. Turnham, USAF  
Commander  
355th Wing  
3405 South Fifth Street  
Davis-Monthan AFB AZ 85707-3012

Terry Rambler  
Chairperson  
San Carlos Apache Tribe of the San Carlos Reservation, Arizona  
PO Box "o"  
San Carlos AZ 85550

Subject: Environmental Assessment for Proposed Playas Special Use Airspace

Dear Chairperson Rambler

The purpose of this letter is twofold: to give you an opportunity to review and comment on a proposed action in which the San Carlos Apache Tribe of the San Carlos Reservation, Arizona may have an interest; and to invite the San Carlos Apache Tribe of the San Carlos Reservation, Arizona to participate in government-to-government consultation with the United States Air Force (Air Force) pursuant to Section 106 of the National Historic Preservation Act.

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355TH WING (ACC)  
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October 16, 2020

Colonel Joseph C. Turnham, USAF  
Commander  
355th Wing  
3405 South Fifth Street  
Davis-Monthan AFB AZ 85707-3012

Vernelda Grant  
THPO  
San Carlos Apache Tribe of the San Carlos Reservation, Arizona  
PO Box "o"  
San Carlos AZ 85550

Subject: Environmental Assessment for Proposed Playas Special Use Airspace

Dear Ms. Grant

The purpose of this letter is twofold: to give you an opportunity to review and comment on a proposed action in which the San Carlos Apache Tribe of the San Carlos Reservation, Arizona may have an interest; and to invite the San Carlos Apache Tribe of the San Carlos Reservation, Arizona to participate in government-to-government consultation with the United States Air Force (Air Force) pursuant to Section 106 of the National Historic Preservation Act.

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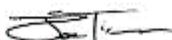
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355TH WING (ACC)  
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October 16, 2020

Colonel Joseph C. Turnham, USAF  
Commander  
355th Wing  
3405 South Fifth Street  
Davis-Monthan AFB AZ 85707-3012

Wally Davis Jr.  
NAGPRA Contact  
Tonto Apache Tribe of Arizona  
Tonto Apache Reservation 30  
Payson AZ 85541

Subject: Environmental Assessment for Proposed Playas Special Use Airspace

Dear Vice President Davis Jr.

The purpose of this letter is twofold: to give you an opportunity to review and comment on a proposed action in which the San Carlos Apache Tribe of the San Carlos Reservation, Arizona may have an interest; and to invite the San Carlos Apache Tribe of the San Carlos Reservation, Arizona to participate in government-to-government consultation with the United States Air Force (Air Force) pursuant to Section 106 of the National Historic Preservation Act.

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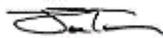
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**Appendix A-2.**  
**Interagency and Intergovernmental Coordination for Environmental Planning**  
**Summary of Description of Proposed Action and Alternatives**

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## ATTACHMENT

### Summary Draft Description of the Proposed Action and Alternatives Playas Special Use Airspace Davis-Monthan Air Force Base, Arizona

#### 1.0 PURPOSE AND NEED FOR ACTION

##### 1.1 INTRODUCTION

The Air Force is proposing to establish an Air Traffic Control-Assigned Airspace (ATCAA) and a Special Use Airspace (SUA) in the form of a permanent Military Operations Area (MOA) above Playas, New Mexico (Figures 1 and 2). The proposed MOA and ATCAA would be activated as needed to support multi-service training requirements and would be managed and scheduled by the 355 Wing personnel at Davis-Monthan Air Force Base (AFB) in southeastern Arizona.

Aircraft operations associated with training activities would occur in conjunction with a wide range of ground training that takes place at the Playas Training and Research Center (PTRC). The PTRC was established as a primary training and readiness support facility for the United States (U.S.) Department of Homeland Security (DHS), state law enforcement agencies, as well as the U.S. Department of Defense (DOD) and associated national defense and security forces.

All of the ground-based activities to be discussed in the Environmental Assessment (EA) in and around the PTRC, which include limited recovery of airdropped personnel or equipment primarily using existing paved or dirt roads, were previously analyzed as part of the Angel Thunder Exercise EA (May 2017) and Personnel Recovery Training Program EA (January 2020). There would be no change in any ground activities as part of this Air Force proposal. There is no permanent MOA or ATCAA established above the PTRC, and airspace training exercises are currently conducted under a temporary MOA (TMOA) and ATCAA.

##### 1.2 NEED FOR THE ACTION

The Air Force has a need for realistic combat rescue training and pre-deployment training on a regular and continuing basis, with large force integration of both airborne and ground-based assets. The Air Force has access to a unique training location at the PTRC that can be limited in the time, frequency, and duration of use without the establishment of permanent MOA. A MOA centered above the PTRC is needed to support the noted training requirements by protecting fast-moving aircraft, tiltrotor aircraft, and helicopters in training exercises and eliminating speed restrictions to allow for combat maneuvering and cloud penetration.

##### 1.3 PURPOSE OF THE ACTION

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 Recovery Center personnel. In conjunction, the purpose is to strengthen joint military operations, multi-national partnerships, and operations with other federal, state, and local agencies/organizations.

August 2020

A SUA consists of defined dimensions of airspace wherein activities must be confined because of their nature, or wherein limitations are imposed upon non-participating aircraft operations, or both

A MOA is a type of SUA outside of Class A airspace to separate or segregate certain nonhazardous military activities from instrument flight rules (IFR) traffic. Activities in MOAs include, but are not limited to, air combat maneuvers, air intercepts, and low-altitude-tactics. The defined vertical and lateral limits vary for each MOA.

ATCAA is assigned to air traffic control to segregate air traffic between specified activities being conducted within the assigned airspace and other IFR traffic. This airspace is not depicted on any chart but is often an extension of a MOA to higher altitudes and usually referred to by the same name. This airspace remains under control of the Federal Aviation Administration (FAA) when not in use to support general aviation activities. Although ATCAA's are typically associated with SUA, they are not a type of SUA.

Attachment

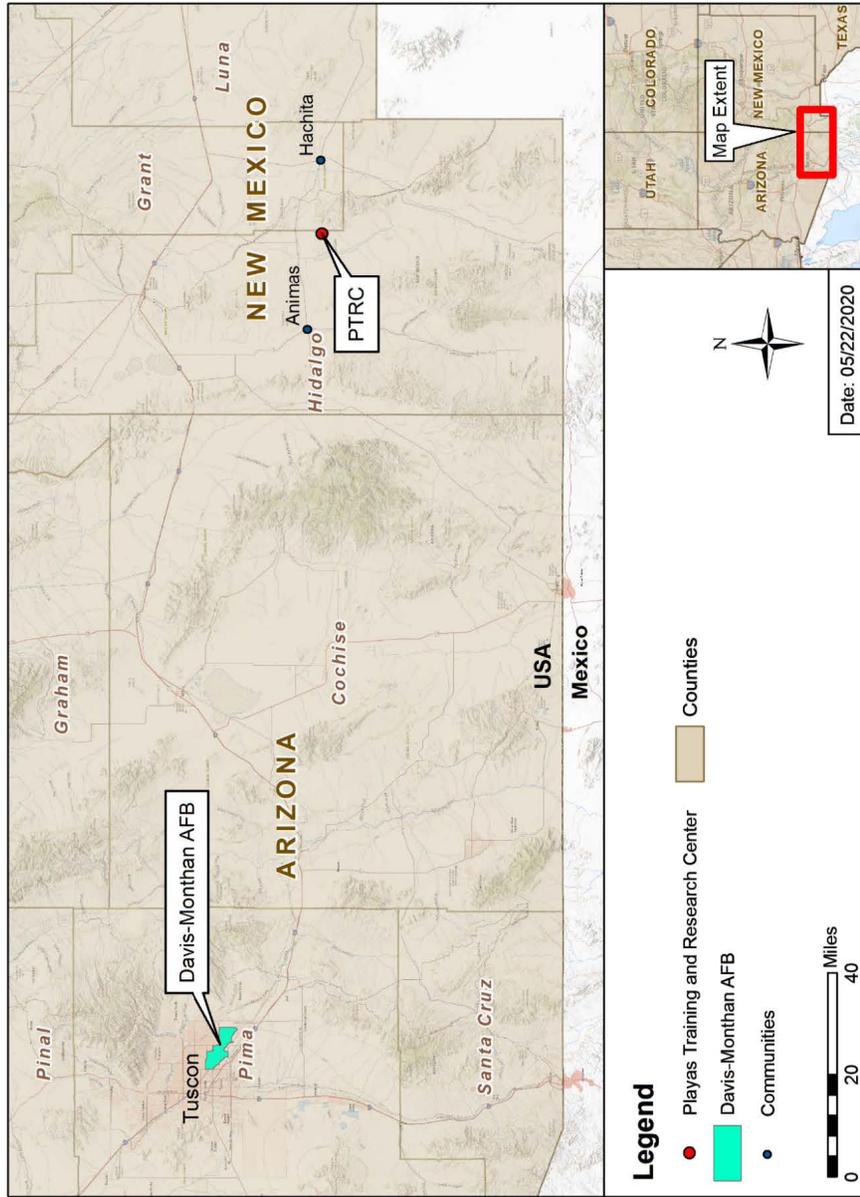


Figure 1. Vicinity Map

August 2020

Attachment

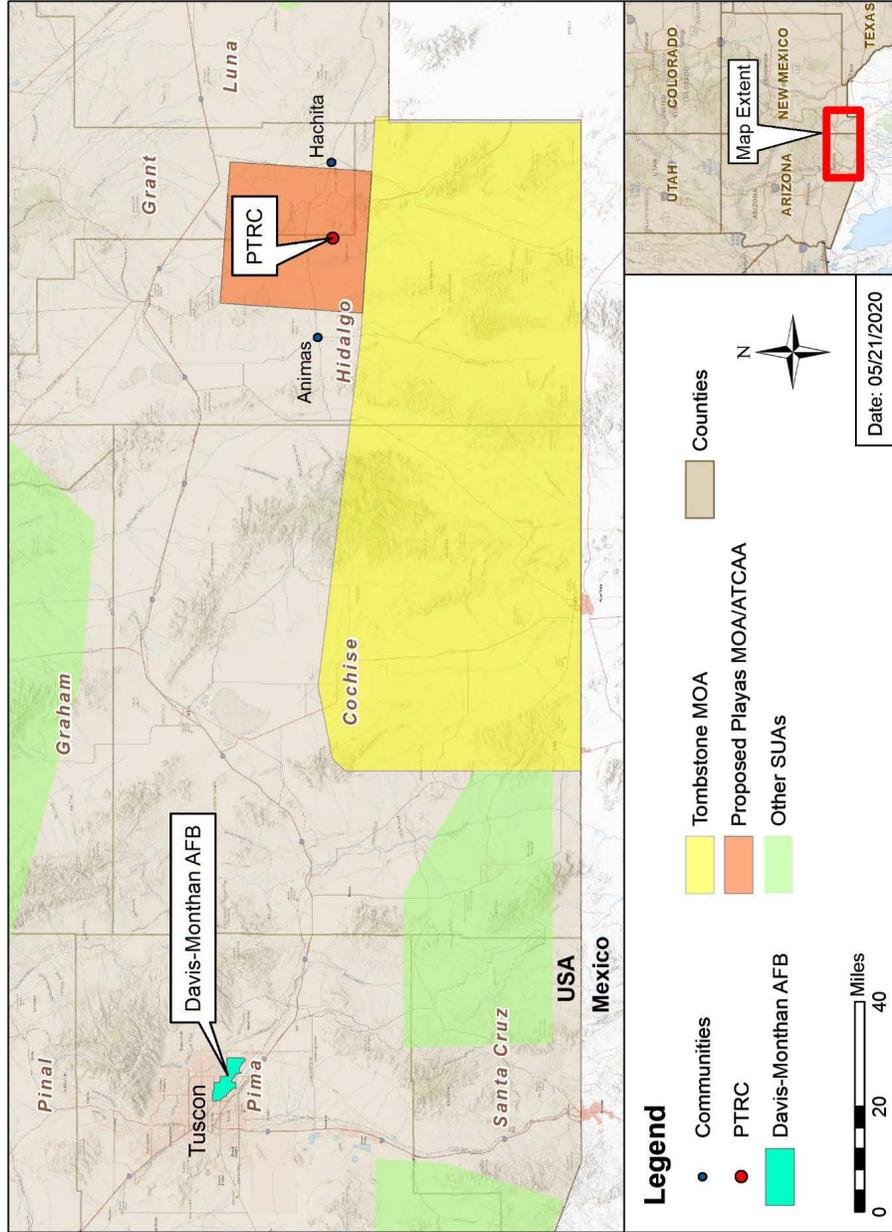


Figure 2. Special Use Airspace

August 2020

## Attachment

### 2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

#### 2.1 PROPOSED ACTION

The Air Force is proposing to establish a SUA in the form of a permanent Playas MOA and ATCAA above Playas, New Mexico. The MOA/ATCAA would be activated as needed to support multi-service training requirements and would be managed and scheduled by the 355 Wing personnel at Davis-Monthan AFB in southeastern Arizona.

The proposed Playas MOA/ATCAA would be defined by the following coordinates:

- Latitude 32°10'43"N., Longitude 108°42'48"W.
- Latitude 32°09'20"N., Longitude 108°19'29"W.
- Latitude 31°49'31"N., Longitude 108°21'03"W.
- Latitude 31°50'49"N., Longitude 108°44'28"W.

The proposed Playas MOA/ATCAA would have the following characteristics:

- 20 nautical mile (nm) by 20 nm block of SUA centered on Playas, New Mexico
- MOA ceiling up to 17,999 feet mean sea level (MSL) (up to, but not including flight level [FL]180)
- Floor at 300 feet above ground level (AGL)
- ATCAA located directly above the MOA with altitudes from FL180 up to FL230.

MSL is altitude in feet above the mean sea level. AGL is altitude expressed in feet measured above the surface of the ground. When flying over land, both MSL and AGL are used to delineate airspace structure. FL is vertical altitude expressed in hundreds of feet.

The proposed MOA/ATCAA would only be used during a specified timeframe during each training event, with specific times of use announced via Notices to Airman (NOTAM). When needed, the 355 Wing personnel would notify FAA personnel at Albuquerque Air Traffic Control Center and request that FAA NOTAMs be published for the activation. The proposed MOA/ATCAA would support nonhazardous military flight activities including, but not limited to, tactical combat maneuvering by fighter, transport, and rotary wing aircraft; nonstandard formation flights; rescue escort maneuvering above participating rotary wing aircraft; tiltrotor aircraft, close air support; freefall and static line parachute operations; and visual flight rules (VFR) aerial helicopter refueling. The proposed boundaries and altitudes of the proposed Playas MOA/ATCAA would remain the same across training events.

Under the Proposed Action, no personnel would be added to Davis-Monthan AFB. There would be no land acquisition and no new construction or demolition of on-ground facilities. Specific training activities are discussed below.

#### 2.2 TRAINING ACTIVITIES

In conjunction with the establishment of the proposed Playas MOA/ATCAA, training activities would occur at the PTRC and associated airspace. Table 2-1 provides a summary of potential annual activities within the proposed Playas MOA/ATCAA under the Proposed Action. Details of each activity are discussed below the table. Please note that the total days in the proposed Playas MOA/ATCAA for an activity may be less than the listed duration because the MOA/ATCAA may not be used everyday. Each activity has components that occur outside the proposed Playas MOA/ATCAA that are outside the scope of this EA.

---

August 2020

## Attachment

**Table 2-1. Annual Potential Activities in the Proposed Playas MOA/ATCAA**

Activity	Events per Year	Duration	Total Days in Proposed Playas MOA/ATCAA	Existing Action in the TMOA
Red Flag-Rescue	2	3 weeks	28	Yes
TRAP	6	12 hours	6	Yes
Electronic warfare	5	3 days	15	No

MOA = Military Operation Area; ATCAA = Air Traffic Control-Assigned Airspace; TRAP = Tactical Recovery of Aircraft and Personnel

### *2.2.1 Red Flag-Rescue*

The Air Force proposed Red Flag-Rescue 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. Red Flag-Rescue would occur twice a year for 3 weeks per event. Table 2-2 provides the annual sorties in the proposed Playas and/or Tombstone MOA/ATCAA and the associated aircraft as a result of the Red Flag-Rescue training.

Operations would include free-fall and static-line parachute operations at all altitudes, nonstandard formation flights, rescue escort maneuvering above participating rotary wing aircraft, and close air support, all up to FL 230. VFR aerial helicopter refueling would be accomplished up to 10,000 feet MSL, within the Tombstone MOA. There would be no supersonic flights, use of chaff and flares, surface-to-surface or surface-to-air weapons firing, or aerial refueling operations conducted within the proposed Playas MOA/ATCAA.

### *2.2.2 Tactical Recovery of Aircraft and Personnel*

Tactical Recovery of Aircraft & Personnel (TRAP) Certification Exercise (CERTEX) is a U.S. Marine Corps (USMC) Special-Purpose Marine Air-Ground Task Force Central Command mission-essential task performed by assigned and briefed aircrews for the specific purpose of recovery of personnel, equipment, and/or aircraft in a tactical situation when survivors and the location have been confirmed. Commonly known as a simulated rescue of a downed pilot, TRAP CERTEX requires use of aircraft and ground forces in a closely coordinated set of actions to execute the rescue of personnel on the ground. Table 2-3 lists the annual sorties in the proposed Playas MOA/ATCAA and the associated aircraft as a result of the TRAP CERTEX.

Proposed aerial activities would include tactical combat maneuvering (basic fighter maneuvers, simulated air-to-ground ordnance delivery, and tactical landing profiles) by fighter and transport category tiltrotor and rotary wing aircraft involving abrupt, unpredictable changes in altitude, attitude, and direction of flight. Nonstandard formation flights are possible. There would be no supersonic flights, use of chaff and flares, surface-to-surface or surface-to-air weapons firing, or aerial refueling operations conducted within the proposed Playas MOA/ATCAA.

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**Attachment**

**Table 2-2. Proposed Red Flag-Rescue Annual Sorties in the Proposed Playas MOA/ATCAA**

Aircraft Type	Sorties in Playas per Day	Duration (minutes) in Proposed Playas MOA/ATCAA	Additional Minutes in other MOAs (e.g., Tombstone)
A-10	8	120	30
AV-8	4	120	30
F-15	4	120	30
F-15E	4	120	30
F-16	4	120	30
F-18	4	120	30
F-22	4	120	30
F-35	4	120	30
Foreign fighters	4	120	30
M/HH-60	2	120	30
UH-1	2	120	30
MH-6	2	120	30
AH-64	2	120	30
CH/MH-47	2	120	30
AH-1	2	120	30
C-23	2	120	30
SC-7	2	120	30
C-2	2	120	30
CH-53	2	120	30
CV/MV-22	2	120	30
EC-725	2	120	60
Foreign helicopters	2	120	30
MQ-1	2	120	30
MQ-9	2	120	30
HC-130	2	120	30
MC-12	2	120	30
MC-130	2	120	30
AC-130	2	120	30
U-28	2	120	30
UH-72	2	120	30

Note: MOA = Military Operation Area; ATCAA = Air Traffic Control-Assigned Airspace

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## Attachment

**Table 2-3. Proposed TRAP Annual Sorties in the Proposed Playas MOA/ATCAA**

Aircraft Type	Sorties in Playas per Day	Duration (minutes) in Proposed Playas MOA/ATCAA	Additional Minutes in other MOAs (e.g., Tombstone)
MV-22B	2	120	180
KC-130J	1	120	180
AH-1Z	2	120	180
UH-1Y	2	120	180
AV-8B / F-35B	2	120	180
FA-18CD / F-35BC	2	120	180
A-10	2	120	180

Note: MOA = Military Operation Area; ATCAA = Air Traffic Control-Assigned Airspace

### 2.2.3 Electronic Warfare Training

Electronic Warfare uses the EM spectrum to attack an enemy, or impede enemy actions by denying the use of the EM spectrum, while not impacting friendly forces. This additional training, in conjunction with PTRC activities, would entail five events per year with a duration of 3 days per event (for a total of 15 days per year). Table 2-4 provides the aircraft that would be used during this training and the number of sorties per day inside the proposed Playas MOA/ATCAA. The EW aircraft would be outside the proposed Playas MOA/ATCAA, but would work in coordination with other faster, maneuvering aircraft that would need the proposed MOA/ATCAA (as listed in Table 2-4). Activities outside of the proposed MOA/ATCAA are not within the scope of this EA.

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**Attachment**

**Table 2-4. Proposed Electronic Attack Annual Sorties in the Proposed Playas MOA/ATCAA**

Aircraft Type	Sorties in Playas per Day	Duration (minutes) in Proposed Playas MOA/ATCAA	Additional Minutes in other MOAs (e.g., Tombstone)
A-10	8	120	30
AV-8	4	120	30
F-15	4	120	30
F-15E	4	120	30
F-16	4	120	30
F-18	4	120	30
F-22	4	120	30
F-35	4	120	30
Foreign fighters	4	120	30
M/HH-60	2	120	30
UH-1	2	120	30
MH-6	2	120	30
AH-64	2	120	30
CH/MH-47	2	120	30
AH-1	2	120	30
C-23	2	120	30
SC-7	2	120	30
C-2	2	120	30
CH-53	2	120	30
CV/MV-22	2	120	30
EC-725	2	120	60
Foreign helicopters	2	120	30
MQ-1	2	120	30
MQ-9	2	120	30
HC-130	2	120	30
MC-12	2	120	30
MC-130	2	120	30
AC-130	2	120	30
U-28	2	120	30
UH-72	2	120	30

Note: MOA = Military Operation Area; ATCAA = Air Traffic Control-Assigned Airspace

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### 2.3 ALTERNATIVES

Two alternatives are proposed to meet the purpose and need for the Proposed Action.

#### 2.3.1 *Alternative 1*

Alternative 1 would establish the Playas MOA/ATCAA with the floor at 300 feet AGL and ceiling at FL 230. Training would consist of Red Flag-Rescue and TRAP, as described in Sections 2.2.1 and 2.2.2, respectively. The proposed MOA/ATCAA would be activated for 34 days a year, as shown in Table 2-5.

**Table 2-5. Alternative 1 - Annual Potential Activities in the Proposed Playas MOA/ATCAA**

Activity	Events per year	Duration	Total Days
Red Flag-Rescue	2	3 weeks	28
TRAP	6	12 hours	6
<b>Total</b>			<b>34</b>

Note: MOA = Military Operation Area; ATCAA = Air Traffic Control-Assigned Airspace; TRAP = Tactical Recovery of Aircraft and Personnel

#### 2.3.2 *Alternative 2*

Alternative 2 would include Alternative 1 (34 days of training using the proposed MOA/ATCAA) with the addition of Electronic Warfare training, which would entail five events per year with a duration of three days per event. Alternative 2 would establish the Playas MOA/ATCAA with the floor at 300 feet AGL and ceiling at FL 230. Training would consist of Red Flag-Rescue, TRAP, and Electronic Warfare training, as described in Sections 2.2.1, 2.2.2, and 2.2.3, respectively. The proposed MOA/ATCAA would be activated for 49 days a year, as shown in Table 2-6, an increase of 15 days when compared to Alternative 1.

**Table 2-6. Alternative 2 - Annual Potential Activities in the Proposed Playas MOA/ATCAA**

Activity	Events per year	Duration	Total Days
Red Flag-Rescue	2	3 weeks	28
TRAP	6	12 hours	6
Electronic Warfare	5	3 days	15
<b>Total</b>			<b>49</b>

Note: MOA = Military Operation Area; ATCAA = Air Traffic Control-Assigned Airspace; TRAP = Tactical Recovery of Aircraft and Personnel

#### 2.3.3 *No Action Alternative*

While the *National Environmental Policy Act of 1969* (NEPA) process requires an EA to analyze the No Action Alternative, analysis of the No Action Alternative provides a benchmark, allowing decisionmakers to compare the magnitude of the potential environmental effects of the Proposed Action. "No action" means that an action would not take place at this time, and the resulting environmental effects from taking no action would be compared with the effects of allowing the proposed activity to go forward.

The No Action Alternative has two components:

- The Air Force would continue to use the Playas TMOA/ATCAA for Red Flag-Rescue activities as described in Section 1.1. The Air Force has previously completed a NEPA analysis for the use of a TMOA/ATCAA over the next 4 years (USAF, 2020a). For consistency, the No Action would include USMC TRAP activities. The USMC has not completed a NEPA analysis for future use of a TMOA/ATCAA and would be required to do so. The Air Force and USMC would be responsible for submitting aeronautical proposals for each requested establishment of the TMOA/ATCAA. Each individual TMOA/ATCAA request is its own independent airspace action from an aeronautical perspective. Since the TMOA only last 2-3 weeks for Red Flag, once those dates have past, the

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TMOA expires. Training would need to be planned months in advance with no flexibility in schedule or scope.

- If there is no TMOA available, training exercises would not continue in the airspace above the PTRC. Ground based training, outside the scope of this EA, would still occur at the PTRC.

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**Appendix A-3.  
Interagency and Intergovernmental Coordination for Environmental Planning  
Mailing List**

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US Senator Martin Heinrich  
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**Appendix A-4.  
Interagency and Intergovernmental Coordination for Environmental Planning  
Responses Received**

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Michelle Lujan Grisham  
Governor

STATE OF NEW MEXICO  
**DEPARTMENT OF CULTURAL AFFAIRS**  
**HISTORIC PRESERVATION DIVISION**

BATAAN MEMORIAL BUILDING  
407 GALISTEO STREET, SUITE 236  
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PHONE (505) 827-6320 FAX (505) 827-6338

November 10, 2020

Kevin Wakefield  
355 CES/CEIE  
3775 South 5<sup>th</sup> Street  
Davis-Monthan AFB, Arizona, 85707

*Re: Section 106 Consultation Initiation for the Environmental Assessment for Proposed Playas Special Use Airspace*

Dear Mr. Wakefield,

Thank you for sending the State Historic Preservation Officer (SHPO) a letter concerning the consultation on the Environmental Assessment for the Proposed Playas Special Use Airspace. The SHPO has the following comments regarding the APE and the potential to affect historic properties.

The Old Hatchet Mine and the American Mill (State Register 721) is located approximately 6 miles east of Playas and would be within the proposed APE. The property contains adobe structural remains. Please assess the effects of the proposed undertaking on State Register Property 721. I have included the nomination form for State Register 721 as an attachment.

Please do not hesitate to contact me if you would like to discuss these comments.

Sincerely,

A handwritten signature in blue ink that reads "Geoff Cunnar".

Geoff Cunnar, PhD RPA  
Staff Archaeologist  
State of New Mexico Department of Cultural Affairs  
Historic Preservation Division  
407 Galisteo Street, Suite 236  
Santa Fe, New Mexico 87501  
505-476-0530



**White Mountain Apache Tribe**  
**Office of Historic Preservation**  
**PO Box 1032**  
**Fort Apache, AZ 85926**  
**Ph: (928) 338-3033 Fax: (928) 338-6055**

**To:** Joseph C. Turnham, Colonel, USAF Commander

**Date:** November 06, 2020

**Re:** *Environmental Assessment for the proposed Playas Special Use Airspace*

.....

The White Mountain Apache Tribe Historic Preservation Office appreciates receiving information on the project dated: October 16, 2020. In regards to this, please attend to the following statement below.

Thank you for allowing the White Mountain Apache tribe the opportunity to review and respond to the above proposed establishment of airspace in the form of a permanent Military Operation Area centered over the Playas Training and Research Center in Grant and Hidalgo Counties, New Mexico.

Please be advised, we reviewed the consultation letter and information provided, and determined the project will "*Not have an Adverse Effect*" on the tribe's cultural heritage resources and/or traditional cultural properties. No further consultation is necessary and/or required.

Thank you for your continued collaborations in protecting and preserving places of cultural and historical importance.

Sincerely,

*Mark T. Altaha*

White Mountain Apache Tribe – THPO  
Historic Preservation Office

**APPENDIX B.  
SOUND, NOISE, AND POTENTIAL EFFECTS**

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## APPENDIX B      SOUND, NOISE, AND POTENTIAL EFFECTS

The following data augments the information concerning aircraft noise modeling found in **Sections 3.2 and 4.2** of this document.

### B.1 AIRCRAFT PROFILES

#### B.1.1 Exercise Red Flag Rescue

**Table B-1. Altitude and Power Breakouts by Aircraft Type for RFR**

Aircraft Type	Includes	Altitude Breakout - Time Spent in PLAYAS MOA						Average Power Setting
		499' AGL 300' AGL	999' AGL 500' AGL	2,999' AGL 1,000' AGL	9,999' MSL 3,000' AGL	17.9k' MSL 10k' MSL	FL230 18k' MSL	
A-10 / FW RESCORT	A-10	5%	10%	15%	20%	50%		90%
Fighters	AV-8, F-15, F-15E, F-16, F-18, F-22, F-35, other Foreign Fighters				10%	30%	60%	80%
Helicopter - Light and Heavy	M/HH-60, UH-1, MH-6, AH- 64, CH/MH-47, CH-53, EC- 725, UH-72, and other foreign	60%	30%	10%				80-120 kts, full RPM by type
Helicopter - Attack	AH-64, AH-1, UH-1	5%	85%	10%				80-120 kts, full RPM by type
Tiltrotor	CV/MV-22	5%	10%	10%	75%			85%
UAS	MQ-1, MQ-9					80%	20%	full
Turboprop Heavier	MC-130, HC-130, AC-130, EC-130				30%	70%		92%
Turboprop Lighter	C-23, SC-7, C-2, E-2, U- 28, MC-12			10%	20%	70%		92%
Light Jet	EC-37B					10%	90%	80%

Note: AGL=above ground level; kts=knots; MSL=mean sea level; RPM= revolutions per minute

### B.1.2 Exercise TRAP/CERTEX

**Table B-2. Altitude and Power Breakouts by Aircraft Type for TRAP/CERTEX.**

Aircraft Type	Altitude Breakout - Time Spent in PLAYAS MOA						Average Power Setting
	499' AGL 300' AGL	999' AGL 500' AGL	2,999' AGL 1,000' AGL	9,999' MSL 3,000' AGL	17.9k' MSL 10k' MSL	FL230 18k' MSL	
MV-22B	5%	10%	10%	75%			85%
CH-53K	60%	30%	10%				full RPM, 80-120 kt per model
KC-130J				20%	80%		92%
AH-1Z	60%	30%	10%				full RPM, 80-120 kt per model
UH-1N	60%	30%	10%				
AV-8B / F-35B				10%	30%	60%	85%
FA-18CD / F-35BC				10%	30%	60%	85%
KC-10	(not in Playas)						na
A-10	5%	10%	15%	20%	50%		90%

Note: AGL=above ground level; kts=knots; MSL=mean sea level; RPM= revolutions per minute

**B.1.3 Exercise: EW Training**

**Table B-3. Altitude and Power Breakouts by Aircraft Type for EW Training Exercise.**

Aircraft Type	Includes	Altitude Breakout - Time Spent in PLAYAS MOA						Average Power Setting
		499' AGL 300' AGL	999' AGL 500' AGL	2,999' AGL 1,000' AGL	9,999' MSL 3,000' AGL	17.9k' MSL 10k' MSL	FL230 18k' MSL	
A-10 / FW RESCORT	A-10	5%	10%	15%	20%	50%		90%
Fighters	AV-8, F-15, F-15E, F-16, F-18, F-22, F-35, other Foreign Fighters				10%	30%	60%	80%
Helicopter - Light and Heavy	M/HH-60, UH-1, MH-6, AH-64, CH/MH-47, CH-53, EC-725, UH-72, and other foreign	60%	30%	10%				80-120 kts, full RPM by type
Helicopter - Attack	AH-64, AH-1, UH-1	5%	85%	10%				80-120 kts, full RPM by type
Tiltrotor	CV/MV-22	5%	10%	10%	75%			85%
UAS	MQ-1, MQ-9					80%	20%	full
Turboprop Heavier	MC-130, HC-130, AC-130, EC-130				30%	70%		92%
Turboprop Lighter	C-23, SC-7, C-2, E-2, U-28, MC-12			10%	20%	70%		92%
Light Jet	EC-37B					10%	90%	80%

Note: AGL=above ground level; kts=knots; MSL=mean sea level; RPM= revolutions per minute

## **B.2 ADDITIONAL MODELING ASSUMPTIONS:**

- No supersonic flight will happen in the proposed Playas.
- Aircraft noise generated by aircraft in the Playas MOA will be assumed to be evenly distributed in the MOA.

### **B.2.1 Modeling Scenarios**

#### **B.2.1.1 Alternative 1**

DNL Metric:

- 2 annual Red Flag-Rescue Exercises
- 6 annual TRAP/CERTEX Exercises
- 34 Total Playas MOA activation days per year

L<sub>dnmr</sub> Metric:

In the same Month:

- 1 Red Flag-Rescue Exercise
- 1 TRAP/CERTEX Exercise

#### **B.2.1.2 Alternative 2**

DNL Metric:

- 2 annual Red Flag-Rescue Exercises
- 6 annual TRAP/CERTEX Exercises
- 5 annual EW Training Exercises
- 49 Total Playas MOA activation days per year

L<sub>dnmr</sub> Metric:

In the same Month:

- 1 Red Flag-Rescue Exercise
- 1 TRAP/CERTEX Exercise
- 1 EW Training Exercises