# FINAL

# **ENVIRONMENTAL ASSESSMENT**

FOR

# **NEW RECEIVING FACILITIES AT**

# **AEROSPACE DATA FACILITY SOUTHWEST**



# White Sands Missile Range, New Mexico

July 2023

REVIEWED AND APPROVED BY ADF-SW AND WSMR SECURITY FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED; APRIL 5, 2023 THIS PAGE INTENTIONALLY LEFT BLANK.

#### US ARMY WHITE SANDS MISSILE RANGE, NEW MEXICO, FINDING OF NO SIGNIFICANT IMPACT

**Name of the Proposed Action:** Environmental Assessment for New Receiving Facilities at Aerospace Data Facility Southwest

**Description of the Proposed Action:** The Aerospace Data Facility – Southwest (ADF-SW) has prepared a Final Environmental Assessment (EA) to construct and operate new receiving facilities, including supporting infrastructure. ADF-SW is located within the White Sands Test Facility (WSTF), a subdivision of White Sands Missile Range (WSMR) leased from the Army by the National Aeronautics and Space Administration (NASA). A 56.5-acre parcel currently under NASA administration would be transferred to ADF-SW for the new facilities. These facilities would include a new visitor center, main entrance gate, vehicle inspection site, mail processing center, warehouse, electrical substation, and security fence. Three new roads and utility lines connecting the new buildings to existing utilities and roads would also be constructed. Approximately 50 new employees would be hired to support the operation of the proposed facilities.

**Purpose and Need:** The purpose of the Proposed Action is to provide adequate facilities for ADF-SW to receive personnel, vehicles, and materials at the site systematically and efficiently, while further improving the site's security to meet Department of Defense (DoD) Antiterrorism/Force Protection (AT/FP) standards. The Proposed Action is needed to (1) accommodate existing demand at ADF-SW for receiving operations, (2) accommodate potential future expansion of ADF-SW, and (3) ensure that ADF-SW maintains up-to-date site security measures that meet minimum Unified Facilities Criteria (UFC) standards.

**Alternatives Considered:** Two alternatives were analyzed in the Final EA: the Proposed Action and a No Action Alternative. Under the Proposed Action (the Preferred Alternative), ADF-SW would construct and operate a new visitor center, main entrance gate, vehicle inspection site, mail processing center, warehouse, electrical substation, and security fence on the proposed 56.5acre parcel to be transferred from NASA.

Under the No Action Alternative, the proposed new receiving facilities at ADF-SW would not be constructed and ADF-SW would continue to use its existing facilities. The 56.5-acre parcel would remain undeveloped.

**Environmental Consequences:** The Final Environmental Assessment assessed potential environmental impacts. Through implementation of best management practices (BMPs) there would be no significant impacts on the environment if the Proposed Action is implemented.

Example BMPs include following standard dust controls during construction to minimize fugitive dust emissions; briefing construction crews on the procedures to be followed during unanticipated discoveries of cultural resources; developing a stormwater pollution prevention plan (SWPPP) and adhering to proper erosion and sediment controls during land-disturbing activities; revegetating disturbed areas using properly adapted xeric plants approved by WSMR; and designing the site to restore pre-development hydrology to the maximum extent technically feasible and comply with Section 438 and the Energy Independence and Security Act (EISA).

**Public Review:** ADF-SW invited members of the public to comment on the Draft EA prior to document finalization during a 30-day public review period from May 22, 2023 to June 21, 2023. The Draft FONSI was also published in the *Las Cruces Sun-News* on May 21, 2023. Hardcopies of the Draft EA were available to the public at the following information repositories: Thomas Branigan Memorial Library (Las Cruces, NM) and WSMR Post Library (WSMR, NM).

The document was also available electronically on the White Sands Garrison website, <u>https://home.army.mil/wsmr/index.php/about/garrison/directorate-public-works-dpw/environmental</u>.

Following the publication of the Draft EA, ADF-SW coordinated with the New Mexico Department of Environment (NMED) regarding fugitive dust emissions and surface water quality. No other public comments were received during the 30-day public review period.

**Conclusions:** Based on the information and analysis presented in this EA and on the guidelines for determining the significance of proposed federal actions in 40 CFR 1508.27, Army guidelines under 32 CFR 651, and review of public and agency comments submitted during the 30-day comment period, WSMR has concluded that the Proposed Action, in conjunction with BMPs specified within the EA, would result in no significant impacts on the environment. Applicable federal, state, and local laws and regulations would be followed. Accordingly, the US Army and WSMR have determined that an environmental impact statement pursuant to the National Environmental Policy Act is not required, and this Finding of No Significant Impact is hereby submitted.

DAVID A. MITCHELL Colonel, U.S. Army Commanding

Date

#### US ARMY WHITE SANDS MISSILE RANGE WHITE SANDS MISSILE RANGE, NEW MEXICO 88002-5048

TITLE: Environmental Assessment for New Receiving Facilities at Aerospace Data Facility Southwest

**PROPONENT:** 

DAVID ANDERSON COL **Deputy Chief of Facility** 

31 Jul 23

Date

**REVIEWED:** 

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Date: 2023.08.02 09:47:40 -06'00'

For:

**BRIAN D. KNIGHT** Chief, Environmental Division **Directorate of Public Works** 

**CONCURRENCE:** 

land

MCHAEL'S. WILLIAMS Acting Director Directorate of Public Works

**APPROVED:** 

**DAVID A. MITCHELL** Colonel, U.S. Army Commanding

2 August 2023

Date

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Date

25 Ang 2023

Date

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## ABBREVIATIONS AND ACRONYMS

AADT	Average Annual Daily Traffic	FPPA	Farmland Protection Policy Act
ACAM	Air Conformity	FY	Fiscal Year
	Applicability Model	GHG	Greenhouse Gas
ADF-SW	Aerospace Data Facility	GWP	Global Warming Potential
	Southwest	HAP	Hazardous Air Pollutant
APF	Area of Potential Effects	HTMW	Hazardous and Toxic
AR	Army Regulation		Materials and Waste
AT/FP	Antiterrorism/Force	H₂S	Hydrogen sulfide
	Protection		Integrated Cultural
BGEPA	Bald and Golden Fagle		Resources Management
DOLIN	Protection Act		Plan
RI M	Bureau of Land	ICUZ	Installation Compatible
BEIM	Management	1002	Use Zone
BMP	Best Management	INCRMP	Integrated Natural and
	Practice		Cultural Resources
САА	Clean Air Act		Management Plan
CEQ	Council on Environmental	INRMP	Integrated Natural
	Quality		Resource Management
CFR	Code of Federal		Plan
	Regulations	IPaC	Information for Planning
CGP	Construction General		and Consultation
	Permit	IPMP	Integrated Pest
CH₄	Methane		Management Plan
CO	Carbon monoxide	LID	Low Impact Development
CO <sub>2</sub>	Carbon dioxide	MBTA	Migratory Bird Treaty Act
CO <sub>2</sub> e	Carbon dioxide	MOU	Memorandum of
	equivalent		Understanding
CWA	Clean Water Act	NAAQS	National Ambient Air
DoD	Department of Defense		Quality Standards
DoDI	Department of Defense	NAGPRA	Native American Graves
	Instruction		Protection and
EA	Environmental		Repatriation Act
	Assessment	NASA	National Aeronautics and
EIS	Environmental Impact		Space Administration
	Statement	NEPA	National Environmental
EISA	Energy Independence		Policy Act
	and Security Act	NHPA	National Historic
EO	Executive Order		Preservation Act
ESA	Endangered Species Act	NMCRIS	New Mexico Cultural
FONSI	Finding of No Significant		Resources Information
	Impact		System

NMED	New Mexico Environment	SO <sub>2</sub>	Sulfur dioxide
	Department	SOP	Standard Operating
NMSA	New Mexico Statutes		Procedures
	Annotated	SWPPP	Stormwater Pollution
NO <sub>x</sub>	Nitrogen oxide		Prevention Plan
N <sub>2</sub> O	Nitrous oxide	UFC	Unified Facilities Criteria
NPDES	National Pollutant	US	United States
	Discharge Elimination	USC	US Code
	System	USD	US Dollar
NRCS	Natural Resources	USEPA	US Environmental
	Conservation Service		Protection Agency
NRHP	National Register of	USFWS	US Fish and Wildlife
	Historic Places		Service
O <sub>3</sub>	Ozone	USGS	US Geological Survey
Pb	Lead	VEC	Valued Environmental
PM	Particulate matter		Component
ROI	Region of Influence	VOC	Volatile Organic
SF	square feet		Compound
SF <sub>6</sub>	Sulfur hexafluoride	WEG	Wind Erodibility Group
SHPO	State Historic	WOUS	Waters of the US
	Preservation Officer	WSMR	White Sands Missile
SIP	State Implementation		Range
	Plan	WSTF	White Sands Test Facility

## 1.0 PURPOSE AND NEED

#### 1.1 INTRODUCTION

This Environmental Assessment (EA) evaluates the Aerospace Data Facility Southwest's (ADF-SW) Proposed Action to construct and operate new receiving facilities, including supporting infrastructure. These facilities would include a new visitor center, main entrance gate, vehicle inspection site, mail processing center, warehouse, electrical substation, and security fence. ADF-SW is located within the White Sands Test Facility (WSTF), a subdivision of White Sands Missile Range (WSMR) leased from the Army by the National Aeronautics and Space Administration (NASA) (see **Figure 1**). The Proposed Action would require ADF-SW to obtain managerial control over an undeveloped 56.5-acre parcel adjacent to the existing ADF-SW site, which is currently managed by NASA.

ADF-SW, on behalf of the Army, has prepared this EA under the provisions of and in accordance with the National Environmental Policy Act (NEPA) (42 United States Code [USC] § 4321 et seq.), Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508), and the *Environmental Analysis of Army Actions, Final Rule* (32 CFR Part 651, 29 March 2002). This EA will facilitate the ADF-SW's decision-making process regarding the Proposed Action and the alternatives considered.

To facilitate public review of this EA, the ADF-SW made the Draft EA and associated Draft Finding of No Significant Impact (FONSI) available on the WSMR Environmental Division website at <a href="https://home.army.mil/wsmr/index.php/about/garrison/directorate-public-works-dpw/environmental">https://home.army.mil/wsmr/index.php/about/garrison/directorate-public-works-dpw/environmental</a>.

#### 1.2 PURPOSE AND NEED

ADF-SW is growing as new personnel continue to be stationed at the site and the growing number of personnel is increasing demand on the existing receiving facilities, as more people must be admitted through the entrance gate, more mail and other materials are being delivered to the site, and more vehicles must be inspected. Additionally, the current ADF-SW entrance gate and receiving facilities do not meet Department of Defense (DoD) Antiterrorism/Force Protection (AT/FP) standards. For example, the entrance gate lacks an approach zone and continuous ballistic protection for personnel, the entrance road between the gate and the interior buildings is too short, and there are insufficient passive vehicle barriers at the site (AECOM, 2020).

The *purpose* of the Proposed Action, therefore, is to provide adequate facilities for ADF-SW to receive personnel, vehicles, and materials at the site systematically and efficiently, while further improving the site's security to meet DoD AT/FP standards.



Figure 1. WSMR Regional Map

The Proposed Action is *needed* to (1) accommodate existing demand at ADF-SW for receiving operations, (2) accommodate potential future expansion of ADF-SW, and (3) ensure that ADF-SW maintains up-to-date site security measures that meet minimum Unified Facilities Criteria (UFC) standards, including:

- UFC 4-010-01 DoD Minimum Anti-Terrorism Standards for Buildings 2018
- UFC 4-022-01 Entry Control Facilities Access Control Points 2017
- UFC 4-022-03 Security Fences and Gates 2013
- UFC 4-022-02 Selection and Application of Vehicle Barriers 2010

#### 1.3 DECISIONS TO BE MADE

ADF-SW, working with the Army, has prepared this EA to satisfy NEPA obligations for the federal Proposed Action described herein. ADF-SW is leading the development of the Proposed Action and environmental review process, while the Army possesses special expertise pertaining to the environmental resources within and adjacent to WSMR. Moreover, as the federal landowner, the Army is the federal decision-maker for this Proposed Action.

Decisions to be made as part of this NEPA process include deciding the components of the Proposed Action to properly address the purpose and need, deciding which alternatives to analyze in detail, deciding whether any valued environmental components would experience significant adverse impacts from the Proposed Action or alternatives, and deciding which actions the Government would commit to undertake to minimize potential environmental impacts, as required under the NEPA, CEQ Regulations, and 32 CFR Part 651.

This EA provides information regarding potential impacts from analyses conducted for the implementation of the Proposed Action as it would affect various valued environmental components. The analysis set forth in this EA allows the decision-maker to balance the protection of environmental resources while fulfilling ADF-SW's mission. Based on an examination of the data generated and an assessment of the magnitude of the potential impacts, a determination would be made indicating if further study is required, via an Environmental Impact Statement (EIS), or if a FONSI is warranted.

#### 1.4 SCOPING AND PUBLIC INVOLVEMENT

Agencies, organizations, and members of the public with a potential interest in the Proposed Action were encouraged to participate in this NEPA process. Refer to **Appendix A** for a complete stakeholder list for this EA.

#### 1.4.1 Agency Coordination

The WSMR Garrison Environmental Division informed and coordinated with other federal, state, and local agencies with jurisdiction by law or special expertise over the Proposed Action to inform the range of issues to be addressed in the EA. Coordination letters to these agencies are consolidated in **Appendix A**. Following the publication of the Draft EA, ADF-SW coordinated with the New Mexico Department of Environment (NMED) regarding fugitive dust emissions and surface water quality.

#### 1.4.2 Native American Consultation

The WSMR Garrison Environmental Division consults and coordinates with federally recognized Native American tribes as required under Department of Defense Instruction (DoDI) 4710.02, *DoD Interactions with Federally Recognized Tribes*, which implements the Annotated DoD American Indian and Alaska Native Policy (dated 27 October 1999); Army Regulation (AR) 200-1, *Environmental Protection and Enhancement* (2007); NEPA; the National Historic Preservation Act (NHPA); and the Native American Graves and Protection and Repatriation Act (NAGPRA) (DoD 2006; DA 2007).

The WSMR Garrison Environmental Division has determined there are no properties within the area of potential effect (APE) for the Proposed Action that are considered religious or culturally significant by Native American tribes; therefore, there is no need to consult or coordinate with federally recognized Native American tribes for this Proposed Action.

#### 1.4.3 Public Review

ADF-SW made the Draft EA and Draft FONSI available for a 30-day public review period from May 22, 2023, to June 21, 2023. The Draft FONSI was also published in the *Las Cruces Sun-News* on May 21, 2023.

The Draft EA and Draft FONSI were available on the WSMR Environmental Division website at <u>https://home.army.mil/wsmr/index.php/about/garrison/directorate-public-works-</u><u>dpw/environmental</u>. Hard copies of the documents were also available for review in the following local area libraries:

- Thomas Branigan Memorial Library: 200 East Picacho Avenue, Las Cruces, NM 88001
- WSMR Post Library: 505 Hof Street, WSMR, NM 88002

No public comments were received during the 30-day public review period. Agency comments have been addressed in the Final EA as appropriate.

#### 1.5 RELATED NEPA, ENVIRONMENTAL, AND OTHER DOCUMENTS

In addition to this EA, the following NEPA and early planning level documents and studies were reviewed and/or used to support the preparation of this EA.

- Environmental Assessment for Cox to Moongate to Apollo Transmission Line Project (BLM, 2020). In 2020, the Bureau of Land Management (BLM) completed an EA for the upgrading and construction of transmission lines on WSMR and neighboring lands. This document serves as a reference for potential impacts to be considered under the Proposed Action.
- Integrated Natural and Cultural Resources Management Plan and Environmental Assessment (INCRMP), 2015-2019 (WSMR, 2015). This plan consolidates the Army's most current data on natural and cultural resources on WSMR.
- Final Phase I Environmental Site Assessment: 56.6-Acre Proposed Land Acquisition for New Main Gate, Visitor's Center, Mail Handling Facility, Vehicle

**Inspections Station, and Electrical Substation** (AECOM, 2022). In 2022 an environmental site assessment was conducted for the site of the Proposed Action. This document was consulted for information on existing conditions and past uses of the Project Site.

- Final Environmental Impact Statement for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range, New Mexico (WSMR, 2009). In 2009 WSMR completed this Final EIS examining the environmental effects of developing new test and training capabilities to meet current and future mission requirements at WSMR. This EIS provides comprehensive background information for multiple resource areas considered in this EA.
- WSTF Integrated Cultural Resources Management Plan (ICRMP) (NASA, 2020). This ICRMP completed in 2020 provides details on the cultural resources specific to WSTF, the subdivision of WSMR where ADF-SW is located.
- WSMR Installation Compatible Use Zone (ICUZ) Study (USAPHC, 2019). WSMR conducted an ICUZ in 2019 to evaluate noise impacts on the installation and surrounding areas. This document provides background on existing conditions at WSMR as related to noise.
- **ADF-SW Integrated Pest Management Plan (IPMP)** (ADF-SW, 2022). The IPMP, most recently updated in 2022, provides a comprehensive and sustainable integrated pest management system for ADF-SW.

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# 2.0 PROPOSED ACTION AND ALTERNATIVES

#### 2.1 PROPOSED ACTION

The Proposed Action being considered in this EA is to construct and operate the new receiving facilities and associated infrastructure listed below. A conceptual site layout for the Proposed Action is illustrated in **Figure 2**. Specific locations of the components would be determined during the design phase and could vary from those shown in this EA.

- Main Entrance Gate (~1,500 square feet [SF])
- Visitor Center (~3,000 SF)
- Vehicle Inspection Site (~1,000 SF)
- Mail Processing Center (~8,000 SF)
- Warehouse (~40,000 SF)
- Electrical Substation (~500 SF)
- Security Fence
- Three new roads
  - "Southern Road" accessing the new main entrance gate with up to three lanes (i.e., two standard access lanes with one additional lane designed for truck inspection)
  - "Serpentine Road" with one inbound and one outbound lane between the main entrance gate and the existing ADF-SW facilities
  - "Perimeter Road," an unpainted, single lane road along the new security fence
- Required utility lines (electrical, water, sewer, and communication)

All proposed facilities would be designed and built in accordance with applicable AT/FP requirements (see **Section 1.2**). Buildings would be one story high, contain parking space, and be constructed on concrete slab foundations. New construction would occur in the southern portion of the Project Site to increase the amount of space between the main gate and the existing buildings, which would also ensure there is additional space within the security perimeter to accommodate potential future ADF-SW growth. The existing security fence would be extended south to the new facilities; the warehouse would be constructed within the security fence, while the other components of the Proposed Action would be located outside of the security fence.

The proposed electrical substation would be constructed in the southwest corner of the Project Site to connect buried power lines from the Project Site to the existing aboveground power lines on the west side of NASA Road, pending confirmation from El Paso Electric during the design phase. For security purposes, electrical power may also be routed to the Project Site from existing ADF-SW facilities within a roadway right-of-way. Solar panels and/or other forms of renewable energy would also be considered during the design phase, and an emergency generator would likely be installed. Water lines would be trenched to the Project Site from the existing ADF-SW buildings within a roadway right-of-way, however, the precise locations of utility lines are subject to change as the road configurations are finalized during the design phase. Water supplied to the site would be sourced from existing ADF-SW system, which connects to the City of Las Cruces sewer system. Communications lines would tie into existing lines that support ADF-SW; these

lines would also be installed in roadway rights-of-way to the extent feasible. Water, sewer, and communications lines would be buried approximately 15 feet or less below ground surface (bgs).

Construction is anticipated to begin in fiscal year (FY) 2025 and take 1 to 2 years to complete. All construction staging would occur within a 65.7-acre Project Site boundary which includes the 56.5-acre parcel being transferred to ADF-SW and 9.2-acres of existing ADF-SW lands south of the main parking lot within the existing fence line. No ground disturbance outside the Project Site is expected. ADF-SW would avoid construction activities within and immediately adjacent to the existing arroyos on the site (see **Section 3.6**) to the extent feasible in order to minimize erosion and sedimentation.

The Proposed Action would comply with all federal and state laws and regulations, including consultation, permitting, and design requirements. For example, the project would comply with applicable requirements of Section 438 of the Energy Independence and Security Act (EISA), which requires federal projects to incorporate into the design, to the maximum extent technically feasible, low impact development (LID) measures to maintain the pre-development hydrology of a site. Such measures could include, but would not be limited to, permeable pavement and water retention/erosion control basins. Construction activities would also be conducted in accordance with the applicable requirements of the US Environmental Protection Agency's (USEPA) National Pollutant Discharge Elimination System (NPDES) and associated permits to manage the quantity and quality of stormwater discharged from the Project Site and minimize the pollution and sedimentation of receiving water bodies. These "regulatory compliance measures" are discussed throughout the resource-specific impact analyses in **Section 3.0**. ADF-SW would comply with each of these requirements if it implements the Proposed Action, thus the analysis assumes compliance with these measures when assessing the impacts.

Once construction is completed, approximately 50 new employees would be hired to support the operation of the proposed facilities. New personnel would include guard, maintenance, and warehouse staff with approximately 20 to 30 staff working per shift. The existing main gate would remain operational for specific circumstances (e.g., as an alternate gate), while the new main gate would become the primary entrance point for personnel. Most oversized truck or construction traffic would continue to use the existing truck gate north of the existing ADF-SW facilities, although some trucks would access the warehouse via the new main gate. Additionally, several tents used for vehicle inspections at the existing main gate would likely be taken down when the new vehicle inspection site becomes operational.





#### 2.2 ALTERNATIVES TO THE PROPOSED ACTION

#### 2.2.1 No Action Alternative

Under the No Action Alternative, no new facilities would be constructed. Management of the 56.5acre parcel would not be transferred from NASA to ADF-SW. ADF-SW would continue to operate using the existing main gate, vehicle inspection site, and mail processing center, and without a visitor center. The warehouses currently in use at ADF-SW are likely to be demolished as part of a separate proposed action and thus would still need to be replaced. ADF-SW would experience excessive demand of these facilities relative to their capacities, and would not meet current AT/FP standards.

While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, this alternative is carried forward for analysis to provide a comparative baseline against which to analyze the effects of the Proposed Action.

#### 2.3 ALTERNATIVES ELIMINATED FROM CONSIDERATION

Alternative locations for these facilities have been dismissed from further consideration as no other sites meet the selection standards described below. The proposed location must:

- Be able to maintain a continuous security fence with the existing ADF-SW facilities, and be reasonably close to existing transportation infrastructure.
- Contain sufficient space for the proposed facilities to be constructed to AT/FP requirements.
- Be available for ADF-SW's use.

Constructing new facilities in the area west of NASA Road would not allow for a continuous security fence since NASA Road must also remain accessible to NASA personnel. The areas north and east of ADF-SW are already developed and used by NASA, and are not large enough to accommodate AT/FP design requirements. The area east of ADF-SW also is not proximal to existing transportation infrastructure. Finally, a 78-acre parcel (see **Figure 2**) was previously considered, however, that parcel included areas later designated as "no build" areas and was subsequently reduced to the current 56.5-acre parcel. Therefore, these alternative locations were eliminated from consideration and the Proposed Action is the only reasonable alternative carried forward for detailed analysis in this EA.

# 3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter presents a description of the baseline conditions in the Region of Influence (ROI) for each Valued Environmental Component (VEC) and analyzes the potential environmental consequences for each VEC that could result from the Proposed Action. The ROI for each VEC is identified in each VEC subsection that follows.

#### 3.1 VALUED ENVIRONMENTAL COMPONENT (VEC) ANALYSIS

A VEC analysis was conducted to identify environmental resource areas potentially impacted by the Proposed Action. This EA applies a method described in the US Army Environmental Command NEPA Analysis Guidance Manual used to rate VECs typically addressed in Army NEPA analyses (Army, 2007). This analytical process allows a level of consistency in evaluating impacts and comparing impacts across installations to help with Army-wide decision-making. It also advocates a process for focusing analysis on areas where impacts are most likely to occur, considering the type of actions involved in a geographic context.

**Table 1** summarizes the degree to which each VEC would potentially be affected by the Proposed

 Action. Possible ratings for each VEC are low, moderate, and high:

- Low (L) Negligible impact anticipated. Generally perceptible, but at the lower end of detection.
- Moderate (M) Minor or moderate impacts anticipated (less than significant). A minor impact would be slight, but detectable. A moderate impact would be readily apparent.
- High (H) Significant impact potential anticipated (likely to be mitigated to less than significant). Significant impacts would be those that, in their context and due to their magnitude, have the potential to meet the thresholds for significance set forth in CEQ regulations (40 CFR 1508.2) and would warrant examination for potential means for mitigation.

VECs rated low indicate that potential impacts to those resource areas were considered to be negligible or nonexistent, so they are not analyzed in detail in this EA. This EA identified seven VECs with a rating of moderate. No VECs were identified with a high rating. Therefore, this EA evaluates the following VECs: Air Quality and Climate; Cultural Resources; Geology, Topography, and Soils; Biological Resources; Water Resources; Facilities and Traffic/Transportation; and Socioeconomics.

VEC	Rating	Rationale/Special Considerations
Air Quality and Climate	Μ	Construction and maintenance activities would result in temporary and minor fugitive dust and vehicle emissions (criteria pollutants and greenhouse gases [GHG]) for 1 to 2 years. A small emergency generator would also be installed, which would produce long-term, minor emissions. The attainment status of air pollutants would not be affected. Therefore, minor impacts to air quality and climate would occur.
Airspace	L	The Proposed Action would not involve any airspace operations nor impede existing airspace use or management. Therefore, no impacts to airspace would occur. This VEC is dismissed from detailed analysis.
Cultural Resources	М	There are no National Register of Historic Places (NRHP)- eligible cultural sites in the vicinity of the Project Site. However, there is potential for unanticipated cultural discoveries during construction.
Noise	L	Temporary and localized noise would be generated from construction operations and vehicle activity. There are no public receptors in the vicinity of the Project Site. Therefore, no impacts to the noise environment would occur. This VEC is dismissed from detailed analysis.
Geology, Topography, and Soils	М	Proposed excavation would be approximately 15 feet or less bgs. Therefore, minor, permanent impacts to geology are possible. Minor, permanent soil disturbance would also occur during facility and infrastructure construction.
Biological Resources	М	Construction would have permanent displacement impacts on biological resources (potentially including special status species) in the Project Site. Operation of the receiving facilities after construction could potentially cause long-term disturbance to wildlife species in the vicinity of the Project Site.
Water Resources	М	There are no jurisdictional Waters of the US (WOUS) on the Project Site, however, construction activities, particularly the proposed Serpentine Road, would affect ephemeral drainages that convey stormwater.
Facilities and Traffic/Transportation	М	Construction impacts to buildings and transportation would be localized to ADF-SW and NASA Road. A minor increase in traffic volume in the immediate area may accompany construction and operation of the new facilities (i.e., construction workers and approximately 50 new operational employees). Additionally, the Proposed Action would include a minor long- term increase in utility requirements to support the new facilities.
Socioeconomics	М	The Proposed Action would result in minor beneficial effects to the local economy from purchase of labor and products (during construction) and hiring of new employees to staff the new facilities (during operation).

Table '	1:	Valued	Environmental	Components
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VEC	Rating	Rationale/Special Considerations
Environmental Justice and Protection of Children	L	The Proposed Action would occur entirely within WSMR lands isolated from the general population; thus, there would be no impact to any populations, including minority populations, low- income populations, and children. Therefore, the Proposed Action would not disproportionately affect minority or low-income populations or children. This VEC is dismissed from detailed analysis.
Land Use	L	The Proposed Action involves developing an unimproved site immediately adjacent to an existing site of the same use. Site management would be transferred from NASA to ADF-SW. The Project Site is entirely within WSMR and dedicated to Government use, and ample buffer land exists between NASA and ADF-SW. Therefore, the Proposed Action would have no impact on land use. This VEC is dismissed from detailed analysis.
Health and Safety	L	ADF-SW or contractor personnel would be responsible for ensuring ground safety and compliance with all applicable occupational health and safety regulations and worker compensation programs, including unexploded ordnance training. ADF-SW or contractor personnel would conduct construction activities in a manner that would not pose any risks to personnel. Therefore, no impacts to health and safety would occur. In the long-term, the Proposed Action would benefit health and safety of on-site personnel by improving site security and traffic circulation. This VEC is dismissed from detailed analysis.
Hazardous Waste and Hazardous Materials	L	Any petroleum, oils, and lubricants generated during construction or operation would be collected and stored in properly labeled, approved containers and recycled or disposed offsite by the construction contractor in accordance with WSMR Regulation 200-1, Hazardous Waste Management. ADF-SW would also follow the ADF-SW Spill Prevention Plan. No impacts to known environmental restoration sites would occur. In addition, in the unlikely event that an unmarked drum or other container, spill, or unidentified substance is encountered, ADF- SW would coordinate with WSMR according to regulations. Therefore, no impacts from hazardous materials or wastes would occur. This VEC is dismissed from detailed analysis.

#### 3.2 AIR QUALITY AND CLIMATE

Air quality conditions at a given location are a function of several factors including the quantity and type of pollutants emitted locally and regionally, as well as the dispersion rates of pollutants in the region. Primary factors affecting pollutant dispersal include wind speed and direction, atmospheric stability, climate and temperature, and topography. Factors affecting climate include the effect the Proposed Action has on short-term or long-term increases in GHG emissions.

The ROI for air quality is the El Paso-Las Cruces-Alamogordo Interstate Air Quality Control Region, which includes four counties in south-central New Mexico and six counties in west Texas. The change in climate conditions caused by GHGs is a global effect. However, for the purposes

of estimating a project's climate impacts, GHG emissions are compared to county and national GHG emissions, as described in **Section 3.2.2.1**.

#### 3.2.1 Affected Environment

#### 3.2.1.1 Criteria Pollutants

National Ambient Air Quality Standards (NAAQS) are established by the USEPA for six "criteria pollutants" (as listed under Section 108 of the Clean Air Act [CAA]) (see **Table 2**): carbon monoxide (CO); lead (Pb); nitrogen oxides (NO<sub>x</sub>); ozone (O<sub>3</sub>); particulate matter (PM), divided into two size classes of 1) aerodynamic size less than or equal to 10 micrometers (PM<sub>10</sub>), and 2) aerodynamic size less than or equal to 2.5 micrometers (PM<sub>2.5</sub>); and sulfur dioxide (SO<sub>2</sub>).

The ambient air quality in an area is characterized in terms of whether it complies with the NAAQS. Areas where monitored outdoor air concentrations are within an applicable NAAQS are considered in *attainment* of that NAAQS. If sufficient ambient air monitoring data are not available to make a determination, the area is instead deemed as *attainment/unclassifiable*. Areas where monitored outdoor air concentrations exceed the NAAQS are designated by the USEPA as *nonattainment*. Nonattainment designations for some pollutants (e.g.,  $O_3$ ) can be further classified based on the severity of the NAAQS exceedances. Lastly, areas that have historically exceeded the NAAQS but have since instituted controls and programs that have successfully remedied these exceedances are known as *maintenance* areas. Portions of Doña Ana County are designated as *nonattainment* for PM<sub>10</sub> (moderate) and 8-hour ozone (marginal) (USEPA, 2022). However, WSMR is designated *attainment/unclassifiable*.

The General Conformity Rule of the federal CAA mandates that the federal government abide by approved State Implementation Plans (SIP) (i.e., air quality control plans). AR 200-1, part 1-24, *Environmental Protection and Enhancement*, states (in part) that Garrison Commanders will: "Comply with applicable federal, state, and local environmental laws, regulations, internal directives and goals, executive orders (Eos), and overseas Foreign Governing Standards." As such, AR 200-1 Chapter 4, *Environmental Asset Management* sets forth the following air quality policies:

- Comply with applicable federal, state, and local air quality regulations, permit requirements, and overseas Final Governing Standards.
- Identify and implement cost-effective pollution prevention measures that will reduce toxic or criteria air emissions.
- Eliminate dependency on ozone-depleting substances.

Pollutant	Туре	Averaging Time	NAAQS Standard
Carbon Monoxide (CO)	Primary	8-hour	9 parts per million (ppm)
	Primary	1-hour	35 ppm
Lead (Pb)	Primary & Secondary	Rolling 3-month average	0.15 micrograms per cubic meter (µg/m³)
Nitrogen Dioxide (NO3)	Primary	1-hour	100 (parts per billion) ppb
	Primary & Secondary	Annual	53 ppb <sup>(2)</sup>
Ozone (O3)	Primary & Secondary	8-hour	0.070 ppm <sup>(3)</sup>
	Primary	Annual	12 μg/m³
Particulate matter equal to or less than 2.5 microns in diameter (PM <sub>2.5</sub> )	Secondary	Annual	15 μg/m³
	Primary & Secondary	24-hour	35 μg/m³
Particulate matter equal to or less than 10 microns in diameter (PM <sub>10</sub> )	Primary & Secondary	24-hour	150 μg/m³
Sulfur Dioxide (SO <sub>2</sub> )	Primary	1-hour	75 ppb <sup>(4)</sup>
	Secondary	3-hour	0.5 ppm
Hydrogen Sulfide (H <sub>2</sub> S)	None	1-hour average	None
Total Reduced Sulfur	None	Half-hour average	None

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(1) In areas designated nonattainment for Lead standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m<sup>3</sup> as a calendar quarter average) also remain in effect.

<sup>(2)</sup> The official level of the annual NO<sub>2</sub> standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of a clearer comparison to the 1-hour standard.

<sup>(3)</sup> Fina<sup>1</sup> rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O<sub>3</sub> standards additionally remain in effect in some areas. Revocation of the previous (2008) O<sub>3</sub> standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

<sup>(4)</sup> The previous SO<sub>2</sub> standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO<sub>2</sub> standards or is not meeting the requirements of a SIP call under the previous SO<sub>2</sub> standards (40 CFR 50.4(3)). A SIP call is a USEPA action requiring a state to resubmit all or part of its SIP to demonstrate attainment of the required NAAQS. Source: (USEPA, 2022)

#### 3.2.1.2 Climate Change and Greenhouse Gas Emissions

GHGs are pollutants of concern for air quality and climate change. The primary long-lived GHGs directly emitted by human activities are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide

(N<sub>2</sub>O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF<sub>6</sub>). To estimate global warming potential (GWP), all GHGs are expressed relative to a reference gas, CO<sub>2</sub>, which is assigned a GWP equal to 1. All six GHGs are multiplied by their GWP and the results are added to calculate the total equivalent emissions of CO<sub>2</sub> (CO<sub>2</sub>e). However, the dominant GHG emitted is CO<sub>2</sub>, mostly from fossil fuel combustion (85.4 percent). This EA considers CO<sub>2</sub>e as the representative GHG emission.

The current level of air emissions from all natural and human activities within a region represent the baseline emissions for that area. The National Emissions Inventory, updated every 3 years by the USEPA, can be used to identify the baseline emissions. It contains estimates of annual air emissions by county. The most recent publicly available inventory data by county is for calendar year 2017. **Table 3** presents the baseline GHG emission levels obtained from the 2017 National Emissions Inventory for Doña Ana County. Nationally, the 2020 baseline GHG emission level is 5,981 million metric tons of  $CO_2e$  (USEPA, 2022). **Table 3** also summarizes climate conditions for the ROI.

Climate Feature	ROI
General Climate Description	Mild arid or semi-arid continental
Average Annual Precipitation (Inches)	6.28
Wettest Month / Average Monthly Precipitation (inches)	August / 1.16
Driest Month / Average Monthly Precipitation (inches)	April / 0.12
Annual Mean Temperature (°F)	62.5
Warmest Month / Average Temperature (°F)	July / 81.2
Coolest Month / Average Temperature (°F)	December / 43.7
County <sup>1</sup> Baseline GHG Emissions (Metric Tons CO <sub>2</sub> e) <sup>2</sup>	2,688,356

Table 3: Climate Conditions in the ROI

Note: 1. Doña Ana County, New Mexico. 2. CO<sub>2</sub>e = Carbon Dioxide Equivalent Sources: (WRCC, 2016; USEPA, 2017)

## 3.2.1.3 Other Air Quality Considerations

In addition to the criteria pollutants discussed above, Hazardous Air Pollutants (HAPs) also are regulated under the CAA. The USEPA has identified 187 HAPs that are known or suspected to cause health effects in small concentrations. HAPs are emitted by a wide range of man-made and naturally occurring sources, including combustion from mobile and stationary sources. However, unlike the NAAQS for criteria pollutants, federal ambient air quality standards do not exist for non-criteria pollutants. Therefore, HAPs are generally regulated through specific air emission permit provisions for stationary sources and HAP emission limits for mobile sources.

Special goals for visibility in many "Class I Federal areas" were also established by the CAA; these areas generally include national parks, wilderness areas, and international parks. The Regional Haze Rule (40 CFR Part 51) was subsequently enacted in 1999 and requires states to establish goals for improving visibility in national parks and wilderness areas areas and to develop long-

term strategies for reducing emissions of air pollutants that cause visibility impairment. Visibilityimpairing pollutants can be transported over great distances; therefore, states are encouraged to work together to develop regional visibility goals and strategies. Visibility-impairing pollutants are emitted by a wide variety of activities and sources, including mobile source fuel combustion, agriculture, and manufacturing. Emissions of these pollutants are regulated by complying with the NAAQS, through state-specific programs, and through specific air emission permit provisions. The nearest Class I Federal areas are White Mountain Wilderness, approximately 75 miles northeast of the Project Site, and Bosque del Apache Wilderness, approximately 90 miles northwest of the Project Site.

Doña Ana County is required by USEPA to be covered by a mitigation plan for fugitive dust, as high wind dust reoccurs seasonally in the region. The NMED developed a fugitive dust rule in conjunction with the mitigation plan to detail mandatory dust abatement measures applicable in Doña Ana County. Doña Ana County has also enacted a local fugitive dust control ordinance, which requires at least one Best Management Practice (BMP) to be implemented for each fugitive dust source.

#### 3.2.2 Environmental Consequences

Air quality is affected by stationary sources (e.g., boilers, emergency generators, and industrial processes), mobile sources (e.g., motor vehicles, construction equipment, and aircraft), and area sources (e.g., vehicle and aircraft fuel transfer, storage, and dispensing). The nature and magnitude of the Proposed Action are expected to create only localized air quality impacts to the area surrounding the Project Site.

The Army used the *Air Conformity Applicability Model* (ACAM) to estimate air emissions from construction and operational activities included in the Proposed Action. This model was designed to provide a uniform and consistent method for calculating air emissions associated with various construction and operational activities. It provides emission estimates for all phases of construction, heating, power generation, motor vehicles, off-road power equipment, and personnel activities. These are the same emission categories associated with the Proposed Action. ACAM can be applied to a variety of DoD facility projects by selecting a "Generic Base" assigned to the facility's county as a surrogate facility, if the specific facility is not included in ACAM's standard facilities list. The summary report generated by ACAM groups all estimated emissions (both construction and operational) into calendar years spanning the project schedule. The ACAM summary report serves as the Record of Air Analysis, provided in **Appendix B**.

Air quality impacts would be significant if emissions associated with the Proposed Action would: (1) increase ambient air pollution concentrations above the NAAQS; (2) contribute to an existing violation of the NAAQS; (3) interfere with or delay timely attainment of the NAAQS; or (4) impair visibility within federally mandated Prevention of Significant Deterioration Class I Federal areas. Additionally, a conformity analysis would be required before initiating any action that may lead to nonconformance with a SIP, an exceedance of *de minimis* criteria pollutant thresholds, or contribution to a violation of the NAAQS. Since WSMR is considered in attainment/unclassifiable for the NAAQS, the provisions of the General Conformity Rule do not apply. AR 200-1 does not provide specific emissions thresholds to assess significance of criteria pollutant emissions. For

this analysis, the insignificance indicators provided in ACAM (based on the NAAQS classification status of a project area) were used to assess air quality impact significance.

The change in climate conditions caused by GHGs is a global effect. The Proposed Action would have a negligible impact on overall global and regional GHG emissions and global climate change. For NEPA disclosure purposes, however, this EA analyzes the potential GHG emissions, as calculated by the ACAM, anticipated under the Proposed Action, which could contribute to climate change. Additionally, per EO 13990, EO 14008, and the Deputy Assistant Secretary of the Army for Environment, Safety, and Occupational Health's memorandum, *Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in Army National Environmental Policy Act Reviews*, dated 04 March 2021, the Army has captured the full costs of GHG emissions from the Proposed Action, as identified in terms of the social costs of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, associated with the Proposed Action. These costs are estimates of the monetized damages associated with incremental increases in these emissions.

#### 3.2.2.1 Preferred Alternative

**Criteria Pollutants:** Construction of the Preferred Alternative would result in *short-term, insignificant impacts* on air quality. Construction activities would temporarily generate fugitive dust from grading, clearing, and vehicle/equipment travel over unpaved areas, and criteria pollutant emissions (e.g., volatile organic compounds [VOCs] and NO<sub>x</sub> [as precursors of O<sub>3</sub>], CO, PM<sub>10</sub>, and PM<sub>2.5</sub> [including its precursor SO<sub>2</sub>]) and GHG emissions from the use of diesel-powered and gasoline-powered equipment. The construction workforce commute would also contribute to a short-term increase in emissions. Construction period emissions typically depend on expected material quantities, such as clean fill import and off-site disposal of excess or contaminated excavated material, and equipment/vehicle utilization requirements for each project component. Construction is anticipated to begin in FY 2025 (October 1, 2024, through September 30, 2025) and take 1 to 2 years to complete.

The estimated project emissions are "netted" on an annual basis. The impact analysis must consider the greatest annual emissions associated with the Proposed Action. To be conservative, the air analysis assumed all construction activities and related emissions would occur in 2025. The majority of air emissions associated with the Proposed Action would be temporary in nature (limited to the duration of construction activities).

Following construction, ongoing annual emissions would occur from operation of the proposed facilities. These emissions include additional personnel activities (e.g., commuting), diesel fuel combustion in one emergency generator, and insignificant emissions associated with routine facility maintenance. Space heating is anticipated to use electricity-powered equipment, which would not generate on-site criteria pollutant emissions.

**Table 4** depicts annual netted emissions for the construction year (2025) and for the operational or "steady state" year in which only emissions from facility operation would occur for the Preferred Alternative. All attainment criteria pollutants are *below the insignificance indicators* for both construction and operation of the Preferred Alternative.

As previously stated, WSMR is located in an area considered *attainment/unclassifiable* for all NAAQS. Therefore, General Conformity is not applicable to the Proposed Action, and a General Conformity applicability analysis was not performed for the Preferred Alternative. As demonstrated in **Table 4**, construction and steady state emissions *would not exceed regulatory or insignificance thresholds.* Furthermore, there are no sensitive receptors within at least three miles of the Project Site. Therefore, the resulting air quality impacts would be *minor* for both the construction and operational (i.e., steady state) scenarios.

Pollutant	Proposed Action Emissions (ton/year) <sup>1</sup>		NEPA Insignificance Indicator (ton/year) General Conformity De Minimis Threshold (ton/year)		General Conformity Applicability (Yes or No)		
	2025	Steady State (Operation)					
VOC	0.941	0.080	100				
NOx	1.438	0.074	100				
СО	2.051	1.048	250				
SOx	0.005	0.006	250				
PM <sub>10</sub>	10.403	0.007	100	N/A	No		
PM <sub>2.5</sub>	0.048	0.006	250				
Pb	0.000	0.000	25				
NH <sub>3</sub>	0.004	0.007	250				
CO <sub>2</sub> e	521.6	103.7	N/A				
Not in a regulatory area							

Table 4: Projected Annual Emissions from the Preferred Alternative

Notes:

1. 2025 represents construction year. Steady state includes new personnel activity and facility operation emissions.

VOC = volatile organic compounds, NO<sub>x</sub> = nitrogen oxides, CO = carbon monoxide, SO<sub>x</sub> = sulfur oxides, PM<sub>10</sub> = particulate matter less than 10 microns, PM<sub>2.5</sub> = particulate matter less than 2.5 microns, Pb = lead, NH<sub>3</sub> = ammonia, CO<sub>2</sub>e = Carbon Dioxide Equivalent, N/A = Not Applicable

Source: ACAM version 5.0.18a, run on October 27, 2022 (Appendix B).

The majority of PM<sub>10</sub> emissions associated with the Preferred Alternative's construction would result from clearing and grading and excavation activities, and from travel on unpaved surfaces. To further minimize the potential for adverse air quality impacts, ADF-SW would implement the following standard dust control BMPs, as applicable:

• Use appropriate dust suppression methods (e.g., spray areas of exposed soil with water, use of enclosures and covers, and suspension of earth-movement during high wind conditions) during onsite construction activities.

- During construction or other earth-moving activities, truckloads of dirt would be covered with tarps to reduce windborne dust.
- Require a speed of less than 15 miles per hour for equipment moving across unpaved surfaces.
- Use low-VOC supplies and equipment.
- Repair and service vehicular and construction equipment to prevent excess emissions.
- Shut down heavy equipment when not in use.

**Greenhouse Gas Emissions and Climate Change:** As further shown in **Table 4**,  $CO_2e$  emissions from construction would be the largest during construction (2025). **Table 5** depicts the Preferred Alternative's annual construction and steady state GHG emissions increases over the Doña Ana County and national baselines. When compared to the GHG emissions baselines, the peak GHG emission year (2025) is 0.020 percent of the county baseline and 0.000009 percent of the national baseline.

Alternative	Proposed Action Increase Over Do Base	GHG Emissions oña Ana County, lline <sup>1</sup>	Proposed Action GHG Emissions Increase Over National Baseline <sup>2</sup>		
	2025	Steady State	2025	Steady State	
Preferred Alternative	0.020%	0.004%	0.000009%	0.000002%	

#### Table 5: Comparison of Greenhouse Gas Emissions

Notes:

1. Doña Ana County, New Mexico GHG emissions baseline is 2,624,523 metric tons of CO<sub>2</sub>e.

2. Annual national GHG emissions baseline is 5,981 million metric tons of  $\mbox{CO}_2\mbox{e}.$ 

Sources: (USEPA, 2017; USEPA, 2020); ACAM version 5.0.18a, run on October 27, 2022 (Appendix B).

 $CO_2e$  emissions calculated using ACAM include emissions of  $CO_2$ ,  $CH_4$ , and  $N_2O$ .  $CO_2$  represents approximately 99.9974 percent of potential GHG emissions from the Preferred Alternative,  $CH_4$  represents approximately 0.0023 percent, and  $N_2O$  represents approximately 0.0003 percent (based on weighted averages of USEPA emission factors for natural gas, gasoline, and diesel in 40 CFR Appendix Tables C-1 and C-2 to Subpart C of Part 98). The annual social costs per metric ton of these three GHGs are determined by multiplying the annual emissions of each GHG (metric tons, shown in **Table 4**), by the social cost (dollars per metric ton) for each GHG. Based on the EO 13990 technical support document Tables A-1 through A-3, the social costs per metric ton are \$83 for  $CO_2$ , \$2,200 for  $CH_4$ , and \$30,000 for  $N_2O$ , based on Emissions Year 2025 and 2.5 percent Average Discount Rate and Statistic. Applying these costs to each Alternative's projected total construction and annual steady state (i.e., operational) GHG emissions yields the social costs. **Table 6** summarizes both construction social costs and steady state social costs for the Preferred Alternative for the 2.5 percent discount.

Discount (2020 USD)	Greenhouse Gas	Price Per Ton (\$)	2025 Construction Emissions (tons)	Social Cost – Construction	Steady State Emissions (tons)	Social Cost – Steady State
	CO <sub>2</sub>	83	521.6	\$43,292	103.7	\$8,607
2.5 Percent	CH4	2,200	0.0120	\$26	0.0024	\$5
	N <sub>2</sub> O	30,000	0.0016	\$47	0.0003	\$9
	Total	N/A	N/A	\$43,365	N/A	\$8,621

#### Table 6: Social Cost of Carbon

Sources: (Interagency Working Group on Social Cost of Greenhouse Gases, 2021); ACAM version 5.0.18a, run on October 27, 2022 (Appendix B).

Note: Values reflect rounding.

The DoD addresses the potential future impacts of severe weather and climate hazards to both current and future DoD facilities by assessing site-specific potential impacts as part of long-range planning, project design, and permitting activities. Relevant long-term climate areas of concern for the Proposed Action's facilities include decreased snowpack and water availability, extreme heat, and larger and more frequent wildfires (USEPA, 2016). The Army has determined that these areas of concern would have little to no impact on the new facilities and related operations included in the Proposed Action.

However, because of the inherent uncertainty of projecting future climate impacts, the Army would design the proposed facilities and infrastructure to have enhanced resiliency to long-term climate impacts. The Army would include master planning activities at WSMR to ensure that climate impacts to the facility are minimized to the extent practicable and consistent with installation, local, or regional climate plans and tools (e.g., the DoD Climate Assessment Tool). Thus, climate change would have *no long-term impacts* on the Proposed Action.

**Other Air Quality Considerations:** Federal ambient air quality standards do not exist for noncriteria pollutants; therefore, there are no specific significance indicators for HAP emissions. HAPs are generally regulated through specific air emission permit provisions for stationary sources and HAP emission limits for mobiles sources. ADF-SW may be required either to update existing air quality permits or obtain a new permit for the proposed facilities.

Similarly, there is no specific insignificance indicator established for assessing a Proposed Action's impact on visibility in Class I Federal areas. However, many pollutants responsible for impairing visibility are regulated by NAAQS either directly (e.g., PM<sub>2.5</sub>) or indirectly (e.g., nitrogen dioxide [NO<sub>2</sub>] and SO<sub>2</sub> emissions, which can form visibility-impairing nitrates and sulfates, respectively, once emitted). Because the Proposed Action would result in insignificant increases in criteria pollutants, it is unlikely that the Preferred Alternative would result in adverse impacts on visibility in Class I Federal areas.

NMED confirmed that the Proposed Action would be exempt from the state fugitive dust control regulation. The Preferred Alternative's construction would also comply with Doña Ana County's fugitive dust control ordinance. BMPs implemented to mitigate PM<sub>10</sub> emissions would also

minimize fugitive dust. Therefore, the Proposed Action would result in *short-term, insignificant impacts* to fugitive dust.

#### 3.2.2.2 No Action Alternative

Under the No Action Alternative, the proposed new receiving facilities at ADF-SW would not be constructed and ADF-SW would continue to use its existing facilities. The 56.5-acre parcel would remain undisturbed. Therefore, the No Action Alternative would have no impact on air quality and climate.

#### 3.3 CULTURAL RESOURCES

Cultural resources are historic properties as defined by the NHPA; cultural items as defined by the NAGPRA; archaeological resources as defined by the Archaeological Resources Protection Act; sacred sites as defined by EO 13007, *Indian Sacred Sites*, to which access is afforded under the American Indian Religious Freedom Act; and collections and associated records as defined by 36 CFR Part 79.

Historic properties covered by the NHPA include any prehistoric or historic district, site, building, structure, or object with known or potential significance with regard to pre- or post-American history, architecture, archaeology, engineering, or culture. Section 106 of the NHPA requires federal agencies to consider the effect an undertaking may have on historic properties. The Preferred Alternative is considered an undertaking and is required to comply with Section 106, including consultation with the New Mexico SHPO. All Section 106 correspondence with the SHPO for this Preferred Alternative is provided in **Appendix C**.

The WSMR Garrison Environmental Division determined there are no properties within the APE that are considered religious or culturally significant by Native American tribes; therefore, there is no need to consult or coordinate with federally recognized Native American tribes for this Proposed Action. The ROI for cultural resources is the APE as defined by the NHPA (36 CFR 800.16[d]). The APE for direct impacts for both archaeological and built environment resources is the area where historic properties could be affected by ground disturbance, and is limited to the 56.5-acre parcel. The APE for indirect impacts includes the direct APE and a surrounding buffer 0.5 kilometer (0.3 mile) wide. Because the buildings and structures that would be constructed as part of the Proposed Action would be one story in height (a maximum of 20 feet above the existing grade) and compatible with the existing built environment in the surrounding area, no potential for visual or auditory impacts were identified beyond this area.

#### 3.3.1 Affected Environment

In 2022, ADF-SW commissioned a Phase I intensive archaeological survey of the 56.5-acre parcel associated with the Proposed Action (Carr, 2022), as this portion of the Project Site is previously undisturbed. This inventory built upon and enhanced seven previous cultural resources surveys conducted within 500 meters of the Project Site. One previously documented archaeological site was reevaluated, and three new isolated finds were identified during the 2022 survey. The reevaluated archaeological site and the three new isolated finds were recommended

as not eligible for listing in the NRHP. The SHPO concurred with these recommendations (see **Appendix C**). Therefore, no historic properties are located within the Project Site.

The Project site is currently vacant land and no survey for previously unrecorded historic-period buildings or structures was conducted. In accordance with SHPO standards, a records review was conducted to identify and compile information about prior historical resource studies and recorded historical resources within the direct APE and a surrounding buffer 0.5-kilometer (0.3 mile) wide (or the indirect APE). The New Mexico Cultural Resource Information System (NMCRIS), a geospatial database maintained by the New Mexico Historic Preservation Division (i.e., NM SHPO), was the primary source of information.

Two above-ground surveys of WSTF have been completed in the last decade. In 2006, NASA facilities at WSTF were evaluated to determine if any properties were eligible for the NRHP in relation to the Space Shuttle Program. In 2012, all facilities at WSTF were surveyed, including those turning 50 years old, as well as more recently built facilities related to the Apollo and Space Shuttle programs. These studies identified 26 resources within WSTF that are eligible for listing in the NRHP, either individually or as contributing parts of historic districts, but none of these are within the direct or indirect APE defined for the Proposed Action.

#### 3.3.2 Environmental Consequences

A cultural resources impact would be significant if it would constitute an unresolved adverse effect as defined in Section 106 of the NHPA (36 CFR 800.5): alteration, directly or indirectly, of any of the characteristics of a historic property that qualify it for inclusion in the NRHP in a manner that would diminish the integrity of its location, design, setting, materials, workmanship, feeling, or association.

#### 3.3.2.1 Preferred Alternative

The Preferred Alternative would have *no effect* on archaeological or built resource historic properties, as none occur within the ROI. The SHPO concurred with this determination (see **Appendix C**).

Additionally, the Preferred Alternative would have no impact on tribally significant resources, as none have been identified within the ROI.

To further minimize the potential for cultural resources impacts, construction crews would receive briefings regarding limitations on artifact collection, non-restricted and restricted area identification, and procedures to be followed during unanticipated discoveries of cultural resources, including human remains, prior to construction actions. Should such an occasion take place during this project, personnel would apply the appropriate Standard Operating Procedure (SOP) from the WSMR INCRMP, ground disturbing activities would cease, and the WSMR Public Works Environmental Division would be alerted immediately at (575) 678-2225 to provide information on the location of the find. WSMR archaeologists would then assess the situation to determine if further evaluation under Section 106 would be required by following practices and procedures outlined in the INCRMP. If human remains are discovered, all work would stop and

resume 30 days after confirmation that proper notifications were made to the WSMR Public Works Environmental Division.

#### 3.3.2.2 No Action Alternative

Under the No Action Alternative, the proposed new receiving facilities at ADF-SW would not be constructed. ADF-SW would continue to use its existing facilities and the 56.5-acre parcel would remain undisturbed. Therefore, the No Action Alternative would have *no impact* on cultural resources.

#### 3.4 GEOLOGY, TOPOGRAPHY, AND SOILS

Geological resources consist of surface and subsurface materials and their properties. Principal geologic factors influencing the ability to support structural development are seismic properties (i.e., potential for subsurface shifting, faulting, or crustal disturbance), soil stability, and topography. The ROI for geology, topography, and soils is the Project Site as shown on **Figure 2**.

The Farmland Protection Policy Act (FPPA) (7 USC 4201 et seq.) states that federal agencies must "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." The resources protected by the FPPA include prime and unique farmland, which are categorized by the Natural Resources Conservation Service (NRCS) based on underlying soil characteristics.

#### 3.4.1 Affected Environment

**Geology:** The primary geological units underlying the Project Site are Piedmont alluvial deposits from the Holocene to lower Pleistocene age and formations in the Upper Santa Fe group from the Middle Pleistocene to uppermost Miocene (USGS, 2022). Within the ROI, depth to bedrock is greater than 6 feet (NRCS, 2022). The US Geological Survey (USGS) 2018 Seismic Hazard map shows the site is at moderate risk of seismic hazard (i.e., hazard level 3 out of 7) (USGS, 2018).

**Topography:** The ROI is located in the Southern Basin and Range physiographic province, which is characterized by a distinctive alternating pattern of mountains and valleys (USDA, 2017). The WSMR terrain primarily consists of isolated mountain ranges, semi-arid grasslands, and dune fields. The terrain within the Project Site includes a gently sloping plain with several steep-sided arroyos crossing the area. Elevations within the Project Site range from approximately 4,780 feet above mean sea level (amsl) to 4,845 feet amsl (see **Figure 3**). The highest elevation is in the southeast corner of the Project Site and the site slopes towards the west and northwest.

**Soils:** Two soil map units occur within the ROI, Mallet-Kimrose-Stronghold complex and Stagecoach-Delnorte-Riverwash association (see **Figure 3**) (NRCS, 2022). Soil characteristics within the ROI are summarized in **Table 7**. No soils within the ROI are designated as prime farmland by the NRCS.

Soil erosion effects are a function of the geology, soils, topography, climate, and vegetation (WSMR, 2015). Water and wind erosion are the primary types of erosion measured by the NRCS. No soil map units within the Project Site exhibit high susceptibility to wind or water erosion. The

NRCS assigns soils to wind erodibility groups (WEG) based on soil properties. The WEGs range from 1 to 8; soils with a WEG of 2 or lower have a very high susceptibility to wind erosion and soils with a WEG of 8 have a very low susceptibility to wind erosion. The erosion K factor indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. All other factors being equal, higher values of K indicate more susceptibility to sheet and rill erosion by water (NRCS, 2022).



#### Figure 3: Topography and Soils
Map Unit Name	Acres	Landform / Description	Wind Erodibility Group	K Factor
Mallet-Kimrose-Stronghold complex, 5 to 20 percent slopes	52.8	Fan remnants; somewhat excessively drained soils, depth to water table is more than 80 inches. Depth to restrictive feature is more than 80 inches.	5	0.10
Stagecoach- Delnorte- Riverwash association, 0 to 35 percent slopes complex	12.9	Fan remnants; well drained soils, depth to water table is more than 80 inches. Depth to restrictive feature is more than 80 inches.	6	0.05

Table 7.	Select Soil	Characteristics

Source: (NRCS, 2022)

### 3.4.2 Environmental Consequences

An impact to geology, topography, and soils would be significant if it would (1) expose people or structures to major geological hazards; or (2) substantially increase potential occurrence of erosion or sedimentation.

### 3.4.2.1 Preferred Alternative

During construction, excavation would likely be approximately 5 feet bgs for most components of the Proposed Action, including installation of concrete slabs for the proposed buildings, road construction, and trenching for the buried utility lines. To be conservative, ADF-SW assumes that excavation could be as deep as 15 feet bgs in some locations, such as for deep fence foundations, multi-level sub-surface utility lines, etc. Since depth to bedrock is generally known to be greater than 6 feet bgs within the Project Site, bedrock may be encountered during excavation. However, potential excavation impacts on underlying bedrock would be minimal. Further, no geologic hazards are apparent on the Project Site and seismic events are not expected to interfere with construction. Therefore, *long-term, minor adverse impacts* to geology are possible.

Minor grading would be necessary to accommodate the new roads and building footprints. Changes to topography due to grading activities would slightly, but permanently, alter the topography of the Project Site. However, the layout of the Project Site would be designed to minimize these changes to the extent practicable. Further, all graded slopes would be designed and constructed in a manner that would minimize potential future erosion, including through revegetation. Any changes to surface drainage would not be substantial and would be minimized to the extent practical; as noted in **Section 2.1**, the Preferred Alternative would maintain and restore pre-development hydrology to the maximum extent technically feasible in compliance with Section 438 of the EISA. Roads and other paved areas would be designed to prevent water from running off in a concentrated flow that would create ruts and erosion. Therefore, *long-term, minor adverse impacts* to topography would result from construction of the Preferred Alternative.

Construction of the Preferred Alternative would remove vegetative cover, disturb the soil surface, and compact the soil within the Project Site, likely impacting less than 50 percent of the Project Site depending on the final site configuration developed in the design phase. The soil would then be susceptible to erosion by wind and surface runoff; however, none of the soils on the Project Site have a high susceptibility to wind or water erosion (see **Table 7**). Erosion would be further reduced by spraying water on loose soils and by minimizing the limits of disturbance to the extent practicable.

Because the Project Site would exceed 1 acre of land disturbance, a NPDES Construction General Permit (CGP) would be obtained for the project pursuant to the Clean Water Act (33 USC 1251 et seq; CWA). Coverage under the CGP would require development of a Stormwater Pollution Prevention Plan (SWPPP), which would identify potential sources of pollutants, describe all pollution prevention activities that would be implemented on the site, and establish erosion and sediment controls to manage stormwater discharges and minimize sedimentation to the extent practicable. Construction crews would adhere to BMPs outlined in the SWPPP, and the erosion and sediment controls would be implemented prior to land-disturbing activities and maintained in good working order for the duration of construction.

Overall, disturbed areas would be quickly stabilized (e.g., revegetated in accordance with a sitespecific revegetation plan) to minimize the potential for construction-related erosion. Therefore, construction of the Preferred Alternative would have *short-term, minor adverse impacts* to soil resources.

Operation of the Preferred Alternative would not entail ground disturbance and would have *no impact* on geology, topography, or soils.

## 3.4.2.2 No Action Alternative

Under the No Action Alternative, the proposed new receiving facilities at ADF-SW would not be constructed. ADF-SW would continue to use its existing facilities and the 56.5-acre parcel would remain undisturbed. Therefore, the No Action Alternative would have *no impact* on geology, topography, and soils.

## 3.5 BIOLOGICAL RESOURCES

Biological resources addressed in this EA consist of vegetation, wildlife, and special status species. Special status species relevant to this EA are those protected under the federal Endangered Species Act (ESA), Bald and Golden Eagle Protection Act (BGEPA), Migratory Bird Treaty Act (MBTA), or under applicable state laws or regulations.

The ROI for biological resources includes vegetation present within the Project Site and wildlife present on-site or within 0.5 mile of the Project Site.

### 3.5.1 Affected Environment

**Vegetation:** Vegetation types vary widely across WSMR, from plains and desert shrublands at lower elevations and basin floors to ponderosa pine forests and rocky outcrops near the summit of Salinas Peak in the San Andreas Mountains. The Project Site consists of moderately dense

desert vegetation throughout (see **Figure 4**). Muldavin et al. developed a model for describing WSMR's vegetative communities, called vegetation map units (Muldavin et al., 2000). ADF-SW and the Project Site are located within the Creosotebush (*Larrea tridentata*) Shrubland map unit and Mixed Lowland Desert Scrub map unit. Creosotebush Shrublands are the most widespread vegetation community on WSMR, extending from basin bottoms at 3,900 feet amsl up through piedmont bajadas and into foothills to 5,700 feet amsl (WSMR, 2015). Mixed Lowland Desert Scrub, a complex mixture of creosotebush, tarbush (*Flourensia cernua*), and fourwing saltbush (*Atriplex canescens*) shrublands, generally occupies low-elevation alluvial flats and playa bottoms at elevations of 3,800 to 5,600 feet amsl with very little slope. There is very limited structural and plant species diversity with the Mixed Lowland Desert Scrub communities (WSMR, 2015).



Figure 4: Project Site Vegetation

**Wildlife:** The regions of New Mexico surrounding WSMR are a center of biodiversity in temperate North America (WSMR, 2015). Many vertebrates found on WSMR are also found throughout the Intermountain West and the Great Plains; however, there are generally fewer warm-blooded vertebrates found on WSMR due to the desert conditions (WSMR, 2015). Complete lists of wildlife species present on WSMR are included in the 2015 INCRMP. Wildlife species that have been observed near the Project Site include jackrabbits (*Lepus californicus*), quail, javelina (*Tayassu tajacu*), oryx (*Oryx gazella*), rattlesnakes, bobcats (*Lynx rufus*), coyotes (*Canis latrans*), mountain lions (*Puma concolor*), mule deer (*Odocoileus hemionus*), and ringtails (*Bassariscus astutus*). Overall, the lack of a consistent water source and limited plant species diversity at the Project Site limits wildlife diversity.

**Special Status Species:** ADF-SW queried the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur on the Project Site. IPaC identified three federally listed threatened or

endangered species, one candidate species, and one experimental population (see **Table 8**). There are no critical habitats at the Project Site (USFWS, 2022).

Wildlife species indigenous to New Mexico may be listed as threatened or endangered by the New Mexico Department of Game and Fish under the New Mexico Wildlife Conservation Act (NMSA 1978, 17-2-37 to 17-2-46). A species is classified as endangered if its prospects of survival or recruitment within the state is in jeopardy. A threatened species is any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range in New Mexico. Both classifications include species that are federally listed. There are nine state-listed threatened species that occur within Doña Ana County and have been recorded at WSMR, excluding the species which also have a federal status (NMDGF, 2022) (see **Table 9**). Of these species, the spotted bat (*Eduerma maculatum*), Costa's hummingbird (*Calypte costae*), Bell's vireo (*Vireo bellii*), and Gray vireo (*Vireo vicinior*) may have suitable habitat at the Project Site (WSMR, 2015).

The MBTA protects migratory birds and prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except with a federal permit (16 USC 703 [2009]; 50 CFR 21 [1974]; 50 CFR 10 [1973]). It is intended to ensure the sustainability of populations of all protected migratory bird species. Protocols and procedures for the protection of migratory birds on WSMR are discussed in the INCRMP (WSMR, 2015). A variety of migratory birds use natural springs and canyons throughout WSMR as stopovers during their seasonal migrations (WSMR, 2018). While Creosote Shrublands generally do not support a large diversity of birds relative to other habitats on WSMR, the nesting season on WSMR is typically March through August (WSMR, 2018).

In 1988, the US Fish and Wildlife Conservation Act (16 USC 2901-2911) was amended to mandate the USFWS to identify the populations of migratory nongame birds that are likely to become candidates for listing under the ESA without additional conservation intervention as "Birds of Conservation Concern." No Birds of Conservation Concern were identified in IPaC for the Project Site.

While the bald eagle (*Haliaeetus leucocephalus*) was removed from the ESA in 2007, it remains protected by the MBTA and BGEPA. Bald eagles typically nest in mature canopy trees near the edges of forested habitat, often within 2 miles of their preferred foraging habitat, which includes inland lakes and rivers. Golden eagles (*Aquila chrysaetos*) generally nest on rock ledges or cliffs. Foraging habitat includes prairies, savannah, or sparse woodland near suitable nesting sites (NatureServe, 2022). Bald eagles and golden eagles are known to nest at WSMR; however, there are no suitable nesting locations for either species within 1 mile of the Project Site.

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Common Name	Scientific Name	Federal Status	Discussion
Southwestern Willow Flycatcher	Empidonax traillii extimus	E	The southwestern willow flycatcher breeds in dense riparian tree and shrub communities near rivers and wetlands (USFWS, 2002). Habitats for wintering generally include brushy savanna edges, secondary growth, shrubby clearings and pastures, and woodlands near water (USFWS, 2002). Though WSMR has suitable breeding habitat for southwestern willow flycatchers, the birds have only been documented at WSMR during migration (WSMR, 2015). The Project Site does not contain suitable habitat for this species.
Northern Aplomado Falcon	Falco femoralis septentrionalis	EXP <sup>1</sup>	Northern Aplomado falcon habitat is variable throughout its range and includes palm and oak savannahs, various desert and coastal grassland associations, and open pine woodlands (USFWS, 2014). Nesting habitats include cliffs and abandoned nests of other bird species, such as hawks and ravens (NatureServe, 2022). Between 2006 and 2011, a total of 337 Aplomado falcons were reintroduced at sites in southern New Mexico, including 12 at WSMR.
Yellow-billed Cuckoo	Coccyzus americanus	т	The yellow-billed cuckoo prefers dense leafy groves, thickets, and forest clearings, especially near lakes, rivers, and streams. Several yellow-billed cuckoo sightings have occurred at WSMR since 1996, however, this habitat is not present in the Project Site.
Monarch Butterfly	Danaus plexippus	С	Monarchs in North America undergo long-distance migration between summer and overwintering sites. There is currently no evidence that monarchs overwinter in New Mexico, however, they are prevalent throughout the state during the warm season (April through September) (Cary & DeLay, 2016). Adult monarchs are opportunistic nectar feeders and will gather nectar from any flowers near their migration path (Cary & DeLay, 2016). Monarch caterpillars must feed on milkweed, which often grows in previously disturbed areas, in fields, and near roadsides. Milkweed is not present in the Project Site, therefore, habitat for the monarch butterfly would be limited.
Sneed Pincushion Cactus	Coryphantha sneedii var. sneedii	E	The Sneed pincushion cactus generally grows between cracks in limestone in areas of broken terrain, steep slopes, and desert scrub in Doña Ana County, NM and El Paso County, TX (NM Rare Plant Technical Council, 1999). The Sneed pincushion cactus is not known to occur at WSMR (WSMR, 2021).

Note: E = Endangered; EXP = Experimental; T = Threatened; C = Candidate; NL = Not Listed

<sup>1</sup> Species for which a population has been artificially established in the wild which is not essential to the survival of the species in the wild.

Sources: (USFWS, 2022; NMDGF, 2022)

Species	WSMR Habitat or Occurrence	Habitat Present at Project Site
Spotted bat ( <i>Eduerma maculatum</i> )	Diverse habitats, including desert scrub. Occurs in Chihuahuan Desert to tree line; Mound Springs. Roosts in cracks and crevices in cliffs and canyons.	Yes
Organ Mountain Colorado chipmunk ( <i>Neotamias</i> <i>quadrivittatus australis</i> )	Texas Canyon, Organ Mountains (4,219 to 7,464 feet).	No
Costa's hummingbird ( <i>Calypte costae</i> )	Shrublands within dry washes and canyons with southern exposure.	Yes
Broad-billed hummingbird ( <i>Cynanthus latirostris</i> )	Higher desert canyons and washes, riparian woodlands and foothill woodlands (3,000 to 5,000 feet).	No
Peregrine falcon ( <i>Falco peregrinus</i> )	Suspected breeding in Oscura and San Andres mountains.	No
Bell's vireo ( <i>Vireo bellii</i> )	Early successional riparian thickets; San Andres Mountains (below 5,000 feet).	Yes
Gray vireo ( <i>Vireo vicinior</i> )	Juniper canyon and foothill woodlands typically with well-developed grass component; San Andres and Organ mountains (4,300 to 7,000 feet).	Yes
Baird's sparrow ( <i>Centronyx bairdii</i> )	Grasslands; Jornada Plain.	No
Varied bunting ( <i>Passerina versicolor</i> )	Dense thorny scrub in canyons; San Andres Mountains.	No

Source: (WSMR, 2015; NMDGF, n.d.)

### 3.5.2 Environmental Consequences

A biological resources impact would be significant if it would (1) substantially reduce regionally or locally important habitat; (2) substantially diminish a regionally or locally important plant or animal species; or (3) adversely affect recovery of a federally or state-protected species.

### 3.5.2.1 Preferred Alternative

**Vegetation:** The vegetation communities in the Project Site are common at WSMR and lack species diversity. Clearing of this vegetation would be required to construct the Preferred Alternative. Although the precise locations of vegetation clearing would not be determined until the design phase of the project, likely less than half of the Project Site would be cleared, with most of this occurring in the southern portion of the Project Site. Vegetation removal and/or replacement would be conducted in accordance with the WSMR INCRMP. Additionally, construction personnel would be notified that all construction equipment must remain within the delineated limits of disturbance; no off-road travel would be permitted.

Once ground disturbance is complete, disturbed portions of the Project Site that remain undeveloped would be revegetated following a site-specific revegetation plan designed to meet the prescribed standards WSMR has established for revegetation and erosion control. For example, disturbed areas would be re-seeded with species from WSMR's list of acceptable xericadapted plants for revegetation. Landscaping or other soil stabilization measures would also be conducted around newly constructed structures and roads to protect against erosion.

Native vegetation communities and wildlife habitats could be impacted by the introduction or encroachment of noxious weeds or invasive species during construction. However, contractors would minimize the introduction or spread of invasive species by adhering to the INCRMP and/or local regulations, including implementation of BMPs. To reduce the chance of invasive plants affecting the Project Site, ADF-SW would coordinate with the WSMR Integrated Pest Management Coordinator regarding invasive weed management. Preventative and control measures would include, but not be limited to, an Employee Environmental Awareness Program; vehicle and equipment entry and exit cleaning procedures; treatment methods including manual, mechanical, and herbicidal; and restoration and revegetation practices. Overall, construction of the Preferred Alternative would have *long-term, minor adverse impacts* on vegetation in the ROI. Operational activities would have *no effect* on vegetation.

**Wildlife:** During construction, common wildlife species occurring on the Project Site would be physically displaced, and construction noise and increased human activity may also disturb wildlife species located within the ROI (i.e., within 0.5 mile of the Project Site). Mobile wildlife species, such as birds and mammals, would likely relocate to areas of similar habitat near the site, although less-mobile species (e.g., some reptiles) could be inadvertently destroyed by construction activities. Although disturbance, displacement, or inadvertent wildlife mortality from construction activities would be an adverse impact, such impacts would occur at the individual level, rather than the population or species level, and would not inhibit the continued propagation of common wildlife populations and species near the Project Site.

The Proposed Action also includes clearing of some vegetation within the Project Site, and construction of a high-security fence around the Project Site. This would also result in *long-term, minor adverse impacts* to wildlife from habitat loss, either from most of the Project Site for larger species that cannot penetrate the fence, or from the vegetated areas cleared for smaller species. No impacts to wildlife migration would be anticipated due to the abundance of similar habitat surrounding the Project Site.

Overall, construction of the Preferred Alternative would result in *short-term and long-term, minor adverse impacts* to wildlife.

Operation of the Preferred Alternative would increase traffic and human presence on the Project Site and require nightime lighting, which may disturb wildlife in the vicinity of the Project Site. Nighttime lighting would be minimized to comply with the MBTA and the Memorandum of Understanding (MOU) between the DoD and the USFWS (DoD & USFWS, 2014). Lighting would also be designed in accordance to the WSMR Site Elements Design Standards to ensure compliance with the New Mexico Night Sky Protection Act (NMSA1978 Article 12).

Any human-wildlife interactions would be handled in accordance with the ADF-SW integrated pest management system (ADF-SW, 2022). Site personnel would report all animal sightings to the Facilities Operations Center and avoid feeding, capturing, or interacting with any wild, feral, or stray animals. Situations involving large animal incursions, feral animals, or venomous snakes would be mitigated by site personnel so that the animal is not an immediate danger to humans.

The construction of the fence around the Project Site would also prevent larger wildlife from entering some of the human-occupied areas. While several facilities are proposed for outside the fence line, human/vehicle presence and nighttime lighting would deter wildlife to a large degree.

Overall, operation of the Preferred Alternative would have *long-term, minor adverse impacts* on wildlife in the ROI due to disturbance or displacement in the near vicinity of the Project Site.

**Special Status Species:** ADF-SW determined that the Preferred Alternative would have *no effect* on any federally listed species. There is no suitable habitat for the southwestern willow flycatcher or yellow-billed cuckoo at the Project Site; therefore, these species are not anticipated to be present during construction or operational activities. Similarly the Sneed pincushion cactus does not occur on WSMR and would not be affected. There is foraging habitat for the Northern Aplomado falcon at the Project Site; however, there is no nesting habitat for the species on the Project Site and the falcon would likely avoid foraging in the ROI during construction.

Monarch butterflies would only have the potential to occur on the Project Site during the warm season. Should migrating monarch butterflies stop-over on the Project Site in notable numbers during construction, construction activities would be paused until the WSMR Garrison Environmental Division evaluates the situation and identifies an appropriate path forward. However, this species is not anticipated to be present on the Project Site under normal circumstances due to the lack of milkweed, and thus would not be affected by construction. Operational activities would have no effect on migrating monarch butterflies as there would be no further vegetation removal or off-road disturbance.

Potential impacts to state listed species would be similar to the impacts to wildlife described above. With the exception of the spotted bat, Costa's hummingbird, Bell's vireo, and gray vireo, none of the state-listed species that occur within Doña Ana County and have been recorded at WSMR have suitable habitat at the Project Site. Because spotted bats roost in crevices in canyons and cliffsides, the bats would not be present at the Project Site during the day. Construction activities would conclude by dusk when the bat begins to forage; therefore, the Preferred Alternative would have no effect on the spotted bat. Potential impacts to the Costa's hummingbird, Bell's vireo, and gray vireo would be similar to the impacts to migratory birds, described below.

Potential impacts to migratory birds could include disturbance to breeding individuals, particularly if construction occurred during the nesting season and nests are located within or adjacent to the construction site. Impacts would potentially include direct loss of eggs or nestlings, indirect displacement from increased noise and human presence in the vicinity of the project, and an incremental, temporary reduction in foraging habitat. Most birds would likely avoid the Project Site and/or relocate to nearby habitats in the area. To the extent practicable, vegetation clearing and grading activities would be conducted outside of the breeding season. Therefore, construction would have *short-term, minor adverse impacts* on migratory birds. Once construction is complete, migratory birds would experience *long-term, minor adverse impacts* similar to those described above for general wildlife species.

The Project Site does not contain suitable nesting habitat for the bald eagle and golden eagle. While bald or golden eagles could briefly enter or fly over the Project Site, they would generally be expected to avoid it during construction activities. Any adverse disturbance to these species that may result from them approaching the construction site would be brief and negligible.

### 3.5.2.2 No Action Alternative

Under the No Action Alternative, the proposed new receiving facilities at ADF-SW would not be constructed. ADF-SW would continue to use its existing facilities and the 56.5-acre parcel would remain undisturbed. Therefore, the No Action Alternative would have no impact on biological resources.

## 3.6 WATER RESOURCES

Water resources analyzed in this EA include surface water (including stormwater), wetlands, floodplains, and groundwater. Surface water resources comprise lakes, rivers, and streams and are important for a variety of ecological, economic, recreational, aesthetic, and human health reasons. Wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE, 1987). Wetlands serve a variety of functions including flood control, groundwater recharge, maintenance of biodiversity, wildlife habitat, recreational opportunities, and maintenance of water quality. Floodplains are belts of low, level ground on one or both sides of a stream channel and are subject to either periodic or infrequent inundation by flood water. A 100-year floodplain has a 1 percent chance of inundation in any given year. Inundation dangers associated with floodplains have prompted federal, state, and local legislation that limits development in these areas largely to recreation and preservation activities. Groundwater can be defined as subsurface water resources that are interlaid in layers of rock and soil and recharged by surface water seepage. Groundwater is important for its use as a potable water source, agricultural irrigation, and industrial applications.

The ROI for surface waters, wetlands, and floodplains includes the Project Site, as well as the down-gradient waterbodies receiving stormwater runoff within 0.5 mile of the site. The ROI for groundwater includes the portion of the groundwater basin that underlies the site.

### 3.6.1 Affected Environment

ADF-SW is located within the Loman Canyon watershed. Numerous unnamed ephemeral (flowing in response to precipitation events) arroyos, mostly east-west in direction, convey surface runoff from the San Andres Mountains to the east to the Rio Grande Valley to the west. As can be seen on the aerial in **Figure 2**, the arroyos are most concentrated in the northern portion of the Project Site. The arroyos lose their traceable channel west of the Project Site, resulting in overland sheet flow, and thus would not be considered WOUS (AECOM, 2022). However, though these drainage features are likely non-jurisdictional, there is potential for them to retain significant flows during storms.

The most recent wetland delineation of the Project Site was conducted in August 2022. No wetland soils, wetland obligate plant species, surface water, or water staining were observed

during the delineation (AECOM, 2022). Additionally, there are no 100-year floodplains in the ROI (FEMA, 2022). Therefore, wetlands and floodplains are dismissed from further analysis.

ADF-SW is underlain by the Jornada del Muerto Basin aquifer. The aquifer is recharged by runoff from precipitation that infiltrates through streambeds (Land, 2016). Potable water for ADF-SW is drawn from wells drilled into the aquifer.

## 3.6.2 Environmental Consequences

A water resources impact would be significant if it would (1) substantially reduce water availability or interfere with the water supply to existing users; (2) create or contribute to the overdraft of groundwater basins or exceed decreed annual yields of water supply sources; (3) substantially adversely affect surface or groundwater quality; (4) degrade unique hydrologic characteristics; or (5) violate established water resources laws or regulations.

### 3.6.2.1 Preferred Alternative

While no WOUS occur on the Project Site, construction of the Preferred Alternative would disturb ephemeral drainages (arroyos) that convey stormwater. More specifically, the proposed Serpentine Road would cross these features approximately perpendicularly to connect the new receiving facilities with the existing ADF-SW facilities. The road would bridge these features, maintaining either an open channel or culverts through which the arroyos would flow. The channel and/or culverts would be sufficiently sized to facilitate the large runoff events that can occur within the Project Site during intense rainfall events. Similar to the Serpentine Road, the security fence and Perimeter Road would need to cross the arroyos on the east and west sides of the Project Site and would similarly contain culverts (modified to prevent human entrance) to facilitate stormwater flow safely through the fence.

As described in **Section 3.4.2.1**, ADF-SW would obtain a CGP through the USEPA and develop a project-specific SWPPP, which would identify erosion controls and BMPs to manage stormwater discharges during construction. The site would also be designed in compliance with Section 438 of the EISA to restore the pre-development hydrology of the site to the maximum extent technically feasible. Therefore, construction of the Preferred Alternative would have *short-term, minor adverse impacts* on surface water in the ROI.

Operation of the Proposed Action would have *no or negligible adverse impacts* on water resources. While stormwater runoff could pick up minor amounts of pollutants deposited on the new impervious surfaces by vehicles, these would likely be captured by the stormwater features constructed pursuant to Section 438 requirements. Further, there are no defined surface water channels downstream of the Project Site, so stormwater from the Project Site becomes overland sheet flow across several miles of desert; therefore, there is no direct connection between Project Site runoff and other surface water features.

Construction of the Preferred Alternative would not be anticipated to intersect groundwater (e.g., through deep excavation), involve groundwater withdrawals, or intentionally release or inject materials into groundwater resources and aquifers. Potential impacts to groundwater may still occur, however, from the accidental spill or release of petroleum products or other liquids used

during construction activities. With implementation of BMPs, such as performing routine inspections of equipment, maintaining spill-containment materials on-site, and adhering to site-specific hazardous and toxic materials and waste (HTMW) plans, the potential for impacts to groundwater would be minimized, resulting in *short-term, minor adverse impacts* to groundwater in the ROI. Once construction is complete, the operation of the new facilities would create a minor increase in demand for potable water withdrawn from existing groundwater wells on WSTF; these withdrawals would be negligible as water would primarily supply domestic uses such as faucets and toilets rather than more intensive industrial or irrigation purposes. Therefore, operation of the Preferred Alternative would cause *long-term, negligible adverse impacts* to groundwater.

### 3.6.2.2 No Action Alternative

Under the No Action Alternative, the proposed new receiving facilities at ADF-SW would not be constructed. ADF-SW would continue to use its existing facilities and the 56.5-acre parcel would remain undisturbed. Therefore, the No Action Alternative would have no impact on water resources.

### 3.7 FACILITIES AND TRAFFIC/TRANSPORTATION

This section describes the vehicular transportation network, facilities, and utilities servicing ADF-SW. Mass transit, bicycle, and pedestrian infrastructure are not addressed as the Preferred Alternative would not meaningfully impact them. The ROI for facilities and traffic/transportation includes ADF-SW, NASA, adjacent properties, and adjacent transportation routes.

### 3.7.1 Affected Environment

ADF-SW is located near the western boundary of WSMR, roughly 5.5 miles north of the intersection of US-70 and NASA Road. Annual average daily traffic (AADT) southbound on NASA Road near US-70 is 3,620 vehicles/day (NMDOT, 2022). Access to NASA Road is restricted to WSTF employees and visitors only; there is no through traffic. The existing receiving facilities at ADF-SW are located on the east side of NASA road. Receiving facilities at ADF-SW include a gate house, security fencing, passive vehicle barriers, inspection tents, and a vehicle containment area.

Utility connections at ADF-SW include water, sewer, and electrical. Water is sourced from local NASA-owned wells. The sewer system is connected to the City of Las Cruces sewer system via pipes that follow NASA Road. Electricity is provided by El Paso Electric via aboveground powerlines that also run adjacent to NASA Road.

## 3.7.2 Environmental Consequences

A transportation impact would be significant if the associated increase in construction- or operation-related traffic would exceed the existing capacity of vehicular transportation networks or contribute to a noticeable degradation of existing traffic conditions. Similarly, impacts to other facilities or utilities would be significant if construction and operation of the Preferred Alternative substantially degraded the existing level of service.

### 3.7.2.1 Preferred Alternative

Construction of the Preferred Alternative would result in temporary increases in constructionrelated traffic at the site that would include workers' personal commuting vehicles and construction equipment (e.g., heavy construction transport vehicles, dump trucks, etc.). Construction would take 1 to 2 years to complete. There would be no impact on the existing flow of traffic or ADF-SW facilities during construction, as all construction and construction staging would occur on the Project Site. No road closures would be anticipated. Under existing conditions, NASA Road serves approximately 3,600 vehicles in each direction per day with a high level of service, so minor increases in traffic near the Project Site during construction would be within the capacity of the existing vehicular transportation network, and would not contribute to a noticeable degradation of traffic conditions. Therefore, construction would have *short-term, minor adverse impacts* on traffic and transportation.

During utility installation, service disruptions would be likely to occur when water, sewer, and power connections are made to the existing infrastructure. However, these disruptions would be very limited in duration, so construction would have a *short-term, negligible adverse impact* to utilities and facilities.

Operation of the Preferred Alternative would require hiring 50 additional ADF-SW employees. These employees would work in shifts of 20 to 30 staff, which would slightly increase the number of commuting vehicles and the demand on parking; accordingly, this increase would be negligible relative to the existing traffic on NASA Road. ADF-SW is also planning a parking lot expansion (approximately 75 additional spaces) in the area southeast of the existing parking lots under a separate project (see **Section 4.1**), and would include additional parking spaces in the site design for the new receiving facilities. These planned parking areas would accommodate the additional staff. Operation of the Preferred Alternative would also facilitate more efficient processing of staff, visitors, and deliveries to ADF-SW, reducing the chance of congestion at the gate which could cause delays or backups on NASA Road. Overall, operation of the Preferred Alternative would likely have a net *long-term, beneficial impact* on traffic and transportation.

Operation of the Preferred Alternative would slightly increase the demand for water, electricity, and sewer services at ADF-SW. However, this increase would be very minor relative to the existing utility use of ADF-SW, and ADF-SW has coordinated with NASA, El Paso Electric, and the City of Las Cruces to ensure that adequate supply of these utilities is available. The Preferred Alternative would not affect other users' utility services. Thus, operation of the Preferred Alternative would have a *long-term, negligible adverse impact* on utilities.

## 3.7.2.2 No Action Alternative

Under the No Action Alternative, the proposed new receiving facilities at ADF-SW would not be constructed and ADF-SW would continue to use its existing facilities. The growth of ADF-SW would eventually surpass the capacity of the existing receiving facilities, which would result in poor traffic flow and delays. Therefore, the No Action Alternative would have a *long-term, minor adverse impact* to facilities and traffic.

### 3.8 SOCIOECONOMICS

Socioeconomics refer to the attributes of the human environment, and include demographic and economic characteristics such as age, race, income, and employment. The ROI for socioeconomics is the city of Las Cruces, as well as Doña Ana County. All components of the Preferred Alternative are located within WSMR, but communities in the Las Cruces metropolitan area would be most likely to experience impacts from the Preferred Alternative with regard to socioeconomic characteristics.

### 3.8.1 Affected Environment

Socioeconomic data for the City of Las Cruces, Doña Ana County, and the state of New Mexico are presented in **Table 10**.

Socioeconomic Indicators	City of Las Cruces	Doña Ana County	State of New Mexico
Total Population	102,950	217,696	2,097,021
Population Change (2010-2020; %)	10.8	8.0	4.2
Median Household Income	\$45,140	\$44,024	\$51,243
Unemployment Rate (%)	4.4	7.7	6.6

 Table 10: Socioeconomic Data

Source: (US Census Bureau, 2020)

Las Cruces had a population increase of 10.8 percent from 2010 to 2020, more than double the 4.2 percent increase in the state of New Mexico over the same period, but only slightly higher than the 7.4 percent increase in the US population (US Census Bureau, 2020).

WSMR is the largest employer in the Las Cruces metropolitan area, with about 5,000 civilian employees and 350 active-duty military members (HUD, 2022). In 2020 the top five industries in Las Cruces were: (1) Educational services, and health care and social assistance, 34.2 percent; (2) Professional, scientific, and management, and administrative and waste management services, 11.2 percent; (3) Retail trade, 10.6 percent; (4) Arts, entertainment, and recreation, and accommodation and food services, 9.5 percent; and (5) Public administration, 7.5 percent.

## 3.8.2 Environmental Consequences

A socioeconomic impact would be significant if it would (1) substantially alter the location and distribution of the local population or (2) change current economic conditions in the ROI in a way that would be notable and harmful for surrounding communities and residents.

## 3.8.2.1 Preferred Alternative

Implementation of the Preferred Alternative would not displace nearby residents or adversely affect economic conditions in the ROI. Proposed construction activities would likely be completed by local contractors, increasing employment opportunities, personal incomes, and materials purchases within the community. If non-local contractors support construction, direct economic benefits associated with expenditures on lodging, food, and retail would accrue to the local

community. Tax revenues associated with direct and indirect construction expenditures would also benefit economic conditions. Therefore, construction of the Preferred Alternative would be anticipated to have a *short-term, beneficial impact* on the surrounding communities during construction.

Operation of the Preferred Alternative would require approximately 50 additional staff to be hired at ADF-SW. New personnel would include guard, maintenance, and warehouse staff. The increase in employment would benefit the local economy by generating income, taxes, and revenue due to project-related spending and expenditure of wages at state and local levels earned by the new workforce. Because these jobs would be available to the residents of surrounding communities, the additional jobs would not attract a significant number of new residents that would subsequently impact the rental or housing markets. Therefore, operation of the Preferred Alternative would have a *long-term*, *beneficial impact* on surrounding communities.

### 3.8.2.2 No Action Alternative

Under the No Action Alternative, the proposed new receiving facilities at ADF-SW would not be constructed and ADF-SW would continue to use its existing facilities. Therefore, the No Action Alternative would have no impact on socioeconomics.

### 3.9 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

**Table 11** compares the impacts to resources analyzed in this EA. Based on the intensity definition provided in **Section 3.1** (negligible, minor, moderate, and significant), none of the resources analyzed in this document reach the level of significant impact for any of the alternatives.

VEC	Impacted Resources	Proposed Action	No Action Alternative	ВМР
Air Quality and Climate	Criteria Pollutants; Construction	Short-term, minor adverse impact	No impact	Standard dust control BMPs would be implemented during construction.
	Criteria Pollutants; Operation	Long-term, minor adverse impact	No impact	N/A
	Greenhouse Gas Emissions and Climate Change	No impact	No impact	N/A
	Other Air Quality Considerations	No impact	No impact	N/A
Cultural Resources	Archaeological or Built Resource Historic Properties	No effect	No effect	Construction crews would receive briefings regarding limitations on artifact collection, non-restricted and restricted area identification, and procedures to be followed during unanticipated discoveries of cultural resources.
	Tribally Significant Resources	No impact	No impact	
Geology, Topography, and Soils	Geology; Construction	Long-term, minor adverse impacts	No impact	N/A
	Geology; Operation	No impact	No impact	N/A
	Topography; Construction	Long-term, minor adverse impact	No impact	Pre-development hydrology would be maintained and restored to the maximum extent technically feasible in compliance with Section 438 of the EISA.

### Table 11: Impact Summary

VEC	Impacted Resources	Proposed Action	No Action Alternative	ВМР
Geology, Topography, and Soils	Topography; Operation	No impact	No impact	N/A
	Soils; Construction	Short-term, minor adverse impact	No impact	Construction crews would adhere to BMPs outlined in the SWPPP, and erosion and sediment controls would be maintained in good working order for the duration of construction.
	Soils; Operation	No impact	No impact	N/A
Biological Resources	Vegetation; Construction	Long-term, minor adverse impact	No impact	Disturbed portions of the Project Site would be revegetated following a site-specific revegetation plan. Prevention and control measures would be implemented to reduce the encroachment of invasive or noxious weeds.
	Vegetation; Operation	No impact	No impact	N/A
	Wildlife; Construction	Short- and long- term, minor adverse impacts	No impact	N/A
	Wildlife; Operation	Long-term, minor adverse impact	No impact	Nighttime lighting would be minimized to comply with the MBTA and New Mexico Night Sky Protection Act. Human-wildlife interactions would be handled in accordance with the ADF-SW integrated pest management system.
	Special Status Species (Federally listed species); Operation	No effect	No effect	N/A

VEC	Impacted	Proposed	No Action	ВМР
	Resources	Action	Alternative	
	Special Status Species (Federally listed species); Construction	No effect	No effect	N/A
Biological Resources	Special Status Species (State-listed species and migratory birds); Construction	Short- and long- term, minor adverse impacts	No impact	To the extent practicable, vegetation clearing and grading activities would be conducted outside of the breeding season for migratory birds.
	Special Status Species (State-listed species and migratory birds); Operation	Long-term, minor adverse impact	No impact	N/A
Water Resources	Surface Water; Construction	Short-term, minor adverse impact	No impact	NPDES CGP would be obtained and a SWPPP would be developed prior to construction. Site would be designed in compliance with Section 438 of the EISA to restore the pre-development hydrology of the site to the maximum extent technically feasible.
	Surface Water; Operation	No or negligible adverse impact	No impact	N/A
	Groundwater; Construction	Short-term, minor adverse impact	No impact	Routine inspections of equipment and maintenance of spill- containment materials on-site would be performed. A site- specific hazardous and toxic materials and waste plan would be developed.
	Groundwater; Operation	Long-term, negligible adverse impact	No impact	N/A
Facilities and Traffic/Transportation	Traffic and Transportation; Construction	Short-term, minor adverse impact	Long-term, minor adverse impact	N/A

VEC	Impacted Resources	Proposed Action	No Action Alternative	ВМР
	Traffic and Transportation;	Long-term, beneficial	Long-term, minor adverse	N/A
Facilities and Traffic/Transportation	Operation Utilities; Construction	impact Short-term, negligible adverse impact	impact No impact	N/A
	Utilities; Operation	Long-term, negligible adverse impact	No impact	N/A
Socioeconomics	Socioeconomics; Construction	Short-term, beneficial impact	No impact	N/A
	Socioeconomics; Operation	Long-term, beneficial impact	No impact	N/A

# 4.0 CUMULATIVE IMPACTS

### 4.1 INTRODUCTION

CEQ regulations implementing the procedural provisions of NEPA define cumulative impacts as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (40 CFR 1508.7).

Each resource, ecosystem, and human community must be analyzed in terms of its ability to accommodate additional effects based on its own time and space parameters. Therefore, cumulative effects analysis will typically encompass an ROI beyond the immediate area of the Proposed Action and a time frame including past actions and foreseeable future actions, to capture these additional effects. For purposes of this cumulative effects analysis, the ROI includes areas within a 0.5-mile radius of the Proposed Action.

**Table 12** lists the past, present, and reasonably foreseeable actions within the ROI that have had, continue to have, or would be expected to have some impact on the natural and human environment. The projects in this table are limited to those implemented in the last three years or those with ongoing contributions to environmental effects. Projects with measurable contributions to impact within the ROI for a resource area were included in the cumulative analysis.

Project Name	Name Project Description		roject Time	line
		Past	Present	Future
NASA Road renovation	NASA would upgrade NASA Road for safety reasons, such as reducing the existing degree of undulation.		х	x
Paving Existing Interior Perimeter Road	An interior perimeter dirt road was paved to accommodate site security and first responder vehicles.	х		
New NASA Equipment	NASA would install new equipment to the north of the Project Site.			x
Building 10 Generator/Chiller Plant	Building 10 is anticipated to have a new generator and chiller installed.			х
Utility Feed	A medium voltage feeder from the Apollo sub- station to ADF-SW would be constructed. The feeder would extend overhead from the sub- station to an underground utility corridor at ADF-SW.			x
Generator C Replacement	An old 2,500-kilowatt (kW) generator would be replaced and relocated to a space next to three other existing generators.			x
Parking Lot Expansion	Approximately 75 parking spaces would be added to the existing parking lot north of the Proposed Action.			x

Table 12: Reasonably Foreseeable Actions within the ROI

Project Name	Project Description		Project Timeline		
		Past	Present	Future	
Existing Entry Road Improvements	Additional passive vehicle barriers, bollard protection around outdoor electrical switches, and additional sections would be added to the entrance road to improve traffic flow and meet security requirements.			х	
Cafeteria Expansion	Existing 3,300 SF outdoor area of cafeteria would be enclosed to accommodate additional personnel.			х	
Building 10-3	A 50,000 SF addition to the existing main building at ADF-SW is currently under construction. The facility will provide additional workspace for 250 staff, including a mix of current staff relocating to this addition and new staff to be hired.		x	x	
Cox to Moongate to Apollo Transmission Line Project	El Paso Electric is proposing to build a 115- kilovolt (kV) double circuit transmission line from the Moongate Substation to an intersecting point on the existing Cox to Apollo line. The project would include upgrading the existing 69-kV line to 115 kV and adding a new 24-kV distribution feeder along NASA Road.			x	

### 4.2 EVALUATION OF CUMULATIVE EFFECTS

## 4.2.1 Air Quality and Climate

Construction of the Preferred Alternative and past, present, and reasonably foreseeable actions would generate air emissions from the use of construction equipment and vehicles; the construction workforce commute would also contribute to a short-term increase in emissions. Operation of the Preferred Alternative would create a negligible increase in emissions from commuting, diesel fuel combustion in one emergency generator, and insignificant emissions associated with routine facility maintenance. Emissions from the Preferred Alternative and other reasonably foreseeable actions would not exceed regulatory thresholds or threaten the maintenance/attainment status of the region, as project-specific compliance with state and federal permitting requirements and implementation of BMPs would further minimize air emissions. Climate change would have no long-term impact on the Proposed Action and it is anticipated that other foreseeable projects would also be designed to have enhanced resiliency to long-term climate impacts. As a result, these cumulative impacts would be *minor* due to the temporary and localized nature of construction and the low emissions expected from the operation of the Preferred Alternative.

## 4.2.2 Cultural Resources

Implementation of the Preferred Alternative and past, present, and reasonably foreseeable actions would not result in any effects on historic and cultural resources in the ROI. No significant known cultural resources occur within the APE of the Preferred Alternative. However, there is

potential for archaeological discoveries while conducting ground-disturbing activities during construction; therefore, in the event that archaeological materials are inadvertently discovered during construction activities, ADF-SW would cease work immediately and notify the appropriate authorities, minimizing the potential for adverse impacts on previously unknown cultural resources.

## 4.2.3 Geology, Topography, and Soils

The Preferred Alternative and past, present, and reasonably foreseeable actions would not appreciably alter geological or topographical conditions in the ROI. While the Preferred Alternative would include grubbing and grading that would have soil erosion impacts, it would not contribute to meaningful topographical impacts in the ROI when considered with other reasonably foreseeable actions. While the NASA Road renovation project may include recontouring portions of the road to improve driver visibility, most cumulative projects would not require substantial grading or changes to topography, as construction activities would primarily occur within previously disturbed areas. Construction activities would require clearing and ground-disturbing activities that would cause soil disturbance and erosion. However, the Preferred Alternative would likely only impact up to half of the Project Site, which would not contribute to significant degradation of soils in the ROI as a whole, when taken into consideration with reasonably foreseeable actions. With implementation of project-specific BMPs, the resulting cumulative impact on soils would be further minimized. It is anticipated that the other foreseeable projects would also comply with applicable erosion and sedimentation regulations and permit requirements.

## 4.2.4 Biological Resources

The Preferred Alternative and past, present, and reasonably foreseeable actions would result in *short- and long-term, minor adverse cumulative impacts* on biological resources. While vegetation would be permanently removed, no sensitive species or high-quality habitat would be affected. Wildlife would be temporarily impacted by construction noise and human activity. There are chances of individual mortalities during construction; however, no population-level impacts are anticipated. The fence and increased human activity during the operation of the Preferred Alternative may disturb wildlife at the Project Site, however, there is ample undisturbed habitat surrounding the Project Site. Further, the areas in which other reasonably foreseeable actions would occur are already disturbed or in previously developed areas, thereby minimizing their potential to impact biological resources over the long term.

## 4.2.5 Water Resources

The Preferred Alternative and past, present, and reasonably foreseeable actions would result in *short-term, minor adverse cumulative impacts* on water resources from increased erosion and sedimentation during construction activities. However, with implementation of stormwater management BMPs and compliance with Section 438 of the EISA, and considering there are no defined surface water channels downstream of the Project Site (i.e., the area west of ADF-SW), individual and collective effects would be maintained at negligible levels.

### 4.2.6 Facilities and Traffic/Transportation

Implementation of the Preferred Alternative in consideration with past, present, and reasonably foreseeable future actions could lead to increased traffic during construction and operation. If the NASA Road renovation occurs concurrently with the Preferred Alternative, *short-term, minor adverse cumulative impacts* to traffic would result as the Preferred Alternative would slightly increase traffic volume while construction is being conducted on the only road accessing the Project Site. The number of new employees associated with the Preferred Alternative, in conjunction with the Building 10-3 project, would also increase the demand for parking at ADF-SW; however, the parking lot expansion project would improve parking access for all employees. Overall, there are four cumulative projects intended to improve the transportation facilities at ADF-SW, and two projects intended to improve electricity provision to the facility. Implementation of the Preferred Alternative would be consistent with current ADF-SW operations and would only marginally increase demand on local utilities. When combined with the effects of other past, present, and reasonably foreseeable project activities, implementation of the Preferred Alternative would be consistent with current ADF-SW operations and would only marginally increase demand on local utilities. When combined with the effects of other past, present, and reasonably foreseeable project activities, implementation of the Preferred Alternative si likely to have a negligible cumulative effect on regional utilities.

### 4.2.7 Socioeconomics

The construction and operation of the Preferred Alternative would result in beneficial impacts on the local economy. Collective expenditures by temporary and permanent workforces would benefit local accommodation, food, and retail industries, and local fiscal benefits would accrue from associated sales tax revenues. Perceptible changes in population growth rate or housing are not expected, as new employees hired during the operation of the Preferred Alternative would likely be existing residents of the Las Cruces metro area. Of the past, present, and reasonably foreseeable future actions considered, the Building 10-3 project is the only one that would involve notable changes in the ADF-SW workforce; this project would result in similar benefits to the local economy, but also would not be anticipated to affect local population or housing availability meaningfully.

# 5.0 LIST OF PREPARERS

### 5.1 GOVERNMENT PREPARERS

Name	Affiliation	Role	
Joshua Lozano	ADF-SW	Deputy Chief of Security	
Deborah Nethers	WSMR	Environmental Specialist	
Gregory Silsby	WSMR	General Biologist	
Amanda Skarsgard	NASA	Environmental Scientist	
Antonette Doherty	NASA	Cultural Resource Manager and Environmental Project Manager	

### 5.2 AECOM PREPARERS

Name	Role	Degree	Years of Experience
Krista Kehrer	Project Manager, EA review and oversight	B.S. in Interior Design	28
Jennifer Warf	Program Manager, EA review and oversight	M.S. in Environmental Studies B.A. in Zoology	20
Michael Busam	Deputy Project Manager, EA preparation	B.S. in Environmental Science and Policy	7
Allison Carr	Preparation of EA sections; Preparation of maps and figures	Master of City Planning B.A. in Geography	3

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APPENDIX A:

# CONSULTATION WITH FEDERAL, STATE, AND LOCAL AGENCIES

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## **DISTRIBUTION LIST**

Local (City and County) Government	
Ifo Pili	Stephanie Hernandez
City Manager	Alamogordo City Manager (Acting)
City of Las Cruces	1376 E Ninth Street
700 N Main Street	Alamogordo, NM 88310
Las Cruces, NM 88001	shernandez@ci.alamogordo.nm.us
agranado@las-cruces.org	
Fernando R. Macias	Ravi Bhasker
Dona Ana County Manager	Mayor of Socorro
845 N Motel Blvd	111 School of Mines Road
Las Cruces, New Mexico 88007	P.O. Box K
fernandom@donaanacounty.org	Socorro, New Mexico 87801
	RBhasker@socorronm.gov
Pamela Heltner	Amber Vaughn
County Manager	Sierra County Manager
County of Otero New Mexico	855 Van Patten
1101 New York Avenue	Truth or Consequences, NM 87901
Alamogordo, NM 88310-6935	Phone: 575.894.6215
Phone: 575.437.7427	avaughn@sierraco.org
pheltner@co.otero.nm.us	
Michael Hawkes	
Socorro County Manager	
PO Box 1	
Socorro, NM 87801	
mhawkes@co.socorro.nm.us	
Legislators	
Senator Martin Heinrich 201	Senator Ben Lujan
North Church St., Ste. 305 Las	120 South Federal Place, Suite 302
Cruces, N.M. 88001	Santa Fe, NM 87501
(575) 523-6561	,
	Email POC - Angelo Champion
Email POC- Ashley Beyer	Casework@lujan senate gov
Ashley_Beyer@heinrich.senate.gov	505 328 7488
575.644.7200	505.520.7400
Congressman Gabe Vasquez	
115 W. Griggs Ave.	
Las Cruces, NM 88001	
Email POC – Adela Amador	
adela.amador@mail.house.gov	

•

.

State		
Secretary James C. Kenney	Collin Haffey	
New Mexico Environment Department	Forest and Watershed Health Coordinator	
P.O. Box 5469	Forest and Watershed Health Office	
Santa Fe, NM 87502-5469	EMNRD-Forestry Division	
James.Kenney@state.nm.us	4001 Edith Blvd. NE	
	Albuquerque, NM, 87107	
	collin.haffey@emnrd.nm.gov	
Abe Franklin	Mr. Blake Roxlau	
Surface Water Quality Bureau, Watershed	Environmental Design Section Manager	
Protection Section	Environmental Design Division	
New Mexico Environment Department	New Mexico Department of Transportation	
P.O. Box 5469	P.O. Box 1149	
Santa Fe, NM 87502-5469	Santa Fe, NM 87504	
abraham.franklin@state.nm.us	blake.roxlau@state.nm.us	
Mr. Mark Watson	Stephanie Garcia Richard	
New Mexico Dept. of Game & Fish	Land Commissioner	
P.O. Box 25112	The New Mexico State Land Office	
Santa Fe. NM 87504	P.O. Box 1148	
mark.watson@state.nm.us	Santa Fe NM 87504	
$\bigcirc$	sgarciarichard@slo.state.nm.us	
	505.827.5760	
Federal		
Mr. Shave Sectoring Field Supervisor	Ma Camia Baraman	
U.S. Fish and Wildlife Service	Dialogist	
Now Movies Ecological Services Field Office	Diologist U.S. Fish and Wildlife Service	
2105 Oguna Road NE	Migratory Pirds	
Albuquerque NM 87112 1001	D O Pox 1206	
nmesfo@five.gov	P.U. BOX 1500 Albuquerque NM 97102 1206	
lillesio@iws.gov	Corrie Borgman@five.gov	
Ma Amy Luadara	Mr. Pohert Houston	
Regional Director	Compliance Assurance and Enforcement Division	
U.S. Fish and Wildlife Somiaa	U.S. Environmental Protection Agency	
DO Box 1206	Region 6	
Albuquerque NM 87102 1206	1445 Ross Avenue Suite 1200	
RDI ueders@fws.gov	Dallas TX 75202	
KDEucucis@iws.gov	ballas, $1X75202$	
Mc Jannifer Domero	Mr. Spancer Pobison	
Acting Defuge Manager	NEDA	
San Andres National Wildlife Defuge	NEFA Hollomon AFR	
IIS Fish and Wildlife Sarvica	49 <sup>th</sup> Civil Engineer Squadron	
5686 Sonto Cortrudio Drivo	Asset Management Flight	
Los Cruces NM 88012	Asset Management Flight	
Las Ciuces, INVI 00012	49 CES/CEIE 550 Tahasa Ayanya	
musay_smyme@iws.gov	Holloman Air Force Base NM 88330 8458	
	Spancer robison and a st mil	
	Spencer.iooison@us.ar.inii	

Ms. Marie Frias Sauter	Vacant	
Superintendent	District Manager	
White Sands National Park	Las Cruces District Office	
U.S. National Park Service	Bureau of Land Management	
P.O. Box 1086	1800 Marquess Street	
Holloman Air Force Base, NM 88330	Las Cruces, NM 88005-3371	
marie_frias@nps.gov	BLM_NM_LCDO_Mail@blm.gov	
Mrs. Yvette M. Waychus	Matthew Atencio, Field Manager (Acting)	
Environmental Division Chief	Socorro Field Office	
USAG Fort Bliss, DPW-ED	Bureau of Land Management	
624 Pleasonton Road	901 S. Highway 85	
Fort Bliss, TX 79916	Socorro, NM 87801-4168	
Yvette.m.waychus.civ@mail.mil	matencio@blm.gov	





DEPARTMENT OF THE ARMY U.S. ARMY GARRISON WHITE SANDS MISSILE RANGE 100 HEADQUARTERS AVENUE WHITE SANDS MISSILE RANGE, NEW MEXICO 88002

[day] March 2023

Dear Interested Stakeholder,

The Aerospace Data Facility Southwest (ADF-SW), has prepared an Environmental Assessment (EA) to construct and operate new receiving facilities, including supporting infrastructure, at ADF-SW. A 56.5-acre parcel currently granted for use by the National Aeronautics and Space Administration (NASA) and managed by White Sands Missile Range would be transferred to ADF-SW for the new facilities. These facilities would include a new visitor center, main entrance gate, vehicle inspection site, mail processing center, warehouse, electrical substation, and security fence. Three new roads and utility lines connecting the new buildings to existing utilites and roads would also be constructed. Approximately 50 new employees would be hired to support the operation of the proposed facilities.

The draft *Environmental Assessment for New Receiving Facilities at ADF-SW* assessed impacts on valued environmental components. The evaluation shows no significant impact to the environment if the proposed action were implemented.

Your interest in this EA is highly valued. The draft EA and draft Finding of No Significant Impact can be viewed online at: <u>https://home.army.mil/wsmr/index.php/about/garrison/directorate-public-works-</u> <u>dpw/environmental</u>. A printed version of the document can be mailed upon request. All correspondence or comments must be received no later than 30-days after the draft Finding of No significant Impact is published in local newspapers.

Department of the Army US Army Garrison White Sands Environmental Division (Bldg. 163/DPW) ATTN: Customer Support Branch White Sands Missile Range, New Mexico 88002-5000 Email to: USARMYGarrisonWSMREnvironmentalAssessments@army.mil FAX: (575) 678-2048

Sincerely,

Brian D. Knight Chief, Environmental Division Directorate of Public Works



June 22, 2023

Brian D. Knight, Chief Environmental Division Directorate of Public Works Department of the Army US Army Garrison White Sands Environmental Division (Bldg. 163/DPW) ATTN: Customer Support Branch White Sands Missile Range, New Mexico 88002-5000

Submitted electronically to: USARMYGarrisonWSMREnvironmentalAssessments@army.mil

RE: Aerospace Data Facility Southwest Receiving Facilities Environmental Assessment

Dear Mr. Knight,

On behalf of the New Mexico Environment Department (NMED), attached please find our comments on the Department of the Army's Environmental Assessment (EA) to construct and operate new receiving facilities, including supporting infrastructure, at White Sands Missile Range.

Strong intergovernmental coordination is essential to ensure protection of human health and the environment. NMED offers a few areas of potential environmental impacts in the attachment for you to evaluate.

Thank you for providing the opportunity to review the project materials. Please don't hesitate to reach out to us with any further questions or concerns you may have. In the future, please send all comment requests to <u>env.review@env.nm.gov</u>. This will help expedite a timely review of your request.

Sincerely,

# Jonas Armstrong

Digitally signed by Jonas Armstrong Date: 2023.06.22 21:49:23 -06'00'

Jonas Armstrong Director of Strategic Initiatives

Attachment (1)

SCIENCE | INNOVATION | COLLABORATION | COMPLIANCE

#### **Attachment**

#### **Introduction**

The Department of the Army's invited comment on its Environmental Assessment (EA) to construct and operate new receiving facilities, including supporting infrastructure, at White Sands Missile Range. The New Mexico Environment Department (NMED) offers the following comments.

#### Air Quality

Although the proposed facility is exempt under the state's Fugitive Dust Control regulation, 20.2.23 NMAC, we wanted to remind you that Dona Ana, county has their own Fugitive Dust ordinance. Any applicable local or county regulations requiring noise and/or dust control must be followed. Also, on page 20 of the draft environmental assessment, Table 3. Climate Conditions in the ROI, the superscript 1 should read, Doña Ana, New Mexico and not Colorado.

#### Petroleum Storage Tanks

This request contains a proposal to install one (1) emergency generator system with a diesel tank. Please note, if the tank falls under the regulatory requirements of 20.5 NMAC, 1,320-gallons and greater for an aboveground tank (AST) and greater than 110-gallons for an underground storage tank (UST), the installation requirements in 20.5.106 or 20.5.109 NMAC must be followed with a 30-day notification given to the Bureau. In addition, there are currently two (2) active UST facilities within ½-mile of the proposed construction site.

The facilities are:

Facility ID	Facility Name	Facility Address
29536	NASA GSCF WSC Bldg. T-1	12600 NASA Road WSC BLDG T-1, Las Cruces, NM 88012
31721	WSTF Bldg. 113, Tank M4 & M5	WSTF Bldg. 113 NASA Rd., Las Cruces, NM 88012

There are no confirmed release sites that are active or have a "no further action" status <u>within</u> the area of the proposed construction site. However, there are two (2) facilities located within  $\frac{1}{2}$  mile identified as sites where a petroleum storage tank release (leak or spill) and one (1) facility located within  $\frac{1}{2}$  mile identified where a release (leak or spill) has been confirmed. These facilities are:

Facility ID	Release Name	Release ID	Facility Address	Status
29536	NASA GSCF WSC Bldg. T-1	2551	12600 NASA Road WSC BLDG T-1, Las Cruces, NM 88012	No Further Action as of July 11, 1995
54798	NASA GSFC WSC Bldg T-3	4810	12600 NASA Road WSC BLDG T-3, Las Cruces, NM 88012	No Further Action as of March 14, 2022
28500	HELSTF WSMR	904	Environmental Office B 26145, White Sands Missile Range, NM 88002	Site referred to the Hazardous Waste Bureau in May of 2001

Facilities where NMED's petroleum storage tank database shows all petroleum storage tanks have been removed or closed and does not show a release and facilities and releases unknown to the Petroleum Storage Tank Bureau are not included in this comment.
If an abandoned storage tank system or petroleum impacted soil and/or water is discovered during construction, the Petroleum Storage Tank Bureau must be notified (20.5.118 NMAC, etc.). In the event that an abandoned storage tank system or petroleum impacted soil and/or water is discovered during any construction activity, please notify the Petroleum Storage Tank Bureau during business hours via the "Leak of the Week" at: <a href="https://www.env.nm.gov/petroleum\_storage\_tank/">https://www.env.nm.gov/petroleum storage\_tank/</a> (see box to the right, Report a Leak or Spill) or call 505-476-4397. During non-business hours, please call 505-827-9329. Owners, operators, and others dealing with petroleum storage tank systems must comply with all regulations in 20.5 NMAC, New Mexico's Petroleum Storage Tank regulations.

# Surface Water Quality

# Clean Water Act, Section 402 NPDES Industrial Storm Water Construction General Permit (CGP)

The USEPA may require National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) coverage for storm water discharges from construction activities (such as clearing, grading, excavating, and stockpiling) that disturb (or re-disturb) one or more acres, including expansions, of total land area. Prior to discharging storm water, construction operators may need to obtain coverage under an NPDES permit.

A Construction General Permit (CGP) is not required if the disturbing activities are part of the normal day-today operation of a completed facility (e.g., daily cover for landfills, maintenance of gravel roads or parking areas, landscape maintenance. If work performed is routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

Among other things, the CGP requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the project, including support and staging areas, and that appropriate Best Management Practices (BMPs) be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (primarily sediment, oil & grease and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization measures (re-vegetation, paving, etc.), and permanent storm water management measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering the Rio Grande or other Waters of the US.

Part 9 of the 2022 CGP includes permit conditions applicable to specific states, Indian country lands, or territories. In the State of New Mexico, except on tribal land, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site (both during and after construction) compared to pre-construction, undisturbed conditions (see Subpart 9.6.1 of the 2022 CGP.

The US EPA Requires that all "operators" obtain NPDES permit coverage for construction projects. Generally, this means at least two parties will require permit coverage. The owner/developer of this construction project who has operational control over project specifications; the general contractor who has day-to-day operational control of those activities at the site, which are necessary to ensure compliance with the SWPPP and other permit conditions; and possibly other "operators" will require appropriate NPDES permit coverage for this project.

The Construction General Permit, Notice of Intent, submittal requirements, Federal Register notice, and other information is available at: <u>https://www.epa.gov/npdes/stormwater-discharges-construction-activities</u>.

If construction activities or disturbances were to take place requiring discharge of dredge/fill material or activities were to take place in the riverbanks and wetlands, a 404 dredge and fill permit is required by the US Army Corps of Engineers.

A Construction General Permit (CGP) is not required if the disturbing activities are part of the normal day-today operation of a completed facility (e.g., daily cover for landfills, maintenance of gravel roads or parking areas, landscape maintenance. If work performed is routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. If the 5845 KAFB Zia Park Construction goes beyond routine maintenance, see below.

# Clean Water Act, Section 402 NPDES Industrial Storm Water Multi-Sector General Permit (MSGP)

Coverage under the NPDES Multi-Sector General Permit (MSGP) is required for stormwater discharges to Waters of the U.S. associated with specific categories of industrial activity or sectors (e.g., Sector M automobile salvage yards, Sector N Scrap Recycling and Waste Recycling Facilities, Sector E Concrete Manufacturing) unless excluded or eligible for an exemption. Information on USEPA's reissued MSGP authorizing stormwater and certain non-stormwater discharges from industrial facilities is available at <a href="https://www.epa.gov/npdes/stormwater-discharges-industrial-activities">https://www.epa.gov/npdes/stormwater-discharges-industrial-activities</a>. EPA's web site, among other things, includes information on eligibility, submitting a notice of intent (NOI), MSGP stormwater water pollution prevention plans (SWPPP), monitoring, inspections, record-keeping, electronic reporting, and sector fact sheets with guidance on best management practices to control pollutants.

# USACE Section 404 Dredge and Fill Permits and NMED 401 Certifications

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the Federal Clean Water Act (CWA). The USACE issues or authorizes Standard Individual Permits (IPs), Nationwide Permits (NWPs), and the Emergency Regional General Permit (RGP) for activities such as earth-moving work within wetlands, lakes, and streams (including ephemeral streams or arroyos) that are waters of the United States. If you have questions about activities within watercourses or wetlands that may require coverage under a CWA Section 404 permit, then more information is available on-line from the USACE, Albuquerque District, Regulatory Division at http://www.spa.usace.army.mil/Missions/Regulatory-Program-and-Permits/.

A water quality certification is required under Section 401 of the Federal CWA for activities regulated under Section 404. More information on the permitting and certification requirements is available on-line from NMED at https://www.env.nm.gov/surface-water-quality/dredgeandfillactivities/. If you have questions related to dredge and fill activities, then contact Abe Franklin, Program Manager, Watershed Protection Section, NMED Surface Water Quality Bureau at 505-827-0187.

# LAS CRUCES SUN-NEWS

#### AFFIDAVIT OF PUBLICATION

Ad No. 0005708008

AECOM 3101 WILSON BLVD ARLINGTON, VA 22201

I, a legal clerk of the Las Cruces Sun-News, a newspaper published daily at the county of Dona Ana, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

5/21/2023

Despondent further states this newspaper is duly qualified to publish legal notice or advertisements within the meaning of Sec. Chapter 167, Laws of 1937.

Clerk

STATE *OF WISCONSIN* SS. County of Brown Subscribed and sworn before me this 5th of June 2023.

NOTARY PUBLIC in and for Brown County, Wisconsin

10-25-26 My Commission Expires

Ad#: 0005708008 Account#1423454 # of Affidavits :1

RYAN SPELLER Notary Public State of Wisconsin

#### **US ARMY WHITE SANDS MISSILE RANGE, NEW** MEXICO, DRAFT FINDING OF NO SIGNIFICANT IMPACT

Name of the Proposed Ac-tion: Environmental Assess-ment for New Receiving Facilities at Aerospace Data Fa-cility Southwest Description of the Proposed Description of the Proposed Action: The Aerospace Data Facility – Southwest (ADF-SW) has prepared a Draft Environmental Assessment (EA) to construct and oper-ate new receiving facilities, including supporting infra-structure. ADF-SW is located within the White Sands Test Facility (WSTE) a subdivision Facility (WSTF), a subdivision of White Sands Missile Range (WSMR) leased from the Army by the National Aeronautics and Space Ad-ministration (NASA). A 56.5-acre pared currently under acre parcel currently under NASA administration would be transferred to ADF-SW for the new facilities. These facilities would include a new visitor center, main ennew visitor center, main en-trance gate, vehicle inspec-tion site, mail processing center, warehouse, electrical substation, and security fence. Three new roads and utility lines connecting the new buildings to existing utilities and roads would al-so be constructed. Approxiutilities and roads would al-so be constructed. Approxi-mately 50 new employees would be hired to support the operation of the pro-posed facilities. Purpose and Need: The pur-pose of the Proposed Action is to provide adequate facili-ties for ADF-SW to receive personnel, vehicles, and maties for ADF-SW to receive personnel, vehicles, and ma-terials at the site systemati-cally and efficiently, while further improving the site's security to meet Depart-ment of Defense (DoD) Antiterrorism/Force Protec-tion (AT/FP) standards. The Proposed Action is needed to (1) accommodate existing

Proposed Action is needed to (1) accommodate existing demand at ADF-SW for re-ceiving operations, (2) ac-commodate potential future expansion of ADF-SW, and (3) ensure that ADF-SW maintaing up to data site remaintains up-to-date site security measures that meet minimum Unified Facilities Criteria (UFC) standards. Alternatives Considered: Two alternatives were ana-lyzed in the Draft EA: the

Proposed Action and a No Action Alternative. Under the Proposed Action (the Preferred Alternative), ADF-SW would construct and operate a new visitor center, main entrance gate, vehicle inspection site, mail processing center, warehouse, electrical substation, and security fence on the proposed 56.5-acre parcel to be transferred from NASA.

by Tercle on the proposed 56.5-acre parcel to be transferred from NASA. Under the No Action Alternative, the proposed new receiving facilities at ADF-SW would not be constructed and ADF-SW would continue to use its existing facilities. The 56.5-acre parcel would remain undeveloped. Environmental Consequences: The Draft Environmental Assessment assessed potential environmental impacts. Through implementation of best management practices (BMPs) there would be no significant impacts on the environment if the Proposed Action is implemented.

the Proposed Action is implemented. Example BMPs include following standard dust controls during construction to minimize fugitive dust emissions; briefing construction crews on the procedures to be followed during unanticipated discoveries of cultural resources; developing a stormwater pollution prevention plan (SWPPP) and adhering to proper erosion and sediment controls during land-disturbing activities; revegetating disturbed areas using properly adapted xeric plants approved by WSMR; and designing the site to restore predevelopment hydrology to the maximum extent technically feasible and comply with Section 438 and the Energy Independence and Security Act (EISA). Public Review: ADF-SW invites members of the public to comment on the Draft EA

Public Review: ADF-SW invites members of the public to comment on the Draft EA prior to document finalization. Hardcopies of the Draft EA are available to the public at the following information repositories: Thomas Branigan Memorial Library (Las Cruces, NM) and WSMR Post Library (WSMR, NM). The document is available

The document is available electronically on the White Sands Garrison website, http s://home.army.mil/wsmr/inde x.php/about/garrison/directo r a t e - p u b -l i c - w o r k s -dpw/environmental. Written comments concern-ing the Draft EA should be directed to the White Sands Missile Range Garrison Envi-ronmental Division via the email or mailing addresses provided below; all com-ments must be received no later than 30 days after the Draft Finding of No Signifi-cant Impact is published. Department of the Army US Army Garrison White Sands Environmental Division (Bldg. 163/DPV) ATTN: Customer Support Branch White Sands Missile Range, New Mexico 880022-5000 Email: USARMYGarrisonWS MREnvironmentalAssessmen ts@army.mil #5708008, Sun News, May 21, 2023

**APPENDIX B:** 

AIR CONFORMITY APPLICABILITY MODEL

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# 1. General Information

#### - Action Location

Base:GENERIC BASEState:New MexicoCounty(s):Dona AnaRegulatory Area(s):NOT IN A REGULATORY AREA

- Action Title: New Receiving Facilities at Aerospace Data Facility Southwest, White Sands Missile Range, NM
- Project Number/s (if applicable):
- Projected Action Start Date: 1/2025

#### - Action Purpose and Need:

Purpose: Provide adequate facilities for Aerospace Data Facility Southwest (ADF-SW) to receive personnel, vehicles, and materials at the site systematically and efficiently, while further improving the site's security to meet Department of Defense (DoD) Antiterrorism/Force Protection (AT/FP) standards.

Need: (1) Accommodate existing demand at ADF-SW for receiving operations, (2) a ccommodate potential future expansion of ADF-SW, and (3) ensure that ADF-SW maintains up-to-date site security measures that meet minimum Unified Facilities Criteria (UFC) standards, including:

- UFC 3-530-01 Interior and Exterior Lighting Systems and Controls 2015
- UFC 4-010-01 DoD Minimum Anti-Terrorism Standards for Buildings 2018
- UFC 4-022-01 Entry Control Facilities Access Control Points 2017
- UFC 4-022-03 Security Fences and Gates 2013
- UFC 4-022-02 Selection and Application of Vehicle Barriers 2010

#### - Action Description:

Construct and operate the new receiving facilities and a ssociated in frastructure, as described below:

- 1,500-square foot (SF) main entrance gate facility
- 3,000-SF visitor center
- 1,000-SF vehicle inspection site
- 8,000-SF mail processing center
- 46,000-SF warehouse
- 500-SF electrical substation
- 3,530 linear feet (LF) of security fencing
- 3,975 LF electrical line
- 4,390 LF water line
- 2,980 LF sanitary sewer line
- 3,290 LF communications line
- 360 LF storm water in frastructure
- 5,200 LF CCTV/electrical (security) lines
- 41,210-SF Southern Road
- 52,620-SF Serpentine Road
- 40,860-SF Perimeter Road
- 1 acre of stormwater retention basins, average 3 feet deep
- Parking a reas for up to 50 total employees and visitors
- 1 diesel-powered emergency generator
- \*Emissions estimates include clearing and grading 3 a cres of contractor staging on-site.

Space heating is anticipated to be electric-powered equipment (no on-site emissions)

Once operational, the new facilities will employ approximately 50 additional staff (with 20 to 30 active on a given shift).

Point of Contact	
Name:	PaulSanford
Title:	Environmental Planner
<b>Organization:</b>	AECOM
Email:	paul.sanford@aecom.com
Phone Number:	813-675-6843

#### - Activity List:

	Activity Type	Activity Title
2.	Construction / Demolition	Construct Facilities and Infrastructure
3.	Emergency Generator	Install and Operate Emergency Generator
4.	Personnel	Additional Personnel Staffing

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

# 2. Construction / Demolition

# 2.1 General Information & Timeline Assumptions

#### - Activity Location

County: Dona Ana Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Construct Facilities and Infrastructure

#### - Activity Description:

Construct and operate the new receiving facilities and associated in frastructure, as described below:

- 1,500-square foot (SF) main entrance gate facility
- 3,000-SF visitor Center
- 1,000-SF vehicle inspection site
- 8,000-SF mail processing center
- 46,000-SF warehouse
- 500-SF electrical substation
- 3530 linear feet (LF) of security fencing
- 3,975 LF electrical line
- 4,390 LF water line
- 2,980 LF sanitary sewer line
- 3,290 LF communications line
- 360 LF storm water in frastructure
- 5,200 LF CCTV/electrical (security) lines
- 41,210-SF Southern Road
- 52,620-SF Serpentine Road
- 40,860-SF Perimeter Road
- 1 acre of stormwater retention basins, average 3 feet deep
- Parking areas for up to 50 total employees and visitors

\*Emissions estimates include clearing and grading 3 a cres of contractor staging on-site.

#### - Activity Start Date Start Month: 1 Start Month: 2025

- Activity End Date

Indefinite:	False
End Month:	11
End Month:	2025

#### - Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.940514
SO <sub>x</sub>	0.004780
NO <sub>x</sub>	1.437700
СО	2.051145
PM 10	10.403355

Pollutant	Total Emissions (TONs)
PM 2.5	0.047615
Pb	0.000000
NH <sub>3</sub>	0.003506
CO <sub>2</sub> e	521.6

# 2.1 Site Grading Phase

# 2.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date Start Month: 1 Start Quarter: 1 Start Year: 2025
- Phase Duration Number of Month: 1 Number of Days: 1

#### 2.1.2 Site Grading Phase Assumptions

- General Site Grading Information	
Area of Site to be Graded (ft <sup>2</sup> ):	378380
Amount of Material to be Hauled On-Site (yd <sup>3</sup> ):	3780
Amount of Material to be Hauled Off-Site (yd <sup>3</sup> ):	11040

#### - Site Grading Default Settings Default Settings Used: Yes Average Day(s) worked per week: 5 (default)

#### - Construction Exhaust (default)

<b>Equipment Name</b>	Number Of	Hours Per Day
	Equipment	
Excavators Composite	1	8
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	3	8

#### - Vehicle Exhaust

Average Hauling Truck Capacity (yd<sup>3</sup>):

20 (default)

### Average Hauling Truck Round Trip Commute (mile): 20 (default)

#### - Vehicle Exhaust Vehicle Mixture(%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

#### - Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

#### - Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

# 2.1.3 Site Grading Phase Emission Factor(s)

# - Construction Exhaust Emission Factors (lb/hour) (default)

Excavators Composite								
	VOC	SO <sub>x</sub>	NO <sub>x</sub>	CO	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e
Emission Factors	0.0559	0.0013	0.2269	0.5086	0.0086	0.0086	0.0050	119.70
<b>Graders</b> Composite								
	VOC	SO <sub>x</sub>	NO <sub>x</sub>	CO	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e
Emission Factors	0.0676	0.0014	0.3314	0.5695	0.0147	0.0147	0.0061	132.89
Other Construction	Equipment	Composite						
	VOC	SO <sub>x</sub>	NO <sub>x</sub>	CO	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e
Emission Factors	0.0442	0.0012	0.2021	0.3473	0.0068	0.0068	0.0039	122.60
<b>Rubber Tired Dozer</b>	's Composit	e						
	VOC	SOx	NO <sub>x</sub>	СО	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e
Emission Factors	0.1671	0.0024	1.0824	0.6620	0.0418	0.0418	0.0150	239.45
Tractors/Loaders/Backhoes Composite								
	VOC	SOx	NO <sub>x</sub>	СО	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872

#### - Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO <sub>x</sub>	NO <sub>x</sub>	CO	PM 10	PM 2.5	Pb	NH <sub>3</sub>	CO <sub>2</sub> e
LDGV	000.216	000.002	000.112	003.201	000.005	000.004		000.024	00297.167
LDGT	000.211	000.003	000.197	003.559	000.006	000.005		000.026	00385.433
HDGV	000.808	000.006	000.860	013.075	000.025	000.022		000.051	00894.420
LDDV	000.071	000.001	000.083	003.088	000.003	000.002		000.008	00300.475
LDDT	000.071	000.001	000.122	002.092	000.003	000.003		000.009	00348.850
HDDV	000.100	000.004	002.413	001.475	000.040	000.036		000.032	01258.368
MC	002.651	000.003	000.755	013.028	000.024	000.021		000.055	00389.875

# 2.1.4 Site Grading Phase Formula(s)

# - Fugitive Dust Emissions per Phase

 $PM10_{FD} = (20 * ACRE * WD) / 2000$ 

PM10<sub>FD</sub>: Fugitive Dust PM 10 Emissions (TONs) 20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day) ACRE: Total acres (acres) WD: Number of Total Work Days (days) 2000: Conversion Factor pounds to tons

### - Construction Exhaust Emissions per Phase

CEE<sub>POL</sub> = (NE \* WD \* H \* EF<sub>POL</sub>) / 2000

CEE<sub>POL</sub>: Construction Exhaust Emissions (TONs) NE: Number of Equipment WD: Number of Total Work Days (days) H: Hours Worked per Day (hours) EF<sub>POL</sub>: Emission Factor for Pollutant (lb/hour) 2000: Conversion Factor pounds to tons

#### - Vehicle Exhaust Emissions per Phase

 $VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$ 

 $\begin{array}{l} VMT_{VE}: \mbox{ Vehicle Exhaust Vehicle Miles Travel(miles)} \\ HA_{OnSite}: \mbox{ Amount of Material to be Hauled On-Site (yd^3)} \\ HA_{OffSite}: \mbox{ Amount of Material to be Hauled Off-Site (yd^3)} \\ HC: \mbox{ Average Hauling Truck Capacity (yd^3)} \\ (1 / HC): \mbox{ Conversion Factor cubic yards to trips (1 trip / HC yd^3)} \\ HT: \mbox{ Average Hauling Truck Round Trip Commute (mile/trip)} \\ \end{array}$ 

 $V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$ 

 $\begin{array}{l} V_{POL}: \ Vehicle \ Emissions (TONs) \\ VMT_{VE}: \ Vehicle \ Exhaust \ Vehicle \ Miles \ Travel (miles) \\ 0.002205: \ Conversion \ Factor \ grams \ to \ pounds \\ EF_{POL}: \ Emission \ Factor \ for \ Pollutant (grams/mile) \\ VM: \ Vehicle \ Exhaust \ On \ Road \ Vehicle \ Mixture \ (\%) \\ 2000: \ Conversion \ Factor \ pounds \ to \ tons \end{array}$ 

### - Worker Trips Emissions per Phase

 $VMT_{WT} = WD * WT * 1.25 * NE$ 

VMT<sub>WT</sub>: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

 $V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$ 

 $\begin{array}{l} V_{POL}: \ Vehicle \ Emissions (TONs) \\ VMT_{WT}: \ Worker \ Trips \ Vehicle \ Miles \ Travel (miles) \\ 0.002205: \ Conversion \ Factor \ grams \ to \ pounds \\ EF_{POL}: \ Emission \ Factor \ for \ Pollutant (grams/mile) \\ VM: \ Worker \ Trips \ On \ Road \ Vehicle \ Mixture (\%) \\ 2000: \ Conversion \ Factor \ pounds \ to \ tons \end{array}$ 

# 2.2 Trenching/Excavating Phase

### 2.2.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date

Start Month:2Start Quarter:1Start Year:2025

#### - Phase Duration

Number of Month: 2

Number of Days: 20

2.2.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information

Area of Site to be Trenched/Excavated (ft <sup>2</sup> ):	244460
Amount of Material to be Hauled On-Site (yd <sup>3</sup> ):	25834
Amount of Material to be Hauled Off-Site (yd <sup>3</sup> ):	13746

- Trenching Default Settings Default Settings Used: Yes Average Day(s) worked per week: 5 (default)

# - Construction Exhaust (default)

Equipment Name	Number Of	Hours Per Day
	Equipment	
Excavators Composite	2	8
Other General Industrial Equipmen Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

### - Vehicle Exhaust

Average Hauling Truck Capacity (yd³):20 (default)Average Hauling Truck Round Trip Commute (mile):20 (default)

- Vehicle Exhaust Vehicle Mixture(%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

# - Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

#### - Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

# 2.2.3 Trenching / Excavating Phase Emission Factor(s)

# - Construction Exhaust Emission Factors (lb/hour) (default)

Excavators Compos	ite									
	VOC	SO <sub>x</sub>	NO <sub>x</sub>	СО	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e		
Emission Factors	0.0559	0.0013	0.2269	0.5086	0.0086	0.0086	0.0050	119.70		
Graders Composite										
	VOC	SO <sub>x</sub>	NO <sub>x</sub>	СО	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e		
Emission Factors	0.0676	0.0014	0.3314	0.5695	0.0147	0.0147	0.0061	132.89		
Other Construction Equipment Composite										
	VOC	SOx	NO <sub>x</sub>	CO	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e		
Emission Factors	<b>VOC</b> 0.0442	<b>SO</b> <sub>x</sub> 0.0012	NO <sub>x</sub> 0.2021	CO 0.3473	<b>PM 10</b> 0.0068	<b>PM 2.5</b> 0.0068	CH <sub>4</sub> 0.0039	CO <sub>2</sub> e		
Emission Factors Rubber Tired Dozer	VOC 0.0442 s Composit	SO <sub>x</sub> 0.0012 e	NO <sub>x</sub> 0.2021	CO 0.3473	<b>PM 10</b> 0.0068	<b>PM 2.5</b> 0.0068	CH <sub>4</sub> 0.0039	CO <sub>2</sub> e 122.60		
Emission Factors <b>Rubber Tired Dozer</b>	VOC 0.0442 s Composite VOC	SO <sub>x</sub> 0.0012 e SO <sub>x</sub>	NO <sub>x</sub> 0.2021 NO <sub>x</sub>	CO 0.3473 CO	PM 10 0.0068 PM 10	PM 2.5 0.0068 PM 2.5	CH <sub>4</sub> 0.0039 CH <sub>4</sub>	CO <sub>2</sub> e 122.60 CO <sub>2</sub> e		
Emission Factors Rubber Tired Dozer Emission Factors	VOC 0.0442 s Composite VOC 0.1671	<b>SO</b> <sub>x</sub> 0.0012 e <b>SO</b> <sub>x</sub> 0.0024	NO <sub>x</sub> 0.2021 NO <sub>x</sub> 1.0824	CO 0.3473 CO 0.6620	PM 10 0.0068 PM 10 0.0418	PM 2.5 0.0068 PM 2.5 0.0418	CH <sub>4</sub> 0.0039 CH <sub>4</sub> 0.0150	CO <sub>2</sub> e 122.60 CO <sub>2</sub> e 239.45		
Emission Factors Rubber Tired Dozer Emission Factors Tractors/Loaders/Ba	VOC 0.0442 s Composit VOC 0.1671 ackhoes Cor	<b>SO</b> <sub>x</sub> 0.0012 e <b>SO</b> <sub>x</sub> 0.0024 <b>mposite</b>	NO <sub>x</sub> 0.2021 NO <sub>x</sub> 1.0824	CO 0.3473 CO 0.6620	PM 10           0.0068           PM 10           0.0418	PM 2.5           0.0068           PM 2.5           0.0418	CH4           0.0039           CH4           0.0150	CO <sub>2</sub> e 122.60 CO <sub>2</sub> e 239.45		

Emission Factors0.03350.00070.18570.35860.00580.00580.003066.872

#### - Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SOx	NO <sub>x</sub>	CO	PM 10	PM 2.5	Pb	NH <sub>3</sub>	CO <sub>2</sub> e
LDGV	000.216	000.002	000.112	003.201	000.005	000.004		000.024	00297.167
LDGT	000.211	000.003	000.197	003.559	000.006	000.005		000.026	00385.433
HDGV	000.808	000.006	000.860	013.075	000.025	000.022		000.051	00894.420
LDDV	000.071	000.001	000.083	003.088	000.003	000.002		000.008	00300.475
LDDT	000.071	000.001	000.122	002.092	000.003	000.003		000.009	00348.850
HDDV	000.100	000.004	002.413	001.475	000.040	000.036		000.032	01258.368
MC	002.651	000.003	000.755	013.028	000.024	000.021		000.055	00389.875

### 2.2.4 Trenching / Excavating Phase Formula(s)

#### - Fugitive Dust Emissions per Phase

 $PM10_{FD} = (20 * ACRE * WD) / 2000$ 

PM10<sub>FD</sub>: Fugitive Dust PM 10 Emissions (TONs) 20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day) ACRE: Total acres (acres) WD: Number of Total Work Days (days) 2000: Conversion Factor pounds to tons

#### - Construction Exhaust Emissions per Phase

 $CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$ 

CEE<sub>POL</sub>: Construction Exhaust Emissions (TONs) NE: Number of Equipment WD: Number of Total Work Days (days) H: Hours Worked per Day (hours) EF<sub>POL</sub>: Emission Factor for Pollutant (lb/hour) 2000: Conversion Factor pounds to tons

#### - Vehicle Exhaust Emissions per Phase

 $VMT_{VE} = (HA_{OnSite} + HA_{OffSite})^* (1 / HC)^* HT$ 

 $\begin{array}{l} VMT_{VE} \colon Vehicle \: Exhaust \: Vehicle \: Miles \: Travel(miles) \\ HA_{OnSite} \colon \: Am \: ount \: of \: Material \: to \: be \: Hauled \: On-Site \: (yd^3) \\ HA_{OffSite} \colon \: Am \: ount \: of \: Material \: to \: be \: Hauled \: Off-Site \: (yd^3) \\ HC \colon \: Average \: Hauling \: Truck \: Capacity \: (yd^3) \\ (1 \: / \: HC) \colon \: Conversion \: Factor \: cubic \: yards \: to \: trips \: (1 \: trip \: / \: HC \: yd^3) \\ HT \colon \: Average \: Hauling \: Truck \: Round \: Trip \: Commute \: (mile/trip) \end{array}$ 

 $V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$ 

V<sub>POL</sub>: Vehicle Emissions (TONs) VMT<sub>VE</sub>: Vehicle Exhaust Vehicle Miles Travel (miles) 0.002205: Conversion Factor grams to pounds EF<sub>POL</sub>: Emission Factor for Pollutant (grams/mile) VM: Vehicle ExhaustOn Road Vehicle Mixture (%) 2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase  $VMT_{WT} = WD * WT * 1.25 * NE$ 

VMT<sub>WT</sub>: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

 $V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$ 

 $\begin{array}{l} V_{POL}: \ Vehicle \ Emissions (TONs) \\ VMT_{VE}: \ Worker \ Trips \ Vehicle \ Miles \ Travel (miles) \\ 0.002205: \ Conversion \ Factor \ grams \ to \ pounds \\ EF_{POL}: \ Emission \ Factor \ for \ Pollutant (grams/mile) \\ VM: \ Worker \ Trips \ On \ Road \ Vehicle \ Mixture (\%) \\ 2000: \ Conversion \ Factor \ pounds \ to \ tons \end{array}$ 

### 2.3 Building Construction Phase

2.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date Start Month: 4 Start Quarter: 1 Start Year: 2025

- Phase Duration Number of Month: 6 Number of Days: 20

#### 2.3.2 Building Construction Phase Assumptions

#### - General Building Construction Information

Building Category:Office or IndustrialArea of Building (ft²):60000Height of Building (ft):12Number of Units:N/A

- Building Construction Default Settings Default Settings Used: Yes Average Day(s) worked per week: 5 (default)

#### - Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	6
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

#### - Vehicle Exhaust Vehicle Mixture(%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

#### - Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

#### - Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

#### 2.3.3 Building Construction Phase Emission Factor(s)

#### - Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite												
	VOC	SOx	NO <sub>x</sub>	СО	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e				
Emission Factors	0.0680	0.0013	0.4222	0.3737	0.0143	0.0143	0.0061	128.77				
Forklifts Composite												
	VOC	SOx	NO <sub>x</sub>	СО	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e				
Emission Factors	0.0236	0.0006	0.0859	0.2147	0.0025	0.0025	0.0021	54.449				
<b>Generator Sets Com</b>	Generator Sets Composite											
	VOC	SO <sub>x</sub>	NO <sub>x</sub>	CO	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e				
Emission Factors	0.0287	0.0006	0.2329	0.2666	0.0080	0.0080	0.0025	61.057				
Tractors/Loaders/Ba	ackhoes Co	nposite										
	VOC	SOx	NO <sub>x</sub>	СО	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e				
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872				
Welders Composite												
	VOC	SO <sub>x</sub>	NO <sub>x</sub>	CO	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e				
Emission Factors	0.0214	0.0003	0.1373	0.1745	0.0051	0.0051	0.0019	25.650				

#### - Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO <sub>x</sub>	NO <sub>x</sub>	CO	PM 10	PM 2.5	Pb	NH <sub>3</sub>	CO <sub>2</sub> e
LDGV	000.216	000.002	000.112	003.201	000.005	000.004		000.024	00297.167
LDGT	000.211	000.003	000.197	003.559	000.006	000.005		000.026	00385.433
HDGV	000.808	000.006	000.860	013.075	000.025	000.022		000.051	00894.420
LDDV	000.071	000.001	000.083	003.088	000.003	000.002		000.008	00300.475
LDDT	000.071	000.001	000.122	002.092	000.003	000.003		000.009	00348.850
HDDV	000.100	000.004	002.413	001.475	000.040	000.036		000.032	01258.368
MC	002.651	000.003	000.755	013.028	000.024	000.021		000.055	00389.875

# 2.3.4 Building Construction Phase Formula(s)

# - Construction ${\bf Exhaust}\,{\bf Emissions}\,{\bf per}\,{\bf Phase}$

 $CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$ 

CEE<sub>POL</sub>: Construction Exhaust Emissions (TONs) NE: Number of Equipment WD: Number of Total Work Days (days) H: Hours Worked per Day (hours) EF<sub>POL</sub>: Emission Factor for Pollutant (lb/hour)

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

 $VMT_{VE} = BA * BH * (0.42 / 1000) * HT$ 

VMT<sub>VE</sub>: Vehicle Exhaust Vehicle Miles Travel (miles) BA: Area of Building (ft<sup>2</sup>) BH: Height of Building (ft) (0.42 / 1000): Conversion Factor ft<sup>3</sup> to trips (0.42 trip / 1000 ft<sup>3</sup>) HT: Average Hauling Truck Round Trip Commute (mile/trip)

 $V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$ 

 $\begin{array}{l} V_{POL}: \ Vehicle \ Emissions (TONs) \\ VMT_{VE}: \ Vehicle \ Exhaust \ Vehicle \ Miles \ Travel (miles) \\ 0.002205: \ Conversion \ Factor \ grams \ to \ pounds \\ EF_{POL}: \ Emission \ Factor \ for \ Pollutant (grams/mile) \\ VM: \ Worker \ Trips \ On \ Road \ Vehicle \ Mixture (\%) \\ 2000: \ Conversion \ Factor \ pounds \ to \ tons \end{array}$ 

### - Worker Trips Emissions per Phase

 $VMT_{WT} = WD * WT * 1.25 * NE$ 

VMT<sub>WT</sub>: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

 $V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$ 

 $\begin{array}{l} V_{POL}: \ Vehicle \ Emissions (TONs) \\ VMT_{WT}: \ Worker \ Trips \ Vehicle \ Miles \ Travel (miles) \\ 0.002205: \ Conversion \ Factor \ grams \ to \ pounds \\ EF_{POL}: \ Emission \ Factor \ for \ Pollutant (grams/mile) \\ VM: \ Worker \ Trips \ On \ Road \ Vehicle \ Mixture (\%) \\ 2000: \ Conversion \ Factor \ pounds \ to \ tons \end{array}$ 

# - Vender Trips Emissions per Phase

 $VMT_{VT} = BA * BH * (0.38 / 1000) * HT$ 

VMT<sub>VT</sub>: Vender Trips Vehicle Miles Travel (miles) BA: Area of Building (ft<sup>2</sup>) BH: Height of Building (ft) (0.38 / 1000): Conversion Factor ft<sup>3</sup> to trips (0.38 trip / 1000 ft<sup>3</sup>) HT: Average Hauling Truck Round Trip Commute (mile/trip)

 $V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$ 

 $\begin{array}{l} V_{POL}: \ Vehicle \ Emissions (TONs) \\ VMT_{VT}: \ Vender \ Trips \ Vehicle \ Miles \ Travel (miles) \\ 0.002205: \ Conversion \ Factor \ grams \ to \ pounds \\ EF_{POL}: \ Emission \ Factor \ for \ Pollutant (grams/mile) \\ VM: \ Worker \ Trips \ On \ Road \ Vehicle \ Mixture \ (\%) \\ 2000: \ Conversion \ Factor \ pounds \ to \ tons \end{array}$ 

# 2.4 Architectural Coatings Phase

#### 2.4.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date Start Month: 11 Start Quarter: 1 Start Year: 2025
- Phase Duration Number of Month: 0 Number of Days: 10

#### 2.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information Building Category: Non-Residential Total Square Footage (ft<sup>2</sup>): 60000 Number of Units: N/A
- Architectural Coatings Default Settings Default Settings Used: Yes Average Day(s) worked per week: 5 (default)

#### - Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

#### 2.4.3 Architectural Coatings Phase Emission Factor(s)

#### - Worker Trips Emission Factors (grams/mile)

	VOC	SO <sub>x</sub>	NO <sub>x</sub>	CO	PM 10	PM 2.5	Pb	NH <sub>3</sub>	CO <sub>2</sub> e
LDGV	000.216	000.002	000.112	003.201	000.005	000.004		000.024	00297.167
LDGT	000.211	000.003	000.197	003.559	000.006	000.005		000.026	00385.433
HDGV	000.808	000.006	000.860	013.075	000.025	000.022		000.051	00894.420
LDDV	000.071	000.001	000.083	003.088	000.003	000.002		000.008	00300.475
LDDT	000.071	000.001	000.122	002.092	000.003	000.003		000.009	00348.850
HDDV	000.100	000.004	002.413	001.475	000.040	000.036		000.032	01258.368
MC	002.651	000.003	000.755	013.028	000.024	000.021		000.055	00389.875

#### 2.4.4 Architectural Coatings Phase Formula(s)

#### - Worker Trips Emissions per Phase

 $VMT_{WT} = (1 * WT * PA) / 800$ 

VMT<sub>WT</sub>: Worker Trips Vehicle Miles Travel (miles) 1: Conversion Factor man days to trips (1 trip / 1 man\* day) WT: Average Worker Round Trip Commute (mile) PA: Paint Area (ft<sup>2</sup>) 800: Conversion Factor square feet to man days (1 ft<sup>2</sup> / 1 man\* day)

 $V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$ 

 $\begin{array}{l} V_{POL}: \ Vehicle \ Emissions (TONs) \\ VMT_{WT}: \ Worker \ Trips \ Vehicle \ Miles \ Travel (miles) \\ 0.002205: \ Conversion \ Factor \ grams \ to \ pounds \\ EF_{POL}: \ Emission \ Factor \ for \ Pollutant (grams/mile) \\ VM: \ Worker \ Trips \ On \ Road \ Vehicle \ Mixture (\%) \\ 2000: \ Conversion \ Factor \ pounds \ to \ tons \\ \end{array}$ 

### - Off-Gassing Emissions per Phase

 $VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$ 

VOC<sub>AC</sub>: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft<sup>2</sup>)
2.0: Conversion Factor total area to coated area (2.0 ft<sup>2</sup> coated area / total area)
0.0116: Emission Factor (lb/ft<sup>2</sup>)
2000: Conversion Factor pounds to tons

# 2.5 Paving Phase

### 2.5.1 Paving Phase Timeline Assumptions

#### - Phase Start Date Start Month: 7 Start Quarter: 1 Start Year: 2025

- Phase Duration Number of Month: 0 Number of Days: 18

# 2.5.2 Paving Phase Assumptions

- General Paving Information Paving Area (ft<sup>2</sup>): 144140
- Paving Default Settings Default Settings Used: Yes Average Day(s) worked per week: 5 (default)

#### - Construction Exhaust (default)

EquipmentName	Number Of	Hours Per Day
	Equipment	
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	2	6
Rollers Composite	1	7

#### - Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

#### - Vehicle Exhaust Vehicle Mixture(%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

# - Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

# - Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

# 2.5.3 Paving Phase Emission Factor(s)

### - Construction Exhaust Emission Factors (lb/hour) (default)

Excavators Composite										
	VOC	SOx	NO <sub>x</sub>	CO	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e		
Emission Factors	0.0559	0.0013	0.2269	0.5086	0.0086	0.0086	0.0050	119.70		
Graders Composite										
	VOC	SOx	NO <sub>x</sub>	СО	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e		
Emission Factors	0.0676	0.0014	0.3314	0.5695	0.0147	0.0147	0.0061	132.89		
Other Construction Equipment Composite										
	VOC	SOx	NO <sub>x</sub>	СО	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e		
Emission Factors	0.0442	0.0012	0.2021	0.3473	0.0068	0.0068	0.0039	122.60		
Rubber Tired Dozers Composite										
	VOC	SO <sub>x</sub>	NO <sub>x</sub>	CO	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e		
Emission Factors	0.1671	0.0024	1.0824	0.6620	0.0418	0.0418	0.0150	239.45		
Tractors/Loaders/Backhoes Composite										
	VOC	SOx	NO <sub>x</sub>	СО	PM 10	PM 2.5	CH <sub>4</sub>	CO <sub>2</sub> e		
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872		

# - Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO <sub>x</sub>	NO <sub>x</sub>	CO	PM 10	PM 2.5	Pb	NH <sub>3</sub>	CO <sub>2</sub> e
LDGV	000.216	000.002	000.112	003.201	000.005	000.004		000.024	00297.167
LDGT	000.211	000.003	000.197	003.559	000.006	000.005		000.026	00385.433
HDGV	000.808	000.006	000.860	013.075	000.025	000.022		000.051	00894.420
LDDV	000.071	000.001	000.083	003.088	000.003	000.002		000.008	00300.475
LDDT	000.071	000.001	000.122	002.092	000.003	000.003		000.009	00348.850
HDDV	000.100	000.004	002.413	001.475	000.040	000.036		000.032	01258.368
MC	002.651	000.003	000.755	013.028	000.024	000.021		000.055	00389.875

# 2.5.4 Paving Phase Formula(s)

# - Construction Exhaust Emissions per Phase

 $CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$ 

CEE<sub>POL</sub>: Construction Exhaust Emissions (TONs) NE: Number of Equipment WD: Number of Total Work Days (days) H: Hours Worked per Day (hours) EF<sub>POL</sub>: Emission Factor for Pollutant (lb/hour) 2000: Conversion Factor pounds to tons

# - Vehicle Exhaust Emissions per Phase

 $VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$ 

 $VMT_{VE}$ : Vehicle Exhaust Vehicle Miles Travel (miles) PA: Paving Area (ft<sup>2</sup>)

0.25: Thickness of Paving Area (ft) (1/27): Conversion Factor cubic feet to cubic yards (1 yd<sup>3</sup>/27 ft<sup>3</sup>) HC: Average Hauling Truck Capacity (yd<sup>3</sup>) (1/HC): Conversion Factor cubic yards to trips (1 trip/HC yd<sup>3</sup>) HT: Average Hauling Truck Round Trip Commute (mile/trip)

 $V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$ 

 $\begin{array}{l} V_{POL}: \ Vehicle \ Emissions (TONs) \\ VMT_{VE}: \ Vehicle \ Exhaust \ Vehicle \ Miles \ Travel (miles) \\ 0.002205: \ Conversion \ Factor \ grams \ to \ pounds \\ EF_{POL}: \ Emission \ Factor \ for \ Pollutant (grams/mile) \\ VM: \ Vehicle \ Exhaust \ On \ Road \ Vehicle \ Mixture \ (\%) \\ 2000: \ Conversion \ Factor \ pounds \ to \ tons \end{array}$ 

#### - Worker Trips Emissions per Phase

 $VMT_{WT} = WD * WT * 1.25 * NE$ 

VMT<sub>WT</sub>: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

 $V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$ 

 $\begin{array}{l} V_{POL}: \ Vehicle \ Emissions (TONs) \\ VMT_{VE}: \ Worker \ Trips \ Vehicle \ Miles \ Travel (miles) \\ 0.002205: \ Conversion \ Factor \ grams \ to \ pounds \\ EF_{POL}: \ Emission \ Factor \ for \ Pollutant (grams/mile) \\ VM: \ Worker \ Trips \ On \ Road \ Vehicle \ Mixture \ (\%) \\ 2000: \ Conversion \ Factor \ pounds \ to \ tons \end{array}$ 

#### - Off-Gassing Emissions per Phase

 $VOC_P = (2.62 * PA) / 43560$ 

VOC<sub>P</sub>: Paving VOC Emissions (TONs) 2.62: Emission Factor (lb/acre) PA: Paving Area (ft<sup>2</sup>) 43560: Conversion Factor square feet to acre (43560 ft2/acre)<sup>2</sup>/acre)

# 3. Emergency Generator

#### 3.1 General Information & Timeline Assumptions

#### - Add or Remove Activity from Baseline? Add

Activity Location
 County: Dona Ana
 Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Install and Operate Emergency Generator

- Activity Description:

Install and operate one diesel-powered emergency generator.

- Activity Start Date

Start Month:	1
Start Year:	2026

- Activity End Date

Indefinite:	Yes
End Month:	N/A
End Year:	N/A

#### - Activity Emissions:

Pollutant	<b>Emissions Per Year (TONs)</b>
VOC	0.005650
SO <sub>x</sub>	0.004759
NO <sub>x</sub>	0.023288
СО	0.015552
PM 10	0.005083

Pollutant	<b>Emissions Per Year (TONs)</b>
PM 2.5	0.005083
Pb	0.000000
NH <sub>3</sub>	0.000000
CO <sub>2</sub> e	2.7

#### 3.2 Emergency Generator Assumptions

- Emergency Generator

Type of Fuel used in Emergency Generator:	Diesel
Number of Emergency Generators:	1

- Default Settings Used: Yes
- Emergency Generator's Horsepower: Average Operating Hours Per Year (hours): 30 (default)

# 3.3 Emergency Generator Emission Factor(s)

#### - Emergency Generators Emission Factor (lb/hp-hr)

	~ ~ ~	210	~ ~ ^					~~
VOC	SOx	NO <sub>x</sub>	CO	PM 10	PM 2.5	Pb	NH <sub>3</sub>	CO <sub>2</sub> e
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251			1.33

### 3.4 Emergency Generator Formula(s)

# - Emergency Generator Emissions per Year

 $AE_{POL} = (NGEN * HP * OT * EF_{POL}) / 2000$ 

AE<sub>POL</sub>: Activity Emissions (TONs per Year) NGEN: Number of Emergency Generators HP: Emergency Generator's Horsepower (hp) OT: Average Operating Hours Per Year (hours) EF<sub>POL</sub>: Emission Factor for Pollutant (lb/hp-hr)

# 4. Personnel

# 4.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location County: Dona Ana Regulatory Area(s): NOT IN A REGULATORY AREA
- Activity Title: Additional Personnel Staffing

### - Activity Description:

Employ up to 50 additional contract personnel

- Activity Start Date

Start Month:1Start Year:2026

- Activity End Date

Indefinite:	Yes
End Month:	N/A
End Year:	N/A

#### - Activity Emissions:

Pollutant	<b>Emissions Per Year (TONs)</b>
VOC	0.074218
SO <sub>x</sub>	0.000751
NO <sub>x</sub>	0.050307
СО	1.032343
PM 10	0.001708

Pollutant	<b>Emissions Per Year (TONs)</b>
PM 2.5	0.001411
Pb	0.000000
NH <sub>3</sub>	0.007384
$CO_2e$	101.0

#### 4.2 Personnel Assumptions

- Number of Pers	onnel
Active Duty 1	Personnel:
<b>Civilian Pers</b>	sonnel:
Support Con	tractor Personnel:
Air National	Guard (ANG) Personnel:
<b>Reserve Pers</b>	sonnel:

- Default Settings Used: Yes

- Average Personnel Round Trip Commute (mile): 20 (default)

Active Duty Personnel:	5 Days Per Week (default)
Civilian Personnel:	5 Days Per Week (default)
Support Contractor Personnel:	5 Days Per Week (default)
Air National Guard (ANG) Personnel:	4 Days Per Week (default)
Reserve Personnel:	4 Days Per Month (default)

# 4.3 Personnel On Road Vehicle Mixture

#### - On Road Vehicle Mixture(%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	37.55	60.32	0	0.03	0.2	0	1.9
GOVs	54.49	37.73	4.67	0	0	3.11	0

# 4.4 Personnel Emission Factor(s)

	- On Road Venicle Emission Lactors (grams/mile)								
	VOC	SOx	NO <sub>x</sub>	CO	PM 10	PM 2.5	Pb	NH <sub>3</sub>	CO <sub>2</sub> e
LDGV	000.216	000.002	000.112	003.201	000.005	000.004		000.024	00297.167
LDGT	000.211	000.003	000.197	003.559	000.006	000.005		000.026	00385.433
HDGV	000.808	000.006	000.860	013.075	000.025	000.022		000.051	00894.420
LDDV	000.071	000.001	000.083	003.088	000.003	000.002		000.008	00300.475
LDDT	000.071	000.001	000.122	002.092	000.003	000.003		000.009	00348.850
HDDV	000.100	000.004	002.413	001.475	000.040	000.036		000.032	01258.368
MC	002.651	000.003	000.755	013.028	000.024	000.021		000.055	00389.875

### - On Road Vehicle Emission Factors (grams/mile)

# 4.5 Personnel Formula(s)

- Personnel Vehicle Miles Travel for Work Days per Year

 $VMT_P = NP * WD * AC$ 

VMT<sub>P</sub>: Personnel Vehicle Miles Travel (miles/year) NP: Number of Personnel WD: Work Days per Year AC: Average Commute (miles)

#### - Total Vehicle Miles Travel per Year

 $VMT_{Total} = VMT_{AD} + VMT_{C} + VMT_{SC} + VMT_{ANG} + VMT_{AFRC}$ 

VMT<sub>Total</sub>: Total Vehicle Miles Travel (miles) VMT<sub>AD</sub>: Active Duty Personnel Vehicle Miles Travel (miles) VMT<sub>C</sub>: Civilian Personnel Vehicle Miles Travel (miles) VMT<sub>SC</sub>: Support Contractor Personnel Vehicle Miles Travel (miles) VMT<sub>ANG</sub>: Air National Guard Personnel Vehicle Miles Travel (miles) VMT<sub>AFRC</sub>: Reserve Personnel Vehicle Miles Travel (miles)

### - Vehicle Emissions per Year

 $V_{POL} = (VMT_{Total} * 0.002205 * EF_{POL} * VM) / 2000$ 

 $\begin{array}{l} V_{POL}: \ Vehicle \ Emissions (TONs) \\ VMT_{Total}: \ Total Vehicle \ Miles \ Travel (miles) \\ 0.002205: \ Conversion \ Factor \ grams \ to \ pounds \\ EF_{POL}: \ Emission \ Factor \ for \ Pollutant (grams/mile) \\ VM: \ Personnel \ On \ Road \ Vehicle \ Mixture \ (\%) \\ 2000: \ Conversion \ Factor \ pounds \ to \ tons \end{array}$ 

# AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

**1. General Information:** The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in a coordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

#### a. Action Location:

Base:GENERIC BASEState:New MexicoCounty(s):Dona AnaRegulatory Area(s):NOT IN A REGULATORY AREA

b. Action Title: New Receiving Facilities at Aerospace Data Facility Southwest, White Sands Missile Range, NM

### c. Project Number/s (if applicable):

#### d. Projected Action Start Date: 1/2025

#### e. Action Description:

Construct and operate the new receiving facilities and associated infrastructure, as described below:

- 1,500-square foot (SF) main entrance gate facility
- 3,000-SF visitor center
- 1,000-SF vehicle inspection site
- 8,000-SF mail processing center
- 46,000-SF warehouse
- 500-SF electrical substation
- 3,530 linear feet (LF) of security fencing
- 3,975 LF electrical line
- 4,390 LF water line
- 2,980 LF sanitary sewer line
- 3,290 LF communications line
- 360 LF storm water in frastructure
- 5,200 LF CCTV/electrical (security) lines
- 41,210-SF Southern Road
- 52,620-SF Serpentine Road
- 40,860-SF Perimeter Road
- 1 acre of stormwater retention basins, average 3 feet deep
- Parking areas for up to 50 total employees and visitors
- 1 diesel-powered emergency generator
- \*Emissions estimates include clearing and grading 3 a cres of contractor staging on-site.

Space heating is anticipated to be electric-powered equipment (no on-site emissions)

Once operational, the new facilities will employ approximately 50 additional staff (with 20 to 30 active on a given shift).

#### f. Point of Contact:

Name:	PaulSanford
Title:	Environmental Planner
Organization:	AECOM
Email:	paul.sanford@aecom.com
Phone Number:	813-675-6843

# AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

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

\_\_\_\_applicable \_\_X\_\_notapplicable

Total net direct and indirect emissions a ssociated with the action were estimated through ACAM on a calendar-year basis for the start of the action through a chieving "steady state" (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the USAF Air Emissions Guide for Air Force Stationary Sources, the USAF Air Emissions Guide for Air Force Mobile Sources, and the USAF Air Emissions Guide for Air Force Transitory Sources.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of potential impacts to a ir quality based on current ambient a ir quality relative to the National Ambient Air Quality Standards (NAAQSs). These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are "Clearly Attainment" (i.e., not within 5% of any NAAQS) and the GCR de minimis values (25 ton/yr for lead and 100 ton/yr for all other criteria pollutants) for actions occurring in areas that are "Near Nonattainment" (i.e., within 5% of any NAAQS). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. For further detail on insignificance indicators see chapter 4 of the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments.

The action's net emissions for every year through a chieving steady state were compared against the Insignificance Indicator and are summarized below.

Anal	ysis	Sum	mary:
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2023						
Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR				
		Indicator (ton/yr)	Exceedance (Yes or No)			
NOT IN A REGULATORY	AREA					
VOC	0.941	100	No			
NOx	1.438	100	No			
CO	2.051	250	No			
SOx	0.005	250	No			
PM 10	10.403	100	No			
PM 2.5	0.048	250	No			
Pb	0.000	25	No			
NH3	0.004	250	No			
CO2e	521.6					

2025

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR			
		Indicator (ton/yr)	Exceedance (Yes or No)		
NOT IN A REGULATORY	AREA				
VOC	0.080	100	No		
NOx	0.074	100	No		
СО	1.048	250	No		
SOx	0.006	250	No		

# AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

PM 10	0.007	100	No
PM 2.5	0.006	250	No
Pb	0.000	25	No
NH3	0.007	250	No
CO2e	103.7		

### 2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR		
		Indicator (ton/yr)	Exceedance (Yes or No)	
NOT IN A REGULATORY AREA				
VOC	0.080	100	No	
NOx	0.074	100	No	
СО	1.048	250	No	
SOx	0.006	250	No	
PM 10	0.007	100	No	
PM 2.5	0.006	250	No	
Pb	0.000	25	No	
NH3	0.007	250	No	
CO2e	103.7			

None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs.No further air assessment is needed.

Sanford, Paul Digitally signed by Sanford, Paul Date: 2023.01.09 17:20:19 -05'00'

Paul Sanford, Environmental Planner

DATE

**APPENDIX C:** 

# NATIONAL HISTORIC PRESERVATION ACT SECTION 106 CONSULTATION

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

Michelle Lujan Grisham<br/>GovernorBATAAN MEMORIAL BUILDING<br/>407 GALISTEO STREET, SUITE 236<br/>SANTA FE, NEW MEXICO 87501<br/>PHONE (505) 827-6320 FAX (505) 827-6338

November 21, 2022

Mr. James Bowman Cultural Resource Manager Department of the Army Environmental Division (Bldg 163/DPW) White Sands Missile Range, New Mexico, 88002-5000

*Re: HPD Log 118431, NMCRIS 150796. An Archaeological Survey Report for New Receiving Facilities at Aerospace Data Facility Southwest* 

Dear Mr. Bowman,

Thank you for sending the State Historic Preservation Officer (SHPO) the above-mentioned report. Our office has reviewed the site form and eligibility determinations for the undertaking, and we offer our comments below.

- We can concur with the not eligible recommendation, but we would have liked to see some subsurface testing to support the assumption that no significant subsurface deposits exist. For example, two shovel tests and a 1 x 1 m unit would have been sufficient to better assess and document the stratigraphy and presence/absence of subsurface deposits. Some spatial integrity is probable given that a rock alignment still was present.
- Photographs should have been taken of the surface within the site including a photograph of the feature. The artifact photos were excellent. Site photographs and artifact photographs should always be appended to the site form.

Please enter agency eligibility recommendations into NMCRIS.

Please contact Geoff Cunnar (geoff.cunnar@dca.nm.gov 505-476-0530) if you have any questions or concerns.

Sincerely,

Geatting Curran

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