

**SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT FOR THE REPAIR OF
TRAINING AREA 41 HILLTOP ACCESS TRAIL (HAT) on FORT HOOD, TEXAS**



**DIRECTORATE OF PUBLIC WORKS ENVIRONMENTAL DIVISION
June 2011**



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Draft Supplemental Environmental Assessment for the Repair of Training Area 41 Hilltop Access Trail
(HATs)

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DRAFT FINDING OF NO SIGNIFICANT IMPACT FOR THE REPAIR OF ONE HILLTOP ACCESS TRAIL (HAT) ON FORT HOOD, TEXAS

1.0 Name of the Action

The U.S. Army, Headquarters III Corps and Fort Hood propose to repair and maintain a hilltop access trail (HAT) in Training Area 41.

2.0 Description of the Proposed Action and Alternatives

The U.S. Army, Headquarters III Corps and Fort Hood propose to repair and maintain a hilltop access trail in Training Area 41, which crosses Turkey Run Creek. The proposed project will facilitate access to the Turkey Run mock village, and IED range, and the greater Western Maneuver Corridor. This access will increase the ability to meet current and future training standards and meet the need for joint operations training. The ability to train comprehensively increases Soldiers' ability to survive on the modern battlefield because the training is realistic.

Maintenance projects usually fall under a categorical exemption in accordance with the 32 Code of Federal Regulations (CFR) Part 651, (Environmental Analysis of Army Actions; Final Rule). However, the presence of threatened or endangered species habitat and one eligible Cultural Resource site within the project area warranted a hard look at the impacts, and triggered the threshold for an Environmental Assessment.

Under the No Action Alternative, the trail would not be repaired. Use would continue and erosion as a result of the use of inadequate trails would increase. Soldier safety would also be a concern since the trails climb steep slopes and there are many high ridges. There would be continual maintenance required to keep the trail operational which would increase the cost of training. The Proposed Action would minimize the amount of maintenance needed because the trail would be repaired using emulsified asphalt.

3.0 Summary of Environmental Effects of the Proposed Action

The impacts to some resources would be undetectable. They are socio-economics, environmental justice and protection of the children, and utilities. They are not examined closely in the Environmental Assessment. However, a hard look was taken before elimination.

Waters of the U.S. and surface water are present in the project area but it has not been formally delineated. The low water crossing would be repaired. It is likely the proposed projects would be covered by a Clean Water Act (CWA) Section 404 Nation Wide Permit (NWP) 14; however if the crossing was to exceed the disturbance allowable

under the NWP, a preconstruction notice and individual permit would be submitted to the U.S. Army Corps of Engineers (USACE) Regulatory Branch.

Since the project is considered maintenance of existing trails, a Notice of Intent to the Texas Commission on Environmental Quality (TCEQ) is not required. However, Best Management Practices (BMPs), and Storm Water Pollution Prevention Plans would be implemented in order to reduce erosion and storm water runoff.

Construction also results in temporary and permanent loss of vegetation, but the majority of the area would be left undisturbed to aid in overall stabilization. The implementation of management measures consistent with the Fort Hood Integrated Natural Resources Management Plan (INRMP) would also minimize degradation. The repair of the trails would have short-term, minor and insignificant adverse effects to grasslands. The use of the trail after construction would actually decrease the amount of erosion if the project was not implemented.

Soil disruptions would occur during construction. Utilization of the BMPs outlined in the INRMP during construction would keep the environmental impacts to soil short-term, minor, and insignificant.

The Proposed Action lies in federally endangered Black Capped Vireo (BCVI) habitat. The projects would require approximately 5 BCVI incidental construction take. This action was a part of the request for incidental take in the 2010 Biological Opinion from the United States Fish and Wildlife Service so the incidental take has already been approved.

The Installation's Integrated Natural Resources Management Plan (INRMP) addresses migratory bird management and conservation in order to comply with the Migratory Bird Treaty Act. Construction would be avoided during the migratory bird nesting season if possible. If the construction could not be delayed until the end of the migratory bird nesting season, the area would be evaluated to determine the necessary minimization measures and appropriate best management practices to minimize impacts to the birds and ensure compliance with the Migratory Bird Treaty Act.

Prehistoric archeology site 41CV1235 is the only National Register of Historic Places (NRHP) eligible historic property located within the project area. The planned undertaking will not have an adverse impact to site 41CV1235.

4.0 Conclusion

On the basis of the findings of this Environmental Assessment (EA), no significant impacts are anticipated from the Proposed Action on human health or the natural environment. A Finding of No Significant Impact (FNSI) is warranted and an Environmental Impact Statement is not required.

BRIAN L. Dosa
Director of Public Works

Date

1.0. INTRODUCTION

The Environmental Division, Directorate of Public Works (DPW) at Fort Hood, Texas, has prepared this Environmental Assessment (EA) to analyze potential environmental impacts resulting from the repair of a Hilltop Access Trail in Training Area 41.

1.1. Proposed Action Overview

The U.S. Army, Headquarters III Corps and Fort Hood propose to repair and maintain this hilltop access trail in training area 41 of Fort Hood. Projects like this are usually covered using a categorical exemption (CX) as indicated in 32CFR part 651, since the project is actually considered maintenance of roads. However the proposed sites are situated in endangered species habitat; and while the acreage is small, there is still an environmental impact. Secondly, the Proposed Action site has one Cultural Resource site that is considered eligible for listing in the Federal Register of Historic Places.

Therefore, an EA was warranted to evaluate these impacts in accordance with 32CFR part 651 Section 651.29 (14)(c): *“If a proposed action would adversely affect “environmentally sensitive” resources, unless the impact has been resolved through another environmental process (e.g., CZMA, NHPA, CWA, etc.) a CX cannot be used...Environmentally sensitive resources include: (1) Proposed federally listed, threatened, or endangered species or their designated critical habitats.”*

1.2. Purpose and Need

The purpose of the Proposed Action is to repair and maintain an inoperable hilltop access trail that provides safe access and to open the landscape for maneuver training.

The maintenance is needed because currently the hilltop access trail is in ill-repair, and maneuver across them is either impossible, or creates enormous erosion and safety concerns. The lack of maintenance over the years has made them largely impassable. Repair is needed to provide safe access and to open the landscape to conduct full spectrum operations that comply with Army training doctrine.

1.3. Agency and Public Participation

III Corps and Fort Hood invite public participation in the National Environmental Policy Act (NEPA) process. Consideration of the views and information of all interested persons promotes open communication and enables better decisions. All agencies, organizations, and members of the public having a potential interest in the Proposed Action are encouraged to participate in the decision-making process. The public is invited to review the EA and provide comments to the Fort Hood Environmental Division. The public comment period will be for 30 days beginning the date that the

notice of availability is printed in the *Killeen Daily Herald*. This EA and draft Finding of No Significant Impact (FNSI) are available for review at the Killeen Public Library located at 205 E. Church St., Killeen, TX 78544 and through the Environmental Division, Directorate of Public Works, and Fort Hood, TX. The documents are also available online through the Fort Hood Directorate of Public Works website at <http://www.dpw.hood.army.mil> ; select "Public Notices."

1.4. Project Location

The projects located in Training Area 41 adjacent to Turkey Run Road. Figure 1.4.1 is a map of the location.

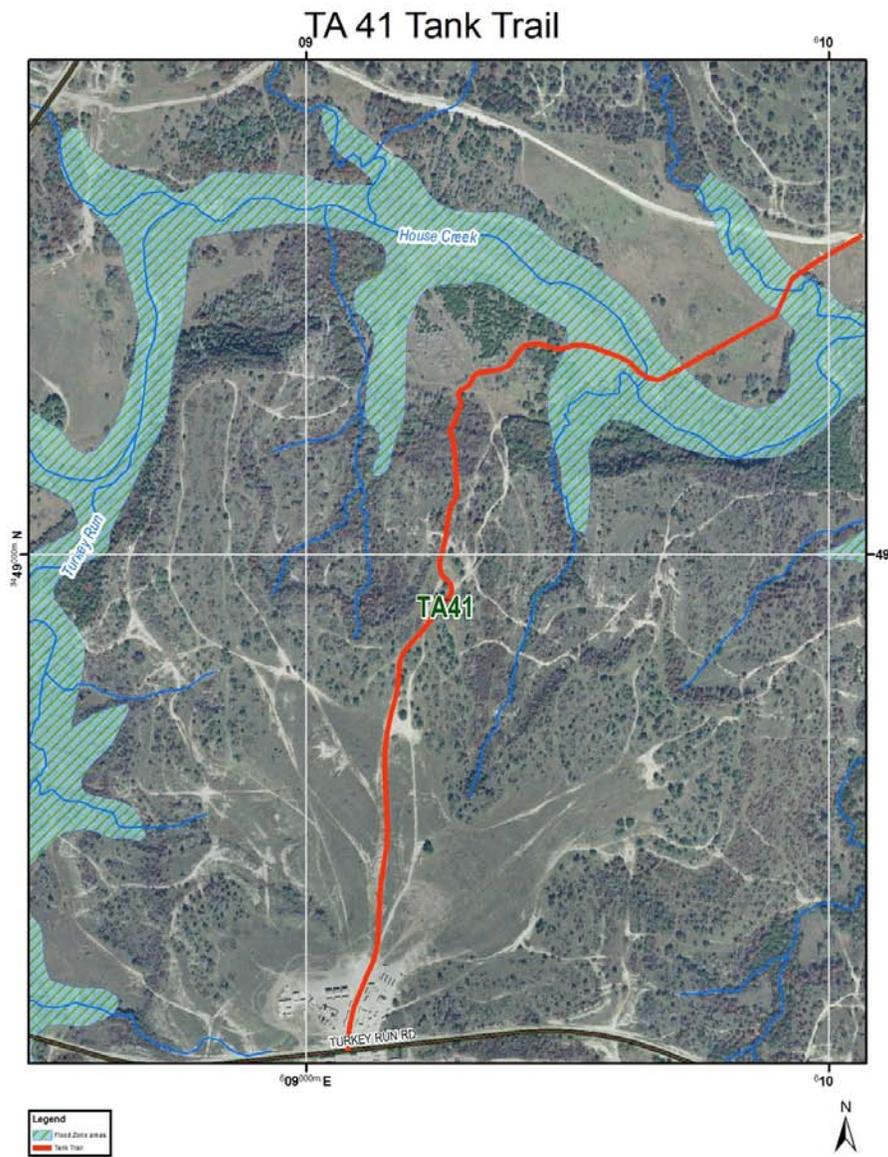


Figure 1.4.1 HAT Location and Flood Plain

2.0. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1. Proposed Action

The U.S. Army, Headquarters III Corps and Fort Hood propose to repair and maintain one hilltop access trail in training area 41 on Fort Hood.

2.2. Alternatives to the Proposed Action

2.2.1. No Action Alternative

Under the No Action Alternative, the hilltop access trails would not be repaired or maintained. Gully and sheet erosion related to the use of the trails would continue, and likely increase; polluting the rivers, creeks and streams near them. Further, it would limit the ability of wheeled tactical vehicles to train to the required Army standard because the vehicles would be unable to utilize the trails. The trails would also become serious safety hazards, endangering the lives of Soldiers because of increased sheet and gully erosion.

2.2.2. Alternatives Considered but Eliminated from further Study

Repairing the hilltop access trails using compacted gravel was considered but eliminated from further study due to the potential for increased erosion. It was also determined that trail use would diminish the life span serviceability of the trail if compacted gravel only was used. The alternative was eliminated from further study due to excessive environmental impacts and future cost considerations.

3.0. AFFECTED ENVIRONMENT and ENVIRONMENTAL CONSEQUENCES

This EA evaluates the potential environmental impacts of the Proposed Action; it does not evaluate environmental parameters unaffected by implementation. Further, the affected environment is analyzed according to the current conditions observed at the project site. Since the environment would remain the same if the No Action Alternative is selected, it will not be analyzed in this EA.

The impacts to some resources would be undetectable. They are socio-economics, environmental justice, and protection of the children, utilities, hazardous materials and solid waste. No economically sensitive groups, minority or low-income populations, schools, daycares, or homes on or near the subject property. As a result, children should not be on or near the subject property during maintenance or subsequent use of proposed tank trails. Land and airspace use would also remain the same as a result of the Proposed Action.

Solid waste generated as a result of the construction and use of the areas would be minimal and would be disposed of in the Fort Hood landfill, or recycled. Spoils as a result of the construction in the form of dirt and/or rock would be either taken to the Inert Material Usage site for re-use or relocated to an approved borrow pit. There would be no utility usage as a result of the Proposed Action. Therefore, these resources have been eliminated from further study and have not been analyzed in this EA.

3.1 Biological Resources

3.1.1. Vegetation

The combination of soils, topography, climate, and human activities has produced a diverse mix of vegetation communities or habitats within the installation. Fort Hood is in the southernmost extension of the Cross Timbers and Prairies Eco-region and the northeastern reaches of the Edwards Plateau Eco-region. Woodlands in the area are closely representative of Edwards Plateau vegetative associations. Three types of forest and shrub communities are found on Fort Hood including coniferous (evergreen), deciduous (sheds leaves in fall), and mixed forests and shrub communities. The coniferous woodlands on the installation are dominated by Ashe juniper (*Juniperus ashei*). Deciduous forests and shrubs are generally found in lowlands and protected slopes; they are relatively uncommon on the installation. Historically, grasslands comprised much of the area. They are representative primarily of the mid-grass associations of the Cross Timbers and Prairies area, with inclusions of the tall-grass associations of the Blackland Prairie (NRCS, 1998). While most of the hilltop access sites are located on already established tank trails, the lack of maintenance has caused some vegetation re-growth on the trails, hilltop access points, and in right-of-way areas. Some vegetation would be removed in conjunction with the Proposed Action.

Construction results in both temporary and permanent loss of vegetation. Vegetation will only be removed in areas to accommodate the needed tank trail and right of way. Additionally, soil may be added or removed and emulsified asphalt applied. The majority of the area would be left undisturbed which aids in stabilization. Most of the vegetation that is currently on the proposed sites will remain because the trail already exists. Implementation of minimization measures detailed in the Fort Hood Integrated Natural Resources Management Plan (INRMP) would minimize degradation of grasslands. With the implementation of minimization measures, the impact to vegetation as a result of the Proposed Action would be permanent on the roads and right of way. Impact would be minor because vegetation would only be removed to maintain already existing roads.

3.1.2 Threatened and Endangered Species

All federal agencies are required to implement protection programs for designated species and to further the purposes of the Endangered Species Act (ESA) [16 U.S.C. 1532 et. seq.] of 1973, as amended. In accordance with Army Regulation (AR) 200-3, Fort Hood has prepared an Endangered Species Management Plan (ESMP) [Fort Hood 2007] which provides comprehensive guidelines for maintaining and enhancing populations and habitats of federally listed and candidate species on Fort Hood while maintaining mission readiness consistent with Army and Federal environmental regulations. A list of threatened, endangered, or other species of concern at Fort Hood is provided in Table 3.1.

Common Name	Scientific Name	Federal Status	State Status
Amphibians			
Jollyville Plateau	<i>Eurycea tonkawae</i>	Candidate	N/A
Salado Springs Salamander	<i>Eurycea chisholmensis</i>	Candidate	N/A
Birds			
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	N/A	Threatened
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Delisted/Monitored	Threatened
Black-capped Vireo	<i>Vireo atricapilla</i>	Endangered	Endangered
Golden Cheeked Warbler	<i>Dendroica chrysoparia</i>	Endangered	Endangered
Interior Least Tern	<i>Sterna antillarum</i>	N/A	Endangered
Peregrine Falcon	<i>Falco peregrinus</i>	N/A	Threatened
Sprague's Pippit	<i>Anthus spragueii</i>	Candidate	N/A
Whooping Crane	<i>Grus Americana</i>	Endangered	Endangered
Mammals			
Red Wolf	<i>Canis rufus</i>	N/A	Endangered
Cave Myotis	<i>Myotis velifer</i>	N/A	Species of Concern
Fish			
Smalleye Shiner	<i>Notropis buccula</i>	Candidate	N/A
Mollusks			
False Spike Mussel	<i>Quadrula mitchelli</i>	N/A	Threatened
Smooth Pimpleback	<i>Quadrula houstonensis</i>	N/A	Threatened
Texas Fawnsfoot	<i>Truncilla macrodon</i>	N/A	Threatened
Reptiles			
Texas Horned Lizard	<i>Phrynosoma cornutum</i>	N/A	Threatened

Source: USFWS, 2011; TPWD 2009b

Legend: N/A Not Listed in Bell County

Three federally listed species found on or near Fort Hood. The golden-cheeked warbler was federally listed as endangered in December 1990 and nests on Fort Hood from March through July. The black-capped vireo was listed as endangered in November 1987 and nests on Fort Hood from March through August. Whooping cranes are rare migrants through the Fort Hood corridor. Five observations of whooping cranes on the installation were documented in December 1986 and three whooping cranes were documented on the installation in March 2010. They may fly over the installation during spring and fall migration and stop over at aquatic habitat on the installation and at Belton Lake (USFWS 2005). The bald eagle, which is now de-listed, winters regularly on Belton Lake and the shoreline along the eastern border of Fort Hood. Eagles arrive during mid- to late-October, and depart generally around the end of March. Fort Hood restricts activities near roost sites when bald eagles are known to be in the area (USFWS 2005).

The golden-cheeked warbler (GCWA) nests in mixed oak juniper woodland, preferring older stands with tall, old (approximately 40 years and older) trees and closed canopies (USFWS 1992). Based on recent monitoring efforts, the golden-cheeked warbler population size on Fort Hood increased significantly over the past 10 years (Anders 2001). Threats to the species include habitat destruction by urban development, brush clearing, oak wilt, range wildfires, and nest parasitism from brown-headed cowbirds (*Molothrus ater*).

The black-capped vireo (BCVI) nests in shrubby re-growth resulting from various disturbances, including wildfire or mechanical removal of woody vegetation. Good nesting habitat for black-capped vireos includes a wide diversity of hardwoods in a patchy, low-growing configuration with open, grassy spaces between patches of woody vegetation. The black-capped vireo is threatened by cowbird parasitism, habitat loss from browsing animals (cows, goats, deer, and exotics), fire suppression and urban development.

Texas Parks and Wildlife Department listed the Texas horned lizard as threatened in 1977 (Handbook of Texas Online). The lizard is one of three horned lizard species in Texas and was historically distributed across most of the state except far eastern areas (Price & Morse 1990). It is predominantly found in the Dallas/Fort Worth metroplex area. Central Texas, specifically the Edwards Plateau ecoregion, where portions of Fort Hood are, has been documented as having a decline of the species. It is primarily unknown why the species began to decline, but urbanization and the prevalence of red imported fire ants (*Solenopsis invicta*) may be associated with the Central Texas decline (Donaldson, Price & Morse 1994).

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BCVI will be affected by the Proposed Action. Incidental take for the proposed action was authorized in the December 2010 biological opinion for Fort Hood. and consultation with USFWS to gain approval for incidental construction take has occurred. Consultation occurred in 2010, and a biological opinion was issued. The project results in approximately 5 acres of BCVI incidental habitat take. Construction must be avoided during the nesting season for the BCVI and GCWA wich is 1 March to 30 June for GCWA and 25 March to 15 August for BCVI.

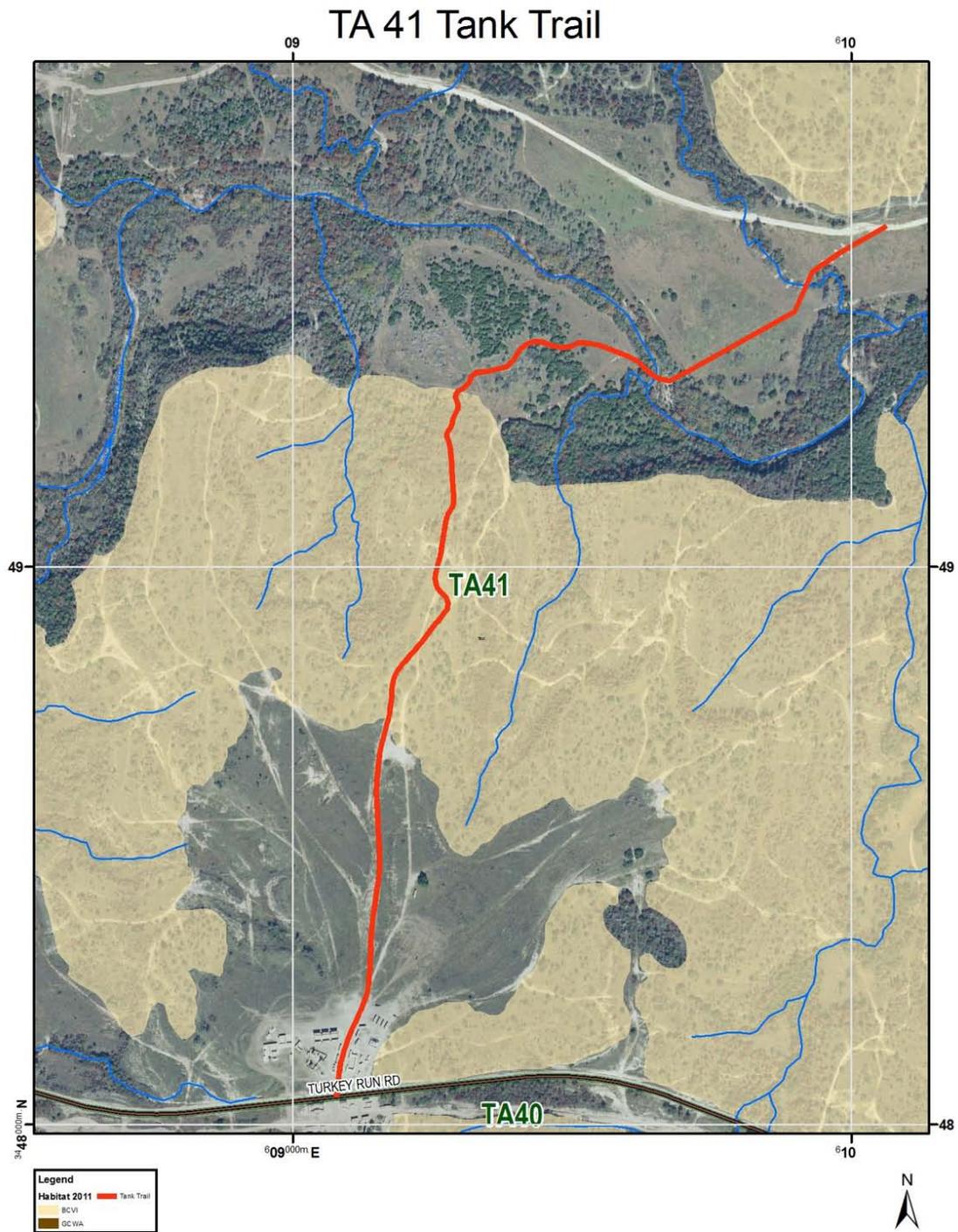


Figure 3.2 Endangered Species Habitat

3.1.3 Migratory Birds

The Migratory Bird Treaty Act (MBTA) protects all species covered under four treaties the United States signed with Canada (1916), Mexico (1936), Japan (1972) and the Russian Federation (1976). This includes all native birds in the United States, except those non-migratory species such as quail and turkey that are managed as game by the states. . A 1988 amendment to the Fish and Wildlife Conservation Act mandates the USFWS to identify species, subspecies, and populations of migratory non-game birds that without additional conservation actions are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973 Many species of migratory birds inhabit Fort Hood.

Migratory birds as defined by the MBTA means any bird, whatever its origin and whether or not raised in captivity that belongs to a species listed in the Code of Federal Regulations (CFR) 50 Section 10.13. Migratory birds by definition also include any mutation or a hybrid of any species named in the 50 CFR and also includes all parts, nests, or eggs of any such bird, and “any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof “(50CFR § 10.13).

Under provisions of the Migratory Bird Treaty Act (MBTA), no one may attempt to take, capture, or kill, pursue, hunt, capture, kill, possess, sell, purchase, barter, offer for sale, import, export, or transport any migratory bird, or their parts, including feathers, nests, or eggs—except under the terms of a valid permit issued in accordance with Federal Regulations as spelled out in 50CFR §10.13.

The use of the hilltop access tank trail falls under the exempted category of “military readiness activities”, based on the “take of Migratory Birds by the Armed Forces Rule, final rule 28 February 2007 (Federal Register volume 70, pages 8931-8950). “In passing the Authorization Act, Congress itself determined that allowing incidental take of migratory birds as a result of military readiness activities is consistent with the MBTA and the treaties. With this language, Congress clearly expressed its intention that the Armed Forces give appropriate consideration to the protection of migratory birds when planning and executing military readiness activities, but not at the expense of diminishing the effectiveness of such activities. This rule has been developed by the Service in coordination and cooperation with the Department of Defense and the Secretary of Defense concurs with the requirements” (Federal Register, volume 70 pages 8931-8950).

Construction on the trail does not fall under the exemption. The U.S. Army Environmental Command (USAEC) issued interim guidance for the unintentional take of migratory birds for actions other than military readiness in July 2008. The guidance states that an Installation's Integrated Natural Resources Management Plan (INRMP) is required to address migratory bird management and conservation and should include management practices to avoid or minimize adverse impacts on migratory birds to the greatest extent practical. Further, the INRMP needs to focus on and sufficiently address those activities that cannot be delayed until after the nesting season. Fort Hood complies with this guidance. The first and foremost minimization measure would be to avoid construction during the migratory bird nesting season applicable to the area.

If the construction could not be delayed until the end of the migratory bird nesting season, compliance with the USAEC guidance and terms indicated in the INRMP would be applied to ensure compliance with the MBTA. Therefore impacts to migratory birds as a result of the Proposed Action are minor and compliance with the MBTA is expected.

3.1.4 Bats

Seven bat species are known to inhabit Fort Hood where they forage and drink along creeks, tributaries, and ponds. Some of the bats are listed as "species of concern" by the U.S. Fish and Wildlife Service. Bats use naturally occurring roosts such as caves, rock shelters, crevices (rock and exfoliating bark), tree cavities, tree foliage, and bird nests to sleep during the day, raise young, and hibernate. "Forest bats" (species that roost in trees) are known to inhabit tree crevices, cavities, and canopies on Fort Hood, especially tree roosts which occur along watercourses.

Some bats forage for food in the area and use the tree canopies and exfoliating bark crevices for roosting. Additionally, bats are known to forage and drink at Turkey Run Creek. The proposed construction or subsequent use of the areas is not expected to have an adverse effect on the ability of bats to forage or roost. For a more in-depth analysis of specific species found on the installation, refer to a reading list located in Appendix B of this document. Since the Proposed Action will most likely have little affect on the ability of the bats to roost or forage, they have been eliminated from further study in this EA.

3.1.5. Fish

The fish and wildlife populations in the project area are characteristic of those found on the Edwards Plateau and Lampasas Cut Plains regions. Thirty-two species of fish have been documented from the lakes, ponds, and streams on the installation. The common species are the red shiner (*Cyprinella lutrensis*), the blacktailed shiner (*Notropis venustus*), and the bullhead minnow (*Pimephales vigilax*), and various other species of the minnow (*Cyprinidae*) or sunfish (*Centrarchidae*) families (USACE 1999).

Comprehensive lists of fish, birds, and cave-dwelling species found on the Installation are available in the appendices of the Integrated Natural Resources Management Plan (INRMP); which can be obtained by contacting the Directorate of Public Works Natural Resources Management office at (254)287-2885.

Streams and creeks are located within the proposed project area; and fish are expected to be temporarily displaced as a result of the repair of the associated low water crossing. However, the construction will not impede the flow of water across the creek so impacts are short-term and minor.

3.1.6 Wildlife

The various habitat types in the project area provide for wildlife communities characteristic of the Edwards Plateau, Blackland Prairie, and the Cross Timbers ecoregions.

The most widespread and abundant birds observed in the project area are the cardinal (*Cardinalis cardinalis*), mourning dove (*Zenaida macroura*), Carolina chickadee (*Poecile carolinensis*), mockingbird (*Mimus polyglottos*), turkey vulture (*Cathartes aura*), and wild turkey (*Meleagris gallopavo*).

Mammal species observed include, but are not limited to, white-tailed deer (*Odocoileus virginianus*), black-tailed jackrabbit (*Lepus californicus*), cottontail rabbit (*Sylvilagus* sp.) and raccoon (*Procyon lotor*). Common small mammals include the deer mouse (*Peromyscus maniculatus*), hispid cotton rat (*Sigmodon hispidus*), and eastern wood rat (*Neotoma floridana*).

Reptiles and amphibians at Fort Hood are representative of the eastern, western, and southern U.S. communities. Eastern species present include Blanchard's cricket frog (*Acris crepitans blanchardi*) and bullfrog (*Rana catesbeiana*). Western species include the Texas greater earless lizard (*Cophosaurus texanus*), collared lizard (*Crotaphytus collaris*), western diamondback rattlesnake (*Crotalus atrox*), and the western narrow-mouthed toad (*Gastrophryne olivacea*). Southern species include the Texas spiny lizard (*Sceloporus olivaceus*), short-lined skink (*Eumeces tetragrammus brevilineatus*), Rio Grande leopard frog (*Rana berlandieri*), and Texas patchnose snake (*Salvadora grahamiae lineata*).

3.1.6 Floodplains

Executive Order (E.O.) 11988, "Floodplain Management", was signed May 24, 1977, to set guidelines to avoid the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

A portion of the Training Area 41 site is located within the floodplain. The area is located where a low water crossing of Turkey Run creek would be repaired. There would be no impediment to the water flow during the construction and repair of the site, causing no environmental impact; therefore floodplains have been eliminated from further study in this EA. A map of the floodplain is figure 1.4.1 and can be found in section 14 above.

3.1.7. Surface Water

Fort Hood is located in the Brazos River Basin. Surface water consists of numerous small to moderate-sized streams, which generally flow in a southeasterly direction. It has approximately 200 miles of named intermittent and perennial streams with numerous additional tributaries of those features. Fort Hood also contains more than 200 water impoundments that equal approximately 692 surface-acres. Most of these are used for flood control, sediment retention, wildlife and livestock water, and fish habitat. A few of the impoundments serve as either wash rack storage facilities or sewage treatment ponds. Additionally, Fort Hood shares 43 miles of shoreline with Belton Lake. Belton Lake is owned and operated by the U.S. Army Corps of Engineers (USACE) for flood control, water supply, and recreation.

Most of Fort Hood lies within the Leon River watershed. The watershed has a drainage area of 3,533 square miles and covers parts of Eastland, Comanche, Mills, Hamilton, Coryell, and Bell counties. The Leon River is formed by the confluence of its north, middle and south forks in Eastland County. The waterway flows about 185 miles southeast, eventually joining the Lampasas River to form the Little River. The Leon River and Cowhouse Creek form the two arms of Belton Lake, and Owl Creek flows directly into the Leon River arm. Tributaries of Nolan Creek, including North Nolan Creek and tributaries of South Nolan Creek, flow southeast and leave the installation. Nolan Creek enters the Leon River below Belton Lake. The southern half of West Fort Hood lies within the Lampasas River watershed. Reese Creek and its tributaries flow south toward the Lampasas River. Storm water flows are also important to the management of surface water. The flows can introduce sediments and other contaminants into lakes, rivers, and streams. Multiple areas of impervious surfaces can overwhelm water bodies within the drainage.

Water quality data on Fort Hood streams indicates that large portions of the training areas are subject to sheet and gully erosion. One of the most substantial impacts to surface water resources is from siltation caused by runoff. Areas disturbed by construction of ranges as well as vehicle traffic including training maneuvers and directly crossing creek beds are major contributors to erosion and runoff. Soil erosion on the installation has resulted in decreased water quality and increased sedimentation in portions of Belton Lake as well as smaller water bodies and tributaries, including the Leon River on the installation (USACE 1999). The Blackland Research and Extension Center Water Science Laboratory in Temple, Texas, monitors sediment

and other water quality parameters at 13 locations across Fort Hood. Soil erosion management actions performed in accordance with the Fort Hood INRMP would help to control the sedimentation loads associated with the Proposed Action.

Construction would require the development of a Storm Water Pollution Prevention Plan (SWPPP) to meet requirements of the Texas Pollutant Discharge Elimination System (TPDES) program. Since the areas of disturbance are all less than five acres, of accumulated disturbance a Notice of Intent (NOI) to the Texas Commission on Environmental Quality would not be required.

Erosion and sediment controls would be used during construction to reduce and control erosion impacts to areas outside the construction sites. The use of BMPs such as silt fencing and sediment traps, as well as the stabilization of disturbed soils would help to maintain water runoff quality at levels comparable to existing conditions and would limit potential environmental impacts from construction activities. Therefore, surface water impacts as a result of the repair of the hilltop access trails would be short-term, and minor.

3.1.7.1 Waters of the United States (U.S.)

Waters of the U.S. also exist on the installation. These resources range from small emergent wetlands associated with ephemeral streams to large, forested wetland complexes adjacent to perennial channels.

Currently, the waters of the U.S. within the project area have not been formally delineated. It is unlikely the funding will become available for a comprehensive delineation. There are multiple low water crossings within the project footprints, but evaluation by Fort Hood environmental staff indicates that only 6-7 of those are on potential waters of the U.S. (WOTUS). Each site, except the OP Grove site, has at least one WOTUS crossing.

Fort Hood environmental staff has also determined that the construction on the project's low water crossings should be covered by Clean Water Act (CWA) Section 404 Nationwide Permit (NWP) #14. Since the impact is anticipated to be less than 1/10 of an acre, no Pre-Construction Notice to the Army Corps of Engineers would be required.

However, if it is determined that these impacts exceed the thresholds of the NWP, appropriate consultation and compensatory mitigation measures, if necessary, would be implemented. Possible mitigation measures can be found in Appendix A of this document. Affects to surface waters of the U.S. would be short-term, and minor.

3.2 Hazardous and Toxic Substances

Specific environmental statutes and regulations govern hazardous material and hazardous waste management activities at Fort Hood. For the purpose of this analysis, the terms *hazardous waste*, *hazardous materials*, and *toxic substances* include those substances defined as hazardous by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), or the Toxic Substances Control Act (TSCA). In general, they include substances that, because of their quantity, concentration, or physical, chemical, or toxic characteristics, might present substantial danger to public health or welfare of the environment if released.

Hazardous materials are managed in accordance with AR 200-1, *Environmental Protection and Enhancement* (December 2009), Section 4, for the purpose of minimizing hazards to public health and damage to the environment. Fort Hood has developed and implemented a Hazardous Material Management Program (HMMP) which focuses on establishing installation-level, centralized management and visibility of materials containing reportable chemicals or having safety considerations. The concept of centralized management is to monitor the materials “from cradle to grave” and reduce hazardous waste generation. Fort Hood’s HMMP is designed as part of an initiative to track the life cycle of all HAZMAT from procurement to ultimate disposition and minimize use of HAZMAT through pollution prevention actions.

Fort Hood’s Spill Prevention, Control, and Countermeasures Plan (SPCCP) and Installation Response Plan (IRP) address the prevention of unintentional pollutant discharges from the bulk storage and handling of petroleum products as well as other hazardous materials. The plan details the specific storage locations, the amount of material at potential spill sites throughout Fort Hood, and spill countermeasures.

All hazardous materials used on-post must be accompanied by a material safety data sheet (MSDS) that details the hazards associated with each specific substance. Contractors working on-post must comply with the Fort Hood HMMP and obtain approval for all hazardous materials brought on post. Material containing polychlorinated biphenyls (PCBs), asbestos, and lead shall not be introduced on military installations.

Hazardous materials would be used in the emulsified asphalt mixture that would be applied to the tank trails. SPCCP measures would be implemented to minimize spills, and storm water concerns would be addressed by the implementation of storm water pollution prevention plans. No air permit is required. Implementation of the aforementioned BMPs, along with careful review and regulated reporting methods would minimize affects to the natural environment throughout the construction of the projects, so the impacts would be short-term, minor and insignificant as a result of the construction and use of the proposed tank trail repairs.

3.3 Geological Resources

3.3.1 Geology

The strata underlying Fort Hood, with the exception of the recent alluvium and river terrace deposits, are consolidated sedimentary rocks of the Cretaceous (dinosaur) age and belong to the Comanche Series (Triassic, mammal producing time). The erosion of these Cretaceous rocks over the past 70 million years and the deposition of unconsolidated materials along the major streams have produced the present landscape of Fort Hood (USACE 1987b). The major rock layers beneath Fort Hood are the Glen Rose formation, Paluxy Sand, Walnut Clay, Comanche Peak formation, Edwards Limestone-Kiamichi Clay complex, Denton Clay-Fort Worth Limestone, and Duck Creek Limestone complex. The major floodplains are filled with alluvium and river terrace deposits.

The Balcones Fault Zone passes immediately east of the installation, and runs north to southwest. The land to the west of this zone, including Fort Hood lands, has risen as much as 500 feet. Erosion of this land over time is what has created the irregular, steep sloping terrain on the installation (USACE 1987b).

Geology is not anticipated to be adversely impacted as a result of the Proposed Action and therefore is eliminated from further study in this EA.

3.3.2 Soils

Soil types within the proposed project area were determined using the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), and Bell County and Coryell County Soil Surveys (USDA 1977 and 1985, respectively).

In 2002, the NRCS assessed soil erosion at Fort Hood as part of the Land Condition and Trend Analysis Program (NRCS 2002). The study concluded that soil erosion was highest in the Western Maneuver Area. Erosion on Fort Hood is a result of drought conditions, military training and continuous grazing without deferment on the soil and vegetation.

There are six types of soil at the proposed location:

ReF is normally found on 12 to 40% slopes and ridges and is well drained. It is described as gravelly clay loam and bedrock whose parent material is limestone and its water capacity is moderately high to high.

Bs is located in areas that are 0 to 1% slopes and can generally be found in flood plains. This nonsaline soil is well drained with a moderately high to high capacity to transmit water and its parent material is loamy alluvium.

DrC is found in the western and center areas of the soil map. DrC is normally found on ridges and backslopes with 1 to 8 percent slopes. The profile of the soil includes clay loam and bedrock. It is described as well drained and the parent material is loamy residuum weathered from limestone.

KrB soil is found normally found on 1 to 3% slopes it is well drained and comprised mostly of silty clay. The parent material of this soil is clayey alluvium.

NuC is usually found on 2 to 6% slopes and its parent material is clayey residuum weathered from shale in the walnut clay. The surface area is covered with cobbles, stones, or boulders, is well drained and has a moderately high capacity to transmit water. It is described as very stony silty clay loam.

LeB is found on areas that are 1 to 3% slopes and is well drained. The origin is clayey slope alluvium and the water table is more than 80 inches from this soil.

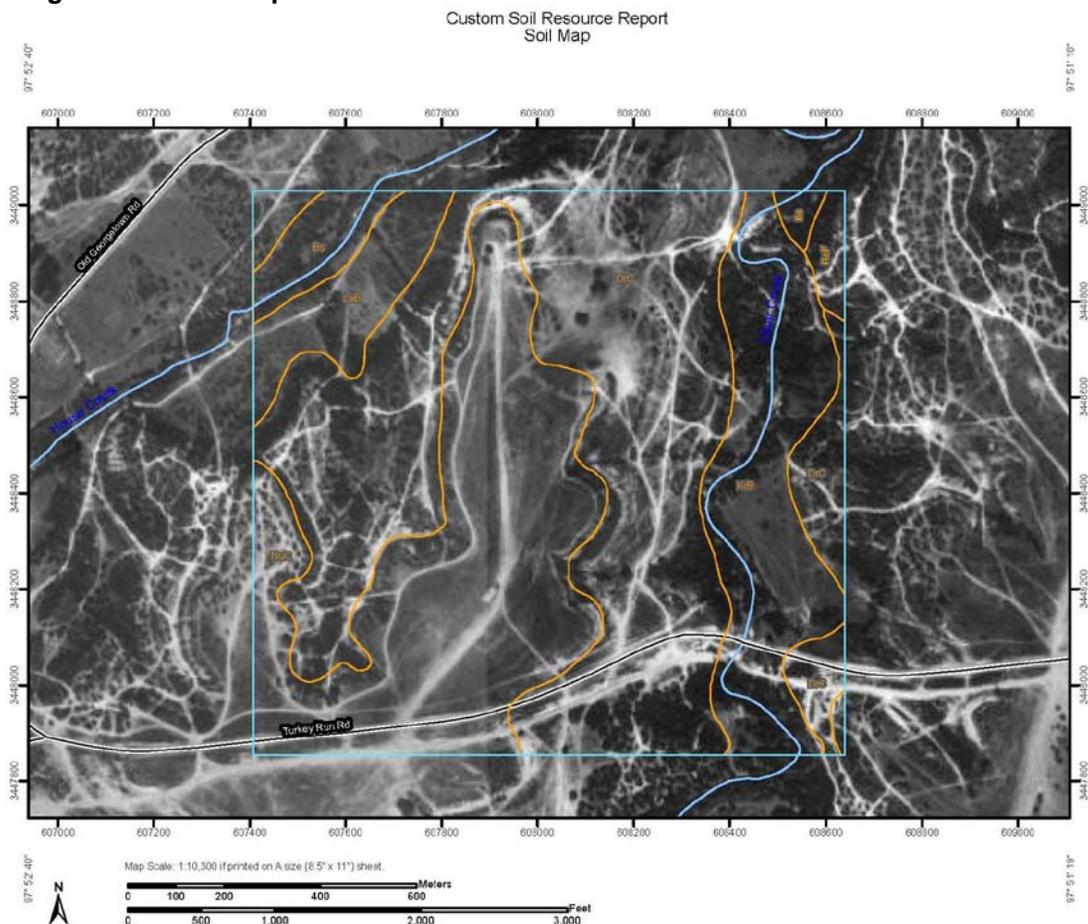
Soil disruptions would occur during the maintenance construction of the HAT. Erosion is a concern in the Training Areas of Fort Hood. Excessive erosion can result in sedimentation of downstream water bodies. This is a prominent issue for Fort Hood, and minimization practices have been developed to curtail the negative consequences. Possible mitigation measures are listed in Appendix A of this document

Through the implementation of BMPs, soil erosion has decreased to nearly acceptable loss rates. (Fort Hood's loss rates are approximately 5 tons per acre, per year; the average is 4 tons per acre, per year). Utilization of BMPs during construction and the emulsified asphalt would decrease erosion during use. The BMPs and SWPPP implementation would keep the environmental impacts to soil short-term, minor, and insignificant.

Map Unit Legend

Coryell County, Texas (TX099)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bs	Bosque clay loam, 0 to 1 percent slopes, occasionally flooded	11.8	3.3%
DrC	Doss-Real complex, 1 to 8 percent	167.0	46.6%
KrB	Krum silty clay, 1 to 3 percent slopes	54.1	15.1%
LeB	Lewisville clay loam, 1 to 3 percent slopes	17.9	5.0%
NuC	Nuff very stony silty clay loam, 2 to 6 percent slopes	103.8	29.0%
ReF	Real-Rock outcrop complex, 12 to 40 percent slopes	4.0	1.1%
Totals for Area of Interest		358.5	100.0%

Figure 3.3.1 Soil Map HAT Source: NCRS TSS Website 2011



3.4. Air Quality

Fort Hood is located in Bell and Coryell Counties, which is within the Austin-Waco Intrastate Air Quality Control Region (AQCR) (40 CFR 81.175). Ambient air quality for the Austin-Waco Intrastate AQCR is classified as an unclassifiable/attainment area for all criteria pollutants. Unclassifiable areas are those that have not had ambient air monitoring and are assumed to be in attainment with National Ambient Air Quality Standards (NAAQS). However, air quality monitoring is being conducted outside the installation at the local airport, Skylark Field. The area is in the second of three years of evaluation to determine attainment status, specifically for ozone but other criteria pollutants are also analyzed. Fort Hood emissions are included in the monitoring data as a result of the close proximity of the installation to the monitoring site.

The Proposed Action is not anticipated to significantly impact the air quality on Fort Hood. Temporary, intermittent, short-term effects will occur with particulate matter generated during construction and the application of emulsified asphalt but does not require an air permit. The amount of particulate generated during construction would be negligible in threshold calculations. Further, the project itself will actually reduce the amount of particulate matter created in the future because emulsified asphalt would be applied to what are now dirt and gravel undefined roads across the landscape. The short term and minor impacts of construction are offset by the long term reduction and improvement of air quality as a result of implementing the Proposed Action.

3.5. Noise

The Noise Control Act of 1972(Public Law 92-574) directs Federal agencies to comply with applicable Federal, state, interstate, and local noise control regulations. Sound quality criteria disseminated by the U.S. Environmental Protection Agency (USEPA), the U.S. Department of Housing and Urban Development (HUD), and the Department of Defense (DoD) have identified noise levels to protect public health and welfare with an adequate margin of safety. These levels are considered acceptable guidelines for assessing noise conditions in an environmental setting. Noise levels below 65 decibels (dB) are considered normally acceptable in suitable living environments.

Responses to noise vary, depending on the type and characteristics of the noise, the expected level of noise, the distance between the noise source and the receptor, the receptor's sensitivity, and the time of day. Table 3.5.1 lists the sound levels of some familiar sources.

Sound Levels of Various Sources	
Source	Sound Level (dB)
Near jet plane at takeoff	140
Gun muzzle blast	140
Threshold of pain	120
Loud music	115
Car horn	115
Thunder	110
Chainsaw	100
Lawn mower at 50 feet	90
Jack hammer	88
Dozer	85
Backhoe	80
Alarm clock	75
Normal conversation	60
Light traffic	50
Refrigerator	40
Rustle of leaves	20
Normal breathing	10

One significant response to noise is annoyance. The annoyance may be personal or experienced as a group. There are five factors identified as indicators for estimating the community's reaction to noise. They are type of noise, amount of repetition, type of neighborhood, time of day, and amount of previous exposure. Noise would be generated during the construction and subsequent use of the Urban Hilltop Access Trails; however, these actions are typical of the normal operations that currently occur on Fort Hood as a result of training. The areas are also located within the boundary of the Installation which is a great distance from any developed housing areas. The project areas are considered to be for agricultural and military training use. Because the Proposed Action would not be located near noise-sensitive areas, noise has been eliminated from further study in this EA.

3.6. Cultural Resources

Fort Hood is developing plans to repair a Hilltop Access Trail (HAT) and stream crossing on House Creek in Coryell County. Three prehistoric archaeology sites are located within the project area and are discussed below. Sites 41CV1225 and 41CV1227 are recommended not eligible for listing on the National Register and repairs to the HAT and crossing will not have an adverse affect to them. Site 41CV1235 is recommended eligible for listing on the National Register of Historic Places (NRHP) and part of the site is located at the stream crossing on House Creek. In 2006, protective measures were implemented on 41CV1235 until such time that funds were available to

concrete the approach to House Creek. These protective measures included: 1) barricading access across the site (Figure 1); and 2) the capping of a segment of a road to eliminate erosion from Feature 1 (Figure 2).

The protective measure to cap the approach with concrete will protect the site by eliminating future impacts from vehicle traffic and erosion. The work will involve the filling of low lying areas and the removal of sand and gravel located in the stream channel to provide a level surface for the approach (Figure 3). Fort Hood acknowledges that this undertaking will have an effect on 41CV1235, however the effects are not considered to be adverse. These types of protective measures have been implemented at other historic properties on Fort Hood in the past and continue to be considered in current and future Integrated Training Area Management Program (ITAM) work plans.

41CV1225 was recorded in 1986 as a burned rock/lithic scatter and two untyped dart points were collected. At that time 60% of the site was estimated to be impacted by agricultural, grazing, military training and erosion. In 1992, the site was reassessed and recommended that subsurface testing be conducted to determine if any intact deposits were present. By 1996 five backhoe tranches and three test units were excavated. Only trench #2 contained cultural material. Test units were excavated over areas with ephemeral surface burned rock concentrations. Though a moderate amount of burned rock and flakes were recovered, testing indicated that all cultural materials were in a mixed context and therefore recommended the site not eligible for listing on the NRHP with no further management actions required. This site is located in proximity to the project area but will not be impacted by the proposed work

41CV1227 was recorded in 1986 as a burned rock concentration of unknown NRHP eligibility that is situated on a steep to moderate slope heavily impacted from vehicle traffic and erosion. In 1992, the site was reassessed and recommended not eligible for the National Register because of the lack of contextual integrity. No buried deposits were encountered and only one untypable dart point was observed on the surface and collected. This site is located in proximity to the project area but will not be impacted by the proposed work.

41CV1235 was recorded in 1986 as a large burned rock midden exposed in a tank trail. At that time several mid to late archaic dart points were collected. In 1992, the site was revisited and divided in to two intact burned rock midden feature areas located in the central (Feature 2) and western (Feature 1) portions of the site. Six backhoe tranches and five test units were excavated within the site. Large amounts of spatially discrete cultural features, organic remains, faunal assemblages and other artifacts were recovered indicating the site contains multiple components in a well stratified alluvial context. The site was recommended eligible for listing to the NRHP with avoidance and protective measures. A site report from 1999 indicated that off road vehicle traffic was having a primary impact on the site and erosion is having a secondary impact to Feature 1. It was recommended at that time to barricade the site and direct traffic to the north and off the east/west tank trail that traversed the site. The site was barricaded and capped in 2006 and the crossing was barricaded until funding was made available to cap the approach with concrete. In 2009 and 2010 the site was revisited with no

artifacts observed in the soil cutbanks of the approach. The Fort Hood Cultural Resource Management Team (FHCRM) recommend stabilizing and capping the tank trail approach across the site and directing all traffic away from the site to the north with barricades. This proposed work will be conducted and coordinated with the FHCRM. All work will be conducted at or on existing tank trails and crossings. None of the sites will be adversely affected by this undertaking since prehistoric sites 41CV1225 and 41CV1227 are not historic properties and the protective measures at 41CV1235 will not be adversely impacting cultural resources at the site.



Figure 3.6.1. NEPA Assessment Rock Barricades on 41CV1235.



Figure 3.6.2. NEPA Assessment Rock Capping on 41CV1235.



Figure 3.6.3. NEPA Assessment House Creek Crossing at 41CV1235.

4.0. CUMULATIVE IMPACTS

This section will evaluate the impact of the cumulative impacts of the repair of hilltop access trails when considered in conjunction with past, present, and foreseeable future actions. Because the No Action Alternative is not anticipated to change the existing environmental conditions, only the Proposed Action is analyzed in this section.

The Council on Environmental Quality (CEQ) defines cumulative impact as the "...impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (CEQ 1978, 40 CFR 1508.7). A series of "quick look" questions developed by US Army Environmental Command have been utilized during the cumulative effects analysis (CEA) (USAEC 1987b). The

following is a list of major projects that are either recently completed, undergoing construction, or are planned for the near future. Although not all of the projects may specifically impact, or be impacted by, the Proposed Action, they are important to note due to their size or effect on Fort Hood.

4.1. 10-Year Range Development Plan Projects

Fort Hood has proposed to construct or modify 24 ranges and their associated supporting facilities within the restricted live fire area. Under the proposal, all 24 ranges would be constructed or modified to fit the Army's emerging doctrinal training standards. No other major range construction projects are scheduled to be conducted in close proximity to the proposed sites until after construction is complete and vegetation re-growth has already occurred. There is scheduled maintenance on East Range Tank Trail; however the cumulative impacts of both projects will improve overall water quality. The temporary, short term minor possibility of increased sedimentation is offset by the final result of the Action. BMPs and that are appropriate to reduce storm water runoff as well as low impact development methods would minimize any temporary impacts to an acceptable level. Therefore, when evaluated cumulatively, the impacts of both projects are insignificant, short term and minor.

4.2. Tank Trail Maintenance

Fort Hood has a tank trail maintenance program which is an ongoing project because there are over 400 miles of tank trails on the Installation. The purpose of the program is to repair and maintain damaged trails to facilitate training. The soil disturbance that results from the grading and hardening of the trail surfaces during maintenance has the potential to increase erosion, sedimentation and runoff to Cowhouse Creek and subsequently Belton Lake and/or the Leon River. This erosion has the potential to impact water quality. However, tank trail maintenance ultimately reduces the amount of sedimentation and runoff and promotes Soldier safety. The East Range Tank Trail is scheduled for maintenance at the same time as construction of the Proposed Action. Both actions would employ BMPs, and low impact development techniques to minimize overall impacts. Further, the final result of tank trail maintenance is improvement in water quality as well as increased safety for our Soldiers. Therefore, cumulative environmental impacts as a result of the tank trail maintenance program and insignificant, minor and short term with long term positive benefits to water quality.

4.3. Western Maneuver Corridor Maintenance

Fort Hood has proposed a project to perform maintenance in the form of woody species management (small tree and brush removal) from the entire Western maneuver corridor, which encompasses 67,000 acres on the west side of the Installation. The project life is 10 years. However, the 'beta' test to see which methods of vegetation removal are most effective for the landscape and training would occur in FY2010, as would the Proposed Action. In order to minimize impacts to the natural environment, the projects would be done consecutively. Further, the woody species management project requires a buffer for riparian areas, and mulching of vegetation in order to prevent erosion. The BMPs implemented as a result of the Proposed Action, along with BMPs and consecutive implementation would give grass time to grow, and reduce the overall impacts to the environment. Therefore, the cumulative affects to the environment as a result of the aforementioned projects would be minor and insignificant.

5.0. CONCLUSION

The maintenance of a Hilltop Access Trail in TA41 is anticipated to provide an avenue that will increase security and safety of the Soldiers fighting the Nation's wars by providing the kind of realistic training they will see on the battlefield. The conclusion of this Environmental Assessment is that the Proposed Action would not result in any significant environmental impacts. A Finding of No Significant Impact (FNSI) is recommended for the Proposed Action, and an Environmental Impact Statement is not required. This EA and supporting documentation have been prepared in accordance with the National Environmental Policy Act of 1969, 42 USC 4321 *et seq.*, and as implemented by Executive Orders 11514 and 119991, Environmental Analysis of Army Actions, 32 CFR Part 651, and the Council on Environmental Quality regulations in 40 CFR Part 6.

6.0. PREPARER

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7.0. PERSONS AND AGENCIES CONTACTED

7.1 Individuals Interviewed

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8.0. LIST of ACRONYMS

Air Quality Control Region	AQCR
Army Regulation	AR
Best Management Practices	BMP
Biological Opinion	BO
Clean Water Act	CWA
Code of Federal Regulations	CFR
Combined Arms Collective Training Facility	CACTF
Construction Site Notice	CSN
Council on Environmental Quality	CEQ
Cumulative Effects Analysis	CEA
decibels	dB
Digital Multi-Purpose Training Range	DMPTR
Directorate of Public Works	DPW
Doss-Reeal Complex	DrC
Eckrant Cobbly silty Clay	EcB
Eckrant-Rock Outcrop	ErB
Endangered Species Act	ESA
Endangered Species Management Plan	ESMP
Environmental Assessment	EA
Evant Silty Clay	EvB
Finding of No Significant Impact	FNSI
Global War on Terror	GWOT
Golden Cheeked Warbler	GCWA

Infantry Platoon Battle Course	IPBC
Integrated Cultural Resources Management Plan	ICRMP
Integrated Natural Resources Management Plan	INRMP
Integrated Training Area Management	ITAM
Krum Silty Clay	KrB
Lewisville clay loam	LeB
Migratory Bird Treaty Act	MBTA
Municipal Separate Storm Sewer System	MS4
National Ambient Air Quality Standards	NAAQS
National Historic Preservation Act	NHPA
National Register of Historic Places	NRHP
Natural Resources Conservation Service	NRCS
Notice of Intent	NOI
State Historic Preservation Officer	SHPO
Storm Water Pollution Prevention Plan	SWPPP
Texas Commission on Environmental Quality	TCEQ
Texas Pollutant Discharge Elimination system	TPDES
Topsey Clay Loam	BtC2
Training and Doctrine Command	TRADOC
United States	U.S.
United States Army Corps of Engineers	USACE
United States Army Environmental Command	USAEC
United States Department of Agriculture	USDA
United States Department of Housing and Urban Development	HUD
United States Environmental Protection Agency	USEPA

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APPENDIX A: POSSIBLE MITIGATION MEASURES

Mitigation actions would be expected to reduce, avoid, or compensate for most adverse effects. The following are possible mitigation measures to be taken for each affected resource.

Land Use

- Adhere to optimal land use plans outlined in the *Fort Hood Real Property Master Plan* when siting new developments.
- Establish an ACUB to promote compatible land use.

Air Quality

- Spray water on construction work sites to reduce fugitive dust emissions.
- Cover open equipment used to convey materials likely to create air pollutants.
- Promptly removing spilled or tracked dirt from streets.
- Maintain equipment and vehicles properly.

Noise

- Limit construction activities to daylight hours.
- Use sound-dampening construction equipment and materials to minimize noise.

Geology and Soils

- Installation should develop a comprehensive Range Management Plan consistent with the INRMP that would provide better control over training and grazing to ensure sustainability of training areas.
- Use appropriate BMPs (such as silt fences, straw bale dikes, diversion ditches, rip rap channels, water bars, or water spreaders) to reduce soil erosion and sedimentation.

Water Resources

- Contractor to obtain TPDES Construction General Permit with accompanying Storm Water Pollution Prevention Plan.
- Use appropriate erosion and sediment controls as BMPs to minimize surface erosion and runoff of pollutants.
- Follow protocols outlined in the storm water TPDES permits and state sediment and erosion control guidelines.
- Seed, revegetate and/or stabilize areas following construction activities.

Vegetation

- Limit disturbed areas to the current footprint areas plus a minimal amount of adjacent construction staging area.
- Employ erosion control practices and tree-protection devices at all proposed sites to protect vegetation and habitat.

Wildlife

- Preserve associated roads and blocks of connective native vegetation on each site to act as buffers and wildlife corridors.
- Use tree-protection BMPs during construction of new developments to maintain natural habitat areas.

Waters of the U.S.

- Conduct a wetland delineation to determine exact wetland boundaries and acreage.
- Avoid construction activities within 100 feet of known waters of the U.S.
- Obtain appropriate Section 404 permits from the Corps of Engineers to fill waters of the U.S. As appropriate, mitigate for losses of stream and wetland acreage.

Cultural Resources

- Include clauses in construction contracts with provisions suspending work until a mitigation determination is made in the event that archeological artifacts are unearthed during construction.
- For known historic properties ensure avoidance and protection by using a buffer area.
- Maintain coordination with State Historic Preservation Office and Federally recognized Indian tribes.

Socioeconomics Environmental Justice and Protection of Children

- Secure construction vehicles and equipment when not in use.
- Place barriers and “No Trespassing” signs around construction sites where practicable.
- Do not use forbidden hazardous/toxic materials.

Utilities

- Install energy-efficient interior and exterior lighting fixtures and controls in all new units.

Hazardous and Toxic Substances

- Use environmentally friendly solvents, greases, and materials during construction.
- Fully comply with all provisions of the Fort Hood Pollution Prevention Plan.
- Use only the Fort Hood Hazardous Materials Control Group (HMCG) in ordering and managing hazardous materials on Fort Hood.
- Survey for UXO on land before any construction or new activities.

Solid Waste Disposal and Recycling

- Use BMPs to ensure that maximum amounts of materials recycled and that landfill disposal is minimized.
- Comply with local and state source separation laws.

APPENDIX B: FISH AND WILDLIFE SPECIES: READING LIST

The following references contain site-specific information about the fish and wildlife on Fort Hood, Texas. Although some of the below references are unpublished, the data may be obtained by contacting the Fort Hood Natural Resources Office at 254-287-2885.

Mammals:

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