EAXX-007-21-001-1757002971

INTRODUCTION

The U.S. Army (Army) has prepared an Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) (Title 42 United States Code (USC) § 4321 et seq.); US Department of Defense (DoD) NEPA Implementing Procedures issued 30 June, 2025; Army Guidance – DoD NEPA Implementing Procedures issued 08 August, 2025; and Army Regulation (AR) 200-1, Environmental Protection and Enhancement.

The Fort Hood Line Haul Facility EA evaluates the potential environmental effects of constructing a new logistics facility, the Fort Hood Line Haul Facility, at Fort Hood, Texas. For the purposes of accommodating personnel, military vehicles, and equipment, the proposed project would construct a staging/marshalling area with container loading aprons for line haul operations at Fort Hood. This Finding of No Significant Impact (FONSI) summarizes the proposed action, alternatives considered, environmental consequences, and public involvement and coordination efforts.

ALTERNATIVE 1 - PROPOSED ACTION

The Army's proposed action is to construct a new 1,066 square foot (SF) Logistics, Line Haul Operations Building south of Building 89010 to support a new staging and marshalling area with container loading aprons for line haul operations. Primary facilities include staging/marshalling area, operations building, loading/unloading docks and ramps, non-organizational vehicle parking, and building information systems. Supporting facilities include electrical, water, sanitary sewer, exterior lighting, fencing, paving, walkways, storm drainage, information systems, and site improvements. Extensive site work is required for this project. Special foundation work is required due to expansive soils. Measures in accordance with the DoD Minimum Antiterrorism for Buildings standards will be provided. Comprehensive building plans and furnishings related to interior design services are required. Access for individuals with disabilities will be provided in accordance with the Architectural Barriers Act (ABA). Heating, ventilation, and air conditioning (HVAC) will be provided by self-contained systems. Utility connections are required to privatized electrical, natural gas, water, and wastewater systems.

The proposed action would clear approximately 9 acres of bare and scrub/shrub land, remove approximately 45 trees, and indirectly disturb an additional 15 acres of adjacent land to replant trees. Trees removed by the proposed action would be replanted in accordance with Fort Hood's 2024 Tree Care Ordinance; a minimum of 200 trees would be replanted in any combination of Bald Cypress (*Taxodium distichum*) within the construction area and native non-fruit bearing trees in the adjacent area.

NO ACTION ALTERNATIVE

Under the no action alternative, the line haul yard and new operations building would not be built, and no support facilities would be in place to accommodate personnel and brigade sized movements. Additionally, military vehicles and equipment would continue to be stored and deployed from inadequately sized and heavily deteriorated facilities.

SUMMARY OF ENVIRONMENTAL EFFECTS

Each resource area was analyzed for potential impacts resulting from the proposed action and alternatives, including any reasonably foreseeable effects. Potential impacts from implementation of the action can be both beneficial and adverse. The degree of environmental beneficial and adverse impacts is characterized as none, negligible, minor, less than significant, significant but mitigable, and significant.

Impacts are anticipated to be minimized through avoidance and/or implementation of existing environmental protection measures. Avoidance strategies depend on the alternative selected and when construction activities are planned. Examples of environmental protection measures would include implementing erosion and sedimentation and stormwater control measures, maintaining vehicles and equipment, and sustaining revegetation cover at the construction site. The Army will continue to adhere to legal and regulatory requirements and continue to implement its approved management plans, Standard Operations Procedures (SOPs), and Best Management Practices (BMPs).

Implementation of the selected alternative may require additional site-specific analyses, including follow-on NEPA evaluations, to address actions necessary for site development, utility tie-ins, and stormwater improvements. With the implementation of identified mitigation measures and other environmental best practices, and evaluation of site-specific design plans, no significant impacts are anticipated from the proposed action or action alternatives addressed in this EA.

The analysis in the EA determined that specific actions at Fort Hood would be necessary to mitigate potential impacts associated with the proposed action on various resource areas, ensuring that these impacts are less than significant. These impacts and subsequent mitigation measures are detailed by resource area as described below.

Air Quality – negligible

- *Impacts:* The proposed action would cause a slight increase in regional emissions due to the use of heavy machinery and construction equipment involved with construction of the Line Haul Facility. Construction would also generate fugitive dust that would temporarily increase PM10 and PM2.5 emissions. However, the slight increase in emissions caused by the proposed action would not be detectible from the existing conditions for air quality and

would not cause local air quality to exceed air quality standards. The No Action Alternative would have no effects on air quality, as no construction would occur.

- *Mitigation(s):* Emissions and fugitive dust generated during construction of the proposed action would be largely confined through BMPs and SOPs as determined by Fort Hood based on site specific conditions.

Biological Resources – less than significant

- *Impacts:* The proposed action would cause minor adverse impacts due to the clearing, removal, or alteration of 9 acres of scrub/shrub habitat in the construction area, removal of 45 trees, and due to the disturbance of the surrounding 15 acres within the tree-replanting area. Removal of deciduous trees would reduce the available habitat for the proposed listed tricolored bat. Impacts within the construction area would primarily be caused by vegetation loss, soil compaction, rutting, and dust generation. Impacts within the tree-replanting area would primarily be caused by limited vegetation clearing and the removal of soil for saplings. There is a potential for the proposed action to contribute to adverse drainage and runoff during construction. The No Action Alternative would not have any effects on Biological Resources, as no construction would occur.
- *Mitigation(s):* Fort Hood actively employs land rehabilitation and maintenance actions to mitigate erosion, sedimentation, leaching of contaminants, drainage, and runoff. No federally listed species are expected to occur within the project area, nor do they have reported critical habitat. In consideration of Endangered Species Act and Migratory Bird Treaty Act species, removal of deciduous trees within the project area would be temporally limited to avoid the nesting season (March 15 to August 15) as applicable. Impacts from thinning the forested area should be further reduced though native landscaping after construction. Removal of herbaceous ground cover would be considered during planning the proposed action to limit impacts to the Monarch Butterfly spring (February-March) and fall (August-October) migrations. Fort Hood would further mitigate impacts to Biological Resources through established BMPs, SOPs, and the creation and implementation of a Storm Water Pollution Protection Plan (SWPP). Trees removed by construction of the proposed action would be replanted in compliance with Fort Hood's 2024 Tree Care Ordinance; a minimum of 200 trees would be replanted in any combination of Bald Cypress within the construction area and non-fruit bearing trees in the adjacent area.

Cultural, Historical, and Archaeological Resources – less than significant

- *Impacts:* Alternative 1 would involve construction activities across approximately 24 acres. The project area was completely surface surveyed for cultural resources, with the western quad surveyed in 1980 (Report No. 3) and the eastern quad surveyed in 1978 (Report No. 1). The 1980 and 1978 surveys did

not identify any cultural resources within the proposed project area (Skinner et al., 1981; Dibble et al., 1989). Due to the nature of the project area, there is a low probability for historic properties to occur. Based on the erosional nature of the project area and shallowness of the soils present, there is a low probability for encountering cultural, historical and archeological resources within the proposed project area. Therefore, it is determined that there will be less than significant effects on these resources. Consulting parties may comment on this determination either through the NEPA process or during the Historic Properties Component (HPC) annual review. The No Action alternative does not include any impacts or ground disturbing activities. Therefore, the No Action alternative will have no potential to affect cultural, archaeological, or historic properties.

- *Mitigation(s):* No mitigation is required. There is a low probability for encountering cultural resources. However, if previously unidentified cultural resources are discovered during the course of construction activities, all work in the vicinity shall cease immediately and the Fort Hood Cultural Resources Management Office would be notified. The Army would follow its standard inadvertent discovery procedures and consult with the State Historic Preservation Officer (SHPO) and Native American Tribes as necessary. If human remains are encountered, they would be treated in accordance with the Native American Graves Protection and Repatriation Act and applicable Army policy.

Hazardous, Toxic, Radioactive, or Solid Wastes (HTRW) – negligible

- *Impacts:* The proposed action may plant non-fruit bearing trees within a potential waste disposal site. No official documentation is available at this time to determine the nature of this site, nor is there sufficient documentation to determine if the site should be pursued as a Recognized Environmental Condition (REC). Based on available information regarding the potential waste disposal site, the area is unlikely to contain hazardous materials and instead likely contains construction debris/residential waste. The proposed action is expected to have negligible impacts to HTRW resources based on current information, however, if there is HTRW material contamination at the site, significant effects could occur. The No Action Alternative would not have any effects on HTRW resources as no construction would occur.
- *Mitigation(s):* Construction workers would be required to follow Fort Hood procedures for the safe storage, handling, and disposal of hazardous substances, including compliance with spill prevention and control requirements. Any accidental releases would be managed in accordance with the installation's spill response protocols. Construction personnel would receive appropriate training, and equipment refueling would occur away from storm drains or sensitive areas. When planning the locations of non-fruit bearing tree plantings, the Army will consider avoiding the potential waste disposal site to further minimize potential impacts to HTRW resources.

Noise – less than significant

- *Impacts:* The proposed action would cause minor adverse impacts to noise in the areas adjacent to the project area. Adverse impacts would result primarily from construction equipment use and increased traffic during construction as well as during operation of the proposed action. There are no known noise sensitive resources near the project area. The No Action Alternative would not have any effects on noise, as no construction would occur, and the facility would not be in operation.
- *Mitigation(s):* Construction noise would be limited to reasonable hours as defined by relevant local codes and regulations, minimizing impacts to the local community. Noise associated with the proposed action would be managed in accordance with existing ordinances regulating noise and temporal considerations of noise as it relates to construction on the installation.

Socioeconomics – negligible

- *Impacts:* Construction of the new facilities could cause increased temporary employment opportunities, logistics volumes, and incomes during construction. The proposed action's effects on socioeconomics are expected to be negligible compared to the existing conditions for population, incomes, logistics volume, or employment as they are primarily expected to be temporary and associated with construction. The No Action Alternative would have no effects on socioeconomic conditions, as the new facilities would not be built.
- *Mitigation(s):* None needed, in terms of race and origin, the Army population generally reflects the diversity across the U.S. Actions associated with the construction of the line haul facility, would occur within the boundaries of the installation and therefore would not cause disproportionately high or adverse human health or environmental effects on local populations.

Topography, Geology, and Soils – less than significant

- *Impacts:* The proposed action would clear 9 acres of undeveloped bare and scrub/shrub land, as well as disturb an additional 15 acres in the surrounding area to replant trees removed during construction. Clearing and grubbing in the overall project area may contribute to increased erosion and shifted drainage patterns within the project area. The No Action Alternative would not have any effects on topography, geology, or soils since no construction would occur.
- *Mitigation(s):* Under the proposed action, standard erosion and sediment control measures would be implemented to minimize soil loss during construction. These would include use of stabilized construction entrances, silt fencing, temporary stormwater conveyance features, and prompt revegetation or stabilization of disturbed areas. A Storm Water Pollution Prevention Plan (SWPPP) would be

developed and implemented during construction, and disturbed soils would be returned to preconstruction contours where feasible.

Transportation and Traffic – negligible

- *Impacts:* Construction of the Line Haul Facility under the proposed action would cause an increase in traffic conditions surrounding the project area. Impacts to transportation and traffic during construction would be temporary, however a negligible increase in permanent traffic conditions would occur since the proposed action would build a new logistics facility focused on the transportation of large vehicles and machinery. The No Action Alternative would have no effects on transportation or traffic since no construction would occur.
- *Mitigation(s):* Under the proposed action, impacts to transportation and traffic would be mitigated by applying temporal considerations when planning construction working hours and construction vehicle operations with regards to current traffic patterns, demands, and peak traffic hours.

Utilities – negligible

- *Impacts:* The proposed action would construct the Line Haul Facility with electricity, water, sewer, and HVAC supporting facilities. The establishment of new utilities associated with the Line Haul Facility could cause temporary minor utility disruptions on post during construction. Additionally, the new Line Haul Facility may increase utility demand, but the overall load is not expected to increase current installation capacities.
- *Mitigation(s):* All utility connections would be coordinated with the Fort Hood Directorate of Public Works to ensure compatibility with system capacity and to minimize service interruptions. Construction would comply with applicable codes and design standards. Stormwater infrastructure would be designed to manage runoff in accordance with current installation requirements.

Water Resources – less than significant

- *Impacts:* The proposed action would convert approximately 1,066 SF of barren and/or low-quality scrub/shrub habitat into concrete in order to construct the Line Haul Facility. Changes in surface structure within the project area would change the hydrology of the area due to the addition of impervious materials. The proposed action would cause an increase in motor vehicles associated with construction and permanently due to the construction of a new logistics facility. Increases in vehicular activity could contribute to nonpoint source pollutions carried by runoff in the Region of Influence (ROI), which may further contribute to erosion. No wetlands, floodplains, or surface water resources are within the immediate project area as reported by available Federal Emergency Management Agency (FEMA) and U.S. Fish and Wildlife Service (USFWS) data

(FEMA, 2025; USFWS, 2025a). The No Action Alternative would have no effects on water resources, as no construction would occur.

- *Mitigation(s):* Under the proposed action, impacts resulting from the physical alteration of the environment associated with impervious materials and potential increased risk of erosion and runoff would be mitigated by adhering to BMPs and SOPs during planning and construction phases. The development of an approved SWPPP prior to construction and adherence to current regulations for water use and waste disposal at the Line Haul Facility would further mitigate impacts to water resources.

PUBLIC REVIEW AND INTERAGENCY COORDINATION

Introduction

The EA will be made available for a 30-day public review period starting on October 20, 2025 and ending November 19, 2025 to provide stakeholders, agencies, and members of the public with an opportunity to review and comment on the proposed action and potential effects. A Notice of Availability (NOA), the Draft EA, and Draft FONSI will be posted at the following Fort Hood website:

https://home.army.mil/hood/units-tenants/Garrison/DPW/ENV/NOA

To facilitate intergovernmental and interagency coordination of environmental planning (IICEP), Fort Hood will send IICEP letters to government agencies and Native American Tribes requesting their review and input. These letters will be sent to the SHPO, USFWS, the U.S. Environmental Protection Agency, and local Native American Tribes. The Army also reviewed threatened and endangered species information and verified that no critical habitat or protected species would be impacted by the project, in accordance with applicable regulations.

Comments Received and Responses

Any substantive comments will be summarized and added to the Final FONSI.

CONCLUSION

The potential impacts of the proposed action and alternatives have been thoroughly evaluated in the EA prepared for the Fort Hood Line Haul Facility at Fort Hood, Texas. This analysis considered all applicable environmental resource areas and incorporated existing agency agreements, mitigation and public input.

The evaluation determined that the proposed action would not result in significant adverse impacts to human health or the natural environment. Any potential impacts would be less than significant and reduced through implementation of standard environmental protection measures. No significant adverse effects to air quality,

biological resources, cultural resources, water resources, or any other evaluated category are anticipated.

Based on the findings of the EA and the results of agency coordination and public review, the Army has determined that preparation of an Environmental Impact Statement is not required. This decision meets the requirements of NEPA and Army NEPA regulations and has been made after considering all submitted information and examining a full range of reasonable alternatives and all environmental impacts. This concludes the NEPA process for this action.

_____ _____

Mark R. McClellan
Colonel, U.S. Army
Commanding

Date

FINAL FORT HOOD LINE HAUL FACILITY ENVIRONMENTAL ASSESSMENT

FORT HOOD, TEXAS

EAXX-007-21-001-1757002971

Prepared For:

United States Department of the Army

October 2025

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Acronyms and Abbreviations

AAP	Army Alternate Procedures
ABA	Architectural Barriers Act
ACE	Apex Clean Energy
AIRFA	American Indian Religious Freedom Act
AR	Army Regulation
ARPA	Archaeological Resource Protection Act
ASTM	American Society for Testing and Materials
BGEPA	Bald and Golden Eagle Protection Act
BMPs	Best Management Practices
BO	Biological Opinion
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CRDAMC	Carl R. Darnall Army Medical Center
CWA	Clean Water Act
dB	Decibel
dBA	A-Weighted Decibels
DNL	Day-Night Average Sound Level
DoD	Department of Defense
DOL	Directorate of Logistics
DOT	Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMCX	Environmental and Munitions Center of Expertise
EO	Executive Order
ER	Engineering Regulations
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHCRM	Fort Hood Cultural Resource Management
FH-DPW	Fort Hood Directorate of Public Works
FONSI	Finding of No Significant Impact
GIS	Geographic Information Systems
HAAF	Hunter Army Airfield
HM	Hazardous Material
HPC	Historic Properties Component
HTRW	Hazardous Toxic and Radioactive Waste
HW	Hazardous Waste
HVAC	Heating Ventilation and Air conditioning
IMCOM	U.S. Army Installation Management Command
INRMP	Integrated Natural Resource Management Plan
IPaC	Information for Planning and Consultation
lbs	Pounds
LOS	Level of Service

LRC	Fort Hood Logistics Readiness Center
LTA	Live Fire Training Area
MBTA	Migratory Bird Treaty Act
MC	Munitions Constituents
MDO	Multi-Domain Operations
MGD	Million Gallons per Day
MS4	Municipal Separate Storm Sewer System
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NCRMB	Natural and Cultural Resources Management Branch
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NO2	Nitrogen Dioxide
NOI	Notice of Intent
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
O3	Ozone
OPSEC	Operations Security
PA	Proposed Action
PM2.5	Particulate Matter 2.5 Microns
PM10	Particulate Matter 10 Microns
POL	Petroleum, Oil and Lubricants
PPP	Power Projection Platform
psi	Pounds per Square Inch
PTRCI	Properties of Traditional Religious and Cultural Importance
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
REP	Retail Energy Provider
ROI	Region of Influence
RPEC	Regional Planning and Environmental Center
RPPD	Real Property Planning Division
RTEST	Rare, Threatened, and Endangered Species Tool
SF	Square Foot
SGCN	Species of Greatest Conservation Need
SHPO	State Historic Preservation Office
SO2	Sulfur Dioxide
SOPs	Standard Operating Procedures
SSS	Special Status Species
SWP	Strom Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
T&E	Threatened and Endangered
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TPWD	Texas Parks and Wildlife Department

TxDOT	Texas Department of Transportation
U.S.	United States
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Command
USEPA	United States Environmental Protection Agency
USC	United Sates Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOC	Volatile Organic Compounds
WC&ID#1	Water Control and Improvement District Number 1
WFC	West Fort Hood

1 INTRODUCTION

This Environmental Assessment (EA) evaluates the potential environmental effects of constructing a new logistics facility, the Fort Hood Line Haul Facility, at Fort Hood, Texas. The proposed project would construct a staging/marshalling area with container loading aprons for line haul operations at Fort Hood.

The United States (US) Army has prepared this EA in compliance with the *National Environmental Policy Act* (Title 42 United States Code (USC) § 4321 et seq.) (NEPA); US Department of Defense (DoD) NEPA Implementing Procedures issued 30 June 2025; Army Guidance – DoD NEPA Implementing Procedures issued 08 August, 2025; and Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*.

1.1 Purpose and Need for the Action

The purpose of this project is to construct a staging/marshalling area with container loading aprons for line haul operations at Fort Hood.

This project is needed to provide adequate ground-based deployment infrastructure to achieve compliance with the various missions levied against the Fort Hood Logistics Readiness Center (LRC). Shipping and receiving of organizational vehicles and equipment on Army installations are primarily assigned as the responsibility of the installation LRC, formerly the Directorate of Logistics (DOL). The LRC ensures logistics services (e.g., maintenance, transportation, shipping, and receiving) are implemented and managed in accordance with current policy, procedural guidance, and management procedures. In addition to the logistical requirements of a training center and an Army power projection platform (PPP), the Fort Hood LRC Transportation Division provides logistical support to tactical units and Army activities throughout the U.S. by operating one of only two Army mobilization/de-mobilization sites. The Line Haul Yard will be designed to accommodate brigade-sized movements (approximately 3,000 – 5,000 soldiers) and will include support facilities for personnel engaged in such large movements on a temporary basis.

1.2 Background

Fort Hood spans roughly 340 square miles across Coryell and Bell Counties, Texas. It is located approximately 60 miles north of Austin and 50 miles south of Waco (Figure 1). The cities of Killeen and Copperas Cove border the installation, and Interstate 14 runs through the area. Fort Hood is the only Army post in the country capable of hosting and training two armored divisions, thanks to its large size and diverse terrain.

The installation is home to the III Armored Corps and supports a mission focused on global deployment and Multi-Domain Operations (MDO). Fort Hood provides comprehensive support services for soldiers, civilians, families, and retirees, including housing, infrastructure, and recreation.

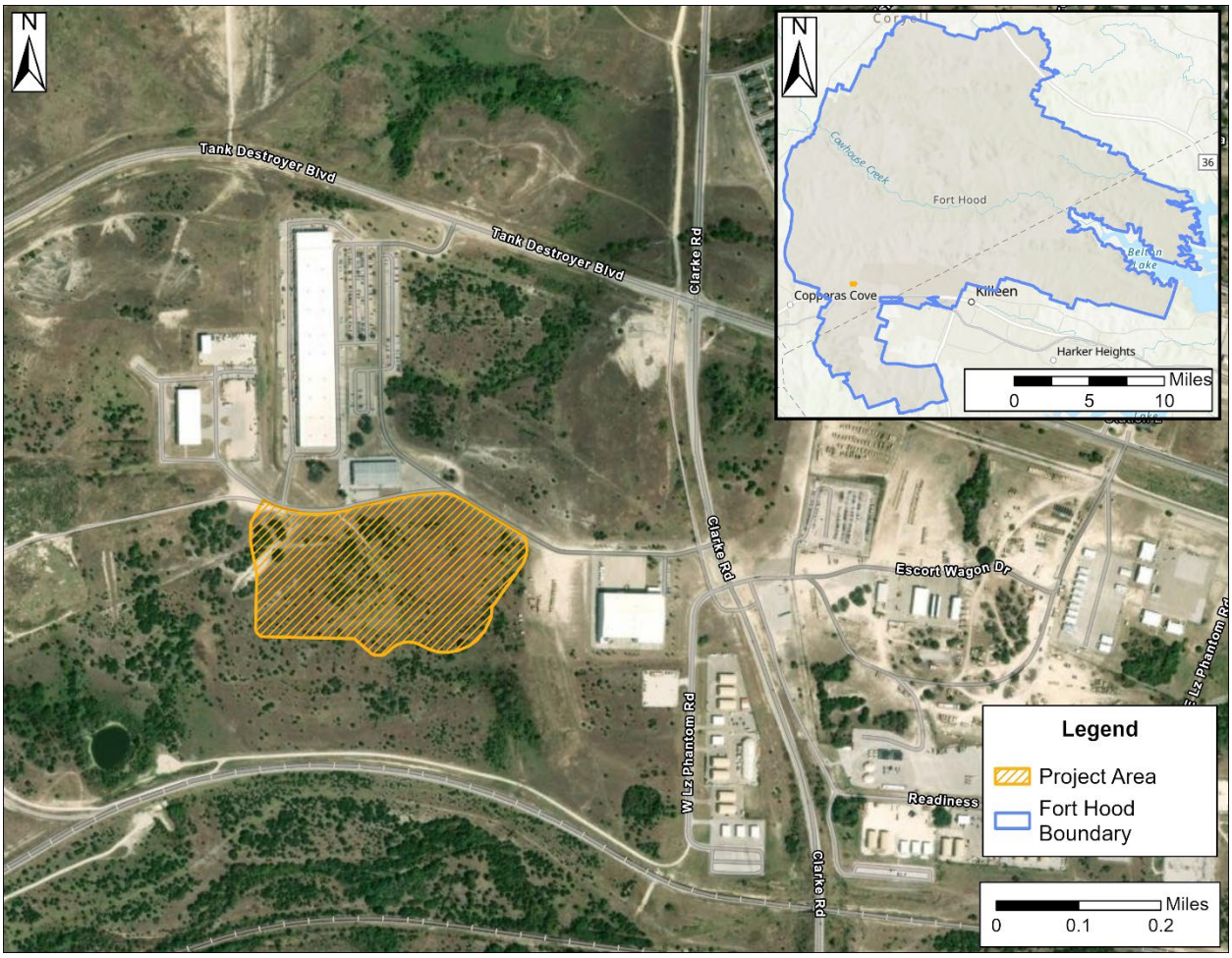

Figure 1 – Fort Hood and Project Location Map

1.3 Scope of the Environmental Analysis

This EA considers the potential effects of the proposed action and alternatives on the potentially affected environment and the degree of the effects of the action. Effects means changes to the human and natural environment from the proposed action or alternatives that are reasonably foreseeable and include the following:

1. Direct effects, which are caused by the action and occur at the same time and place.

2. Indirect effects, which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable.

3. Reasonably Foreseeable effects, which are sufficiently likely to occur such that a person of ordinary prudence would take it into account in reaching a decision.

1.4 Public and Agency Involvement

The Army urges all federal and state agencies, public and private organizations, members of the public that have a potential interest in the proposed action, and Native American Tribes to participate in the Army's NEPA and decision-making processes, as guided by 42 U.S.C. 4321 et seq.

The Final EA and Draft FONSI will be made available to federal, state, and local agencies, Native American Tribes, and the public for review and comment for a 30-day period. Fort Hood will publish a Notice of Availability (NOA) for the Final EA and Draft FONSI online and make the Final EA and Draft FONSI available at:

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and at the following libraries:

- Fort Hood: Casey Memorial Library, Building 3202, 72nd Street and 761st Tank Battalion Avenue, Fort Hood, Texas 7654
- Killeen: Killeen Main Library, 205 E Church Avenue, Killeen, Texas 76541; and
- Copperas Cove: Copperas Cove Public Library, 501 South Main Street, Copperas Cove, Texas 76522.

Following the 30-day review period, the Army will address relevant comments received.

1.5 Decision to be Made

Prior to making a final decision, the decision maker (the Fort Hood Garrison Commander) will consider both the environmental and socioeconomic effects analyzed in this EA, along with all other relevant information, such as public issues of concern identified during the public comment period. If the evaluation determines that the proposed action would not result in significant effects, or if all significant effects can be minimized or mitigated to a less than significant level, the decision maker would sign a FONSI. If potentially significant effects are identified and the impact cannot be reduced, the Army may initiate a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS).

2 PROPOSED ACTION AND ALTERNATIVES

This chapter describes the proposed action and alternatives. Additionally, this chapter provides the screening criteria used by the Army to develop the range of considered alternatives.

This EA analyzes two alternatives: the no action alternative and action alternative.

2.1 Screening Criteria

To satisfy NEPA regulations, alternatives must be reasonable and meet the purpose and need of the proposed action. The following screening criteria have been established to identify alternatives, and to be considered a reasonable alternative, proposed actions must meet the screening criteria below.

- **Limitations on the size or location of the project**
  - Minimum lot size
  - Level of contamination
  - ADP/zoning restrictions
  - Available utilities and infrastructure

2.2 No Action Alternative

Under the no action alternative, the line haul yard and new building would not be built, and no support facilities would be in place to accommodate personnel and brigade-sized movements. Additionally, military vehicles and equipment would continue to be stored and deployed from inadequately sized and heavily deteriorated facilities.

2.3 Alternative 1: Proposed Action Alternative

The proposed action is to construct a new 1,066 square foot (SF) Logistics, Line Haul Operations Building, south of Building 89010 to support a new staging and marshalling area with container loading aprons for line haul operations. Primary facilities include staging/marshalling area, operations building, loading/unloading docks and ramps, non-organizational vehicle parking, and building information systems. Supporting facilities include electrical, water, sanitary sewer, exterior lighting, fencing, paving, walkways, storm drainage, information systems, and site improvements. Extensive site work is required for this project. Special foundation work is required due to expansive soils. Measures in accordance with the DoD Minimum Antiterrorism for Buildings standards will be provided. Comprehensive building and furnishings related interior design services are required. Access for individuals with disabilities will be provided in accordance with the Architectural Barriers Act (ABA). Heating, ventilation, and air conditioning (HVAC) will be provided by self-contained systems. Utility connections are required to privatized electrical, natural gas, water, and wastewater systems.

The proposed action would clear approximately 9 acres of bare and scrub/shrub land, remove approximately 45 trees, and indirectly disturb an additional 15 acres of adjacent land to replant trees. Trees removed by the proposed action would be replanted in accordance with Fort Hood's 2024 Tree Care Ordinance; a minimum of 200 trees would be replanted in any combination of Bald Cypress (*Taxodium distichum*) within the construction area and native non-fruit bearing trees from the approved base landscaping plant list in the adjacent area (Fort Cavazos, 2024). Figure 2 shows the conceptual layout for the Line Haul Facility.

When describing the proposed action, "construction area" will refer to the immediate area of disturbance spanning approximately nine acres for construction of the Line Haul Facility and subsequent plantings of Bald Cypress trees while "tree replanting area" will refer to the additional 15 acres of adjacent surrounding lands indirectly affected by plantings of non-fruit bearing trees allowed by the "Approved Landscaping Plants" list. The term "project area" will refer to the combined construction area and tree replanting area, approximately 24 acres total. Figure 3 displays the construction area and tree replanting areas together, illustrating the total project area.

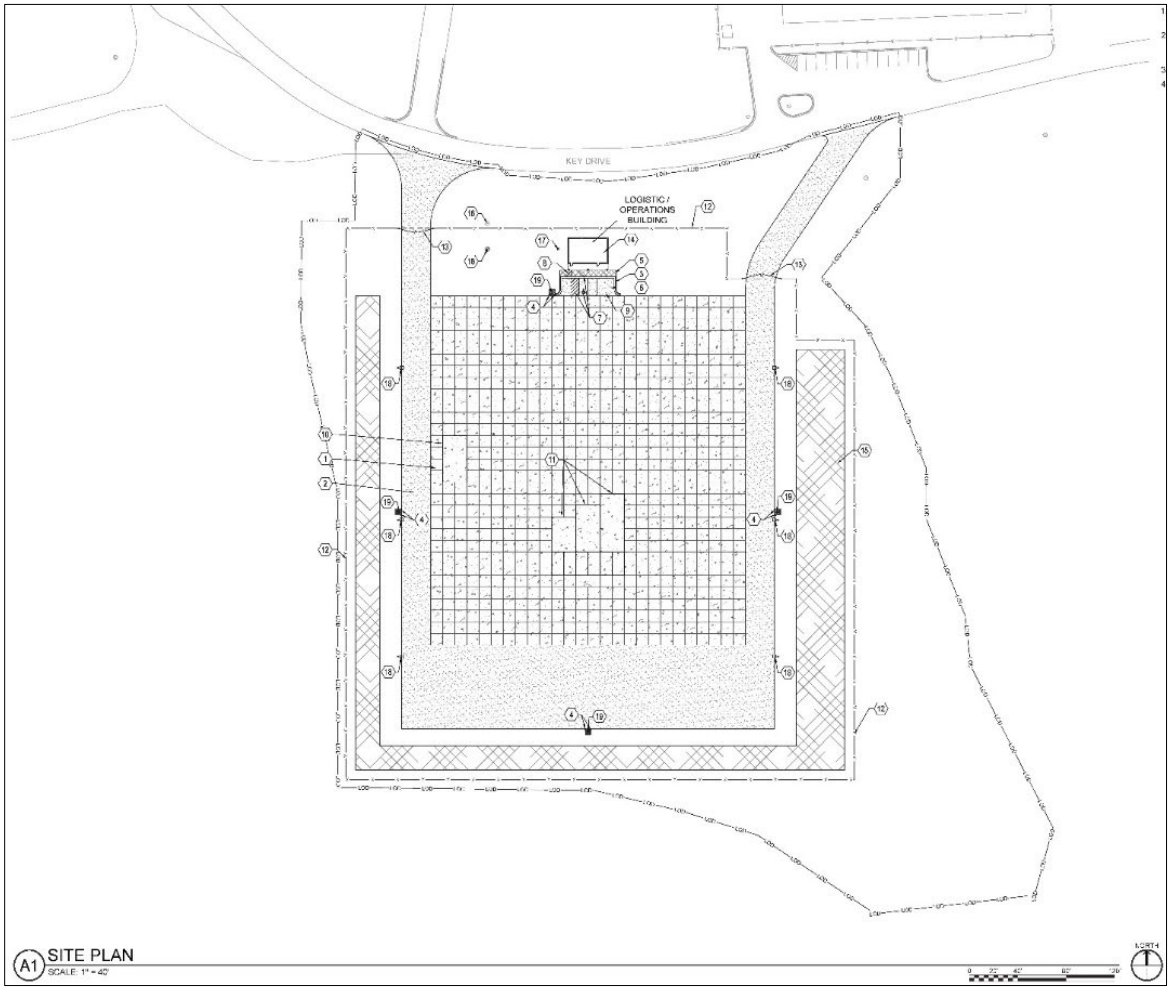

Figure 2 - Conceptual Site Plan of the Line Haul Facility at Fort Hood

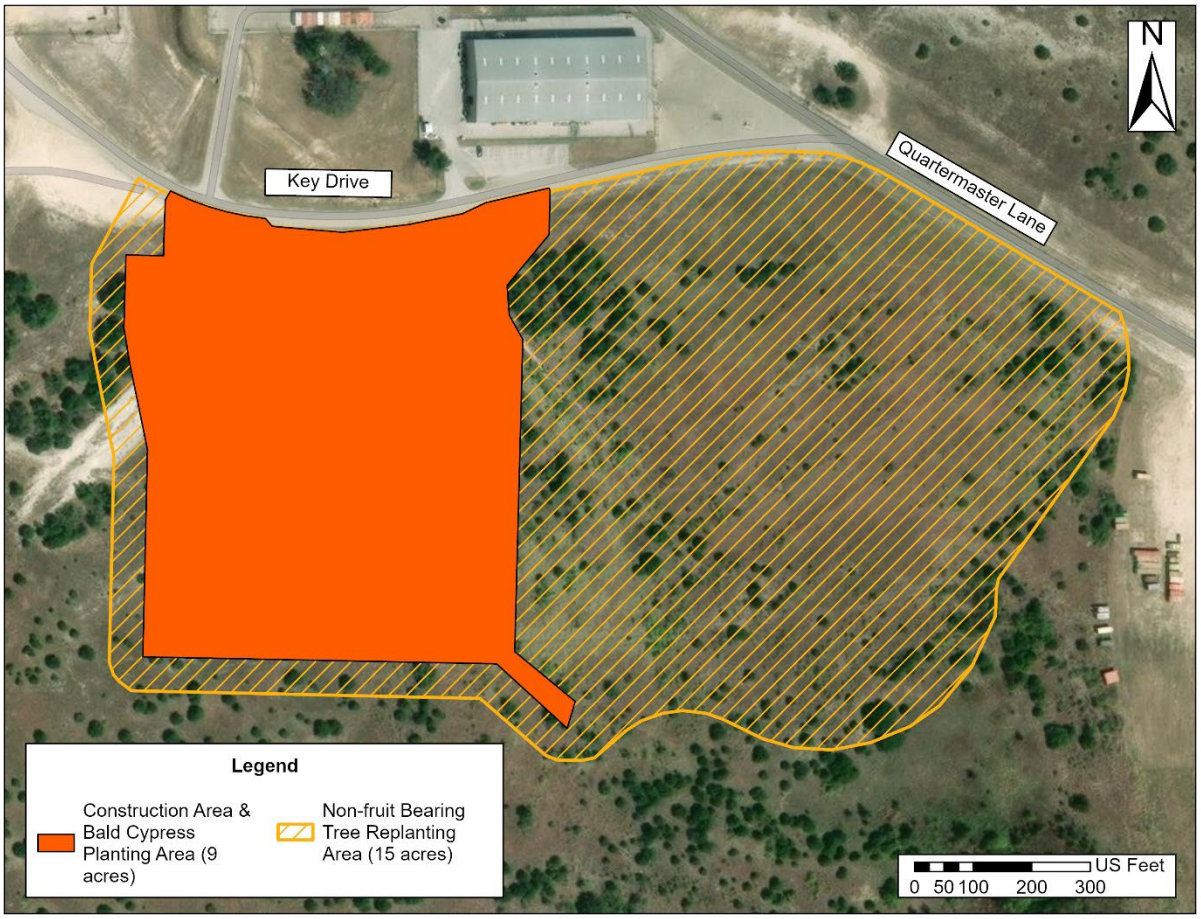

Figure 3 – Proposed Action's Total Project Area

2.4 Alternatives Considered but Eliminated from Further Consideration

2.4.1 Northeast site option:

The alternative to site the facility east of Building 89010 was rejected due to the field check/existing layout of electrical lines in that area, constraints of waste, borrow pits, etc., areas populated by trees for 10:1 criterion for replacement, and conflicts with traffic flow.

2.4.2 Northwest site option:

This alternative would site the facility west of Building 89010, requiring a significant cut and fill. This option offers the loop benefit and excellent queuing shoulder length, but the length of roadway would exceed the Congressionally approved project budget for the pavement area. This option was rejected since the site placement south of Building 89010 was more favorable with regards to space and removal of trees.

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the environmental resources that may be affected by the direct and indirect effects of the action and no action alternative and determines whether potential impacts are beneficial, negligible, or adverse. These assessments guide decision-makers in understanding the extent of environmental changes and the need for mitigation measures. The affected environment has been determined using the criteria in the NEPA regulations and the DoD NEPA Implementing Procedures. Specific affected environment definitions are provided for each resource area and carried forward for detailed analysis.

The affected environment and the degree of effects of implementing an action are considered when determining the magnitude of potential effects to resource areas. In considering whether the effects of the proposed action are significant, the potentially affected environment and the degree of the effects of implementing the action are considered. The degree of effects considers short and long-term effects and beneficial and adverse effects. Effects and/or impacts that potentially result from the implementation of actions can be both beneficial and adverse as defined below:

- **Beneficial:** The impact results in an improvement to environmental conditions, such as enhanced habitat quality, increased infrastructure efficiency or reduced environmental risks.

- **Adverse:** The impact of implementing the action would not benefit the resource/issue.

The degree of environmental beneficial and adverse impacts is characterized as: none, negligible, minor, less than significant, significant but mitigable, or significant, as defined below:

- **None:** There is no impact to the resource due to either the resource or the impact not being present or through full avoidance.
- **Negligible:** No measurable impacts are expected to occur. A negligible impact could locally alter the resource but would not measurably change its function or character.
- **Minor:** Primarily short-term but measurable impacts are expected. Impacts on the resource could be slight.
- **Less than significant:** Noticeable impacts that would have a measurable effect on a wide scale (e.g., outside the footprint of disturbance or on a landscape level). If implementation of the action were to result in moderate adverse impacts, those impacts would not exceed the limits of applicable, local, state, and federal regulations.
- **Significant but mitigatable:** Impacts resulting from implementation of the action would be significant, but measures are proposed to be implemented

that would reduce the degree of impacts such that the impacts are less than significant.

- **Significant:** A major impact that substantially alters environmental conditions and may require mitigation measures or an EIS under NEPA. Significant impacts could exceed limits of applicable local, state, or federal regulations or would untenably alter the function of character of the resource.

To ensure a standardized evaluation of potential environmental impacts, the Army established thresholds of significance for key resource areas (Table 1). The Army developed these thresholds to consider substantive environmental regulations and ensure an objective analysis of regulatory limits or requirements, while others reflect some discretionary judgment on the part of the Army. Quantitative and qualitative analyses have been used, as appropriate, to determine whether and the extent to which a threshold is exceeded. These thresholds, aligned with federal and state regulations, serve as benchmarks to determine whether an impact requires mitigation, further analysis, or dismissal from detailed review.

Table 1 presents each resource area and threshold of significance. The table also identifies which resource areas are analyzed in this EA and which resource areas are dismissed from detailed analysis; each includes an accompanying rationale.

Table 1 - Summary of Resource Areas Considered with Thresholds of Significance and Rationale for Analyzing or Dismissing

Resource Area	Threshold of Significance	Analyzed or Dismissed from Detailed Analysis	Rationale for Analyzing or Dismissing
Air Quality	An impact to ambient air quality would be considered significant if the proposed action were to cause or contribute to a violation of any federal, state, or local air quality standard or regulation.	Analyzed	Implementation of the proposed action would result in increased stationary source and vehicle emissions, as well as having the potential to increase fugitive dust emissions during construction. This resource area is further discussed in Section 3.1
Biological Resources	Impacts to biological resources would be considered significant if Army actions were to result in: • Substantial permanent conversion or loss of net habitat; • Long-term loss or impairment of a substantial portion of a local habitat (species dependent); • Loss of populations of species; or • Unpermitted or unlawful take of Endangered Species Act (ESA) protected, threatened or endangered species protected under the ESA, Bald and Golden Eagle Protection Act, or the Migratory Bird Treaty Act (MBTA).	Analyzed	The proposed action could adversely impact natural resources from increased ground disturbance and alteration due to vegetation loss and potential habitat degradation. This resource area is further discussed in Section 3.2
Climate	Impacts to climate would be considered significant if Army actions were to contribute to shifts in climactic conditions affecting drought, flood control, water supply, or sea level rise.	Dismissed	The proposed action would not affect climate or changing climate conditions locally or regionally.

Cultural Resources	Impacts to cultural resources would be considered significant if they cause alteration of the characteristics that qualify a property for inclusion on the National Register of Historic Places (NRHP). This could include physical destruction, damage, alteration, removal, change in use or character within the setting, and negligence causing deterioration, transfer, lease, or sale. Alteration of properties or access to properties of cultural significance to Native American Tribes would also be significant.	Analyzed	There would be less than significant effects upon cultural resources or historic properties resulting from the proposed action. This resource area is further discussed in Section 3.3
Hazardous, Toxic, Radioactive Materials and Waste	Impacts to hazardous and toxic materials and waste would be considered significant if a substantial additional risk to human health or safety would be attributable to Army actions, including direct human exposure or a substantial increase in environmental contamination.	Analyzed	Further information is needed to determine if this site has the potential to impact the project This resource area is further discussed in Section 3.4
Human Health and Safety	Impacts to health and human safety would be considered significant if a substantial additional risk to human health or safety were attributable to the proposed action, including direct human exposure to hazardous conditions or a substantial increase in conditions that adversely affect public health.	Dismissed	The protection of human health has and continues to be an integral part of the Army's mission at Fort Hood. Activities on Fort Hood comply with all applicable federal and state, DoD, Army, and Installation-level occupational health, safety, and environmental requirements to ensure minimal risk to persons or the environment both on and off Fort Hood. The implementation of any alternatives would comply with these measures and prevent any significant impacts on human health and safety. Therefore, no further analysis of health and human safety is required.

Land Use	Impacts to land use would be considered significant if the changes in land use were incompatible with existing military land uses and designations (including recreation) and/or sufficient land is not available. These impacts could conflict with Army land use plans, policies, or regulations, or conflict with land use off-post.	Dismissed	The proposed action is entirely on military land under military and federal regulations, and all proposed construction would be on land dedicated previously to military usage. There would be negligible effects on the suitability and condition of the land, and the proposed action would not conflict with current zoning or land usage. There would be a negligible effect on land use, and it has been dismissed from further analysis.
Noise	Impacts to noise would be considered significant if noise from Army actions were to cause harm or injury to on- or off-post communities or exceed applicable environmental noise limit guidelines.	Analyzed	Construction associated with the proposed action could lead to a temporary increase in noise. Use of the new line haul facility after completion of the proposed action could lead to an increase in noise levels for the surrounding community. This resource area is discussed further in Section 3.5
Socioeconomics	Impacts to socioeconomics would be considered significant if they were to cause substantial changes to sales volume, income, employment, or population (including housing and schools).	Analyzed	The proposed action could potentially affect socioeconomic conditions resulting from improved facilities and logistic capabilities at Fort Hood. This resource area is discussed further in Section 3.6
Topography, Geology, and Soils	Impacts to geological and soil resources would be considered significant if: • Impacts would occur on unique soil or geological features; or • Substantial soil losses were to impair plant growth or result in detrimental increases in an excess sediment load in installation waters.	Analyzed	Implementation of the proposed action would remove vegetation and disturb soils to an extent that could increase soil erosion rates and alter drainage patterns in the project area. This resource area is further discussed in Section 3.7

Transportation and Traffic	Impacts to transportation and traffic would be considered significant if Army actions: • Cause a reduction by more than two Levels of Service (LOS) at roads and intersections within the Region of Influence (ROI); • Substantially degrade traffic flow during peak hours or; • Substantially exceed road capacity and design	Analyzed	The proposed action would likely increase vehicle traffic for the surrounding area since it is a logistics facility focused on vehicle transport. Construction vehicle ingress and egress could increase the potential for traffic congestion at peak hours. This resource area is discussed further in Section 3.8
Utilities	Impacts to utilities would be considered significant if the proposed action were to cause an impairment of service to the installation and local communities, homes, or businesses.	Analyzed	The construction and equipping of the new line haul facility with electricity, water, sewer, and HVAC utilities could cause minor temporary utility disruptions on post. This resource area is discussed further in Section 3.9
Water Resources	Impacts to water resources would be considered significant if Army actions: • Result in an excess sediment load in installation waters, affecting impaired resources; • Substantially affect surface water drainage or stormwater runoff, including floodwater flows; or • Substantially affect groundwater quantity or quality.	Analyzed	The implementation of Alternative 1 is expected to have less than significant impacts on water resources within the installation area during the construction process. This resource area is further discussed in Section 3.10.

3.1 Air Quality

Air quality is determined by the concentration of pollutants in a given geographic area and is influenced by pollutant type, emission sources, weather conditions and topography. It can be influenced by many factors, including, but not limited to: type and number of pollutants, size and topography of the defined air basin and weather conditions. Most pollutants originate from human-made sources frequently referred to as mobile sources (e.g., vehicles), stationary sources (e.g., factories, refineries, and power plants) and indoor sources (e.g., building materials and cleaning solvents). Air pollutants are also released from natural events, such as volcanic activity and forest fires.

Air quality is regulated by the U.S. Environmental Protection Agency (USEPA) per the Clean Air Act ([CAA] 42 U.S. Code [USC] § 7401 et seq.). The CAA established National Ambient Air Quality Standards (NAAQS) for the criteria pollutants: particulate matter (measured as both particulate matter with a diameter less than or equal to 10 particulate matter microns [PM10] and particulate matter with a diameter less than or equal to 2.5 particulate matter microns [PM2.5]), sulfur dioxide (SO2), carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3) and lead. These standards are designed to protect public health and welfare. Individual states or air agencies may establish their own ambient air quality standards, but they cannot be more lenient than the NAAQS. The Texas Commission on Environmental Quality (TCEQ) has adopted the NAAQS for purposes of regulating criteria pollutant levels within Texas (30 Texas Administrative Code §101.1).

Geographic areas that are in compliance with the NAAQS are designated as “attainment areas.” Areas that do not meet NAAQS for criteria pollutants are designated “nonattainment areas” for that pollutant. Areas that have transitioned from nonattainment to attainment are designated as maintenance areas and are also required to adhere to maintenance plans to ensure continued attainment.

Potential impacts to ambient air quality are evaluated with respect to the context and intensity of the impact in relation to relevant regulations, guidelines, and scientific documentation. This requires the significance of the action to be analyzed with respect to the setting of the proposed action and based relative to the severity of the impact.

Fort Hood is located in Bell and Coryell Counties, which are within the Austin-Waco Intrastate Air Quality Control Region (40 CFR 81.134). These counties are in attainment or unclassifiable for all criteria pollutants (USEPA, 2024). Fort Hood is considered a major source for criteria pollutants because of its calculated potential to emit certain criteria pollutants including CO, NO2, SO2, volatile organic compounds (VOCs) and PM10. The installation maintains a Title V permit (permit number O1659). Air quality permits for sources at the installation are issued by TCEQ as delegated by USEPA Region VI.

3.1.1 No Action Alternative

Under the No Action Alternative, the Line Haul yard and new operations building would not be built. Since no construction would occur, there would be no additional sources of air emissions beyond existing operations. Therefore, air quality conditions would remain unchanged. Ongoing Army-wide sustainability initiatives, including energy efficiency improvements and emissions reduction programs, may contribute to gradual improvements in overall air quality at the installation.

3.1.2 Alternative 1: Proposed Action Alternative

The proposed action would construct a new 1,066 SF Logistics, Line Haul Operations Building to support a new staging and marshalling area with container loading aprons for line haul operations.

Implementation of the proposed action would result in increased stationary source and vehicle emissions. There would be also an increase in emissions from construction equipment during the construction phase of the project as compared to current conditions. Fugitive dust would also be generated by vehicular and equipment movements and would result in a net increase of PM10 and PM2.5 emissions, mainly during the construction phase of the project. These emissions would largely be confined to the proposed construction site, managed through Best Management Practices (BMPs) and Standard Operating Procedures (SOPs) associated with construction as determined by Fort Hood based on site specific conditions and guided by Fort Hood's Integrated Natural Resource Management Plan (INRMP) (Fort Cavazos, 2024). Therefore, construction actions are unlikely to generate significant amounts of particulate matter offsite of the proposed expansion area.

In summary, implementation of Alternative 1, which includes construction and the associated increase in traffic caused by Line Haul operations, would lead to a slight increase in regional emissions, but not enough to exceed air quality standards. Therefore, impacts from the implementation of Alternative 1 would be negligible.

3.2 Biological Resources

Biological resources include sensitive and protected plants and animal species and their associated habitats that are listed for protection at the federal level by USFWS or at the state level by the Texas Parks & Wildlife Department (TPWD). The ROI for biological resources encompasses habitats within and around the proposed 24-acre Line Haul Facility on Fort Hood. This includes areas directly affected by construction and those indirectly impacted by secondary environmental changes.

Biological resources are comprised of the collective native or naturalized vegetation, wildlife and their associated habitats. Existing information on vegetation and wildlife and their associated habitat types in the vicinity of the proposed project area were reviewed, with particular emphasis on the presence of any species listed as Threatened and

Endangered (T&E) by federal or state agencies to assess their sensitivity to the effects of the proposed action. For this EA, biological resources are divided into three subsections: vegetation communities (flora), wildlife communities (fauna), and protected species under the following regulations:

- Bald and Golden Eagles, as protected under the Bald and Golden Eagle Protection Act (16 USC § 17 668).
- Protected species under the Migratory Bird Treaty Act (MBTA) (16 USC §§ 703-712).
- Threatened or endangered species under the Endangered Species Act (ESA) (16 USC § 1531 et seq).
- DoD Instruction 5525.17, which establishes policy, assigns responsibilities, and provides direction for the Conservation Law Enforcement Program in accordance with the authority in DoD Directive 5124.02 (Fort Cavazos, 2024).

The Directorate of Emergency Services is responsible for the enforcement of the laws and regulations pertaining to natural resources, including enforcement of hunting, fishing, area access, and archeological and environmental statutes and regulations at Fort Hood. Laws and regulations related to natural resources on Fort Hood are enforced by the Conservation Law Enforcement Officers (also known as Game Wardens), and include enforcement related to T&E species, historical and archeological sites, fish and wildlife laws and established harvest quotas (Fort Cavazos, 2024). The full complement of enforcement responsibilities and action from Conservation Law Enforcement Officers is outlined within the 2024-2028 Fort Hood INRMP (Fort Cavazos, 2024).

3.2.1 Vegetation

Fort Hood is situated in the northeastern reaches of the Edwards Plateau, the southernmost extension of the Cross Timbers and Prairies, and just west of the Blackland Prairie ecological regions. Woody and shrub-dominant communities, which typify much of the land area on Fort Hood, are most closely representative of Edwards Plateau vegetative associations. The grasslands are representative primarily of the mid-grass associations of the Cross Timbers and Prairies areas, with inclusions of species more commonly associated with tall-grass associations of the Blackland Prairie. Historically, frequent natural and man-made fires confined woody vegetation to riparian areas and rocky slopes and hills. As a result of human activities including grazing, reduction and suppression of fires, and training activities, the current vegetation structure and mix of species differ from those historically associated with the region.

There are four dominant vegetation communities at Fort Hood: Grasslands, Forests, Woodlands, and Shrubs. Grassland Communities are found throughout the installation. The grasslands are composed primarily of perennial herbaceous species characteristic of mid-grass prairie. Common grasses include native species such as little bluestem (*Schizachyrium scoparium*), hairy grama (*Bouteloua hirsuta*), and sideoats grama (*Bouteloua curtipendula*) and the invasive King Ranch bluestem (*Bothriochloa ischaemum*). Common native forbs are broomweeds (*Amphiachyris sp*.), ragweed

(*Ambrosia artemisiifolia*), and snow-on-the-prairie (*Euphorbia bicolor*). Remnant patches of tallgrass prairie vegetation are dominated by native yellow Indiangrass (*Sorghastrum nutans*) and big bluestem (*Andropogon gerardii*) (USACE, 1999).

3.2.2 Fauna

Fort Hood hosts a variety of wildlife, including fish, mammals, herpetofauna, avifauna, and both surface and sub-surface invertebrates typical of central Texas. Some species are widespread across Texas and the southern U.S., while others are endemic to the Edwards Plateau or Cross Timbers and Prairies ecoregions. This wildlife diversity is due to the installation's location at the boundary of these two ecoregions, which supports a range of habitats—grasslands, wetlands, juniper-oak and deciduous forests, riparian areas, shrublands and karst features—that provide essential resources for wildlife (Fort Cavazos, 2024).

There are approximately 196,356 acres of land suitable for fish and wildlife management on the installation. There are 692 surface acres of lakes and ponds, 816 miles of rivers and permanent streams, and 43 miles of shoreline access to Belton Lake. The wildlife management program at Fort Hood is targeted toward restoring the ecological health of the installation's lands (Fort Cavazos, 2024). Fort Hood coordinates with the USFWS on issues regarding fish and wildlife management, as well as for regulatory issues concerning the ESA or the MBTA.

3.2.3 Federally Listed Species

Due to their importance and sensitivity, impacts to potential T&E species and their habitat are, as much as practicable, avoided and/or minimized. The Army consults with the USFWS on actions that may affect federally listed species for their assistance in assessing impacts of actions on listed species. Fort Hood has indicated that there will not be any habitat removed for any listed species. The landcover that will be removed is not part of a designated habitat; therefore, consultation will not be required. Management and conservation of T&E species and their habitat is accomplished through implementation of the installation’s Endangered Species Management Component of Fort Hood’s INRMP (Fort Cavazos, 2024). The INRMP supports the Sustainable Range Program and Installation Training Area Management program, which are mandated to sustain Army training and maneuver areas (AR 350-19). These programs implement the conservation measures identified in the Endangered Species Management Component to avoid or minimize impacts on T&E species and their habitat to ensure compliance with the ESA and promote mission sustainability. Installation Endangered Species Management Components are the Army’s primary means of ensuring compliance with the ESA and balancing mission requirements (U.S. Army, 2012).

An Official Species List from the USFWS Austin Ecological Services Field Office was obtained using the Information for Planning and Consultation (IPaC) tool on 08 September 2025; Table 2 lists the federally listed species reported by the IPaC in the

project area. The IPaC list reports that there is not any critical habitat for federally listed species within the project area.

Table 2 - Federally Listed Species in the Project Area Reported by the USFWS Official Species List

Common Name	Species Name	Federal Status
Golden-cheeked Warbler	*Setophaga chrysoparia*	Endangered
Piping Plover*	*Charadrius melodus*	Threatened
Rufa red knot*	*Calidris canutus rufa*	Threatened
Whooping Crane	*Grus americana*	Threatened
Tricolored Bat**	*Perimyotis subflavus*	Proposed Endangered
Monarch Butterfly	*Danaus plexippus*	Proposed Threatened

*Piping Plover and Rufa red knot are not described below since the IPaC list states that these species are migratory and only need to be considered for wind energy projects. The proposed action is not a wind energy project.

**Tricolored Bat was not reported by the project IPaC list, but is listed in Table 2 since the installation has known occurrences of this species.

3.2.3.1 Golden-cheeked Warbler

The primary threat to the golden-cheeked warbler is habitat destruction and fragmentation. The 2020 Biological Opinion (BO) issued by USFWS emphasizes the protection and management of the warbler's habitat, particularly late-succession Ashe Juniper forests, while introducing additional flexibility through an adaptive management framework. This approach enables the Army to adjust project parameters within the guidelines of the Incidental Take Statement and enhance management and minimization techniques for endangered species (USFWS, 2020a).

Research and conservation efforts for the golden-cheeked warbler on Fort Hood have been numerous. Research projects have included nest survival rates, forest cover and its impacts on density, and nest predation. Current ongoing research includes a breeding range-wide geolocator study to determine migration corridors and overwintering site fidelity; impacts of geolocators on reproductive success, site fidelity and survival; and source sink population dynamics. Monitoring and research activities for the warbler at Fort Hood began in 1991 and continue to the present day.

In August 2020 the Army collaborated with USFWS to develop and implement a BO to assess ongoing and proposed military training activities, military training improvement projects, and prescribed burning and wildfire events occurring on Fort Hood, as well as their effects on the federally listed golden-cheeked warbler. Training activities analyzed under the BO include maneuver exercises for units up to brigade level, live weapons firing, and aviation training. Additionally, land management, range improvements, and other associated activities to support the military mission are included as the actions assessed under the BO. The actions assessed in the BO align with the proposed action

described in this EA, making them a relevant basis for comparison in this analysis (USFWS, 2020a).

Historically, military training activities have resulted in incidental take of the golden-cheek warbler, which has been well documented. It is anticipated that incidental take would continue to occur on Fort Hood at slightly elevated levels due to the potential permanent and temporary loss of habitat. Even at this elevated level, the years of monitoring and research conducted at Fort Hood indicate that the long-term population viability of the golden-cheek warbler within the action area would be sustained. Most importantly, Fort Hood has committed to continue to monitor and manage their endangered species populations for long-term conservation.

3.2.3.2 Whooping Crane

The whooping crane (*Grus americana*) is a rare migrant bird. They may fly over or near Fort Hood during spring and fall migrations. They may stop at Belton Lake during migration and have been observed at other wetland areas on Fort Hood. Three whooping cranes were sighted in 2017, and this species has been previously documented on Fort Hood.

3.2.3.3 Tricolored Bat

The tricolored bat is one of the smallest bats in North America. As its name implies, the tricolored bat is notable for its tricolored fur that appears dark at the base, lighter in the middle, and dark at the tip, often appearing yellowish to nearly orange (USFWS 2025). In the United States, the tricolored bat is known to be found in 39 states, including Texas, along with areas of Canada and Central America.

During the spring, summer, and fall (non-hibernating seasons), tricolored bats primarily roost among live and dead leaf clusters of live or recently dead deciduous hardwood trees. Tricolored bats have also been observed roosting in Spanish moss and lichen. In the summer months, tricolored bats have been observed occupying pine needles, eastern red cedar, artificial roosts including barns, bridges, and beneath porches (USFWS, 2021). With regards to the habitation of transportation structures, it was found that bats prefer concrete bridges and culverts likely due to thermal properties and frictional properties for ease of roosting, and distance to water and suitable foraging habitat from these structures are also important factors (Wetzel, 2023). During the winter, tricolored bats hibernate in caves and mines, although in the southern U.S. where caves are sparse, tricolored bats often hibernate in road-associated culverts and sometimes tree cavities or abandoned water wells (USFWS, 2021). Overwintering tricolored bats were found to prefer culverts longer in length with more sections for an increased surface area, as well as larger entrance dimensions (Meierhofer et al 2019).

Tricolored bats exhibit high site fidelity and often return year after year to both the same hibernaculum as well as the same summer roosting locations. Tricolored bats are opportunistic, insectivorous feeders and consume small insects, including caddisflies,

flying moths, small beetles, small wasps and flying ants, true bugs, and flies. Tricolored bats emerge early in the evening and forage at treetop level or above but may forage closer to ground later. Foraging most commonly occurs over waterways and along forest edges. Tricolored bats disperse from overwintering habitat to summer roosting habitat in the spring around mid-March and return to winter hibernacula in the fall around mid-November (USFWS, 2021).

3.2.3.4 Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) occurs in North, Central, and South America, Australia, New Zealand, and the islands of the Pacific and Caribbean. In many regions, monarchs breed year-round; however, individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migrations. In August through October, in both eastern and western North America, monarchs begin migrating south to their respective overwintering sites in Mexico or on California coasts. In early spring, surviving individuals begin flying back through the breeding grounds from coastal California and Mexico to Canada. These migrations can take monarchs distances of over 3,000 km and last for over two months (USFWS, 2020b). Migratory habitats in Texas are of particular concern as the eastern migratory population funnels though the state in the fall, nectaring on wildflowers on their way to overwintering sites in Mexico, and again in the spring, where they rely on nectar sources and milkweed to support the first generation of the new year.

The monarch butterfly's population decline is due to the loss of breeding, migratory, and overwintering habitats. Habitat loss is largely from the conversion of grasslands to agricultural lands, urban development, the intensive use of herbicides in agriculture, and deforestation at overwintering sites. Intensive herbicide use in agricultural settings is directly related to widespread milkweed eradication, which is essential for monarch reproduction and survival.

In 2020, the Mid-America Monarch Conservation Strategy established a goal of adding 1.3 billion stems of milkweed to the landscape across 20 states including Texas by 2038. The 1.3 billion stem goal is an estimated goal for adding enough habitat to support 6 hectares of overwintering population for the eastern North American monarch population. Areas reserved for the Military Monarch Initiative can be found in the Fort Hood INRMP (Fort Cavazos, 2024).

3.2.4 Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA) Species

Using the same IPaC information obtained from the USFWS in Section 3.2.3, a list of birds protected under the MBTA and BGEPA potentially occurring in the project area are described in Table 3.

Table 3 - MBTA and BGEPA Protected Species Potentially Occurring within the Project area (USFWS, 2025)

Common Name:	Species Name:	MBTA/BGEPA Protection:
Bald Eagle	*Haliaeetus leucocephalus*	MBTA & BGEPA
Black-capped Vireo	*Vireo atricapilla*	MBTA
Chestnut-collared Longspur	*Calcarius ornatus*	MBTA
Chimney Swift	*Chaetura pelagica*	MBTA
Eastern Meadowlark	*Sturnella magna*	MBTA
Field Sparrow	*Spizella pusilla*	MBTA
Grasshopper Sparrow	*Ammodramus savannarum perpallidus*	MBTA
Lesser Yellowlegs	*Tringa flavipes*	MBTA
Painted Bunting	*Passerina ciris*	MBTA
Pectoral Sandpiper	*Calidris melanotos*	MBTA
Rufous-crowned Sparrow	*Aimophila ruficeps eremoeca*	MBTA
Thick-billed Longspur	*Rhynchophanes mccownii*	MBTA

3.2.5 State Listed Species and Special Status Species

Using information from the Texas Parks and Wildlife Department's (TPWD) Rare, Threatened, and Endangered Species Tool (RTEST), State-listed species lists for Bell and Coryell counties are summarized in Table 4. The species reported in Table 4 only include species that are listed by the State of Texas; if a species was reported only as a Species of Greatest Conservation Need (SGCN), it was not carried into the Table. Of the mussels listed in Table 4, only the false spike was historically observed on the Installation and the most recent documented specimen was from the 1930s. Recent eDNA testing supports the theory that the false spike has been extirpated from Fort Hood.

Table 4 - State Listed Species Reported for Bell and Coryell Counties (TPWD, 2019)

Common Name	Scientific Name	Federal Status	State Status	SGCN
Balcones Spike	*Fusconaia iheringi*	Endangered	Endangered	Y
Black Rail	*Laterallus jamaicensis*	Threatened	Threatened	Y
Brazos Heelsplitter	*Potamilus streckersoni*	-	Threatened	Y
False Spike	*Fusconaia mitchelli*	Endangered	Endangered	Y
Golden-cheeked Warbler	*Setophaga chrysoparia*	Endangered	Endangered	Y
Piping Plover	*Charadrius melodus*	Threatened	Threatened	Y
Rufa Red Knot	*Calidris canutus rufa*	Threatened	Threatened	Y

Common Name	Scientific Name	Federal Status	State Status	SGCN
Salado Springs Salamander	*Eurycea chisholmensis*	Threatened	Threatened	Y
Smalleye Shiner	*Notropis buccula*	Endangered	Endangered	Y
Texas Fawnsfoot	*Truncilla macrodon*	Threatened	Threatened	Y
Texas Horned Lizard	*Phrynosoma cornutum*	-	Threatened	Y
White-faced Ibis	*Plegadis chihi*	-	Threatened	N
Whooping Crane	*Grus americana*	Endangered	Endangered	Y
Wood Stork	*Mycteria americana*	-	Threatened	Y

Table 5 includes species, not identified in the previous sections, that are declining and appear to need conservation in order to sustain Fort Hood's military mission in the near-term or foreseeable future. Special Status Species is an informal term used to refer to species that need proactive protection, but for which insufficient information is available to indicate a need to list the species as endangered. The term is not defined in the ESA.

Table 5 – Special Status Species

Scientific Name	Common Name	Federal Status**	State Status	Status on Fort Hood*
Various Species	Cave Invertebrates	--	--	A
Plethodon albagula	Slimy salamander	--	--	A
Myotis veliter	Cave myotis	--	--	A
Croton alabamensis var. texensis	Texabama croton	--	--	A
Phyrnosoma comutum	Texas horned lizard	--	Threatened	A
Vireo atricapilla	Black-capped vireo	DL 16 May 2018	--	A
Colinus virginianus	Northern Bobwhite	--	--	A
Haliaeetus leucocephalus	Bald Eagle	DL 28 June 2007	--	A
Falco peregrinus anatum	American peregrine falcon	DL 1999	Threatened	B

*Status refers to population status on Fort Hood according to these definitions: (A) Population established on Fort Hood. Recent information documents an established breeding population (even if small) or regular occurrence on the Installation. This includes those species for which research and management is ongoing and several endemic cave invertebrates. (B) Recently recorded on Fort Hood, but there is no evidence of an established population. This includes species considered to be transient, accidental, or

migratory (e.g., some migrating birds may use the installation as a stopover site during migration to and from their wintering grounds). For some species in this category, further inventory may reveal breeding populations.
** DL is delisted.

3.2.6 Invasive Species

Invasive species are non-native plants and animals whose introduction to the ecosystem causes, or is likely to cause, economic or environmental harm, or harm to human health. Some native plants may also become invasive due to negative environmental conditions or practices (e.g., mesquite due to continuous cattle grazing, and broomweed and Ashe Juniper due to over grazing and other negative environmental conditions).

Two noxious weeds are known to occur on Fort Hood: dodder (*Cuscuta sp.*) and cattail grass (*Setaria pumila*). Invasive plant species of concern to the Fort Hood ecosystem include giant reed (*Arundo donax*), salt cedar (*Tamarix ramosissima*), Chinese tallow tree (*Triadica sebifera*), kudzu (*Pueraria montana var. lobata*), mimosa (*Albizia julibrissin*), white mulberry (*Morus alba*), Chinese privet (*Ligustrum sinense*), glossy privet (*Ligustrum lucidum*), Japanese honeysuckle *(Lonicera japonica*), King Ranch bluestem (*Bothriochloa ischaemum*), tree of Heaven (*Ailanthus altissima*), China-berry (*Melia azedarach*), sacred bamboo (*Nandina domestica*), Johnson grass (*Sorghum halepense*), Chinese pistache (*Pistacia chinensis*), red-tipped photinia (*Photinia serratifolia*), Jerusalem-thorn (*Parkinsonia aculeate*), fire-thorn (*Pyracantha koidzumii*), Japanese rose (*Rosa multiflora*), periwinkle (*Vinca major and V. minor*), common chaste-tree (*Vitex agnus- castus*), jujube (*Ziziphus zizyphus*), field brome (*Bromus arvensis*), rescuegrass (*Bromus catharticus*), cheat grass (*Bromus tectorum*), pampas grass (*Cortaderia selloana*), West India lantana (*Lantana camara*), dallisgrass (*Paspalum dilatatum*), Asian jasmine (*Trachelospermum asiaticum*), elephant ear (*Alocasia spp.*), English ivy (*Hedera helix*), Malta star thistle (*Centaurea melitensis*), nandina (*Nandina domestica*), wisteria (*Wisteria sinensis*), slender-flowered thistle (*Carduus tenuiflorus*), woolly distaff thistle (*Carthamus lanatus*), field bindweed (*Convolvulus arvensis*), bermudagrass (*Cynodon dactylon*), Horehound (*Marrubium vulgare*), yellow sweet clover (*Melilotus officinalis*), Scotch thistle (*Onopordum acanthium*), Callery pear (*Pyrus calleryana*), bastard cabbage (*Rapistrum rugosum*), multiflora rose (*Rosa multiflora*), blessed milk thistle (*Silybum marianaum*), common chickweed (*Stellaria media*), dandelion (*Taraxacum officinale*), spreading hedgeparsley (*Torilis arvensis*), and flannel mullein (*Verbascum thapsus*).

A few of the invasive animals of concern to the Fort Hood ecosystem include wild pigs (*Sus scrofa*), zebra mussels (*Dreissena polymorpha*), fire ants (*Solenopsis invicta*), and raspberry crazy ants (*Nylanderia fulva*).

3.2.7 No Action Alternative

The No Action Alternative would be the same as the existing conditions for biological resources. Construction of the Line Haul Facility at Fort Hood would not occur, resulting in no beneficial or adverse effects to biological resources.

3.2.8 Alternative 1: Proposed Action Alternative

The proposed action would construct the Line Haul Facility at Fort Hood, resulting in the clearing of approximately 9 acres of low-quality scrub/shrub habitat, removal of 45 trees, and indirect disturbance of an additional 15 acres adjacent to the construction area for tree replanting. The alteration of the environments in the construction area would remove them for use by species and consideration of land suitable for wildlife management. Construction in the proposed area would result in vegetation loss, soil compaction, rutting and generation of dust, all of which could lead to habitat degradation and increased sedimentation and erosion in the project's vicinity if not managed correctly. However, Fort Hood actively employs methods of conducting land rehabilitation and maintenance actions to minimize increased leaching of contaminants, erosion, soil compaction, and the potential for range fires within the range complex.

No federally listed species have habitat in the project area, but federally proposed, State-listed, and special status species are likely to exist. However, temporal considerations would be made during planning to allow for removal or thinning of the deciduous forest area to occur at times not designated as nesting season (March 15 to August 15) for ESA or MBTA protected species (Table 3). Removal of herbaceous ground cover would be considered during planning of the proposed action to limit impacts to the monarch butterfly spring (February-March) and fall (August-October) migrations.

There is the potential for impacts to species from drainage and runoff during the construction period of the proposed action. The possibility of drainage and runoff impacting the surrounding environment would be minimized through BMPs and SOPs. These measures would be implemented and monitored for the duration of the construction. Furthermore, the creation and implementation of a Storm Water Pollution Protection Plan (SWPPP) prior to the proposed action would also manage and minimize the potential impact of increased runoff in the construction area.

The alteration of the herbaceous areas and scrub/shrub land in the project area would cause loss of habitat for the tricolored bat, Texas horned lizard, and monarch butterfly. Removal of deciduous trees would reduce the available habitat for the proposed listed tricolored bat. The monarch butterfly relies on herbaceous species for nectaring during their migrations and obligate milkweed species to lay eggs. Additionally, the loss and alteration of habitat may further contribute to the establishment or presence of invasive species listed in Section 3.2.6. The alteration or removal of herbaceous areas and scrub/shrub habitat should be considered and limited (if possible) during the planning phase. Temporal considerations for construction should

also be made with regards to migration times of monarch butterflies and the brumation season (late October through early April) and breeding season (mid-April and mid-June) for Texas horned lizards.

In summary, the proposed action would clear and convert approximately 9 acres of scrub/shrub habitat in the immediate construction area, disturb an additional 15 acres for tree replanting, and remove 45 trees. The proposed action would cause adverse, short and long-term impacts to habitat and vegetation resources. With the application of BMPs, SOPs, and the implementation of a SWPPP, the proposed action's impacts to biological resources would be less than significant. There would be no expected impacts on federally listed species or their critical habitat with the proposed action, therefore formal consultation under Section 7 of the ESA is not required.

3.3 Cultural, Historical, and Archaeological Resources

Cultural resources encompass a wide range of elements that reflect the historical, archaeological, architectural and cultural heritage of an area. These resources include historic buildings, structures, objects, districts, archaeological sites and tribal resources.

The Fort Hood Cultural Resource Management (FHCRM) program ensures compliance with federal laws and regulations governing cultural resource protection and management. The laws include Section 106 and 110 of the National Historic Preservation Act (NHPA), the Native American Graves Protection and Repatriation Act (NAGPRA), the Archaeological Resource Protection Act (ARPA), the American Indian Religious Freedom Act (AIRFA), NEPA, the Archaeological and Historic Preservation Act, and Executive Orders (EOs) 13007 (Indian Sacred Sites) and 13175 (Consultation and Coordination with Indian Tribal Governments). Cultural resources as defined in these laws are:

- Historic properties, as defined by NHPA
- Cultural items, as defined by NAGPRA
- Archeological resources, as defined by the ARPA
- Sacred sites, as defined in EO 13007, to which access is afforded under AIRFA
- Archeological collections, as defined in 36 CFR 79

FHCRM recognizes archeological resources, cultural landscapes, structures, objects, ethnographic resources, historic places, Properties of Traditional Religious and Cultural Importance (PTRCI), artifacts, documents and anything of cultural character.

To ensure compliance with these laws, the identification and management of cultural resources is guided by AR 200-1 (U.S. Army Environmental Protection and Enhancement) and the FHCRM maintains an active cultural resources management program that identifies and assesses cultural resources on the lands they manage. The FHCRM balances the responsibilities of cultural resources stewardship, which has the goal of preservation and conservation of cultural resources, with military mission requirements. This is accomplished through an active management program that

identifies and assesses archaeological sites, historic buildings, early military infrastructure and other resources like sacred sites. The goal is to minimize training restrictions while preserving significant irreplaceable cultural resources.

Historic properties are a subset of cultural resources that are on or eligible for the National Register of Historic Places (NRHP). To be eligible for the NRHP, properties must be 50 years old (unless they have special significance) and have national, state or local significance in American history, architecture, archaeology, engineering or culture. They also must possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet at least one of four criteria for evaluation (36 CFR § 60.4):

- **Criterion A**: be associated with events that have made a significant contribution to the broad patterns of our history.
- **Criterion B**: be associated with the lives of persons significant in our past.
- **Criterion C**: have distinctive characteristics of type, period or method of construction, or that represent the work of a master, or that possess high artistic values or that represent a significant and distinguishable entity whose components may lack individual distinction.
- **Criterion D**: have yielded, or may be likely to yield, information important in prehistory or history.

Impact analysis for cultural resources focuses on assessing whether the implementation of an alternative would have the potential to affect cultural resources that are eligible or listed in the NRHP or have traditional significance for tribes. For this EA, impact analysis for cultural resources focuses on, but is not limited to, guidelines and standards set forth in the implementing regulations 36 CFR 800 of NHPA Section 106. Under Section 106 of the NHPA, the funding/permitting/approving federal agency is responsible for determining whether any historic properties are located in the area, assessing whether the proposed undertaking would adversely affect the resources, and notifying the SHPO of any adverse effects. An adverse effect is any action that may directly or indirectly change the characteristics that make the historic property eligible for listing in the NRHP. If an adverse effect is identified, the federal agency consults with the SHPO, federally recognized tribes, and the public to develop measures to avoid, minimize or mitigate the adverse effects of the undertaking.

Analysis of potential impacts to cultural resources considers both direct and indirect impacts. Impacts could occur through 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.

Direct impacts are assessed by:

- Identifying the nature and location of all elements of implementing the alternatives.
- Comparing the sites relative to identified historic properties, sensitive areas, and surveyed locations.
- Determining the known or potential significance of historic properties that could be affected.
- Assessing the extent and intensity of the effects.

Indirect impacts occur later in time or farther from the proposed action.

The management of cultural resources and historic properties at Fort Hood is guided by Chapter 6 of AR 200-1, which states that the Cultural Resource Manager has responsibility for compliance with Sections 106 and 110 of the NHPA, as well as ARPA, AHPA, NAGPRA, AIRFA, EO 13007, and EO 13175. AR 200-1 also requires the development of an Integrated Cultural Resources Management Plan (ICRMP) for use as a planning tool. Fort Hood has developed an ICRMP (Fort Hood, 2021) which outlines the responsibilities of the FHCRM and provides a plan for staying in compliance with federal laws. As part of these compliance efforts, Fort Hood adopted the Army Alternate Procedures (AAP) through development of a Historic Properties Component (HPC) of the ICRMP. The HPC is a compliance document that implements the AAP in lieu of regular Section 106 requirements of the NHPA. This HPC was certified by the Advisory Council on Historic Preservation in 2010 and recertified in 2021. The HPC is specific to cultural resources that have been determined to be significant and are considered to be historic properties eligible for inclusion in the NRHP.

To determine the significance of cultural resources, Section 106 provides a roadmap for identifying and evaluating resources for eligibility for the NRHP. The Fort Hood AAP includes the four steps of Section 106 review that are established under 36 CFR Part 800:

- Initiate the process
- Identify and evaluate historic properties
- Assess adverse effects
- Resolve adverse effects

The Fort Hood HPC provides SOPs that are step-by-step procedures that FHCRM follows when considering the effects of its activities on historic properties for Section 106 compliance in accordance with the AAP. While 36 CFR Part 800 prescribes a project-by-project review, the AAP prescribes a programmatic review process, under which consulting parties can participate in the development of the HPC and are included in an annual review and monitoring process. Any adverse actions on historic properties are recorded through the preparation of NEPA documentation.

3.3.1 Affected Environment

The FHCRM has oversight responsibility for 218,823 acres of land at Fort Hood, including 196,791 acres of designated range and training lands. Included within these training lands is 5,592 acres of U.S. Army Corps of Engineers (USACE) property around Belton Lake that Fort Hood currently manages under a land-use permit with the USACE. Detailed information on the natural environment of Fort Hood can be accessed in the INRMP (Fort Cavazos, 2024). The land occupied by Fort Hood is associated with the history of the American Indians, western settlement, and the military history of the U.S.

Numerous and varied cultural resources within the boundaries of Fort Hood have been documented through extensive and systematic investigations. To support cultural resource management, FHCRM has developed a Geographic Information Systems (GIS) database containing installation boundaries, aerial imagery, archaeological site records and regional geomorphological data. This system assists in the identification, monitoring, and protection of cultural resources.

FHCRM investigations have also been documented in 64 research publications detailing the inventory and assessment of cultural resources identified on Fort Hood (Fort Hood, 2021, Appendix J) and identification of areas that have a high potential for intact or buried archeological material. These areas include karst features (sinkholes, caves, and rock-shelters), Holocene alluvium (river terraces and some mid-slope benches) and locations of extant and relocated cemeteries.

3.3.2 Cultural Resources Present

The FHCRM began a comprehensive program to identify cultural resources located on the installation in 1977. As a result of this on-going work 1,103 historic and 1,111 prehistoric cultural sites have been identified. These sites were identified by archaeologists conducting pedestrian surveys (Fort Hood, 2021). All the training and cantonment areas and the majority of the live fire areas have been systematically surveyed for cultural resources. Impact areas or surface danger zones account for the greatest portion of the un-surveyed areas of Fort Hood, which totals approximately 16,300 acres (Fort Hood, 2021).

3.3.3 Archaeological Resources

The prehistoric archaeological resource types (Table 6) identified on Fort Hood span the Holocene with sites dating as early as approximately 10,000 years before present to 200 years before present, all representing remains of hunter/gatherer societies. The archaeological site types are varied and can include concentrations or scatters of specific artifact types, hearths or baking pits, burned rock middens and mounds (earth ovens), post molds and burial grounds.

Table 6 - Prehistoric Archaeological Resources by Type

Resource Type	Definition
Artifact of Lithic Scatter	Surface concentration of stone artifacts with limited matrix depth.
Cave/Sink hole	Cavities in natural rock formation where the opening is smaller than depth, that contain cultural materials.
Midden	Thick deposit of cultural materials without relief of standard shape.
Mound	Small domed, circular shaped features comprised mostly of burned rock.
Open Camp	A place exhibiting evidence of prehistoric encampment not enclosed by natural rock formation.
Procurement Area	Natural resource exploitation location (usually lithic or rock).
Rock Shelter	Overhang or cavity formed in natural rock formation, where opening is greater than depth, that contains cultural materials.

Source: Fort Hood, 2021

Historic archaeological resource types dating to the Historic Period (Table 7) are related to European settlement in the 1800s and the development of Fort Hood in the mid-1900s. These sites typically have evidence of the ranching and farming that occurred in the region.

Table 7- Historic Archaeological Resources by Type (European)

Resource Type	Definition
Artifact Scatter	Surface scatter of historic materials, no structural remains present
Bridge	Bridge structure
Community	Group of habitation structures
Culvert	Water diversion structure
Dump	Defined group of garbage
Farm/Ranch	Homestead and/or grouping of related structures
Livestock Feature	Structure used for attending and support of livestock
Quarry	Specific location of material removal
Railroad	Features related to railroad, i.e., right-of-way
Rock Wall	Fences, supporting structures, etc., made of rock
School	Remains of known school building
Water Feature	Employed in irrigation, water containment, etc.

Source: Fort Hood, 2021

Assessment of archaeological resources has been conducted over time and has included both shovel test pits as well as Phase 2 assessments for NRHP eligibility. The sites that have been the focus for NRHP evaluations are based on installation needs

and tend to be in the vicinity of training areas. Table 8 shows the eligibility status for known prehistoric and historic archaeological sites on Fort Hood.

Table 8 - NRHP Site Data and Evaluation Status

	Eligible	Not Eligible	Not Evaluated	Totals
Prehistoric	200	810	101	**1111**
Historic	11	1063	29	**1103**
TOTALS	**211**	**1873**	**130**	**2214**

Source: Fort Hood, 2021

3.3.4 Buildings, Structures, Districts, Landscapes, and Objects

Fort Hood has inventoried all structures on the installation and is currently in the process of identifying and assessing the buildings and landscapes that are important to local and national heritage and may be eligible for listing in the NRHP. FHCRM currently manages four structures as eligible for listing on the NRHP: the original Post Chapel (Building 53), Hunter Army Airfield (HAAF) Flight Control Tower (Building 7001), HAAF Paint Hanger (Building 7013), and the HAAF Hanger (Building 7027).

Fort Hood has identified seven historic landscapes within the cantonment areas: (1) the Capehart-Wherry Family Housing, (2) the Headquarters/Ceremonial Landscape, (3) the Hood Army Heliport, (4) the Killeen Base, (5) the Motorpool Corridor, (6) the Railroad and Transportation Corridors and (7) the Unaccompanied Personnel Housing. The original post chapel, Building 53, is a significant contributing element of the Headquarters/Ceremonial Landscape.

Per the 2021 HPC (Fort Hood, 2021) several classes of built environment resources are the subject of Proposed Actions (PAs) or program alternatives executed in accordance with 36 CFR § 800.14. These agreements are as follows:

- A nationwide Programmatic Memorandum of Agreement executed in 1986 allows the demolition of World War II temporary buildings and structures as an undertaking exempted from further review under the Fort Hood HPC;
- Undertakings affecting Capehart and Wherry era housing are exempted from further review as the result of the Program Comment for Capehart and Wherry Era Army Family Housing and Associated Structures and Landscape Features (1949-1962);
- Undertakings affecting the Cold War era unaccompanied personnel housing Program are exempted from further review as the result of the Comment for Cold War era Unaccompanied Personnel Housing;
- Undertakings affecting Program Comment for World War II and Cold War Army Ammunition Storage Facilities;
- Undertakings affecting Program Comment for World War II and Cold War Army Ammunition Production Facilities and Plants; and/or

- Any other historic properties covered by future nation-wide programmatic compliance actions.

3.3.5 Properties of Traditional Religious and Cultural Importance (PTRCI)

There are seven federally recognized Native American Tribes affiliated with the lands of the installation: the Apache Tribe of Oklahoma, Caddo Nation, Comanche Nation, Kiowa Tribe of Oklahoma, Mescalero Apache Tribe, Tonkawa Tribe of Oklahoma and Wichita and the Affiliated Tribes (Keechi, Waco, and Tawakonie). Fort Hood recognizes these Tribes as sovereign nations and conducts formal government-to-government consultations during decision-making for PTRCIs and other resources important to Native American communities.

Fort Hood has conducted an inventory of PTRCIs in collaboration with Native American Tribes. The Comanche Nation has identified three sites as being significant to the Comanche people: Sugarloaf Mountain (NRHP eligible), Comanche Trail, and 41BL0146 (NRHP eligible). In addition, multiple Native American Tribes consider the Leon River Medicine Wheel of religious importance. This site has been used continuously for ceremonial purposes since it was discovered in 1990. Access to the Medicine Wheel is restricted to Native Americans for ceremonial purposes and to FHCRM for condition assessments.

3.3.6 Cemeteries

At least 19 cemeteries have been documented within the installation boundaries at Fort Hood. In 1943 and 1953, several large cemeteries were disinterred, and the human remains were relocated to previously established cemeteries in local communities. Smaller cemeteries with less than 50 interments were allowed to remain (Fort Cavazos, 2024). Fort Hood Regulation 210-190 describes the Army's role in the upkeep and conditions for the interment of these remaining cemeteries. Fort Hood manages the Comanche National Indian Cemetery which was established in 1991. The cemetery is located in a protected site, strictly for Native American use and reburial of NAGPRA-related remains and objects.

3.3.7 Environmental Consequences

Fort Hood operates under an HPC that lays out SOPs for identification of historic properties and BMPs to avoid adverse effects to historic properties. These SOPs and BMPs include:

SOP 4.1.1 Archeological Sites and PTRCI

- Maintain sites and PTRCI that are affected by the undertaking in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties and the Standards and Guidelines for Archeology and Historic Preservation.
- Avoid NRHP eligible sites or PTRCIs in the execution of an undertaking if possible by (1) not proceeding with the undertaking, (2) eliminating that part of

the undertaking that would have an adverse effect, (3) redesigning the undertaking to avoid an adverse effect, or (4) use of barricades and site capping.

- Avoid altering and/or disturbing archeological sites and PTRCI in the execution of an undertaking.
- Implement treatment plans.

SOP 4.1.2 Buildings, Structures, Districts and Objects

- Maintain buildings, structures, districts, and objects that are affected by the undertaking in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties and the Standards and Guidelines for Archeology and Historic Preservation.
- Avoid NRHP eligible buildings, structures, districts, and objects in the execution of an undertaking if possible by (1) not proceeding with the undertaking, (2) eliminating that part of the undertaking that would have an adverse effect, or (3) redesigning the undertaking to avoid an adverse effect on buildings, structures, districts, and objects.
- Implement treatment plans.
- If BMPs cannot be applied, the HPC provides alternative mitigation measures for undertakings that would have an adverse effect on historic properties including: Adaptive Reuse (Conversion) of Adversely Affected Historic Properties
- Disposal of Adversely Affected Historic Properties
    - Deconstruction
    - Salvage
    - Transfer
- Relocation
- Mothballing

If adverse effects cannot be avoided, the HRC provides the following SOPs for treatment of adverse effects:

- Comply with NAGPRA for PTRCI;
- Prepare a data recovery plan for archaeological sites;
- Comply with the requirements of EO 13007 and AIRFA for PTRCI that are sacred but are not archeological in nature;
- Develop a Historic American Buildings Survey/Historic American Engineering Record/Historic American Landscape Survey or similar alternative documentation; and
- Disposal.

Impacts to cultural resources would be considered significant if they cause alteration or include the characteristics that qualify a property for inclusion on the NRHP (could include physical destruction, damage, alteration, removal, change in use, or character within the setting, and negligence causing deterioration, transfer, lease or sale).

Alteration of or access to properties of religious or cultural significance to Native American Tribes would also be significant.

3.3.8 No Action Alternative

Under the no action alternative, the project area would not be altered nor expanded and would continue normal operations in its current condition. There are no previously recorded cultural resources located within the proposed project area and the formation processes that currently affects this area will continue into a future with no action.

3.3.9 Alternative 1: Proposed Action Alternative

Alternative 1 would construct a new 1,066 SF Logistics, Line Haul Operations Building to support a new staging and marshalling area with container loading aprons for line haul operations. Construction of this building would result in the clearing of approximately 9 acres of bare and scrub/shrub land and remove approximately 45 trees. The proposed action would also impact an additional 15 acres of adjacent land to replant trees. A total of approximately 24 acres of disturbance are proposed.

Based on a review of the site files at the Texas Historical Commission, there no previously recorded cultural resources mapped within the project area. The project area is located on an eroding, gentle slope of an upland ridge mapped entirely within the Cho soil series. Cho series soils formed in situ within the Lower Walnut Clay that formed during the Cretaceous Period. The project area was completely surface surveyed for cultural resources, with the western quad surveyed in 1980 (Report No. 3) and the eastern quad surveyed in 1978 (Report No. 1). The 1980 and 1978 surveys did not identify any cultural resources within the proposed project area (Skinner et al., 1981; Dibble et al., 1989). Based on the erosional nature of the project area and shallowness of the soils present, there is a low probability for encountering cultural, historical and archeological resources within the proposed project area. Therefore, it is determined that there will be less than significant effects on these resources. Consulting parties may comment on this determination either through the NEPA process or during the Historic Properties Component (HPC) annual review.

3.4 Hazardous, Toxic, Radioactive, or Solid Wastes (HTRW)

In order to complete a feasibility level Hazardous, Toxic, Radiological Waste (HTRW) evaluation for the EA, a records review was conducted following the guidance of Engineering Regulations (ER) 1165-2-132: HTRW Guidance for Civil Works Projects, and portions of American Society for Testing and Materials (ASTM) E1527- 13: Standard Practice for Environmental Site Assessment Phase 1 Process. The proposed project involves the construction of a staging/marshalling area with container loading aprons for line haul operations at Fort Hood. For the purposes of this records search, the identified work area and adjacent properties are considered the footprint of the project. This review does not constitute a Phase I Environmental Site Assessment due to a site inspection and interviews not being conducted.

The identified work areas and directly adjacent areas are potentially disturbed natural areas and warehouses and motorpools used for logistics purposes. The surrounding disturbed natural areas include a potential borrow pit, fill disposal site, and waste disposal area. The developed areas are primarily used for logistic purposes with limited HTRW concerns within the project footprint. There is one area that is identified as a potential waste disposal site within the project footprint. No official documentation is available to determine the nature of this site. Further information is needed to determine if this site has the potential to impact the project.

In the records review, files, maps and other documents that provide environmental information about the project area are obtained and reviewed. To complete the records review, publicly available databases and sources were reviewed using the proposed project footprint. Once the database searches were complete, the results for recognized environmental conditions (RECs) that could affect the proposed project or need further investigation were analyzed. The results of that analysis, specifics of the REC (where applicable), and justification for dismissal from further evaluation (where applicable) are discussed below.

The following environmental databases were searched manually. These databases included the following sources:

- Environmental Protection Agency (EPA) Cleanups in my Community (CIMC) database
- Texas and Tribal Voluntary Cleanup Sites
- EPA Envirofacts database

3.4.1 No Action Alternative

The No Action Alternative would be the same as the existing conditions for HTRW contamination. Construction of the Line Haul Facility at Fort Hood would not occur, resulting in no effects on or disturbance of HTRW contamination.

3.4.2 Alternative 1: Proposed Action Alternative

The EPA conducts and supervises investigation and cleanup actions at sites where oil or hazardous chemicals have been or may be released into the environment. Cleanup activities take place at active and abandoned waste sites, federal facilities and properties, and where any storage tanks have leaked. EPA, other federal agencies, states or municipalities, or the company or party responsible for the contamination may perform cleanups. This multisystem viewer compiles data from multiple databases to include RCRA generators, brownfields, and other environmental conditions. No sites of concern were found after a search for this site.

The Voluntary Cleanup Program (VCP) is administered by the Texas Commission on Environmental Quality and consists of a database. A review of the regulated search results list did not yield any significant RECs within the potential area.

There is one area identified as a potential waste disposal site within the project footprint. No official documentation is available to determine the nature of this site. Further information is needed to determine if this site has the potential to impact the project or should be considered an REC. If there is hazardous material contamination at the site, then there could be significant effects for the proposed action. Based on aerial photography and the appearance of a terraced storm water and erosion control feature, the presence of hazardous materials or waste is present on the site is highly unlikely; the area likely contains construction debris/residential waste, which would have a negligible effect on the proposed action. The suspected debris area is located in the non-fruit bearing tree replanting area so there may need to be a removal action to ensure the trees are successful.

3.5 Noise

Federal and local governments have established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise. The Federal Interagency Committee on Urban Noise developed land-use compatibility guidelines for noise in terms of day-night average sound level (DNL). It is recommended that no residential uses, such as homes, multifamily dwellings, dormitories, hotels, and mobile home parks, be located where the noise is expected to exceed a DNL of 65 decibels (dBA). For outdoor activities, the EPA recommends DNL of 55 dBA as the sound level below which there is no reason to suspect that the general population would be at risk from any of the effects of noise. Noise-sensitive receptors are facilities or areas where excessive noise may disrupt normal activity, cause annoyance, or loss of business. Land uses such as residential, religious, educational, recreational, and medical facilities are more sensitive to increased noise levels than are commercial and industrial land uses.

The primary noise sources at Fort Hood include small- and large-caliber weapons, aviation operations, heavy vehicle movements and demolition activities. The Noise Zones for all operations show annual impacts outside the installation boundaries are distributed to the south, east, and, to a lesser degree, north. The City of Killeen and surrounding communities adjacent to the southern boundary, including Copperas Cove, Harker Heights and Belton combine to create a large metropolitan area along the southern boundary of the installation.

Population exposure to training noise is greatest in this area due to the amount and type of development. Bell and Coryell County lands to the east, west and just north of Fort Hood are rural in nature, with little development and low-density populations. It is in these areas, particularly the east, where range and firing points are near the installation boundary, which hold the greatest potential for future incompatibilities with noise. While

the noise contours for large-caliber weapons extend off the installation boundary, the majority of noise associated with small-arms fire and other activities only impacts areas within the installation boundaries.

Impacts to noise would be considered significant if the proposed action results in harm or injury to off-post communities, disrupts sensitive receptors or exceeds applicable federal, state or Army environmental noise-limit guidelines. This assessment evaluates both temporary (construction-related) and long-term operational impacts.

3.5.1 No Action Alternative

The No Action Alternative would be the same as the existing conditions for noise. Construction of the Line Haul Facility at Fort Hood would not occur. Therefore, implementation of the No Action Alternative would not result in significant noise-related impacts.

3.5.2 Alternative 1: Proposed Action Alternative

Alternative 1 would construct a new 1,066 SF Logistics, Line Haul Operations Building to support a new staging and marshalling area with container loading aprons for line haul operations.

Construction actions would temporally generate noise impacts uncharacteristic for the immediate surrounding area. Operation of construction equipment during reasonable hours (as described by relevant local codes and regulations) would minimize the impacts to the surrounding community. Noise generation from the proposed action is expected to have no effect on off--installation communities.

Relative to the current generation of noise on base, the noise associated with the proposed action would not substantially increase peak noise levels currently generated on Fort Hood and would be considered minor. The proposed action would introduce no long-term adverse effects to the noise environment at Fort Hood. All noise associated with Alternative 1 would be managed in accordance with existing ordinances regulating noise and temporal considerations of noise as it relates to construction on the installation. Therefore, implementation of Alternative 1 is expected to have only less than significant impacts to noise.

3.6 Socioeconomics

Socioeconomics describes the local economic and social conditions in an area. Socioeconomic indicators, such as population, housing, income, and regional economic activity inform the assessment of socioeconomics and are used to understand the community potentially affected by the proposed action.

As defined by the Census Bureau, a low-income person is a person whose household income is at or below the poverty threshold set for the United States. The Census Bureau’s 2023 data identified this threshold as $30,090 annually for a family of

four with two dependents (U.S. Census Bureau, 2024a). Poverty rates are often used as indicators of economic vulnerability, with defined areas where 20 percent or more of residents are below the poverty level considered economically disadvantaged. Additionally, EO 13045, “Protection of Children for Environmental Health Risks and Safety Risks,” requires federal agencies to identify and assess health risks and safety risks that may disproportionately affect children.

The ROI for socioeconomics of the proposed action includes Bell and Coryell Counties, as these counties are generally considered the geographic extent for Fort Hood’s socioeconomic impact. These counties contain the majority of the installation’s soldiers, Army civilians and contractor personnel and are home to many of the businesses that support Fort Hood’s economic activity. The installation has historically played a critical role in the local and regional economy.

The official poverty rate for the U.S. in 2022 was 11.5 percent, with 37.9 million people in poverty. Texas is listed as having one of the highest percentages of poverty in the country at 14 percent (U.S. Census Bureau, 2024c). The percent of persons in poverty for 2022 were 12.2 for Coryell County and 14.2 for Bell County; comparative to the Texas statewide poverty percentage, Coryell County is lower, while Bell County is higher (U.S. Census Bureau, 2024b).

The estimated population total for the ROI in 2023 was 478,071, including 84,878 for Coryell County and 393,193 for Bell County. The ROI experienced a cumulative population increase of 8.3 percent between 2020 and 2023, including Coryell County’s population increase of 2.2 percent and Bell County’s increase of 6.1 percent (U.S. Census Bureau, 2024b).

The total on-post population for Fort Hood is 51,117, which includes:

- 34,375 active personnel;
- 3,589 on-post family members;
- 4,578 civilian employees;
- 6,782 contractor personnel; and
- 1,793 Army and Air Force Exchange Service, commissaries, and staff of on-post schools.

Fort Hood provides a substantial contribution to the ROI economy as the largest single local location employer in the state of Texas as of 2021 with an estimated 34,375 military personnel assigned to the post and 11,360 civilian personnel, including contractors, working on the installation (Military Installations, 2024). Fort Hood’s economic impact in 2021 was estimated at $28.8 billion across the state of Texas (Texas Comptroller, 2021).

The ROI 2022 annual average civilian labor force aged 16 plus was 41 percent and 58.8 percent for Coryell and Bell County respectively (U.S. Census Bureau, 2024b). Health care and social assistance, retail trade, and educational services were the most

common employment sectors for Bell County in 2021 (Data USA, 2024a). Public administration, retail trade and health care and social assistance were the most common employment sectors for Coryell County in 2021 (Data USA, 2024b). Bell and Coryell Counties' unemployment rate was 4.5 percent as of 2023, a 1.3 percent decrease since 2021. However, the ROI unemployment rate was still higher than the overall state of Texas 2023 rate of 3.9 percent (U.S. Bureau of Labor Statistics, 2024).

The average per capita income of the ROI was $29,261 in 2022. For comparison, the per capita income of Texas was $37,514. The total income estimated for the ROI between 2018-2022 was $14,013,228,841 (U.S. Census Bureau, 2024b).

3.6.1 No Action Alternative

Under the No Action Alternative, the Line Haul yard and new operations building would not be built. Economic impacts to the ROI would not be affected beneficially or adversely. Therefore, implementation of the No Action Alternative would not result in significant impacts to socioeconomics.

3.6.2 Alternative 1: Proposed Action Alternative

Alternative 1 would construct a new 1,066 SF Logistics, Line Haul Operations Building to support a new staging and marshalling area with container loading aprons for line haul operations.

Direct benefits in the ROI would be increased employment opportunities related to construction, while indirect benefits include increased logistics volumes and incomes in the ROI. There could also be further increases in the population if workers, solo or with families, move into the ROI for construction or logistics jobs. These impacts would initially be temporary but could lead to permanent increases if workers and families remain in the ROI long term.

Increases in employment, logistics volume, income and population would all be beneficial but negligible compared to the current conditions for the ROI. Therefore, implementation of Alternative 1 is expected to have a negligible impact on socioeconomics.

3.7 Topography, Geology, and Soils

The topography of Fort Hood is defined by remnant mesas separated by wide valleys and rolling lowlands with steep canyon breaks, and it includes karst topographic features such as caves, sinkholes, rockshelters, and springs. Fort Hood is located northwest of the Balcones Fault Zone, a region of numerous geologically small faults. Over geologic time the area surrounding this fault zone, including Fort Hood, has elevated as much as 500 feet in certain areas. The subsequent erosion of these areas has created an irregular and steeply sloping terrain (USACE, 2003).

Elevations range from 561 feet above sea level near the shores of Belton Lake in the northeastern portion of the installation, to 1,231 feet above sea level in the Seven Mile Mountain area in the southern portion of the installation. Slopes generally range from level in the floodplains of Cowhouse Creek to as much as 33 percent on tributary valley walls. The average slope of the installation is between 5 and 8 percent. The area north of Highway 190 generally slopes east, while the area south of Highway 190 generally slopes south and east. The project area is approximately 971 feet above sea level.

The Natural Resources Conservation Service's (NRCS) Web Soil Survey Tool (WSST) reports that the project area (inclusive of the tree replanting zone) is entirely comprised of Cho clay loam (1 to 3 percent slopes). This soil type is not considered Prime Farmland primarily due to its shallow hardpan horizon of 7 to 20 inches (WSST, 2025). Additionally, Cho clay loam is reported by the NRCS as a Capability Class 4 soil, indicating that it has very severe limitations that reduce the choice of plants or requires very careful management, or both (WSST, 2025).

3.7.1 No Action Alternative

Under the No Action Alternative, the Line Haul yard and new operations building would not be built. Therefore, implementation of the No Action Alternative would not result in significant impacts to geological and soil resources.

3.7.2 Alternative 1: Proposed Action Alternative

Alternative 1 would clear approximately 9 acres of undeveloped bare and scrub/shrub land to construct a new logistics, Line Haul Facility. The construction would also remove approximately 45 trees and indirectly disturb an additional 15 acres of adjacent land to replant trees.

Section 3.7 describes the soil series present in the proposed construction site and surrounding area. The area is dominated by Cho series soil, described as well-drained and permeable with a runoff potential from negligible to medium depending on percent slope. While saturation events pose the potential for all disturbed soil series to contribute to erosive events and sedimentation, the implementation of BMPs and SOPs during construction would limit erosive potential and sedimentation to less than significant levels.

Construction of Alternative 1 is expected to remove vegetation and disturb soils to the extent that could increase soil erosion rates and alter drainage patterns in the immediate area, which could lead to gullying and sedimentation. Implementation of BMPs, SOPs, and the development of an SWPPP by Fort Hood in accordance with the INRMP would minimize adverse impacts during and post construction. Remediation of disturbed soils and vegetation in the surrounding areas after construction would further minimize continued erosion potential in the affected areas.

In summary, implementation of Alternative 1 would lead to the possibility for increased erosion. During construction and planning, the inclusion and adherence to BMPs and SOPs as set forth by Fort Hood for identification and mitigation of potential erosional features would render geological impacts from the implementation of Alternative 1 to less than significant levels.

3.8 Transportation and Traffic

Transportation includes air, land and sea routes with the means of moving passengers and goods. A transportation system can consist of any or all the following: roadways, bus routes, railways, subways, bikeways, trails, waterways, airports and taxis, and can be viewed on a local or regional scale.

Traffic is commonly measured through average daily traffic and design capacity. These two measures are used to assign a roadway with a corresponding Level of Service (LOS) qualitive measurement. The LOS designation is a professional industry standard used to analyze and categorize traffic flow and the operating conditions of a roadway segment or intersection. The LOS is defined on a scale of A to F that describes the range of operating conditions on a particular type of roadway facility. LOS A through LOS B indicates free flow travel. LOS C indicates stable traffic flow. LOS D indicates the beginning of traffic congestion. LOS E indicates the nearing of traffic breakdown conditions. LOS F indicates stop-and-go traffic conditions and represents unacceptable congestion and delay.

Transportation in and around Fort Hood is supported by roads, rails and air systems. Pedestrian walks, bike paths and trails are also used to a limited extent for travel within the cantonment area. Fort Hood and the surrounding community experiences typical traffic patterns associated with both residential and commercial activities. Peak traffic periods generally correspond to the morning and evening commutes.

Impacts to transportation and traffic would be considered significant if the proposed action causes a reduction in more than two LOS at roads and intersections within the ROI, substantially degrades traffic flow during peak hours or significantly exceeds road capacity and design.

3.8.1 No Action Alternative

The No Action Alternative would be the same as the existing conditions for transportation and traffic. Construction of the Line Haul Facility at Fort Hood would not occur. Therefore, implementation of the No Action Alternative would not result in significant impacts to transportation and traffic within the region.

3.8.2 Alternative 1: Proposed Action Alternative

Alternative 1 would construct a new 1,066 SF Logistics, Line Haul Operations Building to support a new staging and marshalling area with container loading aprons for line haul operations.

Construction vehicles entering onto the base and ingress and egress to the site would generate temporary impacts to LOS in the immediate area of the project area and potentially impact traffic flow on and off base to Interstate-14. Considerations with regards to peak traffic hours would minimize impacts to negligible levels during construction. Additional workers would generate more vehicle trips within the base. However, this increase is expected to have a negligible impact on the existing road infrastructure.

While additional permanent and transient personnel and their families could potentially increase commuter traffic during peak hours, this is anticipated to place negligible additional demands on the current road infrastructure. Therefore, impacts to transportation and traffic associated with the implementation of Alternative 1 are expected to be negligible.

3.9 Utilities

Utilities include electricity, natural gas, water, sewer services, and stormwater infrastructure within the cantonment area and surrounding regions.

3.9.1 Electricity

Fort Hood is supplied electricity from Apex Clean Energy (ACE), a Texas Retail Energy Provider (REP). The electricity supplied by the REP is ultimately delivered to the West electrical substation through assets belonging to Oncor (a Texas Transmission and Delivery Company). A point of initial delivery is through Oncor's switching station located to east of West Fort Hood (WFH) off South Clear Creek Road.

There are 43 circuits comprised of underground and overhead utility distribution lines that serve the Installation. The capacity of the electrical service is more than adequate for even the peak demand at Fort Hood, and the available capacity of this system is estimated as operating at an average of 22%, with peaks reaching 26% of the capacity. There have been brown outs/black outs and service interruptions during peak operations due to excessive stress from peak demand times and area wide storms.

3.9.2 Gas

Fort Hood is supplied natural gas from Atmos Energy, a Texas Natural Gas Distribution Company. Gas service is provided through four separate gas pipelines originating from Atmos Energy: Station #1-Fort Hood West regulator station, Station #2-Fort Hood South regulator station, Station #3-Carl R. Darnall Army Medical Center (CRDAMC) regulator station, and Station #4-North Fort Hood regulator station.

The Fort Hood West station pipeline enters north of US Highway 190. The line delivers through a 4-inch gas line, operating between 52 and 58 pounds (lbs). of pressure. That 4-inch line feeds into a Dominion Energy station (Pethtel station) where the pressure is stepped down to 30 to 35 lbs. The Fort Hood South main enters north of 31st street and Tank Battalion Avenue. It runs an 8-inch pipeline at 32 to 35 lbs. directly

into the main cantonment. The CRDAMC station main enters north of Business US 190. It runs a 6-inch pipeline at 30 lbs. feeding Fort Hood. The North Fort Hood station main enters south of Business State Highway 36. It runs an 8-inch line at 55 lbs. that feeds to a Dominion Energy station (Porter station), where the pressure is stepped down to 32 to 35 lbs. The overall system is in good condition and is estimated to operate at 100 percent during peak winter times.

3.9.3 Sanitary Wastewater

Wastewater generated by Fort Hood is managed by American Water through American Water's wastewater system and is conveyed off-post through the City of Killeen's infrastructure to Bell County Water Control & Improvement District No. 1's (WC&ID #1) wastewater treatment plant where it is treated to regulatory standards. WC&ID #1's wastewater system operates an activated sludge wastewater treatment facility with an annual permitted treatment capacity of 18 million gallons per day (mgd). The current system is treating an average of 14.9 mgd with the highest peak at 42 mgd (Garrett, June 2025).

3.9.4 Stormwater

Stormwater on Fort Hood is managed according to the Phase II Municipal Separate Storm Sewer System (MS4) permit authorization (TXR040069). The MS4 is comprised of a system of conveyances to include roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, tributaries, and storm drains. This system is utilized for discharging stormwater offsite to Cowhouse Creek, Nolan Creek, and the Lampasas River, which leads to lakes Belton and Stillhouse, where it is then used to provide flood control, drinking water and recreational opportunities for surrounding communities.

Wastewater generated from on-site industrial processes and training exercises is managed by TCEQ Permit to Discharge Waste (WQ0002233000). Treated wastewater and wastewater runoff is consistently monitored for compliance through a series of sample gatherings, inspections, and reporting. All analytical information or exceedances are reported according to Texas Pollutant Discharge Elimination System (TPDES) permit requirements.

3.9.5 Water Supply

Potable water on Fort Hood is supplied by Bell County WC&ID #1 through a wholesale contract with the government. American Water owns and operates the potable water distribution system on the Installation and provides water through Pump Station #1 and Pump Station #7. The system's stored maximum capacity through existing tanks is 10.5 mgd with an average daily use of 5.5 mgd. American Water operates eleven elevated storage tanks with a combined storage capacity of approximately 7.5 million gallons.

A Water Vulnerability and Risk Assessment conducted by Fort Hood/American Water in 2022 indicated the potable water system is well designed, operated, and maintained. More than 320 miles (1,695,000 linear feet) of water pipelines distribute water to the Installation, meeting regulatory standards at a minimum pressure of 35 pounds per square inch (psi). One 48-inch main pipeline enters the Installation on the east side of the Installation and extends west and south. Overall, the system is in good condition and is estimated to have 100 percent available capacity.

Impacts to utilities would be considered significant if the proposed action were to cause an impairment of service to infrastructure, local communities, homes or businesses on the installation; or exceed capacities of existing utility infrastructure on the installation or supplied to the installation by another party.

3.9.6 No Action Alternative

The No Action Alternative would be the same as the existing conditions for utilities. Construction of the Line Haul Facility at Fort Hood would not occur. Therefore, implementation of the No Action Alternative would not result in significant impacts to utilities within the region.

3.9.7 Alternative 1: Proposed Action Alternative

The proposed action is to construct a new 1,066 SF Logistics, Line Haul Operations Building to support a new staging and marshalling area with container loading aprons for line haul operations. Supporting facilities include electrical, water, sanitary sewer, exterior lighting, fencing, paving, walkways, storm drainage, information systems, and site improvements. Utility connections are required to privatized electrical, natural gas, water, and wastewater systems.

The construction and equipping of the new Line Haul Facility with electricity, water, sewer, and HVAC utilities could cause minor temporary utility disruptions on post. The increase in utility load associated with Alternative 1 is not expected to exceed current capacities. As impacts to utilities resulting from Alternative 1 are driven by the proposed construction activities and daily requirements of the new Line Haul Facility, the implementation of Alternative 1 is expected to have a negligible impact on utilities.

3.10 Water Resources

The water resources of Fort Hood can be classified into two main categories—groundwater and surface water. Each of these water resources has its own physical and chemical characteristics, uses, and potential issues. Fort Hood’s major uses of water resources primarily involve surface water and include municipal water supply, training, recreation, vehicle maintenance, and aquatic habitat.

The installation is located directly upstream of two man-made reservoirs—Belton Lake (a sole source water supply for approximately 200,000 people in Fort Hood and the

surrounding communities) and Stillhouse Hollow Lake. Both reservoirs function as fish and wildlife habitat and provide flood control and recreation opportunities for the public.

3.10.1 Surface Water

Fort Hood is in the Brazos River Basin. Surface water resources consist of numerous small to moderate sized streams, which generally flow in a southeasterly direction. Fort Hood has approximately 200 miles of named intermittent and perennial streams with numerous additional tributaries associated with these features. Fort Hood contains more than 200 water impoundments constituting approximately 692 surface-acres. Most of these are used for flood control, sediment retention, wildlife and livestock water, and fish habitat.

3.10.2 Hydrology and Groundwater

As defined by the U.S. Geological Survey (USGS), Fort Hood lies within three major watersheds trending from northwest to southeast: Leon (#12070201), Cowhouse (#12070202), and Lampasas (#12070203) (USGS, 2018). Cowhouse Creek and the Lampasas River are both tributaries of the Leon River. The Leon River begins approximately 60 miles northwest of Fort Hood and roughly parallels the installation's northern boundary. Tributaries of the Leon River, including Shoal and Henson Creeks, drain northern portions of the Western Maneuver Area, the Live Fire Training Area (LTA), and the Eastern Training Area. Owl Creek drains northern portions of the LTA and the Eastern Training Area and merges with the Leon River to form the northern arm of Belton Lake. Nolan Creek, which drains the southern portion of the Eastern Training Area and the main cantonment area, is also part of the Leon River Watershed and merges with this river downstream of Belton Lake. The western arm of Belton Lake is formed by Cowhouse Creek. The Cowhouse Creek watershed includes several tributaries within Fort Hood and drains most of the Western Maneuver Area and LTA along with the northern portion of West Fort Hood. A very small portion of the Lampasas River Watershed lies within the southern portion of West Fort Hood.

The major aquifer that underlies Fort Hood is the Trinity Aquifer. Parts of both the outcrop and the downdip are deeply buried below Fort Hood. The Trinity Aquifer extends through parts of 55 counties of central Texas. The stratigraphic column units from oldest to youngest includes the Glen Rose, Paluxy, Walnut Clay, Comanche Peak, Edwards, and Georgetown limestones. The Paluxy and Walnut Clay units are exposed in wide valleys separating mesa ridges and on the rolling lowlands and associated canyons above major creeks, and the Glen Rose unit is exposed in the benthic along major creeks (USACHPPM, 2001). The Comanche Peak, Edwards, and Georgetown units are exposed on mesa tops, slopes, and canyons.

3.10.3 Water Quality

Water quality studies at Fort Hood include sedimentation and erosion studies, stormwater data collection, TPDES permit monitoring, and studies of sediment,

groundwater and surface waters in the Cowhouse Creek drainage basin. The U.S. Army Center for Health Promotion and Preventive Medicine, now the U.S. Army Public Health Center, examined Munitions Constituents (MC) on Fort Hood range sites and evaluated the effects and risks associated with water quality and other means of MC environmental movement (Fort Cavazos, 2024). The environmental fate of MC indicates a very low risk to humans and sensitive species. Fort Hood ranges were assessed for MC transport off range in 2012 and 2018 and the risk continues to be low (USAEC, 2012). The effects of organic chemical and metal contamination are minimal.

3.10.4 Wetlands

The Clean Water Act (CWA) protects water bodies and stream channels that are under its jurisdiction. Waters of the U.S., including wetlands, exist across the installation. Waters of the U.S. range from small emergent wetlands associated with ephemeral streams to large, forested wetland complexes adjacent to perennial channels. Currently, efforts are underway to delineate (map and describe) all water features, both jurisdictional and non-jurisdictional, across the installation.

Potential jurisdictional wetlands in central Texas and at Fort Hood are most common on floodplains along rivers and streams (riparian wetlands), along the margins of lakes and ponds and in other low-lying areas where the groundwater intercepts the soil (springs). An analysis of existing hydrology, hydric soils, vegetation and floodplains was conducted to determine areas of high probability for jurisdictional wetlands and Waters of the U.S. The results of this analysis indicated that potential jurisdictional wetlands within the boundaries of Fort Hood occur along the 692 surface acres of lakes and ponds, as well as tributaries of the Waters of the U.S., including all streams. There are numerous natural springs within the Fort Hood Military Reservation boundaries, but not all of their locations have been mapped. Several well-known springs from the area are Ransomer Springs, approximately five miles north-northwest of Nolanville; Mountain Springs, in the Owl Creek Mountains approximately 12.4 miles north northwest of Belton; and Taylor Springs, 1.2 miles south of Mountain Springs (Brune, 1981).

It has been the practice of Fort Hood to minimize impacts to potential jurisdictional areas. These areas might be indirectly affected by ongoing installation activities such as military training activities, livestock grazing, hydrologic alterations and urban and training area stormwater runoff. Actions within wetlands should be avoided when a practicable alternative exists that would not impact these areas.

The combination of soils, vegetation and climate affect the current watershed characteristics. Generally, soils on the installation are high in clay so the percolation rate within them is quite low. Vegetation provides little ground cover over much of the installation, so the watersheds have only a small portion of moderate to heavy rainfall soak into soil. The net effect is that Fort Hood stream channels are ephemeral or intermittent and flow only in direct response to rainfall. In the existing cantonment area, some stream channels are altered to accommodate urban runoff and protect infrastructure.

3.10.5 No Action Alternative

Under the No Action Alternative, the Line Haul yard and new operations building would not be built. Therefore, implementation of the No Action Alternative would not result in significant impacts to water resources.

3.10.6 Alternative 1: Proposed Action Alternative

The proposed action would construct the Line Haul yard and new operations building; in turn this would clear approximately 9 acres of barren and scrub/shrub habitat, remove 45 trees, and disturb an additional 15 acres of the surrounding area to replant trees. The change to the surface structure of the project area from development associated with Alternative 1 would change the immediate hydrology of the area. The addition of impervious materials such as concrete, asphalt and/or bitumen would increase runoff velocity. The increase of motor vehicles associated with construction and traffic associated with the logistics facility could contribute to nonpoint source pollutions carried by runoff in the ROI. If it is not properly minimized, increased runoff velocity could lead to accelerated erosion and enlarge the area affected by pollutants that runoff often carries.

Impacts from the physical alterations to the environment associated with the use of impervious materials and the foreseeable increase in pollution from additional vehicular activities due to Alternative 1 would be minimized by adhering to BMPs and SOPs during planning and construction phases of the proposed action. The development of an approved SWPPP prior to construction and adherence to current regulations for water use and waste disposal at the Line Haul yard and operations building would further minimize impacts to water resources.

According to Federal Emergency Management Agency (FEMA) and U.S. Fish and Wildlife Service (USFWS) data, the proposed project area is not located within a special flood hazard zone, floodplain, or wetland (FEMA, 2025; USFWS, 2025a). Review of USFWS and FEMA data shows that there are no surface water resources or wetlands in the proposed project area or its immediate vicinity (FEMA, 2025; USFWS, 2025a). Increased activity and surface alteration associated with Alternative 1 has the potential to impact water resources at Fort Hood, but due to existing BMPs, the size of the proposed expansion, and existing SOPs, the impacts are anticipated to be less than significant. Therefore, implementation of Alternative 1 is expected to have less than significant impacts on water resources.

4 REASONABLY FORESEEABLE EFFECTS

The impact analysis for each resource above presents the direct and indirect effects of the final array of alternatives on each resource's affected environment. The resource conditions described account for the effects to resources related to past and present actions. This Section further considers the effects of each alternative combined with reasonably foreseeable future actions and conditions for all resources.

Reasonably foreseeable future actions would include future development i.e. improving soldier housing on the base and managing natural resources such as environmental conservation efforts, etc. identified in the 2024 INRMP. Future development would typically require soil disturbance, vegetation removal, and transformation of pervious surfaces into impervious areas. This could lead to erosion during construction activities and increased surface water runoff which would lead to habitat loss and water quality impacts resulting in impacts to wildlife including ESA listed species. The final array of alternatives would not contribute to impacts from future development because the potential impacts from these alternatives are anticipated to be similar to the existing condition.

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6 LIST OF PREPARERS

This EA was prepared under the direction of the U.S. Army Corps of Engineers Fort Worth District and in partnership with Fort Hood. The following staff contributed to the preparation of this document:

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- Tamika Gray, USACE – Fort Worth District, Project Manager

ATTACHMENT A: PUBLIC AND AGENCY COORDINATION

Attachment 1: NEPA Project Start Notice

DEPARTMENT OF THE ARMY
UNITED STATES ARMY GARRISON, FORT HOOD
4612 ENGINEER DRIVE
FORT HOOD, TEXAS 76544-5028

October 02, 2025

SUBJECT: Environmental Assessment for Line Haul Facility at Fort Hood, Texas

Dear Concerned Members of the Public:

The United States Army is preparing an Environmental Assessment (EA) to evaluate potential environmental effects associated with the construction and operation of a line haul facility at Fort Hood. This EA is being prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (Title 42 United States Code (USC) § 4321 et seq.) (NEPA); US Department of Defense (DoD) NEPA Implementing Procedures issued 30 June 2025; Army Regulation (AR) 200-1, Environmental Protection and Enhancement; and applicable Army NEPA guidance.

The proposed action includes construction of a 1,066 square foot Logistics, Line Haul Operations Building to support a new Staging and Marshalling area with container loading aprons for line haul operations. The purpose of the proposed action is to construct a staging/marshalling area with container loading aprons for line haul operations at Fort Hood. The proposed action is needed to provide adequate ground-based deployment infrastructure to achieve compliance with the various missions levied against the Fort Hood Logistics Readiness Center.

Once the EA is completed, the EA and a draft of the decision document (either a Finding of No Significant Impact (FONSI) or Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS)) will be available for review by all interested parties for 30 days. A notification of the availability will be sent out prior to the 30-day review period.

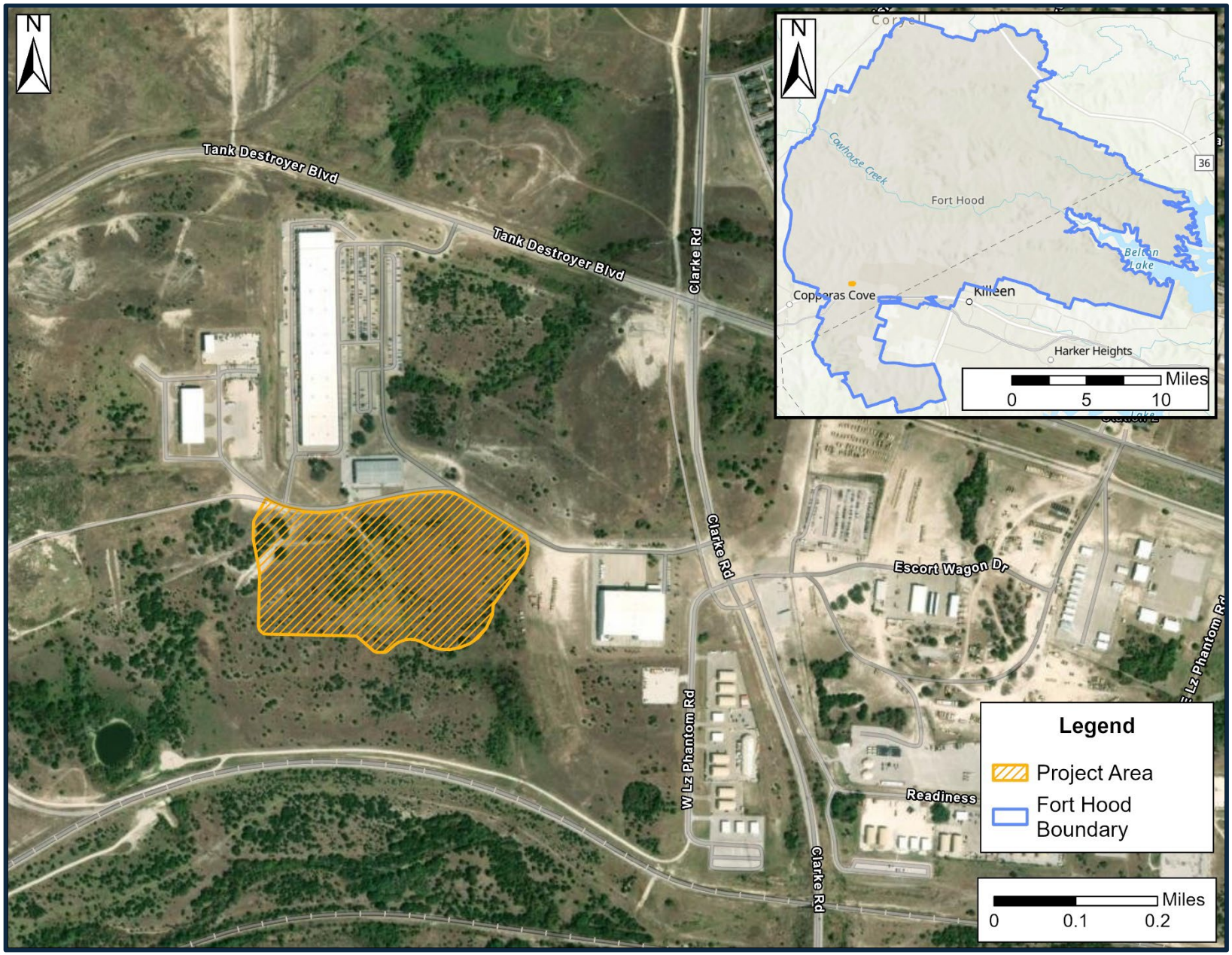
Questions regarding the proposed action or NEPA process should be directed to the NEPA Program Manager, Environmental Division, Directorate of Public Works, at (254) 535-2898 or via email at usarmy.hood.id-readiness.list.pao-staff@army.mil, or US Postal mail to Directorate of Public Works, Environmental Division ATTN: NEPA Program Manager, 4612 Engineer Drive, Fort Hood, TX 76544-5028.

Sincerely,

DUTCHUK.TIMI.MARIE.1146509637 Digitally signed by DUTCHUK.TIMI.MARIE.1146509637 Date: 2025.10.02 12:16:51 -05'00'

Timi M. Dutchuk
Chief, Environmental Division
Directorate of Public Works

Enclosure: Map of the Project Area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Attachment 2: USFWS Official Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Austin Ecological Services Field Office
1505 Ferguson Lane
Austin, TX 78754-4501
Phone: (512) 937-7371

In Reply Refer To: 09/08/2025 15:54:27 UTC
Project Code: 2025-0146055
Project Name: Fort Hood Line Haul Facility

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 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 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: https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.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 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/program/migratory-bird-permit/what-we-do.

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/library/collections/threats-birds.

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/partner/council-conservation-migratory-birds.

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
1505 Ferguson Lane
Austin, TX 78754-4501
(512) 937-7371

PROJECT SUMMARY

Project Code: 2025-0146055
Project Name: Fort Hood Line Haul Facility
Project Type: Military Development
Project Description: This project would construct a new logistics facility at Fort Hood. The proposed action is to construct a new 1,066 square foot (SF) Logistics, Line Haul Operations Building to support a new Staging and Marshalling area with container loading aprons for line haul operations. Primary facilities include staging/marshalling area, operations building, loading/unloading docks and ramps, non-organizational vehicle parking, and building information systems. Supporting facilities include electrical, water, sanitary sewer, exterior lighting, fencing, paving, walks, storm drainage, information systems, and site improvements. Extensive site work is required for this project. Special foundation work is required due to expansive soils. Measures in accordance with the DoD Minimum Antiterrorism for Buildings standards will be provided. Comprehensive building and furnishings related interior design services are required. Access for individuals with disabilities will be provided in accordance with the Architectural Barriers Act (ABA). Heating, ventilation, and air conditioning (HVAC) will be provided by self-contained systems. Utility connections are required to privatized electrical, natural gas, water, and wastewater systems.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@31.1350542,-97.84475457304625,14z

Counties: Coryell County, Texas

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 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 Fisheries[1], 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.

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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 *Setophaga chrysoparia* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/33	Endangered
Piping Plover *Charadrius melodus* 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. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Army
Name: blake westmoreland
Address: 2000 Fort Point Road
City: Galveston
State: TX
Zip: 77550
Email blake.e.westmoreland@usace.army.mil
Phone: 4097663927

Attachment 3: TPWD Rare, Threatened, and Endangered Species of Texas (RTEST) Lists for Bell and Coryell Counties, Texas

Last Update: 1/15/2025

BELL COUNTY

AMPHIBIANS

Salado Springs salamander *Eurycea chisholmensis*

Aquatic; springs, streams and caves with rocky or cobble beds.

Federal Status: T | State Status: T | SGCN: Y
Endemic: Y | Global Rank: G1 | State Rank: S1

Strecker's chorus frog *Pseudacris streckeri*

Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S3

Woodhouse's toad *Anaxyrus woodhousii*

Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S5

ARACHNIDS

No accepted common name *Tartarocreagris hoodensis*

Habitat description is not available at this time.

Federal Status: | State Status: | SGCN: Y
Endemic: Y | Global Rank: G1G2 | State Rank: S1

No accepted common name *Cicurina coryelli*

Habitat description is not available at this time.

Federal Status: | State Status: | SGCN: Y
Endemic: Y | Global Rank: G1G2 | State Rank: SU

BIRDS

bald eagle *Haliaeetus leucocephalus*

Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Federal Status: | State Status: | SGCN: N
Endemic: N | Global Rank: G5 | State Rank: S3B,S3N

BELL COUNTY

BIRDS

Bank Swallow *Riparia riparia*

Bank Swallows live in low areas along rivers, streams, ocean coasts, and reservoirs. Their territories usually include vertical cliffs or banks where they nest in colonies of 10 to 2,000 nests. Though in the past Bank Swallows were most commonly found around natural bluffs or eroding streamside banks, they now often nest in human-made sites, such as sand and gravel quarries or road cuts. They forage in open areas and avoid places with tree cover.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2B,S4N

black rail *Laterallus jamaicensis*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

black-capped vireo *Vireo atricapilla*

Oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3B

Brewer's Blackbird *Euphagus cyanocephalus*

Shrubby and bushy areas (especially near water), riparian woodland, aspen parklands, cultivated lands, marshes, and around human habitation; in migration and winter also in pastures and fields (AOU 1983).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Brown Pelican *Pelecanus occidentalis*

Largely coastal and near shore areas, where it roosts and nests on islands and spoil banks. Feeds in lagunas and shallow seaward waters.

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G4	State Rank: S3B

Cactus Wren *Campylorhynchus brunneicapillus*

Desert (especially with cholla cactus or yucca), mesquite, arid scrub, coastal sage scrub, and in trees in towns in arid regions (Tropical to Subtropical zones) (AOU 1983). Nests in OPUNTIA cactus, or in twiggy, thorny, trees and shrubs, sometimes in buildings. Nest may be relined and used as a winter roost.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

BELL COUNTY

BIRDS

chestnut-collared longspur *Calcarius ornatus*

Occurs in open shortgrass settings especially in patches with some bare ground. Also occurs in grain sorghum fields and Conservation Reserve Program lands

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Common Grackle *Quiscalus quiscula*

Common Grackles do well in human landscapes, using scattered trees for nesting and open ground for foraging. Typical natural habitats include open woodland, forest edge, grassland, meadows, swamps, marshes, and palmetto hammocks. They are also very common near agricultural fields and feedlots, suburbs, city parks, cemeteries, pine plantations, and hedgerows. Unbroken tracts of forest are the only places where you are unlikely to find Common Grackles.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5B

Common Nighthawk *Chordeiles minor*

Common Nighthawks nest in both rural and urban habitats including coastal sand dunes and beaches, logged forest, recently burned forest, woodland clearings, prairies, plains, sagebrush, grasslands, open forests, and rock outcrops. They also nest on flat gravel rooftops, though less often as gravel roofs are being replaced by smooth, rubberized roofs that provide an unsuitable surface.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

Franklin's gull *Leucophaeus pipixcan*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2N

golden-cheeked warbler *Setophaga chrysoparia*

Ashe juniper in mixed stands with various oaks (Quercus spp.). Edges of cedar brakes. Dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G2	State Rank: S2S3B

BELL COUNTY

BIRDS

interior least tern *Sternula antillarum athalassos*

Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Federal Status:	State Status: E	SGCN: N
Endemic: N	Global Rank: G4T3Q	State Rank: S1B

lark bunting *Calamospiza melanocorys*

Overall, it's a generalist in most short grassland settings including ones with some brushy component plus certain agricultural lands that include grain sorghum. Short grasses include sideoats and blue gramas, sand dropseed, prairie junegrass (Koeleria), buffalograss also with patches of bluestem and other mid-grass species. This bunting will frequent smaller patches of grasses or disturbed patches of grasses including rural yards. It also uses weedy fields surrounding playas. This species avoids urban areas and cotton fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

Least Tern *Sternula antillarum*

Sand beaches, flats, bays, inlets, lagoons, islands, river sandbars and flat gravel rooftops in urban areas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S2B

Loggerhead Shrike *Lanius ludovicianus*

Loggerhead Shrikes inhabit open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries. Loggerhead Shrikes are often seen along mowed roadsides with access to fence lines and utility poles.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4B

Mottled Duck *Anas fulvigula*

Estuaries, ponds, lakes, secondary bays.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4B

mountain plover *Charadrius montanus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

BELL COUNTY

BIRDS

Northern Bobwhite *Colinus virginianus*

Inhabits a wide variety of vegetation types, particularly early successional stages. Occurs in croplands, grasslands, pastures, fallow fields, grass-brush rangelands, open pinelands, open mixed pine-hardwood forests, and habitat mosaics (Brennan 1999).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S4B

piping plover *Charadrius melodus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2N

Pyrrhuloxia *Cardinalis sinuatus*

Pyrrhuloxias live in upland deserts, mesquite savannas, riparian (streamside) woodlands, desert scrublands, farm fields with hedgerows, and residential areas with nearby mesquite. When not breeding, some Pyrrhuloxias wander into urban habitats, mesquite-hackberry habitats, and riparian habitats with Arizona sycamore and cottonwood.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

rufa red knot *Calidris canutus rufa*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore. Bolivar Flats in Galveston County, sandy beaches Mustang Island, few on outer coastal and barrier beaches, tidal mudflats and salt marshes.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4T2	State Rank: S2N

Sanderling *Calidris alba*

Nonbreeding: primarily sandy beaches, less frequently on mud flats and shores of lakes or rivers (AOU 1983) also on exposed reefs (Pratt et al. 1987). Sleeps/loafs on upper beach or on salt pond dike.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Snowy Plover *Charadrius nivosus*

BELL COUNTY

BIRDS

Algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. An optimal site characteristic would be large in size. The size of populations appear to be roughly proportional to the total area of suitable habitat used. Formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3B

Sprague's pipit *Anthus spragueii*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat during migration and in winter consists of pastures and weedy fields (AOU 1983), including grasslands with dense herbaceous vegetation or grassy agricultural fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3N

western burrowing owl *Athene cunicularia hypugaea*

Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G4T4	State Rank: S2

white-faced ibis *Plegadis chihi*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: N
Endemic: N	Global Rank: G5	State Rank: S4B

whooping crane *Grus americana*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1S2N

Willet *Tringa semipalmata*

Marshes, tidal mudflats, beaches, lake margins, mangroves, tidal channels, river mouths, coastal lagoons, sandy or rocky shores, and, less frequently, open grassland (AOU 1983, Stiles and Skutch 1989).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5B

Wilson's Warbler *Cardellina pusilla*

BELL COUNTY

BIRDS

Wilson's warblers key in on forests and scrubby areas along streams to fatten up during migration. During the nonbreeding season they use many types of habitats from lowland thickets near streams to high-elevation cloud forests in Mexico and Central America.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

wood stork *Mycteria americana*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers to nest in large tracts of baldcypress (Taxodium distichum) or red mangrove (Rhizophora mangle); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: SHB,S3N

Yellow Rail *Coturnicops noveboracensis*

BREEDING: Emergent wetlands, grass or sedge marshes and wet meadows in freshwater situations. Some breeding territories in these wet meadows contain firm footing and only a few remnant pools of water (Berkey 1991). These areas can range from damp to 38 cm (15 inches) of water but the average depth used for nesting is 8 to 15 cm (3 to 6 inches) (Savaloja 1981). NON-BREEDING: Grain fields in winter and when migrating. Winters in both freshwater and brackish marshes, as well as in dense, deep grass. During fall migration, will use many open habitats, from rice paddies to dry hayfields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3N

yellow-billed cuckoo *Coccyzus americanus*

In Texas, the populations of concern are found breeding in riparian areas in the Trans Pecos (know as part of the Western Distinct Population Segment). It is the Western DPS that is on the U.S. ESA threatened list and includes the Texas counties Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, and Presidio. Riparian woodlands below 6,000' in elevation consisting of cottonwoods and willows are prime habitat. This species is a long-distant migrant that summers in Texas, but winters mainly in South America. Breeding birds of the Trans Pecos populations typically arrive on their breeding grounds possibly in late April but the peak arrival time is in May. Threats to preferred habitat include hydrologic changes that don't promote the regeneration of cottonwoods and willows, plus livestock browsing and trampling of sapling trees in sensitive riparian areas.

Federal Status: T	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4S5B

CRUSTACEANS

No accepted common name *Caecidotea bilineata*

Spring obligate. Caecidotea bilineata is known only from non-cave groundwater habitats in deposits of Cretaceous age. It is presumably a phreatobite. Fine scale habitat requirements unknown.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S1

BELL COUNTY

FISH

Guadalupe bass *Micropterus treculii*

Endemic to the streams of the northern and eastern Edwards Plateau including portions of the Brazos, Colorado, Guadalupe, and San Antonio basins; species also found outside of the Edwards Plateau streams in decreased abundance, primarily in the lower Colorado River; two introduced populations have been established in the Nueces River system. A pure population was re-established in a portion of the Blanco River in 2014. Species prefers lentic environments but commonly taken in flowing water; numerous smaller fish occur in rapids, many times near eddies; large individuals found mainly in riffle tail races; usually found in spring-fed streams having clear water and relatively consistent temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

mountain mullet *Agonostomus monticola*

Catadromous. Adults can be found great distances upstream. Potential to occur in all river systems in Texas from Rio Grande to Sabine River. Rheophilic, fast, strong swimmer often associated with swift currents and possibly near large boulders; found in abundance or at rest in deeper pools of stream below falls and rapids.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2

smalleye shiner *Notropis buccula*

Endemic to the Brazos River drainage; presumed to have been introduced into the Colorado River. Historically found in lower Brazos River as far south as Hempstead, Texas but appears to now be restricted to upper Brazos River system upstream of Possum Kingdom Lake. Typically found in turbid waters of broad, sandy channels of main stream, over substrate consisting mostly of shifting sand.

Federal Status: E	State Status: E	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S1S2

spotted sucker *Minytrema melanops*

Found primarily in east Texas streams from the Red to the Brazos river basins. An isolated, disjunct population occurs in the Llano River near Junction downstream to about Mason; this may be an introduced population. Typically in clear creeks with firm substrates.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

INSECTS

American bumblebee *Bombus pensylvanicus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G3G4	State Rank: SNR

Kretschmarr Cave mold beetle *Texamaurops reddelli*

Small, cave-adapted beetle found under rocks buried in silt; small, Edwards Limestone caves in of the Jollyville Plateau, a division of the Edwards Plateau

Federal Status: E	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1

BELL COUNTY

INSECTS

migratory monarch butterfly *Danaus plexippus plexippus*

Habitat description is not available at this time.

Federal Status: C	State Status:	SGCN: Y
Endemic:	Global Rank: G4T3	State Rank: SNR

No accepted common name *Batrisodes dentifrons*

The only known specimens were taken from under a rock in a cave (Chandler et al., 2009).

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1G2	State Rank: SNR

No accepted common name *Batrisodes fanti*

This species was recently described from a few caves in Bell Co., Texas; from the underside of rocks in both dim twilight and complete darkness (Chandler et al., 2009).

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1G2	State Rank: SNR

No accepted common name *Batrisodes incispes*

It was recently described from a single cave in Bell Co., Texas; from the underside of a rock deeply buried in soil near the end of the cave in dim twilight (Chandler et al., 2009).

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1	State Rank: SNR

No accepted common name *Batrisodes pekinsi*

This species was recently described from a single cave in Bell Co., Texas; from under a small rock buried in clay in the deepest part of the cave in total darkness (Chandler et al., 2009).

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1	State Rank: SNR

No accepted common name *Batrisodes feminiclypeus*

This species is only known from disjunct caves in Bell Co., Texas (Chandler et al., 2009).

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1G2	State Rank: SNR

No accepted common name *Batrisodes gravesi*

This species is known from caves in Bell and Coryell Cos., Texas (Chandler et al., 2009).

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G3	State Rank: S2

MAMMALS

big free-tailed bat *Nyctinomops macrotis*

BELL COUNTY

MAMMALS

Habitat data sparse but records indicate that species prefers to roost in crevices and cracks in high canyon walls, but will use buildings, as well; reproduction data sparse, gives birth to single offspring late June-early July; females gather in nursery colonies; winter habits undetermined, but may hibernate in the Trans-Pecos; opportunistic insectivore

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

cave myotis bat *Myotis velifer*

Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (Hirundo pyrrhonota) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S2S3

eastern spotted skunk *Spilogale putorius*

Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1S3

hoary bat *Lasiurus cinereus*

Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3

mountain lion *Puma concolor*

Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian zones.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2S3

plains spotted skunk *Spilogale interrupta*

Generalist; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S1S3

BELL COUNTY

MAMMALS

Seminole bat *Lasiurus seminolus*

Pine-oak and long-leaf pine in east Texas. Habitats include pine, mixed pine-hardwood, and hardwood forests of uplands and bottomlands, particularly pine-dominated forests, including mature pine and pine-hardwood corridors in managed pine forest landscapes (Menzel et al. 1998, 1999, 2000; Carter et al. 2004; Marks and Marks 2006; Perry and Thill 2007; Perry et al. 2007; Hein et al. 2008; Ammerman et al. 2012).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

tricolored bat *Perimyotis subflavus*

Forest, woodland and riparian areas are important. Caves are very important to this species.

Federal Status: PE	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S2

MOLLUSKS

Balcones spike *Fusconaia iheringi*

Habitat not yet described.

Federal Status: E	State Status: E	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: SNR

Brazos heelsplitter *Potamilus streckersoni*

Reported from streams, but not far into the headwaters, to large rivers, and some reservoirs. In riverine systems occurs most often in nearshore habitats such as banks and backwater pools but occasionally in mainchannel habitats such as riffles. Typically found in standing to slow-flowing water in soft substrates consisting of silt, mud or sand but occasionally in moderate flows with gravel and cobble substrates (Randklev et al. 2014b,c; Tsakiris and Randklev 2016b; Smith et al. 2019) [Mussels of Texas 2020]

Federal Status:	State Status: T	SGCN: Y
Endemic: Y	Global Rank: GNR	State Rank: SNR

false spike *Fusconaia mitchelli*

Occurs in small streams to medium-size rivers in habitats such as riffles and runs with flowing water. Is often found in stable substrates of sand, gravel, and cobble (Howells 2010; Randklev et al. 2012; Sowards et al. 2013; Tsakiris and Randklev 2016). [Mussels of Texas 2019]

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1

Lilliput *Toxolasma parvum*

Reported from small streams, where it may penetrate into the headwaters, to large rivers, oxbows, sloughs, lakes, ponds, canals, borrow pits, and reservoirs. Primarily occurs in still to slow currents in mud and sand substrates (Coker et al. 1921; Read 1954; Neck and Metcalf 1988; Williams et al. 2008; Watters et al. 2009).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

BELL COUNTY

MOLLUSKS

Louisiana Fatmucket *Lampsilis hydiana*

Reported from streams to rivers, may penetrate into headwaters, oxbows, lakes, canals, and reservoirs. Reported to occur in still to moderate currents in sand, mud, and gravel substrates. In riverine systems it is found primarily in nearshore habitats such as banks, backwaters and oxbows (Howells et al. 1996; Randklev et al. 2013a; Randklev et al. 2014a; Tsakiris and Randklev 2016). It adapts readily to reservoirs and can cope with flow modification stemming from river impoundment (Randklev et al. 2016).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

Mapleleaf *Quadrula quadrula*

Reported from streams to rivers, lakes, and reservoirs. In riverine habitats, it may be found in main-channel habitats such as riffles or runs in sand, gravel, and cobble substrates with moderate to swift currents. May also be found in nearshore habitats such as banks and backwaters to include pools in sand or mud substrates with little to no flow. (Williams et al. 2008; Howells 2016; Haag and Cicerello 2016).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

No accepted common name *Phreatodrobia micra*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S2

Pimpleback *Cyclonaias pustulosa*

Occurs in small streams to large rivers in habitats including riffles and runs with flowing water, also found in nearshore habitats such as banks and backwaters or pools. Can occur in reservoirs but varies based by population. Is often found in substrates comprising of sand, gravel, and cobble but also mud and silt (Howells et al. 1996; Williams et al. 2008; Watters et al. 2009).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: SNR

Pistolgrip *Tritogonia verrucosa*

Reported from streams to rivers, lakes, and reservoirs, but considered less tolerant of impoundment (Haag and Cicerello 2016). Can occur in a variety of habitat types but most often found in main channel habitats such as riffles and runs with moderate current and sand, gravel, or cobble substrates (Howells et al. 1996; Williams et al. 2008).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3S4

Tapered Pondhorn *Uniomerus declivis*

It likely occurs in streams, rivers, oxbows, marshes, swamps, lakes, canals, ponds, and reservoirs in still to moderate currents in mud, sand, or gravel substrates. Also probably occurs in woody debris such as logjams and exposed roots of riparian trees (Williams et al. 2008).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: SNR

Texas fawnsfoot *Truncilla macrodon*

BELL COUNTY

MOLLUSKS

Occurs in large rivers but may also be found in medium-sized streams. Is found in protected near shore areas such as banks and backwaters but also riffles and point bar habitats with low to moderate water velocities. Typically occurs in substrates of mud, sandy mud, gravel and cobble. Considered intolerant of reservoirs (Randklev et al. 2010; Howells 2010o; Randklev et al. 2014b,c; Randklev et al. 2017a,b). [Mussels of Texas 2019]

Federal Status: T	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S2

REPTILES

common garter snake *Thamnophis sirtalis*

Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams or marshes. Damp soils and debris for cover are thought to be critical.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2

eastern box turtle *Terrapene carolina*

Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

slender glass lizard *Ophisaurus attenuatus*

Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

western box turtle *Terrapene ornata*

Terrestrial: Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

BELL COUNTY

REPTILES

western massasauga *Sistrurus tergeminus*

Terrestrial: Shortgrass or mixed grass prairie, with gravel or sandy soils. Often found associated with draws, floodplains, and more mesic habitats within the arid landscape. Frequently occurs in shrub encroached grasslands.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

PLANTS

canyon sedge *Carex edwardsiana*

Dry-mesic decidous and deciduous-juniper woodlands in canyons and ravines, usually in clay loams very high in calcium on rocky banks and slopes just above streams and stream beds. Carex edwardsiana usually grows near C. planostachys. Fruiting spring (Ball, Reznicek, and 2003).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Glass Mountains coral-root *Hexalectris nitida*

Apparently rare in mixed woodlands in canyons in the mountains of the Brewster County, but encountered with regularity, albeit in small numbers, under Juniperus ashei in woodlands over limestone on the Edwards Plateau, Callahan Divide and Lampasas Cutplain; Perennial; Flowering June-Sept; Fruiting July-Sept

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

green hawthorn *Crataegus viridis var. glabriuscula*

In mesic soils of woods or on edge of woods, treeline/fenceline, or thicket. Above\near creeks and draws, in river bottoms. Flowering Mar-Apr; fruiting May-Oct.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5T3T4	State Rank: S3

Osage Plains false foxglove *Agalinis densiflora*

Most records are from grasslands on shallow, gravelly, well drained, calcareous soils; Prairies, dry limestone soils; Annual; Flowering Aug-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

plateau milkvine *Matelea edwardsensis*

Occurs in various types of juniper-oak and oak-juniper woodlands; Perennial; Flowering March-Oct; Fruiting May-June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

BELL COUNTY

PLANTS

scarlet leather-flower *Clematis texensis*

Usually in oak-juniper woodlands in mesic rocky limestone canyons or along perennial streams; Perennial; Flowering March-July; Fruiting May-July

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

sycamore-leaf snowbell *Styrax platanifolius ssp. platanifolius*

Rare throughout range, usually in oak-juniper woodlands on steep rocky banks and ledges along intermittent or perennial streams, rarely far from some reliable source of moisture; Perennial; Flowering April-May; Fruiting May-Aug.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3T3	State Rank: S3

Texabama croton *Croton alabamensis var. texensis*

In duff-covered loamy clay soils on rocky slopes in forested, mesic limestone canyons; locally abundant on deeper soils on small terraces in canyon bottoms, often forming large colonies and dominating the shrub layer; scattered individuals are occasionally on sunny margins of such forests; also found in contrasting habitat of deep, friable soils of limestone uplands, mostly in the shade of evergreen woodland mottes; flowering late February-March; fruit maturing and dehiscing by early June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3T2	State Rank: S2

Texas almond *Prunus minutiflora*

Wide-ranging but scarce, in a variety of grassland and shrubland situations, mostly on calcareous soils underlain by limestone but occasionally in sandier neutral soils underlain by granite; Perennial; Flowering Feb-May and Oct; Fruiting Feb-Sept

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Texas fescue *Festuca versuta*

Occurs in mesic woodlands on limestone-derived soils on stream terraces and canyon slopes; Perennial; Flowering/Fruiting April-June

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Texas milk vetch *Astragalus reflexus*

Grasslands, prairies, and roadsides on calcareous and clay substrates; Annual; Flowering Feb-June; Fruiting April-June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

BELL COUNTY

PLANTS

tree dodder *Cuscuta exaltata*

Parasitic on various Quercus, Juglans, Rhus, Vitis, Ulmus, and Diospyros species as well as Acacia berlandieri and other woody plants; Annual; Flowering May-Oct; Fruiting July-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

turnip-root scurfpea *Pediomelum cyphocalyx*

Grasslands and openings in juniper-oak woodlands on limestone substrates on the Edwards Plateau and in north-central Texas (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S2S3

Wright's milkvetch *Astragalus wrightii*

On sandy or gravelly soils; Flowering/fruiting: April and May

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Last Update: 1/15/2025

CORYELL COUNTY

AMPHIBIANS

Strecker's chorus frog *Pseudacris streckeri*

Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Woodhouse's toad *Anaxyrus woodhousii*

Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

ARACHNIDS

No accepted common name *Tartarocreagris hoodensis*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1

No accepted common name *Cicurina coryelli*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: SU

BIRDS

bald eagle *Haliaeetus leucocephalus*

Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G5	State Rank: S3B,S3N

Bank Swallow *Riparia riparia*

Bank Swallows live in low areas along rivers, streams, ocean coasts, and reservoirs. Their territories usually include vertical cliffs or banks where they nest in colonies of 10 to 2,000 nests. Though in the past Bank Swallows were most commonly found around natural bluffs or eroding streamside banks, they now often nest in human-made sites, such as sand and gravel quarries or road cuts. They forage in open areas and avoid places with tree cover.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2B,S4N

CORYELL COUNTY

BIRDS

black rail *Laterallus jamaicensis*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

black-capped vireo *Vireo atricapilla*

Oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3B

Brewer's Blackbird *Euphagus cyanocephalus*

Shrubby and bushy areas (especially near water), riparian woodland, aspen parklands, cultivated lands, marshes, and around human habitation; in migration and winter also in pastures and fields (AOU 1983).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Cactus Wren *Campylorhynchus brunneicapillus*

Desert (especially with cholla cactus or yucca), mesquite, arid scrub, coastal sage scrub, and in trees in towns in arid regions (Tropical to Subtropical zones) (AOU 1983). Nests in OPUNTIA cactus, or in twiggy, thorny, trees and shrubs, sometimes in buildings. Nest may be relined and used as a winter roost.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

chestnut-collared longspur *Calcarius ornatus*

Occurs in open shortgrass settings especially in patches with some bare ground. Also occurs in grain sorghum fields and Conservation Reserve Program lands

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Common Nighthawk *Chordeiles minor*

Common Nighthawks nest in both rural and urban habitats including coastal sand dunes and beaches, logged forest, recently burned forest, woodland clearings, prairies, plains, sagebrush, grasslands, open forests, and rock outcrops. They also nest on flat gravel rooftops, though less often as gravel roofs are being replaced by smooth, rubberized roofs that provide an unsuitable surface.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

CORYELL COUNTY

BIRDS

Franklin's gull *Leucophaeus pipixcan*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2N

golden-cheeked warbler *Setophaga chrysoparia*

Ashe juniper in mixed stands with various oaks (Quercus spp.). Edges of cedar brakes. Dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G2	State Rank: S2S3B

interior least tern *Sternula antillarum athalassos*

Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Federal Status:	State Status: E	SGCN: N
Endemic: N	Global Rank: G4T3Q	State Rank: S1B

lark bunting *Calamospiza melanocorys*

Overall, it's a generalist in most short grassland settings including ones with some brushy component plus certain agricultural lands that include grain sorghum. Short grasses include sideoats and blue gramas, sand dropseed, prairie junegrass (Koeleria), buffalograss also with patches of bluestem and other mid-grass species. This bunting will frequent smaller patches of grasses or disturbed patches of grasses including rural yards. It also uses weedy fields surrounding playas. This species avoids urban areas and cotton fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

Least Tern *Sternula antillarum*

Sand beaches, flats, bays, inlets, lagoons, islands, river sandbars and flat gravel rooftops in urban areas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S2B

Loggerhead Shrike *Lanius ludovicianus*

Loggerhead Shrikes inhabit open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries. Loggerhead Shrikes are often seen along mowed roadsides with access to fence lines and utility poles.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4B

CORYELL COUNTY

BIRDS

Mottled Duck *Anas fulvigula*

Estuaries, ponds, lakes, secondary bays.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4B

mountain plover *Charadrius montanus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

Northern Bobwhite *Colinus virginianus*

Inhabits a wide variety of vegetation types, particularly early successional stages. Occurs in croplands, grasslands, pastures, fallow fields, grass-brush rangelands, open pinelands, open mixed pine-hardwood forests, and habitat mosaics (Brennan 1999).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S4B

Pyrrhuloxia *Cardinalis sinuatus*

Pyrrhuloxias live in upland deserts, mesquite savannas, riparian (streamside) woodlands, desert scrublands, farm fields with hedgerows, and residential areas with nearby mesquite. When not breeding, some Pyrrhuloxias wander into urban habitats, mesquite-hackberry habitats, and riparian habitats with Arizona sycamore and cottonwood.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

Sanderling *Calidris alba*

Nonbreeding: primarily sandy beaches, less frequently on mud flats and shores of lakes or rivers (AOU 1983) also on exposed reefs (Pratt et al. 1987). Sleeps/loafs on upper beach or on salt pond dike.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Snowy Plover *Charadrius nivosus*

Algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. An optimal site characteristic would be large in size. The size of populations appear to be roughly proportional to the total area of suitable habitat used. Formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3B

CORYELL COUNTY

BIRDS

Sprague's pipit *Anthus spragueii*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat during migration and in winter consists of pastures and weedy fields (AOU 1983), including grasslands with dense herbaceous vegetation or grassy agricultural fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3N

western burrowing owl *Athene cunicularia hypugaea*

Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G4T4	State Rank: S2

white-faced ibis *Plegadis chihi*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: N
Endemic: N	Global Rank: G5	State Rank: S4B

whooping crane *Grus americana*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1S2N

Willet *Tringa semipalmata*

Marshes, tidal mudflats, beaches, lake margins, mangroves, tidal channels, river mouths, coastal lagoons, sandy or rocky shores, and, less frequently, open grassland (AOU 1983, Stiles and Skutch 1989).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5B

Wilson's Warbler *Cardellina pusilla*

Wilson’s warblers key in on forests and scrubby areas along streams to fatten up during migration. During the nonbreeding season they use many types of habitats from lowland thickets near streams to high-elevation cloud forests in Mexico and Central America.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

Yellow Rail *Coturnicops noveboracensis*

CORYELL COUNTY

BIRDS

BREEDING: Emergent wetlands, grass or sedge marshes and wet meadows in freshwater situations. Some breeding territories in these wet meadows contain firm footing and only a few remnant pools of water (Berkey 1991). These areas can range from damp to 38 cm (15 inches) of water but the average depth used for nesting is 8 to 15 cm (3 to 6 inches) (Savaloja 1981). NON-BREEDING: Grain fields in winter and when migrating. Winters in both freshwater and brackish marshes, as well as in dense, deep grass. During fall migration, will use many open habitats, from rice paddies to dry hayfields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3N

yellow-billed cuckoo *Coccyzus americanus*

In Texas, the populations of concern are found breeding in riparian areas in the Trans Pecos (know as part of the Western Distinct Population Segment). It is the Western DPS that is on the U.S. ESA threatened list and includes the Texas counties Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, and Presidio. Riparian woodlands below 6,000' in elevation consisting of cottonwoods and willows are prime habitat. This species is a long-distant migrant that summers in Texas, but winters mainly in South America. Breeding birds of the Trans Pecos populations typically arrive on their breeding grounds possibly in late April but the peak arrival time is in May. Threats to preferred habitat include hydrologic changes that don't promote the regeneration of cottonwoods and willows, plus livestock browsing and trampling of sapling trees in sensitive riparian areas.

Federal Status: T	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4S5B

FISH

Guadalupe bass *Micropterus treculii*

Endemic to the streams of the northern and eastern Edwards Plateau including portions of the Brazos, Colorado, Guadalupe, and San Antonio basins; species also found outside of the Edwards Plateau streams in decreased abundance, primarily in the lower Colorado River; two introduced populations have been established in the Nueces River system. A pure population was re-established in a portion of the Blanco River in 2014. Species prefers lentic environments but commonly taken in flowing water; numerous smaller fish occur in rapids, many times near eddies; large individuals found mainly in riffle tail races; usually found in spring-fed streams having clear water and relatively consistent temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

INSECTS

American bumblebee *Bombus pensylvanicus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G3G4	State Rank: SNR

migratory monarch butterfly *Danaus plexippus plexippus*

Habitat description is not available at this time.

Federal Status: C	State Status:	SGCN: Y
Endemic:	Global Rank: G4T3	State Rank: SNR

CORYELL COUNTY

INSECTS

No accepted common name *Batrisodes wartoni*

It is only known from caves in Coryell Co., Texas (Chandler and Reddell, 2001).

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1G2	State Rank: SNR

No accepted common name *Tortopus circumfluus*

Mayflies distinguished by aquatic larval stage; adult stage generally found in shoreline vegetation

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G3	State Rank: S2?

Texas willowfly *Taeniopteryx starki*

Habitat not described in detail, but apparently breeds in rivers; several members of this genus are known to use warm lotic environments, while others use cold lotic environments

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

MAMMALS

cave myotis bat *Myotis velifer*

Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (Hirundo pyrrhonota) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S2S3

eastern spotted skunk *Spilogale putorius*

Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1S3

hoary bat *Lasiurus cinereus*

Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3

CORYELL COUNTY

MAMMALS

mountain lion *Puma concolor*

Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian zones.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2S3

plains spotted skunk *Spilogale interrupta*

Generalist; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S1S3

Seminole bat *Lasiurus seminolus*

Pine-oak and long-leaf pine in east Texas. Habitats include pine, mixed pine-hardwood, and hardwood forests of uplands and bottomlands, particularly pine-dominated forests, including mature pine and pine-hardwood corridors in managed pine forest landscapes (Menzel et al. 1998, 1999, 2000; Carter et al. 2004; Marks and Marks 2006; Perry and Thill 2007; Perry et al. 2007; Hein et al. 2008; Ammerman et al. 2012).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

tricolored bat *Perimyotis subflavus*

Forest, woodland and riparian areas are important. Caves are very important to this species.

Federal Status: PE	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S2

MOLLUSKS

Balcones spike *Fusconaia iheringi*

Habitat not yet described.

Federal Status: E	State Status: E	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: SNR

Brazos heelsplitter *Potamilus streckersoni*

Reported from streams, but not far into the headwaters, to large rivers, and some reservoirs. In riverine systems occurs most often in nearshore habitats such as banks and backwater pools but occasionally in mainchannel habitats such as riffles. Typically found in standing to slow-flowing water in soft substrates consisting of silt, mud or sand but occasionally in moderate flows with gravel and cobble substrates (Randklev et al. 2014b,c; Tsakiris and Randklev 2016b; Smith et al. 2019) [Mussels of Texas 2020]

Federal Status:	State Status: T	SGCN: Y
Endemic: Y	Global Rank: GNR	State Rank: SNR

CORYELL COUNTY

MOLLUSKS

false spike *Fusconaia mitchelli*

Occurs in small streams to medium-size rivers in habitats such as riffles and runs with flowing water. Is often found in stable substrates of sand, gravel, and cobble (Howells 2010; Randklev et al. 2012; Sowards et al. 2013; Tsakiris and Randklev 2016). [Mussels of Texas 2019]

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1

Mapleleaf *Quadrula quadrula*

Reported from streams to rivers, lakes, and reservoirs. In riverine habitats, it may be found in main-channel habitats such as riffles or runs in sand, gravel, and cobble substrates with moderate to swift currents. May also be found in nearshore habitats such as banks and backwaters to include pools in sand or mud substrates with little to no flow. (Williams et al. 2008; Howells 2016; Haag and Cicerello 2016).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Pimpleback *Cyclonaias pustulosa*

Occurs in small streams to large rivers in habitats including riffles and runs with flowing water, also found in nearshore habitats such as banks and backwaters or pools. Can occur in reservoirs but varies based by population. Is often found in substrates comprising of sand, gravel, and cobble but also mud and silt (Howells et al. 1996; Williams et al. 2008; Watters et al. 2009).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: SNR

Pistolgrip *Tritogonia verrucosa*

Reported from streams to rivers, lakes, and reservoirs, but considered less tolerant of impoundment (Haag and Cicerello 2016). Can occur in a variety of habitat types but most often found in main channel habitats such as riffles and runs with moderate current and sand, gravel, or cobble substrates (Howells et al. 1996; Williams et al. 2008).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3S4

Texas fawnsfoot *Truncilla macrodon*

Occurs in large rivers but may also be found in medium-sized streams. Is found in protected near shore areas such as banks and backwaters but also riffles and point bar habitats with low to moderate water velocities. Typically occurs in substrates of mud, sandy mud, gravel and cobble. Considered intolerant of reservoirs (Randklev et al. 2010; Howells 2010o; Randklev et al. 2014b,c; Randklev et al. 2017a,b). [Mussels of Texas 2019]

Federal Status: T	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S2

CORYELL COUNTY

REPTILES

eastern box turtle *Terrapene carolina*

Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

slender glass lizard *Ophisaurus attenuatus*

Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

western box turtle *Terrapene ornata*

Terrestrial: Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

PLANTS

canyon sedge *Carex edwardsiana*

Dry-mesic decidous and deciduous-juniper woodlands in canyons and ravines, usually in clay loams very high in calcium on rocky banks and slopes just above streams and stream beds. Carex edwardsiana usually grows near C. planostachys. Fruiting spring (Ball, Reznicek, and 2003).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Glass Mountains coral-root *Hexalectris nitida*

Apparently rare in mixed woodlands in canyons in the mountains of the Brewster County, but encountered with regularity, albeit in small numbers, under Juniperus ashei in woodlands over limestone on the Edwards Plateau, Callahan Divide and Lampasas Cutplain; Perennial; Flowering June-Sept; Fruiting July-Sept

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

CORYELL COUNTY

PLANTS

Hall's prairie clover *Dalea hallii*

In grasslands on eroded limestone or chalk and in oak scrub on rocky hillsides; Perennial; Flowering May-Sept; Fruiting June-Sept

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

Osage Plains false foxglove *Agalinis densiflora*

Most records are from grasslands on shallow, gravelly, well drained, calcareous soils; Prairies, dry limestone soils; Annual; Flowering Aug-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

plateau milkvine *Matelea edwardsensis*

Occurs in various types of juniper-oak and oak-juniper woodlands; Perennial; Flowering March-Oct; Fruiting May-June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Reverchon's scurfpea *Pediomelum reverchonii*

Mostly in prairies on shallow rocky calcareous substrates and limestone outcrops; Perennial; Flowering Jun-Sept; Fruiting June-July

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

scarlet leather-flower *Clematis texensis*

Usually in oak-juniper woodlands in mesic rocky limestone canyons or along perennial streams; Perennial; Flowering March-July; Fruiting May-July

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

sycamore-leaf snowbell *Styrax platanifolius ssp. platanifolius*

Rare throughout range, usually in oak-juniper woodlands on steep rocky banks and ledges along intermittent or perennial streams, rarely far from some reliable source of moisture; Perennial; Flowering April-May; Fruiting May-Aug.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3T3	State Rank: S3

Texabama croton *Croton alabamensis var. texensis*

In duff-covered loamy clay soils on rocky slopes in forested, mesic limestone canyons; locally abundant on deeper soils on small terraces in canyon bottoms, often forming large colonies and dominating the shrub layer; scattered individuals are occasionally on sunny margins of such forests; also found in contrasting habitat of deep, friable soils of limestone uplands, mostly in the shade of evergreen woodland mottes; flowering late February-March; fruit maturing and dehiscing by early June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3T2	State Rank: S2

CORYELL COUNTY

PLANTS

tree dodder *Cuscuta exaltata*

Parasitic on various Quercus, Juglans, Rhus, Vitis, Ulmus, and Diospyros species as well as Acacia berlandieri and other woody plants; Annual; Flowering May-Oct; Fruiting July-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

turnip-root scurfpea *Pediomelum cyphocalyx*

Grasslands and openings in juniper-oak woodlands on limestone substrates on the Edwards Plateau and in north-central Texas (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S2S3

Wright's milkvetch *Astragalus wrightii*

On sandy or gravelly soils; Flowering/fruiting: April and May

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3