

Draft Environmental Assessment for Proposed Installation Development Plan Projects at Laughlin Air Force Base, Val Verde County, Texas

September 2022



Prepared for:
United States Air Force
47th Civil Engineer Squadron



PRIVACY ADVISORY

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

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

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 Personal home addresses and phone numbers will not be published in the EA.

COMPLIANCE

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COVER SHEET

Draft Environmental Assessment for Proposed Installation Development Plan Projects at Laughlin Air Force Base, Val Verde County, Texas

a. *Responsible Agency:* United States Air Force (Air Force)

b. *Proposals and Actions:*

The Air Force proposes to implement multiple construction, renovation, and demolition actions on Laughlin Air Force Base (AFB). These projects include improvements in the Community and Services District to provide modern, centralized, multi-use facilities that improve the living support amenities for those that work, live, and visit the Base. Projects in the Training District would provide modern, accessible, multi-use facilities that directly support student pilots and their associated support personnel.

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d. *Designation:* Draft EA

e. *Abstract:*

This Environmental Assessment has been prepared pursuant to provisions of the National Environmental Policy Act, Title 42 of the United States Code, Sections 4321–4347, implemented by Council on Environmental Quality regulations, Title 40 of the Code of Federal Regulations (CFR) Parts 1500–1508, and 32 CFR Part 989, Environmental Impact Analysis Process (EIAP).

The overall purpose of the Proposed Action is to support Laughlin AFB's current and future mission of training the next generation of Air Force pilots. The construction of new facilities, renovations and repair of existing facilities, demolition of obsolete facilities, and consolidation of mission support functions would address existing deficiencies in support facilities at Laughlin AFB. Left unchecked, deficiencies in facilities and infrastructure would degrade the Base's ability to meet Air Force current and future pilot training mission requirements. The Proposed Action is needed to provide facilities and infrastructure that are adequate to meet the training requirements of the 47th Flying Training Wing (47 FTW) at Laughlin AFB.

The purpose of the Proposed Action in the Community and Services District is to provide modern, centralized, multi-use facilities that improve the living support amenities for those that work, live, and visit the Base, while providing for future development of the mission. The projects in the Community and Services District are needed to provide a connected, consolidated campus that supports the mission of the 47 FTW, as many of the existing facilities do not meet the current or future needs of the students and employees at Laughlin AFB. Students, staff, and visitors are currently required to use deteriorating buildings that are not large enough to support the current needs of the temporary and permanent populations on Base.

The purpose of the Proposed Action in the Training District is to provide modern, accessible, multi-use facilities that directly support student pilots and their associated support personnel. The projects in the Training District are needed to provide well developed and connected operations and community areas that honor Air Force heritage. Currently, facilities in the Training District are in various states of disrepair and are inefficiently located based on current and future use. Implementation of projects in the Training District under the Proposed Action would meet the need by relocating functions, creating additional parking space, adding sidewalks and/or bike lanes to connect areas of the campus, and adding student areas.

The analysis of the affected environment and environmental consequences of implementing the Proposed Action concluded that there would be no significant adverse impacts from the Proposed Action on the resource areas analyzed. Further, significant cumulative impacts would not be anticipated from activities associated with the Proposed Action when considered with other past, present, or reasonably foreseeable future environmental trends and planned actions at Laughlin AFB.

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	degree Fahrenheit
47 CS	47th Communications Squadron
47 FTW	47th Flying Training Wing
47 MSG	47th Mission Support Group
AAFES	Army and Air Force Exchange Service
ACAM	Air Conformity Applicability Model
ACM	asbestos-containing material
ADP	Area Development Plan
AETC	Air Education and Training Command
AFB	Air Force Base
AFI	Air Force Instruction
AFFF	Aqueous film forming foam
AFMAN	Air Force Manual
Air Force	United States Air Force
AOC	Area of Concern
AST	above-ground storage tank
CDC	Child Development Center
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
CWA	Clean Water Act
CZ	Clear Zone
dBA	A-weighted decibel
DNL	Day-Night Sound Level
DoD	United States Department of Defense
DODI	Department of Defense Instruction
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
ERP	Environmental Restoration Program
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
ft ²	square foot/feet
FY	fiscal year
GHG	greenhouse gas
HAZMAT	hazardous materials
HVAC	heating, ventilation, and air conditioning
HWMP	hazardous waste management plan
IDP	Installation Development Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
IPaC	Information for Planning and Consultation
IRP	Installation Restoration Program
LBP	lead-based paint
MBTA	Migratory Bird Treaty Act of 1918
MMRP	Military Munitions Response Program
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFA	no further action

NFRAP	no further remedial action planned
NH ₃	ammonia
NHPA	National Historic Preservation Act
NO _x	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
Pb	lead
PBR	Permit by Rule
PCBs	polychlorinated biphenyls
PFAS	per- and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate
PM _x	particulate matter less than or equal to x microns in diameter
pre-K	pre-kindergarten
PSD	Prevention of Significant Deterioration
Q	quarter
RCRA	Resource Conservation and Recovery Act
ROI	Region of influence
RV	recreational vehicle
SARA	Superfund Amendments and Reauthorization Act
SHPO	State Historic Preservation Officer
SPCC	spill prevention, control, and countermeasure
SO ₂	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
TCP	Traditional Cultural Property
TNC	The Nature Conservancy
TPWD	Texas Parks and Wildlife Department
tpy	ton per year
TRRP	Texas Risk Reduction Program
TSCA	Toxic Substances Control Act
US	United States
USC	United States Code
USCB	United States Census Bureau
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UST	underground storage tank
UXO	unexploded ordnance
VOC	volatile organic compound

CHAPTER 1 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

Laughlin Air Force Base (AFB) is an Air Education and Training Command (AETC) training base located 6 miles east of Del Rio, Texas. Situated on 4,570 acres of land in Val Verde County, Texas (**Figure 1-1**), the Main Base consists of 4,091 acres adjacent to the south side of United States (US) Highway 90. The off-site portions of Laughlin consist of 479 acres and include Spofford Auxiliary Field, a Next Generation Weather Radar station, a recreation annex near Lake Amistad, and an Instrument Landing System Localizer Annex. The Base is home to the 47th Flying Training Wing (47 FTW); the mission of the 47 FTW is to conduct specialized undergraduate pilot training for the US Air Force (Air Force), Air Force Reserve, Air National Guard, and allied-nation air forces and deploy mission-ready Airmen. The 47 FTW commands a flying operation that exceeds 80,000 flying hours and 51,000 sorties per year (AETC, 2021).

To sustain its training mission, the 47 FTW proposes to implement development projects at Laughlin AFB over the next 5 years from fiscal year (FY) 2023 to FY 2027. The proposed development projects would modernize and improve the community facilities, services facilities, and student support facilities and would improve the overall function and connection of the campus area on Base. Laughlin AFB is classified as “remote and isolated,” which is conducive to pilot training but also requires quality-of-life facilities to produce a training environment to adequately support Airmen and their families. This Environmental Assessment (EA) evaluates the potential environmental, cultural, and socioeconomic effects of the proposed development projects at Laughlin AFB. These projects are further described throughout this EA and collectively referred to as the “Proposed Action.”

1.2 LAUGHLIN AIR FORCE BASE

Laughlin AFB is one of the preeminent undergraduate pilot training bases under the AETC. The host unit at Laughlin AFB is the 47 FTW, which is composed of four subordinate units: 47th Mission Support Group (47 MSG), 47th Operations Group, 47th Maintenance Directorate, and 47th Medical Group. The 47 MSG is composed of four squadrons and two flights: 47th Civil Engineer Squadron, 47th Communications Squadron (47 CS), 47th Force Support Squadron, 47th Security Force Squadron, 47th Logistic Readiness Flight, and 47th Contracting Flight. The 47 MSG is responsible for infrastructure management, emergency response, communications operations and management, quality-of-life operations, force protection, and law enforcement services, among other programs at Laughlin AFB.

Training and operations at Laughlin AFB are centered around a large airfield with three parallel runways that are oriented northwest/southeast in the center portion of the Base; administrative/support and housing areas are located on the west side (**Figure 1-2**). In 2022, 2,617 personnel worked at Laughlin AFB, including active military and civilian support staff, with approximately 1,000 dependents. On-Base housing capacity is 515 in dormitories and lodging units and 451 in family housing units (Laughlin AFB, 2018).

To sustain the long-term mission of Laughlin AFB to train future generations of Airmen for the Air Force, Laughlin AFB prepared an Installation Development Plan (IDP) as a blueprint to guide future decisions regarding on-Base development needed to meet and sustain its mission capability (URS, 2014). The IDP delineated nine planning districts on the main portion of Laughlin AFB. In 2020, Laughlin AFB, in collaboration with stakeholders and the US Army Corps of Engineers, concurrently developed two Area Development Plans (ADPs) that encompassed the Campus Center and Community Center Planning Districts in the IDP (Laughlin AFB, 2020a, 2020b). The preparation of the Community and Services District and Training District ADPs followed United Facilities Criteria 2-100-01, *Installation Master Planning* (Laughlin AFB, 2020a, 2020b).

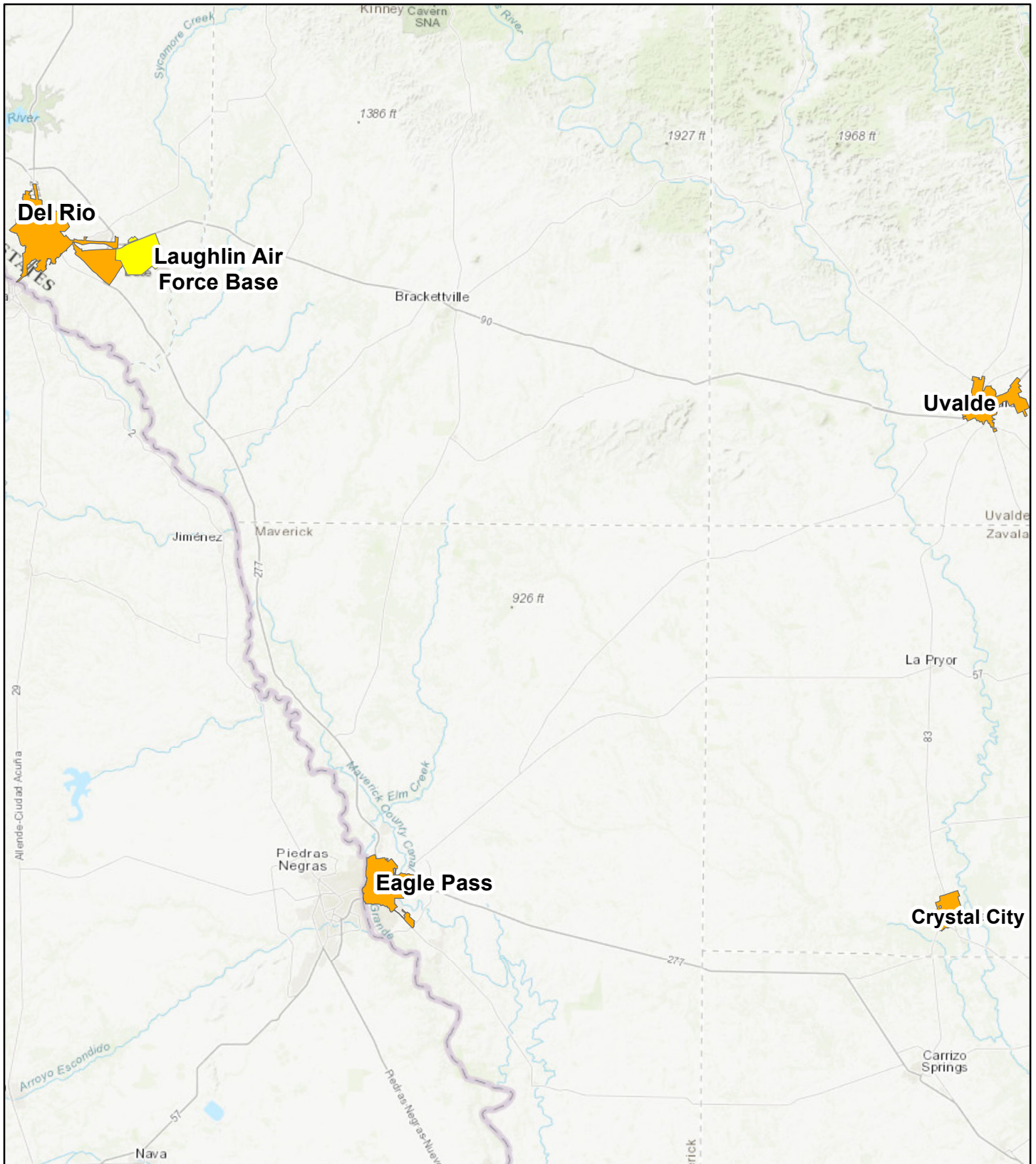
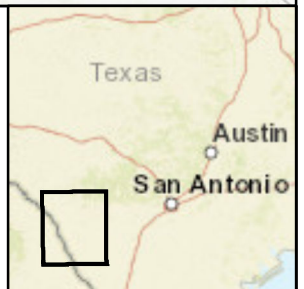


FIGURE 1-1
REGIONAL
OVERVIEW

- Laughlin Air Force Base
- Regional Cities

N
 Imagery: ESRI 2021
 Projection: WGS 1984
 Zone 14N

Miles
 0 5 10



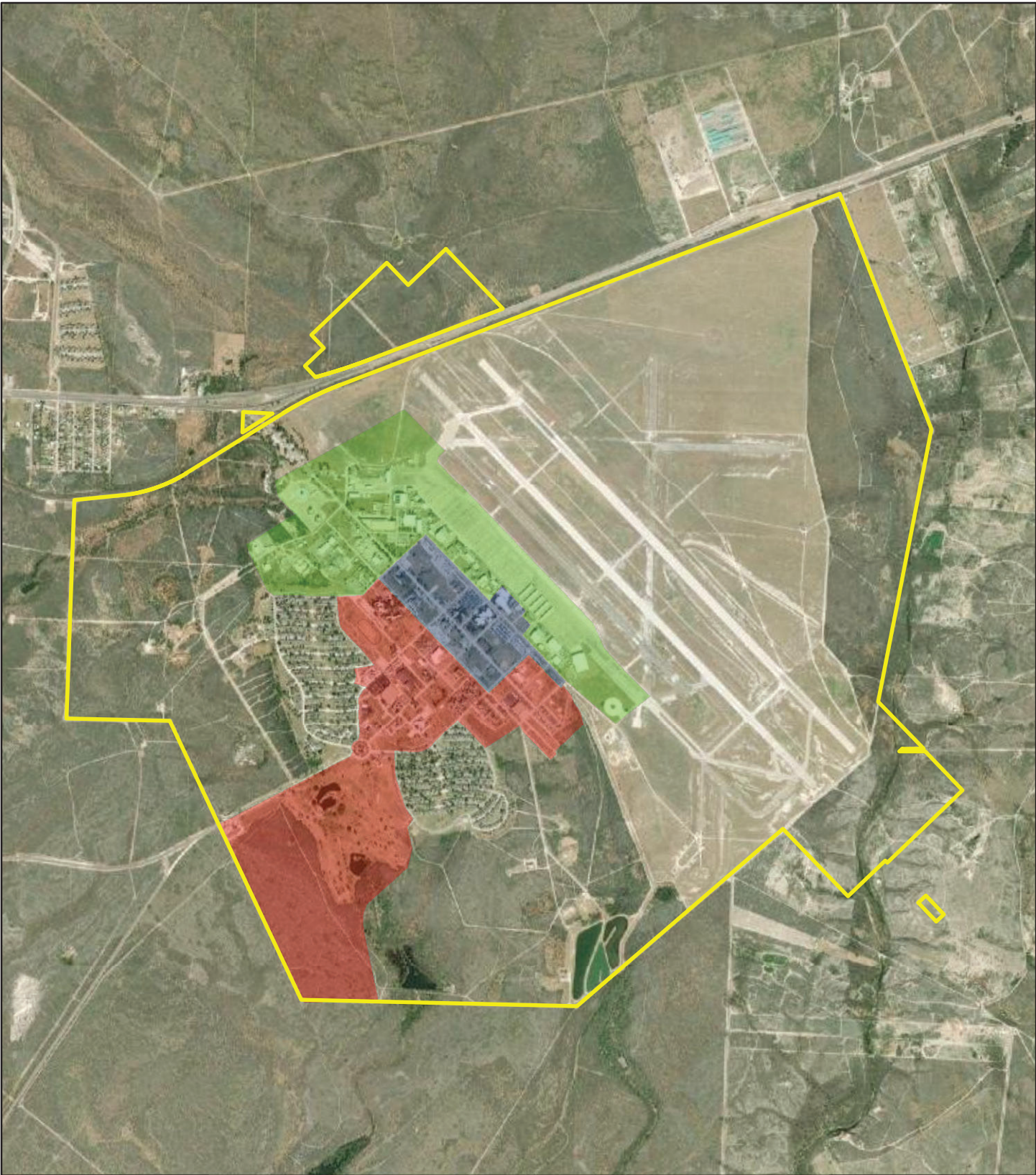





FIGURE 1-2
PLANNING
DISTRICTS

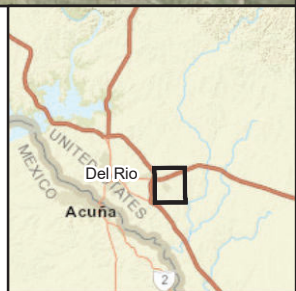
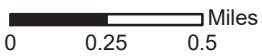
 Laughlin Air Force Base

Planning Districts

-  Community and Services
-  Training
-  Flightline



Imagery: ESRI 2021
 Projection: WGS 1984
 Zone 11N



1.2.1 Community and Services District

The Community and Services District is located in the central and southwest portion of Laughlin AFB (**Figure 1-2**). The Community and Services District is the main hub for all the living support amenities on Laughlin AFB and includes stores, restaurants, support facilities such as laundry and recreation rentals, recreational and fitness facilities (including a golf course), enlisted barracks, student dorms, and medical facilities. Community and Services District functions are highly integrated into the Training District, which were planned concurrently to ensure connectivity between the areas.

1.2.2 Training District

The Training District is located in the central portion of Laughlin AFB (**Figure 1-2**). The Training District is in the campus center between the Flightline District and Community and Services District (URS, 2014). The Training District includes classroom buildings, flight simulators, study areas, and parking areas that directly support the pilot training mission of Laughlin AFB.

1.3 PURPOSE AND NEED FOR INSTALLATION DEVELOPMENT

The overall purpose of the Proposed Action is to support Laughlin AFB's current and future mission of training the next generation of Air Force pilots. The construction of new facilities, renovations and repair of existing facilities, demolition of obsolete facilities, and consolidation of mission support functions would address existing deficiencies in support facilities at Laughlin AFB. Left unchecked, deficiencies in facilities and infrastructure would degrade the Base's ability to meet Air Force current and future pilot training mission requirements. The Proposed Action is needed to provide facilities and infrastructure that are adequate to meet the training requirements of the 47 FTW at Laughlin AFB.

This EA evaluates short-term (1–5 years) installation development projects at Laughlin AFB identified through a collaborative planning process (URS, 2014).

1.3.1 Community and Services District Projects

The purpose of the Proposed Action in the Community and Services District is to provide modern, centralized, multi-use facilities that improve the living support amenities for those that work, live, and visit the Base, while providing for future development of the mission. The projects in the Community and Services District are needed to provide a connected, consolidated campus that supports the mission of the 47 FTW, as many of the existing facilities do not meet the current or future needs of the students and employees at Laughlin AFB. Students, staff, and visitors are currently required to use deteriorating buildings that are not large enough to support the current needs of the temporary and permanent populations on Base.

1.3.2 Training District Projects

The facilities in the Training District directly serve the pilot training mission of Laughlin AFB. The purpose of the Proposed Action in the Training District is to provide modern, accessible, multi-use facilities that directly support student pilots and their associated support personnel. The projects in the Training District are needed to provide well developed and connected operations and community areas that honor Air Force heritage. Currently, facilities in the Training District are in various states of disrepair and are inefficiently located based on current and future use. Implementation of projects in the Training District under the Proposed Action would meet the need by relocating functions, creating additional parking space, adding sidewalks and/or bike lanes to connect areas of the campus, and adding student areas.

1.4 INTERAGENCY AND INTERGOVERNMENTAL COORDINATION AND CONSULTATION

1.4.1 Interagency and Intergovernmental Coordination and Consultation (IICEP)

The Air Force's Environmental Impact Analysis Process (EIAP), in compliance with the *National Environmental Policy Act* ([Title 42 of the United States Code \[USC\] §§ 4321–4347](#)) (NEPA), includes public and agency review of information pertinent to a proposed action and alternatives. Scoping is an early and open process for developing the breadth of issues to be addressed in an EA and for identifying significant concerns related to an action. The Air Force complies with the environmental planning (IICEP) mandate through the scoping process ([Title 40 of the Code of Federal Regulations \[CFR\] § 1501.9](#)) and public comment periods and notified federal, state, and local agencies with jurisdiction that could potentially be affected by the Proposed Action and Alternatives during the development of this EA. Copies of IICEP letters and responses are included in **Appendix A**.

1.4.2 Government-to-Government Consultation

The *National Historic Preservation Act* ([54 USC § 300101](#) et seq.) (NHPA) and its regulations at [36 CFR Part 800](#) direct federal agencies to consult with Indian tribes when a proposed action or alternatives may have an effect on tribal lands or on properties of religious and cultural significance to a tribe. Consistent with the NHPA, the *Native American Graves and Protection and Repatriation Act* ([25 USC § 3001](#) et seq.), Department of Defense (DoD) Instruction (DoDI) 4710.02, *Interactions with Federally Recognized Tribes*, and Department of the Air Force Instruction 90-2002, *Air Force Interaction with Federally Recognized Tribes*, the Air Force has invited federally recognized tribes that are historically affiliated with lands in the vicinity of the Proposed Action and Alternatives to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. The tribal consultation process is distinct from NEPA consultation or the interagency coordination process, and it requires separate notification to all relevant tribes. The timelines for tribal consultation are also distinct from those of the other consultations. The Laughlin AFB point of contact for Indian tribes is the Base Commander. The point of contact for consultation with the Tribal Historic Preservation Officer and the State Historic Preservation Officer (SHPO) is the Laughlin AFB Cultural Resources Manager. Copies of government-to-government consultation is included in **Appendix A**.

1.4.3 Other Agency Consultations

Implementation of the Proposed Action involves coordination with several organizations and agencies. Compliance with Section 7 of the *Endangered Species Act of 1973*, as amended ([16 USC § 1531](#) et seq.) (ESA), and implementing regulations ([50 CFR Part 402](#)) require communication with the US Fish and Wildlife Service (USFWS) in cases where a federal action could affect listed threatened or endangered species, species proposed for listing, or candidates for listing. The primary focus of this coordination is to request a determination of whether any of these species occurs in the proposal area. If any protected species is present, a determination would be made of any potential adverse effects on the species. Should no species protected by the ESA be affected by the Proposed Action or Alternatives, no additional consultation is required. Laughlin AFB used the USFWS' Information for Planning and Consultation (IPaC) online review tool to obtain a list of species that may occur in the proposed project area (**Appendix A**).

Coordination with the appropriate state government agencies and planning districts will occur for review and comment. Compliance with Section 106 of the NHPA and implementing regulations ([36 CFR Part 800](#)) will be accomplished through the SHPO. The Texas Commission on Environmental Quality and Val Verde County will be included for air quality, and the Texas Parks and Wildlife Department will be included on matters related to habitat and species of concern. Copies of all agency correspondence is included in **Appendix A**.

1.5 PUBLIC AND AGENCY REVIEW

A Notice of Availability of the Draft EA and Finding of No Significant Impact (FONSI) announcing the availability of the EA to the public for review and comment was published at <https://www.laughlin.af.mil/>

(under Key Documents) on 31 August 2022. The public and agency review period ended on 5 October 2022. Copies of the public and agency comments are provided in **Appendix A**.

Copies of the Draft EA and FONSI were also made available for review at the following locations:

- Val Verde County Library, 300 Spring Street, Del Rio, TX 78840
- Laughlin AFB Library, 201 Mitchell Boulevard, Laughlin AFB, TX 78843

1.6 DECISION TO BE MADE

This EA analyzes the potential environmental consequences of the Proposed Action and Alternatives. The Proposed Action involves construction of new facilities, renovation and repair of existing facilities, implementation of infrastructure improvements, and demolition of obsolete facilities. Should the Air Force choose to implement the Proposed Action, this EA will assist in determining an appropriate scope of action to minimize potential adverse environmental impacts and allow for additional, project-specific environmental review in compliance with NEPA.

Based on the analysis in this EA, the Air Force will make one of three decisions regarding the Proposed Action:

1. Choose to implement one of the alternatives and sign a FONSI, allowing implementation of the Preferred Alternative.
2. Initiate preparation of an Environmental Impact Statement (EIS) if it is determined that implementation of the Proposed Action and Alternatives would cause significant impacts to the human and natural environment.
3. Select the No Action Alternative, whereby the Proposed Action would not be implemented.

As required by NEPA and its implementing regulations, preparation of an environmental document must precede final decisions regarding the proposed project and be available to inform decision-makers of the potential environmental impacts.

Should the Air Force decide to implement the Proposed Action as noted above, this EA will identify any actions the Air Force will commit to undertake to minimize environmental effects and comply with NEPA.

1.7 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

The Air Force NEPA regulations at [32 CFR § 989.11](#) require an assessment of potential environmental impacts for Air Force projects recommended in a comprehensive plan such as an ADP. In accordance with [40 CFR § 1501.3](#), the Air Force determined the appropriate level for this analysis is an EA. An EA is a concise public document that briefly discusses the purpose and need, alternatives, and potential environmental impacts of a proposed federal action. It aids in agency planning and decision-making, or facilitates the preparation of an EIS, as necessary ([40 CFR § 1501.5](#)).

This EA evaluates the potential environmental consequences of implementing the Proposed Action and Alternatives for Installation development projects at Laughlin AFB. This EA has been prepared in accordance with NEPA, Council on Environmental Quality (CEQ) regulations ([40 CFR Parts 1500–1508](#)), and the EIAP ([32 CFR Part 989](#)). NEPA is the basic national requirement for identifying environmental consequences of federal decisions. NEPA ensures that environmental information, including the anticipated environmental consequences of a proposed action, is available to the public, federal and state agencies, and the decision-maker before decisions are made and before actions are taken.

NEPA requires federal agencies to consider alternatives to a proposed action and to analyze potential impacts of alternatives. Potential impacts of the Proposed Action and Alternatives described in this document will be assessed in accordance with the Air Force EIAP (32 CFR Part 989), which requires that impacts to resources be analyzed in terms of their context, duration, and intensity. To help the public and decision-makers understand the implications of potential impacts, the impacts will be described in the short

and long term, cumulatively, and within context. This EA analyzes the following environmental resources: noise; safety; air quality; biological resources; water resources; soils; land use and visual resources; socioeconomics; environmental justice and protection of children; cultural resources; hazardous materials and wastes, toxic substances, and contaminated sites; and infrastructure, transportation, and utilities.

The expected geographic scope of any potential consequences is defined as the Region of Influence (ROI). Laughlin AFB and its environs are considered in determining the ROI for each environmental resource. The ROI boundaries vary depending on the nature of each resource. For example, the ROI for socioeconomics and air quality extend over a larger jurisdiction than biological and safety.

1.8 APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS

Implementation of the Proposed Action would involve coordination with several organizations and agencies. Adherence to the requirements of specific laws, regulations, best management practices, and necessary permits are described in detail in each resource section in **Chapter 3**.

Other laws and regulations applicable to the Proposed Action include, but are not limited to:

- *Clean Water Act* (33 USC § 1251 et seq.) (CWA)
- *Resource Conservation and Recovery Act* (42 USC § 6901 et seq.) (RCRA)
- Section 438 of the *Energy Independence and Security Act* (Public Law 110-140) (EISA)
- *Comprehensive Environmental Response, Compensation, and Liability Act* (42 USC § 9601 et seq.) (CERCLA)
- *Federal Clean Air Act* (42 USC § 7401 et seq., as amended)
- *Migratory Bird Treaty Act* (16 USC § 703–712.) (MBTA)
- *Toxic Substances Control Act* (15 USC § 2601 et seq.) (TSCA)
- Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (1994)
- EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (1997), as amended by EO 13296 (2003)

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CHAPTER 2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

The installation development projects included as part of the Proposed Action were selected based on current and future needs at Laughlin AFB identified through the installation planning process, including the IDP and ADPs for the Community and Services District and Training District, as required by Air Force Instruction (AFI) 32-1015, *Integrated Installation Planning*. Each of the proposed projects would support the overall purpose and need for installation development as outlined in **Section 1.3**.

2.2 PROPOSED ACTION

The Proposed Action would incorporate the planning considerations addressed in Laughlin AFB planning documents. For example, the Proposed Action would adhere to project-specific development standards, including land use constraints for siting the new facilities, and regulate design parameters such as height, scale, and orientation.

This EA describes the scope, location, and objectives of each project under the Proposed Action, grouped by project type (i.e., construction, renovation, demolition). **Tables 2-1** and **2-2** provide details of projects in the Community and Services District and Training District, respectively, under the Proposed Action.

**Table 2-1
Proposed Community and Services District Projects**

Map ID Number	Project Title (ADP Project Number)	Project Type	Project Description
1	Community Event Complex (2)	Construction	Construct a new community event complex to meet mission needs. The current community center (Club XL) used for events and conferences has insufficient floor space and storage for present and future needs. The new Event Center would allow for larger gatherings and simultaneous events.
2	Modular Officer Dorms (14)	Construction	Construct modular dorms to support the immediate need for additional housing. There is a current shortage and high demand for on-Base housing for servicemen and women who come to Laughlin AFB to train.
3	Expand Family Camp (17)	Construction	Expand the Family Camp to meet the need of the growing number of graduates and family membership who visit and students who bring their own recreational vehicles due to the lack of on-Base housing.
4A 4B 4C	Build pre-K–6 School	Construction	Construct a permanent school structure that would replace the existing modular school facilities. The existing school facilities are at capacity and not sustainable in the long term. The proposed school would have a minimum capacity of 150 students and include cafeteria, playground, off-street drop-off and pickup area, and staff and visitor parking.
5	Relocate AAFES Express (B-115)/Gas Station to Main Exchange (B-540) Shopping Center & Renovate the Exchange	Construction/ Renovation	Consolidate the AAFES Express/Gas Station in the Exchange Shopping Center. Construct a new gas canopy with two fueling islands and 24-hour unattended fueling next to the existing Main Exchange parking lot with a new underground storage tank. Renovate the Exchange with an entrance for the new AAFES Express and

Map ID Number	Project Title (ADP Project Number)	Project Type	Project Description
			potential quick-serve restaurant. Update the Main Exchange image and product offerings in the retail, food, and mall areas. Add new signage on 4th Street near parking lot entrance.
6	Renovate Youth Center/ Co-locate Child Development Center (CDC) (7, 8)	Construction/ Renovation/ Demolition	Construct a new CDC co-located with the Youth Center and add a new parking lot. The Youth Center is in disrepair and cannot support the continued growth in Base population without renovations. A new CDC is needed to meet increased demand for CDC services. The existing CDC would be demolished.
7	Renovate Club XL, (B-472) (3)	Renovation or Demolition/ Construction	Renovate/replace the club to allow for smaller, more frequent events such as Commanders Calls and training seminars. The project would repair the mechanical, electrical, plumbing, HVAC, and fire-protection systems. The building interior would be completely renovated, including reconfiguration of the ballroom, new entry way and rest rooms, new kitchen, and outdoor areas. The facility has asbestos throughout and would require complete abatement.
8	Renovate Ricks Hall (B-255) (21)	Renovation	Renovate Ricks Hall, the old Bachelor Enlisted Quarters. The facility is vacant and must be renovated to current standards before it can be used. The closure of Ricks Hall reduced the available on-Base lodging to below the 120-room requirement that Laughlin AFB maintains.

AAFES = Army and Air Force Exchange Service; AFB = Air Force Base; B = Building (e.g., Building 211 is B-211); CDC = Child Development Center; HVAC = heating, ventilation, and air conditioning; pre-K = pre-kindergarten

**Table 2-2
Proposed Training District Projects**

Map ID Number	Project Title (ADP Project Number)	Project Type	Project Description
9	Expand Parking and Campus Parking Connections (105, 106)	Construction	Construct/expand the Base parking lot within the Campus Center District primarily along 2nd Street. Connect the campus through a series of connected sidewalks to facilitate a pedestrian-friendly installation, reducing traffic, increasing physical health, and supporting servicemen and women and the mission. Good parking connections would encourage people to park in areas farther away from training facilities to prevent overcrowding.
10	Outdoor Student Areas (107)	Construction	Construct shaded outdoor space close to the flightline and classrooms. These areas would serve students by providing areas to study, eat, and relax with coworkers and other students.
11	"Smart Streets"/ Sidewalks and Bike Lanes and Improved Streets (109, 110, 113)	Construction	Provide more pedestrian and bike lanes to improve transportation options and access to training facilities in alignment with the "Smart Streets" initiative. These projects would occur along 2nd Street that has an open stormwater channel that runs parallel to the street and separates parking areas and community services facilities from the training classrooms and flightline. Improvements would also occur on Liberty Drive through the center of the Training

Map ID Number	Project Title (ADP Project Number)	Project Type	Project Description
			District and close Prather Street to vehicle traffic to create a pedestrian walkway.
12	Event Field (114)	Construction (Landscaping)	Landscape and delineate a new Event Field to provide adequate space for portable stages and larger events. The current Event Field is used for special activities for servicemen and women and their families and visitors throughout the year. A new Event Field would allow for larger events with expanded parking and less disturbance to housing and dorm residents during loud or late-night events.
13	Relocate Communications Squadron (101)	Construction/ Demolition	Construct a new building with expanded parking for the 47 CS. The 47 CS is dispersed throughout Laughlin AFB (B-211, B-241, B-339, and B-348). B-348 serves as the current headquarters for the 47 CS. Construction of a new facility would consolidate communication functions currently dispersed throughout the Base. The vacated B-348 would be demolished. B-348 is one the oldest buildings on Base and contains mold, asbestos, and lead-based paint, is prone to flooding, and is inadequate to meet mission demands.

47 CS = 47th Communications Squadron; B = Building (e.g., Building 211 is B-211)

2.3 SELECTION STANDARDS FOR ALTERNATIVE SCREENING

In accordance with 32 CFR § 989.8(c), selection standards were developed to establish a means for determining the reasonableness of an alternative and whether an alternative should be carried forward for further analysis in the EA. Consistent with 32 CFR § 989.8(c), the following selection standards meet the purpose of and need for the Proposed Action and were used to identify reasonable alternatives for analysis in the EA. The supporting alternatives must:

1. remedy facilities and infrastructure deficiencies in order to adequately support current and future strategic missions;
2. be consistent with land use requirements, force protection, and planning concepts as defined in the 2014 IDP and 2020 ADPs;
3. promote sustainable development (connected communities and serve the Base mission); and
4. provide and promote quality-of-life environment on Laughlin AFB.

Separate selection standards were used to identify reasonable alternatives for the location of the pre-K–6 school to ensure selection of an appropriate site. The supporting alternatives for the school must:

1. be located on Base in an area with compatible land use and within 1,500 yards walking distance of housing areas (industrial activities and activities associated with the Base mission should not interfere with the learning environment);
2. be located outside the 65-decibel noise contour to comply with DODI 4165.7, *Real Property Management*, to minimize classroom noise disturbance from aircraft operations;
3. be located on a site that provides adequate space for efficient development of a school structure including a cafeteria, playgrounds, sports field, parking area for visitors and staff, and an off-street drop-off and pickup location (approximately 6.5 acres);
4. have utility connections for water, sewer, and electricity that can be readily accessed during construction; and
5. be located away from areas of heavy daily Base traffic.

Based on these selection standards, no other reasonable alternatives were identified beyond those outlined in **Section 2.4**.

2.4 ALTERNATIVES

The NEPA and CEQ regulations mandate the consideration of reasonable alternatives to the Proposed Action. “Reasonable alternatives” are those that could also be utilized to meet the purpose of and need for the Proposed Action. Alternatives were considered for each of the proposed projects. The Air Force uses several guidelines and instructions in determining the best approach for construction, renovation, and demolition. AFI 32-1023, *Designing and Constructing Military Construction Projects*, implements Air Force Policy Directive 32-10, *Installations and Facilities*, and Military Standard 3007F, *Standard Practice for Unified Facilities Criteria and Unified Facilities Guide Specifications*. AFI 32-1023 provides general design criteria and standards and information on design and construction management. This document provides guidance governing Air Force military construction projects. Air Force Manual 32-1084, *Standard Facility Requirements*, supplements AFI 32-1024, *Standard Facility Requirements*, and provides guidance for determining space allocations for Air Force facilities and may be used to program new facilities or evaluate existing spaces.

The NEPA process is intended to support flexible, informed decision-making; the analysis provided by this EA and feedback from stakeholders will inform decisions made about whether, when, and how to execute the Proposed Action. Among the alternatives evaluated for each project is a No Action Alternative, which evaluates the potential consequences of not undertaking the Proposed Action and serves to establish a comparative baseline for analysis. This section presents reasonable and practicable alternatives for projects where multiple, viable courses of action exist. Each alternative is assessed relative to the selection standards (see **Section 2.3**). Summaries of the projects proposed under Alternatives 1 and 2 in the Community and Services District and the Training District are provided in **Tables 2-3** and **2-4**, respectively. Detailed discussion of each alternative follows, as well as a map of the approximate project locations (**Figure 2-1**).

Table 2-3
Estimated Size of Proposed IDP Alternatives by Project Type – Community and Services District

Project ID Number	Project Title	Project Type/Project Size					
		Alternative 1			Alternative 2		
		Construction	Renovation	Demolition	Construction	Renovation	Demolition
1	Event/Conference Center (2)	43,389 ft ²	NA	NA	NA	NA	NA
2	Modular Officer Dorms (14)	17,405 ft ²	NA	NA	17,405 ft ²	NA	NA
3	Expand Family Camp (17)	113,511 ft ² RV area	NA	NA	113,511 ft ²	NA	NA
4A 4B 4C	Pre-K–6 School (A, B, and C) ^a	60,000 ft ² School 87,000 ft ² hard surface	NA	NA	60,000 ft ² School 87,000 ft ² hard surface	NA	NA
5	Relocate AAFES Express/Gas Station (18)	5,000 ft ² Gas station/ tank area	37,765 ft ² B-540	NA	5,000 ft ² Gas station/ tank area	37,765 ft ² B-540	NA
6	Co-locate Youth Center/CDC (7, 8)	15,000 ft ² CDC 25,000 ft ² parking lot	6,334 ft ² Youth Center	9,149 ft ²	NA	6,334 ft ² Youth Center	NA
7	Club XL B-472 (3)	NA	NA	21,634 ft ²	NA	21,634 ft ²	NA

Project ID Number	Project Title	Project Type/Project Size					
		Alternative 1			Alternative 2		
		Construction	Renovation	Demolition	Construction	Renovation	Demolition
8	Renovate Ricks Hall B-255 (21) ^b	NA	52,859 ft ²	NA	NA	52,859 ft ²	NA
Total Building Space		135,794 ft²	96,958 ft²	30,783 ft²	77,405 ft²	118,592 ft²	0 ft²
Total Parking/Hard-Surface Space		112,000 ft²	NA	NA	87,000 ft²	NA	NA
Total Outdoor Space^c		118,511 ft²	NA	NA	118,511 ft²	NA	NA

Notes:

- This is an estimate of school building structure size = 60,000 ft² and hard surfaces (87,000 ft²) for parking and roads areas (35,000 ft²), and non-turf playgrounds (52,000 ft²).
 - Ricks Hall is currently vacant and uninhabitable. The renovation would not increase the net building footprint but would increase available building space.
 - Outdoor space includes RV spaces, a gas station, and an underground tank area.
- AAFES = Army and Air Force Exchange Service; B = Building (e.g., Building 211 is B-211); CDC = Child Development Center; ft² = square foot/feet; Reno = renovation; RV = recreational vehicle

**Table 2-4
Estimated Size of Proposed IDP Alternatives by Project Type – Training District**

Project ID Number	Project Title	Project Type/Project Size					
		Alternative 1			Alternative 2		
		Construction	Renovation	Demolition	Construction	Renovation	Demolition
9	Expand Parking and Campus Parking Connections (105, 106) ^a	200,000 ft ²	NA	NA	200,000 ft ²	NA	NA
10	Outdoor Student Areas (107) ^b	20,000 ft ²	NA	NA	20,000 ft ²	NA	NA
11	Smart Streets/ Sidewalks, Bike Lanes, and Improved Streets (109, 110, 113) ^c	Along 2 miles of street	NA	NA	Along 2 miles of street	NA	NA
12	Event Field (114) ^d	180,000 ft ² Landscaping	NA	NA	180,000 ft ² Landscaping	NA	NA
13	Relocate 47 CS (101)	12,198 ft ²	NA	10,870 ft ² (B-348)	12,198 ft ²	NA	10,870 ft ² (B-348)
Total Building Space		12,198 ft²	NA	10,870 ft²	12,198 ft²	NA	10,870 ft²
Total Parking Space		200,000 ft²	NA	NA	200,000 ft²	NA	NA
Total Outdoor Space		200,000 ft²	NA	NA	200,000 ft²	NA	NA
Total Infrastructure Improvements		2 miles	NA	NA	2 miles	NA	NA

Notes:

- This area includes new parking area covering the existing softball field.
 - This an approximate area within which covered areas for students would be constructed.
 - This is the approximate distance within which various street improvements, sidewalks, pedestrian walkways, and bike lines would be constructed (not the length of the projects).
 - The Event Field is an open landscaped area (grass) with several added amenities to support larger special events.
- 47 CS = 47th Communications Squadron; B = Building (e.g., Building 211 is B-211); ft² = square foot/feet; Reno = renovation

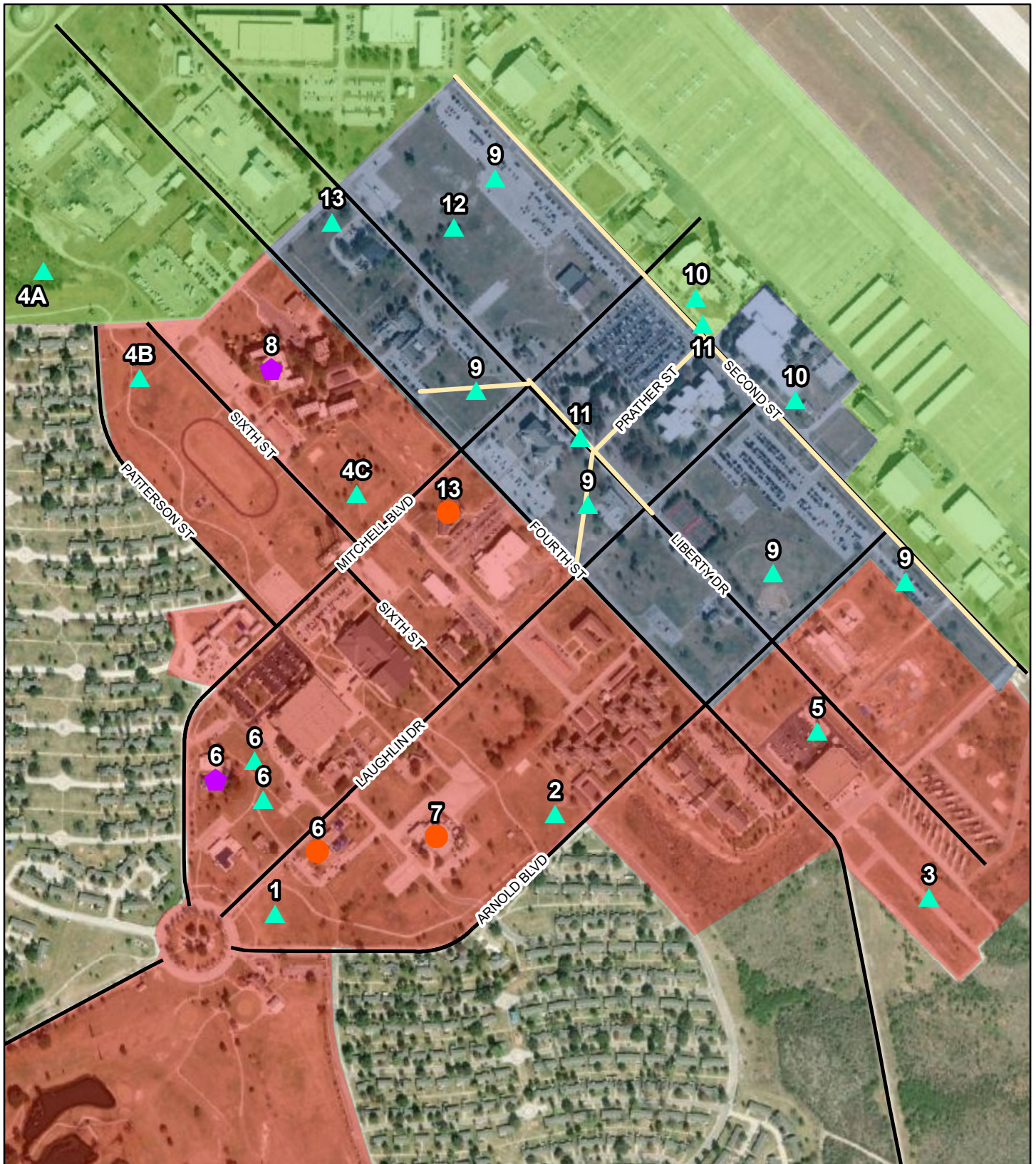








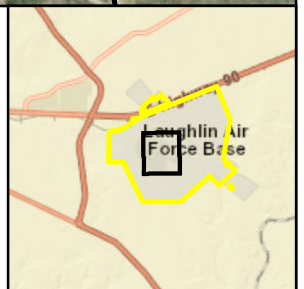


FIGURE 2-1
PROJECT
LOCATIONS

- | | | | |
|---|----------------|---|---------------------------------|
|  | Construction |  | Road |
|  | Demolition |  | Community and Services District |
|  | Renovation |  | Flightline District |
|  | Linear Project |  | Training District |



N
Imagery: ESRI 2021
Projection: WGS 1984
Zone 14N

0 325 650 Feet

2.4.1 Alternative 1

Under Alternative 1, the Proposed Action would include construction, renovation, demolition, and infrastructure development projects (see **Section 2.2**). Project 1 (Event Center) and Project 13 (Communications Building) would also involve building demolition (**Tables 2-1** and **2-2**). Under Alternative 1, the five new construction projects would add approximately 147,992 ft² (**Table 2-5**). The demolition components would remove approximately 41,653 ft² of space for a net gain in building footprint of 106,339 ft². Because Ricks Hall is currently vacant and uninhabitable, its renovation would increase the useable building space by 52,859 ft². Under Alternative 1, 96,958 ft² of building space would be renovated, including Ricks Hall (B-255), the Main Exchange (B-450), and the Youth Center (B-390). Approximately 260,000 ft² of new parking lot and 52,000 ft² of non-turf surface (play surface for the school) would be constructed, for a total added 312,000 ft² of impervious surface. Infrastructure improvements would be implemented along approximately 2 miles of street. Approximately 318,511 ft² of useable outdoor space would be created. This area would include a new fueling station near the Main Exchange, additional recreational vehicle space at the Family Camp, student areas near the academic buildings, and an Event Field for large special events.

Table 2-5
Summary of Proposed Actions by Project Type for Each Alternative

Activity	Alternative 1	Alternative 2	Type
Number of actions	5	3	Facility Construction ^a
Construction amount	147,992 ft ²	89,603 ft ²	Facility Construction ^a
Number of actions	3	4	Renovations
Renovation amount	96,958 ft ²	118,592 ft ²	Renovations
Number of actions	3	1	Demolition
Demolition amount	41,653 ft ²	10,870 ft ²	Demolition
Number of actions	7	6	Infrastructure Construction ^b
Parking/hard-surface space	312,000 ft ²	287,000 ft ²	Infrastructure Construction ^b
Outdoor space	318,511 ft ²	318,511 ft ²	Infrastructure Construction ^b

Notes:

- a. Facility construction includes buildings and other structures such as the gas station and recreational vehicle spaces in the Family Camp.
 - b. Infrastructure includes non-building construction and includes the Event Field, parking areas, and outdoor student areas. No area is included for street improvements such as sidewalks, bike lanes, and pedestrian bridges as these are unknown.
- ft² = square feet

Under Alternative 1, all proposed projects would meet the selection standards listed in **Section 2.3** and would remedy facility deficiencies, be consistent with land use requirements, increase operational efficiencies and sustainable development, and improve the quality of life.

Under Alternative 1, the pre-K–6 school would be constructed on Site A (**Figure 2-1**). Site A was determined to be the preferred location for the new school based on the screening criteria (**Table 2-6**). Site A is located north of the residential housing along Bowling Street in the northwest part of Laughlin AFB. The parcel is located on Base, adjacent to the housing area within reasonable walking distance, and outside the 65-decibel noise contour. Additionally, Site A has sufficient area (greater than 6.5 acres) to accommodate the required school facilities. The site is located along Bowling Street, a residential street, and would avoid Base traffic. The size of the school facilities was based on published school development guidelines (California Department of Education, 2000, Table 3). Size guidelines for classroom size reduction were used. In addition to classroom space for pre-K, it was assumed that enrollment in Grades 1–3 and 4–6 would be up to 150 students each, for a total Grade 1–6 capacity of 300 students. School building size was estimated at 60,000 ft². The school facilities would include approximately 35,000 ft² of parking area and 52,000 ft² of hard surface for hardcourt and apparatus play areas, for a total of 87,000 ft² of impervious surface. Approximately 95,000 ft² would be left as turfed play fields.

52,000 ft² of hard surface for hardcourt and apparatus play areas, for a total of 87,000 ft² of impervious surface. Approximately 95,000 ft² would be left as turf play fields.

**Table 2-6
Selection Criteria Results for Pre-K–6 School Locations**

Selection Criterion	Site A	Site B	Site C
Location	Yes	Yes	No
Noise (<65 decibels)	Yes	Yes	No
Acreage	Yes	Yes	No
Utility Connections	Yes	Yes	Yes
Traffic	Yes	Marginal	No

2.4.2 Alternative 2

Reasonable alternatives for the projects listed in **Section 2.2** were determined to exist for the CDC/Youth Center (Project 6), Club XL (Project 7), and the pre-K–6 school (Project 4) based on the selection standards outlined in **Section 2.3**. No other reasonable alternatives meeting the selection standards were identified for other projects. Therefore, the project list under Alternative 2 would remain the same as Alternative 1 with the following exceptions:

- A new CDC building and parking area would not be constructed near the Youth Center, but the Youth Center would still be renovated.
- The Events/Conference Center would not be constructed.
- Club XL would be renovated.
- The pre-K–6 school would be constructed on Site B (**Figure 2-1**, Project 8B).

Under Alternative 2, the pre-K–6 school would be constructed on Site B. Site B is located northwest of the Laughlin AFB running track between Patterson Street and 6th Street in the northwest part of the Base (**Figure 2-1**). To accommodate the approximately 6.5 acres required for the school facilities, the land along Patterson Street, southwest of the running track, would be needed in addition to the land on the northwest end of the running track. Site B is located on Base, adjacent to the housing area within reasonable walking distance, and outside the 65-decibel noise contour.

Under Alternative 2, three building construction projects would be completed for an increase of 89,603 ft² of building space. A total of 118,592 ft² of building space would be renovated. Under Alternative 2, a total of 10,870 ft² of building space would be demolished. The net increase in building space under Alternative 2 would be about 78,733 ft². A total of 287,000 ft² of impervious surface would be constructed under Alternative 2, including 235,000 ft² of parking area and 52,000 ft² of play area for school project. All proposed projects would meet the selection standards listed in **Section 2.3** and would remedy facility deficiencies, be consistent with land use requirements, increase operational efficiencies and sustainable development, and improve the quality of life.

2.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

One additional preliminary alternative, Site C, was considered for the location of the pre-K–6 school (**Figure 2-1**). Site C for the pre-K–6 school is located northeast of the intersection of Mitchell Boulevard and 6th Street in the north-central part of the Community and Services Planning District. Site C did not meet the screening criteria for location, acreage, noise, and traffic (see **Table 2-6**). Therefore, Site C was eliminated from further consideration in this EA. Sites A and B were retained for detailed analysis.

2.6 ALTERNATIVES RETAINED FOR DETAILED ANALYSIS

Alternatives 1 and 2 are retained for detailed analysis for each of the components of the Proposed Action, as well as the No Action Alternative. Proposed school sites A and B were retained for detailed analysis under Alternative 1 and Alternative 2, respectively.

2.6.1 No Action Alternative

Under the No Action Alternative, the Air Force would not implement the proposed installation development projects, and Laughlin AFB would continue to operate under current conditions. The facility and infrastructure assets of Laughlin AFB would continue to degrade. In the short term, military training and operations would continue at Laughlin AFB in accordance with the status quo. Over time, the mission support capabilities of the Base would diminish along with its ability to support the future missions and requirements of its tenant activities.

While the No Action Alternative would not satisfy the purpose of and need for the Proposed Action, this alternative is retained to provide a comparative baseline against which to analyze the effects of the Proposed Action, as required under the CEQ regulations ([40 CFR § 1502.14\(c\)](#)). The No Action Alternative reflects the status quo and serves as a benchmark against which the effects of the Proposed Action can be evaluated.

2.7 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

The potential impacts under Alternatives 1 and 2 and the No Action Alternative are summarized in **Table 2-7**. The summary is based on information discussed in detail in **Chapter 3** of this EA and includes a concise definition of the issues addressed and the potential environmental impacts associated with each alternative.

**Table 2-7
Summary of Environmental Consequences**

Proposed Action		
Resource Area	Alternative 1/Alternative 2	No Action Alternative
Land Use	No significant adverse effects to land use. Laughlin AFB would lease land to the San Felipe Del Rio Consolidated Independent School District to construct the pre-K-6 school.	No impacts to land use.
Geological Resources	No significant effects to geological resources. Soil erosion potential would be short term and limited to construction and demolition activities.	No impacts to geological resources.
Air Quality	No significant effects to air quality. The estimated total annual emissions of the Proposed Action Alternatives would not exceed the <i>de minimis</i> or Prevention of Significant Deterioration permitting thresholds or any criteria pollutant or precursor. Carbon dioxide equivalent emissions from the Proposed Action Alternatives would be low when compared to large greenhouse gas sources.	No impacts to air quality.
Water Resources	No significant effects to water resources. Potential short-term impacts to stormwater could occur during construction. Minor increase to stormwater runoff from increase in impervious surfaces.	No impacts to water resources, including floodplains.
Biological Resources	No significant effects to biological resources. "No Effect" determination on federally listed threatened or endangered species and other protected species.	No impacts to biological resources.

Proposed Action		
Resource Area	Alternative 1/Alternative 2	No Action Alternative
Cultural Resources	No significant effects to cultural resources would be expected.	No impacts to archaeological, historical architectural properties, or Traditional Cultural Properties.
Infrastructure, Transportation, and Utilities	No significant adverse effects to infrastructure, transportation, or utilities. Beneficial effects on transportation from street improvements and increased parking areas. New construction and demolition of older buildings would improve utility infrastructure.	No impacts to utilities.
Noise	No significant effects to noise-sensitive receptors or increases in operational noise levels.	No impacts to noise levels.
Hazardous Materials and Waste	No significant effects to hazardous materials and waste management. Existing plans are sufficient to manage any hazardous materials or wastes.	No impacts to hazardous materials and waste management.
Safety	No significant effects to safety. Short-term, negligible-to-minor impacts on contractor health and safety could occur during proposed construction and demolition projects.	No impacts to safety.
Socioeconomics	Alternative 1: No significant adverse effects on employment, housing, or educational resources. Beneficial improvements to available housing, and child services for Air Force families through school and CDC facility construction. Alternative 2: No significant adverse effects on employment or housing. Child Development Care services would remain in limited capacity. Beneficial Improvement to educational resources from school construction.	No impacts on employment, housing, or educational resources.
Environmental Justice and Protection of Children	No significant effects to environmental justice populations and protection of children.	No impacts to environmental justice populations and protection of children.
Cumulative Impacts	When incremental impacts of the Proposed Action Alternatives are added to other past, present, or reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no potentially significant cumulative impacts were identified.	No cumulative impacts.

CHAPTER 3 EXISTING CONDITIONS AND ENVIRONMENTAL CONSEQUENCES

3.1 LAND USE

3.1.1 Definition of the Resource

The term “land use” refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. In many cases, land use descriptions are codified in local zoning laws; however, no nationally recognized convention or uniform terminology has been adopted for describing land use categories. As a result, the meanings of various land use descriptions, labels, and definitions vary among jurisdictions. Land use on Laughlin AFB is broadly classified through the identification of planning districts (that is, areas that contain common functions and types of operational activities).

The ROI for land use is the developed area of Laughlin AFB within the Community and Services District and Training District and the western portion of the adjacent Flightline District (**Figure 2-1**).

3.1.2 Existing Conditions

Laughlin AFB’s Main Base occupies 4,091 acres of land east of the city of Del Rio, Texas, in Val Verde County, approximately 6 miles north of the US border with Mexico. Laughlin AFB satellite facilities, including Spofford Auxiliary Field, a Next Generation Weather Radar station, a recreation annex near Lake Amistad, and an Instrument Landing System Localizer Annex, are not included in the Proposed Action. Laughlin AFB is surrounded by private ranching operations (Laughlin AFB, 2021a). The land use on the Base is devoted to the mission of the 47 FTW, to conduct specialized undergraduate pilot training for the Air Force, Air Force Reserve, Air National Guard, and allied-nation air forces to deploy mission-ready Airmen. Laughlin AFB has three runways on the Main Base.

Laughlin AFB prepared an IDP as a blueprint to guide future decisions regarding on-Base development needed to meet and sustain its mission capability (URS, 2014). The IDP delineated nine planning districts on the main portion of Laughlin AFB. In 2020, Laughlin AFB, in collaboration with stakeholders and the US Army Corps of Engineers, concurrently developed two ADPs that encompassed the Campus Center and Community Center Planning Districts in the IDP (Laughlin AFB, 2020a, 2020b). The Community and Services District is in the southwest portion of the Main Base (see **Figure 1-2**). This district contains stores, restaurants, recreational and fitness facilities, a golf course, barracks, student dormitories, and medical facilities that serve Air Force staff, pilot trainees, their families, and civilian workers. The residential area of the Base borders the Community and Services District on the southwest side and provides housing for Air Force staff.

The Training District is located centrally on the Main Base between the Community and Services District and the Flightline District. The Training District includes classroom buildings, flight simulators, study areas, and parking areas that support the pilot training mission of the Installation. This district is designed to support the student pilots and their associated support personnel by hosting graduation ceremonies every three weeks and providing all facilities necessary for training (Laughlin AFB, 2020b). The Flightline District surrounds the north and northeast side of the Training District. This District includes a fire station, hangars, shops, and mission and aviation support facilities. None of the projects under the Proposed Action except for the pre-K–6 school under Alternative 1 (Site A) and the student outdoor areas (Project 10) under Alternatives 1 and 2 would occur in the Flightline District.

3.1.3 Environmental Consequences

3.1.3.1 Evaluation Criteria

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

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

3.1.3.2 Alternative 1

Under Alternative 1, all projects would occur within the Base boundaries. With the exception of the pre-K–6 school, projects under Alternative 1 would occur in the Community and Services District and Training District and would be consistent with existing land use in these two districts. Projects identified under Alternative 1 would provide necessary improvements to outdated facilities. The pre-K–6 school would be constructed on previously undisturbed land in the Flightline District through an installation land lease to the San Felipe Del Rio Consolidated Independent School District. The school district would build and operate the school. The school would be developed north of the Residential Housing District near the Community and Services District. Although the school would be located within the Flightline District, its location would be compatible with existing surrounding land uses. The proposed site is adjacent to residential housing on Bowling Street and is separated from both Base flight operations and support facilities. No impacts to land use would occur under Alternative 1.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant, cumulative effects to land use would be anticipated to occur under implementation of Alternative 1.

3.1.3.3 Alternative 2

Impacts to land use under Alternative 2 would be expected to be the same as those identified under Alternative 1 except for the location of the pre-K–6 school. Under Alternative 2, the pre-K–6 school would be constructed on Site B instead of Site A. Site B is adjacent to the Laughlin AFB running track, east of a residential area within the Community and Services District. The land has been previously disturbed and is undeveloped. Site B is on the periphery of the Base support facilities in the Community and Services District. The Proposed Action under Alternative 2 would align with the existing land use.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant, cumulative effects to land use would be anticipated to occur under implementation of Alternative 2.

3.1.3.4 No Action Alternative

Under the No Action Alternative, the projects included in the Proposed Action would not occur. This would leave outdated schools and facilities across the Installation. No impacts to land use would occur.

3.2 GEOLOGICAL RESOURCES

3.2.1 Definition of the Resource

Geological resources consist of surface and subsurface materials and their properties. Soils are the unconsolidated materials overlying bedrock or other parent material. Soils typically are described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain applications or uses. In appropriate cases, soil properties must be examined for their compatibility with activities or types of land use.

Prime farmland is protected under the *Farmland Protection Policy Act of 1981* and is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. In some areas not identified as having national or statewide farmland importance, land may be considered farmland of local importance to produce food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

The ROI for geological resources is the developed area of Laughlin AFB within the Community and Services District and Training District and the western portion of the adjacent Flightline District (see **Figure 2-1**).

3.2.2 Existing Conditions

Val Verde County is situated at the junction of two major physiographic regions of Texas: the Edwards Plateau, characterized by high dry limestone ridges and poor surface soils, and the Gulf Coastal Plains, characterized by gently rolling plains and deeper richer soils (Laughlin AFB, 2021a). This region of Texas lies adjacent to a geographic area known colloquially as Hill Country, characterized by hills sculpted by stream erosion. Texas Hill Country forms the southwestern portion of the Edwards Plateau.

3.2.2.1 Topography

Laughlin AFB lies on the western edge of the Balcones Escarpment (Laughlin AFB, 2021a). The Balcones Escarpment of the Edwards Plateau physiographic province is a curved geologic fault zone ranging from Del Rio, Texas, to Austin, Texas, and then north through the Dallas-Fort Worth area (Texas State Historical Commission, 2020). The terrain of Laughlin AFB is moderately undulating to flat. Elevation within the Base varies less than 100 feet from about 1,058 to 1,142 feet above mean sea level. The terrain is highest along the western and southwestern Base boundaries and lowest along the eastern and southeastern boundaries of the Installation (Laughlin AFB, 2021a).

3.2.2.2 Geology

Laughlin AFB is underlain by four geologic formations—Uvalde gravel, Del Rio clay, Buda Limestone, and alluvium—that contribute to the availability of economically important minerals such as oil, natural gas, and manganese in Val Verde County (Laughlin AFB, 2021a). Buda Limestone comprises the bedrock formation in the ROI, with a depth ranging from less than 1 foot to approximately 40 feet below ground surface. The Buda Limestone sits over Del Rio clay which has regional depths of 80 feet below ground surface. Del Rio clay restricts the movement of shallow groundwater present on the Base into the underlying aquifer (Parsons, 2009).

3.2.2.3 Soils

There are two soils present in the ROI: Acuna silty clay and Zapata vinegarroon complex (**Figure 3-1**). The Zapata vinegarroon complex is the predominant soil type in Val Verde County. As much as 20 percent of the surface of this soil is covered by limestone and fragmented sedimentary rock, creating a well-drained soil with medium surface runoff, moderate permeability, and a very low water holding capacity (Laughlin AFB, 2021a). Acuna silty clay is a well-drained soil with medium surface runoff that is predominately comprised of silty clay. Both soils are characteristic of relatively low slopes, identifying a flat landscape at the Installation (US Department of Agriculture, 2022). At Laughlin AFB, 2 to 6 feet of silty sand overlie a thick layer of caliche (cemented sedimentary rock) that rests on top of a sand layer. The Buda Limestone is found below these layers at depths of 30–37 ft below ground surface (Parsons, 2009).

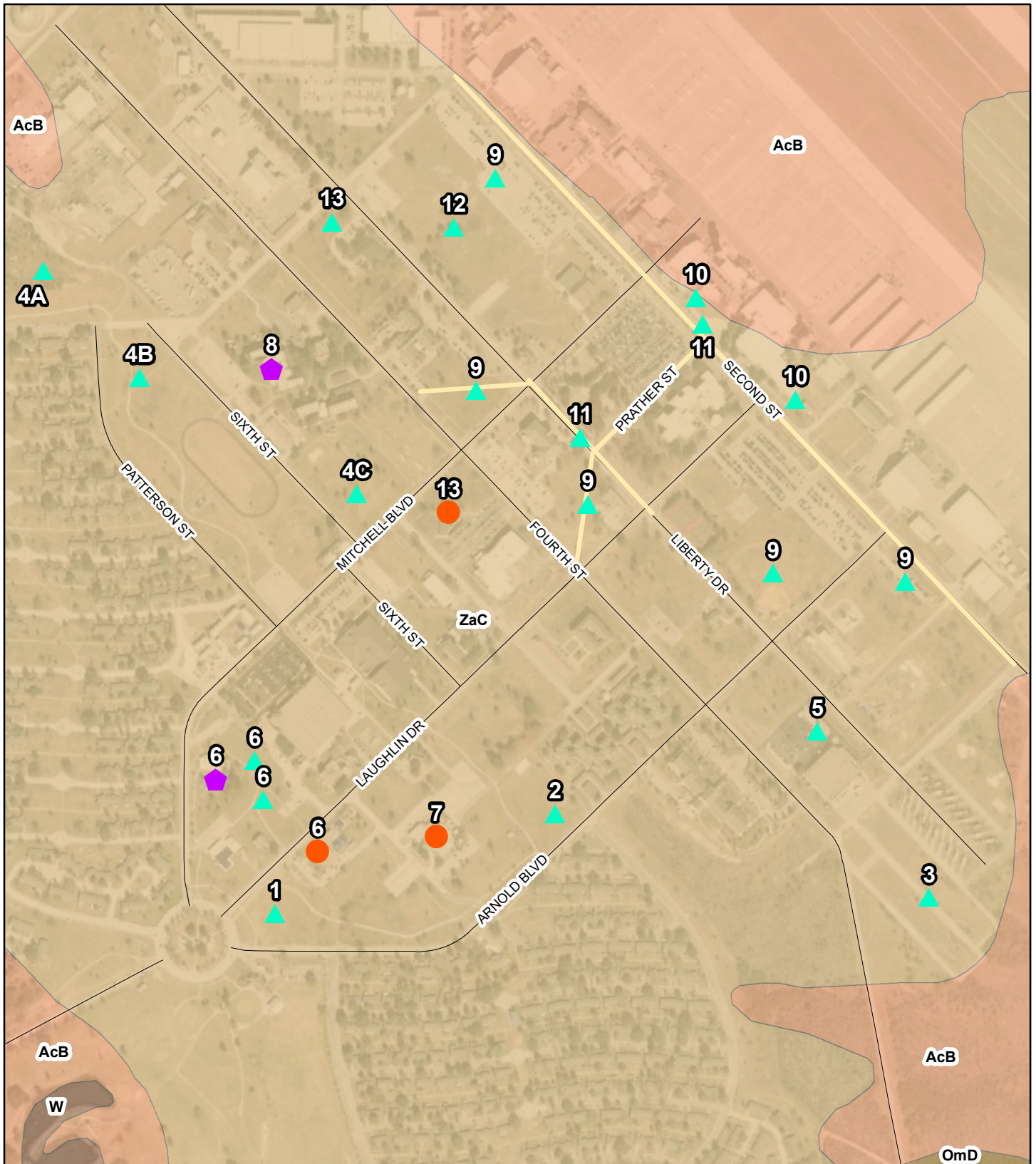









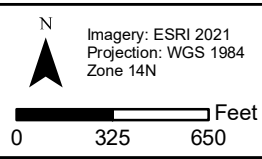
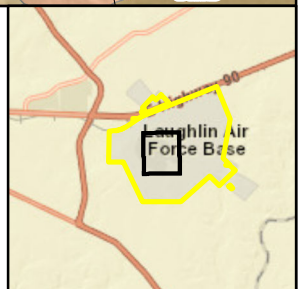


FIGURE 3-1
SOIL
TYPES

- | | | | |
|---|----------------|---|--|
|  | Construction |  | Acuna Silty Clay,
0-3% Slopes (AcB) |
|  | Demolition |  | Olmos Very Gravelly Loam,
1-8% slopes (OmD) |
|  | Renovation |  | Water (W) |
|  | Linear Project |  | Zapata-Vinegarroon Complex,
1-5% Slopes (ZaC) |
|  | Road | | |



3.2.2.4 Prime Farmland

Laughlin AFB was first established as an Air Training Base in 1942. The primary activity on the Laughlin AFB site has been military training since that time. Because Laughlin AFB is developed for military use and does not have the potential for agricultural use, soils on the Base do not qualify as prime farmland.

3.2.3 Environmental Consequences

3.2.3.1 Evaluation Criteria

Evaluation criteria for potential impacts on geological resources are based on soil stability, land use, and mitigation measures. Adverse impacts to geological resources would occur if Alternatives 1 and 2 result in the following:

- increased susceptibility to soil erosion from improper drainage for stormwater or grounding of foundations during construction, and
- unsuitability of soils for development.

3.2.3.2 Alternative 1

Projects under Alternative 1 would be implemented in developed areas of the Installation. Soils within the ROI would be considered suitable for development because they are relatively flat and well drained. Land disturbances from construction of new buildings and facilities would be managed in accordance with the Stormwater Pollution Prevention Plan (SWPPP) (Laughlin AFB, 2021b; Section 7.2). Prescribed construction requirements and best management practices (BMPs) in the SWPPP would mitigate any potential soil erosion issues. All projects would occur within the developed portion of Laughlin AFB that is dedicated to the mission of training Air Force pilots. Therefore, no soils classified as prime or unique farmland would be affected by the Proposed Action. Laughlin AFB is highly developed and adverse long-term impacts to geological resources would not occur.

When considered with past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant, cumulative impacts to geological resources would be anticipated to occur under implementation of Alternative 1.

3.2.3.3 Alternative 2

Under Alternative 2, the projects would be similar to Alternative 1 but with a smaller construction footprint for soil disturbance. The location of the school would move to Site B adjacent to the running track, a previously disturbed but undeveloped location. Potential impacts to geological resources would be the same as Alternative 1.

When considered with past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant, cumulative impacts to geological resources would be anticipated to occur under implementation of Alternative 2.

3.2.3.4 No Action Alternative

Under the No Action Alternative, the projects included in the Proposed Action would not occur. There would be no impacts to the geological resources within the project areas.

3.3 AIR QUALITY

3.3.1 Definition of the Resource

Air quality is measured by the concentration of pollutants known to impact human health and the environment (i.e., criteria pollutants). Measurements of these “criteria pollutants” in ambient air are

expressed in units of parts per million or in units of micrograms per cubic meter. Regional air quality is determined by the types and quantities of atmospheric pollutants and pollutant sources as well as the influence of surface topography and prevailing meteorological conditions.

Regional meteorology is the annual, seasonal, and monthly patterns of weather that affects the ROI and includes characteristics such as precipitation, temperature, wind, and relative humidity. The ROI for air quality is Laughlin AFB and its environs.

3.3.1.1 Criteria Pollutants

The US Environmental Protection Agency (USEPA) has established numerical concentration-based National Ambient Air Quality Standards (NAAQS) for pollutants that are detrimental to human health and the environment (**Table 3-1**). NAAQS are established for the criteria air pollutants ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, respirable particulate matter (including particles equal to or less than 10 microns in diameter and particles equal to or less than 2.5 microns in diameter), and lead. Primary NAAQS represent maximum levels of background air pollution that are considered safe, with an adequate margin of safety to protect public health. Secondary NAAQS represent the maximum pollutant concentration necessary to protect vegetation, crops, and other public resources in addition to maintaining visibility standards.

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

**Table 3-1
National Ambient Air Quality Standards**

Pollutant	Primary/ Secondary ^{a,b}	Averaging Time	Level ^c	Form
Carbon monoxide	primary	8 hours 1 hour	9 ppm 35 ppm	Not to be exceeded more than once per year
Lead ^d	primary and secondary	Rolling 3-month average	0.15 µg/m ³	Not to be exceeded
Nitrogen dioxide ^e	primary	1 hour	100 ppb	98 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	primary and secondary	1 year	53 ppb	Annual Mean
Ozone ^f	primary and secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle pollution (PM _{2.5})	primary	1 year	12 µg/m ³	Annual mean, averaged over 3 years
	secondary	1 year	15 µg/m ³	Annual mean, averaged over 3 years
	primary and secondary	24 hours	35 µg/m ³	98 th percentile, averaged over 3 years
Particle pollution (PM ₁₀)	primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur dioxide ^g	primary	1 hour	75 ppb	99 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Source: USEPA, 2016

Notes:

- a. Primary Standards: the levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the USEPA.
- b. Secondary Standards: the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- c. Concentrations are expressed first in units in which they were promulgated.
- d. In areas designated nonattainment for the Pb 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 $\mu\text{g}/\text{m}^3$ as a calendar quarter average) also remain in effect.
- e. The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.
- f. Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) ozone standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) ozone standards.
- g. The previous sulfur dioxide 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 sulfur dioxide standards or is not meeting the requirements of a State Implementation Plan call under the previous sulfur dioxide standards (40 CFR 50.4(3)). A State Implementation Plan call is a USEPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; $\text{PM}_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; PM_{10} = particulate matter less than or equal to 10 microns in diameter; ppb = parts per billion; ppm = parts per million

When a region or area meets NAAQS for a criteria pollutant, that region or area is classified as "in attainment" for that pollutant. When a region or area fails to meet NAAQS for a criteria pollutant, that region or area is classified as "nonattainment" for that pollutant. In cases of nonattainment, the affected state, territory, or local agency must develop a State Implementation Plan for USEPA review and approval. The State Implementation Plan is an enforceable plan developed at the state level that lays out a pathway for how the state will comply with NAAQS.

3.3.1.2 Greenhouse Gases

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. These emissions are generated by both natural processes and human activities. The accumulation of GHGs in the atmosphere helps regulate the earth's temperature and contribute to global climate change. Primary GHGs include water vapor, methane, nitrogen oxides, hydrofluorocarbons, and chlorofluorocarbons. Each GHG has an estimated global warming potential, which is a function of its atmospheric lifetime and its ability to absorb and radiate infrared energy emitted from the earth's surface. The global warming potential of a particular gas provides a relative basis for calculating its carbon dioxide equivalent (CO_2e) or the amount of CO_2e to the emissions of that gas. Carbon dioxide has a global warming potential of 1 and is, therefore, the standard by which all other GHGs are measured. The GHGs are multiplied by their global warming potential, and the resulting values are added together to estimate the total CO_2e .

The USEPA regulates GHG primarily through a permitting program known as the GHG Tailoring Rule. This rule applies to GHG emissions from larger stationary sources. Additionally, the USEPA promulgated a rule for large GHG emission stationary sources, fuel and industrial gas suppliers, and carbon dioxide injection sites if they emit 25,000 metric tons or more of CO_2e per year ([40 CFR § 98.2\[a\]\[2\]](#)).

3.3.2 Existing Conditions

Laughlin AFB is in Val Verde County, Texas, which is located within in the Metropolitan San Antonio Intrastate Air Quality Control Region ([40 CFR § 81.40](#)). Laughlin AFB is in an area that is currently in attainment for all criteria air pollutants.

As a federal installation that is considered a "minor source" contributor for air pollution, Laughlin AFB operates under a "Permit by Rule (PBR)" issued by the state of Texas. A PBR is the state air authorization for activities that produce more than a de minimis level of emissions but less than New Source Review permitting options. Facilities operating under a PBR are required to monitor emissions and report the

findings. Laughlin AFB also maintains a New Source Review permit (#34801) for the paint booth in Building 33.

3.3.2.1 Air Emission Sources at Laughlin AFB

Laughlin AFB is defined as a “minor source” for criteria and hazardous air pollutants and operates under a PBR as specified in 30 Texas Administrative Code 106. There are numerous sources for air emissions at Laughlin AFB that contribute to the total emissions reported at the end of each calendar year (**Table 3-2**). Emission sources include but are not limited to the following:

- internal combustion sources: emergency generators (diesel fuel) and general-purpose generators (diesel fuel)
- external combustion sources: sources include, but are not limited to, those boilers, heaters, spray booth heaters, and bake-off ovens
- munitions
- painting of assembled aircraft surfaces: sources include primary painting, which includes paints, primers, and cleaners, represented in the permit application (it does not cover touch-up, stenciling, and aircraft parts [secondary] paint)
- welding/soldering/cutting
- fuel storage tanks
- gasoline delivery vessel testing and use
- surface and spray coating operations: sources include, but are not limited to, surface and spray coating (paint booth) operations
- solvent cleaning (degreasing) operations and material usage: sources include, but are not limited to, solvent cleaning equipment
- miscellaneous chemical usage
- abrasive cleaning
- jet engine testing
- cooling tower operations
- woodworking operations: sources include, but are not limited to, dust collection operations

**Table 3-2
Emissions of Criteria Pollution at Laughlin AFB (tons per year)**

Year	CO	NOx	PM ₁₀	PM _{2.5}	SOx	Total VOCs	Total HAPs
2021	13.868	4.854	0.545	0.398	0.248	16.117	3.116
2020	11.770	3.154	1.091	0.711	0.254	11.358	2.385
2019	13.882	5.216	1.211	0.813	0.339	10.770	2.466
2018	14.149	5.008	1.208	0.813	0.356	9.441	2.218
2017	11.397	3.764	1.202	0.885	0.338	11.321	2.226
2016	13.769	4.521	1.096	0.705	0.487	9.286	1.760

CO = carbon monoxide, NOx = nitrogen oxides, PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SOx = sulfur oxides, VOC = volatile organic compounds, and HAP = hazardous air pollutants

3.3.2.2 Regional Climate

The regional climate of Del Rio, Texas, is classified as Mid-Latitude Steppe and Desert. The average daily high temperature in summer ranges from 96.4 degrees Fahrenheit (°F) in June to 98.8°F in August, the warmest month of the year (National Oceanic and Atmospheric Administration [NOAA], 2022a). Average low temperatures in summer range from 74.1 to 76.0°F. The coolest months on average are December and January, with an average daily high temperature of 65.5°F. Average low temperatures in December and January are about 41°F. The highest temperature ever recorded in Del Rio, was 111.9°F (July 13, 2020) and the lowest ever recorded was 10.0°F (December 23, 1989) (NOAA, 2022b).

The average annual rainfall is 19.8 inches. The annual precipitation pattern is bimodal with peak rainfall in May–June and August–October (NOAA, 2022a). Monthly rainfall amounts range from 2 to 3 inches during these months. Precipitation typically occurs from thunderstorms opposed to sustained rainfall from weather fronts. Precipitation during the cooler months from November to February is typically less than 1 inch per month. The risk of flash flooding at Laughlin AFB is typically associated with thunderstorms that may produce large amounts of rain in a short time. The five highest 1-hour precipitation totals recorded in the Del Rio area range from 2.43 to 3.4 inches (NOAA, 2022b).

3.3.3 Environmental Consequences

3.3.3.1 Evaluation Criteria

Section 176(c), General Conformity, of the *Clean Air Act* requires federal agencies to demonstrate that their proposed activities would conform to the applicable state implementation plans for attainment of the NAAQS. General conformity applies to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment area exceed annual *de minimis* thresholds identified in the rule, a formal conformity determination is required of that action. The thresholds are more restrictive as the severity of the nonattainment status of the region increases.

This section discusses the potential effects of the Proposed Action and Alternatives on air quality within the ROI. The proposed project area (Val Verde County, Texas [Metropolitan San Antonio Intrastate Air Quality Control Region]) is in attainment for all criteria pollutants as outlined in NAAQS ([40 CFR § 81.344](#)).

For attainment area criteria pollutants other than lead, the project air quality analysis used USEPA's Prevention of Significant Deterioration (PSD) permitting threshold of 250 tons per year (tpy) as an initial indicator of the local significance of potential impacts to air quality. Due to the toxicity of lead, the use of the PSD 250 tpy attainment area lead threshold as an indicator of potential air quality impact insignificance is not protective of human health or the environment. Therefore, the *de minimis* value of 25 tpy is used.

For criteria pollutants, the analysis compared the annual net increase in emissions estimated for any alternative to the applicable threshold(s). If the annual net increase in emissions would be below 250 tpy for all criteria pollutants, then the alternatives would not be subject to any further conformity determination and the air quality impacts would not be considered significant.

The environmental impact methodology for air quality impacts presented in this EA is derived from Air Force Manual (AFMAN) 32-7002, *Environmental Compliance and Pollution Prevention* (February 2020). The Proposed Action is broken down into basic units. For example, a basic development project that consists of replacing a building with a new building could be broken down into demolition (ft²), grading (ft²), building construction (ft² and height), architectural coatings (ft²), and paving (ft²). These data are then input into the Air Force's Air Conformity Applicability Model (ACAM), which models emissions based on the inputs and estimates air emissions for each specific criteria and precursor pollutant, as defined in the NAAQS. Assumptions of the model, methods, and detailed and summary results are provided in **Appendix B** of this EA.

3.3.3.2 Alternative 1

Alternative 1 consists of a range of construction, demolition, and renovation projects as identified in **Sections 2.2** and **2.4.1**. Planning for the Proposed Action is in a conceptual phase and no construction schedule has been developed as of the writing of this EA. To estimate impacts to air quality all proposed activities under Alternative 1 were combined into an input table prior to entry into ACAM (**Appendix B**). The total inputs were then divided by the proposed duration of construction activities (a period of 5 years from 2023 through 2027) and each year was entered separately into the ACAM program as a separate project. The following assumptions were made for proposed activity timelines within each given year.

- Demolition would occur in Quarter (Q) 1 and span 3 months (January–March)
- Grading would occur for 3 months (February–April)
- Building construction would occur in Q2–Q3 and span for 6 months (April–September)
- Architectural coatings would occur for 3 months (August–October)
- Paving would occur in Q4 and span 3 months (November–December)

The estimated total annual emissions would not exceed the *de minimis* or PSD permitting thresholds outlined in **Section 3.3.3.1** for any criteria pollutant or precursor for any of the years modeled (**Table 3-3**). Therefore, impacts from Alternative 1 on regional air quality would be expected to be minor. Based on the ACAM modeling, the net change in emissions expected over the duration of the project would be primarily associated with construction and would be anticipated to be short term. The “steady state” emissions represent anticipated long-term emissions that would result from implementation of Alternative 1. The calculated emissions would be minimal for Alternative 1 and represent a conservative estimate of emissions as a byproduct of heating the buildings.

Emissions for CO_{2e} do not have a regulatory threshold; however, estimated emissions for CO_{2e} are presented to demonstrate that CO_{2e} emissions would also be low when compared to GHG emissions of 25,000 metric tons or more associated with large GHG sources. When considered with past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to air quality would be expected to occur under the Alternative 1. The results of this analysis indicate that no further evaluation of air quality impacts would be necessary for this project.

**Table 3-3
ACAM Calculations for Alternative 1**

Year	Pollutant	Action Emissions (tons/yr)	INSIGNIFICANCE INDICATOR: Indicator (tons/yr)	INSIGNIFICANCE INDICATOR: Exceedance (yes or no)
2023	VOC	0.907	250	No
2023	NOx	2.072	250	No
2023	CO	2.511	250	No
2023	SOx	0.006	250	No
2023	PM ₁₀	6.853	250	No
2023	PM _{2.5}	0.088	250	No
2023	Pb	0.000	25	No
2023	NH ₃	0.002	250	No
2023	CO _{2e}	559.0	N/A	N/A
2024	VOC	0.894	250	No
2024	NOx	1.988	250	No
2024	CO	2.545	250	No
2024	SOx	0.006	250	No
2024	PM ₁₀	6.847	250	No
2024	PM _{2.5}	0.083	250	No
2024	Pb	0.000	25	No
2024	NH ₃	0.002	250	No
2024	CO _{2e}	626.3	N/A	N/A

Year	Pollutant	Action Emissions (tons/yr)	INSIGNIFICANCE INDICATOR: Indicator (tons/yr)	INSIGNIFICANCE INDICATOR: Exceedance (yes or no)
2025	VOC	0.882	250	No
2025	NO _x	1.919	250	No
2025	CO	2.581	250	No
2025	SO _x	0.006	250	No
2025	PM ₁₀	6.843	250	No
2025	PM _{2.5}	0.079	250	No
2025	Pb	0.000	25	No
2025	NH ₃	0.002	250	No
2025	CO _{2e}	693.7	N/A	N/A
2026	VOC	0.885	250	No
2026	NO _x	1.975	250	No
2026	CO	2.628	250	No
2026	SO _x	0.007	250	No
2026	PM ₁₀	6.847	250	No
2026	PM _{2.5}	0.083	250	No
2026	Pb	0.000	25	No
2026	NH ₃	0.002	250	No
2026	CO _{2e}	761.1	N/A	N/A
2027	VOC	0.869	250	No
2027	NO _x	1.915	250	No
2027	CO	2.485	250	No
2027	SO _x	0.007	250	No
2027	PM ₁₀	6.848	250	No
2027	PM _{2.5}	0.083	250	No
2027	Pb	0.000	25	No
2027	NH ₃	0.002	250	No
2027	CO _{2e}	793.9	N/A	N/A
2028 (steady state)	VOC	0.015	250	No
2028 (steady state)	NO _x	0.280	250	No
2028 (steady state)	CO	0.235	250	No
2028 (steady state)	SO _x	0.002	250	No
2028 (steady state)	PM ₁₀	0.021	250	No
2028 (steady state)	PM _{2.5}	0.021	250	No
2028 (steady state)	Pb	0.000	25	No
2028 (steady state)	NH ₃	0.000	250	No
2028 (steady state)	CO _{2e}	336.9	NA	NA

CO = carbon monoxide; CO_{2e} = carbon dioxide equivalent; N/A = not applicable; NH₃ = ammonia; NO_x = nitrogen oxides; Pb = lead; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOC = volatile organic compound

3.3.3.1 Alternative 2

Alternative 2 would consist of construction, demolition, and renovation projects as identified in **Sections 2.2** and **2.4.2** with a smaller overall construction footprint than that of Alternative 1. The same assumptions made in calculating air emissions under Alternative 1 were applied to Alternative 2.

The estimated total annual emissions for Alternative 2 would not exceed the de minimis or PSD permitting thresholds outlined in **Section 3.3.3.1** for any criteria pollutant or precursor for any of the years modeled (**Table 3-4**). Therefore, impacts from the Alternative 2 on regional air quality would be expected to be minor and no adverse impacts would occur. Based on the ACAM modeling, the net change in emissions associated with this project would be anticipated to be short term. The “steady state” emissions represent anticipated long-term emissions resulting from the project. The calculated emissions would be minimal for the Alternative 2 and would represent a conservative estimate of emissions as a byproduct of heating the buildings.

Emissions for CO_{2e} do not have a regulatory threshold; however, estimated emissions for CO_{2e} are presented to demonstrate that CO_{2e} emissions would also be low when compared to GHG emissions of 25,000 metric tons or more associated with large GHG sources.

When considered with past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to air quality would be expected to occur under Alternative 2. The results of this analysis indicate that no further evaluation of air quality impacts would be necessary for this alternative.

**Table 3-4
ACAM Calculations for Alternative 2**

Year	Pollutant	Action Emissions (tons/yr)	INSIGNIFICANCE INDICATOR: Indicator (tons/yr)	INSIGNIFICANCE INDICATOR: Exceedance (yes or no)
2023	VOC	0.820	250	No
2023	NO _x	2.058	250	No
2023	CO	2.504	250	No
2023	SO _x	0.006	250	No
2023	PM ₁₀	6.249	250	No
2023	PM _{2.5}	0.087	250	No
2023	Pb	0.000	25	No
2023	NH ₃	0.002	250	No
2023	CO _{2e}	549.8	N/A	N/A
2024	VOC	0.806	250	No
2024	NO _x	1.958	250	No
2024	CO	2.526	250	No
2024	SO _x	0.006	250	No
2024	PM ₁₀	6.243	250	No
2024	PM _{2.5}	0.081	250	No
2024	Pb	0.000	25	No
2024	NH ₃	0.002	250	No
2024	CO _{2e}	599.1	N/A	N/A
2025	VOC	0.794	250	No
2025	NO _x	1.874	250	No
2025	CO	2.549	250	No
2025	SO _x	0.006	250	No
2025	PM ₁₀	6.238	250	No
2025	PM _{2.5}	0.076	250	No
2025	Pb	0.000	25	No
2025	NH ₃	0.002	250	No
2025	CO _{2e}	648.3	N/A	N/A
2026	VOC	0.796	250	No
2026	NO _x	1.915	250	No
2026	CO	2.583	250	No
2026	SO _x	0.006	250	No
2026	PM ₁₀	6.241	250	No
2026	PM _{2.5}	0.079	250	No
2026	Pb	0.000	25	No
2026	NH ₃	0.002	250	No
2026	CO _{2e}	697.6	N/A	N/A
2027	VOC	0.779	250	No
2027	NO _x	1.840	250	No
2027	CO	2.427	250	No
2027	SO _x	0.006	250	No
2027	PM ₁₀	6.240	250	No
2027	PM _{2.5}	0.078	250	No
2027	Pb	0.000	25	No
2027	NH ₃	0.002	250	No
2027	CO _{2e}	712.4	N/A	N/A

Year	Pollutant	Action Emissions (tons/yr)	INSIGNIFICANCE INDICATOR: Indicator (tons/yr)	INSIGNIFICANCE INDICATOR: Exceedance (yes or no)
2028 (steady state)	VOC	0.011	250	No
2028 (steady state)	NOx	0.205	250	No
2028 (steady state)	CO	0.172	250	No
2028 (steady state)	SOx	0.001	250	No
2028 (steady state)	PM10	0.016	250	No
2028 (steady state)	PM2.5	0.016	250	No
2028 (steady state)	Pb	0.000	25	No
2028 (steady state)	NH3	0.000	250	No
2028 (steady state)	CO2e	246.4	N/A	N/A

CO = carbon monoxide; CO_{2e} = carbon dioxide equivalent; N/A = not applicable; NH₃ = ammonia; NOx = nitrogen oxides; Pb = lead; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOC = volatile organic compound

3.3.3.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented, and no new air emissions would be released. Therefore, no new air quality impacts would occur with implementation of the No Action Alternative.

3.4 WATER RESOURCES

3.4.1 Definition of the Resource

Water resources includes surface water, groundwater, stormwater, and floodplains. Due to their importance to the human and natural environment, water resources are federally protected and regulated. The *Federal Water Pollution Control Act of 1948*, as amended by the CWA, was enacted to protect water resources vulnerable to contamination and quality degradation. The CWA provides the authority to establish water quality standards, control discharges into surface and subsurface waters (including groundwater), develop waste treatment management plans and practices, and issue permits for discharges. A National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the CWA is required for discharges into navigable waters. USEPA oversees the issuance of NPDES permits at federal facilities as well as water quality regulations (CWA, Section 401) for both surface water and groundwater. The ROI for water resources is the developed area of Laughlin AFB within the Community and Services District and Training District and the surrounding watershed that drains stormwater from those districts.

3.4.1.1 Surface Water and Stormwater

Surface waters, or waters of the US, are primarily lakes, rivers, estuaries, coastal waters, and wetlands. Jurisdictional waters, including surface water resources, as defined in [33 CFR § 328.3](#), are regulated under Sections 401 and 404 of the CWA and Section 10 of the *Rivers and Harbors Act*. Man-made features not directly associated with a natural drainage, such as upland stock ponds and irrigation canals, are generally not considered jurisdictional waters.

Stormwater is surface water runoff generated from precipitation and has the potential to introduce sediments and other pollutants into surface waters. Stormwater is regulated under the CWA Section 402 NPDES program. Impervious surfaces such as buildings, roads, parking lots, and even some natural soils increase surface runoff. Stormwater management systems are designed to contain runoff on site during construction and to maintain predevelopment stormwater flow characteristics following development through either the application of infiltration or retention practices. EISA establishes stormwater design requirements for development and redevelopment projects. Under these requirements, federal facility projects larger than 5,000 ft² must maintain or restore, to the maximum extent feasible, the predevelopment hydrology of the property with respect to the water temperature, rate, volume, and duration of flow.

3.4.1.2 Groundwater

Groundwater is water that exists in the saturated zone beneath the earth's surface in pore spaces and fractures and includes aquifers. Groundwater is recharged through percolation of water on the ground's surface (e.g., precipitation and surface waterbodies) and upward movement of water in lower aquifers through capillary movement. Groundwater is an essential resource that can be used for drinking, irrigation, and industrial processes, and can be described in terms of depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations. Groundwater quality and quantity are regulated under several different programs. The federal underground injection control regulations, authorized under the *Safe Drinking Water Act* ([42 USC § 300g–300j-27](#)), require a permit for the discharge or disposal of fluids into a well. The federal sole source aquifer regulations, also authorized under the *Safe Drinking Water Act*, protect aquifers that are critical to water supply.

3.4.1.3 Floodplains

Floodplains are areas of low-level ground along rivers, stream channels, or coastal waters that provide a broad area to inundate and temporarily store floodwaters. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main waterbody. Floodplains are subject to periodic or infrequent inundation due to rain or melting snow. Risk of flooding is influenced by local topography, the frequency of precipitation events, and the size and characteristics of the watershed upslope of the floodplain.

The Federal Emergency Management Agency (FEMA) evaluates and maps flood potential, which defines the 100-year (regulatory) floodplain. The 100-year floodplain is the area that has a 1-percent annual chance of inundation by a floodwater. FEMA uses letter designations for flood zone classification. Zone A designates 100-year floodplains where flood depths (base flood elevations) have not been calculated and further studies are needed. Zone AE floodplains include calculated base flood elevations. Base flood elevations are minimum elevation standards for buildings. Zone X indicates the 500-year floodplain and is not part of the FEMA regulatory floodplain. Areas designated Zone X lie outside the 100-year and 500-year floodplains and indicate a low risk of flooding hazards (FEMA, 2020). Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to property and human health and safety.

EO 11988, *Floodplain Management*, provides guidelines that agencies should carry out as part of their decision-making process on projects that have potential impacts to or within the floodplain. This EO requires that federal agencies avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and avoid direct and indirect support of floodplain development wherever there is a practicable alternative. EO 13690, *Establishing a Flood Risk Management Standard and Process for Further Soliciting and Considering Stakeholder Input*, established a Federal Flood Risk Management Standard and a process for further soliciting and considering stakeholder input; however, this EO was later revoked by Section 6 of EO 13807, *Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure*. EO 13807 did not revoke or otherwise alter EO 11988.

3.4.1.4 Wetlands

The CWA regulates discharges of pollutants in surface waters of the US. Section 404 of the CWA established a program to regulate the discharge of dredged and fill material into waters of the US, including wetlands. The US Army Corps of Engineers defines wetlands as “those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions” (Environmental Laboratory, 1987). Wetlands generally include swamps, marshes, bogs, and similar areas ([33 CFR Part 328](#)). Federal protection of wetlands is also promulgated under EO 11990, *Protection of Wetlands*, the purpose of which is to reduce adverse impacts associated with the destruction or modification of wetlands. This EO directs federal agencies to provide leadership in minimizing the destruction, loss, or degradation of wetlands.

3.4.2 Existing Conditions

3.4.2.1 Surface Water and Stormwater

Laughlin AFB is located within the approximately 4,500-square mile Elm-Sycamore River Basin (Hydrologic Unit Code 13080001), which extends from southern Texas into Mexico (Texas Parks and Wildlife Department [TPWD], 2022a). Surface water resources on Laughlin AFB are limited due to low annual precipitation; however, two major creeks, wetlands, floodplains, and numerous stormwater ditches and ephemeral drainages are found within the Installation boundary (**Figure 3-2**).

Four primary waterbodies are located within Laughlin AFB. Sacatosa Creek is located along the eastern and southern boundary of the Base and flows through the Southern clear zone (CZ) of the airfield. Sacatosa Creek originates approximately 7.5 miles to the north-northeast of the Base and flows to the south. Zorro Creek is located on the northwestern portion of the Base and originates 200 yards north-northwest of the Installation boundary. An unnamed tributary originates in the southern portion of the Base, slightly northwest of the golf course, and follows in a southerly direction off the property. In addition, a network of stormwater ditches is found throughout the Training District. Surface water from these sources flows northeasterly to a primary drainage canal located along 2nd Street, which flows to the southeast and off Laughlin AFB property.

Stormwater flows off the Base by way of one of these primary surface waters (Laughlin AFB, 2021a). Approximately 1,500 acres of the Base drain to Sacatosa Creek, including most of the airfield and the northeastern portion of the Installation. Sacatosa Creek continues to flow to the south, discharging to the Rio Grande approximately 13 creek-miles downstream of the Base. The northwestern portion of the Base drains to Zorro Creek, including areas located north of Bowling Street and west of Liberty Drive. Zorro Creek continues flowing south-southwest after leaving the Base and discharges into the Rio Grande, approximately 12 creek-miles downstream of the Installation. Approximately 910 acres of Base property, including the two housing areas, the golf course, and the area along the southwest boundary of the Base drain south through the unnamed tributary south of the golf course. The tributary flows to the south and discharges to the Rio Grande approximately 8 miles south of the Base. The central portion of the Base, approximately 1,400 acres, drains to the primary stormwater system along 2nd Street. This drainage flows into Sacatosa Creek approximately 5 creek-miles downstream of the southern Base boundary.

None of the waterbodies found on Laughlin AFB are listed on the 2020 Texas Integrated Report Index of Water Quality Impairments, which identifies all waterbodies with water quality impairments (Texas Commission on Environmental Quality [TCEQ], 2020).

Stormwater at Laughlin AFB is managed by the SWPPP and authorized under the Texas Multi-Sector General Permit (MSGP) TXR050000 (Laughlin AFB, 2021b). If a construction project disturbs greater than one acre of land or has the potential to violate a water quality standard, a SWPPP must be composed and implemented, and erosion and sedimentation controls must be in place in accordance with the TCEQ Texas Pollutant Discharge Elimination System General Permit. A Notice of Intent and Notice of Termination are required as submittals to the TCEQ for construction projects that will disturb greater than 5 acres.

3.4.2.2 Groundwater

Laughlin AFB is sourced by groundwater from the Edwards Aquifer, one of the most abundant artesian aquifers in the world. Edwards Aquifer encompasses approximately 4,350 square miles and provides a source of drinking water to more than 2 million people in the region. Laughlin AFB purchases its potable water from the City of Del Rio, which is sourced from the San Felipe Springs, approximately 7 miles from the Installation. The San Felipe Springs flow from the Edwards Aquifer to form San Felipe Creek.

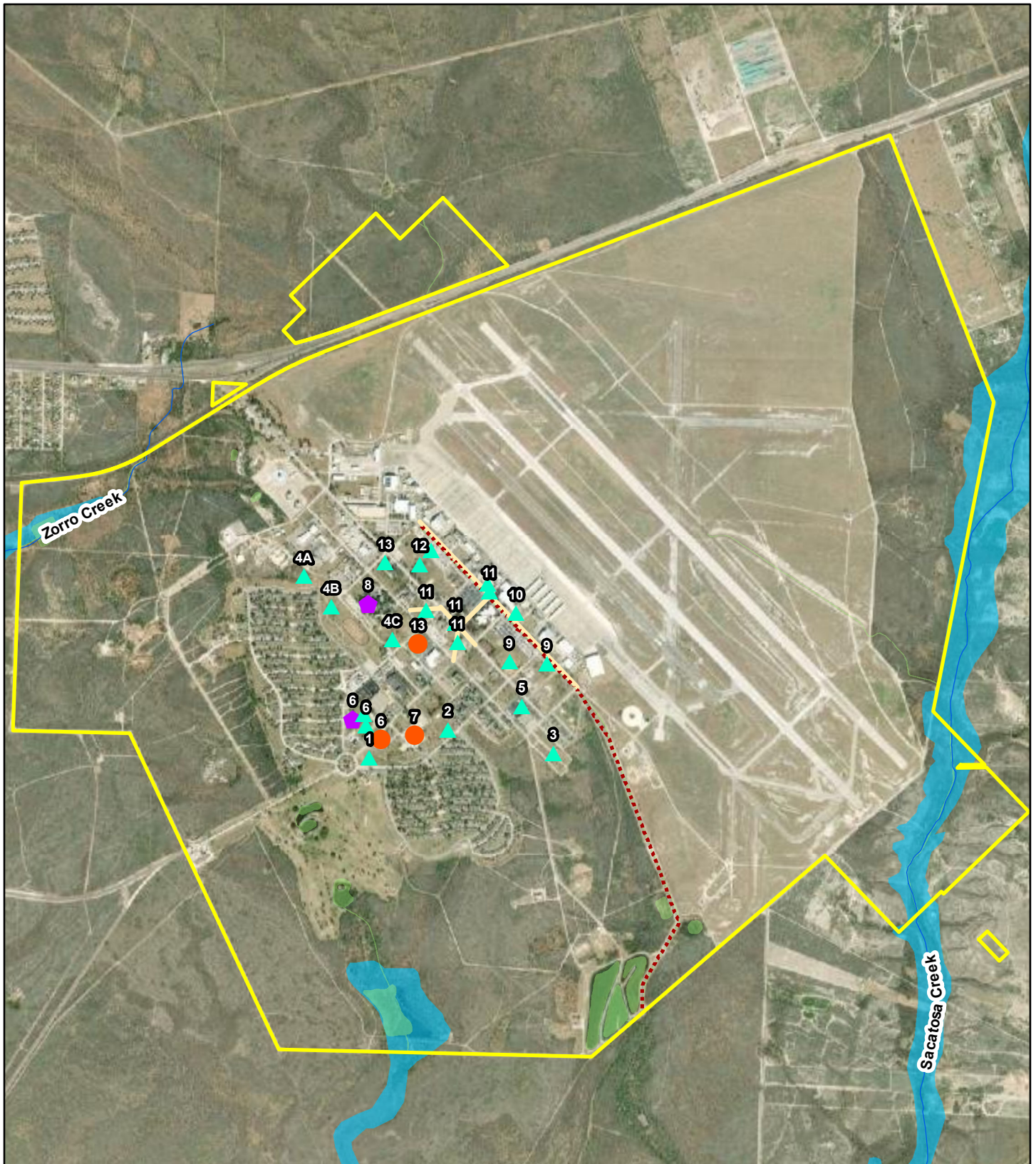
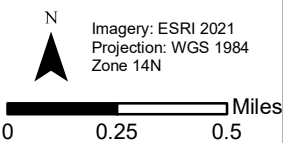











FIGURE 3-2
FLOODPLAINS,
STREAMS, WETLANDS



- | | | | |
|---|-------------------------|---|--------------------|
|  | Construction |  | River/Stream |
|  | Demolition |  | Stormwater Channel |
|  | Renovation |  | Flood Zone A |
|  | Laughlin Air Force Base |  | Wetland |
|  | Linear Project | | |



3.4.2.3 Floodplains

Regulated floodplains extend into Laughlin AFB in three locations, according to the FEMA Flood Insurance Rate Map Panel No. 48465C1775D (July 22, 2010) (see **Figure 3-2**). The 100-year floodplain associated with Sacatosa Creek is located along the eastern boundary of the Base and crosses the southern CZ of the airfield. The floodplain associated with Zorro Creek originates in the northwest corner of the Base property and extends off Base. A third floodplain is associated with the unnamed tributary in the southern portion of the Installation. This mapped floodplain originates slightly south of the golf course and extends off Base. Each mapped floodplain within Laughlin AFB is designated a Zone A floodplain.

3.4.2.4 Wetlands

Wetlands on Laughlin AFB are riverine scrub-shrub wetlands occurring along Zorro Creek to the northwest and unnamed tributaries of the Sacatosa Creek to the southeast of the ROI (see **Figure 3-2**). Hydric soils would not be anticipated to be encountered within the project locations. All three indicators—hydrophytic vegetation, wetland hydrology, and hydric soils—must be present to be classified as a wetland.

3.4.3 Environmental Consequences

3.4.3.1 Evaluation Criteria

Potential impacts to water resources are evaluated on water availability, quality, and use; direct impacts to waters of the US; and encroachment on regulated floodplains. Adverse impacts to water resources would occur if the Proposed Action Alternatives cause any of the following:

- reduced water availability or supply to existing users;
- overdraft of groundwater basins;
- decrease in water quality;
- detrimental effects on the function of a floodplain or be affected by the floodplain; or
- violation of established laws or regulations adopted to protect sensitive water resources.

3.4.3.2 Alternative 1

Surface Water and Stormwater

Ground disturbance and vegetation clearing associated with proposed construction, renovation, demolition, and infrastructure development projects under Alternative 1 could increase soil erosion and sedimentation in the short-term. If not managed properly, disturbed soils could be eroded and transported to nearby waterbodies during stormwater events and adversely affect water quality. The risk of potential increases in soil erosion and sedimentation from these projects would be minimized through the implementation of appropriate erosion and sediment control BMPs in the SWPPP, which would prevent sediment, debris, and other pollutants from potentially entering waters of the US (Laughlin AFB, 2021b).

Approximately 414,000 ft² of new impervious surface area (e.g., buildings, parking areas, non-turf play surface) would be added to the Base under Alternative 1, which would increase stormwater runoff in the long term. The largest contributors of additional impervious surface under Alternative 1 are associated with the construction of additional parking adjacent to 2nd Street and the new school and hard-surface play area. Stormwater runoff produced from the new impervious surfaces would be dispersed in three directions. Approximately 36 percent of the additional stormwater runoff would drain to Zorro Creek, including from the new school and gas station. The Event/Conference Center and new CDC account for 20 percent of the additional stormwater runoff and would drain to the unnamed tributary south of the golf course. The new parking area and officer's dorms total approximately 44 percent of the additional stormwater runoff and would drain to the primary stormwater system along 2nd Street.

Laughlin AFB would adhere to the guidance provided in Unified Facilities Criteria 3-210-10, *Low Impact Development*, to comply with Section 438 of the *Energy Independence Security Act of 2007*, which provides guidance for the management of stormwater for federal projects. Compliance with this guidance would ensure that post-project hydrology mirrors pre-project hydrology on the project areas to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow.

Groundwater

Proposed construction, demolition, and renovation projects included in Alternative 1 would have the potential to impact groundwater if stormwater runoff contained contaminants and entered the underground aquifer. The Edwards Aquifer is primarily recharged from streambeds where sinkholes or fault planes allow water to enter the aquifer. The recharge zone of the Edwards Aquifer is a 1,250 square mile area located east of Laughlin AFB. Stormwater from the Base does not flow into the recharge zone; therefore, no significant direct effects to the aquifer would be anticipated to occur under implementation of Alternative 1.

Floodplains

The construction, renovation, demolition, and infrastructure development projects included in Alternative 1 would not cross or encroach on a FEMA-regulated floodplain. Therefore, Alternative 1 would not result in impacts to the 100-year floodplain.

Wetlands

Hydric soils and wetlands are unlikely to be encountered because the projects would occur in upland sites on the Laughlin AFB ROI; therefore, no impacts to wetlands would be anticipated to occur under Alternative 1.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to water resources would be anticipated to occur under implementation of Alternative 1.

3.4.3.3 Alternative 2

Surface Water and Stormwater

Alternative 2 would include slightly less new construction than Alternative 1 and increase the amount of renovation to existing facilities. Approximately 349,000 ft² of new impervious surface area would be added to the Base under Alternative 2, slightly less than those added under Alternative 1. However, the potential for a short-term increase in soil erosion and sedimentation and the proposed mitigation measures would be similar under both alternatives. Therefore, potential impacts to surface water and stormwater would be expected to be similar under both Alternative 1 and Alternative 2, except for the estimated increase in impervious surfaces.

Similar to Alternative 1, the largest increases in impervious surfaces under Alternative 2 are associated with the additional parking adjacent to 2nd Street and the new school and play area. Under Alternative 2, stormwater from new impervious surface would be dispersed to Zorro Creek (45 percent) and to the primary stormwater system along 2nd Street (55 percent).

Groundwater

Potential impacts to groundwater would be the same as Alternative 1 because the probability of stormwater entering the aquifer would be low. When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to groundwater would be anticipated to occur under implementation of Alternative 2.

Floodplains

Potential impacts to floodplains would be similar to Alternative 1, as the location of the improvements would be similar.

Wetlands

Potential impacts to wetlands would be similar to Alternative 1, as the location of the improvements would be similar.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to water resources would be anticipated to occur under implementation of Alternative 2.

3.4.3.4 No Action Alternative

Under the No Action Alternative, none of the projects in the Proposed Action would occur. Therefore, there would be no impacts to water resources.

3.5 BIOLOGICAL RESOURCES

3.5.1 Definition of the Resource

Biological resources include native or invasive plants and animals; sensitive and protected floral and faunal species; and the associated habitats, such as wetlands, forests, grasslands, cliffs, and caves in which they exist. Habitat can be defined as the resources and conditions in an area that support a defined suite of organisms. The following is a description of the primary federal statutes that form the regulatory framework for the evaluation of biological resources.

The ROI for biological resources includes the land within Laughlin AFB where the proposed projects would occur.

3.5.1.1 Endangered Species Act

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

3.5.1.2 Migratory Bird Treaty Act

The MBTA makes it unlawful for anyone to take migratory birds or their parts, nests, or eggs unless permitted to do so by regulations. Per the MBTA, “take” is defined as “pursue, hunt, shoot, wound, kill, trap, capture, or collect” ([50 CFR § 10.12](#)). Birds protected under the MBTA include nearly all species in the US except for nonnative/human-introduced species and some game birds.

EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, requires all federal agencies undertaking activities that may negatively impact migratory birds to follow a prescribed set of actions to further implement MBTA. EO 13186 directs federal agencies to develop a Memorandum of Understanding with USFWS that promotes the conservation of migratory birds.

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

In December 2017, the US Department of the Interior issued M-Opinion 37050, which concluded that the take of migratory birds from an activity is not prohibited by the MBTA when the purpose of that activity is not the take of a migratory birds, eggs, or nests. On August 11, 2020, the US District Court, Southern District of New York, vacated M-37050. Thus, incidental take of migratory birds is again prohibited. The interpretation of the MBTA remains in flux, and additional court proceedings are expected.

3.5.1.3 Bald and Golden Eagle Protection Act

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

3.5.1.4 Aquatic Resources

Aquatic resources are habitats that contain either permanent or sufficient temporary water to support plant or wildlife species that require water or hydric soils for at least part of their life cycle.

3.5.1.5 Invasive Species

Invasive species are non-native species whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal, or plant health. EO 13751, *Safeguarding the Nation from the Impacts of Invasive Species*, requires federal agencies to identify actions that may affect invasive species; use relevant programs to prevent introductions of invasive species; detect, respond, and control such species; monitor invasive species populations; and provide for restoration of native species. Invasive species damage native habitat and impede management by outcompeting native species.

3.5.2 Existing Conditions

3.5.2.1 Vegetation

Approximately 3,357 acres of Laughlin AFB are improved or semi-improved grounds that require some periodic maintenance such as mowing, irrigation, and xeriscaping. Predominant varieties of turf grasses observed within the developed areas of Laughlin AFB include Bermuda grass, St. Augustine grass, Lehmann lovegrass, and King Ranch bluestem. Urban forestry within the Base is dominated by Arizona ash, live oak, red oak, honey mesquite, crape myrtle, cedar elm, and Afghan pine. The area within the ROI is predominantly improved or semi-improved grounds.

The TPWD, in cooperation with The Nature Conservancy (TNC) of Texas, conducted inventories of plant species at Laughlin AFB in 1993, 1994, and 1997. The results were published in two documents: *Biological Survey of Laughlin Air Force Base* (TPWD, 1995 as cited in Laughlin, 2021a) and *Survey of Rare, Threatened, and Endangered Plant and Animals at Laughlin Air Force Base, Del Rio, Texas* (TNC, 1999 as cited in Laughlin AFB, 2021a). Laughlin AFB is located within the South Texas Plains in southwestern US. Four vegetation communities were identified in a Base-wide biological survey: Cenizo Series-Guajillo series Mosaic, Cane Bluestem-False Rhodesgrass series, the Sugarberry-Elm series (*Celtis laevigata*–*Ulmus crassifolia*), and the Big Sacaton series (*Sporobolus wrightii*) (Laughlin AFB, 2021a). These vegetation communities occur on undeveloped areas of the Installation. The Cenizo Series covers the gravelly hills that occupy the western half, the eastern edge, and the Clear Zones. Cenizo and guajillo shrubs are extremely common on these hills. The Cane Bluestem-False Rhodesgrass series exists on the relatively level uplands on the east side of the Base, as well as some other scattered patches. These

grasslands were observed to be in a highly degraded state, possibly from historic overgrazing. Shrub invasion has not occurred in these grasslands because of an intensive mowing regime. The floodplain of Sacatosa Creek (on the east side of the Base) and the drainages near the impoundment south of the golf course are dominated by a disturbed representation of the Sugarberry-Elm series. This community also has invaded the impoundment edge, and it is maintained as a narrow strip of woodland along the original drainage. The Big Sacation series exists along Sacatosa Creek on the east side of the Base as well as in the south CZ and is representative of a marshy zone dominated by grasses and sedges. On the Base property, the marshy grasslands are still fairly intact.

3.5.2.2 Wildlife

The land within Laughlin AFB ROI is mostly developed but is surrounded by undeveloped land as well as CZs to support airfield operations. Within the ROI, wildlife is restricted to those few remaining areas of native vegetation or are species that have adapted to urban life. Small, nocturnal, burrowing species, such as Hispid cotton rat (*Sigmodon hispidus*), bats, and the nocturnal Virginia opossum (*Didelphis virginiana*), are common in areas that retain some natural vegetation. Other species likely to be found include the eastern cottontail (*Sylvilagus floridanus*), white-tailed deer (*Odocoileus virginianus*), and the striped skunk (*Mephitis mephitis*).

Bird species common in the vicinity of Laughlin AFB include raptors, such as red-tailed hawks (*Buteo jamaicensis*), American kestrels (*Falco sparverius*), and Northern harriers (*Circus cyaneus*). Other common species include vultures (*Cathartes aura*), chipping sparrow (*Spizella passerine*), and the American crow (*Corvus brachyrhynchos*).

Several species of reptiles are known to occur on Laughlin AFB. The spot-tailed earless lizard (*Holbrookia lacerate*), little brown skink (*Scincella lateralis*), and red-eared slider (*Trachemys scripta elegans*) are likely to be observed in natural areas, occasionally occurring in more developed areas.

3.5.2.3 Threatened or Endangered Species and Other Protected Species

Laughlin AFB manages threatened and endangered species proactively and with a forward-looking perspective that works to prevent potential listings as well as conserve species that are legally protected at the state or federal level. Whenever practicable within the constraints of the military mission, impacts to the species will be avoided and minimized and their habitats will be managed.

Laughlin AFB used the USFWS' IPaC online review tool to obtain a potential species list for the Proposed Action (**Appendix A**). As summarized in **Table 3-5**, 12 federally listed threatened or endangered species, 1 candidate species, and 1 experimental non-essential population have the potential to occur in the ROI; however, only 1 federal candidate species is known to occur on Laughlin AFB.

The Monarch butterfly is a candidate species being considered for protection under the ESA. Monarch butterflies feed on nectar from many flower species but breed only where there are milkweeds (*Asclepias* spp.). Vegetation within the ROI is generally developed and unlikely to provide significant habitat to Monarch butterflies.

Several state-listed threatened or endangered species are known to occur within Val Verde County and may have the potential to occur in the ROI (TPWD, 2022b) as summarized in **Table 3-6**.

Frequent sightings of the state-threatened Texas horned lizard have been observed on Laughlin AFB, particularly near roadways and bare patches of ground (Ryberg et al., 2021). The Texas horned lizard prefers open, arid, and semi-arid regions with sparse vegetation of grass, cactus, scattered brush, or scrubby trees. The Texas horned lizard's diet consists primarily of harvester ants. The species burrows into soil, uses rodent burrows, or hides under rocks when inactive. Breeding takes place between March and September (Conant and Collins, 1998).

**Table 3-5
Federal-Listed Species with the Potential to Occur Within the Vicinity of Laughlin AFB**

Species	Type	Federal Status	Known to Occur on Laughlin AFB
Golden-cheeked Warbler (<i>Setophaga chrysoparia</i>)	Birds	Endangered	No
Piping plover (<i>Charadrius meodus</i>)	Birds	Threatened	No
Red knot (<i>Calidris canutus rufa</i>)	Birds	Threatened	No
San Marcos salamander (<i>Eurycea nana</i>)	Amphibians	Threatened	No
Texas blind salamander (<i>Eurycea rathbuni</i>)	Amphibians	Endangered	No
Devils river minnow (<i>Dionda diaboli</i>)	Fishes	Threatened	No
Fountain darter (<i>Etheostoma fonticola</i>)	Fishes	Endangered	No
Mexican blindcat (catfish) (<i>Prietella phreatophila</i>)	Fishes	Endangered	No
Rio Grande silvery minnow (<i>Hybognathus amarus</i>)	Fishes	Experimental Population, Non-Essential	No
Texas hornshell (<i>Popenaias popeii</i>)	Clams	Endangered	No
Monarch butterfly (<i>Danaus plexippus</i>)	Insects	Candidate	Yes
Texas snowbells (<i>Styrax platanifolius</i> ssp. <i>texanus</i>)	Plants	Endangered	No
Texas wild-rice (<i>Zizania texana</i>)	Plants	Endangered	No
Tobush fishhook cactus (<i>Danaus plexippus</i>)	Plants	Threatened	No

Source: USFWS IPaC

**Table 3-6
State-Listed Species with the Potential to Occur Within the Vicinity of Laughlin AFB**

Species	Type	State Status	Known to Occur on Laughlin AFB
White-faced ibis (<i>Plegadis chihi</i>)	Bird	Threatened	Potential Migratory
Common black hawk (<i>Buteogallus anthracinus</i>)	Bird	Threatened	Potential Migratory
Zone-tailed hawk (<i>Buteo albonotatus</i>)	Bird	Threatened	Potential Migratory
Gray hawk (<i>Buteo plagiatus</i>)	Bird	Threatened	Potential Migratory
American peregrine falcon (<i>Falco peregrinus anatum</i>)	Bird	Threatened	Potential Migratory
Tropical parula (<i>Setophaga pitiayumi</i>)	Bird	Threatened	Potential Migratory
Texas tortoise (<i>Gopherus berlandieri</i>)	Reptile	Threatened	Yes
Texas horned lizard (<i>Phrynosoma cornutum</i>)	Reptile	Threatened	Yes

Source: TPWD, 2022b

One Texas tortoise was observed on Laughlin AFB in 2021 after several years of surveys. This state-listed species prefers open brush with a grass understory, typically avoiding open grass and bare ground. Individuals are active in hot weather, during which they usually rest in a shallow depression at the base of a bush or cactus or sometimes in underground burrows or under objects (Conant and Collins, 1998). The Texas tortoise's diet is mainly grass and the pads, flowers, and fruits of prickly pear, but other vegetation is consumed as well. Individuals can live for more than 50 years. Dispersal distances of more than 10 kilometers have been recorded for the species, so migrants from populations in the area around Laughlin AFB could explain the infrequent observations.

The Tamaulipan spot-tailed earless lizard (*Holbrookia subcaudalis*) has been observed during multiple surveys on Laughlin AFB. The TPWD considers this lizard a species of concern (as opposed to threatened) and is promoting its conservation. A population of the spot-tailed earless lizard is known to be located on and around the Laughlin AFB airfield, which appears to provide optimal habitat of open, compacted, flat areas free of vegetation and other obstructions. The frequently mowed, disturbed, compacted airfield appears to be ideal habitat for this species.

The Rio Grande cooter (*Pseudemys gorzugi*) is a relatively large, riverine turtle, and is a species of greatest conservation need in Texas. Habitat for this species consists of deep, clear pools in rivers, and is restricted to the Rio Grande watershed. One Rio Grande cooter was observed within the wastewater treatment ponds

at the south end of Laughlin AFB as well as 5 miles away in San Felipe Creek. The species is likely declining because of habitat loss and alteration, as well as collection for the pet trade.

Previous reports have identified two globally rare plant species at Laughlin AFB (TPWD, 1995; TNC, 1999): long-stalk heimia (*Ammannia grayi*) and Texas trumpets (*Acleisanthes crassifolia*). These species are not federally or state-listed, and therefore are not protected by the ESA or state regulations; however, the USFWS and the TPWD encourage conservation of these species. Protection of such species may reduce the likelihood of their future listing. Populations of Texas trumpets are generally located in open, low shrublands on shallow, well-drained, calcareous gravelly loams over caliche on gentle-to-moderate slopes, often in sparsely vegetated openings in cenizo shrublands (Poole et al., 2007). Six Texas trumpets plants were observed on Laughlin AFB in a small, less-than-50-foot-diameter, brush-covered slope in an undeveloped area near the western perimeter fence (TNC, 1999). Additional shrubs of this plant may be present in similar habitat elsewhere on the Base. The long-stalk heimia is a globally imperiled species ranging from south-central Texas into northeast Mexico. This species requires moist or sub-irrigated alkaline or gypsiferous clayey soils along unshaded margins of wetlands (Poole et al., 2007). Long-stalk heimia is dependent upon seeps or springs, a habitat that is very rare in this arid landscape. Several populations of long-stalk heimia were identified on Laughlin AFB in 1993 and 1994 (TPWD, 1995) and in 1997 (TNC, 1999). These populations were found in the moist soils along Sacatosa Creek and along an unnamed drainage near the Installation's southern boundary.

Migratory bird species protected under the federal MBTA likely occur in the undeveloped areas surrounding the Base. However, the developed areas of the ROI have been fragmented into small habitat patches, decreasing the quality of habitat available to migratory birds. As summarized in **Tables 3-5** and **3-6**, three federally listed and six state-listed avian species have the potential to occur in Val Verde County, although none has been observed on Laughlin AFB: the Golden-cheeked Warbler (F), piping plover (F), red knot (F), white-faced ibis (S), common black hawk (S), gray hawk (S), tropical parula (S), American peregrine falcon (S), and zone-tailed hawk (S).

3.5.2.4 Aquatic Resources

Aquatic resources are limited on Laughlin AFB but include riverine scrub-shrub wetlands occurring along Zorro Creek northwest of the ROI and unnamed tributaries of Sacatosa Creek southeast of the ROI (see **Figure 3-2**). The wastewater treatment ponds near the southern Base boundary provide habitat to water birds and aquatic-adapted reptiles and amphibians.

3.5.2.5 Invasive Species

A significant challenge for Laughlin AFB in wetland and floodplain habitat is the ongoing expansion of salt cedar (*Tamarix* spp.). Salt cedar occurs in several areas across the Base, and in some sites its spread is aided by inappropriately managed drainage, which is allowing wetlands to form and persist on sites that would otherwise be vegetated by upland species. In 2014, Laughlin AFB began an aggressive control effort with the goal of eradicating salt cedar from the Base. Formal wetland delineation of the areas of proposed salt cedar removal was completed in October 2014 to ensure compliance with CWA regulations and to guide the eradication effort (Laughlin AFB, 2016a). Control efforts up to the 2021 treatments had reduced the salt cedar population by 69 percent, with the remaining infestations composed primarily of seedling and sapling individuals.

3.5.3 Environmental Consequences

3.5.3.1 Evaluation Criteria

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

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

- sensitivity of the resource to the proposed activities; and
- duration of potential ecological impact.

Adverse impacts on biological resources would occur if the Proposed Action or Alternatives negatively affect species or habitats of high concern over relatively large areas or if estimated disturbances cause reductions in population size or distribution of a species of high concern.

As a requirement under the ESA, federal agencies must provide documentation that ensures that the agency's proposed actions would not adversely affect the existence of any threatened or endangered species. The ESA requires that all federal agencies avoid "taking" federally threatened or endangered species (which includes jeopardizing threatened or endangered species habitat). Section 7 of the ESA establishes a consultation process with USFWS that ends with either a "No Effect" determination by the federal agency or a biological opinion from the USFWS that the Proposed Action either would or would not jeopardize the continual existence of a species.

3.5.3.2 Alternative 1

Vegetation

The areas designated for proposed project activities under Alternative 1 are mostly highly disturbed or developed. Site 4A, the proposed pre-K–6 school property under Alternative 1, is partly undisturbed and would have the potential to impact approximately 2 to 3 acres of native vegetation. Due to the lack of intact native vegetation in the areas proposed for development under Alternative 1 and the minimal vegetation clearing associated with construction and demolition activities that would occur under Alternative 1, no significant impacts to vegetation would be anticipated to occur.

Wildlife

There is limited suitable habitat for wildlife in the areas on Laughlin AFB within the proposed project locations under Alternative 1. The developed portion of Laughlin AFB, in which the projects proposed under Alternative 1 would be located, supports relatively common wildlife species such as small mammals. Bats have the potential to roost on some buildings scheduled for demolition under Alternative 1; buildings would be checked for roosting bats prior to demolition. The bat maternity season is generally from early May through mid- to late-August. Wildlife, especially avian species, utilizing small, undeveloped areas between buildings for foraging and breeding would normally be sensitive to increased noise impacts from military aircraft. However, operations have been ongoing at Laughlin AFB for decades and are now part of the natural noise environment. The noise and movement temporarily caused by construction and demolition activities would have negligible, short-term impacts on wildlife.

Threatened or Endangered Species and Other Protected Species

No federally listed threatened or endangered species have been observed on Laughlin AFB, nor does critical habitat exist within Laughlin AFB. Water use associated with new buildings would be partially offset by demolition of older buildings and would have no measurable effect on the amount of water supplied by the City of Del Rio to Laughlin AFB and sourced from the San Felipe River. Therefore, Alternative 1 would not affect any of the protected species in the San Felipe Creek. The Air Force has determined that the proposed projects under Alternative 1 would have "No Effect" on federally listed threatened or endangered species. In addition, no impacts to bald or golden eagles would be expected because suitable habitat for these species does not exist on Laughlin AFB. Migratory birds would have the potential to nest in buildings proposed for demolition; however, all project areas would be checked for nesting birds prior to construction and demolition activities. The Texas horned lizard, a state-protected species, could potentially be present on Site 4A, which is proposed for the pre-K–6 school, and potentially in the vicinity of the Family Camp expansion (3). No rare or listed plant species are known to be within the ROI. The nearest rare plant population is the Texas trumpets, approximately 4,000 feet to the southwest of the ROI.

Aquatic Resources

Aquatic resources would not be affected because the projects occur in upland sites on the Laughlin AFB ROI; therefore, no impacts to aquatic resources would be anticipated to occur under Alternative 1.

Invasive Species

None of the project sites under Alternative 1 contains poorly drained sites conducive to the establishment of salt cedar. Soil disturbance during construction would create potential sites for establishment of invasive species. However, most of these sites would be occupied by new buildings or hardscape (e.g., parking lots) and surrounded by maintained landscaping, thus preventing establishment of invasive species. BMPs, such as checking construction sites for presence of invasive plants, would be employed. If invasive plants are present, mechanical or chemical treatment of the plants, avoiding areas of invasive plants, and thoroughly cleaning and inspection of equipment and work clothing before moving off site would lessen the probability of spreading seeds throughout the Installation.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to biological resources would be anticipated to occur under implementation of Alternative 1.

3.5.3.3 Alternative 2

Vegetation

No significant long-term impacts to vegetation would be anticipated with implementation of Alternative 2. Alternative 2 would have a smaller construction footprint than Alternative 1 and the majority of the ROI is already semi-developed.

Wildlife

No significant long-term impacts to wildlife would be anticipated with implementation of Alternative 2. Alternative 2 would have a smaller construction footprint than Alternative 1, and the majority of the ROI is already developed.

Threatened or Endangered Species and Other Protected Species

No federally listed threatened or endangered species have been observed on Laughlin AFB, nor does critical habitat exist within Laughlin AFB. The Air Force has determined that the proposed projects under Alternative 2 would have “No Effect” on federally listed threatened or endangered species. In addition, no impacts to bald or golden eagles are expected because suitable habitat for these species does not exist on Laughlin AFB. Migratory birds would have the potential to nest in buildings proposed for demolition; however, all project areas would be checked for nesting birds prior to construction and demolition activities. The Texas horned lizard, a state-protected species, could potentially be present in the vicinity of the Family Camp expansion (3).

Aquatic Resources

Aquatic resources would not be affected because the projects occur in upland sites on the Laughlin AFB ROI; therefore, no impacts to aquatic resources would be anticipated to occur under Alternative 2.

Invasive Species

Potential establishment of invasive species under Alternative 2 would be similar to Alternative 1. Under Alternative 2, approximately 2 acres fewer of previously disturbed land would be developed.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to biological resources would be anticipated to occur under implementation of Alternative 2.

3.5.3.4 No Action Alternative

Under the No Action Alternative, the projects included in the Proposed Action would not occur. Biological resources at Laughlin AFB would remain in their current state, and no adverse effects would be expected.

3.6 CULTURAL RESOURCES

3.6.1 Definition of the Resource

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture or community for scientific, traditional, religious, or other purposes. These resources are protected and identified under several federal laws and EOs including the *Archaeological and Historic Preservation Act of 1960*, as amended ([54 USC § 300101](#) et seq.), the *American Indian Religious Freedom Act of 1978* ([42 USC § 1996](#)), the *Archaeological Resources Protection Act of 1979*, as amended ([16 USC §§ 470aa–470mm](#)), the *Native American Graves Protection and Repatriation Act of 1990* ([25 USC §§ 3001–3013](#)), the NHPA, as amended through 2016, and associated regulations ([36 CFR Part 800](#)). The NHPA requires federal agencies to consider effects of federal undertakings on historic properties prior to deciding or taking an action and integrate historic preservation values into their decision-making process. Federal agencies fulfill this requirement by completing the NHPA Section 106 consultation process, as set forth in 36 CFR Part 800. NHPA Section 106 also requires agencies to consult with federally recognized American Indian tribes with a vested interest in the undertaking. NHPA Section 106 requires all federal agencies to seek to avoid, minimize, or mitigate adverse effects to historic properties (36 CFR § 800.1[a]).

Cultural resources include the following subcategories:

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

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

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

Properties that are less than 50 years old can be considered eligible for the NRHP under criteria consideration G if they possess exceptional historical importance. Those properties must also retain historic integrity and meet at least one of the four NRHP criteria (Criteria A, B, C, or D). The term “historic property” refers to National Historic Landmarks, NRHP-listed, and NRHP-eligible cultural resources.

The ROI or Area of Potential Effect for cultural resources is the location of each proposed project and a 50-meter buffer around each site.

3.6.2 Existing Conditions

There is a sparse record of human occupation in the Val Verde County area during the period of initial contact with Euro-Americans, and Native American sites from the historic period may be difficult to identify (Laughlin AFB, 2017). In the 19th and into the 20th century, the region around Del Rio, Texas, had a history

of Mexican settlement and ranching and military presence. The land that would eventually become Laughlin AFB was part of the Zacatosa Ranch purchased by DoD in 1942 for use as an Air Training Base.

3.6.2.1 Archaeological Sites

Surveys to identify archaeological sites at Laughlin AFB were conducted in 1993, 1994, 1997, and 2021 (Laughlin AFB, 2017). Thirteen archaeological sites have been recorded on the Main Base of Laughlin AFB. Of these, four sites have been determined eligible for listing on the NRHP. Descriptions of these sites can be found in the Laughlin AFB *Integrated Cultural Resources Management Plan* (2017, Appendix B). All archaeological sites except one are located on the periphery of developed portion of the Base. Most of the sites are located along the east and southeast boundary of the Base in the vicinity of Sacatosa Creek. The Zacatosa Ranch area on the east side of the Base and sites near and along Sacatosa Creek have the greatest potential for undiscovered buried cultural resources.

The archaeological site located within the Community and Services District contained scattered fire-cracked rock and evidence of chipped stone debitage. However, the entire area was heavily disturbed by building and landscaping, and the survey report suggested that the surface deposits may have been brought in with fill material. The site is ineligible for listing on the NRHP.

3.6.2.2 Historic Architectural Properties

Five surveys or assessments have been conducted for historic structures on Laughlin AFB (Spude, 1996; Tennis et al., 1996; Kuehn and Dering, 1998; AETC, 2002 as cited in Laughlin AFB, 2017; Sennott et al., 2020). Laughlin AFB was occupied by the Zacatosa Creek Ranch prior to development as an Air Training Base. The former ranch building site was on the east side of the Base. The adobe ranch buildings no longer exist. Many of the Base buildings and structures were built during the Cold-War era in the 1950s and supported the U-2 spy plane mission. The AETC sponsored an inventory and assessment of 163 buildings on Laughlin AFB that dated to the Cold-War era (AETC, 2002 as cited in Laughlin AFB, 2017; Table 8-2). None of the buildings evaluated were recommended as eligible for listing on the NRHP. Many of the buildings were removed from consideration because the structures had been heavily remodeled, renovated to the extent that the original architectural integrity no longer existed, or did not have Cold-War era significance. In 2019, Argonne National Laboratory evaluated for historical significance 196 military operations and support facilities at Laughlin AFB that were built during and after the Cold-War era (Sennott et al., 2020). Many of these buildings had not been previously evaluated. However, the assessment did not identify any additional considerations for eligibility for listing on the NRHP.

3.6.2.3 Traditional Cultural Properties

TCPs may include traditionally used plants and animals, trails, and certain geographic areas. Types of resources that have been specifically identified in recent studies include, but are not limited to, rock art sites; “power” rocks and locations; medicine areas; and landscape features such as specific peaks or ranges, hot springs, meadows, valleys, and caves. No Native American cemeteries, burials, sacred sites, or areas considered a TCP have been identified during archaeological surveys at Laughlin AFB (Laughlin AFB, 2017).

3.6.3 Environmental Consequences

3.6.3.1 Evaluation Criteria

Adverse impacts on cultural resources would occur if the Proposed Action or Alternatives results in the following:

- physically altering, damaging, or destroying all or part of a resource;
- altering characteristics of the surrounding environment that contribute to the resource’s significance;

- introducing visual or audible elements that are out of character with the property or alter its setting;
- neglecting the resource to the extent that it deteriorates or is destroyed; or
- the sale, transfer, or lease of the property out of agency ownership (or control) without adequate enforceable restrictions or conditions to ensure preservation of the property's historic significance.

For the purposes of this EA, an impact is considered significant if it alters the integrity of a NRHP-listed, eligible, or potentially eligible resource or potentially impacts TCPs.

3.6.3.2 Alternative 1

Archaeological Sites

All construction, renovation, and ground-disturbing activity associated with the Proposed Action under Alternative 1 would occur in the Community and Services District and Training District. The four archaeological sites on Laughlin AFB considered eligible for listing on the NRHP do not occur near the projects in Alternative 1. The one archaeological site in the Community and Services District is not eligible for listing on the NRHP and would not be disturbed. The Proposed Action under Alternative 1 would be anticipated to have no effect on archaeological resources on Laughlin AFB.

Historic Architectural Properties

None of the buildings evaluated by Laughlin AFB for historical significance was determined to be eligible for listing on the NRHP. Under Alternative 1, B-348, B-472, and B-476 would be demolished, and B-255, B-390, and B-540 would be renovated. All six buildings were evaluated for eligibility for listing on the NRHP in 2002 (Laughlin AFB, 2017; Table 8-2). Because no buildings or structures on Laughlin AFB have been determined eligible for listing on the NRHP, the Proposed Action under Alternative 1 would be anticipated to have no effect on any building or structure of historical significance.

Traditional Cultural Properties

Because no Native American TCPs, cemeteries, burials, or sacred sites have been identified on Laughlin AFB, no impacts to these cultural resources would occur from implementation of the Proposed Action under Alternative 1. However, if an inadvertent discovery of Native American human remains occurs during any subsurface excavation during construction, all work activity would cease, and procedures outlined in the Laughlin AFB *Integrated Cultural Resources Management Plan* would be followed.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to cultural resources would be anticipated to occur under implementation of Alternative 1.

3.6.3.3 Alternative 2

Archaeological Sites

Alternative 2 differs from Alternative 1 with respect to which buildings would be constructed, demolished, or renovated and in the location of the proposed pre-K–6 school. However, the location of the Proposed Action under Alternative 2 is nearly the same as Alternative 1, and no archaeological sites would be affected. Alternative 2 would be anticipated to have no effect on archaeological sites.

Historic Architectural Properties

Under Alternative 2, B-348 would be demolished and B-255, B-390, B-472, and B-540 would be renovated. These buildings have been evaluated and determined not to be eligible for listing on the NRHP. The Proposed Action under Alternative 2 would be anticipated to have no effect on any buildings or structures of historical significance.

Traditional Cultural Properties

Impacts to TCPs under Alternative 2 would be the same as under Alternative 1. No impacts to TCPs, cemeteries, burials, or sacred sites would occur. However, if an inadvertent discovery of Native American human remains occurs during any subsurface excavation during construction, all work activity would cease,

and procedures outlined in the Laughlin AFB *Integrated Cultural Resources Management Plan* would be followed.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to cultural resources would be anticipated to occur under implementation of Alternative 2.

3.6.3.4 No Action Alternative

Under the No Action Alternative, the projects included in the Proposed Action would not occur. Cultural resources at Laughlin AFB would remain in their current state, and no adverse effects would be expected.

3.7 INFRASTRUCTURE, TRANSPORTATION, AND UTILITIES

3.7.1 Definition of the Resource

Infrastructure consists of systems and structures that enable a population in a specified area to function. Infrastructure is wholly man-made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as developed. The availability of infrastructure and its capacity to support more users, including residential and commercial expansion, are generally regarded as essential to the economic growth of an area.

Infrastructure includes utilities, solid waste management, sanitary and storm sewers, and transportation. Utilities include electrical, natural gas, potable water supply, sanitary sewage/wastewater, and communications systems. Solid waste management primarily relates to the availability of landfills to support a population's residential, commercial, and industrial needs. Sanitary and storm sewers (also considered utilities) include systems that collect, move, treat, and discharge liquid waste and stormwater. Transportation is the system of roadways, highways, and transit services in the vicinity of the Installation that potentially could be affected by a proposed action.

The ROI for this resource is Laughlin AFB and the adjacent traffic infrastructure that provides access to the Base.

3.7.2 Existing Conditions

3.7.2.1 Transportation

The location of Laughlin AFB and the city of Del Rio provides access to the international border with Mexico, the city of San Antonio, and the neighboring state of New Mexico. Anticipated future growth and development have prompted the need for planned transportation improvements. A Ports-to-Plains corridor connects Canada to Mexico via Highway 90 through Texas, New Mexico, Oklahoma, and Colorado, passing west of Laughlin AFB (URS, 2014).

A traffic volume sample in December 2021 showed a daily average of approximately 2,200 entries through the security gates (Laughlin AFB, 2021c). Two gates provide Base access: the North Gate and the West Gate. The North Gate is accessed via Highway 90 from the north end of the Base. While there is a 1,000-foot turnout access to support heavy gate traffic, the gate is often congested with minimal room for queued vehicles waiting to enter the Base. In addition to congestion, traffic entering the North Gate requires patrons to cross an active railroad track, posing safety concerns. The West Gate is now the primary access to the Base, with the North Gate used only for emergencies and special events. New construction between the West Gate and Loop 79 has mitigated safety and congestion concerns (URS, 2014). The West Gate routes traffic through the traffic circle near the golf course and distributes traffic to three primary streets, reducing congestion for traffic entering the Base.

On Base, the road system provides access to most areas of the Installation within approximately 15 minutes. Laughlin AFB contains 60 miles of road systems with 25 miles of paved asphalt. The remaining 35 miles are unpaved gravel or dirt. Primary north/south streets include Second Street, Liberty Drive, and

Fourth Street, while the primary east/west routes include Laughlin Drive, Mitchell Boulevard, and Arnold Boulevard (URS, 2014). A Base-wide push for greater pedestrian access and ease of alternate modes of transportation has prompted a focus on centralizing the Base's common infrastructure and increasing pedestrian access between buildings.

The current transportation system on Base is adequate to meet the needs of personnel and visitors, but increased growth, reorganization of infrastructure, gate access, and pedestrian needs have strained the overall traffic system at Laughlin AFB (URS, 2014).

3.7.2.2 Electricity and Natural Gas

Laughlin AFB receives natural gas from West Texas Gas Company via a 6-inch-diameter, high-pressure, steel pipeline. This pipeline is routed through the southwestern portion of the Base and is odorized in B-497. Roughly 90 percent of the natural gas lines have been replaced and updated in recent years. Current gas lines are sufficient for current demands, as well as future growth, though not all buildings are properly metered for natural gas consumption. Pressure is maintained at 19 pounds per square inch in the winter and 16 pounds per square inch in the summer. Most facilities at Laughlin AFB use natural gas to heat their water supply, though several buildings use electricity for heating the facility and water (URS, 2014).

Electrical distribution is provided by Champion and distributed via the Rio Grande Electric Cooperative. The region is prone to electrical disturbances due to weather conditions and animal or human interference. Beginning in 2012, Laughlin AFB implemented a "Pole Away" program, which seeks to move power lines from above-ground to below-ground. Currently, the Base is on a looped distribution system with a primary voltage of 7,200/12,480 volts. Roughly 35 back-up generators are available on Base for emergency use with capacity ranging from 15 kilovolt-amperes to 350 kilovolt-amperes.

3.7.2.3 Potable Water Supply

Laughlin AFB purchases its potable water from the City of Del Rio. The region supplies water locally from the San Felipe Spring via the Edwards Aquifer (Laughlin AFB, 2021a). While the pump station is owned by the City of Del Rio, Laughlin AFB maintains two feeder line pumps on San Felipe Springs. This water is pumped at a rate of 2,100 gallons per minute, with a backup capacity of 5,000 gallons per minute. Laughlin AFB stores its water supply on Base in a 1,000,000-gallon-capacity ground storage tank that pumps to two storage towers with 100,000-gallon and 300,000-gallon storage capacity (Laughlin AFB, 2021a). The Base-wide water distribution system is in poor condition, resulting in the loss of 20 percent of its water supply due to leaks. These issues, along with dead-end pipes and lack of proper and reliable water pressure, leaves Laughlin AFB with insufficient water supply to meet the needs of the overall mission, supply requirements, emergency use, and irrigation (URS, 2014).

3.7.2.4 Sanitary Sewer

A review of the sanitary sewer system during the development of the Laughlin AFB IDP documented no system inefficiencies (URS, 2014). However, current investigations into groundwater nitrate sources may indicate one location of leaking sanitary sewer lines on the Base. The sanitary sewer system on Base is a facultative lagoon process with two of the three ponds currently used (Laughlin AFB, 2020c). No septic systems are located on Laughlin AFB and use of effluent for irrigation is being considered. The sanitary sewer system is equipped to manage current and future mission requirements of the Base; however, the ponds attract birds near the flightline, providing an increased bird aircraft strike hazard risk (URS, 2014).

3.7.2.5 Solid Waste

Solid waste at Laughlin AFB is managed in accordance with the *Integrated Solid Waste Management Plan* (Laughlin AFB, 2020d). Laughlin AFB solid waste, including municipal solid waste, is transported to the Del Rio City Landfill. The Del Rio City Landfill meets requirements of the Base. Laughlin AFB diverts recyclable materials to the on-Base Laughlin Recycling Center, reducing solid waste impacts to the landfill (Laughlin AFB, 2020d).

3.7.2.6 Liquid-Fuel Storage

Liquid-fuel capacity at Laughlin AFB has been determined adequate to meet the needs of the Installation. Liquid fuel is stored and utilized on Base in the form of fuel storage facilities (fuel farm), pipelines, fueling stations, and fueling equipment.

Jet-A fuel is stored in three above-ground storage tanks (ASTs), is delivered to the flightline via 6,000-gallon refueling trucks and supplies the existing fueling stations. Two of the ASTs have a 10,000-barrel capacity, and the third has a 15,000-barrel capacity. The current liquid-fuel system is in good condition, though anti-terrorism/force protection safety concerns remain (URS, 2014). The existing vehicle fueling station is located on the north end of the Base and does not align with the West Gate, the primary access gate. The fueling station is supplied by three ASTs.

3.7.3 Environmental Consequences

3.7.3.1 Evaluation Criteria

Impacts to infrastructure from the Proposed Action or Alternatives are evaluated for their potential to disrupt or improve existing levels of service, increase energy or water consumption, and exceed the capacity of sanitary sewer and solid waste management systems.

Adverse transportation impacts would occur if the Proposed Action or Alternatives creates a substantial increase in traffic that would cause a decrease in the level of service, a substantial increase in the use of the street systems or mass transit, or if on-Base parking needs could not be met. Adverse impacts to utilities/services would occur if the Proposed Action or Alternatives creates a demand that exceeds the existing supply capacity or required services in conflict with adopted plans and policies for the area.

3.7.3.2 Alternative 1

Transportation

The improvement of approximately 2 miles of streets, including bike lanes and pedestrian walkways, and construction of new parking areas would benefit the movement of traffic, staff, and students on Base. The relocation of the fueling station to near the Main Exchange, a site more aligned with parking areas and the West Gate, would improve traffic flow. Short-term disruptions to traffic flows would be expected during construction activities around the Base. The new pre-K–6 school would remove traffic congestion from student drop-off and parking at the existing modular school on Mitchell Boulevard, one of three main access routes for traffic entering through the West Gate entrance.

Electricity and Natural Gas

The capacity of the electric and natural gas systems is sufficient for future growth and mission requirements. No adverse, long-term impacts to the electric and natural gas systems would be expected under Alternative 1.

Potable Water Supply

The current capacity of the potable water supply has limitations for future growth and mission requirements because of the condition of the water distribution system. The Proposed Action under Alternative 1 would add 90,541 ft² of new building space and 52,859 ft² of new useable space with the renovation of Ricks Hall. These buildings may increase future water demand but would also improve the water distribution system by adding new distribution lines during construction. However, the existing inefficiencies of the water supply system at Laughlin AFB would remain.

Sanitary Sewer

The capacity of the sewer system is sufficient for future growth and mission requirements. However, with the addition of new construction and demolition of older buildings, sewer lines and systems would be improved and upgraded. Beneficial impacts to the sewer system through facility upgrades would be expected under Alternative 1.

Solid Waste

The solid waste system is sufficient for future growth and mission requirements, including disposal of the solid waste from construction of new buildings, demolition of old buildings, and renovation of existing buildings. **Table 3-7** provides estimates of solid waste generated from new construction, demolition of older buildings, and renovation of existing buildings. Approximately 4,175 tons of solid waste would be generated under Alternative 1 from all projects. The amount of solid waste that would be disposed of in landfills would depend on the percentage of materials that could be recovered and diverted from disposal. No long-term, adverse impacts to the current capacity of the solid waste system would be expected under Alternative 1.

Table 3-7
Estimates^a of Solid Waste from the Proposed Action

Activity	Square Footage	Waste Generated (pounds per square foot)	Alternatives	Waste Generated: Pounds	Waste Generated: Tons
New Construction	144,392	4.34	1	626,661	313
Demolition	41,653	158	1	6,581,174	3,291
Renovation	96,958	11.79	1	1,143,135	572
New Construction	73,805	4.34	2	320,314	160
Demolition	10,870	158	2	1,717,460	859
Renovation	118,592	11.79	2	1,398,200	699

Source: USEPA 2009

Note:

Totals: Alternative 1 is 8,350,970 pounds, 4,175 tons; Alternative 2 is 3,435,973 pounds, 1,718 tons

a. These estimates assume no recovery of materials and diversion from landfills.

Liquid-Fuel Storage

Moving of the vehicle fueling station to align with the West Gate under Alternative 1 would provide a beneficial impact to the overall system on Base by centralizing the fueling station. Additionally, the existing ASTs would be replaced by a below-ground storage tank and would reduce anti-terrorism/force protection safety concerns. The current capacity is sufficient for current mission requirements; however, with improvements, the fuel system would be expected to provide increased efficiencies and better service for Laughlin AFB staff. Long-term, beneficial impacts would be expected to occur under Alternative 1.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to infrastructure, transportation, and utilities would be anticipated to occur under implementation of Alternative 1.

3.7.3.3 Alternative 2

The Proposed Action under Alternative 2 would differ from Alternative 1 primarily in which new buildings would be constructed or renovated and the location of the new pre-K–6 school. Under Alternative 2, the pre-K–6 school would be constructed on Site 4B surrounding the running track. Although this site is not located on a primary Base access route, the streets surrounding Site 4B are used as arterial access routes for Base traffic in the Community and Services District. Traffic on these streets would be more than traffic on streets near Site 4A (the proposed location for the pre-K–6 school under Alternative 1), which is located off of Bowling Street. The amount of new building and useable renovated space would be 27,605 ft² less than Alternative 1. Approximately 1,718 tons of solid waste would be generated under Alternative 2 from all projects (see **Table 3-7**). The amount of solid waste that would be disposed of in landfills would depend on the percentage of materials that could be recovered and diverted from disposal. The potential impacts to infrastructure and utilities are expected to be the same as those described for Alternative 1 except the amount of solid waste that would be generated would be less under Alternative 2.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to infrastructure, transportation, and utilities would be anticipated to occur under implementation of Alternative 2.

No Action Alternative

Under the No Action Alternative, road improvements would not occur, a new fueling station would not be constructed, and a new school would not replace the current modular units. The traffic near the existing school would continue to be congested during the morning and afternoon. Additional strain on the potable water supply would not occur, and new water distribution lines associated with new construction would not be installed.

3.8 NOISE

3.8.1 Definition of the Resource

Noise is undesirable or unwanted sound that interferes with verbal communication and hearing. Sound pressure level, described in decibels, is used to quantify sound intensity. Sound level measurements used to characterize sound levels sensed by the human ear are designated “A-weighted” decibels (dBA).

The *Noise Control Act of 1972* ([Public Law 92-574](#)) directs federal agencies to comply with applicable federal, state, and local noise control regulations. In 1974, the USEPA provided information suggesting continuous and long-term noise levels greater than 65 dBA are normally unacceptable for noise-sensitive receptors such as residences, schools, churches, and hospitals.

The ROI for noise is the project locations in the Community and Services District and Training District on Laughlin AFB.









3.8.2 Existing Conditions

As is normal for military installations with a flying mission, the primary driver of noise at Laughlin AFB is aircraft operations. Typical ambient sound levels on the Base have been previously modeled for a noise effects assessment as part of the Installation’s Installation Compatibility Use Zone (Laughlin AFB, 2012). Modeling results for this assessment indicate that existing Day-Night Sound Levels (DNLs) range from 60 dBA DNL to 75 dBA across Laughlin AFB (**Figure 3-3**). Ambient noise levels from aircraft operations at the proposed project locations are in the range of 60 to 70 dBA.

In addition to aviation noise, other noise is generated from the day-to-day activities from operations, maintenance, and the industrial functions associated with airfield operations. These noise sources include ground-support equipment and vehicular transportation. Noise from aircraft operations remains the dominant noise source. Sensitive noise receptors such as the existing pre-K–5 school and residential areas that could potentially be exposed to noise from Installation activities are proximate to the southeastern and eastern portions of the Installation. All Laughlin AFB housing and community functions are located along the western and southern side of the Base. No off-Base sensitive receptors are within the ROI for the Proposed Action or Alternatives.

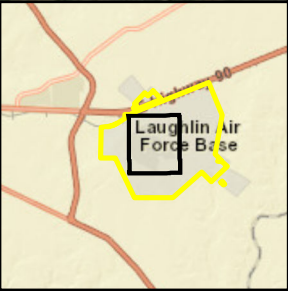


FIGURE 3-3
NOISE
CONTOURS

- | | | | |
|---|----------------|---|-------------|
|  | Construction |  | 65 Decibels |
|  | Demolition |  | 70 Decibels |
|  | Renovation |  | 75 Decibels |
|  | Linear Project |  | Road |

N
Imagery: ESRI 2021
Projection: WGS 1984
Zone 14N

0 325 650 Feet



3.8.3 Environmental Consequences

3.8.3.1 Evaluation Criteria

When evaluating noise effects, several aspects are examined:

- the degree to which noise levels generated by training and operations, as well as construction, demolition, and renovation activities, would be higher than the ambient noise levels;
- the degree to which there would be hearing loss and/or annoyance; and
- the proximity of noise-sensitive receptors (e.g., residences, schools, hospitals, parks) to the noise source.

An environmental analysis of noise includes the potential effects on the local population and estimates the extent and magnitude of the noise generated by the Proposed Action and Alternatives.

3.8.3.2 Alternative 1

Proposed projects under Alternative 1 would include construction and demolition activities that would occur entirely within the boundaries of Laughlin AFB. The affected environment for noise effects from the Proposed Action and Alternatives and ongoing operations is focused within 0.5 mile to 1 mile of the proposed projects.

Noise modeling results indicate that existing DNLs range from 60 dBA DNL to 70 dBA across Laughlin AFB and within the vicinities of the proposed projects (Laughlin AFB, 2012). Under Alternative 1, the pre-K–6 school would be constructed on Project Site 4A (see **Figure 3-3**). Site A was determined to be the preferred location for the new school based on the screening criteria (**Table 2-6**). Existing noise levels at Site A are estimated to be less than 65 dBA (Laughlin AFB, 2012).

Noise associated with the operation of construction equipment is generally short term, intermittent, and localized, with the loudest machinery typically producing peak sound pressure levels ranging from 86 to 95 dBA at a 50-foot distance from the source (**Table 3-8**). Several projects, such as the Event Center, new CDC, and the pre-K–6 school would be near the Base residential areas and would cause short-term noise impacts during daylight hours during building construction.

**Table 3-8
Peak Sound Pressure Level of Construction Equipment from 50 Feet**

Equipment	Sound Pressure Level (dBA)
Bulldozer	95
Scraper	94
Front Loader	94
Backhoe	92
Grader	91
Crane	86

Source: Reagan and Grant, 1977
dBA = A-weighted decibel

However, construction noise does not typically generate a predicted noise exposure of 65 dBA DNL or greater even at extremely high rates of operation because the equipment itself does not generate noise that would produce a 65-dBA DNL when averaged over a year. Additionally, adherence to standard Air Force Occupational Safety and Health regulations that require hearing protection along with other personal protective equipment and safety training would minimize the risk of hearing loss to construction workers. Therefore, noise associated with construction and demolition projects proposed under Alternative 1 would not cause any significant direct or indirect impacts on noise-sensitive receptors. There would be no operational increases in noise resulting from implementation of Alternative 1.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to the noise environment would be anticipated to occur under implementation of Alternative 1.

3.8.3.3 Alternative 2

Proposed projects under Alternative 2 would include construction and demolition activities that would occur entirely within the boundaries of Laughlin AFB. Under Alternative 2, the pre-K–6 school would be constructed on Site B. Site B is located northwest of the Laughlin AFB running track between Patterson Street and 6th Street in the northwest part of the Base (see **Figure 3-3**). Existing noise levels at Site B are estimated to be less than 65 dBA (Laughlin AFB, 2012).

As for Alternative 1, noise associated with construction and demolition projects proposed under Alternative 2 would not be expected to cause any significant direct or indirect impacts on noise-sensitive receptors. However, as described for Alternative 1, several projects would create short-term noise impacts to adjacent residents during construction. Similar to Alternative 1, there would be no operational increases in noise resulting from implementation of Alternative 2.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to the noise environment would be anticipated to occur under implementation of Alternative 2.

3.8.3.4 No Action Alternative

Under the No Action Alternative, the projects included in the Proposed Action would not occur. Noise on Laughlin AFB would not change from current conditions, and no significant impacts on noise-sensitive receptors would occur.

3.9 HAZARDOUS MATERIALS AND WASTES

The definition of “hazardous materials and waste” depends on regulatory context. That is, the criteria used to define the terms are often specific to an activity or location (e.g., commerce [49 CFR § 171.8], energy [49 CFR § 171.8], and federal facilities [40 CFR Part 262]). Generally, hazardous materials and wastes are materials and substances determined to present risks to human health, safety, or the environment when they occur above certain concentrations or undergo a physical or chemical change. Exposure to such materials may also harm ecosystems, including plants, animals, soil, water, and other natural resources. Localized environmental conditions may affect the extent of contamination from, or exposure to, hazardous materials and wastes.

3.9.1 Definition of the Resource

CERCLA, as amended by the *Superfund Amendments and Reauthorization Act (SARA)* and TSCA (as implemented by [40 CFR Part 761](#)), defines hazardous materials (HAZMAT) as any substance with physical properties of ignitability, corrosivity, reactivity, or toxicity that might cause an increase in mortality, serious irreversible illness, and incapacitating reversible illness, or that might pose a substantial threat to human health or the environment. The Occupational Safety and Health Administration (OSHA) is responsible for the enforcement and implementation of federal laws and regulations pertaining to worker health and safety under [29 CFR Part 1910](#). OSHA also includes the regulation of HAZMAT in the workplace and ensures appropriate training in their handling.

The *Solid Waste Disposal Act*, as amended by RCRA, which was further amended by the *Hazardous and Solid Waste Amendments of 1984* ([Public Law 98-616](#)), defines hazardous wastes as any solid, liquid, contained gaseous, or semi-solid waste, or any combination of wastes, that pose a substantial present or potential hazard to human health or the environment. In general, both HAZMAT and hazardous wastes include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, might present substantial danger to public health and welfare or the environment when released or otherwise improperly managed.

Air Force Policy Directive 32-70, *Environmental Considerations in Air Force Programs and Activities*, establishes the policy that the Air Force is committed to performing the following actions:

- cleaning up environmental damage resulting from its past activities,
- meeting all environmental standards applicable to its present operations,
- planning its future activities to minimize environmental impacts,
- responsibly managing the irreplaceable natural and cultural resources it holds in public trust, and
- eliminating pollution from its activities wherever possible.

AFMAN 32-1067, *Water and Fuel Systems*, identifies compliance requirements for underground storage tanks (USTs) and ASTs, and associated piping, that store petroleum products and hazardous substances. Evaluation of HAZMAT and hazardous wastes focuses on USTs and ASTs as well as the storage, transport, and use of pesticides, fuels, oils, and lubricants. Evaluation might also extend to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site of a Proposed Action. In addition to being a threat to humans, the improper release of HAZMAT and hazardous wastes can threaten the health and well-being of wildlife species, botanical habitats, soil systems, and water resources. In the event of HAZMAT or hazardous waste release, the extent of contamination will vary based on the type of soil, topography, weather conditions, and water resources that occur in the vicinity of the event.

AFMAN 32-7002, *Environmental Compliance and Pollution Prevention*, establishes procedures and standards that govern management of HAZMAT throughout the Air Force. AFMAN 32-7002 applies to all Air Force personnel who authorize, procure, issue, use, or dispose of HAZMAT, and to those who manage, monitor, or track any associated activities. Toxic substances might pose a risk to human health but are not regulated as contaminants under the hazardous waste statutes. Included in this category are asbestos-containing materials (ACM), lead-based paint (LBP), radon, polychlorinated biphenyls (PCBs), and per- and polyfluoroalkyl substances (PFAS). A proposed activity may affect and be affected by the presence of special hazards or controls over them. Information on special hazards describing their locations, quantities, and condition assists in determining the significance of such activity.

Section 311 of the CWA, as amended by the *Oil Pollution Act* ([Public Law 101-380](#)), establishes requirements to prevent, prepare for, and respond to oil discharges at specific types of facilities, including military bases. The intent is to prevent oil from reaching navigable waters and adjoining shorelines, and to contain discharges of oil. To do so, facilities are required to develop and implement spill prevention, control, and countermeasure (SPCC) plans to establish procedures, methods, and equipment requirements for response and cleanup actions (Subparts A, B, and C).

Through the Environmental Restoration Program (ERP) initiated in 1980, a subcomponent of the Defense ERP that became law under SARA, each DoD installation is required to identify, investigate, and clean up hazardous waste disposal or release sites. Remedial activities for ERP sites follow the Hazardous and Solid Waste Amendments under the RCRA Corrective Action Program. The ERP provides a uniform, thorough methodology to evaluate past disposal sites, control the migration of contaminants, minimize potential hazards to human health and the environment, and clean up contamination through a series of stages until it is decided that no further remedial action is warranted.

Also contained within the ERP is the Military Munitions Response Program (MMRP). The MMRP was established by the DoD in 2001 to address munitions-related concerns from releases of unexploded ordnance (UXO), discarded military munitions, and munitions constituents. The MMRP addresses non-operational range lands with suspected or known hazards that occurred before 2002 but that are not already included within installation-level cleanup activities in accordance with respective Installation Restoration Programs (IRPs).

The ROI for potential HAZMAT and hazardous wastes effects is Laughlin AFB.

3.9.2 Existing Conditions

3.9.2.1 Hazardous Materials and Wastes

RCRA establishes the mandatory procedures and requirements for federal facilities that use, accumulate, transport, treat, store, or dispose of HAZMAT. Under RCRA, USEPA can grant authority to a state to establish and enforce its own hazardous waste management program, provided the state's requirements are no less stringent than the USEPA's (USEPA, 2022a). In Texas, the TCEQ implements the RCRA program.

Laughlin AFB is classified as a large-quantity generator of hazardous waste (RCRA Site ID TX2571524105). Aircraft operations, maintenance, and related industrial activities are the primary source of HAZMAT generated at the Base. Examples of hazardous substances in use at Laughlin AFB include flammable and combustible liquids, acids, corrosives, caustics, anti-icing chemicals, compressed gases, solvents, paints, paint thinners, and pesticides. Laughlin AFB maintains a hazardous waste management plan (HWMP) for operations that involve handling, storage, transportation, and disposal of hazardous waste (Laughlin AFB, 2020e). The HWMP also serves to document the processes and procedures for HAZMAT and hazardous waste management at the Installation, as required to remain in compliance with RCRA.

3.9.2.2 Asbestos, Lead-Based Paint, and Polychlorinated Biphenyls

Building and structures may contain HAZMAT, such as ACMs, PCB-containing equipment or materials, and LBP. Laughlin AFB maintains management plans for these types of HAZMAT to comply with applicable federal and state laws and regulations (Laughlin AFB, 2019).

3.9.2.3 Radon

Val Verde County is located within Radon Zone 3 (USEPA, 2022b). This zone has predicted average indoor radon screening levels of less than 2 picocuries per liter (USEPA, 2019). Due to the low probability of radon levels exceeding the USEPA's guidance level of 4 picocuries per liter (USEPA, 2022c), radon is not further evaluated herein.

3.9.2.4 Per- and Polyfluoroalkyl Substances and Aqueous Film Forming Foam

PFAS are a group of man-made chemicals that are employed in a wide variety of residential, commercial, and industrial uses and can be found in everyday items such as nonstick cookware, stain-resistant fabric and carpet, certain types of food packaging, and firefighting foam (AFCEC, n.d.). In 2016, USEPA announced advisory levels for two types of PFAS in drinking water: perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA).

The USEPA has not yet enacted specific regulatory standards for PFAS. However, continued research shows that there are potential human health risks associated with these substances, and regulatory standards are being considered (AFCEC, n.d.). Aqueous film forming foam (AFFF), which the Air Force began to use in the 1970s to extinguish petroleum-based fires, contains both PFOS and PFOA. In August of 2016, the Air Force began phasing out PFOS-based AFFF and other AFFF products and introduced newer, more environmentally friendly formulas. In August of 2017, the Air Force finished the phase out and completed the new foam delivery (AFCEC, n.d.).

All Air Force investigation and mitigation work relating to PFOS and PFOA is done in accordance with CERCLA, applicable state laws, and the USEPA's lifetime drinking water health advisory of 70 parts per trillion (AFCEC, n.d.).

A preliminary assessment was conducted at Laughlin AFB in 2015 in accordance with CERCLA and SARA assessment procedures (HydroGeologic, 2016). A site inspection was conducted in 2018 that investigated three potential release areas of AFFF, 14 other sites that were previously identified were determined to not warrant further action (**Figure 3-4** and **Table 3-9**). All three sites were recommended for further investigation under a site investigation (Amec Foster Wheeler, 2018).

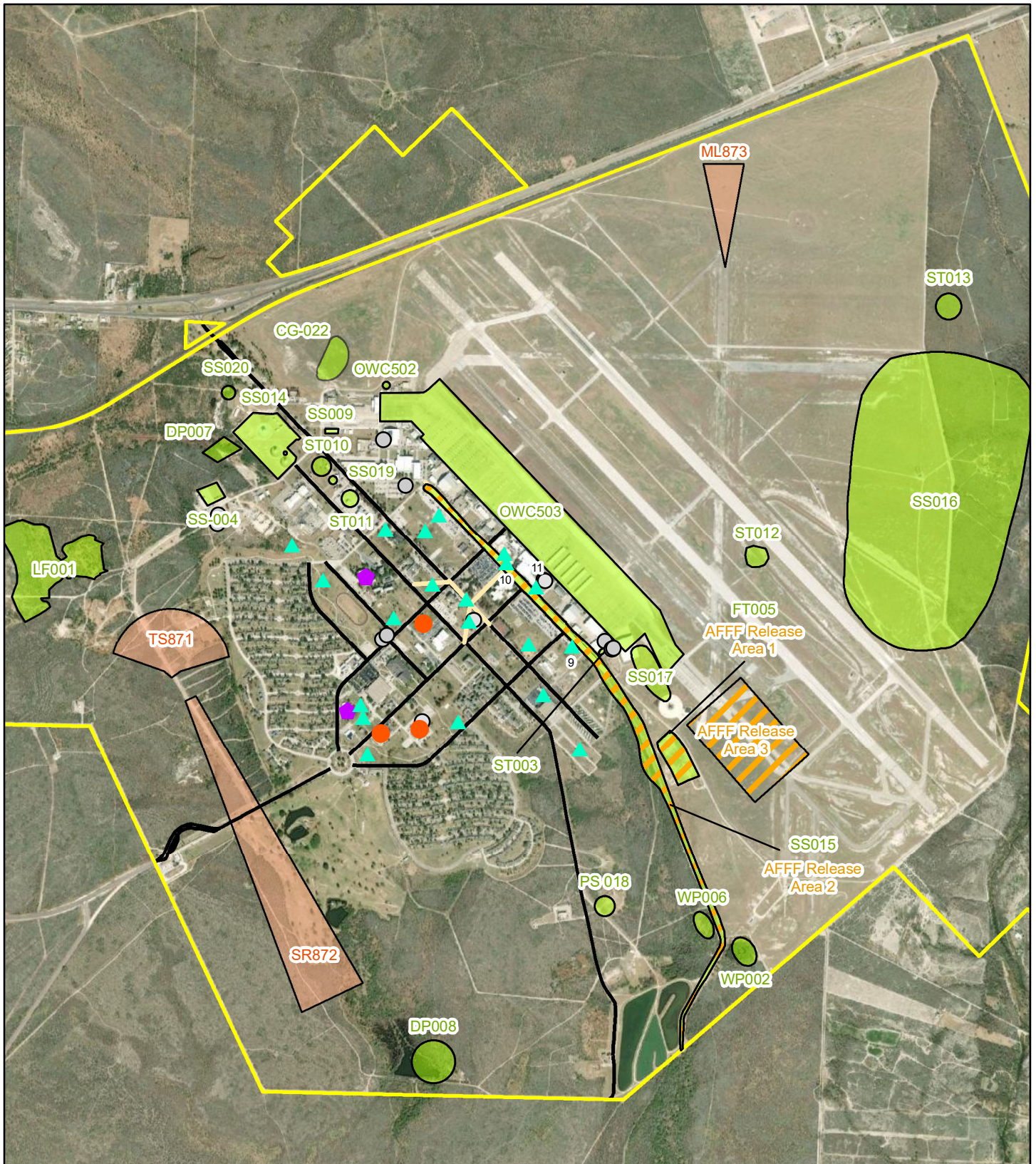


FIGURE 3-4
HAZMAT
SITES

- | | | | |
|--|--------------------|--|--------------|
| | Construction | | Laughlin AFB |
| | Demolition | | IRP Sites |
| | Renovation | | AFFF Sites |
| | Storage Tank (AST) | | MMRP Sites |
| | Linear Project | | |
| | Road | | |

N
Imagery: ESRI 2021
Projection: WGS 1984
Zone 14N

0 1,000 2,000 Feet



**Table 3-9
AFFF Release Areas**

Site	Status	Description
AFFF Release Area 1	Recommended for SI	Former Fire Training Area (IRP Site FT005)
AFFF Release Area 2	Recommended for SI	Stormwater Drainage Ditch (IRP Site SS015)
AFFF Release Area 3	Recommended for SI	Former Time and Distance Testing Area (IRP Site SS021)

AFFF = aqueous film forming foam; IRP = Installation Restoration Program; SI = site investigation

3.9.2.5 Installation Restoration Program Sites

The IRP at Laughlin AFB was established in 1985 (URS, 2014), leading to the identification of 24 IRP sites throughout the Installation. As of 2021, a total of 11 sites were being tracked, and 5 sites (SS016, SS014, CG022, FT005, and TA500) are currently undergoing remedial action operation monitoring under Hazardous Waste Permit No. 50258, EPA ID. No. TX2571524105, ISWR No. 69007. Six sites are under land use control and are inspected annually; the remaining five sites are designated as requiring no further remedial action planned (see **Figure 3-4** and **Table 3-10**). A 5-year review was last completed in 2018 and concluded that the selected remedies (i.e., land use controls) remain protective of human health and the environment (AFCEC, 2018). There are also three Areas of Concern (AOCs) that have been closed since 2005: AOC-01, AOC-04, and AOC-11 (URS, 2014).

**Table 3-10
IRP Sites**

Site	Status	Description
FT005	LTM	This was a former fire training area in use from 1974 to the mid-1990s that included pits, an AST and UST, fuel/water separators, supply lines, and a former holding pond. Following a leak in the fuel supply line the delivery system was taken out of service, the pond was demolished, and contaminated soil was removed. Remedial action has included the management of a plume management zone with monitored natural attenuation established in 2010. AFFF Release Area 1 is located within this site.
LF001	NFRAP (LUC)	Also known as the Base landfill, this area operated as a trench and fill landfill until 1974. Remedial action included the installation of a cap over the portion formerly used as a sanitary landfill. It was approved for closure by TCEQ in 1987.
WP002	NFRAP (LUC)	Also known as the Old Waste Pond, this former soil quarry is a bermed area that was used as a retention pond in the 1970s. This area was an accumulation point for industrial wastewater from the flightline. This area was approved for closure by TCEQ under the TRRP in 2005.
ST003	Closed (TRRP)	Also known as the Defuel Pit, this area consisted of a 1,000-gallon UST used to store a variety of HAZMAT. It was closed in 1996 under the Texas Petroleum Tank Program but was reopened in 2009 due to elevated levels of arsenic in groundwater. It was closed under TRRP standards for commercial and industrial use in 2013.
SS004	NFRAP	Located at the Defense Reutilization and Marketing Office, this area was a large concrete structure used to store hazardous waste. In 1994 the adjacent yard was paved, and the structure and impacted soil was removed. This area was approved for closure by TCEQ under the TRRP in 2008.
WP006	NFRAP (LUC)	Located on the west side of SS-015, this area provided additional retention capacity for WP002. It rarely retained water but may have been used for disposal of wastewater from other areas. It was abandoned in 1976 and was approved for closure by TCEQ under the TRRP in 2005.
DP007	NFRAP	This was a former disposal area for petroleum storage tank sludge. This area was approved for closure by TCEQ under the TRRP in 2009.
DP008	NFRAP	Also known as the South Boundary Dike, this was the site of a one-time occurrence of waste solvent dumping in 1974. This area was approved for closure by TCEQ under the TRRP in 2000.

Site	Status	Description
SS009	NFRAP (LUC)	This area was used to store pesticides and contains a concrete pad. Low levels of pesticides were detected in soil, but the site was approved for closure by TCEQ under the TRRP in 2009.
ST010	NFRAP	Located at former B-121, this site included a UST that was removed in 1989. This area was approved for closure by TCEQ under the TRRP in 2001.
ST011	NFRAP	Located at former B-126, this site included a UST that was removed at an unknown date. This area was approved for closure by TCEQ under the TRRP in 2001.
ST012	NFRAP	Located at former B-640, this site included a UST that was removed in 1991. This area was approved for closure by TCEQ under the TRRP in 2001.
ST013	NFRAP	Located at former B-121, this site included a UST that was removed in 1989. This area was approved for closure by TCEQ under the TRRP in 1999.
SS014	LTM	This was a former jet fuel receiving and storage area. It consists of two areas: Area A (ASTs, piping) and Area B (underground distribution lines). Remedial action has included a removal action in 2008 for soil around the pipeline, groundwater monitoring, and natural attenuation. Contaminants are limited to the shallow aquifer and no response under a commercial/industrial site use scenario is required. Remedial action currently consists of natural attenuation.
SS015	NFRAP (LUC)	Also known as the Storm Drainage Ditch, this area accepts runoff from the flightline. In the 1970s this area was contaminated with heavy metals and solvents from runoff that was diverted to retention basin WP002 (another IRP site). This area was approved for closure by TCEQ under the TRRP in 2009. AFFF Release Area 2 is located within this site. This area is closed under residential TRRP requirements and operates under Property Limits Remedy Standard A, allowing commercial and industrial land use.
SS016	LTM	Also known as the MARS Building and Area, this area is a potential source of solvent contamination. Remedial action has included groundwater monitoring and natural attenuation.
SS017	NFRAP	This area was initially identified as AOC 07, with high levels of solvents detected in groundwater from an unidentified source. This area was approved for closure by TCEQ under the TRRP in 2009.
PS018	NFRAP	A former storage and mixing area for pesticides and solvents, this area was approved for closure by TCEQ under the TRRP in 2008.
SS019	NFRAP	Also known as the former B-116 HVAC shop, this area was also a storage area for drums containing solvents that were stored without proper secondary containment. This led to elevated levels in soil and groundwater. However, these levels were below permissible limits, and the area was approved for closure by TCEQ under the TRRP in 2010.
SS020	NFRAP	Also known as the Former Jet Engine Test Cell Facility, this area was in use until 1972. Operations at the site produced waste fuels that were often routed to dry wells for disposal. Solvent levels were detected at elevated concentrations, and a new AOC was created for the immediately impacted area. This site was approved for closure by TCEQ under the TRRP in 2010.
OWC502	NFRAP	This was a 500-gallon former oil-water separator and associated piping and storage for the B-18 Engine Test Cell that was removed in 2013. This OWS had no secondary containment, and the connected piping has been capped and abandoned. This site was approved for closure by TCEQ under the TRRP in 2014.
OWC503	NFRAP	The site of a former 1,000-gallon OWS, associated piping and storage at B-51 that was removed in 2013. The piping connecting the OWS to B-41 was disconnected prior to 2012 and is no longer in service. This site was approved for closure by TCEQ under the TRRP in 2014.
CG022	Open	The site is identified as AOC 20 and is located around groundwater monitoring well SS014MW002, which is located approximately 400 feet northeast of closed IRP Site SS020. Potential contaminants are trichloroethylene and its daughter products.

AFFF = aqueous film forming foam; AOC = Area of Concern; AST = above-ground storage tank; B = Building; HAZMAT = hazardous material; HVAC = heating, ventilation, and air conditioning; IRP = Installation Restoration Program; LTM = long-term monitoring; LUC = land use control; NFRAP = no further remedial action planned; TCEQ = Texas Department of Environmental Quality; TRRP = Texas Risk Reduction Program; UST = underground storage tank

3.9.2.6 Military Munitions Response Program

MMRP sites are areas suspected or known to contain UXO or munitions constituents, which are considered HAZMAT. The goal of the program is to make munitions response areas safe for reuse in accordance with anticipated future land use and to protect human health and the environment. Three MMRP sites have been identified at Laughlin AFB (**Figure 3-4**); all of them have been designated as no further action (NFA) with no land use controls (DENIX, 2022) (**Table 3-11**). These MMRP sites will not be further evaluated herein due to the low probability of encountering UXO under implementation of the Proposed Action.

Table 3-11
Military Munitions Response Program Sites

Site	Status	Description
ML873	NFA	Formerly known as ML005, the M-203 Practice Grenade Range was deactivated in 2006. This approximately 24-acre area consisted of firing ranges and skeet houses. In previous investigations, no munitions were found and contaminant concentration in soil were within acceptable levels. The site is not subject to TRRP and was designated NFA with unrestricted land use in 2012.
SR872 (FWPR)	NFA	Also known as the Former West Pistol Range, this approximately 63-acre area was intermittently used between 1942 and 1958 for small arms training. The site is not subject to TRRP and was designated NFA with unrestricted land use in 2012.
TS871 (FWSR)	NFA	Also known as the Former West Skeet Range, this approximately 63-acre area was intermittently used between 1943 and 1963. The site is not subject to TRRP and was designated NFA with unrestricted land use in 2012.

NFA = no further action; TRRP = Texas Risk Reduction Program

3.9.3 Environmental Consequences

3.9.3.1 Evaluation Criteria

Impacts on HAZMAT management would be considered adverse if the federal action resulted in noncompliance with applicable federal and state regulations or increased the amounts generated or procured beyond the current Laughlin AFB waste management procedures and capacities. Impacts on the IRP would be considered adverse if the federal action disturbed (or created) contaminated sites resulting in negative effects on human health or the environment.

3.9.3.2 Alternative 1

Hazardous Materials and Wastes

Under Alternative 1, limited use of HAZMAT would be required during the construction and demolition projects. HAZMAT would possibly include paints, welding gases, solvents, preservatives, sealants, and pesticides. Additionally, hydraulic fluids and petroleum products, such as diesel and gasoline, would be used in construction and demolition equipment and vehicles. There would be a potential for the accidental discharge or spill of HAZMAT that could contaminate the environment or result in exposure of persons to such contaminants.

Construction could unearth contaminants in environmental media not yet known or identified for management action. Even without a major release or discovery event, multiple minor releases of HAZMAT during the proposed activities could potentially affect the environment or persons in the vicinity.

HAZMAT used or generated during construction or demolition would be handled, stored, and disposed of in accordance with federal and state laws and regulations. All applicable permits for handling and disposal of HAZMAT would be obtained prior to starting construction or demolition activities. Construction and demolition work under Alternative 1 would be subject to the procedural requirements of the Laughlin AFB HWMP, SPCC plan, and other applicable management plans to prevent and minimize risks associated with

contaminant release or transport in the environment. During construction or demolition, if HAZMAT is discovered, work in that location would stop until the potential contamination has been properly evaluated and addressed.

Asbestos, Lead-Based Paint, and Polychlorinated Biphenyls

Improper handling of construction and building materials has the potential to adversely affect workers and the environment at Laughlin AFB. Concerns of ACMs, LBPs, and PCBs are also associated with the age of a building. Three facilities proposed for renovation or demolition or improvement/maintenance under Alternative 1 have the potential to contain these materials due to their year of construction (**Table 3-12**).

**Table 3-12
Potential Presence of Hazardous Materials by Year Built**

Building Number	Associated Project	Year Built	ACM Potential ^a (prior 1970)	LBP Potential ^b (prior 1978)	PCBs Potential ^c (prior 1978)
348	13 Relocate Communications Squadron	1952	Yes	Yes	Yes
472	7 Renovate Club XL	1953	Yes	Yes	Yes
476	6 Renovate Youth Center/Co-locate Child Development Center	1974	No	Yes	Yes

Notes:

- a. Buildings or structures constructed prior to 1970 are likely to contain ACM. When disturbed, asbestos becomes airborne and is harmful to human health if inhaled. The Laughlin AFB *Asbestos Management Plan* (Laughlin AFB, 2019) focuses on in-place management of ACM.
- b. Buildings or structures constructed before 1978 may contain LBP. Exposure to LBP is harmful to human health, particularly children.
- c. Buildings constructed prior to 1979 may contain PCBs in various machinery and wiring. Exposure to PCB concentrations exceeding 50 parts per million is harmful to human health.

ACM = asbestos-containing material; LBP = lead-based paint; PCB = polychlorinated biphenyls

Removal of ACMs, LBPs, and PCBs during implementation of the Proposed Action would result in the beneficial impact of creating safer indoor spaces by avoiding future exposure. Construction contractors would follow the Laughlin AFB HWMP and *Asbestos Management Plan* (Laughlin AFB, 2019) to mitigate exposure during implementation of Alternative 1. With proper handling and construction procedures, no significant effects on workers, Base personnel, and the environment would be expected to occur from HAZMAT and waste.

Storage Tanks

Only the demolition or renovation of Club XL (B-472) would be implemented in proximity to an existing AST at Laughlin AFB (see **Figure 3-4**). AST VP-472-1 is a collection tank for cooking oil at Club XL (B-472). Project 5 (see **Figure 2-1**) would relocate the existing AAFES Express/Gas Station to the Exchange Shopping Center. The three ASTs at the existing gas station would be decommissioned and removed. A new UST would be installed near a new fueling station located in the Exchange Shopping Center.

Although some projects would be located within proximity of an existing AST, work under Alternative 1 would not be expected to result in significant impacts. Construction contractors would be responsible for avoiding the ASTs during construction and demolition activities.

Perfluoroalkyl Substances and Aqueous Film Forming Foam

PFAS may be present in soil and/or groundwater at the three AFFF release sites on Laughlin AFB. Construction of Project 11 in the Training District (Smart Street Sidewalks and Bike Lake Improvements) would be located within AFFF Release Area 2 (see **Figure 3-4**). Under the 2018 Site Inspection, this site was recommended for further assessment under a site investigation, as PFAS levels were above project action limits in subsurface soil (Amec Foster Wheeler, 2018). Ground disturbance activities under

Alternative 1 would not be anticipated to significantly impact the release area, as these activities would be at or near surface level. Ground disturbance in the area would be managed in accordance with applicable Laughlin AFB and Air Force guidance, and potential impacts to water quality would be monitored under the SWPPP. There are no other release sites within the vicinity of the proposed projects.

Installation Restoration Program Sites

No significant effects to IRP sites would be anticipated to occur under Alternative 1. There is a former site in the vicinity of Project 11 in the Training District. Site SS015 (Storm Drainage Ditch) runs along the northern boundary of the Training District. However, this area has been designated as requiring no further remedial action planned since 2009 and has been approved for commercial and industrial use under the TCEQ TRRP (Parsons, 2009). With the applicable requirements and management plans in place for construction of the proposed projects and no contaminants at concentrations that would pose a risk to construction workers, potential HAZMAT and hazardous waste impacts would be minor and short term. No significant effects from implementation of Alternative 1 would be expected to occur.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to HAZMAT or hazardous waste would be anticipated under Alternative 1.

3.9.3.3 Alternative 2

Alternative 2 differs from Alternative 1 primarily by which new buildings would be constructed and which existing building would be renovated instead of being demolished. The new pre-K–6 school would be constructed on Site 4B (see **Figure 2-1**). Potential impacts from HAZMAT to construction workers, Base personnel, and the environment would be the same as Alternative 1.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to HAZMAT or hazardous waste would be anticipated under Alternative 2.

3.9.3.4 No Action Alternative

Under the No Action Alternative, the projects under the Proposed Action would not occur, and Laughlin AFB would continue to operate as a large-quantity generator of hazardous waste under RCRA. HAZMAT management at the Base would continue in accordance with relevant plans and applicable HAZMAT laws and regulations. The built environment of Laughlin AFB would continue to deteriorate and become outdated for military use.

3.9.4 Best Management Practices and Mitigation Measures

The Air Force would implement the following BMPs for HAZMAT and hazardous wastes:

- Adhere to the Laughlin AFB HWMP to minimize impacts from the handling and disposal of hazardous substances and ensure compliance with state and federal HAZMAT regulations.
- Properly handle, remove, and dispose of ACMs, LBPs, and PCBs in accordance with Air Force, local, state, and federal regulations.
- Properly handle and remove all hazardous and toxic substances used during construction, demolition, and renovation activities.

Failure to implement BMPs under the Proposed Action likely would result in adverse short- and long-term impacts to personnel due to exposure of materials that are known to be hazardous to humans. Removal of ACMs, LBPs, and PCBs during implementation of the Proposed Action would have a beneficial impact by creating safer indoor spaces by avoiding future exposure.

3.10 SAFETY

3.10.1 Definition of the Resource

This section discusses safety concerns associated with ground and flight activities. Ground safety considers issues associated with ground operations and maintenance activities that support unit operations including arresting gear capability, jet blast/maintenance testing, and safety danger. Aircraft maintenance testing occurs in designated safety zones. Ground safety also considers the safety of personnel and facilities from flight operations in the vicinity of the airfield and in the airspace. CZs and Accident Potential Zones around the airfield restrict the public's exposure to areas with a higher accident potential. Although ground and flight safety are addressed separately, in the immediate vicinity of the runway, risks associated with safety-of-flight issues are interrelated with ground safety concerns.

Flight safety considers aircraft flight risks such as midair collision, bird/wildlife aircraft strike hazard, and in-flight emergency. The Air Force has safety procedures and aircraft-specific emergency procedures produced by the original equipment manufacturer of the aircraft. Basic Airmanship procedures also exist for handling any deviations to air traffic control procedures due to an in-flight emergency; these procedures are defined in Volume 3 of AFI 11-202, *General Flight Rules*, and established aircraft flight manuals. The Flight Crew Information File is a safety resource for aircrew day-to-day operations and contains air and ground operation rules and procedures.

The ROI for safety is Laughlin AFB and areas immediately adjacent to the Installation where ground safety concerns exist, as well as the airfield and airspace.

3.10.2 Existing Conditions

Under [40 CFR § 989.27](#), the EIAP for a proposed action includes assessing direct and indirect impacts of the Proposed Action and Alternatives on the safety and health of Air Force employees and others at a work site. Air Force Policy Directive 91-2, *Safety Programs* (2019), is implemented by AFI 91-202, *The US Air Force Mishap Prevention Program* (2022), which manages risks to protect Air Force personnel from occupational deaths, injuries, or illnesses and minimize loss of Air Force resources. These standards apply to all Air Force activities and adherence to the Air Force's Mishap Prevention Program ensures Air Force workplaces meet federal safety and health requirements.

Day-to-day operation and maintenance activities at Laughlin AFB are performed in accordance with applicable Air Force safety regulations, published Air Force Technical Orders, and standards prescribed by Air Force occupational and environmental safety, fire protection, and health program requirements. These are intended to reduce occupational risks to government personnel and contractors and to protect other individuals that reside on or visit or are near the Installation.

Ground safety concerns include ground and industrial operations, operational activities, and motor vehicle use. Accidents can occur from equipment operation, materials use, and building and equipment maintenance.

Air Force safety programs for industrial activities, motor vehicle and equipment operation, and everyday operations are continuously refined as new activities and new information becomes available. All Airmen receive regular safety training to keep the chances of incidents as low as possible.

All construction contractors at Laughlin AFB must follow ground safety regulations and worker's compensation programs to avoid posing any risks to workers or personnel on or off Installation. Construction contractors are responsible for reviewing potentially hazardous workplace operations, monitoring exposure to workplace chemicals (e.g., lead, ACM, HAZMAT); physical hazards (e.g., noise propagation, slips, trips, falls); and biological agents (e.g., infectious waste, wildlife, poisonous plants) (Laughlin AFB, 2022). Construction contractors are required to recommend and evaluate controls (e.g., preventative, administrative, engineering) to ensure personnel are properly protected and to implement a medical surveillance program to perform occupational health physicals for those workers subject to any accidental chemical exposures.

3.10.3 Environmental Consequences

3.10.3.1 Evaluation Criteria

Safety-related impacts from a proposed activity are assessed according to the potential to increase or decrease safety risks to personnel, the public, property, or the environment. Adverse impacts related to safety would occur if the Proposed Action Alternatives resulted in Air Force OSHA criteria being exceeded or the improper implementation of established or proposed safety measures, creating unacceptable safety risk to personnel. Adverse impacts would occur if the activities

- substantially increase risks associated with the safety of construction personnel, contractors, military personnel, or the local community;
- substantially hinder the ability to respond to an emergency; or
- introduce a new health or safety risk for which the Base is not prepared or does not have adequate management and response plans in place.

3.10.3.2 Alternative 1

Under Alternative 1 of the Proposed Action, construction, demolition, renovation, and infrastructure projects would be implemented. Collectively, these actions would create potential safety risks and hazards to construction workers and on-Base personnel in the vicinity of construction projects. The safety risks and hazards would be those typically associated with facility construction projects and identified in the Laughlin AFB *Safety Guide for Civilian Contractors* (Laughlin AFB, 2022). These include but are not limited to hazards from trenching and excavations, material storage, hoisting and lifting, flammable liquids and compressed gases, welding, falls, confined space, and industrial equipment operation.

The long-term impacts of the Proposed Action would be improvements to the health and safety of Laughlin AFB personnel and visitors. These improvements would occur from the replacement of outdated facilities with new facilities, renovation of existing buildings, expansion of the CDC facilities, and construction of a new and larger pre-K–6 school located away from main traffic routes, thus creating a safer environment for parents and students.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects related to safety would be anticipated under Alternative 1.

3.10.3.3 Alternative 2

Although the combination of new construction, renovation, and demolition under Alternative 1 is different than Alternative 2, the potential ground safety hazards and processes and procedures to mitigate those hazards would be the same as Alternative 1. With the implementation of required safety regulations and procedures, the potential risk to construction workers would be minimal, and the risk to Base personnel and visitors would be negligible under Alternative 2. Alternative 2 would also create long-term improvements to the health and safety of Laughlin AFB personnel and visitors, similar to Alternative 1.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects related to safety would be anticipated under Alternative 2.

3.10.3.4 No Action Alternative

Under the No Action Alternative, the projects under the Proposed Action would not occur and the existing safety conditions would remain unchanged. The built environment of Laughlin AFB would continue to deteriorate and become outdated for military use.

3.11 SOCIOECONOMICS

3.11.1 Definition of the Resource

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

The ROI for socioeconomics includes Laughlin AFB, surrounding communities, and Val Verde County.

3.11.2 Existing Conditions

3.11.2.1 Population

The population in Val Verde County was approximately 49,018 persons in 2020, an increase of 0.2 percent since 2010 (United States Census Bureau [USCB] 2022a, 2022b). Laughlin AFB is located approximately 8 miles east of the city of Del Rio, Texas. Del Rio has a population of approximately 35,828 persons (**Table 3-13**). For comparison, three additional communities are listed in **Table 3-13**: Crystal City (approximately 96 miles southeast), Eagle Pass (approximately 53 miles south), and Uvalde (approximately 65 miles east) (see **Figure 1-1**). Del Rio's growth rate has been similar to those of the surrounding communities. By contrast, the Laughlin AFB Census-Designated Place¹ (CDP) has grown approximately 4.3 percent since 2010, reflecting the growth of the Installation's mission and supporting population.

Table 3-13
Community and County Population Estimates and Growth near Laughlin AFB

Geographic Area	2010 Population	2020 Population	Total Growth (percent)
US	303,965,272	326,569,308	0.7
State of Texas	24,311,891	28,635,442	1.8
Val Verde County, Texas	48,088	49,018	0.2
Crystal City, Texas	7,155	7,256	0.1
Del Rio, Texas	35,223	35,828	0.2
Eagle Pass, Texas	25,468	29,307	1.5
Uvalde, Texas	15,820	16,122	0.2
Laughlin AFB CDP, Texas	1,381	1,975	4.3

Source: USCB, 2022a, 2022b

AFB = Air Force Base; CDP = Census-Designated Place

3.11.2.2 Employment

Total employment in Val Verde County in 2020 was estimated to be approximately 61 percent (USCB, 2022b). Approximately 26.6 percent of civilians employed are government workers in Val Verde County (DP03). Direct employment associated with Laughlin AFB is approximately 6,000 military and civilian personnel (Laughlin AFB, 2018). An additional 926 indirect jobs with an estimated value of over \$35 million

¹ CDPs are a statistical geography representing closely settled, unincorporated communities that are locally recognized and identified by name.

are also attributed to Laughlin AFB (Laughlin AFB, 2018). The total economic impact of Laughlin AFB in 2018 was estimated at over \$177 million (Laughlin AFB, 2018).

3.11.2.3 Housing

Laughlin AFB currently has 56 dormitory/lodging facilities that hold 515 personnel as well as family housing for 446 officers and enlisted personnel (Laughlin AFB, 2018). Currently, there is a shortage for on-Base housing for trainees coming to Laughlin AFB. In addition, due to the lack of on-Base housing, the graduates and family members who visit Laughlin AFB have limited housing options for their stay. The communities that surround Laughlin AFB have a vacancy rate between 8 and 11 percent (**Table 3-14**).

Table 3-14
2020 Occupancy Status of Communities near Laughlin AFB

Geographic Area	Occupied	Vacant	Percent Vacant
US	126,817,580	13,681,156	10.3
State of Texas	10,419,147	1,098,177	10.6
Val Verde County, Texas	15,796	2,659	6.9
Crystal City, Texas	2,211	306	8.2
Del Rio, Texas	11,648	1,393	9.4
Eagle Pass, Texas	9,342	937	11.0
Uvalde, Texas	5,332	663	9.0

Source: USCB, 2022c

3.11.2.4 Schools

Laughlin AFB is located within the San Felipe Del Rio Consolidated Independent School District. The school district maintains nine elementary schools, two middle schools, five high schools, and two alternative schools (San Felipe Del Rio, 2022). Currently the military and civilian personnel stationed at Laughlin AFB would be zoned for Ruben Chavira Elementary School, Roberto “Bobby” Barrera Elementary STEM Magnet School, Del Rio Middle School, Del Rio Freshman School, and Del Rio High School (San Felipe Del Rio, 2022). Ruben Chavira Elementary School serves kindergarten through 5th grade with a capacity of 554 students and current enrollment of 586 students. Del Rio Middle School has a current enrollment of 1,535 students for Grades 6–8. Ninth graders attend the Del Rio Freshman School before finishing Grades 10–12 at Del Rio High School with a current enrollment of 2,181 students. The current CDC on Laughlin AFB is near capacity, and a new care center is needed to meet increased demand for childcare services to support the needs of military families.

The San Felipe Del Rio Consolidated Independent School District leased land from Laughlin AFB to provide a pre-K–5 school on-Base. The Roberto “Bobby” Barrera Elementary STEM Magnet School accommodates 157 students and is an alternative to Installation residents having to send their children off Base for school. The school district installed a campus of eight relocatable buildings, one permanent restroom building, and one playground on a 2.66-acre site located north of the intersection of Mitchell Boulevard and 7th Street, known as the Club Amistad Site (Laughlin AFB, 2016b). The school district is responsible for all aspects of the operation of the school. The lease was for a period of 5 years, and the school district started planning for a permanent school facility on Laughlin AFB. The temporary campus would be dismantled after the permanent facility is ready for occupation (Laughlin AFB, 2016b).

3.11.3 Environmental Consequences

3.11.3.1 Evaluation Criteria

Consequences to socioeconomic resources were assessed in terms of the potential impacts on the local economy from implementation of the Proposed Action and Alternatives. Direct impacts to the local economy and indirect impacts on housing and employment were evaluated based on the implementation of the Proposed Action and Alternatives. The magnitude of potential impacts can vary greatly depending on the location of an action. For example, implementation of an action that creates 10 employment positions might

be unnoticed in an urban area but might have significant impacts in a rural region. In addition, if potential socioeconomic changes from a Proposed Action result in substantial shifts in population trends or in adverse effects on regional spending and earning patterns, such changes may be considered adverse.

3.11.3.2 Alternative 1

The proposed projects under Alternative 1 include the renovation of Ricks Hall, the construction of a new elementary school, and a new CDC. Ricks Hall provided on-Base lodging and was closed because it did not meet current standards. It provided housing for enlisted personnel but is currently vacant and uninhabitable. The renovation of Ricks Hall would increase the useable building space by 52,859 ft² and increase the available housing space on the Base. The new elementary school would serve up to 300 pre-K–6 grade students and be approximately 60,000 ft². The new CDC would be approximately 15,000 ft². These three projects would have beneficial effects by increasing on-Base housing, improving school facilities and capacity for students of military families, and providing additional CDC capacity. The proposed projects that would occur under Alternative 1 would not involve the addition of permanent military, contract, or civilian personnel or their families. Therefore, implementation of Alternative 1 would result in minimal impacts to the local and regional population.

Construction and demolition proposed under Alternative 1 would result in an increase of construction personnel on Base during working hours. This would be temporary in nature and would have a negligible impact on the socioeconomic environment of Laughlin AFB and surrounding communities. The renovation of Ricks Hall would allow for additional on-Base housing, while the new elementary school and larger CDC would have the potential to increase the number of staff reporting to the on-Base facility. No adverse impacts on employment, housing, or educational resources would occur under Alternative 1.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to socioeconomics would be anticipated under Alternative 1.

3.11.3.3 Alternative 2

Alternative 2 differs from Alternative 1 in the location of the new pre-K–6 school and not constructing a new CDC. The potential impacts described for Alternative 1 would be similar under Alternative 2 except that no additional capacity for childcare would be added. This would negatively impact Laughlin AFB workers, staff, and students that require childcare services.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to socioeconomic would be anticipated under Alternative 2.

3.11.3.4 No Action Alternative

Under the No Action Alternative, the projects under the Proposed Action would not occur. Needs for additional on-Base housing, improved school facilities, and increased capacity for childcare would not be met.

3.12 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

3.12.1 Definition of the Resource

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

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, pertains to environmental justice issues and relates to various socioeconomic groups and disproportionate impacts that could be imposed on them. This EO requires that federal agencies' actions substantially affecting human health or the environment do not exclude persons; deny persons' benefits; or

subject persons to discrimination because of their race, color, or national origin. EO 12898 was enacted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

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

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

Minority, low-income, and youth populations that could be disproportionately impacted by the project are addressed for the county and cities in the ROI (Laughlin AFB and environs) and are compared with those populations in Texas and the US.

3.12.2 Existing Conditions

In 2020, approximately 85 percent of the population of Val Verde County was part of minority ethnic groups (**Table 3-15**) (USCB, 2022d). This percentage is considerably higher than the state and nation. However, it is very similar to the other communities in the vicinity of Laughlin AFB. Crystal City and Eagle Pass have the highest proportion of minority groups. Approximately 18.3 percent of the population in Val Verde County live below poverty level. This percentage is higher than the poverty levels in Texas and nationally (**Table 3-15**). Crystal City and Eagle Pass have the highest percentage of people living below poverty level (USCB, 2022e). All the surrounding communities have higher percentages than that of the state or the nation. The percent of youth living in the local area ranges from 25.3 to 28.8, which is comparable to Val Verde County, but higher than both the state and national rate.

Table 3-15
Total Populations and Populations of Concern by Community and Geographic Region

Location	Total Population	Percent Total Minority	Percent Hispanic or Latino (of any race)	Percent Below Poverty	Percent Youth ^a
US	326,569,308	38.9%	18.2%	12.8%	22.4%
State of Texas	28,635,442	58.6%	39.4%	14.2%	25.8%
Val Verde County, Texas	49,018	85.2%	82.2%	18.3%	28.3%
Crystal City, Texas	7,256	99.4%	99.4%	29.5%	25.3%
Del Rio, Texas	35,828	89.0%	85.9%	20.3%	28.8%
Eagle Pass, Texas	29,307	97.9%	97.1%	25.2%	27.7%
Uvalde, Texas	16,122	85.1%	81.8%	21.0%	28.1%
Laughlin AFB CDP, Texas	1,975	34.0%	19.0%	0.0%	16.5%

^a Percent youth are all persons under the age of 18.

3.12.3 Environmental Consequences

3.12.3.1 Evaluation Criteria

The comparison of ethnicity and poverty rates among local, county, state, and national data was used to determine if any populations would be disproportionately affected by the Proposed Action. If an adverse environmental or socioeconomic consequence would fall disproportionately upon minority, low-income, or youth populations, then an environmental justice impact may occur.

3.12.3.2 Alternative 1

Under Alternative 1, the proposed construction, demolition, and renovation projects would not result in a disproportionate impact on minorities, low-income, and youth populations because these actions are fully contained within Laughlin AFB. Alternative 1 would not impact the availability of housing, community resources, and community services outside Laughlin AFB. Therefore, activities proposed under Alternative 1 would not disproportionately affect the availability of these resources to minorities, low-income populations, or children in the vicinity of Laughlin AFB.

When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to environmental justice or children populations would be anticipated under Alternative 1.

3.12.3.3 Alternative 2

Alternative 2 differs from Alternative 1 in the location of the new pre-K–6 school and not constructing a new CDC. The potential impacts described for Alternative 1 would be similar under Alternative 2. When considered in conjunction with other past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB, no significant cumulative effects to environmental justice or children populations would be anticipated under Alternative 2.

3.12.3.4 No Action Alternative

Under the No Action Alternative, the projects under the Proposed Action would not occur. Therefore, impacts to minority, low-income, and youth populations would not occur.

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Minors: Disaster Risk Reduction
Years of Experience: 4
Contribution: Land Use, Geological Resources

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Robert P. Benton	Community Planner, 47 CES/CENPL
Jason K. Smith	Remedial Project Manager, AFMC 47 CES/AFCEC/CZOW

CHAPTER 5 REFERENCES

- AETC (Air Education and Training Command). 2002. *Laughlin Air Force Base, Cold War-Era Buildings and Structures Inventory and Assessment*. Prepared by Edward Salo, Marsha Prior and Joe C. Freeman (Duane E. Peter, Principal Investigator) of Geo-Marine, Plano Texas, under contract to US Army Corps of Engineers, Fort Worth. United States Air Force.
- AETC. 2021. "Fact Sheet: Laughlin Air Force Base." <https://www.aetc.af.mil/About-Us/Fact-Sheets/Article/558878/laughlin-air-force-base/> (accessed 30 December 2021).
- AFCEC (Air Force Civil Engineer Center). n.d. "Air Force Response to PFOS and PFOA." <https://www.afcec.af.mil/WhatWeDo/Environment/Perfluorinated-Compounds/> (accessed 11 February 2022).
- AFCEC. 2018. 5-Year Review of Laughlin Air Force Base Installation Remediation Program Sites. Joint Base San Antonio, Lackland, Texas.
- Amec Foster Wheeler, 2018. *Draft Final Site Inspection Report Site Inspections of Aqueous Film Forming Foam (AFFF) Release Areas Environmental Programs Worldwide, Laughlin Air Force Base, Del Rio, Texas*. Prepared by AMEC Foster Wheeler Programming, Inc. and Oneida Total Integration Enterprises, September.
- California Department of Education. 2000. *Guide to School Site Analysis and Development*. Prepared by School Facilities Planning Division. [School Site Analysis and Development Guide, 2000 - School Facility \(CA Dept of Education\)](#).
- Conant, R. and J.T. Collins. 1998. *Peterson Guide to Reptiles and Amphibians—Eastern/Central North America*, 3rd Edition. Houghton Mifflin Company, New York, NY.
- DENIX. 2022. *Military Munitions Response Program*. <https://denix.osd.mil/mmrp/mrsi/home/>.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Final Report. Wetlands Research Program Technical Report Y-87-1. January. <https://www.poh.usace.army.mil/Portals/10/1987-Army-Corps-Wetlands-Delineation-Manual.pdf> (accessed May 2022).
- FEMA (Federal Emergency Management Administration). 2020. Flood Zones. <https://www.fema.gov/glossary/flood-zones?msckid=64957d66a62711ec93d4b16a53a67d75> (accessed May 2022).
- HydroGeologic, Inc. 2016. *Final Preliminary Assessment Report for Perfluorinated Compounds at Laughlin Air Force Base, Del Rio, Texas*. January.
- Kuehn, David D., and J. Philip Dering. 1998. "Assessments and Recommendations." *In Archaeological Context and Land Use in the Western Rio Grande Plains: Phase II Evaluation at Eleven Sites on the Laughlin Air Force Base, Val Verde County, Texas* [Draft]. J. Philip Dering [editor]. Reports of Investigations No. 1. Center for Ecological Archaeology. Texas A&M University. College Station, Texas.
- Laughlin AFB. 2012. Laughlin Air Force Base Air Installation Compatibility Use Zone (AICUZ). ArcGIS Data Files. US Air Force.
- Laughlin AFB. 2016a. *Finding of No Significant Impact, Final Environmental Assessment for Salt Cedar Eradication on Laughlin Air Force Base*, US Air Force. April.

- Laughlin AFB. 2016b. *Finding of No Significant Impact (FONSI) for Environmental Assessment for Constructing a Magnet School at Laughlin Air Force Base, Texas*, US Air Force. November.
- Laughlin AFB. 2017. *Integrated Cultural Resources Management Plan*. US Air Force, October.
- Laughlin AFB. 2018. *Economic Impact Statement FY18*, 47th Flying Training Wing. US Air Force. September.
- Laughlin AFB. 2019. *Asbestos Management and Operation Plan*. US Air Force, May.
- Laughlin AFB. 2020a. *Area Development Plan: Community & Services District*. Prepared for United States Air Force by US Army Corps of Engineers, Regional Planning & Environmental Center, September 2020.
- Laughlin AFB. 2020b. *Area Development Plan: Training District*. Prepared for United States Air Force by US Army Corps of Engineers, Regional Planning & Environmental Center, September 2020.
- Laughlin AFB. 2020c. *Spill Prevention, Control, and Countermeasures Plan Laughlin Air Force Base for Fence-to-Fence Environmental Services at Dyess Air Force Base, Laughlin Air Force Base, and Goodfellow Air Force Base, Texas*. US Air Force. March.
- Laughlin AFB. 2020d. *Integrated Solid Waste Management Plan*. US Air Force. October.
- Laughlin AFB. 2020e. *Hazardous Waste Management Plan*. US Air Force. November.
- Laughlin AFB. 2021a. *Integrated Natural Resources Management Plan*. US Air Force.
- Laughlin AFB. 2021b. *Storm Water Pollution Prevention Plan*. US Air Force. November.
- Laughlin AFB. 2021c. Email from C. MCKAUGHAN, USAF AETC 47 SFS/SFS to S. MINGS, USAF AETC 47 CES/CENMP. "Traffic Study Request." 14 December.
- Laughlin AFB. 2022. *Safety Guide for Civilian Contractors*. US Air Force. FY22.
- NOAA (National Oceanic and Atmospheric Administration). 2022a. Monthly Climate Normals (1991–2020) - Del Rio Area, TX, NOWData – NOAA Online Weather Data. [Climate \(weather.gov\)](https://www.weather.gov) (accessed 5 May 2022).
- NOAA. 2022b. Local Climate Records – Del Rio Area, TX. Austin/San Antonio Weather Forecast Office. [Local Climate Records \(weather.gov\)](https://www.weather.gov) (accessed 5 May 2022).
- Parsons. 2009. *Decision Document for No Further Planned Response Action Planned, SS015 Storm Water Drainage Ditch Laughlin AFB, Del Rio, Texas*. Prepared for Air Force Center for Environmental Excellence, Brooks Air Force Base, Texas. June.
- Poole J.M., W.R. Carr, D.M. Price, and J.R. Singhurst. 2007. *Rare Plants of Texas*. Texas A&M University Press, College Station, TX.
- Reagan and Grant. 1977. *Special Report Highway Construction Noise: Measurement, Prediction, and Mitigation*. U.S. Department of Transportation – Federal Highway Administration. 1977.
- Ryberg, W. A., D.K. Walkup, T.J. Hibbitts, M. Kramm, and R.R. Lopez. 2021. *Herpetofaunal Monitoring at Laughlin Air Force Base - Post Salt Cedar Eradication*. Texas A&M University, Natural Resources Institute, College Station, Texas. September.

- San Felipe Del Rio Consolidated Independent School District. 2022. "School Locator." <https://www.sfdrcisd.org/parents/school-locator/>.
- Sennott, S., D.J. O'Rourke, A.B. Orr, L.M. Gierek, and K.L. Wescott. 2020. *Historic Building Inventory and Evaluation for Laughlin Air Force Base, Kinney and Val Verde Counties, Texas*, Prepared for Laughlin Air Force Base, Del Rio, Texas, and Air Force Civil Engineer Center, Joint Base San Antonio, Lackland, Texas. September.
- Spude, R.L. 1996. *Historical Structures Evaluation*. National Park Service, Denver Service Center.
- TCEQ (Texas Commission on Environmental Quality). 2020 *Texas Integrated Report Index of Water Quality Impairments*.
- Tennis, Cynthia, Marcie Renner, and Robert J. Hard (editors). 1996. Archaeological Survey of Laughlin Air Base, Val Verde, Texas. Archaeological Survey Report No. 239. Center for Archaeological Research, The University of Texas at San Antonio.
- Texas State Historical Commission. 2020. "Balcones Escarpment (updated June 23, 2020)." *Handbook of Texas Online*. <https://www.tshaonline.org/handbook/entries/balcones-escarpment> (accessed 20 May 2022).
- TNC (The Nature Conservancy). 1999. *Survey of Rare, Threatened, and Endangered Plant and Animals at Laughlin Air Force Base, Del Rio, Texas*. Prepared for Laughlin AFB.s'
- TPWD (Texas Parks and Wildlife Department). 1995. *Biological Survey of Laughlin Air Force Base Final Report*. Prepared for Laughlin AFB.
- TPWD. 2022a. Texas Watershed Viewer. <https://tpwd.maps.arcgis.com/apps/Viewer/index.html?appid=2b3604bf9ced441a98c500763b8b1048> (accessed 5 May 2022).
- TPWD. 2022b. *Rare, Threatened, and Endangered Species of Texas, Val Verde County*. <https://tpwd.texas.gov/gis/rtest/>.
- USCB (United States Census Bureau). 2022a. DP05 | Selected Economic Characteristics, 2010: ACS 5-Year Estimates Data Profiles. https://data.census.gov/cedsci/table?q=Laughlin%20AFB%20CDP,%20Texas&t=Populations%20and%20People&q=0100000US_0400000US48_0500000US48465_1600000US4818020,4819792,4821892,4874588&tid=ACSDP5Y2010.DP05.
- USCB. 2022b. DP03 | Selected Economic Characteristics, 2020: ACS 5-Year Estimates Data Profiles https://data.census.gov/cedsci/table?q=Laughlin%20AFB%20CDP,%20Texas&t=Employment&q=0100000US_0400000US48_0500000US48465_1600000US4818020,4819792,4821892,4874588&tid=ACSDP5Y2019.DP03&moe=false.
- USCB. 2022c. H1 | Occupancy Status, 2020: DEC Redistricting Data (PL 94-171) https://data.census.gov/cedsci/table?q=housing&q=0100000US_0400000US48_0500000US48465_1600000US4818020,4819792,4821892,4874588&tid=DECENNIALPL2020.H1.
- USCB. 2022d. DP05 | ACS Demographics and Housing Estimates, 2020: ACS 5-Year Estimates Data Profiles https://data.census.gov/cedsci/table?q=Laughlin%20AFB%20CDP,%20Texas&t=Populations%20and%20People&q=0100000US_0400000US48_0500000US48465_1600000US4818020,4819792,4821892,4874588&tid=ACSDP5Y2020.DP05.

- USCB. 2022e. S1701 | Poverty Status in the Past 12 Months, 2020: ACS 5-Year Estimates Subject Tables https://data.census.gov/cedsci/table?q=Laughlin%20AFB%20CDP,%20Texas&t=Poverty&g=0100000US_0400000US48_0500000US48465_1600000US4818020,4819792,4821892,4874588&tid=ACSSST5Y2020.S1701
- US Department of Agriculture. 2022. Natural Resources Conservation Service. Web Soil Survey. <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> (accessed May 2022).
- URS 2014. *Installation Development Plan: Laughlin Air Force Base*. Prepared for the 47th Flying Training Wing. October.
- USEPA (US Environmental Protection Agency). 2009. Estimating 2003 Building-Related Construction and Demolition Materials Amounts. EPA530-R-09-002. Office of Resource Conservation and Recovery, March.
- USEPA. 2016. "Criteria Air Pollutants-NAAQS Table." <https://www.epa.gov/criteria-air-pollutants/naags-table> (accessed 4 May 2022).
- USEPA. 2019. EPA map of Radon Zones. June 2019, EPA 402/F19/004. <https://www.epa.gov/radon/epa-map-radon-zones>.
- USEPA. 2022a. State Authorization under the Resource Conservation and Recovery Act (RCRA). <https://www.epa.gov/rcra/state-authorization-under-resource-conservation-and-recovery-act-rcra> (accessed May 2022).
- USEPA. 2022b. *Texas – EPA Map of Radon Zones*. <https://www.epa.gov/sites/default/files/2014-08/documents/texas.pdf> (accessed May 2022).
- USEPA. 2022c. What is EPA's Action Level for Radon and What Does it Mean? <https://www.epa.gov/radon/what-epas-action-level-radon-and-what-does-it-mean> (accessed May 2022).

**APPENDIX A
INTERAGENCY/INTERGOVERNMENTAL COORDINATION FOR
ENVIRONMENTAL PLANNING**

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**DEPARTMENT OF THE AIR FORCE
47TH FLYING TRAINING WING (AETC)**

Lt Col John J. Casey
47th Civil Engineer Squadron Commander
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Laughlin AFB TX 78843

29-Jul-2022

Mark S. Wolfe
Texas State Historic Preservation Office
Texas Historical Commission
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Dear Mr. Wolfe

The United States Air Force (Air Force) is preparing an Environmental Assessment (EA) for proposed area development plan (ADP) projects in accordance with planning documents for the Community and Services District and Training District at Laughlin Air Force Base (AFB) near Del Rio, Val Verde County, Texas (**Attachment 1**). These projects constitute a federal undertaking pursuant to Section 106 of the *National Historic Preservation Act* (NHPA) (36 Code of Federal Regulations [CFR] § 800.16(y)). Accordingly, the Air Force requests to initiate the NHPA, Section 106 consultation with your office.

Pursuant to 36 CFR Part 800, implementing Section 106 of the NHPA, we request your assistance in defining the Area of Potential Effect (APE) and identifying any concerns you may have regarding the potential presence of significant cultural resources in the affected area. The proposed APE encompasses the Community and Services and Training Planning Districts at Laughlin AFB (**Attachment 1**).

Proposed Action and Project Locations

The Proposed Action in the Community and Services District includes six new construction projects: a community event complex, modular officer dorms, expansion of the family camp for RV parking, a new Pre-K–6 elementary school, a self-service gas station, and a child development center (CDC). The renovation of four existing buildings includes an officer dorm, an event center, a youth center, and the Exchange. Two buildings, Club XL and the existing CDC, would potentially be demolished.

The Proposed Action in the Training District includes five construction projects: expansion of campus parking areas; outdoor student areas for pilot trainees; improvements to streets, sidewalks, and bike lanes, a new communications building; and an outdoor event field for special activities. These projects would include demolition of an existing building that houses a part of the Laughlin AFB communications squadron.

Under Alternative 1, 41,653 square feet (ft²) of existing building space would be demolished: B-472 (community event complex), B-476 (CDC), and B-348 (communications squadron building). Approximately 144,392 ft² of new buildings would be constructed, for a net increase in building footprint of 102,739 ft². A total of 96,958 ft² of existing buildings would be renovated. Implementation of Alternative 1 also would increase the amount of impervious surface on Base by 312,000 ft², most of which would be parking areas. Alternative 2 differs only by which buildings would be demolished and constructed. Buildings B-472 and B-476 would not be demolished under Alternative 2. The Air Force would renovate B-472 instead of constructing a new event conference complex. All other proposed projects would remain the same. The net increase in building footprint under Alternative 2 would be 62,935 ft² from the construction of 73,805 ft² of new buildings and demolition of 10,870 ft² (B-348). A total of 118,592 ft² of existing buildings would be renovated.

The Air Force proposes to implement the projects from approximately 2023 to 2033. The intent of these projects is to provide improvements necessary to support the mission of Laughlin AFB and its tenant units. The proposed projects were identified as priorities for the Installation for the improvement of the physical infrastructure and functionality of Laughlin AFB including current and future mission and facility requirements. All projects under the Proposed Action would occur entirely within the boundary of Laughlin AFB and within existing developed areas of the Base. A location map of each proposed project location is attached (**Attachment 2**).

Purpose and Need

The overall purpose of the Proposed Action is to support Laughlin AFB's current and future mission of training the next generation of Air Force pilots. The construction of new facilities, renovations and repair of existing facilities, demolition of obsolete facilities, and consolidation of mission support functions would address existing deficiencies in support facilities at Laughlin AFB. Left unchecked, deficiencies in facilities and infrastructure would degrade the Base's ability to meet Air Force current and future pilot training mission requirements. The Proposed Action is needed to provide facilities and infrastructure that are adequate to meet the training requirements of the 47th Flying Training Wing (FTW) at Laughlin AFB.

The purpose of the projects in the Community and Services District is to provide modern, centralized, multi-use facilities that improve the living support amenities for those that work, live, and visit the Base, while providing for future development of the mission. The projects in the Community and Services District are needed to provide a connected, consolidated campus that supports the mission of the 47 FTW, as many of the existing facilities do not meet the current or future needs of the students and employees at Laughlin AFB. Students, staff, and visitors are currently required to use deteriorating buildings that are not large enough to support the current needs of the temporary and permanent populations on Base.

The purpose of the projects in the Training District is to provide modern, accessible, multi-use facilities that directly support student pilots and their associated support personnel. The projects would provide well developed and connected operations and community areas. Currently, facilities in the Training District are in various states of disrepair and are inefficiently located based on current and future use. Implementation of projects in the Training District

under the Proposed Action would meet the need by relocating functions, creating additional parking space, adding sidewalks and/or bike lanes to connect areas of the campus, and adding student areas.

Environmental Assessment

The EA will assess the potential environmental consequences of the Proposed Action and No Action Alternative. Potential impacts identified during the initial planning stages include effects on air quality, infrastructure/utilities, biological and cultural resources, geological resources, and water resources. The EA will also examine the cumulative effects when combined with past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB.

We intend to provide the Texas State Historic Preservation Office with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Laughlin AFB does not know of any historic properties of religious and cultural significance or eligible for listing on the National Register of Historic Places within the project's proposed APE. Nevertheless, we ask for your assistance in identifying any historic properties of which we may be unaware, particularly those that may be affected by the proposed undertaking described above, and in defining the APE.

To ensure the Air Force has sufficient time to consider your input in the preparation of the Draft EA, and for compliance with Section 106 of the NHPA, please forward your written comments or requests for additional information to Ms. Laura Meyer Frerich, Air Force 47 CES/CEIE, 251 4th Street, Building 100, Laughlin AFB, Texas 78843, by email to laura.meyer_frerich@us.af.mil, or by phone at (830) 298-5694. We request your comments within 30 days of receipt of this letter to ensure we can address them during the environmental impact analysis process. Thank you for your assistance.

Sincerely,

CASEY.JOHN.JOS
EPH.1022686875

Digitally signed by
CASEY.JOHN.JOSEPH.1022686
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Date: 2022.07.26 17:44:32 -05'00'

JOHN J. CASEY, Lt Col, USAF
Commander, 47th Civil Engineer Squadron

2 Attachments:

1. Planning Districts Map of Laughlin AFB
2. Project Locations at Laughlin AFB



**DEPARTMENT OF THE AIR FORCE
47TH FLYING TRAINING WING (AETC)**

25 July 2022

Colonel Craig D. Prather
47 FTW Wing Commander
561 Liberty Drive, Suite 1
Laughlin AFB, TX 78843

Estavio Elizondo
Chairman
Kickapoo Traditional Tribe of Texas
2212 Rosita Valley Rd.
Eagle Pass TX 78852-9752

Dear Chairman Elizondo

The United States Air Force (Air Force) is preparing an Environmental Assessment (EA) for proposed area development plan (ADP) projects in accordance with planning documents for the Community and Services District and Training District at Laughlin Air Force Base (AFB) near Del Rio, Val Verde County, Texas (**Attachment 1**). These projects constitute a federal undertaking pursuant to Section 106 of the *National Historic Preservation Act* (NHPA) (36 Code of Federal Regulations [CFR] § 800.16(y)). Accordingly, the Air Force seeks consultation with the Kickapoo Traditional Tribe of Texas.

Pursuant to Section 106 of the NHPA, implementing regulations at 36 CFR Part 800, and Department of Defense (DoD) Instruction 4710.02, *DoD Interactions with Federally Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action. Pursuant to 36 CFR §§ 800.4(a) and (b), we request your assistance in defining the Area of Potential Effect (APE) and help us fulfill our obligations pursuant to 36 CFR § 800.4(a)(4) by identifying any such properties within the project's APE that are of historical significance. Historic properties include archaeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural properties and landscapes, plant and animal communities, and buildings and structures with significant tribal association. Regardless of whether the Kickapoo Traditional Tribe of Texas chooses to consult on this project, the Air Force will comply with the *Native American Graves Protection and Repatriation Act* (NAGPRA) by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Texas State Historic Preservation Office.

Proposed Action and Project Location

The Proposed Action in the Community and Services District includes six new construction projects: a community event complex, modular officer dorms, expansion of the family camp for RV parking, a new Pre-K–6 elementary school, a self-service gas station, and a child development center (CDC). The renovation of four existing buildings includes an officer dorm, an event center, a youth center, and the Exchange. Two buildings, Club XL and the existing CDC, would potentially be demolished.

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The Air Force proposes to implement the projects from approximately 2023 to 2033. The intent of these projects is to provide improvements necessary to support the mission of Laughlin AFB and its tenant units. The proposed projects were identified as priorities for the Installation for the improvement of the physical infrastructure and functionality of Laughlin AFB including current and future mission and facility requirements. All projects under the Proposed Action would occur entirely within the boundary of Laughlin AFB and within existing developed areas of the Base. A location map of each proposed project location is attached (**Attachment 2**).

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Environmental Assessment

The EA will assess the potential environmental consequences of the Proposed Action and No Action Alternative. Potential impacts identified during the initial planning stages include effects on air quality, infrastructure/utilities, biological and cultural resources, geological resources, and water resources. The EA will also examine the cumulative effects when combined with past, present, and reasonably foreseeable environmental trends and planned actions at Laughlin AFB.

As a government-to-government consultation, we would appreciate any input regarding concerns of potential effects of the Proposed Action. NHPA requires that federal agencies consult with tribes when an agency action might affect historic properties of religious and cultural significance to the tribes. To help us fulfill that obligation, I ask for your assistance in defining the APE and in identifying any such properties within the project's APE that are of significance.

We intend to provide the Kickapoo Traditional Tribe of Texas with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Laughlin AFB does not know of any historic properties of religious and cultural significance within the project's proposed APE. Nevertheless, we ask for your assistance in identifying any historic properties of which we may be unaware, particularly those that may be affected by the proposed undertaking described above.

Please indicate below (see **Attachment 3**) whether you will be providing information or would like to consult on this undertaking. Your choice applies only to providing information and consultations under the NHPA. It will not affect the handling or disposition of human remains,

funerary objects, sacred objects, or objects of cultural patrimony under NAGPRA. In the event such items are discovered, we will contact you regarding their handling and disposition.

If you have any questions, please contact Ms. Laura Meyer Frerich, 47 CES/CEIE, 251 4th Street, Building 100, Laughlin AFB, Texas 78843, at laura.meyer_frerich@us.af.mil, or by phone at (830) 298-5694. Thank you in advance for your assistance in this effort.

PRATHER.CRAIG.D.1187827929
G.D.1187827929

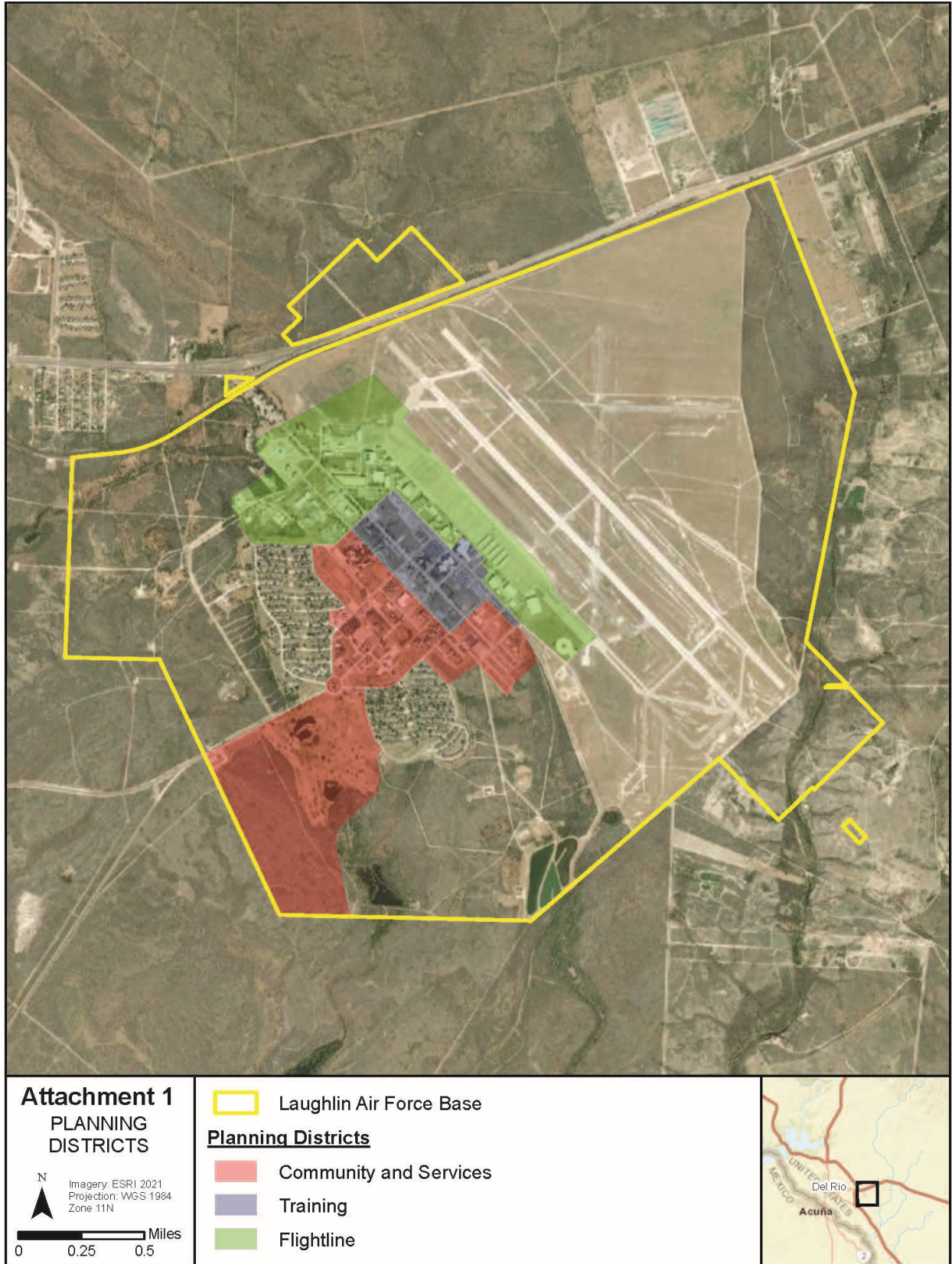
Digitally signed by
PRATHER.CRAIG.D.1187827929
Date: 2022.07.15 11:34:43 -05'00'

CRAIG D. PRATHER, Colonel, USAF
Commander, 47th Flying Training Wing

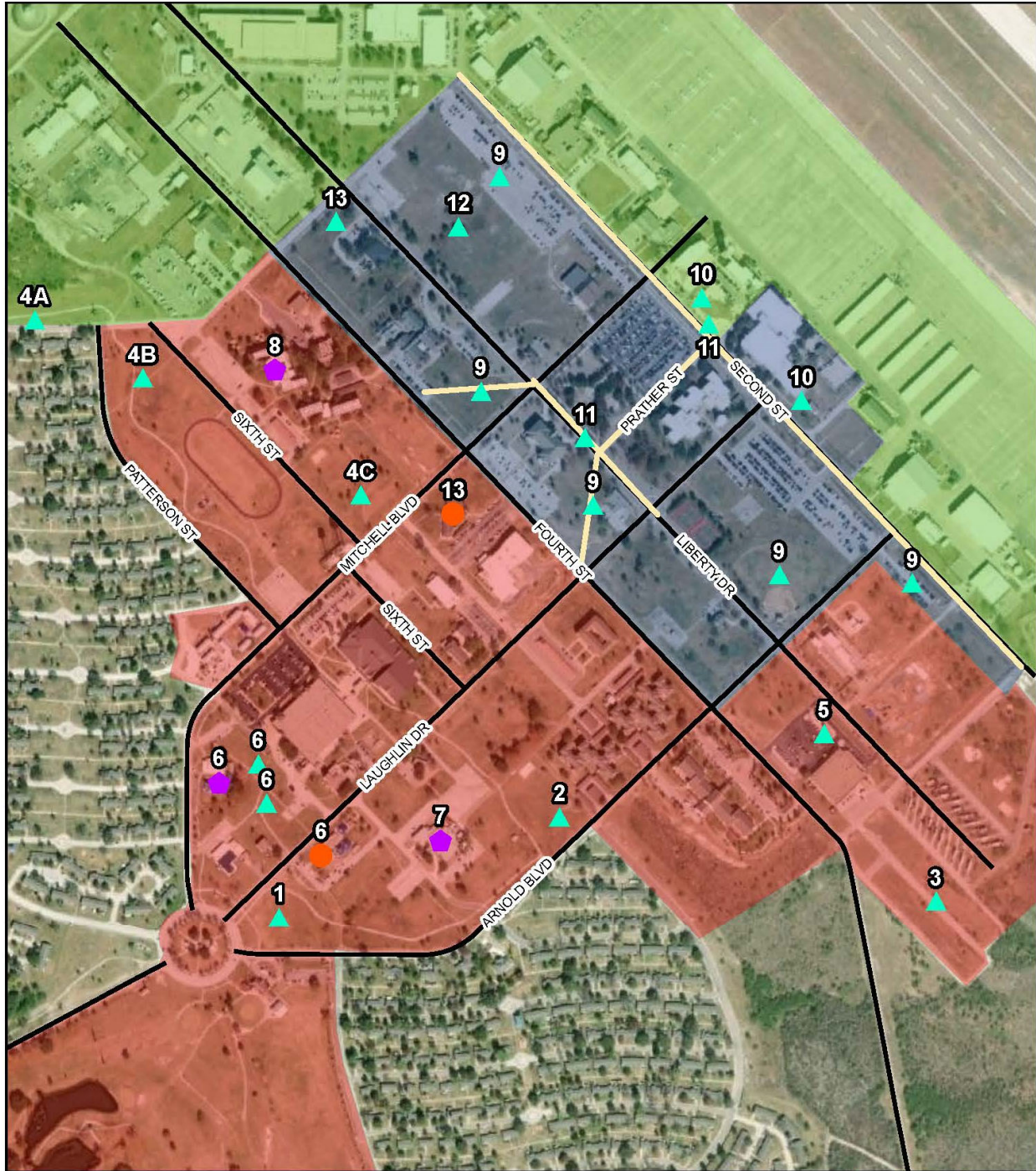
3 Attachments:

1. Planning Districts Map of Laughlin AFB
2. Project Locations at Laughlin AFB
3. Letter Response


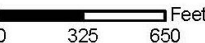
Attachment 1 – Planning Districts Map of Laughlin AFB



Attachment 2 – Project Locations at Laughlin AFB



Attachment 2 PROJECT LOCATIONS

 Imagery: ESRI 2021
 Projection: WGS 1984
 Zone 11N
 Feet
 0 325 650

 Laughlin Air Force Base  Road

Project Type

-  Construction
-  Demolition
-  Renovation
-  Linear Project

Planning Districts

-  Community and Services
-  Flightline
-  Training



Attachment 3 – Proposed ADP Projects for Laughlin AFB

Letter Response

The Kickapoo Traditional Tribe of Texas has determined that:

- Historic properties of religious and cultural significance to the Kickapoo Traditional Tribe of Texas are not present on or within the project's APE; therefore, consultation is not required at this time.
- Historic properties of religious and cultural significance to the Kickapoo Traditional Tribe of Texas are present on or within the project's APE, but consultation is not required at this time because the properties will not be affected by the proposed undertaking.
- Historic properties of religious and cultural significance to the Kickapoo Traditional Tribe of Texas are present on or within the project's APE, and the tribe desires to consult on this and future projects.

- Other:

Print Name

Signature

Position

Date



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Austin Ecological Services Field Office

10711 Burnet Road, Suite 200

Austin, TX 78758-4460

Phone: (512) 490-0057 Fax: (512) 490-0974

<http://www.fws.gov/southwest/es/AustinTexas/>

<http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>

In Reply Refer To:

April 20, 2022

Project Code: 2022-0034155

Project Name: EA for Installation Development Plan Projects at Laughlin Air Force Base, Val Verde County, Texas

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Austin Ecological Services Field Office

10711 Burnet Road, Suite 200

Austin, TX 78758-4460

(512) 490-0057

Project Summary

Project Code: 2022-0034155
Event Code: None
Project Name: EA for Installation Development Plan Projects at Laughlin Air Force Base, Val Verde County, Texas
Project Type: Military Development
Project Description: The United States Air Force (Air Force) is preparing an Environmental Assessment (EA) for proposed Area Development Plan (ADP) projects in accordance with planning documents for the Community and Services District and Training District at Laughlin Air Force Base (AFB), near Del Rio, Val Verde County, Texas. The overall purpose of the Proposed Action is to support Laughlin AFB's current and future mission of training the next generation of Air Force pilots. The construction of new facilities, renovations and repair of existing facilities, demolition of obsolete facilities, and consolidation of mission support functions would address existing deficiencies in support facilities at Laughlin AFB. Left unchecked, deficiencies in facilities and infrastructure would degrade the Base's ability to meet Air Force current and future pilot training mission requirements. The Proposed Action is needed to provide facilities and infrastructure that are adequate to meet the training requirements of the 47 FTW at Laughlin AFB.

The Proposed Action in the Community and Service District includes a potential of seven new construction projects. These projects include a community event complex, modular officer dorms, expansion of the family camp for RV parking, a new Pre-K-6 elementary school, a self-serve gas station, and child development center. The renovation of four existing buildings (building #) includes an officer dorm (B-255), an event center (B-472), a youth center (B-390), and the Exchange (B-446). Two buildings, Club XL (B-472) and the existing Child Development Center (B-476), would potentially be demolished depending on the Action Alternative chosen for implementation. The Proposed Action in the Training District include five potential construction projects including expansion of campus parking areas; outdoor student areas for pilot trainees; improvements to streets, sidewalks, and bike lanes, a new communications building; and an outdoor event field for special activities. These projects would include demolition of an existing building (B-348) that houses a part of the Laughlin AFB 47th Communication Squadron.

Overall, the Proposed Action would demolish 10,870 to 41,653 square feet (ft²) of existing building space and construct approximately 73,805 to 144,392 ft² of new building space depending on which alternatives are selected for implementation. The net change in building footprint under the Proposed Action would be an increase of 62,935 to 102,739 ft².

Renovations of existing buildings would range for 96,958 to 118,592 ft². Implementation of the Proposed Action would increase the amount of impervious surface on Base by 287,000 to 312,000 ft², most of which would be parking areas.

The Air Force proposes to implement the projects from approximately 2023 to 2027. The intent of these projects is to provide improvements necessary to support the mission of Laughlin AFB and its tenant units. The proposed projects were identified as priorities for the Installation for the improvement of the physical infrastructure and functionality of Laughlin AFB including current and future mission and facility requirements. All projects under the Proposed Action would occur entirely within the boundary of Laughlin AFB and within existing developed areas of the Base.

The EA will assess the potential environmental consequences of the Proposed Action and No Action Alternative.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@29.357543900000003,-100.78615284187387,14z>



Counties: Kinney and Val Verde counties, Texas

Endangered Species Act Species

There is a total of 14 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Golden-cheeked Warbler <i>Setophaga chrysoparia</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/33	Endangered
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

Amphibians

NAME	STATUS
San Marcos Salamander <i>Eurycea nana</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6374	Threatened
Texas Blind Salamander <i>Eurycea rathbuni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5130	Endangered

Fishes

NAME	STATUS
Devils River Minnow <i>Dionda diaboli</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7661	Threatened
Fountain Darter <i>Etheostoma fonticola</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5858	Endangered
Mexican Blindcat (catfish) <i>Prietella phreatophila</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7657	Endangered
Rio Grande Silvery Minnow <i>Hybognathus amarus</i> Population: Rio Grande, from Little Box Canyon to Amistad Dam No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1391	Experimental Population, Non- Essential

Clams

NAME	STATUS
Texas Hornshell <i>Popenaias popeii</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/919	Endangered

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Texas Snowbells <i>Styrax platanifolius ssp. texanus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5214	Endangered
Texas Wild-rice <i>Zizania texana</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/805	Endangered
Tobusch Fishhook Cactus <i>Sclerocactus brevihamatus ssp. tobuschii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2221	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: Air Force
Name: Ronald Green
Address: Environmental Assessment Services
Address Line 2: 4812 Pinon Drive
City: Las Vegas
State: NV
Zip: 89130
Email: ronald.green@easbio.com
Phone: 7026839621

APPENDIX B
AIR QUALITY ANALYSIS BACK-UP

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AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force 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: LAUGHLIN AFB
State: Texas
County(s): Val Verde
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Laughlin Proposed ADP

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2023

e. Action Description:

See DOPAA for full description:

Under Alternative 1, the Proposed Action would include construction, renovation, demolition, and infrastructure development projects (see Section 2.2). Project 1 (Event Center) and Project 13 (Communications Building) would also involve building demolition (Tables 2-1 and 2-2). Under Alternative 1, the five new construction projects would add approximately 144,392 ft² (Table 2-5). The demolition components would remove approximately 41,653 ft² of space for a net gain in building footprint of 90,541 ft². Because Ricks Hall is currently vacant and uninhabitable, its renovation would increase the useable building space by 52,859 ft². Under Alternative 1, 96,958 ft² of building space would be renovated, including Ricks Hall (B-255), the Main Exchange (B-450), and the Youth Center (B-390). Approximately 260,000 ft² of new parking lot and 52,000 ft² of non-turf surface (play surface for the school) would be constructed, for a total added 312,000 ft² of impervious surface. Infrastructure improvements would be implemented along approximately 2 miles of street. Approximately 318,511 ft² of useable outdoor space would be created. This area would include a new fueling station near the Main Exchange, additional recreational vehicle space at the Family Camp, student areas near the academic buildings, and an Event Field for large special events.

Reasonable alternatives for the projects listed in Section 2.2 were determined to exist for the CDC/Youth Center (Project 6), Club XL (Project 7), and the Pre-K-6 school (Project 4) based on the selection standards outlined in Section 2.3. No other reasonable alternatives meeting the selection standards were identified for other projects. Therefore, the project list under Alternative 2 would remain the same as Alternative 1 with the following exceptions:

- A new CDC building and parking area would not be constructed near the Youth Center, but the Youth Center would still be renovated.
- The Events/Conference Center would not be constructed.
- Club XL would be renovated.
- The Pre-K-6 school would be constructed on Site B (Figure 2-1, Project 8B).

Under Alternative 2, the Pre-K-6 school would be constructed on Site B. Site B is located northwest of the Laughlin AFB running track between Patterson Street and 6th Street in the northwest part of the Base (Figure 2-1). To accommodate the approximately 6.5 acres required for the school facilities, the land along Patterson Street, southwest of the running track, would be needed in addition to the land on the northwest end of the running track. Site B is located on Base, is adjacent to the housing area within reasonable walking distance, and is outside the 65-decibel noise contour.

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

Under Alternative 2, three building construction projects would be completed for an increase of 73,805 ft² of building space. A total of 118,592 ft² of building space would be renovated. Under Alternative 2, a total of 10,870 ft² of building space would be demolished. The net increase in building space under Alternative 2 would be about 62,935 ft². A total of 287,000 ft² of impervious surface would be constructed under Alternative 2, including 235,000 ft² of parking area and 52,000 ft² of play area for school project. All proposed projects would meet the selection standards listed in Section 2.3 and would remedy facility deficiencies, be consistent with land use requirements, increase operational efficiencies and sustainable development, and improve the quality of life.

Under the No Action Alternative, the Air Force would not implement the proposed installation development projects, and Laughlin AFB would continue to operate under current conditions. The facility and infrastructure assets of Laughlin AFB would continue to degrade. In the short term, military training and operations would continue at Laughlin AFB in accordance with the status quo. Over time, the mission support capabilities of the Base would diminish along with its ability to support the future missions and requirements of its tenant activities.

f. Point of Contact:

Name: Rebecca Steely
Title: Environmental Planner
Organization: Environmental Assessment Services, LLC
Email: Rebecca.Steely@easbio.com
Phone Number: (585) 410-1110 Mobile

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

 applicable
 X not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving “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 air quality based on current ambient air 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 achieving steady state were compared against the Insignificance Indicator and are summarized below.

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

Analysis Summary:

2023

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.907	250	No
NOx	2.072	250	No
CO	2.511	250	No
SOx	0.006	250	No
PM 10	6.853	250	No
PM 2.5	0.088	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	559.0		

2024

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.894	250	No
NOx	1.988	250	No
CO	2.545	250	No
SOx	0.006	250	No
PM 10	6.847	250	No
PM 2.5	0.083	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	626.3		

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.882	250	No
NOx	1.919	250	No
CO	2.581	250	No
SOx	0.006	250	No
PM 10	6.843	250	No
PM 2.5	0.079	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	693.7		

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

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.885	250	No
NOx	1.975	250	No
CO	2.628	250	No
SOx	0.007	250	No
PM 10	6.847	250	No
PM 2.5	0.083	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	761.1		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.869	250	No
NOx	1.915	250	No
CO	2.485	250	No
SOx	0.007	250	No
PM 10	6.848	250	No
PM 2.5	0.083	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	793.9		

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.015	250	No
NOx	0.280	250	No
CO	0.235	250	No
SOx	0.002	250	No
PM 10	0.021	250	No
PM 2.5	0.021	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	336.9		

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.

Rebecca Steely , Environmental Planner

DATE

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force 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: LAUGHLIN AFB
State: Texas
County(s): Val Verde
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Laughlin Proposed ADP

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2023

e. Action Description:

See DOPAA for full description:

Under Alternative 1, the Proposed Action would include construction, renovation, demolition, and infrastructure development projects (see Section 2.2). Project 1 (Event Center) and Project 13 (Communications Building) would also involve building demolition (Tables 2-1 and 2-2). Under Alternative 1, the five new construction projects would add approximately 144,392 ft² (Table 2-5). The demolition components would remove approximately 41,653 ft² of space for a net gain in building footprint of 90,541 ft². Because Ricks Hall is currently vacant and uninhabitable, its renovation would increase the useable building space by 52,859 ft². Under Alternative 1, 96,958 ft² of building space would be renovated, including Ricks Hall (B-255), the Main Exchange (B-450), and the Youth Center (B-390). Approximately 260,000 ft² of new parking lot and 52,000 ft² of non-turf surface (play surface for the school) would be constructed, for a total added 312,000 ft² of impervious surface. Infrastructure improvements would be implemented along approximately 2 miles of street. Approximately 318,511 ft² of useable outdoor space would be created. This area would include a new fueling station near the Main Exchange, additional recreational vehicle space at the Family Camp, student areas near the academic buildings, and an Event Field for large special events.

Reasonable alternatives for the projects listed in Section 2.2 were determined to exist for the CDC/Youth Center (Project 6), Club XL (Project 7), and the Pre-K-6 school (Project 4) based on the selection standards outlined in Section 2.3. No other reasonable alternatives meeting the selection standards were identified for other projects. Therefore, the project list under Alternative 2 would remain the same as Alternative 1 with the following exceptions:

- A new CDC building and parking area would not be constructed near the Youth Center, but the Youth Center would still be renovated.
- The Events/Conference Center would not be constructed.
- Club XL would be renovated.
- The Pre-K-6 school would be constructed on Site B (Figure 2-1, Project 8B).

Under Alternative 2, the Pre-K-6 school would be constructed on Site B. Site B is located northwest of the Laughlin AFB running track between Patterson Street and 6th Street in the northwest part of the Base (Figure 2-1). To accommodate the approximately 6.5 acres required for the school facilities, the land along Patterson Street, southwest of the running track, would be needed in addition to the land on the northwest end of the running track. Site B is located on Base, is adjacent to the housing area within reasonable walking distance, and is outside the 65-decibel noise contour.

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Under Alternative 2, three building construction projects would be completed for an increase of 73,805 ft² of building space. A total of 118,592 ft² of building space would be renovated. Under Alternative 2, a total of 10,870 ft² of building space would be demolished. The net increase in building space under Alternative 2 would be about 62,935 ft². A total of 287,000 ft² of impervious surface would be constructed under Alternative 2, including 235,000 ft² of parking area and 52,000 ft² of play area for school project. All proposed projects would meet the selection standards listed in Section 2.3 and would remedy facility deficiencies, be consistent with land use requirements, increase operational efficiencies and sustainable development, and improve the quality of life.

Under the No Action Alternative, the Air Force would not implement the proposed installation development projects, and Laughlin AFB would continue to operate under current conditions. The facility and infrastructure assets of Laughlin AFB would continue to degrade. In the short term, military training and operations would continue at Laughlin AFB in accordance with the status quo. Over time, the mission support capabilities of the Base would diminish along with its ability to support the future missions and requirements of its tenant activities.

f. Point of Contact:

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

applicable
 not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving “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 air quality based on current ambient air 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 achieving steady state were compared against the Insignificance Indicator and are summarized below.

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

Analysis Summary:

2023

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.820	250	No
NOx	2.058	250	No
CO	2.504	250	No
SOx	0.006	250	No
PM 10	6.249	250	No
PM 2.5	0.087	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	549.8		

2024

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.806	250	No
NOx	1.958	250	No
CO	2.526	250	No
SOx	0.006	250	No
PM 10	6.243	250	No
PM 2.5	0.081	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	599.1		

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.794	250	No
NOx	1.874	250	No
CO	2.549	250	No
SOx	0.006	250	No
PM 10	6.238	250	No
PM 2.5	0.076	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	648.3		

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

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.796	250	No
NOx	1.915	250	No
CO	2.583	250	No
SOx	0.006	250	No
PM 10	6.241	250	No
PM 2.5	0.079	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	697.6		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.779	250	No
NOx	1.840	250	No
CO	2.427	250	No
SOx	0.006	250	No
PM 10	6.240	250	No
PM 2.5	0.078	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	712.4		

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR: Indicator (ton/yr)	INSIGNIFICANCE INDICATOR: Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.011	250	No
NOx	0.205	250	No
CO	0.172	250	No
SOx	0.001	250	No
PM 10	0.016	250	No
PM 2.5	0.016	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	246.4		

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.

Rebecca Steely , Environmental Planner

DATE