ENVIRONMENTAL ASSESSMENT
FOR
RELOCATION OF THE
DEFENSE NON-TACTICAL GENERATOR
AND RAIL EQUIPMENT CENTER

Prepared for

U.S. Army Materiel Command

September 2016

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SECTION 1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

This environmental assessment (EA) is being prepared to evaluate the socioeconomic and environmental impacts associated with the relocation of the Defense Non-tactical Generator and Rail Equipment Center (DGRC) at Hill Air Force Base (AFB) to a U.S. Army Organic Industrial Base (OIB) installation.

This EA has been prepared in accordance with requirements of Title 42 United States Code (U.S.C.) sections 4321 *et seq.*, *the National Environmental Policy Act* (NEPA); Title 40 Code of Federal Regulations (CFR) Parts 1500-1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA)*; 32 CFR Part 651, *Environmental Analysis of Army Actions*; and U.S. Army Materiel Command (AMC) policy.

1.1 PURPOSE FOR THE PROPOSED ACTION

The DGRC, a satellite activity of the Anniston Army Depot (ANAD) in Anniston, Alabama, provides overhaul and repair services for military locomotives. The facility also overhauls and repairs railcars and power generators. In 2014, DGRC was designated as the Center of Industrial and Technical Excellence (CITE) for maintenance and overhaul of non-tactical generators. Table 1-1 lists the main processes for completely refurbishing a locomotive at the DGRC, and Table 1-2 briefly describes each functional process.

The U.S. Army operates the DGRC on behalf of the DoD at its current location on Hill AFB in Ogden, Utah (Figures 1-1 and 1-2). The DGRC has been located in Ogden since 1942, when it opened shop as the Transportation Maintenance Division of Ogden Arsenal. In 1942, Ogden Arsenal was located near the Army's Hill Field. After the creation of the U.S. Air Force in 1942, the Army's Hill Field became Hill AFB. Until 1964, the Army split rail maintenance between the former Fort Holabird in Maryland and Hill AFB. Upon closure of Fort Holabird, the DGRC at Hill AFB assumed responsibility for all DoD locomotive overhaul and repair.

The DGRC is a self-contained complex that occupies 29 acres and consists of several workshops, storage facilities, and administrative buildings covering approximately 94,000 gross square feet (sq ft). The largest of the complex facilities is building 1701, a historic building that includes administrative space, shops, and engine repair stalls.

Over time, the Air Force's mission and land-use plans at Hill AFB have changed and now necessitate relocation of the DGRC. Jointly, the Air Force and Army have studied various possibilities for relocating the center since 2010. During the summer of 2015, the Army made the decision to relocate it to an installation within the Army's OIB.

1.2 NEED FOR THE PROPOSED ACTION

Due to changing land-use requirements at Hill AFB, the Army has determined that it is necessary to relocate the DGRC to an OIB installation. The Army reached this conclusion following the completion of feasibility studies and discussions held between Army and Air Force senior leaders over the past 4 years. The Army's OIB is managed by AMC, the Army command that provides materiel readiness—equipping, sustaining, and enabling the Warfighter through technology, acquisition support, materiel development, and logistics power projection—across the spectrum of joint military operations.

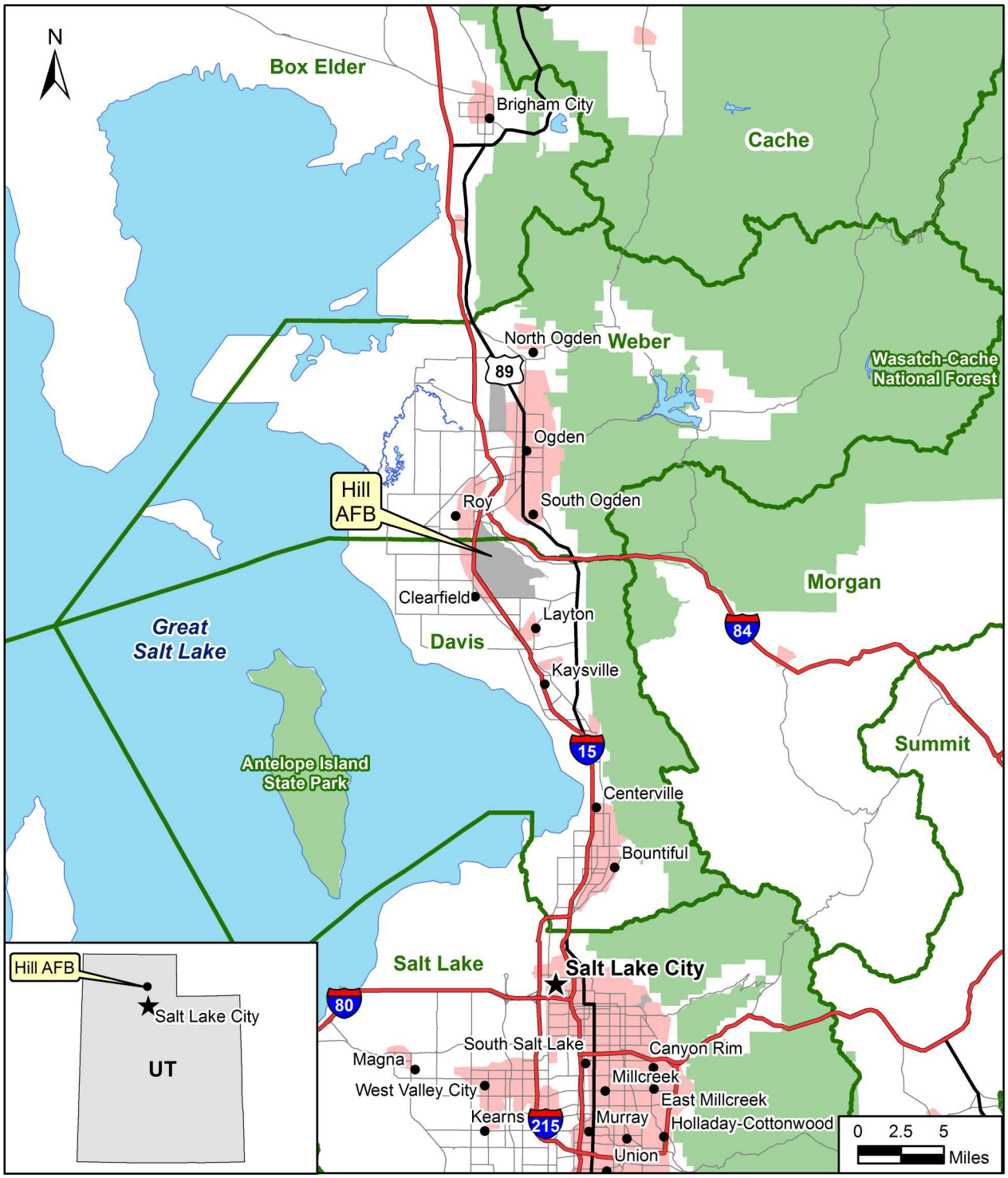
Table 1-1. DGRC Functional Processes at Hill AFB

Functional Process	Hill AFB
Shipping and Receiving	
Rail Storage	On-site
Carpentry/Box Shop	Bldg. 1701
Disassembly	
Truck Disassembly	Bldg. 1701, Tracks 1 & 2
Cowling Disassembly	Bldg. 1701, Tracks 3 & 4
Chassis Disassembly	Bldg. 1701, Tracks 3 & 4
Asbestos Removal	Bldg. 1701, Track 4
Drain Fluids	Bldg. 1701, Track 4
Cleaning/Abrasive Blast	
Media Blast	Bldg. 1704
Steam Cleaning/Degrease	Bldg. 1701D
Subcomponent Rebuild	
Generator Rebuild	Bldg. 1701, Track 6
Engine Rebuild	Contracted Out
Electrical Rewire	Bldg. 1701, Track 6
Air Valve Rebuild	Bldg. 1701, Air Brake Room
Welding	Bldg. 1701, Weld Shop
Paint	Bldg. 1701, Tracks 7 & 8
Truck Overhaul	Bldg. 1701, Tracks 1 & 2
Cowling Overhaul	Bldg. 1701, Tracks 3 & 4
Chassis Overhaul	Bldg. 1701, Tracks 3 & 4
Parts Reclaim	
Machining	Bldg. 1701, Machine Shop
Warehousing	Bldg. 1706
Laydown Area	On-site
Machining	Bldg. 1701, Machine Shop
Paint	
Paint Prep	Bldg. 1701, Track 8
Paint	Bldg. 1701, Track 7
Assembly	
Truck Assembly	Bldg. 1701, Tracks 1 & 2
Cowling Assembly	Bldg. 1701, Tracks 3 & 4
Chassis Assembly	Bldg. 1701, Tracks 3 & 4
Assembly	Bldg. 1701, Tracks 3 & 4
Final Assembly/Testing	Bldg. 1701, Tracks 3 & 4
Testing	
Generator Load Testing	On-site
Locomotive Load Testing	Bldg. 1701, Track 4
Test Track	On-site
Final Repair	Bldg. 1701, Tracks 3 & 4
Final Paint	Bldg. 1701, Track 7

Note: Bldg. = building.

Table 1-2. Descriptions of Functional Processes

Functional Process	Description
Shipping and Receiving	This process involves receiving locomotives and generators for overhaul and delivery of overhauled equipment. Some equipment or components are boxed/crated for delivery.
Disassembly	During the disassembly process, the truck, cowling, and chassis are disassembled, asbestos if present is removed, and all fluids are drained. If asbestos is present on compressor discharge points, fuel lines, or other components, it is removed and disposed of by a certified asbestos abatement contractor. Before asbestos removal, the work area is tented to prevent the release of asbestos fibers. Oil filters, fuel filters, sludge, and fluids drained from locomotives and generators are separately contained in 55-gallon drums. Batteries also are removed and properly staged. Hill AFB Environmental Division manages the collection, storage, and disposal of these wastes. Hazardous waste generated at the DGRC is managed in accordance with the Hill AFB *Hazardous Waste Management Plan*. Fuel from locomotives or generators being prepared for overhaul is filtered and pumped to an already overhauled locomotive or generator being readied for client delivery. If the DGRC cannot reuse the fuel, a contractor removes it for proper disposal.
Cleaning/Abrasive Blast	The cleaning/abrasive process is conducted about 1 week per month. During this process, parts are degreased and cleaned by media blasting and with steam. Media blasting uses sand or aluminum oxide and is done in an enclosed area equipped with a baghouse to capture dust. During this process, air emissions are monitored. Blasting residue and paint fragments are drummed, and the residue generated from steam cleaning also is contained. Solvents used in cleaning also are properly managed and contained. Hill AFB Environmental Division manages collection, storage, and disposal of generated waste. Hill AFB also maintains the baghouse.
Subcomponent Rebuild	This process involves rebuilding or overhaul of multiple components that could require welding and painting. Welding is done in a controlled enclosure where air is monitored. Painting is described under “Paint.”
Parts Reclaim	During this process, parts that can be reused are repaired or reconditioned.
Paint	During this process, parts are prepared for painting. Painting is done daily in an enclosed paint booth that has filters to control emissions. Hill AFB replaces and properly disposes of paint booth filters as needed.
Assembly	During the assembly process, locomotive or generator components are reassembled and tested.
Testing	The testing process involves locomotive and generator load testing and testing locomotives on a test track. For load testing, locomotives and generators are connected to equipment that assists in engine and generator calibration and to ensure that they meet overhaul specifications. Load testing of locomotives is done outdoors and typically lasts about 10 hours per day for 2 days, followed by operating on a test track for about 20 hours 3 times per year. About three generators are load tested per year, each for about 50 hours.
Final Repair	This process involves repairs that are required after testing and preparation for customer delivery.
Final Paint	Before customer delivery, paint imperfections are touched up with a brush.



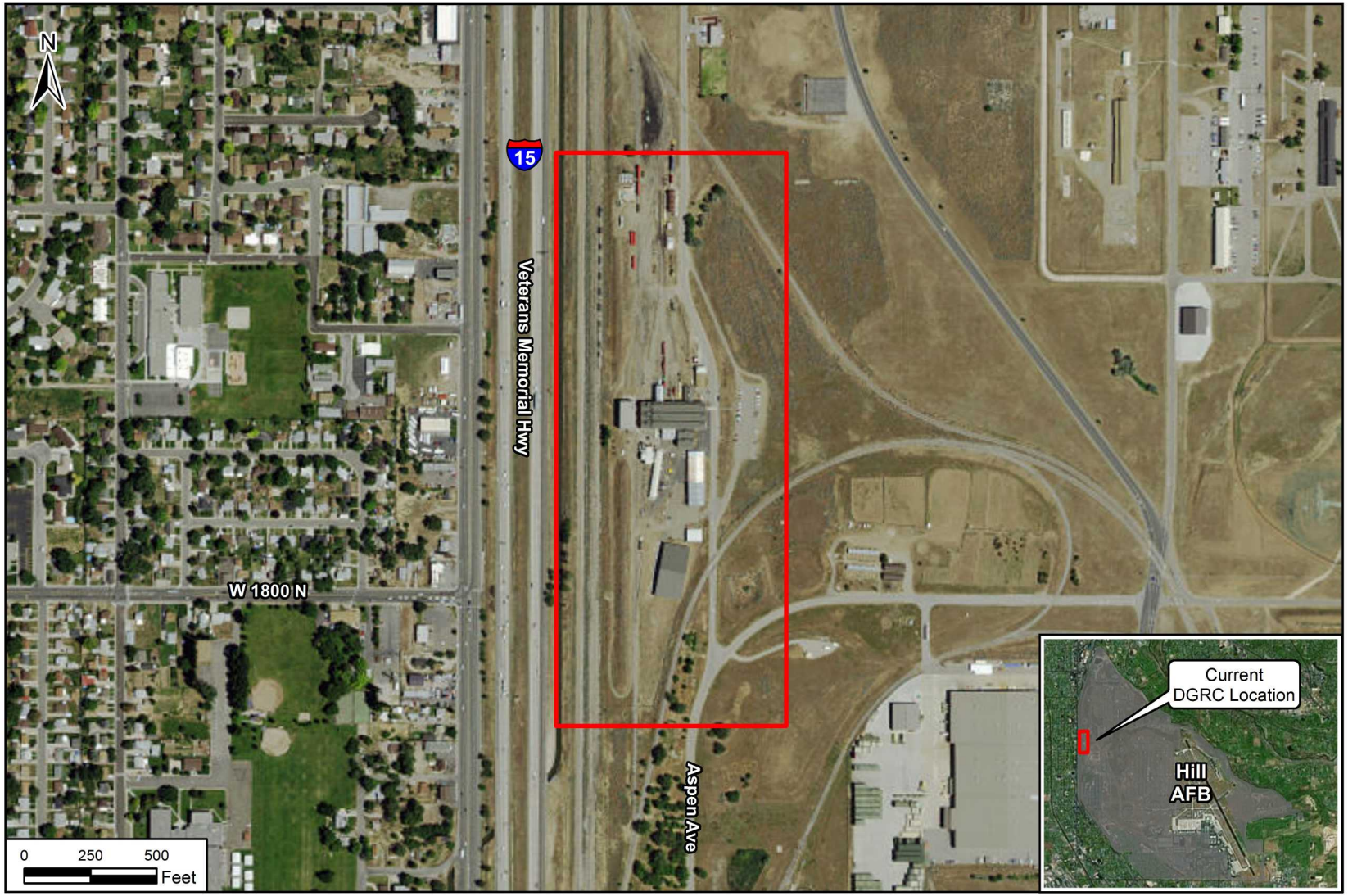
LEGEND

- Military Installation
- County Boundary
- Interstate Highway
- U.S. Route
- Road
- Surface Water
- Urban Area
- Park

Hill AFB Location

Ogden, Utah

Figure 1-1



LEGEND

DGRC Location

Current DGRC Site

Hill AFB, Ogden, Utah

Figure 1-2

Source: ESRI 2014.

1.3 REGULATORY COMPLIANCE

NEPA requires that federal agencies consider the environmental consequences of proposed actions during the decision-making process. The intent of NEPA is to protect, restore, and enhance the environment through well-informed decision making. The Council on Environmental Quality (CEQ) was established under NEPA to implement and oversee federal policy in that process. To this end, the CEQ issued regulations to implement the procedural provisions of NEPA (40 CFR 1500-1508). The Army has supplemented the CEQ NEPA regulations by promulgating its own NEPA regulations (32 CFR Part 651).

Applicable federal, state, and local regulations were considered during analysis of the proposed action's impacts to individual environmental and social resources as part of the EA. The following legislation were given particular consideration:

- Clean Air Act (42 U.S.C. 7401)
- Clean Water Act (33 U.S.C. 1251)
- Endangered Species Act (16 U.S.C. 1531-1543)
- Archaeological Resources Protection Act (16 U.S.C. 470aa *et seq.*)
- National Historic Preservation Act of 1966 (16 U.S.C. 470 *et seq*., as amended)
- Resource Conservation and Recovery Act (42 U.S.C. 6901)

1.4 DECISION TO BE MADE

AMC must decide whether the socioeconomic and environmental impacts of the selected alternative that best meets the purpose and need for the proposed action will support a finding of no significant impact (FNSI) or will require publishing in the *Federal Register* a notice of intent (NOI) to prepare an environmental impact statement (EIS). Publication of the NOI would be necessary if the potential adverse environmental impacts associated with the selected alternative would remain significant even after the implementation of all reasonable mitigation measures.

1.5 PUBLIC PARTICIPATION

The Army invites and strongly encourages public participation in the NEPA process. Consideration of the views and information of all interested parties promotes open communication and enables better decision making. All agencies, organizations, and members of the public having a potential interest in the proposed action—including minority, low-income, disadvantaged, and Native American groups—are urged to participate in the decision-making process.

Opportunities for public participation with respect to this EA and decision making on the proposed action are guided by 32 CFR Part 651. This EA, along with a draft FNSI, will be available to the public for 30 days. A notice of availability of the EA will be published in a newspaper local to each proposed OIB installation. At the end of the 30-day public review period, the Army will consider any comments that individuals, agencies, or organizations have submitted on the EA or the draft FNSI. Then, as appropriate, the Army will either execute a final FNSI and proceed with implementing the proposed action or publish a NOI to prepare an EIS.

SECTION 2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The proposed action is the relocation of the current DGRC mission from Hill AFB to the Army OIB installation most capable of receiving the DGRC. The proposed relocation of the DGRC would likely involve a combination of existing facility renovation, new construction, and demolition to establish the facility at a new location and the subsequent operation of the new DGRC to meet mission requirements.

2.2 SCREENING CRITERIA

The Army established screening criteria to identify OIB installations that would be capable of meeting the purpose and need for the proposed action. Headquarters (HQ) AMC developed screening criteria to evaluate where the DGRC could potentially be located within the OIB (Table 2-1). An evaluation team consisting of representatives from HQ AMC, Joint Munitions Command (JMC), and Tank and Automotive Command (TACOM) evaluated and scored installations based on the screening criteria. The JMC team scored JMC installations; the TACOM team scored TACOM installations; and the HQ AMC team scored all of the installations carried forward for screening.

Table 2-1. Screening Criteria for Relocating the DGRC from Hill AFB

Army Industrial Installation	The site is a current Army industrial complex installation. Because of the nature of DGRC's mission, an underlying assumption was that it is in the best interest of DoD to keep the DGRC within the Army industrial footprint, and specifically within the AMC footprint to facilitate command and control. Scoring for this criterion also evaluated the ease with which an installation could align the DGRC mission with the current mission set of the installation.
Heavy Repair Capability	The installation is capable of, or has facilities easily repurposed for, heavy vehicle repairs. Infrastructure is present on the installation to support heavy repair operations, such as high bay facilities, heavy-lift bridge cranes, drop tables, and available hardstand staging areas. Available supporting facilities include warehousing, compliant hazardous material storage, blast booth, and paint booth.
Rail Access	Viable rail, including a ¾-mile test track section per testing standards, is available at the installation. It meets current requirements of pounds per foot rail. Access is available to commercial rail line (proximity) along with presence of turntable(s), slide table(s), or "Y" on the installation for turning locomotives.
Personnel	A skilled workforce is present with experience applicable or adaptable to the DGRC core mission and has the ability to maintain DGRC operation as a CITE. Experience with heavy mobile equipment repairs. Adequate workforce population to transition mission with minimal disruption to services. The installation is situated to absorb additional personnel from the DGRC.
Time	The installation is well situated to execute relocation in a reasonable timeframe based upon availability of facilities or space to house the DGRC mission.

Between 2013 and 2014, the Army requested cost estimates from various rail companies to determine if privatizing DGRC operations was feasible. Due to the need to refurbish older locomotives, all cost estimates were found to be cost prohibitive for the Army; therefore, DGRC privatization was eliminated from further consideration. In addition, HQ AMC's initial screening eliminated the following installations because of mission sets different than traditional industrial operations: Military Ocean Terminal Sunny Point, Southport, North Carolina; Military Ocean Terminal Concord, Concord, California; and Pueblo Chemical Depot, Pueblo, Colorado. The two ocean terminals ship military cargo to DoD military activities worldwide from the East and West coasts, respectively. Pueblo Chemical Depot is one of nine installations across the United States that stores chemical weapons. Additionally, AMC eliminated Corpus Christi Aviation Depot, a major tenant on Corpus Christi Naval Air Station, Texas; and Crane Army Ammunition Activity on Crane Naval Weapons Center in Crane, Indiana.

Table 2-2 lists the AMC OIB installations individually analyzed and scored by the DGRC Relocation Assessment team.

Table 2-2. AMC Installations Screened for Potential to Receive the DGRC Mission

Installation	Acronym	Location
Anniston Army Depot	ANAD	Anniston, AL
Blue Grass Army Depot	BGAD	Lexington, KY
Hawthorne Army Depot	HWAD	Hawthorne, NV
Holston Army Ammunition Plant	HSAAP	Kingsport, TN
Iowa Army Ammunition Plant	IAAAP	Middletown, IA
Joint Systems Manufacturing Center–Lima	JSMC–Lima	Lima, OH
Lake City Army Ammunition Plant	LCAAP	Independence, MO
Letterkenny Army Depot	LEAD	Letterkenny, PA
McAlester Army Ammunition Plant	MCAAP	McAlester, OK
Milan Army Ammunition Plant	MLAAP	Milan, TN
Pine Bluff Arsenal	PBA	Pine Bluff, AR
Radford Army Ammunition Plant	RFAAP	Radford, VA
Red River Army Depot	RRAD	Texarkana, TX
Scranton Army Ammunition Plant	SCAAP	Scranton, PA
Sierra Army Depot	SIAD	Herlong, CA
Tobyhanna Army Depot	TYAD	Tobyhanna, PA
Tooele Army Depot	TEAD	Tooele, UT
Watervliet Arsenal	WVA	Watervliet, NY

The assessment team narrowed the list of OIB installations most capable of receiving the DGRC to four: ANAD, McAlester Army Ammunition Plant (MCAAP), Red River Army Depot (RRAD), and Tooele Army Depot (TEAD). The HQ AMC principal deputy chief of staff, G3/4 approved carrying these installations forward for detailed environmental impact analysis as part of the Army's decision process to relocate the DGRC from Hill AFB.

2.3 ALTERNATIVES CONSIDERED

2.3.1 No Action Alternative

CEQ regulations require analysis of a No Action Alternative to provide a benchmark against which decision makers can compare the magnitude of the potential environmental effects caused by the

proposed action and other alternative actions. The No Action Alternative is not required to be reasonable nor does it need to meet the purpose and need. Under the No Action Alternative, the Army would not relocate the DGRC from Hill AFB to an Army OIB installation. Because the DGRC's mission is inconsistent with Hill AFB's long-range land-use plan, for the No Action Alternative, the DGRC would continue to operate to support the Army mission and the Hill AFB land-use plan would not be implemented as projected in the *Environmental Assessment for the West Side Development Enhanced Use Lease Hill Air Force Base*, June 2008.

2.3.2 Alternative A–Relocate the DGRC to ANAD

Under alternative A, the Army would relocate the DGRC to ANAD. This relocation would bring ANAD's DGRC mission within ANAD's footprint in Alabama.

ANAD is the DoD's premier CITE and provides industrial and technical support to joint services for repair, overhaul, and refurbishment of combat vehicles, artillery systems, bridge systems, small arms, and secondary components. Major tenants of the installation include Anniston Defense Munitions Center, Assembled Chemical Weapons Alternatives, and Defense Distribution Depot Anniston.

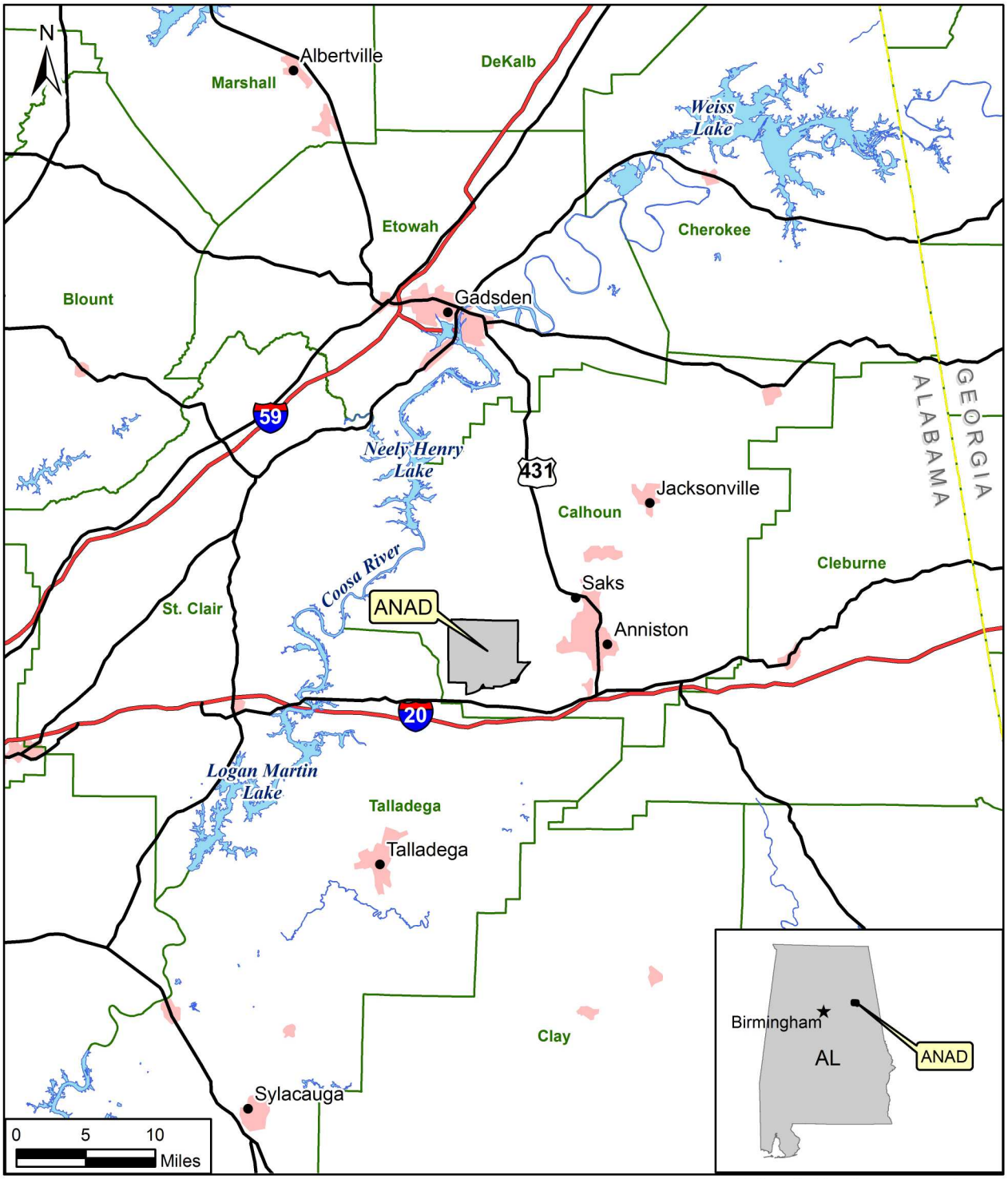
Installation Overview

ANAD is one of the largest ammunition storage facilities in the United States. It is located approximately 51 miles east of Birmingham, Alabama, off of Alabama Highway 202 and adjacent to Bynum, Alabama. The City of Anniston is approximately 10 miles east of ANAD (Figure 2-1). The installation is located on 15,279 acres in Calhoun County and has nearly 9 million sq ft of buildings and a plant replacement value of approximately $1.6 billion. To the north, the installation is bordered by Pelham Range, which is a 20,000-acre training range operated by the Alabama Army National Guard. With a $1.1-billion economic impact, ANAD is a major economic engine for the region.

Originally called Anniston Ordnance Depot (AOD), ANAD was constructed in 1941 with storage igloos, ammunition magazines, warehouses, and several administrative buildings. Nearly a decade later, AOD began an assignment to overhaul and repair combat vehicles. In 1963, the depot was renamed Anniston Army Depot and began its maintenance and storage missions. ANAD began repair and overhaul of the M1 Abrams main battle tank in the mid-1980s and was the recipient of towed and self-propelled artillery and light combat vehicle missions as a result of Defense Base Realignment and Closure (BRAC) 1995. Production of Stryker vehicles began in 2001 with commercial partner General Dynamics. ANAD is transforming with the Army and using innovative initiatives, including workforce revitalization and Lean/Six Sigma, and partnering with industry. In September 2006, the Secretary of the Army designated ANAD as the CITE for combat vehicles (wheeled and tracked except Bradley fighting vehicles), including assault bridging, artillery, and small caliber weapons.

Required Relocation Actions

The Army would accomplish relocation of the DGRC to ANAD through a combination of existing facility renovation and new construction. Where necessary, building renovations would include lighting, fire protection, electrical and ventilation upgrades; painting; and equipment improvements. At building 170, construction of concrete pits, removal and replacement of railroad track, and tying into a steam-cleaning waste line would be expected. At field 9A, an approximately 20,000-square foot concrete hardstand, fencing, load bank electrical service, 2,000-gallon diesel storage tank, and 1,000-gallon waste storage tank and associated containment berm would be constructed or installed. Figure 2-2 shows the proposed project area, and Table 2-3 shows how ANAD would accommodate the DGRC processes.



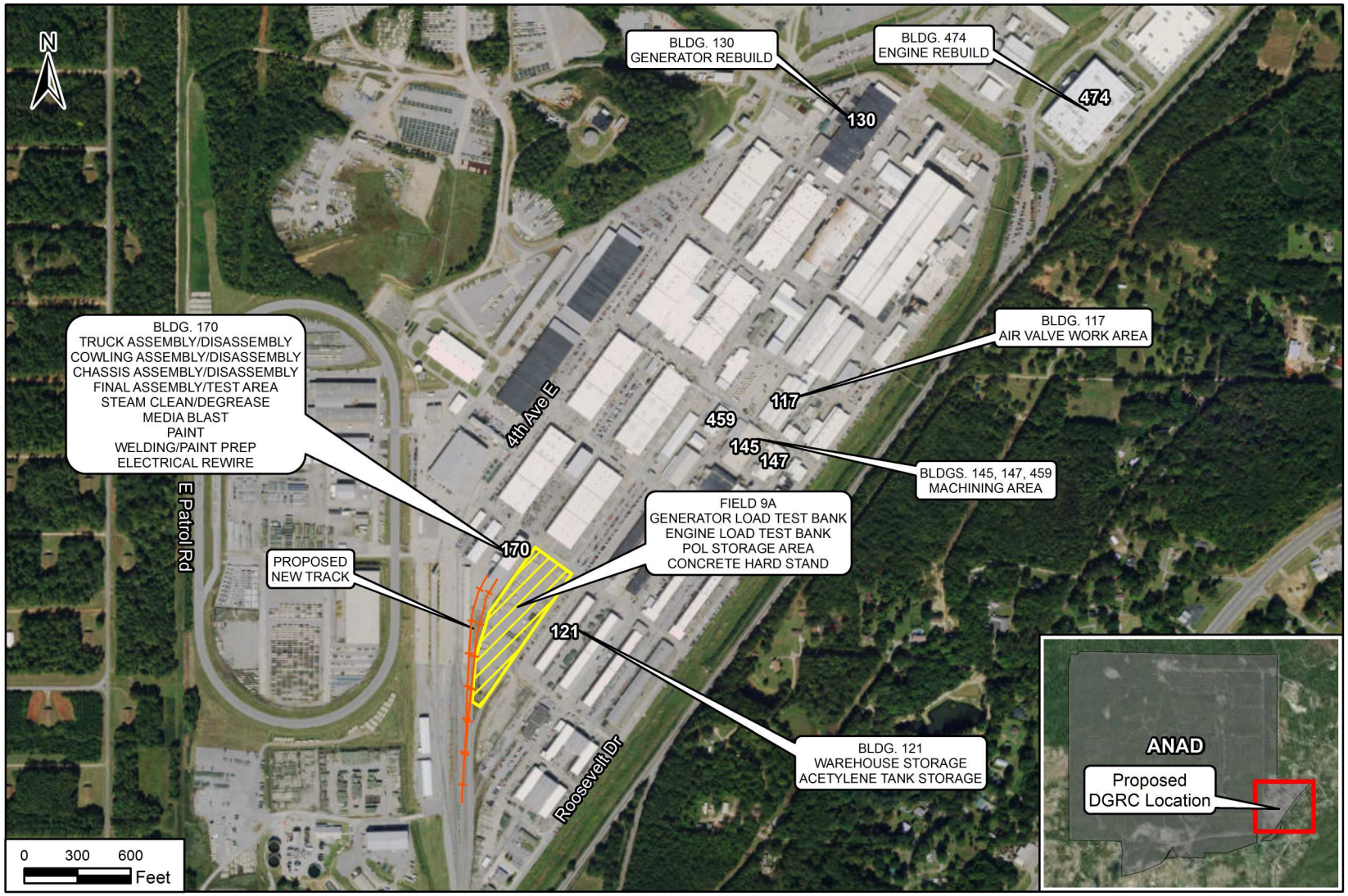
LEGEND

- State Boundary
- County Boundary
- Urban Area
- Surface Water
- Interstate Highway
- U.S. Route

ANAD Location

Anniston, Alabama

Figure 2-1



Proposed DGRC Location on ANAD

Anniston, Alabama

Figure 2-2

Source: ESRI 2013. Note: Locations are approximate.

Table 2-3. Proposed Locations for DGRC Functional Processes at ANAD

Functional Process	Current Location Hill AFB	Proposed Location ANAD
Shipping and Receiving		
Rail Storage	On-site	Turner/Lake Yards
Carpentry/Box Shop	Bldg. 1701	Bldg. 121
Disassembly		
Truck Disassembly	Bldg. 1701, Tracks 1 & 2	Bldg. 170
Cowling Disassembly	Bldg. 1701, Tracks 3 & 4	Bldg. 170
Chassis Disassembly	Bldg. 1701, Tracks 3 & 4	Bldg. 170
Asbestos Removal	Bldg. 1701, Track 4	Bldg. 170
Drain Fluids	Bldg. 1701, Track 4	Bldg. 170
Cleaning/Abrasive Blast		
Media Blast	Bldg. 1704	Bldg. 170
Steam Cleaning/Degrease	Bldg. 1701D	Bldg. 170
Subcomponent Rebuild		
Generator Rebuild	Bldg. 1701, Track 6	Bldg. 130[a]
Engine Rebuild	Contracted Out	Bldg. 474
Electrical Rewire	Bldg. 1701, Track 6	Bldg. 170
Air Valve Rebuild	Bldg. 1701, Air Brake Room	Bldg. 117
Welding	Bldg. 1701, Weld Shop	Bldg. 170
Paint	Bldg. 1701, Tracks 7 & 8	Bldg. 170
Truck Overhaul	Bldg. 1701, Tracks 1 & 2	Bldg. 170
Cowling Overhaul	Bldg. 1701, Tracks 3 & 4	Bldg. 170
Chassis Overhaul	Bldg. 1701, Tracks 3 & 4	Bldg. 170
Parts Reclaim		
Machining	Bldg. 1701, Machine Shop	Bldgs. 145/147/459
Warehousing	Bldg. 1706	Bldg. 121
Laydown Area	On-site	Field 9A
Machining	Bldg. 1701, Machine Shop	Bldg. 170
Paint		
Paint Prep	Bldg. 1701, Track 8	Bldg. 170
Paint	Bldg. 1701, Track 7	Bldg. 170
Assembly		
Truck Assembly	Bldg. 1701, Tracks 1 & 2	Bldg. 170
Cowling Assembly	Bldg. 1701, Tracks 3 & 4	Bldg. 170
Chassis Assembly	Bldg. 1701, Tracks 3 & 4	Bldg. 170
Assembly	Bldg. 1701, Tracks 3 & 4	Bldg. 170
Final Assembly/Testing	Bldg. 1701, Tracks 3 & 4	Bldg. 170
Testing		
Generator Load Testing	On-site	Field 9A
Locomotive Load Testing	Bldg. 1701, Track 4	Field 9A
Test Track	On-site	Adjacent Turner Yard
Final Repair	Bldg. 1701, Tracks 3 & 4	Bldg. 170
Final Paint	Bldg. 1701, Track 7	Bldg. 170

Note:
[a] Only sections 4 and 5 of building 130 are being proposed for use.
Bldg. = building.

2.3.3 Alternative B–Relocate the DGRC to MCAAP

Under alternative B, the Army would relocate the DGRC to MCAAP.

MCAAP produces and renovates conventional ammunition and ammunition-related components. MCAAP is the group technology center for bomb load, assemble, and pack. MCAAP personnel also perform manufacturing services (i.e., industrial, engineering and product assurance) in support of production. They receive, store, issue, maintain, and/or demilitarize, and dispose of conventional ammunition and related items. In addition, MCAAP renovates, modifies, and maintains guided missiles and serves as a power projection platform. MCAAP currently maintains AMC's mobile rail repair team.

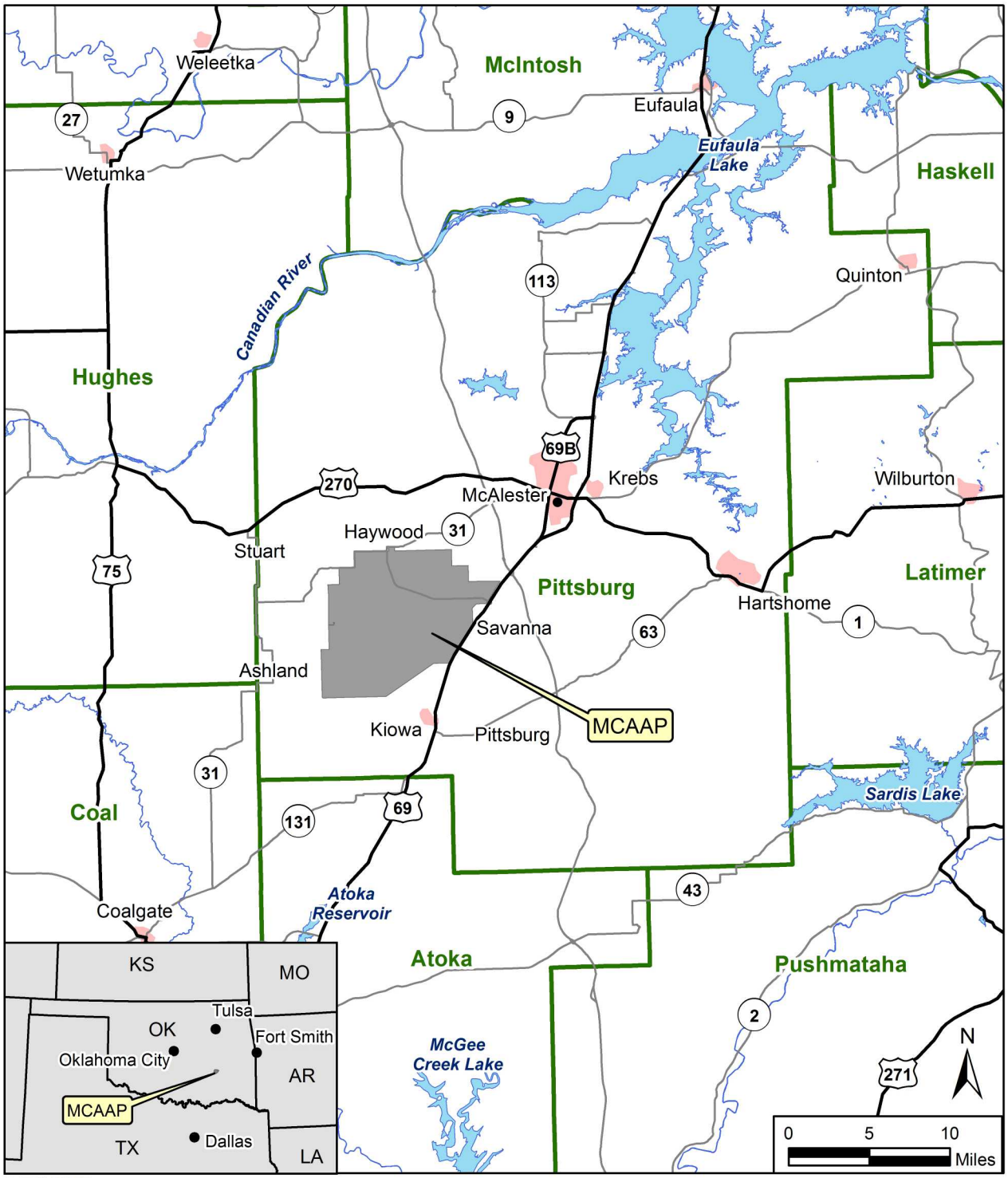
Installation Overview

MCAAP is a government-owned, government-operated facility located in Pittsburg County near the Town of Savanna in southeastern Oklahoma. It is approximately 9 miles southwest of the Town of McAlester and approximately 90 miles south of Tulsa (Figure 2-3). The facility, which consists of 45,000 acres, has 2,816 permanent structures, 2,263 igloos, 220 miles of railroad, 410 miles of improved roads, and 40 miles of fiber optic cable. MCAAP also is International Organization for Standardization (ISO) 9001 certified, ISO 14001 certified, Voluntary Protection Programs certified, and a Lean/Six Sigma continuous improvement organization. MCAAP also is an organic bomb-making facility and has two linear accelerator X-ray systems with digital imaging.

Established on May 20, 1943, as the McAlester Naval Depot, the facility began producing ammunition in September 1943. Peak employment during World War II was more than 8,000 civilians with 680 military personnel. The depot was transferred to the Army on October 1, 1977, under the Single Manager for Conventional Ammunition Act.

Required Relocation Actions

The Army would accomplish relocation of the DGRC to MCAAP through a combination of facility demolition (building 429 and part of building 9), existing facility renovation (buildings 9, 11, and 399), construction of new facilities, and the use of an existing rail yard. Building 429, which consists of approximately 4,200 sq ft, would be demolished to make room for a new high-bay facility for initial locomotive disassembly and assembly to be added to building 9. Demolition being proposed at building 9 includes flooring, a mezzanine, and approximately 35,000 sq ft of storage space. Building 11 would be renovated to accommodate a break area for DGRC personnel. At building 399, a new cleaning facility addition is proposed along with a sand-blasting containment area. Other construction would include concrete pits and installation of new railroad track to buildings 9 and 399. Figure 2-4 shows the proposed project area, and Table 2-4 shows how MCAAP would accommodate the DGRC processes.



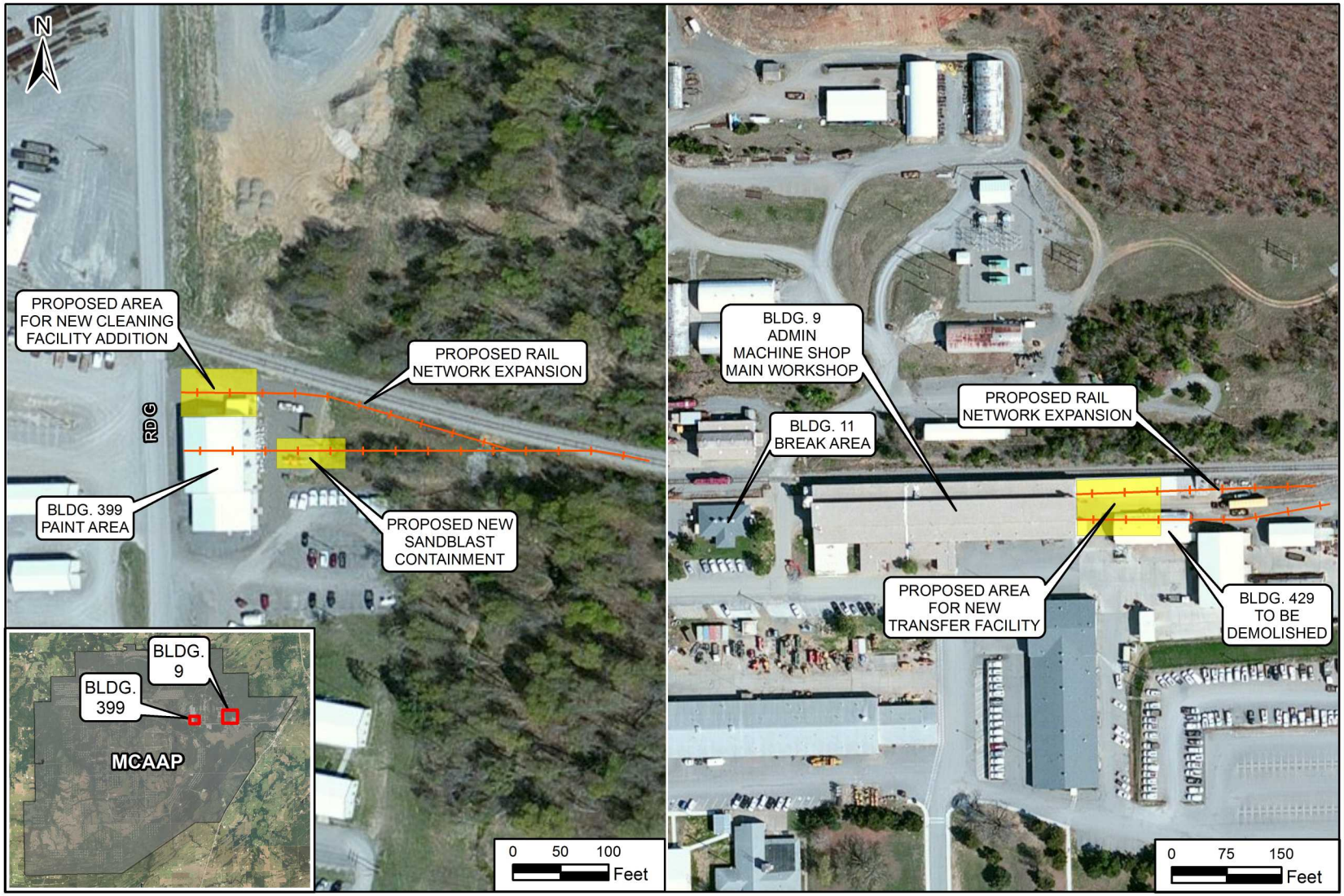
LEGEND

- County Boundary
- Urban Area
- U.S. Route
- State Route
- Surface Water

MCAAP Location

McAlester, Oklahoma

Figure 2-3



Proposed DGRC Location on MCAAP

McAlester, Oklahoma

Figure 2-4

Source: ESRI 2013. Note: Locations are approximate.

Table 2-4. Proposed Locations for DGRC Functional Processes at MCAAP

Functional Process	Current Location Hill AFB	Proposed Location MCAAP
Shipping and Receiving		
Rail Storage	On-site	Old Rail Yard
Carpentry/Box Shop	Bldg. 1701	Bldg. 9
Disassembly		
Truck Disassembly	Bldg. 1701, Tracks 1 & 2	Bldg. 9 Addition
Cowling Disassembly	Bldg. 1701, Tracks 3 & 4	Bldg. 9 Addition
Chassis Disassembly	Bldg. 1701, Tracks 3 & 4	Bldg. 9 Addition
Asbestos Removal	Bldg. 1701, Track 4	Bldg. 9
Drain Fluids	Bldg. 1701, Track 4	Bldg. 9
Cleaning/Abrasive Blast		
Media Blast	Bldg. 1704	Bldg. 399
Steam Cleaning/Degrease	Bldg. 1701D	Bldg. 399
Subcomponent Rebuild		
Generator Rebuild	Bldg. 1701, Track 6	Bldg. 9
Engine Rebuild	Contracted Out	Bldg. 9
Electrical Rewire	Bldg. 1701, Track 6	Bldg. 9
Air Valve Rebuild	Bldg. 1701, Air Brake Room	Bldg. 9
Welding	Bldg. 1701, Weld Shop	Bldg. 9
Paint	Bldg. 1701, Tracks 7 & 8	Bldg. 399
Truck Overhaul	Bldg. 1701, Tracks 1 & 2	Bldg. 9
Cowling Overhaul	Bldg. 1701, Tracks 3 & 4	Bldg. 9
Chassis Overhaul	Bldg. 1701, Tracks 3 & 4	Bldg. 9
Parts Reclaim		
Machining	Bldg. 1701, Machine Shop	Bldg. 9
Warehousing	Bldg. 1706	Storage Bldgs.
Laydown Area	On-site	Bldg. 9 Local On-site
Machining	Bldg. 1701, Machine Shop	Bldg. 9
Paint		
Paint Prep	Bldg. 1701, Track 8	Bldg. 399
Paint	Bldg. 1701, Track 7	Bldg. 399
Assembly		
Truck Assembly	Bldg. 1701, Tracks 1 & 2	Bldg. 9 Addition
Cowling Assembly	Bldg. 1701, Tracks 3 & 4	Bldg. 9 Addition
Chassis Assembly	Bldg. 1701, Tracks 3 & 4	Bldg. 9 Addition
Assembly	Bldg. 1701, Tracks 3 & 4	Bldg. 9 Addition
Final Assembly/Testing	Bldg. 1701, Tracks 3 & 4	Bldg. 9 Addition
Testing		
Generator Load Testing	On-site	Old Rail Yard
Locomotive Load Testing	Bldg. 1701, Track 4	Old Rail Yard
Test Track	On-site	Old Rail Yard
Final Repair	Bldg. 1701, Tracks 3 & 4	Bldg. 9
Final Paint	Bldg. 1701, Track 7	Bldg. 399

Notes:
Bldg. = building.
Building 11, immediately west of building 9, would be renovated and used as a break area.

2.3.4 Alternative C–Relocate the DGRC to RRAD

Under alternative C, the Army would relocate the DGRC to RRAD.

The Red River Defense Complex is the largest single employer in the greater Texarkana, Texas, area. RRAD is an ISO 9001:2008 Registered industrial complex with approximately 34 miles of railroad track, providing responsive and innovative solutions for the DOD in repair, overhaul, recapitalization, and conversion of combat and tactical vehicles. Red River Army Depot is recognized as the Center of Industrial Technical Excellence (CITE) for tactical wheeled vehicles, the Small Emplacement Excavator, Bradley Fighting Vehicle series, Multiple Launch Rocket System chassis and for rubber products necessary for sustainment and support to the United States and Allied forces and agencies. Since the start of the Global War on Terrorism, RRAD has deployed over 3,000 men and women to support the warfighter in theater. The Red River Defense Complex is home to a workforce of approximately 3,500 federal civilian members with an additional 2,500 tenants and contractors. RRAD has achieved recognition and earned registration under stringent ISO quality system requirements. The depot was the first in the Department of the Army to achieve ISO certification across the entire installation. RRAD also is the Army's only two-time recipient of the Robert T. Mason Award for Depot Maintenance Excellence and an eight-time winner of the Shingo Medallion.

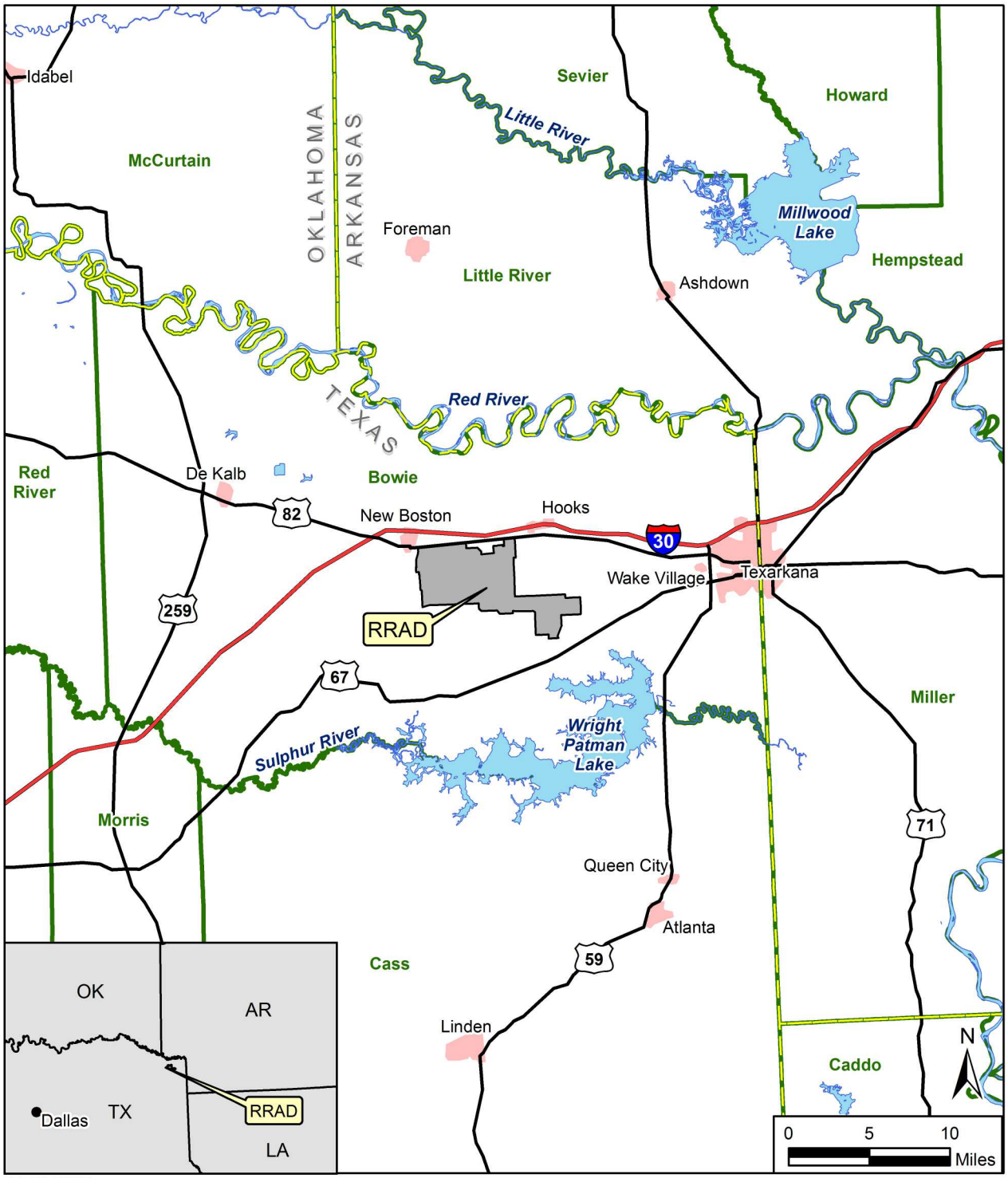
RRAD is a strategic national asset with over 70 years of service to the United States and its Soldiers. The depot is recognized as the depot source of repair for the mine-resistant ambush protected vehicle. The depot's multiskilled workforce possesses a wide range of technical resources, including the capability to design, fabricate, and manufacture a wide range of items, from specialty parts to unique prototype weapon systems and vehicles. The dedicated workforce provides continuous on-site support throughout the world.

Installation Overview

RRAD consists of approximately 15,840 acres in Bowie County in northeast Texas and is located approximately 18 miles west of the City of Texarkana (Figure 2-5). RRAD conducts ground combat and tactical system sustainment maintenance operations and related support services worldwide for U.S. and Allied forces and friendly nations in support of the warfighter. RRAD was originally established in 1941 as an ammunition storage depot. The continued demands of World War II brought a change to the mission of the depot that required it to add the repair of tanks to its capabilities. Red River Ordnance Depot also was chosen as the training facility for over 12,000 Soldiers during World War II and the Korean War and became home to many a Soldier as they prepared for eventual deployment in defense our nation. Throughout the years the depot's missions have changed, and today RRAD is sustaining the Joint Warfighter's combat power by providing ground combat and tactical systems sustainment maintenance operations, including over 5,000 deployments since the beginning of the Global War on Terrorism, RRAD has deployed more employees than any other civilian organization in the world.

Required Relocation Actions

The Army would accomplish relocation of the DGRC to RRAD and would accommodate the DGRC processes entirely through new construction in an area north of building 655. The proposed location for the DGRC facility is an approximately 5-acre parcel situated in a wooded area next to existing railroad infrastructure and along an existing on-post commercial truck route. The new DGRC facility would consist of an approximately 94,000-sq ft building, 90,000 sq ft of concrete hardstand, 20,000 sq ft of gravel parking, a new rail spur, and utility infrastructure. Figure 2-6 shows the proposed project area. Because all required actions to relocate the DGRC to RRAD



LEGEND

- State Boundary
- County Boundary
- U.S. Route
- Surface Water
- Urban Area

RRAD Location

Red River, Texas

Figure 2-5

LEGEND

Intermittent Creek

Proposed DGRC Location on RRAD

Red River, Texas

Figure 2-6

Source: ESRI 2015. Note: Locations are approximate.

would be through new construction located north of building 655, a table identifying the proposed location of each functional process is not provided.

2.3.5 Alternative D–Relocate the DGRC to TEAD

Under alternative D, the Army would relocate the DGRC to TEAD.

TEAD is a premier active joint ammunition storage and outloading site. The installation is responsible for shipping, storing, receiving, inspecting, demilitarizing, and maintaining training and war reserve conventional ammunition. TEAD designs and manufactures ammunition peculiar equipment (APE) used in demilitarization of munitions for DoD and is the Army's CITE for APE.

Installation Overview

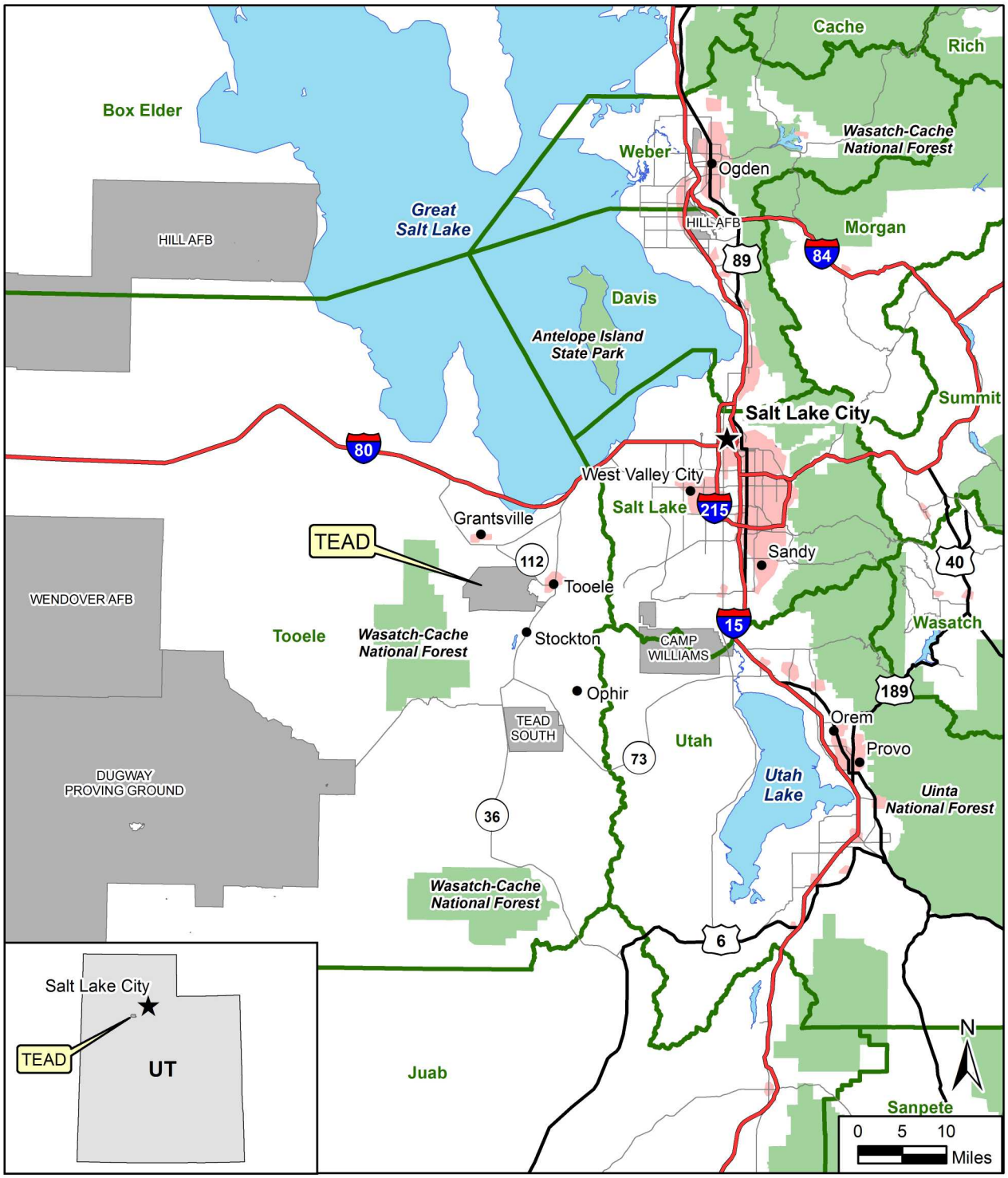
TEAD is in Tooele County in north central Utah, about 35 miles southwest of Salt Lake City, just west of the City of Tooele and south of the City of Grantsville (Figure 2-7). TEAD North Area is over 23,610 acres and has over 1,100 storage, production, fabrication, and administrative buildings.

TEAD was originally known as the Tooele Ordnance Depot and construction of its facilities was completed in 1943. It functioned as a storage depot for World War II supplies, ammunition, and combat vehicles. BRAC 1988 recommended that TEAD take over the general supply storage mission from Pueblo Army Depot Activity in Colorado, and BRAC 1993 recommended that TEAD eliminate its troop support, maintenance, storage, and distribution missions. The realignment of the maintenance and supply missions was completed in 1995, with TEAD retaining the logistic support of conventional ammunition shipping, storage, receiving, inspection, maintenance, testing, and demilitarization operations; and the design and manufacturing of ammunition-related equipment. TEAD continues to provide extensive base operations support in design and manufacture of chemical ammunition-related equipment, and communications support to Army installations throughout the western United States. In 2010, the depot was officially designated by the Secretary of the Army as a CITE for APE maintenance. Also, the depot has received certification for Occupational Health and Safety Management Systems 18001.

TEAD specializes in ammunition logistics and the engineering, design, and manufacture of ammunition-related equipment. As a major power projection platform for the United States' Joint Services, TEAD issues, receives, stores, maintains, demilitarizes, and tests ammunition. Additionally, the depot designs, develops, fabricates, and fields ammunition-related equipment. TEAD's equipment and services are used throughout the world. It has the infrastructure, specialized workforce, and proven procedures necessary to meet today's technological challenges quickly and effectively. In sustaining organic capabilities, TEAD maximizes the use of its organic capacity through a number of direct sales, public-private partnerships, and workshare arrangements.

Required Relocation Actions

The Army would accomplish relocation of the DGRC to TEAD through a combination of existing facility renovation and new construction. Building renovations would include roofing repairs, flooring modifications, the addition of an office and break room, equipment installation, and constructing approximately 1,700 linear feet of railroad that would serve buildings 507, 541, and 594. Figure 2-8 shows the proposed project area, and Table 2-5 shows how TEAD would accommodate the DGRC processes.



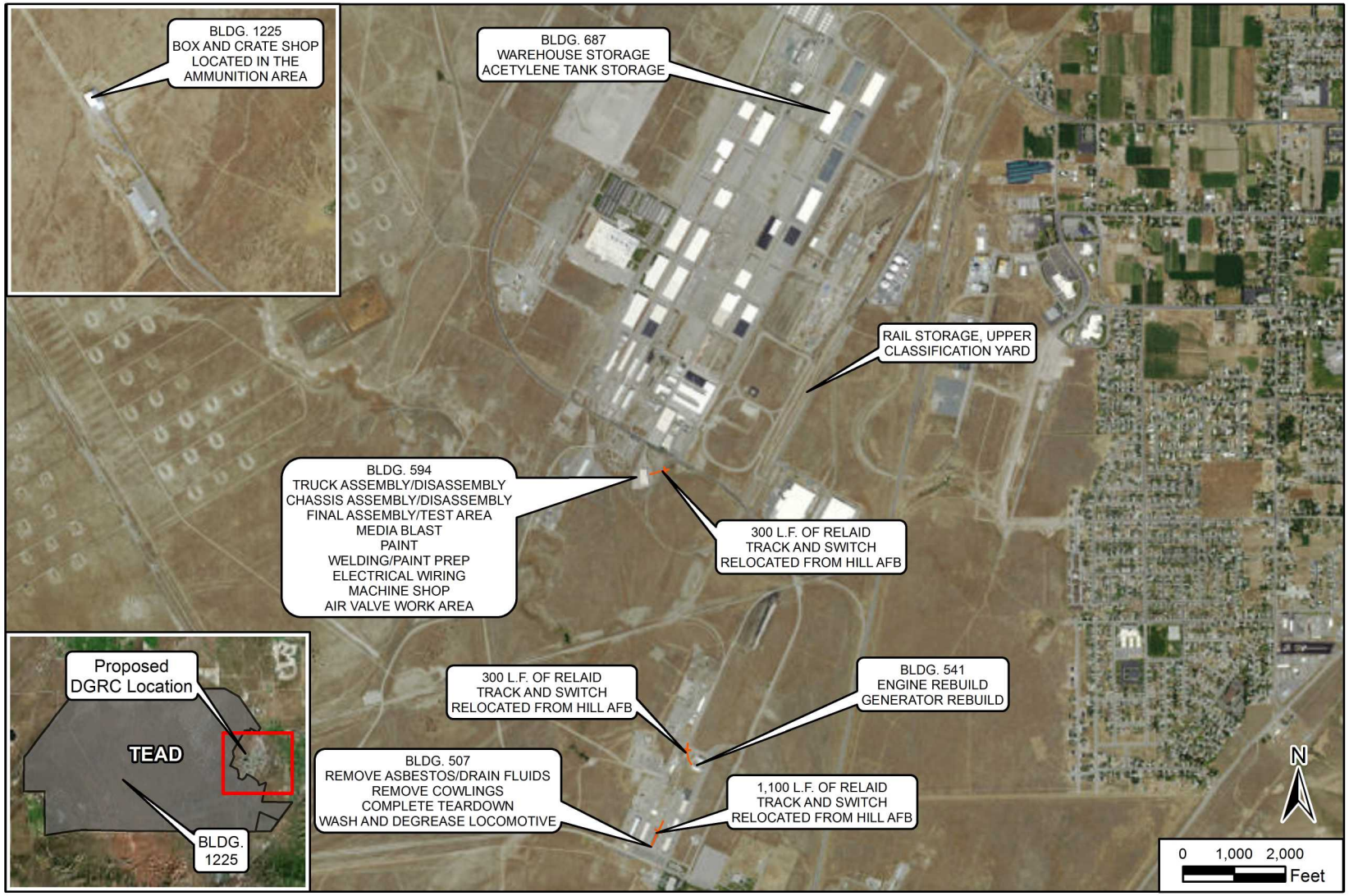
LEGEND

- Military Installation
- County Boundary
- Interstate Highway
- U.S. Route
- State Route
- Surface Water
- Urban Area
- Park

TEAD Location

Tooele, Utah

Figure 2-7



Proposed DGRC Location on TEAD

Tooele, Utah

Figure 2-8

Source: ESRI 2014. Note: Locations are approximate.

Table 2-5. Proposed Locations for DGRC Functional Processes at TEAD

Functional Process	Current Location Hill AFB	Proposed Location at TEAD
Shipping and Receiving		
Rail Storage	On-site	On-site (Upper Classification Yard)
Carpentry/Box Shop	Bldg. 1701	1225 (Box and Crate Shop in Ammunition Area)
Disassembly		
Truck Disassembly	Bldg. 1701, Tracks 1 & 2	Bldg. 594, Tracks 2 & 3
Cowling Disassembly	Bldg. 1701, Tracks 3 & 4	Bldg. 507
Chassis Disassembly	Bldg. 1701, Tracks 3 & 4	Bldg. 594, Tracks 2 & 3
Asbestos Removal	Bldg. 1701, Track 4	Bldg. 507
Drain Fluids	Bldg. 1701, Track 4	Bldg. 507
Cleaning/Abrasive Blast		
Media Blast	Bldg. 1704	Bldg. 594 (Equipment Moved from Hill AFB)
Steam Cleaning/Degrease	Bldg. 1701D	Bldg. 507
Subcomponent Rebuild		
Generator Rebuild	Bldg. 1701, Track 6	Bldg. 541, Track 4
Engine Rebuild	Contracted Out	Contracted Out
Electrical Rewire	Bldg. 1701, Track 6	Bldg. 594, Track 4
Air Valve Rebuild	Bldg. 1701, Air Brake Room	Bldg. 594, Air Brake Room
Welding	Bldg. 1701, Weld Shop	Bldg. 594, Track 1
Paint	Bldg. 1701, Tracks 7 & 8	Bldg. 594, Track 5
Truck Overhaul	Bldg. 1701, Tracks 1 & 2	Bldg. 594, Tracks 2 & 3
Cowling Overhaul	Bldg. 1701, Tracks 3 & 4	Bldg. 507
Chassis Overhaul	Bldg. 1701, Tracks 3 & 4	Bldg. 541
Parts Reclaim		
Machining	Bldg. 1701, Machine Shop	Bldg. 594, Machine Shop
Warehousing	Bldg. 1706	Bldg. 687[a]
Laydown Area	On-site	On-site
Machining	Bldg. 1701, Machine Shop	Bldg. 594, Machine Shop
Paint		
Paint Prep	Bldg. 1701, Track 8	Bldg. 594, Track 5
Paint	Bldg. 1701, Track 7	Bldg. 594, Track 5
Assembly		
Truck Assembly	Bldg. 1701, Tracks 1 & 2	Bldg. 594, Tracks 2 & 3
Cowling Assembly	Bldg. 1701, Tracks 3 & 4	Bldg. 541
Chassis Assembly	Bldg. 1701, Tracks 3 & 4	Bldg. 594
Assembly	Bldg. 1701, Tracks 3 & 4	Bldg. 594
Final Assembly/Testing	Bldg. 1701, Tracks 3 & 4	Bldg. 594
Testing		
Generator Load Testing	On-site	On-site
Locomotive Load Testing	Bldg. 1701, Track 4	On-site
Test Track	On-site	On-site
Final Repair	Bldg. 1701, Tracks 3 & 4	Bldg. 594, Track 5
Final Paint	Bldg. 1701, Track 7	Bldg. 594, Track 5

Notes:
Bldg. = building.
Building 687 and some of the upper rail classification yard are no longer owned by TEAD. They are part of the Ninigret and Peterson Industrial Depot. While not owned, TEAD does have a 99-year lease on building 687 and five other surrounding warehouses.

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SECTION 3.0 AFFECTED ENVIRONMENT

3.1 NO ACTION ALTERNATIVE

Analysis of keeping or the loss of the DGRC at Hill AFB is not included in this EA because of the following recent NEPA documentation that has been prepared for the Hill AFB Enhanced Use Lease (EUL) project and a Utah Department of Transportation (UDOT) highway interchange project. EULs allow military bases to lease underutilized property to private entities to maximize its utility and value. Each of those projects covered land area that included the existing DGRC.

- EA for the West Side Development, Hill AFB, Utah, June 2008
- 1800 North (SR-37) Record of Decision, Final Environmental Impact Statement (FEIS) and Section 4(F) Evaluation, UDOT Project # F-0037(4)0, December 2015
- Supplemental Environmental Assessment (SEA) for Falcon Hill National Aerospace Research Park EUL Hill Air Force Base, Utah, March 2016

The Falcon Hill National Aerospace Research Park EUL was initially referred to as the "West Side Development EUL." The West Side Development EA and SEA evaluated the impacts associated with implementing the EUL agreement and, on the basis of those documents, the impacts from implementing the EUL were determined to be less than significant. The FEIS prepared by UDOT was for a highway interchange that would support highway needs and the EUL included the DGRC and surrounding land area.

3.2 RELOCATE THE DGRC TO ANAD (ALTERNATIVE A)

3.2.1 Land Use

ANAD is divided into three areas: the East Area, the West Area, and the Restricted Area. The developed areas are primarily confined to the West and East areas because most of the Restricted Area is encompassed by explosive safety arcs that limit development. The proposed relocation of the DGRC to ANAD would occur entirely within the East Area. The East Area, which includes the Nichols Industrial Complex (NIC), is almost entirely developed and includes storage and industrial land uses. Rail and other facilities in this area support the rebuild of equipment and weapons systems and typically include operations such as cleaning, plating, finishing, machining, welding, grinding, painting, coating, shipping, receiving, and assembly/disassembly (CH2M Hill 2010).

Buildings within the NIC that are proposed for the DGRC relocation are buildings 117, 121, 130, 145, 147, 170, 459, and 474. Most of those buildings are already used to support ongoing equipment rebuild functions and would continue providing that support if the DGRC is relocated to ANAD. Functions performed in buildings being proposed for the DGRC—some of which are underutilized—would be moved to other buildings, consolidated in existing buildings, or moved to areas of ANAD currently being used for similar functions. Field 9A, a fenced 4.5-acre gravel lot, is used to stage military equipment and vehicles requiring overhaul or refurbishing. Vehicles and equipment temporarily staged on the lot would be relocated to other available staging areas on ANAD. Railroad infrastructure that would support the proposed DGRC also is located within the NIC.

3.2.2 Aesthetics and Visual Resources

The relocation of the DGRC to ANAD would be entirely within the industrialized NIC. The NIC is surrounded by ANAD to the southwest, west, north, and northeast. The Norfolk Southern railroad, a wooded buffer, and undeveloped off-post property are located to the southeast. ANAD, including the NIC, has restricted access and is not visible from off-post.

3.2.3 Air Quality

U.S. Environmental Protection Agency (EPA) Region 4 and the Alabama Department of Environmental Management (ADEM) regulate air quality in Alabama. ANAD is located in Calhoun County, which is within the East Alabama Intrastate Air Quality Control Region (AQCR) (40 CFR 81.199). EPA has designated Calhoun County as being in attainment for all criteria pollutants (USEPA 2016a). EPA monitors levels of criteria pollutants at representative sites in each region throughout Alabama. For reference purposes, Table 3-1 shows the monitored concentrations of criteria pollutants at the monitoring locations closest to ANAD.

Table 3-1. Air Quality Standards and Monitored Data near ANAD

Pollutant	Air Quality Standard		Monitored Concentrations		
	Level	Averaging Period	2013	2014	2015
Carbon monoxide (CO)					
1-hour (ppm)	35	Not to be exceeded more than once per year	5.6	13.8	6.9
8-hour (ppm)	9		1.7	2.4	1.9
Nitrogen oxides (NO_2)					
1-hour (ppb)	100	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	46	51	50
Ozone (O_3)					
8-hour (ppm)	0.070	3-year average of the fourth highest daily maximum	0.067	0.065	0.073
Sulfur dioxide (SO_2)					
1-hour (ppb)	75	99th percentile, averaged over 3 years	29	41	45
3-hour (ppm)	0.5	Not to be exceeded more than once per year	No Data	No Data	No Data
Fine particulate matter ($PM_{2.5}$)					
24-hour (µg/m^3)	35	98th percentile, averaged over 3 years	24	26	24
Annual mean (µg/m^3)	12	Averaged over 3 years	11.8	12.1	11.8
Particulate matter (PM_{10})					
24-hour (µg/m^3)	150	Not to be exceeded more than once per year over 3 years	58	98	73

Source: USEPA 2016b.
Notes: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter.

ANAD is considered a major facility for the purposes of air permitting and holds a major operating permit (no. 301-0023), which was renewed with modifications on April 20, 2015 (ADEM 2016). The permit requirements include annual periodic inventory of all significant stationary sources of air emissions for each of the criteria pollutants of concern; monitoring and recordkeeping requirements also are included in the permit. Primary stationary sources of air emissions include boilers, generators, and explosive processing areas (ADEM 2016). Table 3-2 lists ANAD 2013 facilitywide air emissions from all significant stationary sources.

Table 3-2. Annual Emissions for Significant Stationary Sources at ANAD

Pollutant	Emissions (tons/year)
CO	45.4
NO_x	53.0
Volatile organic compounds (VOCs)	76.0
$PM_{2.5}$	6.4
PM_{10}	158.0
SO_2	16.5

Source: U.S. Army 2014.

3.2.4 Noise

Existing sources of noise at ANAD include military and industrial activities, open detonation of munitions, testing of munitions, commercial and private aircraft overflights, and road traffic, as well as lawn maintenance equipment, construction noise, and bird and animal vocalizations. Background noise levels expressed as equivalent sound level (L_{eq})—the average sound level in decibels (dB)—and day-night sound level (DNL)—a 24-hour average sound level with a 10-dB penalty added to the nighttime levels (10 p.m. to 7 a.m.)—were estimated for the surrounding areas using the techniques specified in the *American National Standard Institute—Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present*, ANSI S12.9-1993 (R2013)/Part 3 (ANSI 2013). The closest noise-sensitive area (NSA) is a residential area 1,160 feet east of the proposed DGRC site at ANAD. The estimated background sound level at the NSA is 40 A-weighted dB (dBA)—a noise measurement that approximates the perception of sound by humans—in the daytime and 34 dBA at night with an overall sound level of 42 dBA DNL.

The Anniston Munitions Center open detonation ground is located in the northwest section of the depot, and the Anniston Directorate of Production Static Test Firing range is located in the northeastern corner of the depot. Areas adjacent to these facilities have elevated levels of noise compared to background noise. Activity at the facilities would be audible but distant at the DGRC during periods of quiet or unfavorable weather conditions. They would not contribute appreciably to noise near the proposed DGRC (USAPHC 2014).

Alabama does not have a statewide noise regulation. The City of Anniston, however, maintains a noise ordinance, which limits sound levels to 60 dBA in residential areas. The city noise ordinance exempts construction noise between 7 a.m. and 10 p.m. (Anniston Municipal Code §16.6).

3.2.5 Geology and Soils

ANAD is near the western end of the Weisner Ridge Formation, almost entirely within the Appalachian Valley and Ridge physiographic province, characterized by folded strata that are commonly oriented in northeast-southwest valleys and ridges (ANAD 2010). The topography of ANAD ranges from gently rolling to hills and steep slopes to the west and northwest. The elevation at the proposed DGRC relocation site is approximately 650 feet above mean sea level (AMSL) (USGS 2016a).

Soils. The soils on ANAD are mostly moderately well-drained (ANAD 2013a). The soils at the proposed DGRC relocation site are of the Cumberland, Lindside, Newark, Philo, Stendal, and Sequatchie types (see Table 3-3) (NRCS 2016a). Somewhat poorly drained Lindside and Newark soils cover most of the site. All soils are more than 80 inches deep, Cumberland and Sequatchie soils have no incidence of flooding or ponding, Lindside and Newark soils frequently flood with no incidence of ponding, and Philo and Stendal soils occasionally flood with no incidence of ponding. All soil types are rated moderate for the corrosion of concrete. The Sequatchie soil type is rated

moderate for the corrosion of steel; all other soil types are rated high for the corrosion of steel. The Lindside and Newark soils are rated moderate for soil erosion; all other soils are rated low for soil erosion.

Table 3-3. Soils of Proposed DGRC Location on ANAD

Soil Type Abbreviation	Soil Type	Occurrence	Corrosion of Concrete	Corrosion of Steel	Soil Erosion (K Factor, Whole Soil)
CrC3	Cumberland gravelly clay loam, 6–10% slopes, severely eroded	On-site	Moderate	High	.15 (low)
CrD3	Cumberland gravelly clay loam, 10–25% slopes, severely eroded	Bldg. 474	Moderate	High	.15 (low)
LiA	Lindside and Newark silt loams, 0–2% slopes	Bldgs. 117, 121, 130, 145, 147, 170, & 459; Field 9A	Moderate	High	.37 (moderate)
PhA	Philo and Stendal fine sandy loams, 0–2% slopes	Bldg. 474	Moderate	High	.20 (low)
PkA	Philo and Stendal soils, local alluvium, 0–2% slopes	Bldg. 474	Moderate	High	.20 (low)
ScB	Sequatchie fine sandy loam, 2–6% slopes	Bldg. 474	Moderate	Moderate	.20 (low)

Source: NRCS 2016a.

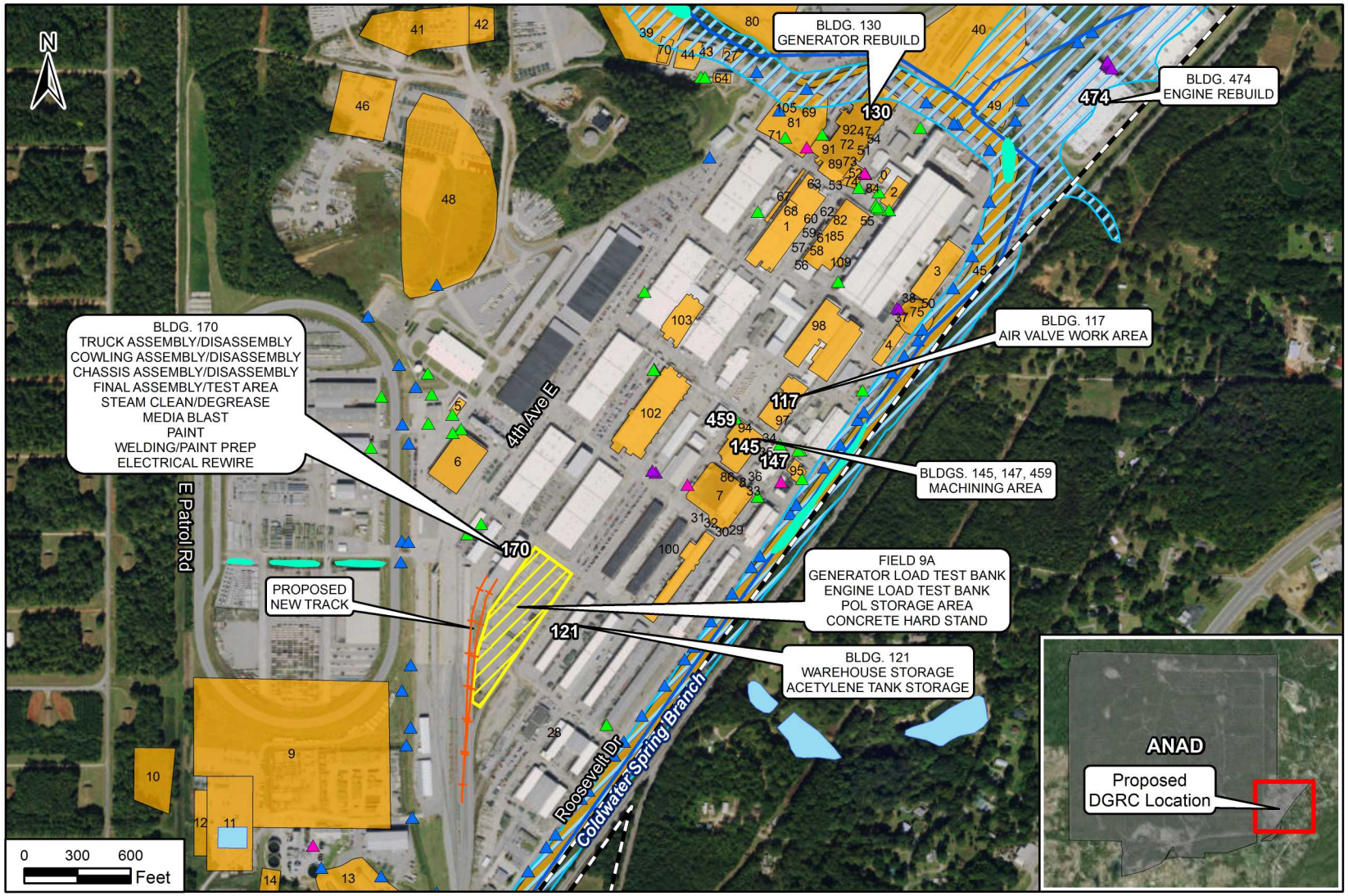
3.2.6 Water Resources

3.2.6.1 Surface Waters

Surface water and stormwater runoff from the East Area flow into a stormwater drainage ditch west of the proposed locations for the DGRC facilities and into numerous stormwater drains on the East Area. They, in turn, drain to Coldwater Spring Branch, which flows parallel to and south of Roosevelt Drive (Figure 3-1). Stormwater draining from the East Area to Coldwater Spring Branch is monitored for various chemical constituents depending on the area from which the stormwater originates. Coldwater Spring Branch flows to Choccolocco Creek to the south, which flows into the Coosa River.

3.2.6.2 Groundwater

The Coldwater Spring aquifer is the main water source for ANAD, which is located within the recharge area of the aquifer system (CH2M Hill 2010). The areas proposed for DGRC facilities are developed and impermeable, but runoff from the areas can enter groundwater after draining to the nearby ditch and creek.



LEGEND

- Installation Boundary
- Stream
- Surface Water
- Wetland
- 100-Year Floodplain
- SWMU
- Fuel Tank
- AST
- UST
- Monitoring Well

ANAD Constraints

Anniston, Alabama

Figure 3-1

Source: ANAD GIS 2016; ESRI 2013. Note: Locations are approximate.

3.2.6.3 Wetlands and Floodplains

No wetlands are located in the areas proposed for DGRC facilities. The floodplain of Coldwater Spring Branch extends onto the areas occupied by buildings 130 and 474 (Tetra Tech 2015) (Figure 3-1).

3.2.7 Biological Resources

3.2.7.1 Vegetation

The proposed project area is highly developed and has no native vegetative communities.

3.2.7.2 Wildlife

Fauna of the area is typical of species of the Ridge and Valley Province, including mice (*Peromyscus* spp.), voles, white-tailed deer (*Odocoileus virginianus*), coyotes (*Canas latrans*), eastern cottontail (*Sylvilagus floridanus*), squirrels (*Sciurus* spp.), turkey (*Meleagris gallopavo*), bobwhite quail (*Colinus virginianus*), mourning dove (*Zenaida macroura*), snakes, and lizards (ANAD 2013a).

3.2.7.3 Protected Species

One federally listed endangered plant species, Tennessee yellow-eyed grass (*Xyris tennesseensis*), is known to occur on ANAD. Its occurrence is limited to a single population on the western half of the installation. Three federally protected species of bat are potentially present on ANAD. Indiana bats (*Myotis sodalis*) winter in caves or abandoned mines and roost in the summer in wooded areas under loose tree bark on dead or dying trees (USFWS 2015b). Gray bats (*M. grisescens*) live in caves year-round (USFWS 2015a). Neither species roosts in buildings. Northern long-eared bats (*M. septentrionalis*) winter in caves and roost underneath bark on both live and dead trees, and have rarely been found roosting in structures, like barns and sheds (USFWS 2015c). The University of Illinois Extension service reports that female northern long-eared bats form small nursery colonies in hollow trees, under loose bark, or in little-used buildings (University of Illinois 2016). The Tennessee Bat Working Group reports that in summer northern long-eared bats roost by day in a variety of shelters, including buildings and under tree bark or shutters, but at night they commonly use caves as roosts (TNBWG 2016).

3.2.7.4 Migratory Birds

The Migratory Bird Treaty Act (MBTA) implements the United States' obligation under several international treaties and conventions to protect migratory birds, and Executive Order (EO) 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, directs executive departments and agencies to take certain actions to further implement the MBTA.

No natural habitat for migratory birds is present in the proposed project area.

3.2.8 Cultural Resources

3.2.8.1 Archaeological Site Actions

The National Park Service (NPS) completed a reconnaissance level archaeological survey of ANAD in 1984 and a series of archaeological investigations were completed from 1984 to 1999. These surveys identified three prehistoric sites, three historic cemeteries, and one historic complex. None of the documented archaeological resources are listed in the National Register of Historic Places (NRHP). The three historic cemeteries were recommended as eligible for listing in the NRHP as archaeological sites. According to the 2010 ANAD integrated cultural resources management plan (ICRMP), all archaeological investigations have been completed and no additional archaeological investigations had been undertaken since the 2004 ICRMP. ANAD

contains no currently identified archaeological sites that have not been tested (Brockington 2004; Stallings 2010).

No known archaeological resources are located within the ANAD project area.

3.2.8.2 Architectural Inventory Actions

Established in 1940, ANAD was primarily constructed from 1941–1942 during World War II as an ammunition storage depot for the Army. Today, ANAD is the Army's oldest operating maintenance depot, with a primary mission of repairing and rebuilding a variety of military vehicles and combat tanks. From 1984 to 1985, the NPS completed an architectural inventory and Historic American Engineering Record (HAER) documentation for 67 buildings (Hightower and Lange 1985; Brockington 2004).

Two intensive architectural inventories in 2004 and 2006 documented additional architectural resources constructed through the Cold War (1970–1991), including ammunition storage igloos, warehouses, repair and maintenance shops, housing, support facilities, and administrative buildings. Neither of the inventories determined that any of the resources were individually eligible for listing on the NRHP; they did, however, recommend three historic districts as potentially eligible for listing on the NRHP. The districts were located in the Ammunition Limited Area (ALA), the NIC, and the East Area. The ALA district includes the Lance Missile Fueling Facility. The ALA and East Area were recommended NRHP-eligible under criteria A for architectural significance and criteria C for historical significance while the NIC was recommended NRHP-eligible under criteria A for historical significance only (Stallings 2010; Brockington 2004).

As a result of the 2004 inventory, ANAD and the Alabama State Historic Preservation Office (SHPO) executed a memorandum of agreement (MOA) on July 27, 2005, regarding continued operation of the ALA historic district, including the Lance Missile Fueling Facility. The MOA stipulated that ANAD would undertake Historic American Buildings Survey (HABS) Level II photographic and historical documentation of the ALA historic district as mitigation for continued use of the ALA. The photographic documentation was completed in 2007 (Stallings 2010).

ANAD and the Alabama SHPO executed a second MOA on February 2, 2006, regarding continued operation of the NIC historic district, which "requires frequent alteration of systems and structures within the complex." The MOA stipulated that ANAD would complete professional historical documentation of the NIC with "a publicly accessible section on the history of the installation." In 2007, ANAD completed a 125-page narrative history titled *From Shermans to Strykers: Industrial Maintenance at the Anniston Army Depot, 1940–2007* (Stallings 2007). In a letter dated September 4, 2007, the Alabama SHPO accepted the history "as mitigation for the Nichols Industrial Complex." This documentation mitigated continued operation of historic buildings located at the NIC through February 2, 2016. A new MOA is currently being developed (Stallings 2007, 2010).

ANAD and the Alabama SHPO executed a third MOA on October 16, 2007, which stipulated that HABS/HAER Level II photographic and historic documentation of the Lance Missile Fueling Facility would be completed as mitigation for continued use of the NRHP-eligible facility. The photographic documentation was completed in 2009 (Stallings 2010).

In 2006, the Advisory Council on Historic Preservation (ACHP) issued *Program Comment for World War II and Cold War Era (1939–1974) Ammunition Storage Facilities*. As applied to ANAD, the 2006 program comment satisfies the Army's responsibilities at the installation for compliance under section 106 of the National Historic Preservation Act (NHPA) regarding the effects of management actions for ammunition storage facilities, like igloos, built between 1939 and 1974.

The Army is no longer required to follow the case-by-case section 106 review process for those properties.

3.2.8.3 Traditional Cultural Properties and Sacred Sites Actions

ANAD initiated tribal consultation in 2003 when the previous ICRMP was distributed to American Indian tribes for review and commentary. No tribal responses were received. In 2005, ANAD initiated tribal consultation to develop a consultation agreement (CA) with the 21 federally recognized American Indian tribes that have a historic association to sites in Alabama. Seven tribes elected to participate in the CA, which remained in effect until 2015. Those tribes were the Absentee-Shawnee Tribe of Oklahoma, Choctaw Nation of Oklahoma, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, Miccosukee Tribe of Indians of Florida, Mississippi Band of Choctaw Indians, and United Keetoowah Band of Cherokee Indians in Oklahoma (Stallings 2010).

To date, no tribes have presented resources within the boundaries of ANAD that they consider to be traditional cultural properties (TCPs). As of the 2010 ICRMP, no tribe members have "requested access to any of the resources" (Stallings 2010).

3.2.8.4 Native American Graves Protection and Repatriation Act Actions

According to the ICRMPs prepared in 2004 and 2010, archaeological surveys of ANAD and tribal consultation have not resulted in the identification of prehistoric human remains or burial sites at ANAD. The Native American Graves Protection and Repatriation Act requires consultation with relevant American Indian tribal nations regarding treatment of American Indian burials, funerary remains, or other objects of cultural patrimony before any action is taken regarding a potential grave site (Stallings 2010; Brockington 2004).

3.2.8.5 Cemetery Actions

An archaeological survey for ANAD documented three historic cemeteries within the depot's boundary. The Wilbanks and Burns cemeteries are located in the ALA. The Bynum Cemetery is located near the main gate at the south end of the depot. Containing a total of 33–38 marked burials dating from 1857 to 1912, all three cemeteries have been determined to be eligible for listing on the NRHP as archaeological sites. The 2010 ICRMP indicated that a cemetery preservation plan would be completed by 2015 (Stallings 2010; Brockington 2004).

No cemeteries, known American Indian TCPs, or NRHP-listed properties are located within the ANAD project area.

3.2.9 Socioeconomics

The socioeconomic conditions evaluated for this study include the economic and sociological environment, environmental justice, and protection of children for the region of influence (ROI). The ROI is a geographic area selected as a basis on which social and economic impacts of project alternatives are analyzed. The defined ROI for this project is Calhoun County, Alabama, and covers an area of 606 square miles in northeast Alabama.

The baseline year for socioeconomic data is 2015, the most recent year for which most of the ROI socioeconomic indicators (e.g., population, employment) are reasonably available. If 2015 data were not available, the most recent data available are presented. Data for Alabama and the United States are provided for comparative purposes.

3.2.9.1 Economic Environment

Employment and industry. ROI civilian labor force and unemployment data are shown in Table 3-4. The region's labor force decreased by 10 percent between 2010 and 2015. Both Alabama's

and the nation's labor forces decreased by 2 percent during the same time period. The regional decline can be attributed to a loss of government industry defense-related jobs (McCreless 2014).

The national, state, and ROI unemployment rates all decreased from 2010 to 2015. The ROI 2015 annual unemployment rate was 6.9 percent, higher than the state and national unemployment rates of 6.1 and 5.3 percent, respectively. The primary sources of ROI employment were the government and government enterprises, retail trade, manufacturing, and health care and social assistance industry sectors. Together these industry sectors accounted for almost 55 percent of regional employment. The government and government enterprises industry sector is the largest employer in the ROI, accounting for about 22 percent of regional employment (BEA 2015). ANAD is part of the government and government enterprises industry sector, and employs about 4,200 personnel (e.g., Active Duty, DoD civilian, tenants, contractors, and nonappropriated funds employees) (DoD 2013).

Table 3-4. Labor Force and Unemployment

Jurisdiction	2010 Civilian Labor Force	2015 Civilian Labor Force	Change in Labor Force 2010–2015	2010 Unemployment Rate	2015 Unemployment Rate
ROI	51,559	46,288	-10%	11.4%	6.9%
Alabama	2,196,042	2,146,157	-2%	10.5%	6.1%
United States	153,889,000	157,130,000	2%	9.6%	5.3%

Source: BLS 2016.

Income. ROI income levels are lower than state and national averages (Table 3-5). The ROI per capita personal income (PCPI) of $21,306 was 89 percent of the state PCPI of $23,936 and 75 percent of the national PCPI of $28,555. The ROI median household income of $40,919 was 94 percent of the state median household income of $43,511 and 77 percent of the national median household income of $53,482.

Table 3-5. Income, 2010-2014 5-year Estimates

Jurisdiction	PCPI	Median Household Income
ROI	$21,306	$40,919
Alabama	$23,936	$43,511
United States	$28,555	$53,482

Source: U.S. Census Bureau 2015.
Note: Income reported in 2014 dollars.

3.2.9.2 Sociological Environment

Population. The ROI's population was 115,620 in 2015, a decrease of about 3 percent (or about 2,900 people) since 2010 (Table 3-6). During that same time period, Alabama's population grew by 2 percent and the national population increased by 4 percent. The ROI population decline corresponds with the loss of hundreds of defense-related jobs in the area, resulting in out migration (McCreless 2014).

Table 3-6. Population

Jurisdiction	2010 Population	2015 Population	Change in Population 2010–2015
ROI	118,586	115,620	-3%
Alabama	4,780,127	4,858,979	2%
United States	308,758,105	321,418,820	4%

Source: U.S. Census Bureau 2016a.

Housing. Housing data are presented in Table 3-7. ROI housing costs (median monthly mortgage and gross rent) are lower than state and national levels. The ROI homeowner vacancy rate is slightly higher than rates for the state and the nation. The ROI rental vacancy rate is lower than the state and nation rates. The ROI has about 7,900 vacant housing units (U.S. Census Bureau 2015). There is no base housing on ANAD, with the exception of one set of quarters designated for the depot commander (DoD 2013).

Table 3-7. Housing Data, 2010-2014 5-year Estimates

Jurisdiction	Number of Housing Units	Homeowner Vacancy Rate[a]	Rental Vacancy Rate[b]	Median Monthly Mortgage	Median Monthly Gross Rent
ROI	53,306	3.0%	4.0%	$1,052	$634
Alabama	2,190,638	2.6%	9.0%	$1,159	$715
United States	132,741,033	2.1%	6.9%	$1,522	$920

Source: U.S. Census Bureau 2015.
Notes:
a. The homeowner vacancy rate is the proportion of the homeowner housing inventory that is vacant for sale.
b. The rental vacancy rate is the proportion of the rental inventory that is vacant for rent.

Law enforcement, fire protection, medical services. The ANAD Directorate of Emergency Services (DES) provides depot law enforcement, fire and emergency services, force protection, antiterrorism, and physical security. ROI law enforcement is provided by the Calhoun County Sheriff's Office, along with municipal police departments (e.g., Anniston and Oxford) and state police law enforcement officers. The nearest off-post fire station is an Oxford Fire Department station on Route 78, about 2 miles from ANAD.

ANAD does not have a hospital on the installation; an occupational clinic is available to employees (DoD 2013). The Stringfellow Memorial Hospital in Anniston is about 11 miles from the depot.

Schools. The Calhoun County School District has 19 public schools with a student enrollment of almost 9,400 students. The county also has four private schools (NCES 2015). There are no primary or secondary schools on-base at ANAD (DoD 2013).

3.2.9.3 Environmental Justice

On February 11, 1994, President Clinton issued EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. The EO is designed to focus the attention of federal agencies on the human health and environmental conditions in minority and

low-income communities. Environmental justice analyses are performed to identify the disproportionate placement of high and adverse environmental or health impacts from proposed federal actions on minority or low-income populations and to identify alternatives that could mitigate those impacts.

Minority populations are identified as Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and other Pacific Islander, people of two or more races, and people of Hispanic or Latino origin. Minority populations should be identified if either the minority population of the affected area exceeds 50 percent or the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. In 2015, the ROI population was comprised of 27 percent minority populations (Table 3-8). The ROI population consisted of a lower percentage of minorities than Alabama and the United States as a whole, with populations of 33 percent and 37 percent minorities, respectively (U.S. Census Bureau 2015).

Table 3-8. Minority Population and Persons in Poverty, 2010–2014 5-year Estimates

Jurisdiction	Minority Population	Persons in Poverty
ROI	27%	22%
Alabama	33%	19%
United States	37%	16%

Source: U.S. Census Bureau 2015.

Poverty thresholds established by the Census Bureau are used to identify low-income populations. Poverty status is reported as the number of persons or families with income below a defined threshold level. As of 2015, the U.S. Census Bureau defined the poverty threshold level as $12,085 or less of annual income for an individual and $24,259 or less of annual income for a household of four (U.S. Census Bureau 2016b). About 22 percent of ROI residents were classified as living in poverty (Table 3-8), higher than Alabama's poverty rate of 19 percent and the national poverty rate of 16 percent (U.S. Census Bureau 2015).

3.2.9.4 Protection of Children

EO 13045, *Protection of Children from Environmental Health and Safety Risks*, requires federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children.

The proposed DGRC on ANAD would be located within the depot's secure boundary. There are no homes or facilities on-base where children are typically present adjacent or near the proposed DGRC facilities.

3.2.10 Traffic and Transportation

Roadways and highway networks are the primary form of transportation in and around ANAD. Regional access is provided by Interstate- (I-) 20 from the east and west, and by I-59 from the north and south. U.S. 431 and other state routes provide access to the immediate area, while Frankford Avenue provides direct access to the proposed DGRC site on the installation. Intersections near the proposed site include Roosevelt Drive and 2nd Avenue West, and Roosevelt Drive and 2nd Street West (Wainwright Avenue). In general, nearby roadways and

intersections both on- and off-base operate free of congestion during nonpeak traffic hours. The installation has two gates; the main gate from MacArthur Avenue would be the gate predominantly used during construction and operation of the DGRC (DoD 2016).

Rail access to the installation is provided by Southern Railway Corporation spurs owned by Norfolk Southern that approach primarily from the northeast. The closest major seaports are the Port of Mobile and the Port of Savannah, operated by the Alabama State Port Authority and Georgia Ports Authority, respectively (ANAD 2013b).

The closest airport is Anniston Regional Airport, which is about 5 miles away and has 63 operations per day. The closest international airport is Birmingham-Shuttlesworth International, which is about 57 miles away and has 281 operations per day. Other nearby airports include St. Clair County, Talladega Municipal, and Northeast Alabama Regional airports (AirNav 2016).

3.2.11 Utilities and Solid Waste

3.2.11.1 Potable Water

Potable water at ANAD is supplied by the Anniston Water Works and Sewer Board (AWWSB) and originates from the Coldwater Spring–a natural spring source. The maximum capacity of the Coldwater Pumping Station is 23.5 million gallons per day (mgd). Current demand averages approximately 15 mgd, with a maximum pumping rate of 20 mgd, including off-post demand (CH2M Hill 2010). The fiscal year (FY) 2015 daily average usage at ANAD was 0.834 mgd (Milner 2016, email communication). ANAD also has three primary water storage tanks: two 500,000-gallon storage tanks in the West Area, and a 1-million-gallon tank within the industrial complex in the East Area.

3.2.11.2 Wastewater

Domestic wastewater is treated at ANAD's recently renovated sewage treatment plant (STP) located in the East Area. The STP has a designed maximum capacity of 0.55 mgd. Typical depot waste generation is approximately 0.23 mgd leaving approximately 0.32 mgd of available capacity (Tracks 2015). All treated effluent from the STP is discharged to Choccolocco Creek under National Pollutant Discharge Elimination System (NPDES) permit no. AL0002658.

ANADs industrial waste treatment plant (IWTP) also is located in the East Area of ANAD and treats wastewater from ANAD's industrial operations such as component cleaning and finishing, metal plating, chemical cleaning, and vehicle washing. The IWTP was completed in 2011 and has a design capacity of approximately 0.60 mgd, which is nearly double the capacity of the previous facility. The IWTP also provides for future expansion capabilities of up to 1.0 mgd (ANAD 2013b). The 2015 average daily flow from the STP was 0.173 mgd. The 2015 average monthly peak was 0.444 mgd (Milner 2016, email communication). The plant's biological treatment process produces water of the required quality for direct discharge to Choccolocco Creek. Before discharge, the water must meet NPDES permit limits (ANAD 2013b).

3.2.11.3 Electricity

Electrical power at ANAD is provided by the Alabama Power Company via a 44-kilovolt (kV) line from the Oxanna Substation. The total capacity of the incoming 44-kV line is reported to be 44,300 kilovolt amperes. Two Alabama Power Company-owned substations are located on ANAD and distribute power throughout the installation through government-owned power lines. A 14-megavolt ampere (MVA) substation and a 21-MVA substation serve the East Area and the NIC. In 2014, there was a peak demand of approximately 72 percent of the Oxanna substation's capacity (Milner 2016, email communication).

3.2.11.4 Natural Gas

Natural gas at ANAD is provided by Alagasco and is the main source of fuel for all central heating plants and stand-alone boilers at ANAD. ANAD is contracted with Alagasco for 600,000 British thermal units (MBtu) for uninterruptible service followed by an interruptible rate. Alagasco notifies ANAD in advance of any curtailment period, which usually coincides with cold weather and results in heightened demand on the natural gas system. These interruptions have lasted up to 1 month but generally last less than 3 days. ANAD uses no. 2 fuel oil as a backup and is, therefore, not affected by natural gas curtailments (CH2M Hill 2010).

3.2.11.5 Stormwater

ANAD's industrial area has stormwater infrastructure consisting of catch basins and storm drainage lines. This infrastructure directs stormwater to outfalls that discharge directly to the Dry Creek Main Diversion Channel (CH2M Hill 2010).

3.2.11.6 Solid Waste

ANAD nonhazardous refuse is collected by a private contractor and disposed of in Advanced Disposal's Cedar Hill Landfill in St. Clair County. The landfill has approximately 65.4 million cubic yards of air space available. With an average of 700 tons of waste accepted per day, the landfill has more than 24 years of site life (Advanced Disposal 2016).

3.2.12 Hazardous and Toxic Substances

Activities involving hazardous and toxic substances at ANAD are primarily regulated by EPA, the U.S. Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation (DOT), and ADEM. The staff of ANAD's Directorate of Risk Management, Environmental Compliance Division oversee compliance with applicable regulations.

Mission-supporting operations at ANAD involve the use, storage, and handling of hazardous substances and petroleum products and the generation, storage, transport, and disposal of hazardous and petroleum waste. Examples of hazardous substances and petroleum products used at ANAD include gasoline, diesel, oil, lubricants, solvents, and paint.

ANAD is a large-quantity generator of hazardous waste operating under EPA identification number AL3210020027. Hazardous waste is managed in accordance with the *ANAD Red Book: Hazardous Waste, Emergency Response, and Environmental Guidance* and hazardous waste facility permit no. AL3210020027, issued by ADEM on November 13, 2007 (ANAD 2014). Examples of hazardous waste streams include spent solvents, waste acids, paint residue, metal finishing wastes, and used oil filters (ANAD 2014).

ANAD's NIC, where the proposed DGRC sites are located, is a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List (NPL) site and ANAD has entered into a federal facilities agreement with EPA Region 4 and ADEM. Hazardous substance release sites requiring corrective action are referred to as *solid waste management units* (SWMUs). As shown in Figure 3-1, SWMUs, fuel tanks, and aboveground and underground storage tanks are located in the vicinity of the proposed DGRC sites. Contamination at the SWMUs is being addressed under the Army's Installation Restoration Program (IRP).

Military Munitions Response Program (MMRP) and other munitions investigation sites are more than 4 miles from the site proposed for the relocation of the DGRC to ANAD (Malcolm Pirnie 2005).

Land use controls are in place at ANAD, including restricting certain areas to industrial land use only, requiring dig permits, requiring protective equipment and approval of the IRP manager to

conduct soil excavations, and restricting groundwater access and use (ANAD 2006, U.S. Army 2013).

Buildings 170, 459, and 474 were built in the 1990s or more recently and are not likely to contain asbestos or lead-based paint. The remaining buildings (buildings 121, 145, 147, 117, and 130) are older and could contain asbestos and lead-based paint (Milner 2016, email communication). ANAD is in an area with a high potential for indoor radon concentrations that exceed the EPA-recommended action level of 4 picocuries per liter (USEPA 2016c).

3.3 RELOCATE THE DGRC TO MCAAP (ALTERNATIVE B)

3.3.1 Land Use

Land use on MCAAP is divided into a production area, an industrial area, an administrative area, the ammunition storage area, and buffer zones surrounding the ammunition storage area. The production, industrial, and administrative areas are all located in the eastern part of the installation. Building 399 is located in the production area; buildings 9, 11, and 429 are located in the industrial area.

Buildings 9, 11, and 429 are surrounded by industrial-purpose buildings, parking areas, a large equipment maintenance garage, storage areas, a combined office and workshop building, an office building, and a warehouse. A railroad track runs along the north side of buildings 9 and 11. Beyond those developed areas is wooded open space to the north and Brown Lake to the south.

Located near building 399 is a security office building and parking area, pest management buildings and parking space, a storage area for 50-gallon drums, waste collection containers, and a large outdoor rail equipment maintenance and storage area. The same railroad track that runs along the north side of buildings 9 and 11 passes north of building 399. A potentially historic school house is located south of building 399 on C Tree Road. Those developed areas are bordered by wooded areas.

3.3.2 Aesthetics and Visual Resources

The overall aesthetic of the proposed DGRC facility locations at MCAAP is utilitarian. Buildings 9, 429, and 399 have an industrial, functional appearance, as do most facilities located near them. Equipment is stored outside buildings 9 and 429 on asphalt pavement, and parking areas for building 399 are unmarked gravel hardpan extensions of Road G.

3.3.3 Air Quality

EPA Region 6 and the Oklahoma Department of Environmental Quality (ODEQ) regulate air quality in Oklahoma. MCAAP is located in Pittsburg County, Oklahoma, which is within the Southeastern Oklahoma Intrastate AQCR (40 CFR 81.123). EPA has designated Pittsburg County as being in attainment for all criteria pollutants (USEPA 2016a). EPA monitors levels of criteria pollutants at representative sites in each region throughout Oklahoma. For reference purposes, Table 3-9 shows the monitored concentrations of criteria pollutants at the monitoring locations closest to MCAAP.

MCAAP's facility wide major source air permit renewal (2012-672-TVR) was issued March 17, 2015. MCAAP currently operates under air permit number 2012-672-TVR (M-3) which expires on March 17, 2020. As outlined in the MCAAP Title V Air Permit (2012-672-TVR), primary stationary sources of air emissions include paint booths, boilers (natural gas and diesel), mill activities, pesticide applications, solvent wiping and cleaning, grit blasters, explosive powder sifting, asphalt coating, open burning/open detonation, battery charging, and gasoline and diesel storage tanks. Table 3-10 lists MCAAP 2015 facility wide air emissions from all significant stationary sources.

Table 3-9. Air Quality Standards and Monitored Data at MCAAP

Pollutant	Air Quality Standard		Monitored Concentrations		
	Level	Averaging Period	2013	2014	2015
CO					
1-hour (ppm)	35	Not to be exceeded more than once per year	1	0.9	2.9
8-hour (ppm)	9		0.8	0.7	0.9
NO2					
1-hour (ppb)	100	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	46	46	52
O_3					
8-hour (ppm)	0.070	3-year average of the fourth highest daily maximum	0.071	0.062	0.060
SO_2					
1-hour (ppb)	75	99th percentile, averaged over 3 years	3	3	3
3-hour (ppm)	0.5	Not to be exceeded more than once per year	No Data	No Data	No Data
$PM_{2.5}$					
24-hour (µg/m^3)	35	98th percentile, averaged over 3 years	23	23	16
Annual mean (µg/m^3)	12	Averaged over 3 years	10	9.3	7.8
PM_{10}					
24-hour (µg/m^3)	150	Not to be exceeded more than once per year over 3 years	62	85	92

Source: USEPA 2016b.
Notes:
ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter

Table 3-10. Annual Emissions for Significant Stationary Sources at MCAAP

Pollutant	Emissions (tons/year)
CO	33.0
NO_x	46.5
VOCs	19.7
$PM_{2.5}$	3.0
PM_{10}	227.3
SO_2	9.7

Source: ODEQ 2016.

3.3.4 Noise

Existing sources of noise at MCAAP include open detonation of munitions, military training, industrial activities, commercial and private aircraft overflights, and road traffic, as well as lawn maintenance equipment, construction noise, and bird and animal vocalizations. Background noise levels (L_{eq} and DNL) were estimated for the surrounding areas using the techniques specified in ANSI S12.9-1993 (R2013)/Part 3 (ANSI 2013). The closest NSA is a residential area 2,590 feet east of the proposed DGRC site at MCAAP. The estimated background sound levels at the NSA are 42 dBA in the daytime and 34 dBA at night with an overall sound level of 40 dBA DNL.

MCAAP operates two open detonation ranges—the Defense Ammunition Center training range and the Sensor Fuse Weapons test range, and a small arms range. Those facilities are located on the east side of the installation. Areas adjacent to them have elevated levels of noise compared to background noise, and the activities at the facilities would be clearly audible at the proposed DGRC site (USPHC 2016).

Oklahoma does not have a statewide noise regulation, but the City of McAlester maintains a noise ordinance, which limits noise levels to 60 dBA in residential areas. The city noise ordinance exempts construction noise between 8 a.m. and 10 p.m. (Code of Ordinances McAlester, Oklahoma §82-162).

3.3.5 Geology and Soils

MCAAP is located in the Lower Canadian Hills subregion of the Arkansas Valley, which separates the Ozark Plateau from the Ouachita Mountains (MCAAP 2016). The terrain is transitional and diverse, characterized by plains, hills, floodplains, terraces, and scattered mountains, making it distinct from nearby ecoregions. The Lower Canadian Hills are a transitional area between drier subregions to the west and wetter parts of the Arkansas Valley to the east. The topography of MCAAP is predominantly level to gently sloping, with rolling sandstone hills. The elevation at the proposed DGRC relocation site is approximately 750 feet AMSL (USGS 2016b).

Soils. The soils on MCAAP are generally well-drained, but erodible if denuded of vegetative cover (MCAAP 2016). The soils at the proposed DGRC relocation site are classified as Urban Land, Verdigris, and Rexor soil types (see Table 3-11) (NRCS 2016b). Urban Land covers most of the proposed DGRC relocation site and is fill material at a variable depth up to 80 inches and has no specified incidence of flooding or ponding. Verdigris and Rexor soils are more than 80 inches deep with frequent flooding and no incidence of ponding. Verdigris and Rexor soil types are rated low for the corrosion of concrete, low for the corrosion of steel, and moderate for soil erosion. Urban Land is unrated for those factors.

Table 3-11. Soils of Proposed DGRC Location on MCAAP

Soil Type Abbreviation	Soil Type	Occurrence	Corrosion of Concrete	Corrosion of Steel	Soil Erosion (K Factor, Whole Soil)
URB	Urban Land	Bldgs. 9, 11, & 399	N/A	N/A	N/A
VdRA	Verdigris-Rexor complex, 0–1% slopes, frequently flooded	Bldg. 399	Low	Low	.37 (moderate)

Source: NRCS 2016b.
Note: N/A = not applicable.

3.3.6 Water Resources

3.3.6.1 Surface Waters

Neither of the proposed DGRC facility sites have surface water features. Streams east and west of the industrial area where buildings 9 and 429 are located drain to Brown Lake (MCAAP 2016). A stream that also drains to Brown Lake runs east of building 399. Stormwater runoff from the industrial area drains to pervious ground along the railroad track that passes north of the area or

to storm drains located throughout the industrial area. Stormwater runoff from the hardpan surrounding building 399 drains to nearby pervious areas.

3.3.6.2 Groundwater

Groundwater is not present on MCAAP in great quantities except in some terrace gravel deposits. Groundwater recharges rapidly from precipitation and flows primarily through joints in the underlying bedrock. Groundwater is not used as a source of potable water on MCAAP.

3.3.6.3 Wetlands and Floodplains

The proposed DGRC facility areas have no areas of wetlands or areas designated as floodplains. Floodplains on MCAAP consist primarily of riparian areas associated with the installation's streams, and wetlands on MCAAP are associated primarily with streams, lakes, and borrow areas (MCAAP 2016).

3.3.7 Biological Resources

3.3.7.1 Vegetation

Vegetation in the area surrounding building 399 includes native upland grasses and hardwood stands. Vegetated areas are sparse near buildings 9, 11, and 429 and have been disturbed by the surrounding development. Brushland and agricultural areas can be found in the installation but not near the proposed project area. Hardwood stands are near the edges of the installation, along streams and lakes, and scattered throughout the ammunition storage areas. Typical hardwood species on MCAAP are post oak (*Quercus stellata*) and blackjack oak (*Q. marilandica*) with a mixture of hickory (*Carya spp*.) (MCAAP 2016).

3.3.7.2 Wildlife

Mammals typically found on MCAAP include the white-tailed deer, eastern cottontail, raccoon (*Procyon lotor*), eastern gray squirrel (*Sciurus carolinensis*), eastern fox squirrel (*S. niger*), gray fox (*Urocyon cinereoargenteus*), red fox (*Vulpes vulpes*), bobcat (*Lynx rufus*), beaver (*Castor canadensis*), skunk (*Mephitis mephitis*), and opossum (*Didelphis marsupialis*). Feral hogs (*Sus scrofa*) are a nuisance species on MCAAP. Ducks, frogs, snakes, and turtles also are found on the installation and wild turkey are abundant (MCAAP 2016).

3.3.7.3 Protected Species

Only one of the species with special federal or state status that have been documented in Pittsburg and the surrounding counties and for which there is believed to be suitable habitat on MCAAP—the American burying beetle (*Nicrophorus americanus*)—is a known resident of MCAAP. Planning level surveys conducted on MCAAP in 2002 (the most recent conducted on the installation) identified no rare species of plants or other animals. The American burying beetle was listed by the U.S. Fish and Wildlife Service (USFWS) as an endangered species in 1989 and identified on MCAAP in 2001. MCAAP biologists conduct surveys for the beetle to monitor fluctuations in the population every 3 years.

3.3.7.4 Migratory Birds

Several bird species protected under the MBTA reside at MCAAP, including the Canada goose (*Branta canadensis*), wood duck (*Aix sponsa*), mallard (*Anas platyrhynchos*), blue-winged teal (*Anas discors*), and mourning dove.

Bald eagles (*Haliaeetus leucocephalus*) are frequent winter visitors to MCAAP. The species is no longer protected under the Endangered Species Act, but is still afforded safeguards under the

MBTA and the Bald and Golden Eagle Protection Act. The last time a pair of bald eagles is known to have successfully nested at MCAAP was in 1982 (MCAAP 2016).

3.3.8 Cultural Resources

3.3.8.1 Archaeological Sites Actions

The MCAAP archaeological overview and management plan, completed in 1984, identified 417 potential locations of archaeological sites such as razed farmsteads, churches, schools, coal mines, hand-dug wells, and isolated graves. Between 1975 and 2007, 27 archaeological investigations covering nearly 2,000 acres were conducted on MCAAP. Those studies identified six archaeological sites, three of which were determined ineligible for listing on the NRHP and three of which were determined to require further investigation to determine NRHP eligibility (Hovell 2012).

No known archaeological resources are located within the MCAAP project area.

3.3.8.2 Architectural Inventory Actions

MCAAP was primarily constructed from 1942 to 1943 during World War II as an ammunition storage depot and ammunition production plant for the Army. Its current primary mission is to produce and renovate missile ammunition and components. The facility has nearly 9 million sq ft of covered explosives storage space (Hovell 2012).

The first architectural inventory of MCAAP was completed in 1984. It identified three resources that were potentially eligible for listing on the NRHP: building 90 (a preinstallation schoolhouse), building groups 42DC–45DC (World War II-era beehive magazines), and building groups 41LC and 46LC (World War II-era barrel vault magazines). A comprehensive architectural inventory of World War II properties on MCAAP was completed in 1996. That survey identified 409 buildings and structures requiring further investigation to assess their NRHP eligibility. In addition, the 1944 memorial at the Ward Springs Cemetery and 1944 7-AT-105 building explosion site have been added to the master inventory of resources requiring further investigation, for a total of 411 resources (Hovell 2012).

The ACHP's 2006 *Program Comment for World War II and Cold War Era (1939–1974) Army Ammunition Production Facilities and Plants* and *Program Comment for World War II and Cold War Era (1939–1974) Ammunition Storage Facilities*, as applied to MCAAP, satisfy the Army's responsibilities at the installation for compliance under section 106 regarding the effects of management actions for all properties built between 1939 and 1974. As a result, the Army is no longer required to follow the case-by-case section 106 review process for those properties at MCAAP (Jorns 2007). As a result of the Program Comments by 2009 all previously identified potentially eligible buildings for inclusion on the NRHP were removed from the DOE's list with the exception of building 90, a cold war era schoolhouse.

3.3.8.3 Traditional Cultural Properties and Sacred Sites Actions

MCAAP initiated tribal consultation in 2012 when the previous ICRMP was distributed to American Indian tribes for review and commentary. The consultation was distributed to six individuals representing five tribes. There were no responses from the tribes (Johnson 2016, email communication).

To date, no tribes have presented resources that they consider to be TCPs within the boundaries of MCAAP.

3.3.8.4 Native American Graves Protection and Repatriation Act Actions

According to the ICRMP prepared in 2012, archaeological surveys of MCAAP and tribal consultation have not resulted in the identification of prehistoric human remains or burial sites. Three small earthen mounds, however, could possibly contain American Indian burials, and limited potential exists for other isolated graves.

3.3.8.5 Cemetery Actions

Before acquisition by the U.S. government in 1942, MCAAP contained seven known cemeteries and 11 isolated burials. In 1942, the majority of the burials were relocated to the Ward Springs Cemetery at MCAAP or to nearby towns. A memorial installed at Ward Springs Cemetery in 1944 is potentially eligible for listing on the NRHP. Limited potential exists for identifying other isolated graves associated with demolished homesteads on MCAAP (Hovell 2012).

No cemeteries, known Native American TCPs, or NRHP-listed properties are located within the MCAAP project area.

3.3.9 Socioeconomics

The socioeconomic conditions evaluated for this study include the economic and sociological environment, environmental justice, and protection of children for the ROI. The defined ROI for this project is Pittsburg County, Oklahoma, and covers an area of 1,305 square miles in southeast Oklahoma.

The baseline year for socioeconomic data is 2015, the most recent year for which most of the ROI socioeconomic indicators (e.g., population, employment) are reasonably available. If 2015 data were not available, the most recent data available are presented. Data for Oklahoma and the United States are provided for comparative purposes.

3.3.9.1 Economic Environment

Employment and industry. ROI civilian labor force and unemployment data are shown in Table 3-12. The region's labor force decreased by about 8 percent between 2010 and 2015. Oklahoma's labor force increased 4 percent and the nation's labor force increased by 2 percent during the same time period. The regional decline can be attributed to the loss of oil and gas industry-related jobs in the area because of a shift in oil and gas production to other parts of the state and drops in crude oil and natural gas prices (Puit 2015; Snead 2016).

Table 3-12. Labor Force and Unemployment

Jurisdiction	2010 Civilian Labor Force	2015 Civilian Labor Force	Change in Labor Force, 2010–2015	2010 Unemployment Rate	2015 Unemployment Rate
ROI	18,930	17,356	-8%	8.2%	5.5%
Oklahoma	1,768,284	1,842,049	4%	6.8%	4.2%
United States	153,889,000	157,130,000	2%	9.6%	5.3%

Source: BLS 2016.

The national, state, and ROI unemployment rates all decreased from 2010 to 2015. The ROI 2015 annual unemployment rate was 5.5 percent, higher than the state unemployment rate of 4.2 percent and the national unemployment rate of 5.3 percent. The primary sources of ROI

employment were in the government and government enterprises; retail trade; mining, quarrying, and oil and gas extraction; and farming industry sectors. Together these sectors accounted for 50 percent of regional employment. The government and government enterprises sector was the largest employer, accounting for 25 percent of ROI employment (BEA 2015). MCAAP, part of the government industry sector, employs about 2,000 personnel (e.g., Active Duty, DoD civilians, and contractor employees) (DoD 2016).

Income. ROI income levels are lower than state and national averages (Table 3-13). The ROI PCPI of $22,719 was 92 percent of the state PCPI of $24,695 and 80 percent of the national PCPI of $28,555. The ROI median household income of $41,339 was 89 percent of the state median household income of $46,235 and 77 percent of the national median household income of $53,482.

Table 3-13. Income, 2010–2014 5-year Estimates

Jurisdiction	PCPI	Median Household Income
ROI	$22,719	$41,339
Oklahoma	$24,695	$46,235
United States	$28,555	$53,482

Source: U.S. Census Bureau 2015.
Note: Income reported in 2014 dollars.

3.3.9.2 Sociological Environment

Population. The ROI's population was about 44,600 in 2015, a decrease of about 3 percent (or about 1,200 people) since 2010 (Table 3-14). During that same time period, both Oklahoma's and the nation's populations increased by 4 percent. The ROI population decline corresponds with job losses in the area (see Employment and Industry in section 3.3.9.1), resulting in out-migration.

Table 3-14. Population

Jurisdiction	2010 Population	2015 Population	Change in Population 2010–2015
ROI	45,837	44,610	-3%
Oklahoma	3,751,616	3,911,338	4%
United States	308,758,105	321,418,820	4%

Source: U.S. Census Bureau 2016a.

Housing. Housing data are presented in Table 3-15. ROI housing costs (median monthly mortgage and gross rent) are lower than state and national levels. The ROI homeowner vacancy rate of 2.9 percent is slightly higher than the state vacancy rate of 2.3 percent and the national vacancy rate of 2.1 percent. The ROI rental vacancy rate of 8 percent is about the same as the state rental vacancy rate of 8.1 percent, but higher than the national rate of 6.9 percent. The ROI has about 4,300 vacant housing units (U.S. Census Bureau 2015). MCAAP has 14 on-post housing units, available first to military personnel. If there is excess military housing, however, it can be made available to DoD civilian employees (DoD 2016).

Table 3-15. Housing Data, 2010-2014 5-year Estimates

Jurisdiction	Number of Housing Units	Homeowner Vacancy Rate[a]	Rental Vacancy Rate[b]	Median Monthly Mortgage	Median Monthly Gross Rent
ROI	22,768	2.9%	8.0%	$930	$661
Oklahoma	1,680,457	2.3%	8.1%	$1,150	$717
United States	132,741,033	2.1%	6.9%	$1,522	$920

Source: U.S. Census Bureau 2015.
Notes:
a. The homeowner vacancy rate is the proportion of the homeowner housing inventory, which is vacant for sale.
b. The rental vacancy rate is the proportion of the rental inventory, which is vacant for rent.

Law enforcement, fire protection, medical services. The MCAAP DES provides law enforcement, force protection, antiterrorism, and physical security on the installation. ROI law enforcement is provided by the Pittsburg County Sheriff's Office, along with the McAlester Police Department and state police law enforcement officers. The MCAAP Fire and Emergency Services Division is responsible for fire protection on the installation.

The MCAAP on-post occupational clinic provides limited outpatient medical services for active duty members as well as occupational health services and first-aid treatment for DoD civilian employees and contract security guards injured in the line of duty. The clinic is under the direction of Reynolds Army Community Hospital at Fort Sill in Lawton, Oklahoma (about 200 miles west of MCAAP). The nearest hospital is the McAlester Regional Health Center in McAlester, about 15 miles from MCAAP.

Schools. The Pittsburg County Savanna School District has two public schools with a student enrollment of about 400 students. There are also two private schools with a student enrollment of about 200 students (NCES 2015). There are no primary or secondary schools located on MCAAP.

3.3.9.3 Environmental Justice

In 2015, the ROI population was comprised of 29 percent minority populations (Table 3-16). The ROI population had a lower percentage of minorities than Oklahoma and the United States as a whole, with populations of 32 percent and 37 percent minorities, respectively (U.S. Census Bureau 2015).

Table 3-16. Minority Population and Persons in Poverty, 2010-2014 5-year Estimates

Jurisdiction	Minority Population	Persons in Poverty
ROI	29%	20%
Oklahoma	32%	17%
United States	37%	16%

Source: U.S. Census Bureau 2015.

About 20 percent of ROI residents were classified as living in poverty, higher than both Oklahoma's poverty rate of 17 percent and the national poverty rate of 16 percent (U.S. Census Bureau 2015).

3.3.9.4 Protection of Children

The proposed DGRC on MCAAP would be located within the installation's secure boundary. There are no homes or facilities on-base where children are typically present adjacent to or near the proposed DGRC facilities.

3.3.10 Traffic and Transportation

Roadways and highway networks are the primary form of transportation in and around MCAAP. Regional access is provided by I-40 from the east and west, and U.S. Route 82 (Indian National Parkway) from the north and south. U.S. 69 and other state routes provide access to the immediate area while West Carl Albert Parkway provides direct access to the DGRC site on the installation. Intersections near the proposed sites include C Tree Road and Road G, and C Tree Road and U.S. 69 (Northeast Highway 69). In general, nearby roadways and intersections both on- and off-base operate free of congestion during nonpeak traffic hours. Construction and operations personnel of the DGRC would enter through the main gate off U.S. 69. Deliveries and other large trucks would enter the installation through Truck Gate, as required.

Rail access to MCAAP is provided by spurs owned by the Union Pacific Railroad that approach from all directions. The installation currently uses the rail for manufacturing and production facilities and the ammunition storage igloos/magazines on the north side of the installation and a few locations near the open burn pits (USACE 2007).

The closest airport is McAlester Regional Airport, which is 3 miles away and has 23 operations per day. The closest international airport is Tulsa International, which is 90 miles away and has 260 operations per day. Other nearby airports include Holdenville Municipal, Henryetta Municipal, and Stigler Regional airports (AirNav 2016).

3.3.11 Utilities and Solid Waste

3.3.11.1 Potable Water

Brown Lake is the primary source of potable water for MCAAP. MCAAP holds a water rights permit that allows withdrawal of 900 acre-feet per year. Data from 2011 indicate that the water capacity of the lake was 4,158 acre-feet. Lake water is treated to potable water standards at the installation water treatment plant located at the eastern edge of Brown Lake. The treatment plant is rated to treat 1.0 mgd. Treated water is routed into a 1-million-gallon clear well and pumped to various users, including MCAAP, the towns of Savanna and Haywood, and Haywood School. Three ground-level storage tanks are located on the installation, two capable of holding 200,000 gallons each and the third capable of holding 100,000 gallons. Five elevated storage tanks are located on the installation, four with holding capacities of 100,000 gallons and a fifth capable of holding 50,000 gallons. An additional 100,000-gallon storage tank is inactive. Water is distributed by gravity-fed pipelines.

Water usage in 2014 was more than 169 million gallons for industrial uses and more than 29 million gallons for the public water supply (Haywood/Savanna) (MCAAP 2016). Combined, the water usage in 2014 was approximately 608 acre-feet, well below the permitted withdrawal amount.

3.3.11.2 Wastewater

MCAAP's wastewater system, originally constructed in 1943, underwent substantial replacement during the 1990s. It conveys sanitary and industrial wastewater through collection pipes to the treatment plant via gravity feed. The treatment plant is designed to process 0.5 mgd with a maximum capacity of 0.75 mgd. The plant's average daily flow is approximately 0.3 mgd, leaving about 0.2 mgd of available capacity. If flow exceeds the treatment plant's capacity, it is diverted

to flow management lagoons with a combined capacity of 9.7 million gallons of wastewater flow equalization/flow management and includes stormwater retention (McMurtrey 2016, personal communication). Treated wastewater is discharged to Bull Creek under Oklahoma Pollutant Discharge Elimination System permit (no. OK0000523). The discharge consists of treated wastewater from decommissioning activities, sanitary wastewater, laundry, and accounts for a proposed carwash.

3.3.11.3 Electricity

Electrical power at MCAAP is provided by the American Electrical Power/Public Service Company of Oklahoma via a 69-kV line to the installation's two transformers. Electricity is distributed over government-owned power lines. MCAAP currently supplies a demand of 5 megawatts (MW) of electrical power, but has a capacity of 7 MW on one transformer. Using both transformers, MCAAP can meet a higher demand up to 14 MW of electricity for short periods, if needed (McMurtrey 2016, personal communication).

3.3.11.4 Natural Gas

Natural gas at MCAAP is provided by Constellation New Energy-Gas Division. MCAAP consumed approximately 346 million cubic feet of natural gas in 2015 (McMurtrey 2016, personal communication). MCAAP uses natural gas for space heating, hot water, burning methane gas at the sewer plant, incinerating paint fumes, cooling several buildings with gas-driven chillers, heating oil for the tar kettles, and process steam. The greatest consumption of natural gas is for space heating (USACE 2007).

3.3.11.5 Stormwater

Stormwater runoff from MCAAP's administration and industrial areas is collected by stormwater infrastructure and conveyed by piping to Brown Lake. Stormwater is managed under MCAAP's storm water industrial permit no. OKR050886. Discharges from MCAAP have been reduced to lower pollutant loading—primarily suspended solids—into Brown Lake by directing those discharges into the sewage treatment plant, which discharges to Bull Creek downstream from Brown Lake (MCAAP 2016).

3.3.11.6 Solid Waste

MCAAP operates a permitted nonhazardous industrial solid waste landfill that is expected to be available for the next 10 years. Currently, approximately 3–5 tons of waste per day is deposited in the landfill. Construction and demolition waste not accepted at the MCAAP landfill is typically disposed of off post at the Alderson Regional Landfill along with municipal waste collected from the installation by a contractor (McMurtrey 2016, personal communication).

3.3.12 Hazardous and Toxic Substances

Activities involving hazardous and toxic substances at MCAAP are primarily regulated by the EPA, OSHA, DOT, and ODEQ. Staff of MCAAP's Environmental Management Office oversee compliance with applicable regulations.

Mission-supporting operations at MCAAP involve the use, storage, and handling of hazardous substances and petroleum products and the generation, storage, transport, and disposal of hazardous and petroleum waste. Building 9 is currently a metalworking and carpentry shop, building 399 is a painting building, and building 11 is empty. Examples of hazardous substances and petroleum products used in these buildings include oils, lubricants, solvents, and paint. A drum storage area is located east of building 9.

MCAAP is a large quantity generator of hazardous waste operating under EPA identification no. OK6213822798. Hazardous waste is managed in accordance with the installation's hazardous waste management plan (MCAAP 2014) and operations permit no. 6213822798-2013 for hazardous waste management issued by ODEQ on June 28, 2013. Examples of hazardous waste streams include paint, degreasing chemicals, metal grindings, waste from demilitarizing munitions, and waste from machine shops.

As shown in Figure 3-2, IRP sites, and aboveground storage tanks are in the vicinity of the proposed DGRC sites. One site is located within 0.1 mile of the proposed DGRC sites. The environmental response is complete at MCAAP- 045, roundhouse building 10. At CCMCAAP-051, pentachlorophenol (PCP) contamination was found in groundwater. ODEQ concurs that a source was not identified during investigation. However, PCP in one monitoring well at the fuel farm remains slightly above the MCL. Thus, PCP will be monitored in the existing wells under the ongoing groundwater monitoring program for the Fuel Farm area. No further action is warranted.

The MMRP site nearest to the proposed DGRC sites is a mortar impact area approximately one-fourth mile south of buildings 9 and 11 at Brown Lake, referred to as MCAAP-005-R-02 (Shaw 2009).

MCAAP requires dig permits before excavation of any type throughout base. The MCAAP Department of Public Works, Environmental Management Office reviews dig permits and specifies the necessary safety precautions for each project (URS 2013).

Buildings 9, and 11 are old enough that they could contain asbestos and lead-based paint. Some of the siding on building 9 is known to contain asbestos. MCAAP is in an area where indoor radon concentrations are not likely to exceed the EPA's recommended action level (USEPA 2016c).

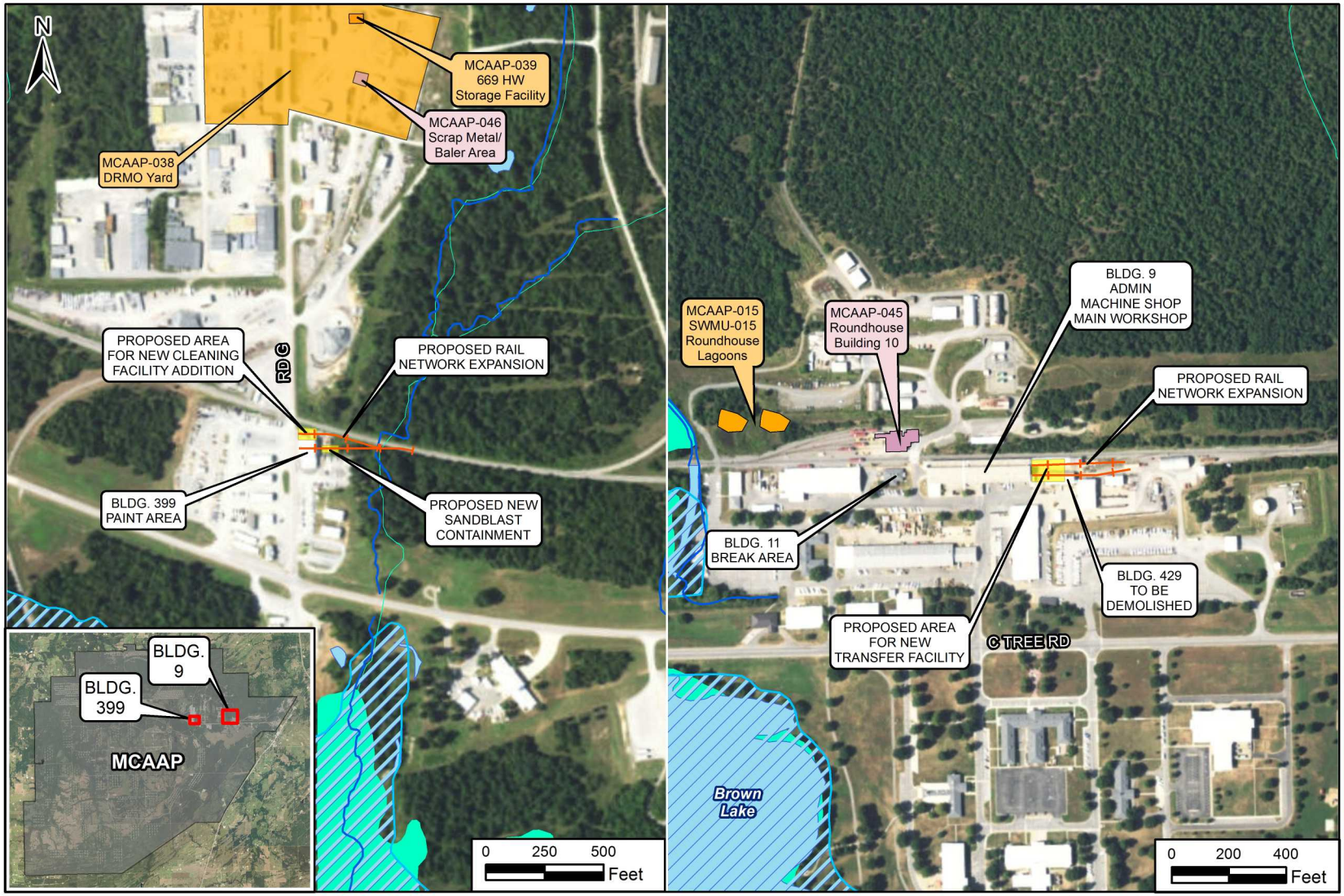
3.4 RELOCATE THE DGRC TO RRAD (ALTERNATIVE C)

3.4.1 Land Use

The approximately 5-acre site selected for proposed relocation of the DGRC at RRAD is undeveloped, predominantly wooded, and bisected by an intermittent stream. Situated to the north and northwest of the proposed site is building 636 and fragmented wooded areas separated by railroad infrastructure. East of the proposed site is a wooded buffer, the installation railroad, and a railroad spur leading to building 655. Further east is a large military equipment and vehicle staging area and the installation's industrial area. South of the proposed site is a wooded buffer and building 655. To the west, military vehicles are staged along both sides of Ammunition Drive, which is a commercial truck route. Also to the west is the intersection of Ammunition Drive and Standard Magazine Road 1. Undeveloped wooded land lies beyond Ammunition Drive.

Building 636 is a motorpool/tire shop, and building 655 was used for ammunition operations before being damaged by a fire/explosion. The parking area of building 655 is used for military vehicle staging.

According to the RRAD real property vision plan finalized in 2015, the proposed site being considered for the DGRC relocation is in a functional area of RRAD designated for warehousing and storage. The vision plan's future designation, however, places the proposed site between land areas that are reserved for future industrial tenants and RRAD's existing industrial production zone.



LEGEND

- Stream
- Surface Water
- Wetland
- 100-Year Floodplain
- SWMU
- IRP Site

MCAAP Constraints

McAlester, Oklahoma

Figure 3-2

Source: MCAAP GIS 2016; ESRI 2013. Note: Locations are approximate.

3.4.2 Aesthetics and Visual Resources

The undeveloped, predominantly wooded site selected for the proposed relocation of the DGRC is in an area that is consistent with RRAD's real property vision plan. As described in section 3.4.1, the site is located near railroad infrastructure, warehouse and industrial operations, roadways, and a military vehicle staging area. The proposed site is not in or adjacent to any residential land-use areas or scenic resources, or within the viewshed of a sensitive viewpoint.

3.4.3 Air Quality

EPA Region 6 and the Texas Commission on Environmental Quality (TCEQ) regulate air quality in Texas. RRAD is located in Bowie County, Texas, which is within the Shreveport-Texarkana-Tyler Intrastate AQCR (40 CFR 81.94). EPA has designated that county as being in attainment for all criteria pollutants (USEPA 2016a). EPA monitors levels of criteria pollutants at representative sites in each region throughout Texas. For reference purposes, Table 3-17 shows the monitored concentrations of criteria pollutants at the monitoring locations closest to RRAD.

Table 3-17. Air Quality Standards and Monitored Data near RRAD

Pollutant	Air Quality Standard		Monitored Concentrations		
	Level	Averaging Period	2013	2014	2015
CO					
1-hour (ppm)	35	Not to be exceeded more than once per year	1.7	1.2	1.6
8-hour (ppm)	9		1	0.8	1
NO2					
1-hour (ppb)	100	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	17	14	15
O_3					
8-hour (ppm)	0.070	3-year average of the fourth highest daily maximum	0.073	0.066	0.066
SO_2					
1-hour (ppb)	75	99th percentile, averaged over 3 years	15	17	8
3-hour (ppm)	0.5	Not to be exceeded more than once per year	No Data	No Data	No Data
$PM_{2.5}$					
24-hour (µg/m^3)	35	98th percentile, averaged over 3 years	28	19	19
Annual mean (µg/m^3)	12	Averaged over 3 years	10.4	9.6	9.4
PM_{10}					
24-hour (µg/m^3)	150	Not to be exceeded more than once per year over 3 years	63	55	53

Source: USEPA 2016b.
Notes: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter.

RRAD is considered a major facility for the purposes of air permitting and holds a major operating permit (no. 01646), which was renewed February 10, 2015. The permit requirements include annual periodic inventory of all significant stationary sources of air emissions for each of the

criteria pollutants of concern, as well as monitoring and recordkeeping. Primary stationary sources of air emissions include boilers and heaters, fuel storage tanks, paint booths, and manufacturing operations. Table 3-18 lists 2014 facility wide air emissions from all significant stationary sources.

Table 3-18. 2014 Annual Emissions for Significant Stationary Sources at RRAD

Pollutant	Emissions (tons/year)
CO	40.6
NO_x	69.1
VOCs	87.6
SO_2	66.2
$PM_{2.5}$	3.8
PM_{10}	22.5

Source: TCEQ 2015.

3.4.4 Noise

Existing sources of noise at RRAD include military and industrial activities, commercial and private aircraft overflights, and road traffic, as well as lawn maintenance equipment, construction noise, and bird and animal vocalizations. Background noise levels (L_{eq} and DNL) were estimated for the surrounding areas using the techniques specified in ANSI S12.9-1993 (R2013)/Part 3 (ANSI 2013). The closest NSA is a residential area 5,052 feet east of the proposed DGRC site at RRAD. The estimated background sound levels at the NSA are 49 dBA in the daytime and 47 dBA at night with an overall sound level of 52 dBA DNL (ANSI 2013).

Sources of noise at RRAD include the 25 millimeter cannon weapons test range two miles southeast of the proposed DGRC site and the combat vehicle test track a mile and a quarter northeast of the proposed DGRC site. Areas adjacent to these facilities have elevated levels of noise compared to background noise, and activity at these facilities would be clearly audible at, but completely compatible with, the proposed DGRC (USAPHC 2014).

Texas does not have a statewide noise regulation, but Bowie County and the City of Texarkana both maintain noise ordinances, which limit noise levels to 50 dBA in residential areas. Bowie County exempts construction noise between 7 a.m. and 10 p.m. Monday through Friday and 9 a.m. and 10 p.m. on weekends. The city noise ordinance exempts construction noise between 7 a.m. and 6 p.m. Monday through Saturday. Construction noise is prohibited on Sundays (Bowie County; Texarkana Code of Ordinances).

3.4.5 Geology and Soils

On RRAD, outcrops from the Midway and Wilcox Groups of the West Gulf Coastal Plain physiographic province are oriented east to west, with the Midway Group occurring in the north-central part of the installation and underlying the proposed DGRC relocation site, and the Wilcox Group occurring to the south. The Midway Group consists of shale and thin, discontinuous laminations of silt and fine silty sand. The clay shale of the Midway Group is relatively soft and moist (Tetra Tech 2011a). The topography of RRAD is relatively flat. The elevation on the proposed DGRC relocation site is approximately 360 feet AMSL, but rises to approximately 370 feet AMSL at the northern portion (USGS 2016c).

Soils. The soils on RRAD range from mostly well drained to moderately well drained (Tetra Tech 2011a). The soils at the DGRC relocation site are of the Annona type (NRCS 2016b). Well-drained Annona soils cover the entire forested area of the proposed DGRC relocation site. Soils are more than 80 inches deep and have no incidence of flooding or ponding. The Annona soil types are

rated moderate for the corrosion of concrete, high for the corrosion of steel, and high for soil erosion (Table 3-19).

Table 3-19. Soils of Proposed DGRC Location on RRAD

Soil Type Abbreviation	Soil Type	Occurrence	Corrosion of Concrete	Corrosion of Steel	Soil Erosion (K Factor, Whole Soil)
4	Annona loam, 1-3% slopes	On-site	Moderate	High	.49 (high)

Source: NRCS 2016c.

3.4.6 Water Resources

3.4.6.1 Surface Waters

A first-order intermittent stream that drains to the Caney Creek Reservoir crosses the western side of the proposed DGRC parcel from north to south (Tetra Tech 2011a; USGS 2016c) (Figure 3-3). Caney Creek is one of five creeks on the installation in the Sulphur River Basin (Tetra Tech 2011a).

3.4.6.2 Groundwater

Groundwater is not withdrawn or used at the installation as a potable water source (Tetra Tech 2011a). The northeast portion of the installation where the proposed parcel is located overlies the subsurface of the Nacatoch Aquifer, a narrow-banded, minor aquifer extending across northeast Texas. The aquifer is composed of sequences of sand separated by impermeable layers of mudstone or clay, and includes a cover of alluvium that reaches up to 80 feet thick along major drainages. Groundwater generally flows to the south in this northern part of the aquifer.

3.4.6.3 Wetlands and Floodplains

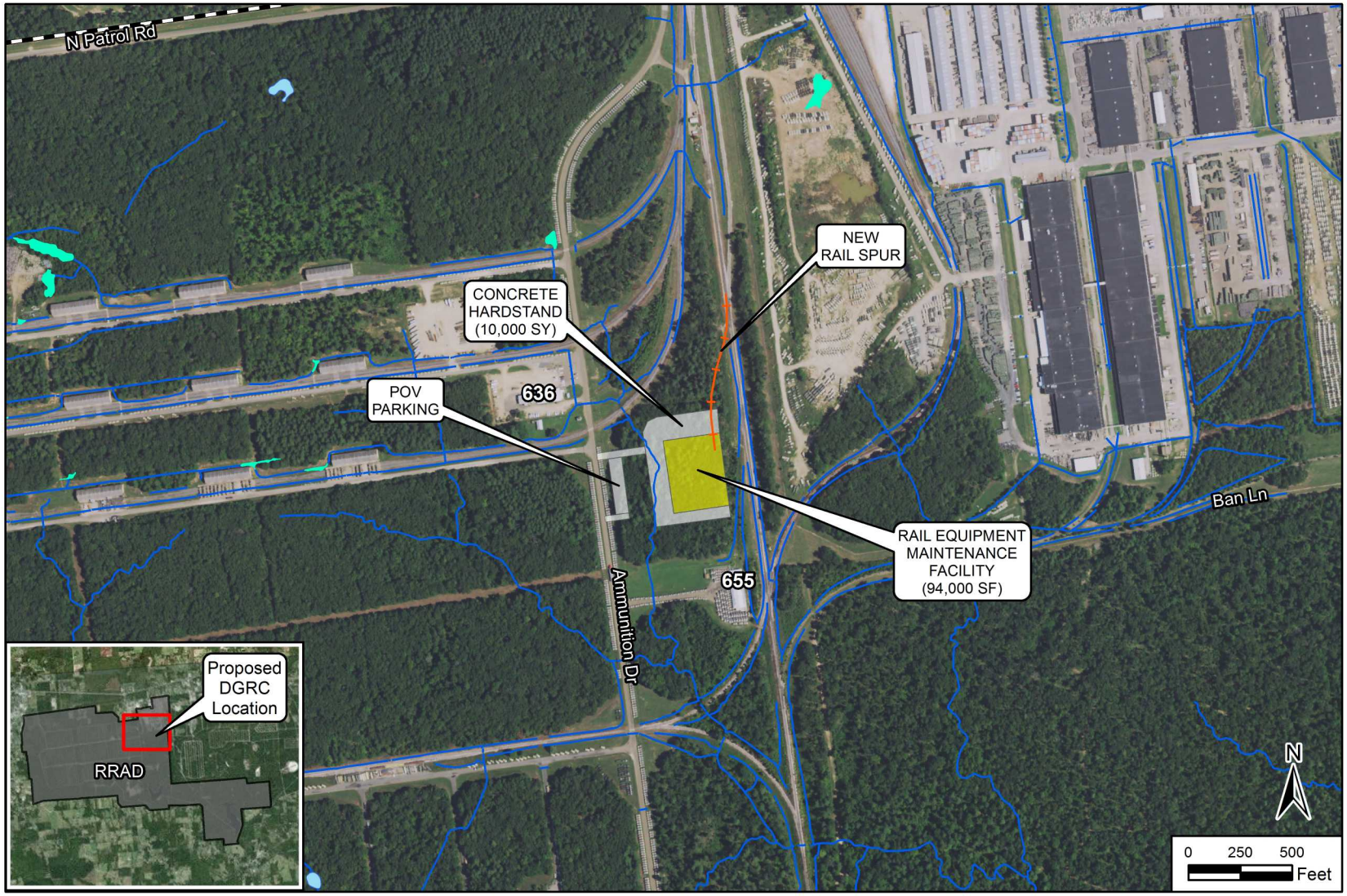
Jurisdictional wetlands on RRAD are predominantly on floodplains along rivers and streams, along the margins of lakes and ponds, and in other low-lying areas. A wetland inventory was conducted on RRAD in 1998 using photo-interpretation followed by field verification. No wetlands larger than 1 acre are located on the proposed DGRC parcel. However, the approximately 1,452 acres of wetlands and deep water habitats on RRAD have not been determined to be jurisdictional; therefore, project-specific field delineations, consistent with current U.S. Army Corps of Engineers (USACE) protocols for determining the presence of jurisdictional wetlands, must be conducted before implementing activities that could potentially affect wetlands.

The parcel is not within a 100- or 500-year floodplain. The entire parcel is composed of Annona loam soils, which typically have up to 12 inches of surface loam, a depth to water table of 80 inches, and no frequency of flooding (NRCS 2016b).

3.4.7 Biological Resources

3.4.7.1 Vegetation

Forest covers approximately 10,884 acres of RRAD and consists primarily of three forest communities: pine plantations, mixed pine-hardwood, and bottomland hardwood. Coverage consists of approximately 3,037 acres of bottomland hardwood, 1,052 acres of mixed hardwood/pine (hardwood-dominated), 2,533 acres of natural pine forest, 2,894 acres of mixed pine/hardwood (pine-dominated), and 1,368 acres of pine plantations. The proposed 5.0-acre DGRC relocation site consists of mixed hardwood/pine forest (Tetra Tech 2011a; HDR 2015).



LEGEND

- Installation Boundary
- Intermittent Creek
- Surface Water
- Wetland

RRAD Constraints

Red River, Texas

Figure 3-3

Source: ESRI 2014; RRAD GIS 2016. Note: Locations are approximate.

3.4.7.2 Wildlife

Common wildlife at RRAD include turkeys, coyote, raccoon, deer, bobcat, feral hogs, bats, rabbits, beaver, fox squirrel, gray squirrel, armadillo (*Dasypus novemcinctus*), beaver, eastern mole (*Scalopus aquaticus*), snakes, turtles, lizards, frogs, and toads (Tetra Tech 2011a).

3.4.7.3 Protected Species

There are five ESA-listed animal species that are known or anticipated to occur in Bowie County, Texas. These species include the interior least tern (*Sterna antillarum athalassos*), piping plover (*Charadrius melodus*), American burying beetle, black bear (*Ursus americanus*) and red wolf (*Canis rufus*) (TPWD 2016). None of these species have been identified on the installation, and subsequently, the installation has not developed an endangered species management plan. No federally listed species, no candidate species, and no species proposed for listing were observed during 2011–2012 planning level surveys for mammals, birds, bats, and fish (Tetra Tech 2011b; RRAD 2013a, 2013b, 2013c). No federally-listed plant species are known to occur in Bowie County, Texas, or at RRAD (TPWD 2016).

According to the Texas Parks and Wildlife Department (TPWD), 17 additional species are classified as threatened or endangered by the state and are known to occur in Bowie County. Three of the 17 state listed species—the bald eagle, alligator snapping turtle (*Macroclemys temminckii*), and creek chubsucker (*Erimyzon oblongus*)—have been observed at RRAD.

3.4.7.4 Migratory Birds

RRAD is primarily forested with two reservoirs that are able to provide stopovers for migratory birds and provide shelter in the forests for MBTA protected birds.

Bald eagles have been observed by staff on the installation and are protected under the MBTA and the Bald and Golden Eagle Protection Act.

3.4.8 Cultural Resources

3.4.8.1 Archaeological Sites Actions

Between 1980 and 2012, eleven archaeological surveys have been conducted on RRAD. The eleven surveys covered approximately 11,121 acres and documented 149 archaeological sites. Of these, 116 sites have been determined not eligible for listing on the NRHP. RRAD and Texas SHPO agreed that the remaining 33 sites should be protected from further disturbance until further testing to determine NRHP eligibility can be conducted. Approximately 161 unsurveyed acres are planned for future archaeological survey, most likely on a project-by-project basis (New South Associates 2013).

The 2005 BRAC resulted in the transfer of 3,839 acres of land from RRAD and Federal ownership in 2011. The land transfer eliminated 31 archaeological sites, including one cemetery, from the RRAD inventory. A 2010 Programmatic Agreement between RRAD and the Texas SHPO required a formal NRHP evaluation of the 31 archaeological sites. As a result of the PA, in 2011 the 31 archaeological sites were determined to be not eligible for listing on the NRHP (New South Associates 2013).

Currently, no archaeological sites on RRAD are listed on the NRHP or have been formally determined eligible for listing on the NRHP. The Texas SHPO concurred with this finding a letter dated March 23, 2012. RRAD has no formal agreements with the Texas SHPO concerning the management of archaeological sites (New South Associates 2013).

The proposed location at RRAD has been previously surveyed for archaeological resources; no known archaeological resources that are eligible for or listed on the NRHP are located in the proposed project area.

3.4.8.2 Architectural Inventory Actions

Created in 1941, RRAD was originally the site of an ordnance depot for the manufacture, storage, and distribution of military munitions. A large number of the facility's buildings were constructed from 1942-1943 during World War II. The facility continued to evolve with construction of new facilities during the Cold War. Today, RRAD is under the jurisdiction of TACOM. Since its founding, RRAD has undergone numerous boundary changes, which continue through the removal of surplus land and buildings. In 1995, 765 acres and 106 buildings were deaccessioned as part of BRAC 1990 (New South Associates 2013).

BRAC 2005 resulted in the transfer of 3,839 acres of land from RRAD and federal ownership in 2011. The land transfer eliminated 180 ammunition igloo storage structures from the RRAD inventory. These 180 igloos, along with all ammunition storage facilities constructed between 1939 and 1974 across the DoD installations, were determined to be NRHP-eligible in 2006 through the ACHP Program Comment for World War II and Cold War Era (1939-1974) Ammunition Storage Facilities. Under these program comments, DoD, in coordination with the ACHP, mitigated the NRHP-eligible igloos and other ammunition storage facilities as part of a nationwide mitigation agreement (New South Associates 2013).

Between 1984 and 2012, five architectural inventories were completed that documented facilities related to World War II and the Cold War. The initial 1984 report resulted in HABS documentation. The five architectural surveys documented 1,262 buildings, structures, and engineering works (New South Associates 2013).

Currently, no architectural resources at RRAD are listed on the NRHP or have been determined eligible for listing on the NRHP. The Texas SHPO concurred that 1,231 buildings included in the 2006 report were not NRHP eligible in a letter dated August 21, 2014. The Texas SHPO had previously concurred that 31 buildings surveyed in 2012 were not NRHP-eligible in letters dated February 23, 2012, and April 24, 2012. RRAD has no formal agreements with the Texas SHPO concerning the management of its architectural inventory (New South Associates 2013; Wolfe to Kuykendall, August 21, 2014). The proposed location of the DGRC at RRAD does not have any buildings or structures.

3.4.8.3 Traditional Cultural Properties and Sacred Sites Actions

The RRAD consulted with five federally-recognized American Indian tribes during the development of the 2010 Programmatic Agreement regarding the deaccessioning of 31 archaeological sites. Tribes invited to be consulting parties included the Caddo Nation, the Comanche Indian Tribe of Oklahoma, the Kiowa Indian Tribe of Oklahoma, the Tonkawa Tribe of Indians of Oklahoma, and the Wichita Tribe. Of these, the Caddo Nation and Kiowa Indian Tribe of Oklahoma agreed to serve as consulting parties.

To date, no tribes have presented resources that they consider to be TCPs within the boundaries of RRAD (New South Associates 2013).

3.4.8.4 Native American Graves Protection and Repatriation Act Actions

A 1995 USACE study of the facility's archaeological collections and tribal consultation has not resulted in the identification of prehistoric human remains or burial sites on RRAD.

3.4.8.5 Cemetery Actions

Four cemeteries have been documented at RRAD. These are Collum Cemetery, McAdams Cemetery, Elliot Cemetery, and Till Cemetery. None of the cemeteries have been determined to be eligible for listing on the NRHP. BRAC 2005 resulted in the transfer of 3,839 acres of land from RRAD and federal ownership in 2011. The land transfer eliminated the Hays Cemetery from the RRAD inventory. A 2010 Programmatic Agreement between RRAD and the Texas SHPO required a formal NRHP evaluation of the Hays Cemetery. As a result of the Programmatic Agreement, in 2011 the Hays Cemetery was determined not eligible for NRHP listing (New South Associates 2013).

No historic structures, cemeteries, known Native American TCPs, or NRHP-listed properties are within the RRAD project area.

3.4.9 Socioeconomics

The socioeconomic conditions evaluated for this study include the economic and sociological environment, environmental justice, and protection of children for the ROI. The defined ROI for this project is Bowie County, Texas. The county is 885 square miles in northeast Texas, bordering Arkansas and Oklahoma, and the state of Louisiana is within an hour's drive. The area is commonly known as the Four States Area.

The baseline year for socioeconomic data is 2015, the most recent year for which most of the ROI socioeconomic indicators (e.g., population, employment) are reasonably available. If 2015 data were not available, the most recent data available are presented. Data for Texas and the United States are provided for comparative purposes.

3.4.9.1 Economic Environment

Employment and industry. ROI civilian labor force and unemployment data are shown in Table 3-20. The region's labor force decreased 9 percent between 2010 and 2015. Texas' labor force increased by 7 percent, and the nation's by 2 percent, during the same time period. Employment in the ROI manufacturing, transportation, and warehousing industry sectors declined over 2010–2014 (Chmura 2014).

Table 3-20. Labor Force and Unemployment

Jurisdiction	2010 Civilian Labor Force	2015 Civilian Labor Force	Change in Labor Force 2010–2015	2010 Unemployment Rate	2015 Unemployment Rate
ROI	42,211	38,589	-9%	8.4%	4.8%
Texas	12,241,970	13,078,304	7%	8.1%	4.5%
United States	153,889,000	157,130,000	2%	9.6%	5.3%

Source: BLS 2016.

The national, state, and ROI unemployment rates all decreased from 2010 to 2015. The ROI 2015 annual unemployment rate was 4.8 percent, higher than the state unemployment rate of 4.5 percent but lower than the United States' unemployment rate of 5.3 percent.

The primary sources of ROI employment were the government and government enterprises; health care and social assistance; retail trade; and accommodation and food services industry

sectors. Together these industry sectors accounted for almost 60 percent of regional employment. The government and government enterprises sector was the largest employer, accounting for 20 percent of ROI employment (BEA 2015). RRAD (part of the government industry sector) employs about 4,500 personnel (including Active Duty [the depot has only a few assigned military members], DoD civilian, tenants, and contractors) (DoD 2013).

Income. ROI income levels are lower than state and national averages (Table 3-21). The ROI per capita personal income (PCPI) of $22,977 was 87 percent of the state PCPI of $26,513 and 80 percent of the national PCPI of $28,555. The ROI median household income of $42,917 was 82 percent of the state median household income of $52,576 and 80 percent of the national median household income of $53,482.

Table 3-21. Income, 2010–2014 5-year Estimates

Jurisdiction	PCPI	Median Household Income
ROI	$22,977	$42,917
Texas	$26,513	$52,576
United States	$28,555	$53,482

Source: U.S. Census Bureau 2015.
Note: Income reported in 2014 dollars.

3.4.9.2 Sociological Environment

Population. The ROI's population was about 93,400 in 2015, an increase of 1 percent (or about 825 people) since 2010 (Table 3-22). During that same time period, Texas's population grew by 9 percent and the nation's population increased by 4 percent.

Table 3-22. Population

Jurisdiction	2010 Population	2015 Population	Change in Population 2010–2015
ROI	92,565	93,389	1%
Texas	25,146,105	27,469,214	9%
United States	308,758,105	321,418,820	4%

Source: U.S. Census Bureau 2016a.

Housing. Housing data are presented in Table 3-23. ROI housing costs (median monthly mortgage and gross rent) are lower than state and national levels. The ROI homeowner vacancy rate is very similar to the rates for the state and nation. The ROI rental vacancy rate is lower than the state vacancy rate but higher than the national rate. The ROI has about 5,000 vacant housing units (U.S. Census Bureau 2015). There is no base housing on RRAD (DoD 2013).

Law enforcement, fire protection, medical services. The RRAD DES provides depot law enforcement, fire and emergency services, force protection, antiterrorism, and physical security (RRAD 2011c). ROI law enforcement is provided by the Bowie County Sheriff's Office, along with municipal police departments (e.g., Hooks, New Boston, and Texarkana) and state police law enforcement officers. The nearest off-post fire station is the Hooks Fire Department in the Town of Hooks, just a few blocks north of the installation.

Table 3-23. Housing Data, 2010-2014 5-year Estimates

Jurisdiction	Number of Housing Units	Homeowner Vacancy Rate[a]	Rental Vacancy Rate[b]	Median Monthly Mortgage	Median Monthly Gross Rent
ROI	38,855	1.9%	7.3%	$1,122	$713
Texas	10,187,189	1.8%	8.5%	$1,433	$870
United States	132,741,033	2.1%	6.9%	$1,522	$920

Source: U.S. Census Bureau 2015.
Notes:
a. The homeowner vacancy rate is the proportion of the homeowner housing inventory, which is vacant for sale.
b. The rental vacancy rate is the proportion of the rental inventory, which is vacant for rent.

RRAD does not have a hospital on the installation. The U.S. Army Occupational Health Clinic on the depot provides treatment for Active Duty Military and for occupational injuries of civilian employees. The nearest military hospital is at Barksdale AFB in Bossier City, Louisiana (about 90 miles south of RRAD) (DoD 2013). The closest private sector hospitals (Christus St. Michael and Wadley Regional Medical Center) are about 20 miles east of the depot in the City of Texarkana.

Schools. Two towns located within 5 miles of RRAD—Hooks and New Boston, Texas—have their own independent school districts. Texarkana has four school districts: Texarkana, Texas; Texarkana, Arkansas; Liberty-Eylau, Texas; and Pleasant Grove, Texas. Combined, these school districts have 41 public schools with a student enrollment of more than 18,700 students. Bowie County also has five private schools with an enrollment of about 360 students (NCES 2015). There are no primary or secondary schools on RRAD (DoD 2013).

3.4.9.3 Environmental Justice

In 2015, the ROI population was comprised of 34 percent minority populations (Table 3-24). The ROI had a lower percentage of minority populations than Texas and the United States as a whole, with populations of 56 percent and 37 percent minorities, respectively (U.S. Census Bureau 2015).

About 17 percent of ROI residents were classified as living in poverty, very similar to the state and national poverty rates of 18 percent and 16 percent, respectively (U.S. Census Bureau 2015).

3.4.9.4 Protection of Children

The proposed DGRC on RRAD would be located within the depot's secure boundary. There are no homes or facilities on-base where children are typically present adjacent to or near the proposed DGRC facilities.

Table 3-24. Minority Population and Persons in Poverty, 2010–2014 5-year Estimates

Jurisdiction	Minority Population	Persons in Poverty
ROI	34%	17%
Texas	56%	18%
United States	37%	16%

Source: U.S. Census Bureau 2015.

3.4.10 Traffic and Transportation

Roadways and highway networks are the primary form of transportation in and around RRAD. Regional access is provided by I-30 from the east and west, and I-49 from the north and south. U.S. 82 and other state routes provide access to the immediate area, and James Carlow Drive provides direct access to the site on the installation. Intersections near the proposed sites include, Roosevelt Drive and 2nd Avenue West, and Roosevelt Drive and 2nd Street West (Wainwright Avenue). In general, nearby roadways and intersections both on- and off-base operate free of congestion during nonpeak traffic hours. The main gate from U.S. 82 would be the gate predominantly used during construction and operation of the DGRC.

Commercial rail service available to the northern half of RRAD is provided by Texas Northeastern Railroad and Cotton Belt Route Railroad (a Union Pacific subsidiary). Texas Northeastern Railroad leases Union Pacific rail spurs to provide access to RRAD, with service between Texarkana and Annona, Texas (USACE 2009).

The closest international airport is Dallas/Fort Worth International Airport, the third busiest airport in the world, which is 181 miles away and has nearly 900 daily flights. Other nearby airports include Hope Municipal, Hal-Miller Municipal, and Howard County Airport (AirNav 2016).

3.4.11 Utilities and Solid Waste

3.4.11.1 Potable Water

The RRAD potable water supply system is owned, operated, and maintained by TexAmericas Center (TAC). TAC is the local redevelopment authority established after the 1995 BRAC realignment actions at RRAD and purchases RRAD's potable water from Texarkana Water Utilities. The potable water supply capacity for the installation is approximately 5.0 mgd. On average, about 1.0 mgd is used (Ramsauer 2016, personal communication). The system also includes a 500,000-gallon elevated potable water storage tank used to regulate pressure (HDR 2015).

3.4.11.2 Wastewater

In addition to RRAD's potable water supply system, TAC owns, operates, and maintains the installation's sanitary sewer system. Sewage is collected from RRAD for treatment at an off-installation facility located at the former Lone Star Army Ammunition Plant east of RRAD. The capacity of the sanitary sewer system servicing RRAD is approximately 1.5 mgd. On average, depot waste generation is approximately 0.4 mgd, leaving approximately 1.1 mgd of available capacity.

TAC also owns, operates, and maintains RRAD's industrial wastewater system, the capacity of which is approximately 0.8 mgd (RRAD 2012a). On average, about 0.25 mgd of wastewater is treated. Treated water from the sanitary and industrial facilities is discharged to Elliott Creek, which flows into Lake Wright Patman. Treated water from the STP and IWTP is discharged under TexAmerica permit no. WQ0004664000 (Ramsauer 2016, personal communication).

3.4.11.3 Electricity

Electrical power at RRAD is provided by Southwestern Electric Power Company via a 69-kV line. TAC also owns, operates, and maintains RRAD's high-voltage electrical distribution system. Aboveground power lines are the primary means of electrical distribution on the installation. The electrical capacity for RRAD is approximately 25 MW and the monthly peak average is 14.3 MW (Ramsauer 2016, personal communication).

3.4.11.4 Natural Gas

Natural gas at RRAD is provided by Enable Midstream and Sage Energy. The natural gas capacity for RRAD is approximately 3.01 million cubic feet per day, with average usage of about 0.97 million cubic feet per day. Natural gas is used to produce steam at the main boiler plant, for equipment, and for building heat and domestic hot water (Ramsauer 2016, personal communication).

3.4.11.5 Stormwater

RRAD's stormwater management system consists of an underground storm sewer and surficial conveyances, such as ditches and canals. Stormwater from RRAD discharges to various surface waters on and off the installation. The majority of the installation drains to the Big Creek, Rock Creek, and Caney Creek watersheds.

3.4.11.6 Solid Waste

RRAD nonhazardous refuse is collected and disposed of by a private contractor. Solid waste is collected on a regular basis and disposed of at the New Boston Landfill, which is operated by Waste Management. The landfill has an anticipated life of approximately 40 years (Ramsauer 2016, personal communication). Construction and demolition waste is managed by project contractors. Before construction can begin on any project, contractors must submit a recycling and waste prevention plan that outlines how such waste will be diverted from landfills.

3.4.12 Hazardous and Toxic Substances

Activities involving hazardous and toxic substances at RRAD are primarily regulated by EPA, OSHA, DOT, and TCEQ. Staff of RRAD's Directorate of Public Works, Environmental Division oversee compliance with applicable regulations.

Mission-supporting operations at RRAD involve the use, storage, and handling of hazardous substances and petroleum products and the generation, storage, transport, and disposal of hazardous and petroleum waste. RRAD is a large-quantity generator of hazardous waste operating under EPA identification no. TX3213820738. Hazardous waste is managed in accordance with the installation's hazardous material and waste management plan and the provisions of its hazardous waste permit no. 50178, issued by TCEQ on December 14, 2012. Examples of hazardous waste streams include fuels, oils, lubricants, antifreeze, degreasing chemicals, and batteries.

Currently, the proposed DGRC site at RRAD is undeveloped and no activities are occurring at the site involving hazardous substances or waste, or structures that could contain hazardous substances such as asbestos or lead-based paint. There are no known releases of hazardous substances (e.g., SWMUs or IRP sites) or MMRP sites on or adjacent to the proposed DGRC site (EEM 2008; Ramsauer 2016, personal communication).

RRAD is located in an area where indoor radon concentrations are unlikely to exceed the EPA's recommended action level (USEPA 2016c).

3.5 RELOCATE THE DGRC TO TEAD (ALTERNATIVE D)

3.5.1 Land Use

TEAD serves as an ammunition storage, maintenance, and demilitarization facility and requires large isolated tracts of land to carry out this mission. TEAD encompasses 23,610 acres, of which more than 98 percent is categorized as minimal use areas and is characterized by ammunition storage igloos and other ammunition-related land uses. The remaining land (less than 2 percent),

including the 280-acre cantonment area, is categorized as administration/community support areas.

A third land use category, high-intensity use areas, was applied to the TEAD Industrial Area, a former industrial/vehicle maintenance area that includes more than 50 buildings within a rectangular-shaped parcel approximately 1 mile long and one-half mile wide. Most of the area was transferred in the 1995 BRAC action. The area was operated under the name of Utah Industrial Depot for some time and is now the Peterson Industrial Depot and Ninigret Depot and operates as a commercial/industrial business complex.

The City of Tooele is approximately one-half mile east of TEAD and the commercial/industrial business complex. Much of the land surrounding TEAD is open space used for livestock grazing.

The proposed relocation of the DGRC to TEAD would use building 1225, which is located in the ammunition area; buildings 501, 507, 541, and 594, which are on on-base land categorized as administration/community support areas; and building 687 at the Peterson Industrial Depot (TEAD holds a 99-year lease on the building). Those buildings are currently vacant, used for storage, or used for operations similar to those of the DGRC, including heavy equipment repair, painting, shipping, and receiving. The existing classification yard is in the Ninigret Depot, although TEAD retains ownership of a portion of it.

3.5.2 Aesthetics and Visual Resources

The relocation of the DGRC to TEAD would locate DGRC functions within industrial portions of the base and the adjacent commercial/industrial complex that was formerly part of TEAD. Those areas have an industrial aesthetic character with features such as warehouse-style buildings and existing railroad tracks. The action areas are bordered by other commercial and industrial facilities, a fuel farm, munitions storage areas, and undeveloped land characterized by sparse desert-like vegetation.

3.5.3 Air Quality

EPA Region 8 and the Utah Department of Environmental Quality (UDEQ) regulate air quality in Utah. TEAD is located in Tooele County, which is within the Wasatch Front Intrastate AQCR (40 CFR 81.52). EPA has designated that part of Tooele County as being in nonattainment for $PM_{2.5}$ and in attainment for all other criteria pollutants (USEPA 2016a). EPA monitors levels of criteria pollutants at representative sites in each region throughout Utah. For reference purposes, Table 3-25 shows the monitored concentrations of criteria pollutants at the monitoring locations closest to TEAD.

TEAD is considered a major facility for the purposes of air permitting and holds a major operating permit (no. 4904500006), which was renewed October 19, 2014 (USEPA 2016d). The permit requirements include annual periodic inventory of all significant stationary sources of air emissions for each of the criteria pollutants of concern; as well as monitoring and recordkeeping. Primary stationary sources of air emissions include boilers, generators, and explosive processing areas. Notably, TEAD is close to its permitted emissions limit for NO_x. Additional stationary sources would be subject to a case-by-case review to determine if a permit modification would be required. Table 3-26 lists 2014 facility wide air emissions from all significant stationary sources.

Table 3-25. Air Quality Standards and Monitored Data near TEAD

Pollutant	Air Quality Standard		Monitored Concentrations		
	Level	Averaging Period	2013	2014	2015
CO					
1-hour (ppm)	35	Not to be exceeded more than once per year	2.7	2.9	3.2
8-hour (ppm)	9		1.7	1.7	1.7
NO_2					
1-hour (ppb)	100	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	62	48	52
O_3					
8-hour (ppm)	0.070	3-year average of the fourth highest daily maximum	0.077	0.072	0.081
SO_2					
1-hour (ppb)	75	99th percentile, averaged over 3 years	26	6	5
3-hour (ppm)	0.5	Not to be exceeded more than once per year	No Data	No Data	No Data
$PM_{2.5}$					
24-hour (µg/m^3)	35	98th percentile, averaged over 3 years	59	48	34
Annual mean (µg/m^3)	12	Averaged over 3 years	12.1	8.2	8.6
PM_{10}					
24-hour (µg/m^3)	150	Not to be exceeded more than once per year over 3 years	105	87	92

Source: USEPA 2016b.
Notes: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter.
USEPA has yet to make the final designations under the most recent O3 NAAQS.

Table 3-26. 2014 Annual Emissions for Significant Stationary Sources at TEAD

Pollutant	Emissions (tons/year)
CO	0.5
NO_x	48.1
VOCs	2.3
SO_2	0.6
$PM_{2.5}$	3.1
PM_{10}	23.7

Source: Montgomery 2016.

3.5.4 Noise

Existing sources of noise at TEAD include military and industrial activities, commercial and private aircraft overflights, and road traffic, as well as lawn maintenance equipment, construction noise, and bird and animal vocalizations. Background noise levels (L_{eq} and DNL) were estimated for the surrounding areas using the techniques specified in ANSI S12.9-1993 (R2013)/Part 3 (ANSI 2013). The closest NSA is a residential area 5,800 feet east of the proposed DGRC site at TEAD. The estimated background sound levels at the NSA are 49 dBA in the daytime and 47 dBA at night with an overall sound level of 52 dBA DNL (ANSI 2013).

Operational noise sources at TEAD include a helicopter landing pad, railway operations, outdoor rifle range, trap and skeet range, vehicle test track, industrial operations, and ordnance demolition. On- and off-post noise-sensitive land uses are generally far enough from those sources to prevent unacceptable noise exposure. The facilities are primarily located on the western side of the installation and areas adjacent to those activities have elevated levels of noise compared to background noise. Activity at the facilities would be audible but distant at the proposed DGRC.

Utah does not have a statewide noise regulation, but the Tooele County maintains a noise ordinance, which limits noise levels to 65 dBA in residential areas. The county noise ordinance exempts construction noise between 7 a.m. and 10 p.m. (Tooele County Code § 82-162).

3.5.5 Geology and Soils

TEAD is near the Wasatch Front, marking the eastern edge of the Great Basin section of the Basin and Range physiographic province, which is characterized by closed drainage basins bounded by north-trending asymmetrical fault-block ranges (TEAD 2015). The topography of TEAD is mostly smooth and uniform, sloping to the southwest. The elevation on the proposed DGRC relocation site is approximately 4,800 feet AMSL in the vicinity of buildings 594 and 687, but rises to approximately 4,900 feet AMSL in the vicinity of buildings 507 and 541 (USGS 2016).

Soils. The soils on TEAD are well drained (TEAD 2015). The soils on the proposed DGRC relocation site are of the Abela and Doyce types (see Table 3-27) (NRCS 2016a, NRCS 2016b). Well-drained Abela gravelly loam covers most of the area. Soils on both parcels are more than 80 inches deep and have no incidence of flooding or ponding. The Abela and Doyce soil types are rated moderate for the corrosion of concrete, moderate for the corrosion of steel, and low for soil erosion.

Table 3-27. Soils of Proposed DGRC Location on TEAD

Soil Type Abbreviation	Soil Type	Occurrence	Corrosion of Concrete	Corrosion of Steel	Soil Erosion (K Factor, Whole Soil)
1	Abela gravelly loam, 2–8% slopes	Bldgs. 507, 541, 594; 1,700 linear feet of relaid track & switch from Hill AFB	Moderate	Moderate	.15 (low)
15	Doyce loam, 2–8% slopes	On-site	Moderate	Moderate	.24 (low)

Source: NRCS 2016a, NRCS 2016b.

3.5.6 Water Resources

3.5.6.1 Surface Waters

The TEAD North Area is in the Tooele Valley and the watershed of the Great Salt Lake. There are no major natural fresh surface waterbodies in Tooele Valley (TEAD 2015).

Natural stream channels flow out of nearby canyons to become washes, dividing and ultimately disappearing into the alluvial aprons on the basin margin (TEAD 2015). There is a wash southwest of the proposed location for most of the DGRC facilities in the TEAD North Area. When it flows, it carries water northeast beyond the boundary of the installation and eventually combines with flows from other washes before entering the Great Salt Lake. At its closest point, the wash is approximately 1,300 feet from any of the proposed facilities.

3.5.6.2 Groundwater

The aquifer in the Tooele Valley is unconsolidated (TEAD 2015). Groundwater recharge in the valley occurs at the margins of the basin. The depth to groundwater depends on location; the depth of potable groundwater wells in the TEAD North Area ranges from 428 feet to 780 feet, with static water levels reportedly ranging from about 200 feet to more than 700 feet.

3.5.6.3 Wetlands and Floodplains

There are no wetlands or areas of flood hazard in the TEAD North Area (TEAD 2015) (Figure 3-4).

3.5.7 Biological Resources

3.5.7.1 Vegetation

The proposed project area is developed land in TEAD's administrative and industrial areas. Sagebrush- (*Artemisia* spp.-) dominated communities are most common on TEAD, surrounded by desert shrublands (TEAD 2015).

3.5.7.2 Wildlife

Numerous species of wildlife are found on the installation, including pronghorn sheep (*Antilocapra americana*), elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), coyote, porcupine (*Hystricomorph hystricidae*), skunk, and small mammals such as shrews, bats, squirrels, rabbits, and other rodents, as well as common birds and raptors. Lizards, snakes, and skinks also occur on TEAD, but no amphibians have been observed at TEAD (TEAD 2015).

3.5.7.3 Protected Species

No federal- or state-listed threatened, endangered, or rare species are known to occur on the installation (TEAD 2015).

TEAD contains habitat for several species of concern, including the bald eagle, golden eagle (*Aquila chrysaetos*), ferruginous hawk (*Buteo regalis*), and peregrine falcon (*Falco peregrinus*). These species either are listed by USFWS as birds of conservation concern (BCCs) or as Utah species of concern, or are protected under the MBTA, the Bald and Golden Eagle Protection Act, or the Lacey Act (UDWR 2015; USFWS 2008, 2016).

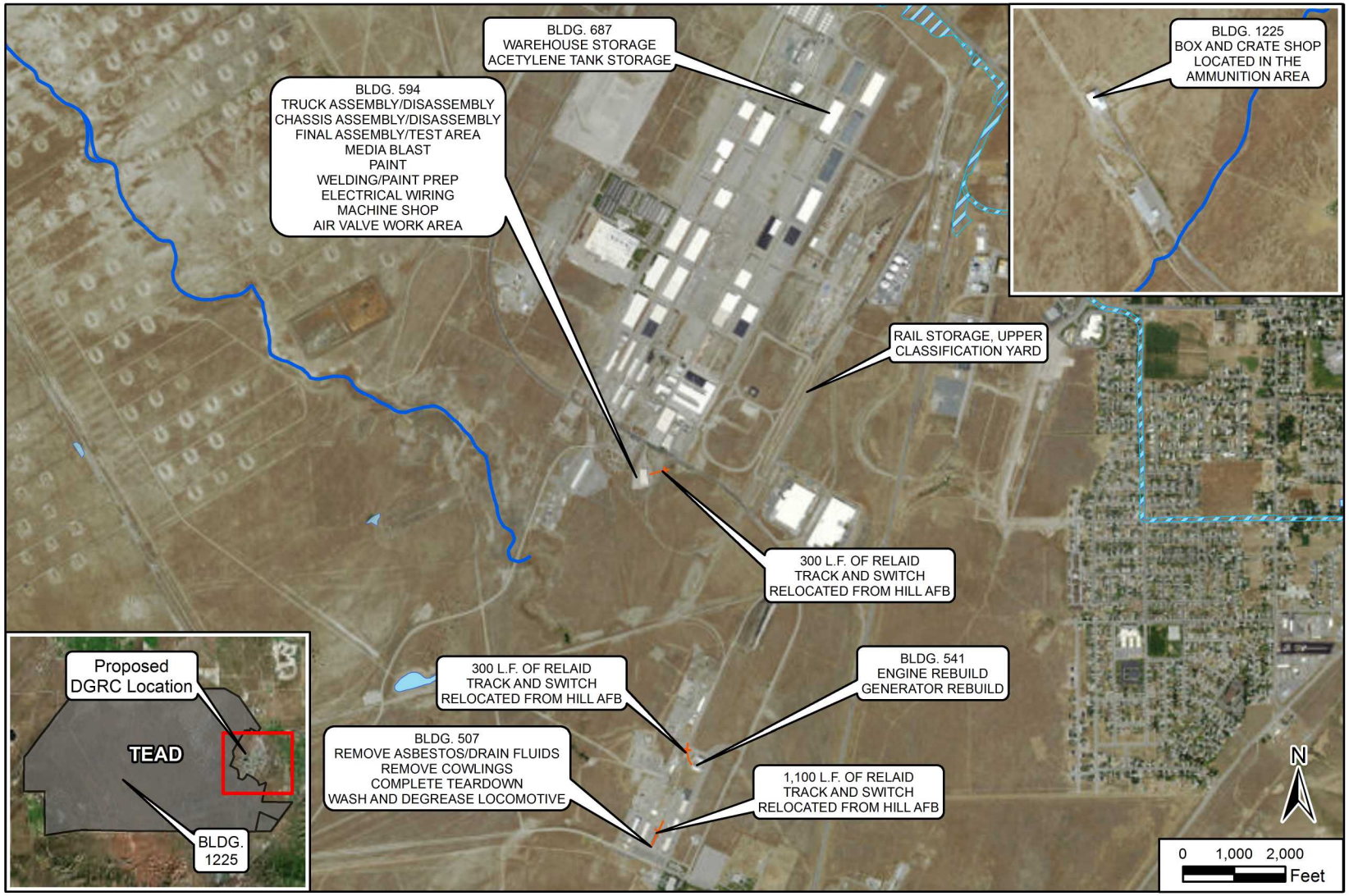
3.5.7.4 Migratory Birds

Golden Eagles, a protected species under the Bald and Golden Eagle Protection Act and a BCC, have been observed on TEAD, but no nests have been found. TEAD has scrub habitat suitable for the eagles. The eagle's primary habitat during the breeding season is cliffs; their secondary habitat used during the breeding season for nesting or foraging and for wintering is high desert scrub. Natural habitat for species protected under the MBTA does not occur in the proposed project area.

3.5.8 Cultural Resources

3.5.8.1 Archaeological Sites Actions

There have been at least 11 archaeological surveys conducted on 11,169 acres at TEAD, including at least seven since 1930 on 7,077 acres at TEAD North Area and four since 1980 on 4,092 acres at TEAD South Area–formerly Deseret Chemical Depot. The surveys identified 105 archaeological sites, including 80 at TEAD North Area and 25 at TEAD South Area. Of the 105 identified sites, 37 have been determined eligible or potentially eligible for listing on the NRHP.



LEGEND

- Stream
- Surface Water
- 100-Year Floodplain

TEAD Constraints

Tooele, Utah

Figure 3-4

Source: ESRI 2014; NHD 2016; FEMA 2016. Note: Locations are approximate.

The remaining sites have been determined ineligible for listing on the NRHP. Currently, no archaeological sites at TEAD are listed on the NRHP and TEAD has no formal agreements with the Utah SHPO concerning management of archaeological sites (New South Associates 2016).

The proposed DGRC location at TEAD North Area has been previously surveyed for archaeological resources, and no known archaeological sites were located within the project area.

3.5.8.2 Architectural Inventory Actions

TEAD was initially constructed during World War II as a munitions ordnance depot at TEAD North Area and toxic chemical munitions storage and distribution at TEAD South Area. With a combined area of approximately 43,000 acres, the TEAD facilities evolved through the Cold War. Between 1984 and 2004, seven architectural inventories were completed at TEAD, including five at TEAD North Area and two at TEAD South Area. In 1984, NPS completed surveys for both TEAD North and South areas; that inventory included HABS documentation for 41 buildings and structures. A reconnaissance level survey for resources constructed during the Cold War era (1959–1970) at both TEAD North and South areas was completed in 2015; the survey documented 29 buildings and structures (New South Associates 2016).

Between 1996 and 2015, five inventories of TEAD North and South areas documented over 1,100 buildings constructed between World War II and the Cold War. A 2002 inventory documented 1,169 resources constructed from 1941 to 2000 at TEAD North Area and determined that none of them were NRHP-eligible (New South Associates 2016). None of the buildings or structures, including Buildings 507, 541, 594, 687, and 1225 within the Area of Potential Effect for the subject project, was recommended eligible for the NRHP. The report was submitted to the UTAH SHPO in June 2002; an Army memorandum on file at TEAD documented the SHPO received the report but did not provide comment on the report; therefore, TEAD found this to be a “presumption of concurrence,” based on 36 CFR Part 800.3(d) of Section 106 of the National Historic Preservation Act (NHPA).

The ACHP 2006 *Program Comment for World War II and Cold War Era (1939–1974) Ammunition Storage Facilities*, as applied to TEAD, satisfies the Army’s responsibilities at the installation for compliance under section 106 regarding the effects of management actions for all ammunition storage properties built between 1939 and 1974. The Army is no longer required to follow the case-by-case section 106 review process for those properties, which include over 1,100 ammunition igloo storage facilities located at TEAD. This includes 907 igloos at TEAD North Area and 208 igloos at TEAD South Area (New South Associates 2016).

A historic architectural survey of the subject buildings that are 50-years of age or older was conducted in 2002 by the U.S. Army Corps of Engineers and JRP Historical Consulting Services. The survey completed an inventory and evaluation of 1,169 World War II and Cold War-era buildings and structures at TEAD North built between 1942 and 2000. None of the buildings or structures, including Buildings 507, 541, 594, 687, and 1225, was recommended eligible for the NRHP.

Currently, no architectural resources at TEAD are listed in or eligible for listing on the NRHP (New South Associates 2016).

3.5.8.3 Traditional Cultural Properties and Sacred Sites Actions

Federally recognized tribes with possible affiliation to lands on which TEAD is located include Confederated Tribes of Goshute Reservation; Crow Tribe of Montana; Duckwater Shoshone Tribe of Duckwater Reservation; Ely Shoshone Tribe of Nevada; Hopi Tribe of Arizona; Navajo Nation, Arizona, New Mexico and Utah; Northwestern Band of Shoshone Nation; Paiute Indian Tribe of

Utah; Shoshone Tribe of Wind River Reservation, Wyoming; Shoshone-Bannock Tribes of the Fort Hall Reservation; Shoshone-Paiute Tribes of the Duck Valley Reservation, Nevada; Skull Valley Band of Goshute Indians of Utah; Te-Moak Tribe of Western Shoshone Indians of Nevada; Ute Indian Tribe of the Uintah and Ouray Reservation, Utah; Ute Mountain Tribe of the Ute Mountain Reservation, Colorado, New Mexico and Utah; and Zuni Tribe of the Zuni Reservation, New Mexico (New South Associates 2016).

One archaeological site at TEAD–the Rocky Ridge Petroglyphs site–has been identified as a potential TCP. Federally recognized tribes have not identified any other sites at TEAD as TCPs (New South Associates 2016).

3.5.8.4 Native American Graves Protection and Repatriation Act Actions

A 1996 USACE review of the facility's archaeological collections and tribal consultation did not result in the identification of prehistoric human remains or burial sites at TEAD.

3.5.8.5 Cemetery Actions

No historic structures, cemeteries, known Native American TCPs, or NRHP-listed properties are located within the TEAD project area.

3.5.9 Socioeconomics

The socioeconomic conditions evaluated for this study include the economic and sociological environment, environmental justice, and protection of children for the ROI. The ROI is a geographic area selected as a basis on which social and economic impacts of project alternatives are analyzed. The defined ROI for this project is Tooele County, Utah, and covers an area of 6,941 square miles in northwest Utah.

The baseline year for socioeconomic data is 2015, the most recent year for which most of the ROI socioeconomic indicators (e.g., population, employment) are reasonably available. If 2015 data were not available, the most recent data available are presented. Data for Utah and the United States are provided for comparative purposes.

3.5.9.1 Economic Environment

Employment and industry. ROI civilian labor force and unemployment data are shown in Table 3-28. The region's labor force increased 7 percent between 2010 and 2015. Utah's labor force increased 8 percent and the nation's labor force increased by 2 percent during the same time period. The national, state, and ROI unemployment rates all decreased from 2010 to 2015. The ROI 2015 annual unemployment rate was 4 percent, higher than the state unemployment rate of 3.5 percent, but lower than the national unemployment rate of 5.3 percent. The primary sources of ROI employment were the government and government enterprises, retail trade, manufacturing, administrative and support and waste management and remediation services, and health care and social assistance industry sectors. Together these industry sectors accounted for almost 55 percent of regional employment. The government and government enterprises sector was the largest employer, accounting for about 20 percent of ROI employment (BEA 2015). TEAD (part of the government industry sector) is the third largest employer in the ROI, with about 480 employees (1 Active Duty employee and the rest DoD civilians, with 48 percent of those being veterans). The depot's fiscal year 2015 operating budget was $63.8 million and payroll was $38.9 million (TEAD PAO 2015).

Table 3-28. Labor Force and Unemployment

Jurisdiction	2010 Civilian Labor Force	2015 Civilian Labor Force	Change in Labor Force, 2010–2015	2010 Unemployment Rate	2015 Unemployment Rate
ROI	27,454	29,416	7%	8.3%	4.0%
Utah	1,356,097	1,464,404	8%	7.8%	3.5%
United States	153,889,000	157,130,000	2%	9.6%	5.3%

Source: BLS 2016.

Income. ROI PCPI was lower than state and national averages, but ROI median household income was higher than state and nation levels (Table 3-29). The ROI PCPI of $22,423 was 92 percent of the state PCPI of $24,312 and 79 percent of the national PCPI of $28,555. The ROI median household income of $63,077 was 105 percent of the state median household income of $59,846 and 118 percent of the national median household income of $53,482.

Table 3-29. Income, 2010–2014 5-year Estimates

Jurisdiction	PCPI	Median Household Income
ROI	$22,423	$63,077
Utah	$24,312	$59,846
United States	$28,555	$53,482

Source: U.S. Census Bureau 2015.
Note: Income reported in 2014 dollars.

3.5.9.2 Sociological Environment

Population. The ROI's population was about 62,950 in 2015, an increase of about 8 percent (or about 4,730 people) since 2010 (Table 3-30). During the same time period, Utah's population also grew by 8 percent; the nation's population increased by 4 percent.

Table 3-30. Population

Jurisdiction	2010 Population	2015 Population	Change in Population 2010–2015
ROI	58,218	62,952	8%
Utah	2,763,888	2,995,919	8%
United States	308,758,105	321,418,820	4%

Source: U.S. Census Bureau 2016a.

Housing. Housing data are presented in Table 3-31. ROI housing costs (median monthly mortgage and gross rent) are lower than state and national levels. The ROI homeowner vacancy rate is very similar to the state and nation, but the ROI rental vacancy rate is much higher than the state and nation. The ROI has about 1,500 vacant housing units (U.S. Census Bureau 2015). TEAD has no on-post housing.

Table 3-31. Housing Data, 2010-2014 5-year Estimates

Jurisdiction	Number of Housing Units	Homeowner Vacancy Rate[a]	Rental Vacancy Rate[b]	Median Monthly Mortgage	Median Monthly Gross Rent
ROI	19,925	1.9%	10.9%	$1,356	$819
Utah	999,734	1.8%	5.7%	$1,454	$875
United States	132,741,033	2.1%	6.9%	$1,522	$920

Source: U.S. Census Bureau 2015.
Notes:
a. The homeowner vacancy rate is the proportion of the homeowner housing inventory, which is vacant for sale.
b. The rental vacancy rate is the proportion of the rental inventory, which is vacant for rent.

Law enforcement, fire protection, medical services. Security in the TEAD North and South areas is provided by DoD personnel in the TEAD Law Enforcement and Security Division. The division is responsible for all aspects of law enforcement and security at TEAD and acts as a liaison with federal, state, and local law enforcement agencies. TEAD operates under an MOA for mutual assistance in law enforcement and civil emergency assistance with the Grantsville City Police Department, Tooele City Police Department, Tooele County Sheriff's Office, Utah Highway Patrol, and Federal Bureau of Investigation (Salt Lake City office). TEAD also has an MOA with Tooele County, Dugway Proving Ground, and the State of Utah Division of Emergency Management for establishment and operation of the Tooele Community Joint Information Center in the event of an emergency or disaster.

TEAD has an on-post fire department with one station each in the TEAD North and TEAD South cantonment areas to respond to fires on depot lands as well as on neighboring lands. TEAD has fire-fighting mutual aid agreements with Tooele City, Grantsville City, Stockton City, North Tooele County, and Dugway Proving Ground.

TEAD does not have a hospital on the installation, but a health clinic is available to employees. The City of Tooele has two medical centers and urgent care facilities.

Schools. The Tooele County School District has 28 public schools with a student enrollment of about 14,300 students. There also is one private school with a student enrollment of about 60 students (NCES 2015). There are no primary or secondary schools located on TEAD.

3.5.9.3 Environmental Justice

In 2015, the ROI population was comprised of 16 percent minority populations (Table 3-32). The ROI had a lower percentage of minority populations than Utah and the United States as a whole, with populations of 20 percent and 37 percent minorities, respectively (U.S. Census Bureau 2015).

Table 3-32. Minority Population and Persons in Poverty, 2010–2014 5-year Estimates

Jurisdiction	Minority Population	Persons in Poverty
ROI	16%	9%
Utah	20%	13%
United States	37%	16%

Source: U.S. Census Bureau 2015.

About 9 percent of ROI residents were classified as living in poverty, lower than Utah's poverty rate of 13 percent and the national poverty rate of 16 percent (U.S. Census Bureau 2015).

3.5.9.4 Protection of Children

The proposed DGRC on TEAD would be located within the depot's secure boundary. There are no homes or facilities on-base where children are typically present adjacent to or near the proposed DGRC facilities.

3.5.10 Traffic and Transportation

Roadways and highway networks are the primary form of transportation in and around TEAD. Regional access is provided by I-80 from the east and west, and I-15 from the north and south. State routes including State Route (SR) 36 and SR 112 provide access to the immediate area, and K-Line Road provides direct access to the site on the installation. Intersections near the proposed sites include Oak Road and Poplar Street, and Teak Road and Commander Boulevard. In general, nearby roadways and intersections both on- and off-base operate free of congestion during nonpeak traffic hours. The installation has two gates; the main gate from SR 36 would be the gate predominantly used during construction and operation of the DGRC (USEPA 2008).

Rail access to TEAD is provided from Union Pacific spurs that approach the installation primarily from the north (UtahRails.net 2016). Spurs on the installation are owned and maintained by TEAD. The installation currently uses the rail for maintenance, supplies, and distribution.

The closest airport is Bolinder Field-Tooele Valley, which is 10 miles away and has 193 operations per day. The closest international airport is Salt Lake International, which is 20 miles away and has 848 operations per day. Other nearby airports include South Valley Regional, Hill AFB, and Michael Army Airfield (AirNav 2016).

3.5.11 Utilities and Solid Waste

3.5.11.1 Potable Water

TEAD operates and maintains its own water supply and distribution system. The water supply system is located on the eastern side of Tooele Valley, where the natural slope of the valley maintains gravity-based pressure in the system. Water is supplied by three domestic supply groundwater wells that draw from a confined aquifer (TEAD 2015). The maximum capacity is approximately 1.4 mgd, and the demand in 2015 was approximately 0.33 mgd. TEAD also has approximately 2.2 million gallons of storage capacity (Montgomery 2016, personal communication).

3.5.11.2 Wastewater

TEAD's wastewater is treated off-post at the Tooele City Water Reclamation Facility (WRF). The WRF has a design capacity of 3.2 mgd and treats approximately 1.8 mgd, leaving about 1.4 mgd of available capacity (Bolser 2016, personal communication). Portions of the installation not connected to the city sewer system are served by septic tanks (TEAD 2015). An on-post carwash is the only source of industrial wastewater. Wastewater from the carwash passes through an oil-water separator and then is discharged to the city sewer system (Montgomery 2016, personal communication).

3.5.11.3 Electricity

Electrical power at TEAD is provided by Rocky Mountain Power. The main electrical service line feeding TEAD provides 45 MVA at 46 kV. Electricity is distributed over government-owned power lines and transformers. TEAD has available capacity at all substations to accommodate future growth (Montgomery 2016, personal communication).

3.5.11.4 Natural Gas

Natural gas at TEAD is provided by Queststar Gas Company. There are three supply services providing gas to TEAD; however, available capacity is not known. Natural gas is primarily used for facility heating and energy generation supply (Montgomery 2016, personal communication).

3.5.11.5 Stormwater

Because the administrative/community support area consists primarily of impervious surfaces, stormwater runs off quickly into storm sewer collectors and is routed north to an area where it is discharged and allowed to percolate into the soil. No type of stormwater infrastructure is present in the minimal use areas (TEAD 2015).

3.5.11.6 Solid Waste

TEAD nonhazardous refuse is collected and disposed of by a private contractor and garrison facilities. Approximately 4,380 tons of solid waste per year is disposed of at the Tooele County Landfill (Montgomery 2016, personal communication).

3.5.12 Hazardous and Toxic Substances

Activities involving hazardous and toxic substances at TEAD are primarily regulated by EPA, OSHA, DOT, and UDEQ. TEAD's environmental staff oversee compliance with applicable regulations.

Mission-supporting operations at TEAD involve the use, storage, and handling of hazardous substances and petroleum products and the generation, storage, transport, and disposal of hazardous and petroleum waste. Examples of hazardous substances and petroleum products used at TEAD include fuels, oils, lubricants, solvents, and paint.

TEAD is a large-quantity generator of hazardous waste operating under EPA identification no. UT 3213820894. Hazardous waste is managed in accordance with the installation's hazardous waste management plan and hazardous waste treatment and storage permit issued by the Utah Solid and Hazardous Waste Control Board. Examples of hazardous waste streams include paint, oil, and solvents.

TEAD is a CERCLA NPL site and has entered into a federal facilities agreement with EPA Region 8. Contaminated sites at TEAD consist of underground storage tanks, closed solid waste landfills, 59 SWMUs, and active remediation and treatment sites. Of the 59 SWMUs, 33 are being addressed under the Army's IRP for active facilities and 26 are under the BRAC environmental program. There are eight munitions response sites at TEAD, which are being addressed under the Army's MMRP and the CERCLA process (TEAD 2012).

Several SWMUs and IRP sites, and one MMRP site are located near the buildings for the proposed relocation of the DGRC to TEAD. Only one known contaminated site—TEAD-101—overlaps the proposed DGRC locations.

A large trichloroethylene (TCE) groundwater plume exists at TEAD-101, the source of which was a former industrial/vehicle maintenance area located on the 1995 BRAC parcel that is now the Peterson Industrial and Ninigret depots. Multiple source areas within the former industrial/vehicle maintenance area contributed to soil and groundwater contamination. Based on past investigations, TCE, tetrachloroethylene (also known as PCE), and carbon tetrachloride are present at the greatest concentrations in soil and groundwater, with TCE being the predominant contaminant. Most of building 687 is within the plume's 5-micrograms-per-liter contour line, which runs approximately 400 feet north of building 594 and 850 feet west of the classification yard (Parsons 2014).

Institutional controls have been implemented at TEAD to prevent contact with contaminated soil and groundwater. On TEAD, the environmental staff manages institutional controls. Off post, institutional controls that prohibit access to or withdrawal of groundwater are in place in the groundwater management area affected by TEAD-101 and are managed by the Utah Department of Natural Resources. In designated areas both on- and off-post, disturbance of the subsurface or groundwater is prohibited without prior written approval of the Army. The extraction of groundwater for potable use is prohibited throughout the groundwater management area associated with TEAD-101, which includes building 687 and the classification yard (Parsons 2014).

Buildings 507, 594, and 687 are old enough that they could contain asbestos and lead-based paint. Asbestos abatement has been conducted at buildings 507 and 594, and building 687 has asbestos-containing transite siding (Howard 2016). TEAD is located in an area where indoor radon concentrations are unlikely to exceed EPA's recommended action level (USEPA 2016c).

SECTION 4.0 ENVIRONMENTAL CONSEQUENCES

4.1 RELOCATE THE DGRC TO ANAD (ALTERNATIVE A)

4.1.1 Land Use

No adverse effects on land use would be expected from relocating the DGRC to ANAD. The action would use existing buildings and add a limited amount of new track. The buildings that would support the DGRC functions are currently underutilized, used for storage, or used to support functions similar to DGRC processes. Functions in some buildings or areas being proposed for the DGRC would be moved to other comparable locations at ANAD. Other buildings or areas already provide machining to multiple product lines and would continue to do so if the DGRC is relocated to ANAD. If relocated, DGRC would be situated within the industrialized NIC and would be consistent with designated land uses.

4.1.2 Aesthetics and Visual Resources

No adverse effects on aesthetics and visual resources would be expected from relocating the DGRC to ANAD. Construction and building renovations would occur in previously disturbed areas and would serve ongoing industrial functions of the NIC. Further, construction and renovation would not be visible to the general public because of the restricted nature of the installation and wooded buffers along installation boundaries.

4.1.3 Air Quality

Short- and long-term minor adverse effects on air quality would be expected. Short-term effects would be caused by air emissions generated during construction activities. Long-term increases in emissions would be caused by an increase in the number of stationary sources at the proposed DGRC. Increases in emissions would be below the general conformity rule *de minimis* thresholds, would not exceed the greenhouse gas (GHG) threshold in the draft CEQ guidance, and would not contribute to a violation of any federal, state, or local air regulation.

ANAD is within a region that EPA has designated as being an attainment area for all criteria pollutants and the general conformity rule does not apply. There would be some amount of air emissions from construction activities, such as fugitive dust and construction equipment, and day labor commutes. These sources of emissions would be small, temporary, and end with the construction phase. Although ANAD is in attainment for the National Ambient Air Quality Standards (NAAQS), the *de minimis* thresholds have been carried forward to determine the level of effects under NEPA.

Table 4-1 lists operational emissions from the DGRC. Emissions would be below the *de minimis* threshold of 100 tons per year (tpy) of each pollutant; therefore, the level of effects would be minor. A record of non-applicability (RONA) and emission estimations are provided in Appendix B.

Table 4-1. Operational Emissions Compared to *de minimis* Thresholds

Activity/Source	CO	NO_x	VOC	SO_x	PM_{10}	$PM_{2.5}$	*de minimis* Threshold [tpy]	Exceeds *de minimis* Thresholds? [Yes/No]
DGRC Operations	<0.1	<0.1	2.4	<0.1	<0.1	<0.1	100	No

Source: USAF 2016.

Alternative A does not include any new major stationary sources of air emissions, but might include some small stationary sources of air emissions such as standby generators, boilers, and

paint booths. Any new stationary sources of air emissions could be subject to federal and state air permitting regulations, including New Source Review, Prevention of Significant Deterioration, National Emission Standards for Hazardous Air Pollutants, and New Source Performance Standards. New stationary sources would be reviewed on a case-by-case basis and added to the installation's air operating permit as necessary. Both a new source construction permit and a modification to the existing permit could be required.

ADEM regulations outline requirements and best management practices that a developer must comply with when constructing new facilities. All persons responsible for any operation, process, handling, transportation, or storage facility that could generate fugitive dust would take reasonable precautions to prevent that dust from becoming airborne. Reasonable precautions might include using water to control dust from building construction, road grading, or land clearing. In addition, construction would proceed in full compliance with current ADEM requirements, with compliant practices and/or products. These requirements include the following:

- Open burning (COA 335-3-3-.01)
- Fugitive dust and fugitive emissions (COA 335-3-4-.02)
- Surface coating (COA 335-3-6-.11)

This listing is not all-inclusive; DoD and any contractors involved in the proposed project would comply with all applicable air pollution control regulations.

Greenhouse Gases and Climate Change. There would be no appreciable ongoing sources of GHG emissions associated with alterative A. All operational activities combined would generate approximately 61.4 tons of CO_2 per year, which is below the CEQ threshold. By using new heating systems, complying with Leadership in Energy and Environmental Design (LEED) standards during construction, and centrally locating the facilities, DoD is continuing to implement measures to reach its GHG reduction goals. These effects would be minor.

4.1.4 Noise

Short- and long-term minor adverse effects would be expected. Short-term increases in noise would be caused by construction activities. Long-term increases in noise would be the result of minor changes in traffic patterns and the periodic testing of generators and engines. Those effects would not result in the violation of applicable any federal, state, or local noise regulation, or create appreciable areas of incompatible land use.

Table 4-2 presents typical sound levels (dBA at 50 feet) that EPA has estimated for the main phases of outdoor construction. Individual pieces of heavy equipment typically generate noise levels of 80–90 dBA at a distance of 50 feet. With multiple items of equipment operating concurrently, noise levels can be relatively high during daytime periods at locations within several hundred feet of active construction sites. The zone of relatively high construction noise typically extends to distances of 400–800 feet from the site of major equipment operations.

Table 4-2. Sound Levels Associated with Construction

Construction	Sound Level 50 Feet from Source (dBA)
Ground Clearing	84
Excavation, Grading	89
Foundations	78
Finishing	89

Source: USEPA 1971.

There are no NSAs within 800 feet of the proposed DGRC site. Because of the limited and temporary use of heavy equipment and the distance to the nearest NSA, noise effects would be

minor. Although construction-related noise would be minor, the following best management practices (BMPs) would be implemented to reduce the already limited noise effects:

- Construction activities would occur primarily during normal weekday business hours; and
- Heavy equipment mufflers would be properly maintained and in good working order.

Heavy equipment noise would dominate the soundscape for all on-site personnel. Equipment operators would wear adequate personal hearing protection to limit exposure and ensure compliance with federal health and safety regulations.

No long-term increases in the overall noise environment would be expected. There would be periodic outdoor testing of locomotives and generators, which would be primarily during the daytime and last 2 full days for approximately three locomotives per year. Locomotives also would be operated on a test track for about 20 hours three times per year. In addition, approximately three generators per year would be tested for about 50 hours. Sound levels would be comparable to those of heavy construction equipment outlined above. Because of the limited testing of locomotives and generators, and the distance to the nearest NSA, the effects would be minor.

4.1.5 Geology and Soils

Short-term minor adverse effects on soils would be expected from implementing the proposed action at ANAD. No adverse effects on geology and topography would be expected. Some site soils would be disturbed during grading and fill activities, and some soil erosion would be expected. Should construction activities disturb soil areas of 1 acre or more, coverage under the ADEM general NPDES permit no. ALR100000 for discharges associated with regulated construction activities would be required. Proposed construction would require erosion and sediment control in accordance with a construction BMP plan prepared for the project and certified by a qualified credentialed professional. The BMP plan would specify the state-approved BMPs for erosion control and sediment retention that would be used during construction, referencing the Alabama Soil and Water Conservation Committee's *The Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* (SWCC 2009). Soil erosion would be minimized through compliance with those requirements and implementation of the BMP plan. Should soil disturbing activities affect less than 1 acre, general permit coverage and preparation of a formal BMP plan would not be required. However, such sites are required to incorporate BMPs to the maximum extent practical (ANAD 2011). After site work is completed, an appropriate cover would be established to minimize postconstruction erosion and to eliminate any long-term effects on soils.

4.1.6 Water Resources

No adverse effects on water resources would be expected from implementing the proposed action at ANAD. There are no surface water features in areas that would be directly affected by the proposed construction. Most of the work would be conducted in established facilities, and storm water runoff from the East Area is controlled and monitored at numerous drainage points. Floodplains would not be affected by relocating the DGRC to ANAD. Buildings 130 and 474 would be modified, but no new structures would be constructed in a floodplain.

4.1.7 Biological Resources

No adverse impacts on biological resources would be expected if the DGRC was relocated to ANAD. The developed areas proposed for the DGRC components do not support native vegetation, wildlife, or protected species. Tennessee yellow-eyed grass does not occur in the proposed project area (ANAD 2013a). No habitat suitable for protected bat species is present on the Industrial Area. Northern long-eared bats have been known to use buildings to roost, primarily

for day-time roosting (TNBWG 2016). The human presence and noise during the day in the Industrial Area would most likely preclude northern long-eared bats from roosting in buildings in the Industrial Area. However, ANAD would take precautions to avoid taking or disturbing northern long-eared bats if building renovations would disturb areas where the bats roost and if they were determined to be roosting in buildings to be renovated. If northern long-eared bats were found occupying a building to be renovated, ANAD would consult with USFWS regarding measures to be taken to avoid taking the bats.

For the same reasons as above, it is unlikely that migratory birds would find the buildings in the Industrial Area suitable for nesting. ANAD maintains a mature forested area of approximately 1,580 acres in the northwest corner of the installation (the “northwest parcel”) for managing for the stopover needs of Neotropical migrants as they migrate through the area.

No adverse effects on protected species or migratory birds, therefore, would be expected from implementing the proposed action at ANAD.

4.1.8 Cultural Resources

The proposed project would impact 10 resources located within the boundaries of the NRHP-eligible NIC historic district. The impacted resources include buildings 117, 121, and 130 (1942); building 145 (1987); building 147 (1957); building 170 (1995); building 459 (2005); building 474 (2009); field 9A; and Turner Yard. Of those resources, buildings 117, 121, 130, and 145 were determined to be NRHP-eligible resources that contribute to the NIC historic district. The remaining resources are considered noncontributing (Stallings 2010; Milner 2016, email communication).

Continued operation of the four NRHP-eligible buildings in the NIC historic district was proactively mitigated in 2007 with the completion of a historic documentation report and narrative history (Stallings 2007). That documentation was stipulated in an MOA between ANAD and the Alabama SHPO executed on February 2, 2006. The Alabama SHPO approved the mitigation on September 4, 2007. The MOA included a stipulation that it expired in 10 years (i.e., February 2, 2016). According to ANAD staff, a new MOA is currently under development that will include similar stipulations (Stallings 2007, 2010; Williard 2016, email communication).

While the proposed undertaking would not impact any known archaeological sites, there is the possibility that previously unrecorded archaeological deposits and sites could be encountered during construction. If so, then the inadvertent discovery provisions of the ANAD ICRMP will be followed.

As a result of the 2007 mitigation for continued operation of the NRHP-eligible NIC historic district from 2006–2016, no adverse effects on cultural resources would be expected from alternative A.

4.1.9 Socioeconomics

4.1.9.1 Economic Impacts

IMPLAN economic model. A quantitative projection of economic effects on the ROI (i.e., Calhoun County, Alabama) from the proposed action was developed using the Impact Analysis for Planning (IMPLAN) model. IMPLAN is an economic model originally developed in 1976 by the U.S. Forest Service for natural resource planning, but later updated and adapted by other government agencies and private sector analysts to use in economic impact analysis. It is now owned by the IMPLAN Group, LLC. IMPLAN is a regional input-output model derived by using local data combined with national input-output accounts. The model uses the most currently available data obtained from the Department of Commerce, Bureau of Labor Statistics, and other federal and state agencies. IMPLAN uses trade flow characteristics to trace economic changes

in a regional economy arising from fluctuations in the level of activity in one or more identified industry sectors.

IMPLAN estimates economic changes (direct, indirect, and induced) for a defined region. *Direct effects* are the initial production changes or expenditures made by producers/consumers as a result of an activity or policy; *indirect effects* are secondary effects of local industries buying goods and services from other local industries (business-to-business transactions); and *induced effects* are the tertiary effects from spending of labor income (consumer spending by the workforce). The IMPLAN model estimates changes in regional employment, labor income, value added, and output as a result of a proposed action. *Employment* is the annual average of monthly jobs in an industry (full-time or part-time). *Labor income* is all forms of employment income, including employee compensation (wages and benefits) and proprietor's income. *Value added* is the difference between an industry's or establishment's total output and the cost of its intermediate inputs. *Output* is the value of industry production (i.e., business sales dollars) (IMPLAN 2015).

For the proposed action, annual impacts were calculated for the estimated 1-year construction and renovation period, and then for the first year of operation at full employment. The input variables for the IMPLAN model are listed in Table 4-3. For modeling purposes, the estimated construction and renovation cost of about $7.8 million was entered into the IMPLAN model as the construction industry change for 1 year (the IMPLAN model is designed to evaluate on an annual basis). Operational employment of 30 jobs represents the estimated maximum number of direct jobs that could be generated by the proposed DGRC facility at ANAD. To assess the maximum possible impact to the ROI, it is assumed that those jobs would be filled by workers who would move into the ROI.

Table 4-3. IMPLAN Model Input—ANAD

Input Variable	
Construction and Renovation Cost	$7,800,000
Operational Employment	30

Construction Impacts on Employment, Industry, and Income. Short-term minor beneficial economic effects would be expected. The estimated cost expenditures associated with the proposed construction and renovation for the DGRC at ANAD would result in a minor increase in regional employment, income, value added, and output, as determined by the IMPLAN model (Table 4-4). The IMPLAN model estimates the total multiplier effect to the county's economy from increased expenditures associated with the proposed action. The economic benefits of construction would be short-term and diminish as the project reaches completion. The project is estimated to employ about 69 direct workers during peak construction and generate additional indirect and induced employment in associated sectors. The direct employment numbers were derived based on the project's estimated construction and renovation expenditures and IMPLAN's estimate of construction workers employed per dollar of expenditure. Total employment (direct, indirect, and induced) created during the construction phase is estimated to be about 93 jobs, with the wholesale trade, truck transportation, architectural and engineering and related services, and commercial and industrial machinery equipment rental and leasing businesses generating most of the indirect jobs. Food, retail, and health services would generate most of the induced jobs. The estimated increases in employment, labor income, and output from the proposed project would be minor (less than 1 percent) relative to the ROI's baseline economy and workforce.

Table 4-4. IMPLAN Model Output—ANAD, Construction Economic Impacts

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	69	$2,753,301	$3,509,839	$7,800,000
Indirect Effect	9	$438,698	$737,606	$1,552,750
Induced Effect	15	$509,830	$954,796	$1,739,325
Total Effect	93	$3,701,829	$5,202,241	$11,092,075

Source: IMPLAN model.

Operations Impacts on Employment, Industry, and Income. Long-term minor beneficial economic effects would be expected. IMPLAN's estimated increase in the economic variables listed in Table 4-5 would be minor relative to the ROI's baseline economy. It is estimated that the operation of the proposed DGRC at ANAD would create 30 direct jobs, and a total of about 44 jobs (direct, indirect, and induced). The majority of the indirect and induced jobs would be in the wholesale trade; services to buildings; and food, health, and retail service sectors. Employment, labor income, and output would increase by less than 1 percent of the ROI's baseline employment, labor income, and output.

Table 4-5. IMPLAN Model Output—ANAD, Operation Economic Impacts

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	30	$1,866,754	$2,813,945	$4,024,507
Indirect Effect	4	$141,825	$233,464	$449,204
Induced Effect	10	$321,323	$601,852	$1,096,276
Total Effect	44	$2,329,902	$3,649,261	$5,569,987

Source: IMPLAN model.

4.1.9.2 Population

No adverse effects from population change would be expected. To evaluate the potential maximum effect of the proposed action, it was assumed that the 30 DGRC employees would move into the ROI. Using the U.S. average household size of 2.63 (U.S. Census Bureau 2015), the estimated total increase in population would be about 80 persons, a minor increase (less than 1 percent) compared to the ROI baseline population of more than 115,000.

4.1.9.3 Housing

No adverse effects on housing would be expected from implementing the proposed action. The proposed action would create a demand for 30 additional housing units in the ROI (assuming one housing unit per employee). The ROI would have sufficient housing units to accommodate the incoming population (see section 3.2.9.2, Housing); the proposed action would not create a housing shortage.

4.1.9.4 Law Enforcement, Fire Protection, and Medical Services

No adverse effects on emergency services would be expected from implementing the proposed action.

4.1.9.5 Schools

No adverse effects on schools would be expected. To evaluate the potential maximum effect of the proposed action, it was assumed that the 30 DGRC employees would move into the ROI, representing 30 new households. Based on about one-third of U.S. households having one or more children (persons under the age of 18) and an average of 1.8 children per family, relocating the DGRC at ANAD would result in an estimated increase of about 20 children in the ROI (U.S. Census Bureau 2015, 2016c). This would be a minor increase (less than 1 percent) compared to the ROI baseline school enrollment of 9,400.

4.1.9.6 Environmental Justice

No effects on environmental justice would be expected from implementing the proposed action. Constructing and operating the DGRC on ANAD would not result in disproportionate adverse environmental or health effects on low-income or minority populations. It is not an action with the potential to substantially affect human health or the environment by excluding persons, denying persons' benefits, or subjecting persons to discrimination or disproportionately high environmental health or safety risks. There are no residential or commercial areas adjacent to or near the proposed DGRC facilities.

4.1.9.7 Protection of Children

No adverse effects would be expected. The proposed DGRC on ANAD would be located within the depot's secure boundary. There are no homes or other types of facilities where children are typically present (e.g., day care centers, schools, churches, libraries, shopping centers) adjacent to or near the proposed DGRC facilities. Implementing the proposed action would not result in environmental health or safety risks that might disproportionately affect children.

4.1.10 Traffic and Transportation

Short- and long-term minor adverse effects would be expected. Short-term effects would be the result of additional vehicles and day-labor traffic during construction. Long-term effects would be caused by minute increases in vehicular traffic and rail activities from the operation of the DGRC facilities. Implementing the proposed action at ANAD would have no appreciable effect to air traffic or public transportation.

Construction and demolition. Construction activities would have short-term minor adverse effects on transportation and traffic, primarily caused by worker commutes and delivery of equipment and materials to and from the proposed DGRC sites. Congestion could increase in the immediate area caused by additional vehicles and traffic delays near the site. In addition, road closures or detours to accommodate utility system work would be expected. These effects would be temporary in nature and would end with the construction phase. The existing transportation infrastructure would be sufficient to support the increase in vehicle traffic. Although the effects would be minor, contractors would route and schedule construction vehicles to minimize conflicts with other traffic, and strategically locate staging areas to minimize traffic impacts. All construction vehicles would be equipped with backing alarms, two-way radios, and slow-moving vehicle signs when appropriate.

On-post roadways, gate traffic, and parking. The DGRC could introduce a small number of additional vehicles onto nearby roadways (approximately 30). Direct effects associated with the additional localized traffic would include a minute increase in daily and peak period traffic volumes

on roadways and at intersections adjacent to the site and at the installation gates. The proposed DGRC would generate an increase of 72 vehicle trips per day from DGRC workers, most of which would occur during peak traffic periods (ITE 2003). In general, this would correspond to an incremental increase in the miles traveled on-post and a small net increase of on-post traffic. It is not expected that traffic at any gate would change substantially from implementation of the proposed action at ANAD. Adequate parking would be provided. The effects would be minor.

Off-post roadways. Many of the additional 72 trips would occur at peak periods and would account for a minute change in off-post traffic that would not appreciably affect any nearby roadways or intersections. The effects would be negligible.

Rail. Alternative A would introduce approximately three locomotives both bound for and leaving from the DGRC every year for servicing. In addition, as many as three generators per year could be transported to and from the DGRC by rail. This would constitute a minute increase in the rail traffic at the installation. The existing rail infrastructure at ANAD is sufficient to support DGRC operations. There would be an upgrade in on-post rail infrastructure with the replacement of the track to support the DGRC. The effects would be minor.

4.1.11 Utilities

4.1.11.1 Potable Supply

Long-term minor adverse effects on water supply would be anticipated from relocating the DGRC operations to ANAD. ANAD uses about 0.834 mgd of water and current DGRC operations use about 4,500 gallons of water per day. A similar amount of water would be expected to be used at ANAD, which would result in a slight increase in usage and demand on available capacity.

4.1.11.2 Wastewater

Long-term minor adverse effects on wastewater treatment would be anticipated from relocating the DGRC operations to ANAD. ANAD's STP and IWTP have approximately 0.32 mgd and 0.43 mgd of available capacity, respectively. Current DGRC operations generate about 3,150 gallons of wastewater per day. A similar amount of wastewater would be expected to be treated at ANAD, which would result in a slight decrease of available treatment capacity.

4.1.11.3 Electricity

Long-term minor adverse effects would be expected from increased energy use during DGRC operations. The capacity of the existing electric transmission system is expected to be sufficient to meet the needs of the proposed action. Where possible, adverse effects would be offset by installing electrical fixtures in compliance with the Energy Policy Act of 2005, which has goals for increased use of renewable energy sources, advanced utility monitoring, and procurement of energy-efficient equipment and building systems.

4.1.11.4 Natural Gas

If natural gas is required, long-term minor adverse effects would be expected from increased use of natural gas during DGRC operations. The capacity of the existing natural gas distribution system would be expected to be sufficient to meet the needs of the proposed action.

4.1.11.5 Stormwater

No effects on the stormwater system would be expected from relocating the DGRC to ANAD. Construction would result in an increase in impervious area at field 9A, where an approximately 0.46-acre concrete hardstand is being proposed. The concrete hardstand would increase the amount of stormwater runoff generated. In accordance with the Energy Independence and Security Act of 2007 (EISA)—under which federal agencies are required to reduce stormwater

runoff from federal development and redevelopment projects to protect water resources—facilities would be designed to limit the impact on stormwater generation and stormwater impacts on surface waters. BMPs such as low impact development stormwater management practices would be incorporated to ensure that the amount of postconstruction runoff from the site was not greater than the amount of preconstruction runoff and that it would not exceed the receiving capacity of the ditches and streams to which it would flow. BMPs to steady the flow and deliver it to the stormwater drainage system would maintain stormwater flow at the site at preinstallation conditions and would result in the project having no effect on the stormwater system.

4.1.11.6 Solid Waste

Long-term minor adverse effects on solid waste would be expected from relocating the DGRC to ANAD. These effects would be the result of adding debris from construction and demolition activities to the landfill. The majority of waste generated would likely be from the demolition of concrete pads at building 170. Concrete waste and reinforcing material would be diverted from the landfill by recycling. Minimal waste would be expected from operating the DGRC, and where possible, that waste also would be recycled. Any remaining waste from construction, renovation, and operations would be transported and disposed of in the Cedar Hill Landfill.

4.1.12 Hazardous and Toxic Substances

Long-term minor adverse effects on hazardous and toxic substances would be expected from relocating the DGRC to ANAD. As provided in Table 1-2, Descriptions of Functional Processes, operating the DGRC includes several processes that use hazardous substances and/or generate regulated waste (e.g., solvents, fuel, oil, lubricants, asbestos, paint, and batteries). Similar operations and management of hazardous substances would be expected at ANAD.

Construction activities would use petroleum products and hazardous materials and generate wastes, including hazardous wastes. Construction contractors would be responsible for maintaining compliance and preventing spills by implementing proper storage and handling procedures and by following installation procedures. If a spill did occur, the contractors would be responsible for responding to it and cleaning it up, in consultation with installation personnel.

Construction could require ground disturbance in the vicinity of SWMUs. ANAD environmental staff would be contacted for guidance and to obtain necessary authorization before ground disturbing activities occur that might expose workers to contaminated soil or groundwater. If unknown contamination was encountered during construction activities, work in that area would cease and ANAD environmental staff would be notified to determine appropriate management procedures.

Relocating the DGRC to ANAD would result in a long-term increase in the use of hazardous materials and generation and disposal of larger quantities of wastes, including hazardous wastes, at ANAD. The Army follows strict standard operating procedures (SOPs) for managing hazardous materials and waste; therefore, no new procedures would need to be implemented. All hazardous materials and waste would be handled and managed in accordance with local, state, and federal regulations and in accordance with established installation procedures.

4.1.13 Cumulative Effects

CEQ regulations implementing NEPA define a *cumulative impact* as follows:

> Cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable 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 (40 CFR 1508.7).

For the purposes of this EA, significant cumulative impacts would occur if incremental effects of implementing the proposed action at ANAD, added to environmental impacts of past, present, and reasonably foreseeable actions, exceeded significance thresholds for resources at the installation and the surrounding region. Projects at ANAD consist of construction, renovation, and demolition projects that support mission objectives. They have been completed or are at various stages of completion or planning and are identified in the *Anniston Army Depot Real Property Planning Board Fall 2015* presentation. The analysis in the EA indicates that the proposed action would be expected to have a short- or long-term minor adverse effect on the following resource areas: air quality, noise, soils, traffic and transportation, utilities, and hazardous and toxic substances. Because the proposed action would have primarily a localized effect on noise, soils, traffic and transportation, and hazardous and toxic substances, no cumulative effects would be expected. The resource areas with the potential for regional cumulative effects are air quality and utilities.

Air Quality. The State of Alabama takes into account the effects of all past, present, and reasonably foreseeable emissions during the development of the state implementation plan. The state accounts for all significant stationary, area, and mobile emission sources in the development of the plan. Estimated emissions generated by implementing the proposed action at ANAD would be *de minimis*. Therefore, it is understood that an action of this size would not contribute significantly to adverse cumulative effects on air quality.

Utilities. Long-term minor adverse cumulative effects would be expected on utilities—water, wastewater treatment, electricity, natural gas, and solid waste—from the increased demand associated with construction and operation of the DGRC at ANAD. All utilities have adequate capacity to accommodate both construction and operation of the proposed DGRC. Demand on landfill capacity would result primarily from the disposal of construction debris, after which the demand would be minimal. The amount of construction and operational waste disposed of in the landfill would be minimized through recycling.

4.1.14 Mitigation Summary

No mitigation measures associated with the relocation of the DGRC to ANAD were identified. BMPs would be implemented before, during, and after construction and renovation of proposed facilities and project areas as required under federal, state, and local regulations and Army policy.

4.2 RELOCATE THE DGRC TO MCAAP (ALTERNATIVE B)

4.2.1 Land Use

No adverse effects on land uses would be expected to result from implementing the proposed action at MCAAP. The facilities on MCAAP proposed for DGRC use are already in areas designated for industrial and production uses. No land use changes or conflicts would result from the proposed action.

4.2.2 Aesthetics and Visual Resources

No adverse effects on aesthetics and visual resources would be expected to result from implementing the proposed action at MCAAP. The facilities on MCAAP proposed for DGRC use are in developed areas and the aesthetics of the areas would not be changed upon repurposing them for the DGRC.

4.2.3 Air Quality

As with alternative A, and for similar reasons, implementing the proposed action at MCAAP would have both short- and long-term minor adverse effects on air quality. Increases in emissions would be below the general conformity rule *de minimis* thresholds, would not exceed the GHG threshold in the draft CEQ guidance, and would not contribute to a violation of any federal, state, or local air regulation.

All emissions of criteria pollutants and GHGs and their effects would be similar to those outlined under alternative A; however, they would be at the proposed DGRC site at MCAAP. MCAAP is within a region EPA has designated as being an attainment area for all criteria pollutants and the general conformity rule does not apply. There would be some amount of air emissions from air emissions from construction activities, such as fugitive dust and construction equipment, and day labor commutes. These sources of emissions would be small, temporary, and end with the construction phase.

Although MCAAP is in attainment for the NAAQS, the *de minimis* thresholds have been carried forward and compared to permanent operational sources of air emissions to determine the level of effects under NEPA. Table 4-1 lists operational emissions from the DRGC. Emissions would be below the *de minimis* threshold of 100 tpy of each pollutant; therefore, the level of effects would be minor. A RONA and emission estimations are in Appendix B.

Permitting requirements and BMPs would be similar to those outlined under alternative A. Construction would proceed in full compliance with current ODEQ requirements, with compliant practices and/or products. ODEQ requirements include the following:

- Open burning (252:100-11-1)
- Visible emissions and particulate matter (252:100-25-1)
- Control of fugitive dust (252:100-29-1)
- Control of emission of volatile organic compounds (VOCs) (252:100-37-1)

This listing is not all-inclusive; the DoD and any contractors involved in the proposed project would comply with all applicable air pollution control regulations.

4.2.4 Noise

As with alternative A, and for similar reasons, implementing the proposed action at MCAAP would have both short- and long-term minor adverse effects on the noise environment. The effects would be similar to those outlined for alternative A; however, they would be at the proposed DGRC site at MCAAP. Short-term increases in noise would be caused by construction activities. Long-term increases in noise would be the result of minor changes in traffic patterns and the periodic testing of generators and engines. These effects would not result in the violation of applicable federal, state, or local noise regulations, or create appreciable areas of incompatible land use.

There are no NSAs within 800 feet of the proposed DGRC. Because of the limited and temporary use of heavy equipment during construction, limited testing of locomotives and generators, and the distance to the nearest NSA, short- and long-term effects would be minor.

4.2.5 Geology and Soils

Short-term minor adverse effects on soils would be expected from implementing the proposed action at MCAAP. No adverse effects on geology and topography would be expected. Soils would be disturbed and some grading and/or filling would be done near building 399 to install the proposed rail network expansion. Some soil erosion would be expected. Coverage under the

Oklahoma Pollutant Discharge Elimination System Stormwater general permit (no. OKR10) would be required. The construction operator would be required to implement and maintain effective erosion and sediment control in accordance with a construction BMP plan prepared for the project and certified by a qualified credentialed professional. The BMP plan would specify the state-approved practices for erosion control and sediment retention to be used during construction, referencing the MCAAP storm water pollution prevention plan (SWPPP) for construction activities (MCAAP 2013a). Soil erosion would be minimized through compliance with those requirements and implementation of the construction BMP plan. After soil-disturbing activities are completed, a suitable cover would be established to minimize postconstruction erosion and to eliminate long-term effects on soils.

4.2.6 Water Resources

No adverse effects on water resources would be expected to result from implementing the proposed action at MCAAP. No surface water resources, floodplains, or wetlands are on or near the parcels proposed to be used as DGRC facilities. No effects on groundwater would be expected because the activities proposed would occur inside existing facilities.

4.2.7 Biological Resources

No adverse effects on vegetation would be expected from implementing alternative B because the activities would occur exclusively in developed areas. No adverse effects on the American burying beetle would be expected from implementing the proposed action at MCAAP. Suitable habitat types for American burying beetles include tallgrass prairie, woodlands, and forests (ODWC 2016), none of which are found on the proposed DGRC sites.

4.2.8 Cultural Resources

The proposed undertaking would impact five resources: demolition of building 429; renovation of buildings 9, 11, and 399; use of an existing rail yard; and construction of new facilities. Buildings 9 and 11 were constructed in 1943. Building 429 is a quonset hut that dates from 1948. Building 399 was constructed in 2007 and appears to be ineligible for listing on the NRHP because it was built so recently.

The ACHP's 2006 *Program Comment for World War II and Cold War Era (1939–1974) Army Ammunition Production Facilities and Plants* and *Program Comment for World War II and Cold War Era (1939–1974) Ammunition Storage Facilities*, as applied to MCAAP, satisfy the Army's responsibilities at the installation for compliance under section 106 regarding the effects of management actions for all properties built between 1939 and 1974. The Army is no longer required to follow the case-by-case section 106 review process for those properties. As a result, any activity that might result in the alteration or demolition of a historic building at MCAAP has been mitigated under the program comments. Therefore, no effects on cultural resources would be expected for alternative B.

While the proposed undertaking would not impact any known archaeological sites, there is the possibility that previously unrecorded archaeological deposits and sites could be encountered during construction. If so, then the inadvertent discovery provisions of the MCAAP ICRMP will be followed.

4.2.9 Socioeconomics

4.2.9.1 Economic Impacts

IMPLAN economic model. A quantitative projection of economic effects on the ROI (i.e., Pittsburg County, Oklahoma) from the proposed action was developed using the IMPLAN model. See section 4.1.9.1 for background information on the IMPLAN model.

For the proposed action, annual impacts were calculated for the estimated 1-year construction and renovation period, and then for the first year of operation at full employment. The input variables for the IMPLAN model are listed in Table 4-6. For modeling purposes, the estimated construction and renovation cost of about $9 million was entered into the IMPLAN model as the construction industry change for 1 year (the IMPLAN model is designed to evaluate on an annual basis). Operational employment of 30 jobs represents the estimated maximum number of direct jobs that could be generated by the proposed DGRC facility at MCAAP. To assess the maximum possible impact to the ROI, it is assumed that those jobs would be filled by workers who would move into the ROI.

Table 4-6. IMPLAN Model Input—MCAAP

Input Variable	
Construction and Renovation Cost	$9,000,000
Operational Employment	30

Construction impacts on employment, industry, and income. Short-term minor beneficial economic effects would be expected. The estimated cost expenditures associated with the proposed construction and renovation for the DGRC at MCAAP would result in a minor increase in regional employment, income, value added, and output, as determined by the IMPLAN model (Table 4-7). The economic benefits of construction would be short-term and diminish as the project reaches completion. The project is estimated to employ about 73 direct workers during peak construction and to generate additional indirect and induced employment in associated sectors. Total employment (direct, indirect, and induced) created during the construction phase is estimated to be about 94 jobs, with the wholesale trade, truck transportation, architectural and engineering and related services, and commercial and industrial machinery equipment rental and leasing businesses generating most of the indirect jobs. Food, retail, and health services would generate most of the induced jobs. The estimated increases in employment, labor income, and output from the proposed project would be minor (less than 1 percent) relative to the ROI's baseline economy and workforce.

Table 4-7. IMPLAN Model Output—MCAAP, Construction Economic Impacts

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	73	$3,715,845	$4,414,524	$9,000,000
Indirect Effect	6	$306,524	$508,921	$979,357
Induced Effect	15	$518,524	$1,012,578	$1,846,694
Total Effect	94	$4,540,893	$5,936,023	$11,826,051

Source: IMPLAN model.

Operations impacts on employment, industry, and income. Long-term minor beneficial economic effects would be expected. IMPLAN's estimated increase in the economic variables

listed in Table 4-8 would be minor relative to the ROI's baseline economy. It is estimated that the operation of the proposed DGRC at MCAAP would create about 30 direct jobs, and a total of about 43 jobs (direct, indirect and induced jobs). The majority of the indirect and induced jobs would be in the wholesale trade; services to buildings; and food, health, and retail service sectors. Employment, labor income, and output would increase by less than 1 percent of the ROI's baseline employment, labor income, and output.

Table 4-8. IMPLAN Model Output—MCAAP, Operation Economic Impacts

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	30	$2,635,137	$3,913,410	$5,148,188
Indirect Effect	3	$119,429	$193,429	$366,078
Induced Effect	10	$354,872	$692,785	$1,263,758
Total Effect	43	$3,109,438	$4,799,624	$6,778,024

Source: IMPLAN model.

4.2.9.2 Population

No adverse effects from population change would be expected. To evaluate the potential maximum effect of the proposed action, it was assumed that the 30 DGRC employees would move into the ROI. Using the U.S. average household size of 2.63 (U.S. Census Bureau 2015), the estimated total increase in population would be about 80 persons, a minor increase (less than 1 percent) compared to the ROI baseline population of about 45,000.

4.2.9.3 Housing

No adverse effects on housing would be expected from implementing the proposed action. The proposed action would create a demand for 30 additional housing units in the ROI (assuming one housing unit per employee). The ROI would have sufficient housing units (see section 3.3.9.2, Housing) to accommodate the incoming population and would not create a housing shortage.

4.2.9.4 Law Enforcement, Fire Protection, and Medical Services

No adverse effects on emergency services would be expected from implementing the proposed action.

4.2.9.5 Schools

No adverse effects on schools would be expected. To evaluate the potential maximum effect of the proposed action, it was assumed that the 30 DGRC employees would move into the ROI, representing 30 new households. Based on about one-third of U.S. households having one or more children (persons under the age of 18) and an average of 1.8 children per family, relocating the DGRC at MCAAP would result in an estimated increase of about 20 children in the ROI (U.S. Census Bureau 2015, 2016c). This would be a minor increase (3 percent) compared to the ROI baseline school enrollment of 600.

4.2.9.6 Environmental Justice

No effects on environmental justice would be expected from implementing the proposed action. Constructing and operating the DGRC on MCAAP would not result in disproportionate adverse environmental or health effects on low-income or minority populations. It is not an action with the potential to substantially affect human health or the environment by excluding persons, denying persons' benefits, or subjecting persons to discrimination or disproportionately high environmental health or safety risks. There are no residential or commercial areas adjacent to or near the proposed DGRC facilities.

4.2.9.7 Protection of Children

No adverse effects would be expected. The proposed DGRC on MCAAP would be located within the installation's secure boundary. There are no homes or other types of facilities where children are typically present (e.g., day care centers, schools, churches, libraries, shopping centers) adjacent to or near the proposed DGRC facilities. Implementing the proposed action would not result in environmental health or safety risks that might disproportionately affect children.

4.2.10 Traffic and Transportation

As with alternative A, and for similar reasons, alternative B would have both short- and long-term minor adverse effects on traffic and transportation. These effects would be similar to those outlined in alternative A; however, they would be at the proposed DGRC site at MCAAP. Short-term effects would be caused by additional vehicles and day-labor traffic during construction. Long-term effects would be the result of minor increases in vehicular traffic and rail activities from the operation of the DGRC facilities. Alternative B would have no appreciable effect on air traffic or public transportation.

Construction. Construction activities would have short-term minor adverse effects on transportation and traffic. The effects would be primarily the result of worker commutes and delivery of equipment and materials to and from the proposed DGRC sites. Congestion could increase in the immediate area because of additional vehicles and traffic delays near the site. In addition, road closures or detours to accommodate utility system work could be expected. Those effects would be temporary and would end with the construction phase. The existing transportation infrastructure would be sufficient to support the increase in vehicle traffic. Although the effects would be minor, contractors would route and schedule construction vehicles to minimize conflicts with other traffic, and strategically locate staging areas to minimize traffic impacts. All construction vehicles would be equipped with backing alarms, two-way radios, and slow-moving vehicle signs when appropriate.

On-post roadways, gate traffic, and parking. The DGRC would introduce a small number of additional vehicles onto nearby roadways (approximately 30). Direct effects associated with the additional localized traffic would include a minute increase in daily and peak period traffic volumes on roadways and at intersections adjacent to the site and at the installation gates. The proposed DGRC would generate an increase of 72 vehicle trips per day from DGRC workers most of which would occur during peak traffic periods (ITE 2003). In general, that would correspond to an incremental increase in the miles traveled on-post and a small net increase to on-post traffic. It is not expected that traffic at any gate would change substantially. The project is currently in the preliminary design stage, and in the final design stage, adequate parking would be provided. The effects would be minor.

Off-post roadways. The small net increase of personnel would constitute a corresponding increase of approximately 72 vehicle trips per day either originating at or bound for the installation (ITE 2003). Many of those trips would occur at peak periods and would account for some small

amount of off-post traffic. That would constitute a minute change in off-post traffic and not appreciably affect any nearby roadways or intersections. The effects would be negligible.

Rail. Alternative B would introduce approximately three locomotives both bound for and leaving from the DGRC every year for servicing. In addition, as many as three generators per year could be transported to and from the DGRC by rail. This would constitute a minute increase in the rail traffic at the installation and would be barely perceptible compared to existing conditions. In general, the existing rail infrastructure at the installation meets the requirements outlined in Table 2-1 and is sufficient to support DGRC operations. New railroad track would be installed to both buildings to support the DGRC. The effects would be minor.

4.2.11 Utilities

4.2.11.1 Potable Supply

Long-term minor adverse effects on water supply would be anticipated from relocating the DGRC operations to MCAAP. MCAAP, the towns of Savanna and Haywood, and Haywood School combined used approximately 198 million gallons or 608 acre-feet of water in 2014, which is well below the permitted withdrawal amount of 900 acre-feet. Combined usage is about 0.543 mgd of water, and current DGRC operations use about 4,500 gallons of water per day. A similar amount of water would be expected to be used at MCAAP, which would result in a slight increase in usage and demand on available capacity.

4.2.11.2 Wastewater

Long-term minor adverse effects on wastewater treatment would be anticipated from relocating DGRC operations to MCAAP. The MCAAP wastewater system has approximately 0.20 mgd of available capacity and a combined capacity of 9.7 million gallons of wastewater flow equalization/flow management lagoons. Current DGRC operations generate about 3,150 gallons of wastewater per day. A similar amount of wastewater would be expected to be treated at MCAAP, which would result in a slight increase on available treatment capacity.

4.2.11.3 Electricity

Long-term minor adverse effects would be expected from increased energy use during DGRC operations. The capacity of the existing electric transmission system is expected to be sufficient to meet the needs of the proposed action. Where possible, adverse effects would be offset by installing electrical fixtures in compliance with the Energy Policy Act of 2005, which has goals for increased use of renewable energy sources, advanced utility monitoring, and procurement of energy-efficient equipment and building systems.

4.2.11.4 Natural Gas

If natural gas is required, long-term minor adverse effects would be expected from increased usage during DGRC operations. The capacity of the existing natural gas distribution system would be expected to be sufficient to meet the needs of the proposed action.

4.2.11.5 Stormwater

No effects on the stormwater system would be expected from relocating the DGRC to MCAAP. Proposed additions to buildings 399 and 9 and a new sandblast containment would result in an increase in impervious area and increase the quantity of stormwater runoff generated. However, such increases would be managed in accordance with MCAAP's stormwater management plans and in accordance with the EISA. See section 4.1.11.5 for information on EISA management requirements.

4.2.11.6 Solid Waste

Long-term minor adverse effects on solid waste would be expected from relocating the DGRC to MCAAP. The effects would result from adding debris to landfills from a combination of new construction, renovation of buildings 9 and 399, and demolition of building 429 and a portion of building 9. It is estimated that construction would consist of approximately 14,500 sq ft, renovation of approximately 34,500 sq ft, and demolition of approximately 40,640 sq ft. Demolition would include a storage area, flooring, and a mezzanine in building 9.

Relocating the DGRC to MCAAP could generate approximately 3,432 tons of construction, renovation, and demolition debris (Table 4-9). About 50 percent of the debris would be recycled, which could result in about 1,716 tons of nonhazardous debris for disposal in the MCAAP landfill or the Alderson Regional Landfill. Minimal waste would be expected from operating the DGRC and, where possible, that waste also would also be recycled.

Table 4-9. Summary of Construction and Demolition Debris

	Type	Debris Generation Rate (lb/sq ft)	Debris Generated (tons)	Quantity Recycled (50%) (tons)	Total Quantity Disposed of in Landfill (tons)
Construction					
14,500 sq ft	Nonresidential	4.4	32	16	16
Demolition					
40,640 sq ft	Nonresidential	158	3,210	1,605	1,605
Renovation					
34,500 sq ft	Nonresidential	11	190	95	95
Total			3,432	1,716	1,716

Source: USEPA 2003 and MCAAP 2013b.
Notes: lb = pound; sq ft = square feet/square foot.

4.2.12 Hazardous and Toxic Substances

Long-term minor adverse effects on hazardous and toxic substances would be expected from relocating the DGRC to MCAAP. As described in Table 1-2, operating the DGRC includes several processes that use hazardous substances and/or generate regulated waste (e.g., solvents, fuel, oil, lubricants, asbestos, paint, and batteries). Similar operations and management of hazardous substances would be expected at MCAAP.

Construction activities would use petroleum products and hazardous materials and generate wastes, including hazardous wastes. Construction contractors would be responsible for maintaining compliance and preventing spills by implementing proper storage and handling procedures and by following installation procedures. If a spill did occur, the contractors would be responsible for responding to it and cleaning it up, in consultation with installation personnel.

Prior to construction, MCAAP environmental staff would be contacted for guidance and to obtain necessary authorization before ground-disturbing activities occur that might expose workers to contaminated soil or groundwater. If unknown contamination is encountered during construction activities, work in that area would cease and MCAAP environmental staff would be notified to determine appropriate management procedures.

Relocating the DGRC to MCAAP would result in a long-term increase in the use of hazardous materials and generation and disposal of larger quantities of wastes, including hazardous wastes, at MCAAP. The Army follows strict SOPs for managing hazardous materials and waste; therefore, no new procedures would need to be implemented. All hazardous materials and waste would be handled and managed in accordance with local, state, and federal regulations and in accordance with established installation procedures.

4.2.13 Cumulative Effects

CEQ regulations implementing NEPA define a *cumulative impact* as follows:

> Cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable 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 (40 CFR 1508.7).

For the purposes of this EA, significant cumulative impacts would occur if incremental effects of implementing the proposed action at MCAAP, added to the environmental impacts of past, present, and reasonably foreseeable actions, exceeded significance thresholds for resources at an installation and the surrounding region. Generally, projects at MCAAP consist of construction, renovation, and demolition projects that support mission objectives. The analysis in the EA indicates that the proposed action would be expected to have short- or long-term negligible or minor adverse effects on the following resource areas: air quality, noise, soils, vegetation, traffic and transportation, utilities, and hazardous and toxic substances. Because the proposed action would have primarily a localized effect on noise, soils, vegetation, traffic and transportation, and hazardous and toxic substances, no cumulative effects on those resource areas would be expected. The resource areas with the potential for regional cumulative effects are air quality and utilities.

Air Quality. The State of Oklahoma takes into account the effects of all past, present, and reasonably foreseeable emissions during the development of the state implementation plan. The state accounts for all significant stationary, area, and mobile emission sources in the development of the plan. Estimated emissions generated by implementing the proposed action at MCAAP would be *de minimis*. Therefore, it is understood that an action of this size would not contribute significantly to adverse cumulative effects to air quality.

Utilities. Long-term minor adverse cumulative effects would be expected on utilities—water, wastewater treatment, electricity, natural gas, and solid waste—from the increased demand associated with construction and operation of the DGRC at MCAAP. All utilities have adequate capacity to accommodate the proposed action. Demand on landfill capacity would result primarily from construction, demolition, and renovation. Thereafter, the demand would be minimal. The long-term cumulative effect on landfill capacity, therefore, would be minimal. The amount of waste disposed of in landfills would be minimized through recycling.

4.2.14 Mitigation Summary

No mitigation measures associated with the relocation of the DGRC to MCAAP were identified. BMPs would be implemented before, during, and after construction and renovation of proposed facilities and project areas as required under federal, state, and local regulations and Army policy.

4.3 RELOCATE THE DGRC TO RRAD (ALTERNATIVE C)

4.3.1 Land Use

No adverse effects on land use would be expected from relocating the DGRC to RRAD. The existing warehousing and storage designation and future industrial zone designation of the site and surrounding land would be compatible with the proposed use of the land. Constructing and operating the proposed DGRC at the site would not create a conflict or disrupt or divide established land-use configurations.

4.3.2 Aesthetics and Visual Resources

No adverse effects on aesthetics and visual effects would be expected from relocating the DGRC to RRAD. There are no aesthetically sensitive locations within the viewshed of the proposed site, and the site would not be visibly accessible to the general public because of restricted access.

4.3.3 Air Quality

As with alternative A, and for similar reasons, alternative C would have both short- and long-term minor adverse effects on air quality. Increases in emissions would be below the general conformity rule *de minimis* thresholds, would not exceed the GHG threshold in the draft CEQ guidance, and would not contribute to a violation of any federal, state, or local air regulation.

All emissions of criteria pollutants and GHGs and their effects would be similar to those outlined under alternative A; however, they would be at the proposed DGRC site at RRAD. RRAD is within a region EPA has designated as being an attainment area for all criteria pollutants and the general conformity rule does not apply. There would be some amount of air emissions from construction activities, such as fugitive dust and construction equipment, and day labor commutes. These sources of emissions would be somewhat higher than the other alternatives as more construction would be required at RRAD than at other installations to support the DRGC. Regardless, as with other installations these emissions would be small, temporary, and end with the construction phase.

Although RRAD is in attainment for the NAAQS, the *de minimis* thresholds have been carried forward and compared to permanent operational sources of air emissions to determine the level of effects under NEPA. Table 4-1 lists operational emissions from the DRGC. Emissions would be below the *de minimis* threshold of 100 tons per year (tpy) of each pollutant; therefore, the level of effects would be minor. A RONA and emission estimations are in Appendix B.

Permitting requirements and BMPs would be similar to those outlined under alternative A. Construction would proceed in full compliance with current TCEQ requirements, with compliant practices and/or products. TCEQ requirements include the following:

- General air quality rules (115 TAC A)
- Visible emissions and particulate matter (30 TAC H)
- Open burning (30 TAC H)
- Air pollution from motor vehicle (30 TAC C)
- VOCs (30 TAC C)

This listing is not all-inclusive; the DoD and any contractors involved in the proposed project would comply with all applicable air pollution control regulations.

4.3.4 Noise

As with alternative A, and for similar reasons, alternative C would have both short- and long-term minor adverse effects on the noise environment. These effects would be identical to those outlined for alternative A; however, they would be at the proposed DGRC site at RRAD. Short-term increases in noise would be caused by construction activities. Long-term increases in noise would be the result of minor changes in traffic patterns and the periodic testing of generators and engines. The effects would not result in the violation of applicable federal, state, or local noise regulation, or create appreciable areas of incompatible land use.

There are no NSAs within 800 feet of the proposed DGRC. Because of the limited and temporary use of heavy equipment during construction, limited testing of locomotives and generators, and the distance to the nearest NSA, short- and long-term effects would be minor.

4.3.5 Geology and Soils

Short-term minor adverse effects on soils would be expected from implementing alternative C. No adverse effects on geology and topography would be expected. Soil disturbance would result from installing the rail maintenance facility, new rail spur, concrete hardstand, and parking, and associated grading and filling, and some soil erosion would be expected. Coverage would be required under the Texas Pollutant Discharge Elimination System multi-sector general permit (no. TXR05U103) for industrial facilities that discharge storm water associated with industrial activities. The construction operator would be required to implement and maintain effective erosion and sediment control in accordance with a construction BMP plan. The plan would specify the state-approved BMPs for erosion control and sediment retention to be used during construction, referencing the RRAD SWPPP. Soil erosion would be minimized through compliance with those requirements and implementation of the BMP plan. After soil-disturbing activities are completed, a suitable cover would be established to minimize postconstruction erosion and to eliminate any long-term effects on soils.

4.3.6 Water Resources

Long-term minor to moderate adverse impacts on water resources would result from implementing the proposed action at RRAD. The final layout of the facility has not been determined yet, leaving the possibility that the stream and any wetlands associated with it on the parcel could be affected by facility construction. If impacts are anticipated, RRAD would survey the site for wetlands, and if any are found, the Army would obtain a Clean Water Act section 404 permit for the construction. Section 404 establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including fill for development. A permit must be obtained before dredged or fill material is discharged into waters of the United States.

4.3.7 Biological Resources

Long-term minor adverse effects on vegetation and wildlife would be expected from relocating the DGRC to RRAD, although no adverse effects on protected species would be expected. Approximately 5 acres (or 0.05 percent) of RRAD's forested land would be lost to the proposed project, an amount that would not substantially reduce the quantity of forested area locally or regionally and would not fragment existing tracts of forested land.

If a protected species was observed during implementation of the proposed action at RRAD, installation personnel would coordinate with USFWS regarding measures to protect the species.

4.3.8 Cultural Resources

No effects on cultural resources would be expected. The proposed action at RRAD would not affect any existing facilities.

Although the proposed action would not affect any known archaeological sites, there is the possibility that previously unrecorded archaeological deposits and sites could be encountered during construction. If so, then the inadvertent discovery provisions of the RRAD ICRMP will be followed.

4.3.9 Socioeconomics

4.3.9.1 Economic Impacts

IMPLAN economic model. A quantitative projection of economic effects on the ROI (i.e., Bowie County, Texas) from the proposed action was developed using the IMPLAN model. See section 4.1.9.1 for background information on the IMPLAN model.

For the proposed action, annual impacts were calculated for the estimated 1-year construction and renovation period, and then for the first year of operation at full employment. The input variables for the IMPLAN model are listed in Table 4-10. For modeling purposes, the estimated construction and renovation cost of about $24.6 million was entered into the IMPLAN model as the construction industry change for 1 year (the IMPLAN model is designed to evaluate on an annual basis). Operational employment of 30 jobs represents the estimated maximum number of direct jobs that could be generated by the proposed DGRC facility at RRAD. To assess the maximum possible impact to the ROI, it is assumed that these jobs would be filled by workers who would move into the ROI.

Table 4-10. IMPLAN Model Input—RRAD

Input Variable	
Construction and Renovation Cost	$24,600,000
Operational Employment	30

Construction impacts on employment, industry, and income. Short-term minor beneficial economic effects would be expected. The estimated cost expenditures associated with the proposed construction and renovation for the DGRC at RRAD would result in a minor increase in regional employment, income, value added, and output, as determined by the IMPLAN model (Table 4-11). The economic benefits of construction would be short-term and diminish as the project reaches completion. The project is estimated to employ about 187 direct workers during peak construction and generate additional indirect and induced employment in associated sectors. Total employment (direct, indirect, and induced) created during the construction phase is estimated to be about 253 jobs, with the wholesale trade, truck transportation, and commercial and industrial machinery equipment rental and leasing businesses generating most of the indirect jobs. Food, retail, and health services would generate most of the induced jobs. The estimated increases in employment, labor income, and output from the proposed project would be minor (less than 1 percent) relative to the ROI's baseline economy and workforce.

Table 4-11. IMPLAN Model Output—RRAD, Construction Economic Impacts

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	187	$8,116,450	$10,688,805	$22,329,512
Indirect Effect	24	$1,220,542	$2,216,756	$4,704,830
Induced Effect	42	$1,700,553	$2,985,894	$5,379,377
Total Effect	253	$11,037,545	$15,891,455	$32,413,719

Source: IMPLAN model.

Operations impacts on employment, industry, and income. Long-term minor beneficial economic effects would be expected. IMPLAN's estimated increase in the economic variables listed in Table 4-12 would be minor relative to the ROI's baseline economy. It is estimated that the operation of the proposed DGRC at RRAD would create about 30 direct jobs, and a total of about 42 jobs (direct, indirect and induced jobs). The majority of the indirect and induced jobs would be in the wholesale trade; services to buildings; and food, health, and retail service sectors. Employment, labor income, and output would increase by less than 1 percent of the ROI's baseline employment, labor income, and output.

Table 4-12. IMPLAN Model Output—RRAD, Operation Economic Impacts

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	30	$1,643,066	$2,654,228	$3,861,271
Indirect Effect	4	$166,115	$270,676	$490,785
Induced Effect	8	$329,945	$579,400	$1,043,798
Total Effect	42	$2,139,126	$3,504,304	$5,395,854

Source: IMPLAN model.

4.3.9.2 Population

No adverse effects from population change would be expected. To evaluate the potential maximum effect of the proposed action, it was assumed that the 30 DGRC employees would move into the ROI. Using the U.S. average household size of 2.63 (U.S. Census Bureau 2015), the estimated total increase in population would be about 80 persons, a minor increase (less than 1 percent) compared to the ROI baseline population of about 93,400.

4.3.9.3 Housing

No adverse effects on housing would be expected from implementing the proposed action. The proposed action would create a demand for 30 additional housing units in the ROI (assuming one housing unit per employee). The ROI would have sufficient housing units (see section 3.4.9.2,

Housing) to accommodate the incoming population and the proposed action would not create a housing shortage.

4.3.9.4 Law Enforcement, Fire Protection, and Medical Services

No adverse effects on emergency services would be expected from implementing the proposed action.

4.3.9.5 Schools

No adverse effects on schools would be expected. To evaluate the potential maximum effect of the proposed action, it was assumed that the 30 DGRC employees would move into the ROI, representing 30 new households. Based on about one-third of U.S. households having one or more children (persons under the age of 18) and an average of 1.8 children per family, relocating the DGRC at RRAD would result in an estimated increase of about 20 children in the ROI (U.S. Census Bureau 2015, 2016c). This would be a minor increase (less than 1 percent) compared to the ROI baseline school enrollment of more than 19,000 students.

4.3.9.6 Environmental Justice

No adverse effects on environmental justice would be expected from implementing the proposed action. Constructing and operating the DGRC on RRAD would not result in disproportionate adverse environmental or health effects on low-income or minority populations. It is not an action with the potential to substantially affect human health or the environment by excluding persons, denying persons' benefits, or subjecting persons to discrimination or disproportionately high environmental health or safety risks. There are no residential or commercial areas adjacent to or near the proposed DGRC facilities.

4.3.9.7 Protection of Children

No adverse effects would be expected. The proposed DGRC on RRAD would be located within the depot's secure boundary. There are no homes or other types of facilities where children are typically present (e.g., day care centers, schools, churches, libraries, shopping centers) adjacent to or near the proposed DGRC facilities. Implementing the proposed action would not result in environmental health or safety risks that might disproportionately affect children.

4.3.10 Traffic and Transportation

As with alternative A, and for similar reasons, alternative C would have both short- and long-term minor adverse effects on traffic and transportation. These effects would be similar to those outlined in alternative A; however, they would be at the proposed DGRC site at RRAD. Short-term effects would be caused by additional vehicles and day-labor traffic during construction. Long-term effects would be the result of minor increases in vehicular traffic and rail activities from the operation of the DGRC facilities. Alternative C would have no appreciable effect on air traffic or public transportation.

Construction. Construction activities would have short-term minor adverse effects on transportation and traffic. These effects would be primarily the result of worker commutes and delivery of equipment and materials to and from the proposed DGRC sites. Congestion could increase in the immediate area as a result of additional vehicles and traffic delays near the site. In addition, road closures or detours to accommodate utility system work could be expected. Those effects would be temporary and would end with the construction phase. The existing transportation infrastructure would be sufficient to support the increase in vehicle traffic. Although the effects would be minor, contractors would route and schedule construction vehicles to minimize conflicts with other traffic, and strategically locate staging areas to minimize traffic

impacts. All construction vehicles would be equipped with backing alarms, two-way radios, and slow-moving vehicle signs when appropriate.

On-post roadways, gate traffic, and parking. The DGRC would introduce a small number of additional vehicles onto nearby roadways (approximately 30). Direct effects associated with the additional localized traffic would include a minute increase in daily and peak period traffic volumes on roadways and at intersections adjacent to the site and at the installation gates. The proposed DGRC would generate an increase of 72 vehicle trips per day from DGRC workers, most of which would occur during peak traffic periods (ITE 2003). In general, this would correspond to an incremental increase in the miles traveled on-post and a small net increase to on-post traffic. It is not expected that the amount of traffic at any gate would change substantially. The project is currently in the preliminary design stage, and in the final design stage, adequate parking would be provided. The effects would be minor.

Off-post roadways. The small net increase of personnel would constitute a corresponding increase of approximately 72 vehicle trips per day either originating at or bound for the installation (ITE 2003). Many of these trips would occur at peak periods and would account for some small amount of off-post traffic. This would constitute a minute change in off-post traffic, but not appreciably affect any nearby roadways or intersections. The effects would be negligible.

Rail. Alternative C would introduce approximately three locomotives both bound for and leaving from the DGRC every year for servicing. In addition, as many as three generators per year could be transported to and from the DGRC by rail. This would constitute a minute increase in the rail traffic at the installation and would be barely perceptible compared to existing conditions. In general, the existing rail infrastructure at the installation meets the requirements outlined in Table 2-1 and is sufficient to support DGRC operations. There would be installation of a new rail spur to support the DGRC. The effects would be minor.

4.3.11 Utilities

4.3.11.1 Potable Supply

Long-term minor adverse effects on water supply would be anticipated from relocating the DGRC operations to RRAD. Current DGRC operations use about 4,500 gallons of water per day, and a similar amount would be expected to be used at RRAD. This amount would result in a slight increase in demand; however, RRAD uses approximately 1.0 mgd of the 5 mgd of available capacity.

4.3.11.2 Wastewater

Long-term minor adverse effects on wastewater treatment would be anticipated from relocating the DGRC operations to RRAD. Current DGRC operations generate about 3,150 gallons of wastewater per day. A similar amount of wastewater would be expected to be treated at RRAD, which would result in a slight decrease on available treatment capacity. RRADs sanitary sewer and industrial wastewater systems have approximately 1.1 mgd and 0.55 mgd of available capacity, respectively.

4.3.11.3 Electricity

Long-term minor adverse effects would be expected from increased energy usage during DGRC operations. The capacity of the existing electric transmission system is expected to be sufficient to meet the needs of the proposed action. Where possible, adverse effects would be offset by installing electrical fixtures in compliance with the Energy Policy Act of 2005, which has goals for increased use of renewable energy sources, advanced utility monitoring, and procurement of energy-efficient equipment and building systems.

4.3.11.4 Natural Gas

Long-term minor adverse effects would be expected from increased use of natural gas during DGRC operations. The capacity of the existing natural gas distribution system would be expected to be sufficient to meet the needs of the proposed action.

4.3.11.5 Stormwater

No effects on the stormwater system would be expected from relocating the DGRC to RRAD. Proposed construction of a new DGRC facility, including a concrete hardstand, would result in an increase in impervious area and increase the quantity of stormwater runoff generated. However, such increases would be managed in accordance with RRAD's stormwater management plans and in accordance with the EISA. See section 4.1.11.5 for information on EISA management requirements.

4.3.11.6 Solid Waste

Long-term minor adverse effects on solid waste would be expected from relocating the DGRC to RRAD. These effects would result from adding debris from constructing the new DGRC facility to the landfill. It is estimated that construction would consist of an approximately 94,000-sq ft facility (excludes construction of hardstand and gravel parking as waste generation would be expected to be minimal), which could generate approximately 207 tons of construction debris (Table 4-13). About 50 percent of the debris would be recycled, which would result in about 103.5 tons of nonhazardous debris for disposal in the New Boston Landfill. Timber on the proposed DGRC site would be harvested and sold. Remaining stumps and grubbing material would be diverted from the landfill by mulching. Minimal waste would be expected from operating the DGRC and, where possible, that waste also would be recycled.

Table 4-13. Summary of Construction and Demolition Debris

	Type	Debris Generation Rate (lb/sq ft)	Debris Generated (tons)	Quantity Recycled (50%) (tons)	Total Quantity Disposed of in Landfill (tons)
Construction					
94,000 sq ft	Nonresidential	4.4	207	103.5	103.5
Total			207	103.5	103.5

Source: USEPA 2003 and RRAD 2015.
Notes: lb = pound; sq ft = square feet/square foot.

4.3.12 Hazardous and Toxic Substances

Negligible-to-minor adverse effects on hazardous and toxic substances would be expected from relocating the DGRC to RRAD. As described in Table 1-2, operating the DGRC includes several processes that use hazardous substances and/or generate regulated waste (e.g., solvents, fuel, oil, lubricants, asbestos, paint, and batteries). Similar operations and management of hazardous substances would be expected at RRAD.

Construction activities would use petroleum products and hazardous materials and generate wastes, including hazardous wastes. Construction contractors would be responsible for maintaining compliance and preventing spills by implementing proper storage and handling

procedures and by following installation procedures. If a spill did occur, the contractors would be responsible for responding to it and cleaning it up, in consultation with installation personnel.

No effects from SWMUs, IRP or MMRP sites, or storage tanks would be expected. RRAD environmental staff would be contacted for guidance and to obtain necessary authorization before ground-disturbing activities occur. If unknown contamination is encountered during construction activities, work in that area would cease and RRAD environmental staff would be notified to determine appropriate management procedures.

Relocating the DGRC to RRAD would result in a long-term increase in the use of hazardous materials and generation and disposal of larger quantities of wastes, including hazardous wastes, at RRAD. The Army follows strict SOPs for managing hazardous materials and waste; therefore, no new procedures would need to be implemented. All hazardous materials and waste would be handled and managed in accordance with local, state, and federal regulations and in accordance with established installation procedures.

4.3.13 Cumulative Effects Summary

CEQ regulations implementing NEPA define a *cumulative impact* as follows:

> Cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable 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 (40 CFR 1508.7).

For the purposes of this EA, significant cumulative impacts would occur if incremental effects of implementing the proposed action at RRAD, added to the environmental impacts of past, present, and reasonably foreseeable actions, exceeded significance thresholds for resources at an installation and the surrounding region. Projects at RRAD that have been completed or are at various stages of completion or planning include a maneuver systems sustainment center, body painting and repair buildings, an emergency water supply tank, a general purpose warehouse, and improvements to four existing, unimproved open storage areas. The analysis in the EA indicates that the proposed action would be expected to have a short- or long-term minor adverse effect on the following resource areas: air quality, noise, soils, surface water, vegetation and wildlife, traffic and transportation, utilities, and hazardous and toxic substances. Because the proposed action would have primarily a localized effect on noise, soils, traffic and transportation, and hazardous and toxic substances, no cumulative effects on these resource areas would be expected. The resource areas with the potential for regional cumulative effects are air quality, surface water, and utilities.

Air Quality. The State of Texas takes into account the effects of all past, present, and reasonably foreseeable emissions during the development of the state implementation plan. The state accounts for all significant stationary, area, and mobile emission sources in the development of the plan. Estimated emissions generated by implementing the proposed action at RRAD would be *de minimis*. Therefore, it is understood that an action of this size would not contribute significantly to adverse cumulative effects to air quality.

Surface Water. By implementing BMPs specified in a construction BMP plan and a section 404 permit (if required), impacts on surface waters from the proposed action would be minimized and any cumulative effects on water quality would be short-term and minor.

Utilities. Long-term minor adverse cumulative effects would be expected on utilities—water, wastewater treatment, electricity, natural gas, and solid waste—from the increased demand associated with construction and operation of the DGRC at RRAD. All utilities have adequate

capacity to accommodate the proposed action at RRAD. Debris generated from relocating the DGRC to RRAD would result only from the construction, so the effect on landfill capacity would be short term. The cumulative effect on landfill capacity would be minor. The amount of waste disposed of in the landfills would be minimized through recycling.

4.3.14 Mitigation Summary

If the proposed action at RRAD would affect the stream and associated wetlands, if any, on the parcel, the Army would comply with the terms of a section 404 permit issued by USACE, including avoiding and minimizing impacts, and mitigating impacts as necessary. Applicable BMPs would be implemented before, during, and after construction and renovation for the proposed facility, as required under federal, state, and local regulations and Army policy.

4.4 RELOCATE THE DGRC TO TEAD (ALTERNATIVE D)

4.4.1 Land Use

No adverse effects on land use would be expected from relocating the DGRC to TEAD. The action would take place in industrial portions of the base and the adjacent commercial/industrial complex with several existing railroad tracks. The action would use existing buildings and add a limited amount of new track. The buildings that would support the DGRC functions are currently vacant, used for storage, or used to support functions similar to DGRC processes. Functions in buildings being proposed for the DGRC would be moved to other comparable buildings at TEAD. Use of the existing building and areas proposed for the DGRC would be consistent with current designated land uses.

4.4.2 Aesthetics and Visual Resources

No adverse effects on aesthetics and visual resources would be expected from relocating the DGRC to TEAD. The action would take place in an area with an industrial aesthetic and existing railroad tracks. The action would use existing buildings and any exterior renovations would not alter the buildings' current industrial aesthetic character. Segments of new track would be constructed in previously disturbed areas near existing railroad tracks and would not alter or conflict with the area's current industrial aesthetic.

4.4.3 Air Quality

As with alternative A, and for similar reasons, alternative D would have both short- and long-term minor adverse effects on air quality. Increases in emissions would be below the general conformity rule *de minimis* thresholds, would not exceed the GHG threshold in the draft CEQ guidance, and would not contribute to a violation of any federal, state, or local air regulation. Notably, Hill AFB and TEAD are both within AQCR 52. Therefore, the addition of operational emissions attributable to the DGRC at TEAD would be countered by a similar reduction in operational emissions at Hill AFB.

All emissions of criteria pollutants and GHGs and their effects would be similar to those outlined under alternative A; however, they would be at the proposed DGRC site at TEAD. There would be some amount of air emissions from construction activities, such as fugitive dust and construction equipment, and day labor commutes. These sources of emissions would be small, temporary, and end with the construction phase. There would be some operational sources of air emissions.

TEAD is within a region EPA has designated as being in nonattainment for $PM_{2.5;}$ therefore, the total direct and indirect emission from alternative D, including both construction and operational emissions have been compared to the *de minimis* thresholds to determine if the general conformity rule applies (Table 4-14) (USEPA 2016a). Construction emissions were estimated for

fugitive dust, on- and off-road diesel equipment and vehicles, worker trips, and paving off-gasses; operational emissions would be the same as for the other alternatives. The total direct and indirect emissions from alternative D would be below the *de minimis* thresholds; therefore, the general conformity rule would not apply and the level of effects would be minor. Detailed emissions calculations and a RONA are provided in Appendix B. The effects would be minor.

Table 4-14. DGRC Emissions Compared to *de minimis* Thresholds—TEAD

Activity/Source	CO	NO_x	VOC	SO_x	PM_{10}	$PM_{2.5}$	*de minimis* Threshold [tpy]	Exceeds *De Minimis* Thresholds? [Yes/No]
Construction	2.5	3.7	0.5	0.0	1.5	0.3	100	No
Operations	<0.1	<0.1	2.4	<0.1	<0.1	<0.1	100	No

For purposes of analysis, it was assumed that all construction activities would be compressed into one 12-month period. Therefore, regardless of the ultimate implementation schedule, annual emissions would be less than those specified herein. Small changes in facilities site and ultimate design, and moderate changes in quantity and types of equipment used would not substantially change these emission estimates, and would not change the determination under the general conformity rule or level of effects under NEPA.

Permitting requirements and BMPs would be similar to those outlined under alternative A. Construction would proceed in full compliance with current UDEQ requirements, with compliant practices and/or products. UDEQ requirements include the following:

- Permissible open burning (19-2-114)
- Prohibition of particulate matter (19-2-102)

This listing is not all-inclusive; the DoD and any contractors involved in the proposed project would comply with all applicable air pollution control regulations.

4.4.4 Noise

As with alternative A, and for similar reasons, alternative D would have both short- and long-term minor adverse effects on the noise environment. The effects would be identical to those outlined for alternative A; however, they would be at the proposed DGRC site at TEAD. Short-term increases in noise would be caused by construction activities. Long-term increases in noise would be the result of minor changes in traffic patterns and the periodic testing of generators and engines. Those effects would not result in the violation of applicable federal, state, or local noise regulation, or create appreciable areas of incompatible land use.

There are no NSAs within 800 feet of the proposed DGRC. Because of the limited and temporary use of heavy equipment during construction, the limited testing of locomotives and generators, and the distance to the nearest NSA, short- and long-term effects would be minor.

4.4.5 Geology and Soils

Short-term minor adverse effects on soils would be expected from implementing alternative D. No adverse effects on geology and topography would be expected. Soil disturbance would result from installing railroad track near buildings 541 and 594. Grading and filling also would occur, and those activities could result in soil erosion. If ground-disturbing activities affect more than 1 acre, coverage under the Utah Pollutant Discharge System storm water permit (no. UTR000175) might

be required. However, construction projects between 1 and less than 5 acres (i.e., small construction sites) might qualify for a waiver from the permit based on low erosivity at the site. If the site does not qualify, the construction operator would be required to implement and maintain effective erosion and sediment control in accordance with a construction BMP plan. The plan would specify the state-approved BMPs for erosion control and sediment retention to be used during construction, referencing the TEAD SWPPP. Soil erosion would be minimized through compliance with those requirements and implementation of the BMP plan. After soil-disturbing activities are completed, a suitable cover would be established to minimize postconstruction erosion and to eliminate any long-term effects on soils.

4.4.6 Water Resources

No adverse effects on water resources would be expected to result from implementing the proposed action at TEAD. No surface water resources, floodplains, or wetlands are located on or near the parcels proposed to be used for DGRC facilities. No effects on groundwater would be expected.

4.4.7 Biological Resources

No adverse effects on biological resources would be expected from relocating the DGRC to TEAD. The primarily developed areas proposed for the DGRC at TEAD have limited potential for supporting native vegetation and wildlife, and no protected species would be expected to be found in the areas.

4.4.8 Cultural Resources

No effects on cultural resources would be expected. Buildings 507, 541, 594, 687, and 1225 have been determined to be ineligible for listing on the NRHP.

The proposed location has been previously surveyed for both architectural and archaeological resources; no cultural resources that are eligible for or listed on the NRHP are located in the proposed project area. Further, proposed rail construction would take place on previously disturbed ground. Therefore, the proposed action would not impact any historic resources.

Although the proposed action would not affect any known archaeological sites, there is the possibility that previously unrecorded archaeological deposits and sites could be encountered during construction. If so, then the inadvertent discovery provisions of the TEAD ICRMP will be followed.

4.4.9 Socioeconomics

4.4.9.1 Economic Impacts

IMPLAN economic model. A quantitative projection of economic effects on the ROI (i.e., Tooele County, Utah) from the proposed action was developed using the IMPLAN model. See section 4.1.9.1 for background information on the IMPLAN model.

For the proposed action, annual impacts were calculated for the estimated 1-year construction and renovation period, and then for the first year of operation at full employment. The input variables for the IMPLAN model are listed in Table 4-15. For modeling purposes, the estimated construction and renovation cost of about $1.9 million was entered into the IMPLAN model as the construction industry change for 1 year (the IMPLAN model is designed to evaluate on an annual basis). Operational employment of 30 jobs represents the estimated maximum number of direct jobs that could be generated by the proposed DGRC facility at TEAD. To assess the maximum possible impact to the ROI, it is assumed that these jobs would be filled by workers who would move into the ROI.

Table 4-15. IMPLAN Model Input—TEAD

Input Variable	
Construction and Renovation Cost	$1,900,000
Operational Employment	30

Construction impacts on employment, industry, and income. Short-term minor beneficial economic effects would be expected. The estimated cost expenditures associated with the proposed construction and renovation for the DGRC at TEAD would result in a minor increase in regional employment, income, value added, and output, as determined by the IMPLAN model (Table 4-16). The economic benefits of construction would be short-term and diminish as the project reaches completion. The project is estimated to employ about 13 direct workers during peak construction and generate additional indirect and induced employment in associated sectors. Total employment (direct, indirect, and induced) created during the construction phase is estimated to be about 17 jobs, with the wholesale trade, truck transportation, architectural and engineering and related services, and commercial and industrial machinery equipment rental and leasing businesses generating most of the indirect jobs. Food, retail, and health services would generate most of the induced jobs. The estimated increases in employment, labor income, and output from the proposed project would be minor (less than 1 percent) relative to the ROI's baseline economy and workforce.

Table 4-16. IMPLAN Model Output—TEAD, Construction Economic Impacts

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	13	$764,781	$1,080,153	$1,900,000
Indirect Effect	1	$31,409	$46,017	$94,651
Induced Effect	3	$65,732	$158,201	$291,298
Total Effect	17	$861,922	$1,284,371	$2,285,949

Source: IMPLAN model.

Operations impacts on employment, industry, and income. Long-term minor beneficial economic effects would be expected. IMPLAN's estimated increase in the economic variables listed in Table 4-17 would be minor relative to the ROI's baseline economy. It is estimated that the operation of the proposed DGRC at TEAD would create about 30 direct jobs, and a total of about 37 jobs (direct, indirect and induced jobs). The majority of the indirect and induced jobs would be in the wholesale trade; services to buildings; and food, health, and retail service sectors. Employment, labor income, and output would increase by less than 1 percent of the ROI's baseline employment, labor income, and output.

Table 4-17. IMPLAN Model Output—TEAD, Operation Economic Impacts

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	30	$1,207,764	$2,072,916	$3,267,156
Indirect Effect	2	$62,796	$121,278	$244,617
Induced Effect	5	$105,092	$253,006	$465,785
Total Effect	37	$1,375,652	$2,447,200	$3,977,558

Source: IMPLAN model.

4.4.9.2 Population

No adverse effects from population change would be expected. To evaluate the potential maximum effect of the proposed action, it was assumed that the 30 DGRC employees would move into the ROI. Using the U.S. average household size of 2.63 (U.S. Census Bureau 2015), the estimated total increase in population would be about 80 persons, a minor increase (less than 1 percent) compared to the ROI baseline population of about 62,950.

4.4.9.3 Housing

No adverse effects on housing would be expected from implementing the proposed action. The proposed action would create a demand for 30 additional housing units in the ROI (assuming one housing unit per employee). The ROI would have sufficient housing units (see section 3.5.9.2, Housing) to accommodate the incoming population and the proposed action would not create a housing shortage.

4.4.9.4 Law Enforcement, Fire Protection, and Medical Services

No adverse effects on emergency services would be expected from implementing the proposed action.

4.4.9.5 Schools

No adverse effects on schools would be expected. To evaluate the potential maximum effect of the proposed action, it was assumed that the 30 DGRC employees would move into the ROI, representing 30 new households. Based on about one-third of U.S. households having one or more children (persons under the age of 18) and an average of 1.8 children per family, relocating the DGRC at TEAD would result in an estimated increase of about 20 children in the ROI (U.S. Census Bureau 2015, 2016c). This would be a minor increase (less than 1 percent) compared to the ROI baseline school enrollment of more than 14,000 students.

4.4.9.6 Environmental Justice

No adverse effects on environmental justice would be expected from implementing the proposed action. Constructing and operating the DGRC on TEAD would not result in disproportionate adverse environmental or health effects on low-income or minority populations. It is not an action with the potential to substantially affect human health or the environment by excluding persons, denying persons' benefits, or subjecting persons to discrimination or disproportionately high environmental health or safety risks. There are no residential or commercial areas adjacent to or near the proposed DGRC facilities.

4.4.9.7 Protection of Children

No adverse effects would be expected. The proposed DGRC on TEAD would be located within the depot's secure boundary. There are no homes or other types of facilities where children are typically present (e.g., day care centers, schools, churches, libraries, shopping centers) adjacent to or near the proposed DGRC facilities. Implementing the proposed action would not result in environmental health or safety risks that might disproportionately affect children.

4.4.10 Traffic and Transportation

As with alternative A, and for similar reasons, alternative D would have both short- and long-term minor adverse effects on traffic and transportation. The effects would be similar to those outlined in alternative A; however, they would be at the proposed DGRC site at TEAD. Short-term effects would be caused by additional vehicles and day-labor traffic during construction. Long-term effects would be the result of minor increases in vehicular traffic and rail activity from the operation of the DGRC facilities. Alternative D would have no appreciable effect on air traffic or public transportation.

Construction. Construction activities would have short-term minor adverse effects on transportation and traffic. These effects would be primarily the result of worker commutes and delivery of equipment and materials to and from the proposed DGRC sites. Congestion might increase in the immediate area as a result of additional vehicles and traffic delays near the site. In addition, road closures or detours to accommodate utility system work could be expected. Those effects would be temporary and would end with the construction phase. The existing transportation infrastructure would be sufficient to support the increase in vehicle traffic. Although the effects would be minor, contractors would route and schedule construction vehicles to minimize conflicts with other traffic, and strategically locate staging areas to minimize traffic impacts. All construction vehicles would be equipped with backing alarms, two-way radios, and slow-moving vehicle signs when appropriate.

On-post roadways, gate traffic, and parking. The DGRC would introduce a small number of additional vehicles onto nearby roadways (approximately 30). Direct effects associated with the additional localized traffic would include a minute increase in daily and peak period traffic volumes on roadways and at intersections adjacent to the site and at the installation gates. The proposed DGRC would generate an increase of 72 vehicle trips per day from DGRC workers, most of which would occur during peak traffic periods (ITE 2003). In general, this would correspond to an incremental increase in the miles traveled on-post and a small net increase to on-post traffic. It is not expected that traffic at any gate would change substantially. The project is currently in the preliminary design stage, and in the final design stage, adequate parking would be provided. The effects would be minor.

Off-post roadways. The small net increase of personnel would constitute a corresponding increase of approximately 72 vehicle trips per day either originating at or bound for the installation (ITE 2003). Many of these trips would occur at peak periods and would account for some small amount of off-post traffic. This would constitute a minute change in off-post traffic, but not appreciably affect any nearby roadways or intersections. The effects would be negligible.

Rail. Alternative D would introduce approximately three locomotives both bound for and leaving from the DGRC every year for servicing. In addition, as many as three generators per year could be transported to and from the DGRC by rail. This would constitute a minute increase in the rail traffic at the installation and would be barely perceptible compared to existing conditions. In general, the existing rail infrastructure at the installation meets the requirements outlined in Table 2-1 and is sufficient to support DGRC operations. There would be construction of approximately

1,700 linear feet of railroad that would serve buildings 507, 541, and 594 to support the DGRC. The effects would be minor.

4.4.11 Utilities

4.4.11.1 Potable Supply

Long-term minor adverse effects on water supply would be anticipated from relocating the DGRC operations to TEAD. Current DGRC operations use about 4,500 gallons of water per day, and a similar amount would be expected to be used at TEAD. That amount would result in a slight increase in demand; however, TEAD's recent water demand was approximately 0.33 mgd of the approximate 1.4 mgd of available capacity.

4.4.11.2 Wastewater

Long-term minor adverse effects on wastewater treatment would be anticipated from relocating DGRC operations to TEAD. The Tooele City WRF has approximately 1.4 mgd of available capacity. Current DGRC operations generate about 3,150 gallons of wastewater per day. A similar amount of wastewater would be expected to be generated at TEAD. Wastewater would be treated at the WRF, which would result in a slight decrease of available treatment capacity. Such increases in wastewater would need to be approved by the WRF before coming online.

4.4.11.3 Electricity

Long-term minor adverse effects would be expected from increased energy use during DGRC operations. The capacity of the existing electric transmission system is expected to be sufficient to meet the needs of the proposed action. Where possible, adverse effects would be offset by installing electrical fixtures in compliance with the Energy Policy Act of 2005, which has goals for increased use of renewable energy sources, advanced utility monitoring, and procurement of energy-efficient equipment and building systems.

4.4.11.4 Natural Gas

Long-term minor adverse effects would be expected from increased usage of natural gas during DGRC operations. The capacity of the existing natural gas distribution system would be expected to be sufficient to meet the needs of the proposed action.

4.4.11.5 Stormwater

No effects on the stormwater system would be expected from relocating the DGRC to TEAD. Existing facilities at TEAD would be used to house DGRC's operations, resulting in minimal increase in impervious area. However, should an increase occur, stormwater would be managed in accordance with TEAD's stormwater management plans and in accordance with the EISA. See section 4.1.11.5 for information on EISA management requirements.

4.4.11.6 Solid Waste

Long-term minor adverse effects on solid waste would be expected from relocating the DGRC to TEAD. The effects would result from adding debris from construction and renovation to the landfill. It is estimated that construction would consist of an approximately 2,085-sq-ft office and breakroom in building 594 and approximately 24,150 sq ft of roof/flooring renovations at building 507, which could generate approximately 138 tons of construction and renovation debris (Table 4-18). About 50 percent of the generated debris would be recycled, which would result in about 69 tons of nonhazardous debris for disposal in the Tooele County Landfill. Minimal waste would be expected from operating the DGRC and, where possible, that waste also would be recycled.

Table 4-18. Summary of Construction and Demolition Debris

	Type	Debris Generation Rate (lb/sq ft)	Debris Generated (tons)	Quantity Recycled (50%) (tons)	Total Quantity Disposed of in Landfill (tons)
Construction					
2,085 sq ft	Nonresidential	4.4	4.6	2.3	2.3
Renovation					
24,150 sq ft	Nonresidential	11	133	66.5	66.5
Total			137.6	68.8	68.8

Source: USEPA 2003 and TEAD undated.
Notes: lb = pound; sq ft = square feet/square foot.

4.4.12 Hazardous and Toxic Substances

Negligible-to-minor adverse effects on hazardous and toxic substances would be expected from relocating the DGRC to TEAD. As described in Table 1-2, operating the DGRC includes several processes that use hazardous substances and/or generate regulated waste (e.g., solvents, fuel, oil, lubricants, asbestos, paint, and batteries). Similar operations and management of hazardous substances would be expected at TEAD.

Construction activities would use petroleum products and hazardous materials and generate wastes, including hazardous wastes. Construction contractors would be responsible for maintaining compliance and preventing spills by implementing proper storage and handling procedures and by following installation procedures. If a spill did occur, the contractors would be responsible for responding to it and cleaning it up, in consultation with installation personnel.

Construction would require ground disturbance in the vicinity of SWMU and IRP sites. Construction would not involve access to or withdrawal of groundwater within the groundwater management area affected by TEAD-101, so the proposed action would not conflict with off-base groundwater controls. TEAD environmental staff would be contacted for guidance and to obtain necessary authorization before ground-disturbing activities occur that might expose workers to contaminated soil or groundwater. If unknown contamination is encountered during construction activities, work in that area would cease and TEAD environmental staff would be notified to determine appropriate management procedures.

Relocating the DGRC to TEAD would result in a long-term increase in the use of hazardous materials and generation and disposal of larger quantities of wastes, including hazardous wastes, at TEAD. The Army follows strict SOPs for managing hazardous materials and waste; therefore, no new procedures would need to be implemented. All hazardous materials and waste would be handled and managed in accordance with local, state, and federal regulations and in accordance with established installation procedures.

4.4.13 Cumulative Effects Summary

CEQ regulations implementing NEPA define a *cumulative impact* as follows:

> Cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable 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 (40 CFR 1508.7).

For the purposes of this EA, significant cumulative impacts would occur if incremental effects of implementing the proposed action at TEAD, added to the environmental impacts of past, present, and reasonably foreseeable actions, exceeded significance thresholds for resources at an installation and the surrounding region. The TEAD area development plan prepared in 2015 identifies near-term and midterm (1–6 years) projects that include a new water storage tank and supply lines, natural gas line extension, warehouse renovations, railroad upgrades, road and access control point improvements, and a wind turbine. The analysis in the EA indicates that the proposed action would be expected to have a short- or long-term minor adverse effect on the following resource areas: air quality, noise, soils, traffic and transportation, utilities, and hazardous and toxic substances. Because the proposed action would have primarily a localized effect on noise, soils, traffic and transportation, and hazardous and toxic substances, no cumulative effects on these resource areas would be expected. The resource areas with the potential for regional cumulative effects are air quality and utilities.

Air Quality. The State of Utah takes into account the effects of all past, present, and reasonably foreseeable emissions during the development of the state implementation plan. The state accounts for all significant stationary, area, and mobile emission sources in the development of the plan. Estimated emissions generated by implementing the proposed action at TEAD would be *de minimis*. Therefore, it is understood that an action of this size would not contribute significantly to adverse cumulative effects to air quality. Notably, DGRC operational emissions at TEAD would be offset by a similar reduction in operational emissions at Hill AFB.

Utilities. Long-term minor adverse cumulative effects would be expected on utilities—water, wastewater treatment, electricity, natural gas, and solid waste—from the increased demand associated with construction and operation of the DGRC at TEAD. All utilities at the installation have adequate capacity to accommodate the proposed action. Demand on local landfills would occur primarily during construction and renovation, after which the demand would be minimal. The cumulative effect on the landfill, therefore, would be minor. The amount of waste disposed of in the landfill would be minimized through recycling.

4.4.14 Mitigation Summary

No mitigation measures associated with the relocation of the DGRC to TEAD were identified. BMPs would be implemented before, during, and after construction and renovation of proposed facilities and project areas as required under federal, state, and local regulations and Army policy.

4.5 No Action Alternative

Under the No Action Alternative, the Army would not relocate the DGRC from Hill AFB to ANAD, MCAAP, RRAD, TEAD, or any other Army OIB installation. There would be no facility construction, renovation, or demolition or operation of the DGRC at any of the proposed alternatives, which would result in no effects on the resource areas analyzed in this document. Baseline conditions at each installation would remain the same.

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SECTION 5.0 FINDINGS AND CONCLUSIONS

This EA has been prepared to evaluate the potential effects on the natural and human environment from activities associated with implementing the proposed action, which is the relocation of the DGRC to one of four Army OIB installations: ANAD, MCAAP, RRAD, or TEAD. It also examined the No Action Alternative for the proposed relocation of the DGRC.

5.1 FINDINGS

The predicted effects of implementing the proposed action on environmental resource areas at ANAD, MCAAP, RRAD, and TEAD are briefly described in Tables 5-1 through 5-4, respectively. Each table provides a summary and comparison of the effects of implementing the proposed action versus the No Action Alternative. Table 5-5 compares the effects of implementing the proposed action on each installation together. The No Action Alternative is not included in Table 5-5 because no adverse effects on the environment and socioeconomics at any installation are anticipated.

When comparing implementing the proposed action at each installation, the effects are the same for all resource areas except for surface water, wetlands, vegetation, and wildlife resource areas at RRAD. Long-term minor adverse effects on surface water, vegetation, and wildlife resource areas would be expected at RRAD because the proposed site at RRAD is undeveloped. Additionally, long-term minor to moderate adverse effects on wetlands would be expected if wetlands are identified at the RRAD site.

For each installation, short- and long-term minor adverse effects would be expected on air quality, noise, and traffic and transportation. Short-term minor adverse effects on soils would be expected and long-term minor adverse effects would be expected on hazardous and toxic substances and utilities, except for stormwater where no effects are anticipated. Further, cumulative effects from implementing the proposed action at any location would not significantly impact the physical and socioeconomic environment.

Implementing the proposed action at any installation would not be expected to result in significant adverse environmental impacts. Preparation of an EIS, therefore, is not anticipated, and a draft FNSI will be available for review in accordance with 32 CFR Part 651, *Environmental Effects of Army Actions,* and NEPA (42 U.S.C. §§ 4321–4347).

5.2 MITIGATION MEASURES

This EA does not identify mitigation measures associated with implementing the proposed action at ANAD, MCAAP, or TEAD.

An intermittent stream and, if present, wetlands could be affected by implementing the proposed action at RRAD. The Army would comply with the requirements and conditions of a section 404 permit from USACE in the event that the proposed action at RRAD would require one. BMPs would be implemented before, during, and after construction as required under federal, state, and local regulations and Army policy.

5.3 CONCLUSION

Based on the findings of the assessment, implementing the proposed action at any installation—ANAD, MCAAP, RRAD, or TEAD—would not be expected to have any significant adverse effects on the natural or human environment.

Table 5-1. Summary of Potential Environmental and Socioeconomic Consequences of Relocating the DGRC to ANAD (Alternative A)

	Environmental and Socioeconomic Effects	
Resource	**Alternative A**	**No Action Alternative**
Land Use	No effect	No effect
Aesthetics and Visual Resources	No effect	No effect
Air Quality	Short- and long-term minor adverse	No effect
Noise	Short- and long-term minor adverse	No effect
Geology and Soils		
Geology/Topography	No effect	No effect
Soils	Short-term minor adverse	No effect
Water Resources		
Groundwater	No effect	No effect
Surface water	No effect	No effect
Wetlands	No effect	No effect
Floodplains	No effect	No effect
Biological Resources		
Vegetation	No effect	No effect
Wildlife	No effect	No effect
Threatened and Endangered Species	No effect	No effect
Cultural Resources	No effect	No effect
Socioeconomics		
Construction Impacts on Employment, Industry, and Income	Short-term minor beneficial	No effect
Operations Impacts on Employment, Industry, and Income	Long-term minor beneficial	No effect
Population	No effect	No effect
Housing	No effect	No effect
Law Enforcement, Fire Protection, and Medical Services	No effect	No effect
Schools	No effect	No effect
Environmental Justice	No effect	No effect
Protection of Children	No effect	No effect
Traffic and Transportation	Short- and long-term minor adverse	No effect
Utilities		
Water/Wastewater	Long-term minor adverse	No effect
Electricity	Long-term minor adverse	No effect
Natural Gas	Long-term minor adverse	No effect
Stormwater	No effect	No effect
Solid Waste	Long-term minor adverse	No effect
Hazardous and Toxic Substances	Long-term minor adverse	No effect

Table 5-2. Summary of Potential Environmental and Socioeconomic Consequences of Relocating the DGRC to MCAAP (Alternative B)

	Environmental and Socioeconomic Effects	
Resource	**Alternative B**	**No Action Alternative**
Land Use	No effect	No effect
Aesthetics and Visual Resources	No effect	No effect
Air Quality	Short- and long-term minor adverse	No effect
Noise	Short- and long-term minor adverse	No effect
Geology and Soils		
Geology/Topography	No effect	No effect
Soils	Short-term minor adverse	No effect
Water Resources		
Groundwater	No effect	No effect
Surface water	No effect	No effect
Wetlands	No effect	No effect
Floodplains	No effect	No effect
Biological Resources		
Vegetation	No effect	No effect
Wildlife	No effect	No effect
Threatened and Endangered Species	No effect	No effect
Cultural Resources	No effect	No effect
Socioeconomics		
Construction Impacts on Employment, Industry, and Income	Short-term minor beneficial	No effect
Operations Impacts on Employment, Industry, and Income	Long-term minor beneficial	No effect
Population	No effect	No effect
Housing	No effect	No effect
Law Enforcement, Fire Protection, and Medical Services	No effect	No effect
Schools	No effect	No effect
Environmental Justice	No effect	No effect
Protection of Children	No effect	No effect
Traffic and Transportation	Short- and long-term minor adverse	No effect
Utilities		
Water/Wastewater	Long-term minor adverse	No effect
Electricity	Long-term minor adverse	No effect
Natural Gas	Long-term minor adverse	No effect
Stormwater	No effect	No effect
Solid Waste	Long-term minor adverse	No effect
Hazardous and Toxic Substances	Long-term minor adverse	No effect

Table 5-3. Summary of Potential Environmental and Socioeconomic Consequences of Relocating the DGRC to RRAD (Alternative C)

	Environmental and Socioeconomic Effects	
Resource	**Alternative C**	**No Action Alternative**
Land Use	No effect	No effect
Aesthetics and Visual Resources	No effect	No effect
Air Quality	Short- and long-term minor adverse	No effect
Noise	Short- and long-term minor adverse	No effect
Geology and Soils		
Geology/Topography	No effect	No effect
Soils	Short-term minor adverse	No effect
Water Resources		
Groundwater	No effect	No effect
Surface water	Long-term minor adverse	No effect
Wetlands	Long-term minor to moderate adverse**[a]	No effect
Floodplains	No effect	No effect
Biological Resources		
Vegetation	Long-term minor adverse	No effect
Wildlife	Long-term minor adverse	No effect
Threatened and Endangered Species	No effect	No effect
Cultural Resources	No effect	No effect
Socioeconomics		
Construction Impacts on Employment, Industry, and Income	Short-term minor beneficial	No effect
Operations Impacts on Employment, Industry, and Income	Long-term minor beneficial	No effect
Population	No effect	No effect
Housing	No effect	No effect
Law Enforcement, Fire Protection, and Medical Services	No effect	No effect
Schools	No effect	No effect
Environmental Justice	No effect	No effect
Protection of Children	No effect	No effect
Traffic and Transportation	Short- and long-term minor adverse	No effect
Utilities		
Water/Wastewater	Long-term minor adverse	No effect
Electricity	Long-term minor adverse	No effect
Natural Gas	Long-term minor adverse	No effect
Stormwater	No effect	No effect
Solid Waste	Long-term minor adverse	No effect
Hazardous and Toxic Substances	Long-term minor adverse	No effect

Note:
a. RRAD might require a wetlands delineation of the proposed site before construction.

Table 5-4. Summary of Potential Environmental and Socioeconomic Consequences of Relocating the DGRC to TEAD (Alternative D)

	Environmental and Socioeconomic Effects	
Resource	**Alternative D**	**No Action Alternative**
Land Use	No effect	No effect
Aesthetics and Visual Resources	No effect	No effect
Air Quality	Short- and long-term minor adverse	No effect
Noise	Short- and long-term minor adverse	No effect
Geology and Soils		
Geology/Topography	No effect	No effect
Soils	Short-term minor adverse	No effect
Water Resources		
Groundwater	No effect	No effect
Surface water	No effect	No effect
Wetlands	No effect	No effect
Floodplains	No effect	No effect
Biological Resources		
Vegetation	No effect	No effect
Wildlife	No effect	No effect
Threatened and Endangered Species	No effect	No effect
Cultural Resources	No effect	No effect
Socioeconomics		
Construction Impacts on Employment, Industry, and Income	Short-term minor beneficial	No effect
Operations Impacts on Employment, Industry, and Income	Long-term minor beneficial	No effect
Population	No effect	No effect
Housing	No effect	No effect
Law Enforcement, Fire Protection, and Medical Services	No effect	No effect
Schools	No effect	No effect
Environmental Justice	No effect	No effect
Protection of Children	No effect	No effect
Traffic and Transportation	Short- and long-term minor adverse	No effect
Utilities		
Water/Wastewater	Long-term minor adverse	No effect
Electricity	Long-term minor adverse	No effect
Natural Gas	Long-term minor adverse	No effect
Stormwater	No effect	No effect
Solid Waste	Long-term minor adverse	No effect
Hazardous and Toxic Substances	Long-term minor adverse	No effect

Table 5-5. Alternative Comparisons: Summary of Potential Environmental and Socioeconomic Consequences

	Environmental and Socioeconomic Effects			
Resource	**Alternative A (ANAD)**	**Alternative B (MCAAP)**	**Alternative C (RRAD)**	**Alternative D (TEAD)**
Land Use	No effect	No effect	No effect	No effect
Aesthetics and Visual Resources	No effect	No effect	No effect	No effect
Air Quality	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse
Noise	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse
Geology and Soils				
• Geology/Topography	No effect	No effect	No effect	No effect
• Soils	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse
Water Resources				
• Groundwater	No effect	No effect	No effect	No effect
• Surface water	No effect	No effect	Long-term minor adverse	No effect
• Wetlands	No effect	No effect	Long-term minor to moderate adverse [b]	No effect
• Floodplains	No effect	No effect	No effect	No effect
Biological Resources				
• Vegetation	No effect	No effect	Long-term minor adverse	No effect
• Wildlife	No effect	No effect	Long-term minor adverse	No effect
• Threatened and Endangered species	No effect	No effect	No effect	No effect
Cultural Resources	No effect[a]	No effect	No effect	No effect
Socioeconomics				
• Construction Impacts on Employment, Industry, and Income	Short-term minor beneficial	Short-term minor beneficial	Short-term minor beneficial	Short-term minor beneficial
• Operations Impacts on Employment, Industry, and Income	Long-term minor beneficial	Long-term minor beneficial	Long-term minor beneficial	Long-term minor beneficial
• Population	No effect	No effect	No effect	No effect
• Housing	No effect	No effect	No effect	No effect
• Law Enforcement, Fire Protection, and Medical Services	No effect	No effect	No effect	No effect
• Schools	No effect	No effect	No effect	No effect
• Environmental Justice	No effect	No effect	No effect	No effect
• Protection of Children	No effect	No effect	No effect	No effect
Traffic and Transportation	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse

Table 5-5. Alternative Comparisons: Summary of Potential Environmental and Socioeconomic Consequences (continued)

	Environmental and Socioeconomic Effects			
Resource	**Alternative A (ANAD)**	**Alternative B (MCAAP)**	**Alternative C (RRAD)**	**Alternative D (TEAD)**
Utilities				
• Water/Wastewater	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse
• Electricity	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse
• Natural Gas	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse
• Stormwater	No effect	No effect	No effect	No effect
• Solid Waste	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse
Hazardous and Toxic Substances	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse

Notes:
a. A new MOA between ANAD and the Alabama SHPO is under development and will include stipulations similar to the expired agreement.
b. RRAD might require a wetlands delineation of the proposed site before construction.

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Wolfe, Mark, Executive Director, Texas State Historic Preservation Office. 2014, August 21.Texas SHPO response letter to Dennis K. Kuykendall, Cultural Resources Manager, Department of the Army, Red River Army Depot.

SECTION 7.0 PERSONS CONSULTED

ANAD

Brad Williard, PE, Chief, Environmental and Restoration Division Directorate of Risk Management

Brett Burford, GIS Manager

Glenn Milner, Environmental Engineer, Directorate of Risk Management

Len Hearron, Master Planner

MCAAP

Clayton R. Johnson, Master Planner

Harry W. Jackson, Facility Electrical Engineer

Traci McMurtrey, Environmental Protection Specialist

RRAD

Josh Meadows, Chief, Facilities Master Planning Branch

Ross Ramsauer, Chief, Environmental Division

TEAD

Nicholas Montgomery, Environmental Engineer

Roland Howard, Engineering Technician

Hill AFB/DGRC

Billy Funderburg, Division Chief Generator & Rail Center

Kregg Knight, Chief, Industrial Management Section DGRC

Sam Johnson, NEPA Manager, 75th CEG/CEIEA

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SECTION 8.0 LIST OF PREPARERS

Emmy Andrews, Tetra Tech, Inc.
M.S., Environmental Management, University of San Francisco
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Years of Experience: 12

Michelle Cannella, Tetra Tech, Inc.
B.S., Mineral Economics, Penn State University
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B.S., Environmental Resource Management, Virginia Tech
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M.A., Historic Preservation, Middle Tennessee State University
B.Arch, University of Tennessee, Knoxville
Years of Experience: 24

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M.S., Civil and Environmental Engineering, Tufts University
B.S., Mechanical Engineering, Northeastern University
Years of Experience: 27

Sam Pett, Tetra Tech, Inc.
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B.S., Wildlife Biology and Zoology, Michigan State University
Years of Experience: 24

Jackie Tyson, New South Associates
M.H.P., Historic Preservation, University of Kentucky
B.A., Anthropology, Georgia State University
Years of Experience: 12

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SECTION 9.0 DISTRIBUTION LIST

ANAD

Agencies

U.S. Environmental Protection Agency Region 4, Office of Environmental Assessment, Atlanta, GA

U.S. Fish and Wildlife Service, Ecological Services Division, Daphne, AL

Alabama Department of Conservation and Natural Resources, Alabama Division of Wildlife and Freshwater Fisheries, Montgomery, AL

Alabama Department of Environmental Management, Montgomery, AL

Alabama State Commission State Historic Preservation Office, Montgomery, AL

Native American Tribes

Absentee Shawnee Tribe Oklahoma

Alabama-Coushatta Tribe of Texas

Alabama-Quassarte Tribal Town of the Creek Nation of Oklahoma

Cherokee Nation of Oklahoma

Chickasaw Nation

Choctaw Nation of Oklahoma

Coushatta Tribe of Louisiana

Eastern Band of Cherokee Indians

Eastern Shawnee Tribe of Oklahoma

Jena Band of Choctaw Indians

Kialegee Tribal Town of the Creek Nation of Oklahoma

Miccosukee Tribe of Indians of Florida

Mississippi Band of Choctaw Indians

Muskogee (Creek) Nation of Oklahoma

Poarch Band of Creek Indians

Seminole Nation of Oklahoma

Seminole Tribe of Florida

Shawnee Tribe

Thlopthlocco Tribal Town

Tunica-Biloxi Indian Tribe of Louisiana

United Keetoowah Band of Cherokee Indians in Oklahoma

Library

Public Library of Anniston-Calhoun County

MCAAP

Agencies

U.S. Environmental Protection Agency Region 6, Dallas, TX

U.S. Fish and Wildlife Service, Oklahoma Ecological Services Field Office, Tulsa, OK

Oklahoma Department of Wildlife Conservation, Oklahoma City, OK

Oklahoma State Commission State Historic Preservation Office, Oklahoma City, OK

Native American Tribes

Choctaw Nation of Oklahoma (duplicate)

Chickasaw Nation (duplicate)

Caddo Indian Tribe

Quapaw Tribe of Oklahoma

Wichita and Affiliated Tribes

Library

McAlester Public Library

RRAD

Agencies

U.S. Environmental Protection Agency Region 6, Dallas, TX

U.S. Fish and Wildlife Service, Region 2, Arlington Field Office, Arlington, TX

Texas Historic Commission, Austin, TX

Texas Parks and Wildlife Department, Austin, TX

Texas Commission on Environmental Quality, Austin, TX

Native American Tribes

Caddo Indian Tribe (Duplicate)

Comanche Nation

Kiowa Tribe of Oklahoma

Wichita and Affiliated Tribes (Duplicate)

Library/Courthouse

Bowie County Clerk's Office

TEAD

Agencies

U.S. Environmental Protection Agency Region 8, Office of Environmental Assessment, Denver, CO

U.S. Fish and Wildlife Service, Utah Field Office, West Valley City, UT

Utah Department of Natural Resources, Salt Lake City, UT

Utah State Historic Preservation Office, Salt Lake City, UT

Native American Tribes

Confederated Tribes of Goshute Reservation

Crow Tribe of Montana

Duckwater Shoshone Tribe of the Duckwater Reservation

Ely Shoshone Tribe of Nevada

Hopi Tribe of Arizona

Navajo Nation, Arizona, New Mexico & Utah

Northwestern Band of Shoshone Nation

Paiute Indian Tribe of Utah

Eastern Shoshone Tribe of the Wind River Reservation, Wyoming

Shoshone-Bannock Tribes of the Fort Hall Reservation

Shoshone-Paiute Tribes of the Duck Valley Reservation, Nevada

Skull Valley Band of Goshute Indians of Utah

Te-Moak Tribe of Western Shoshone Indians of Nevada

Ute Indian Tribe of the Uintah & Ouray Reservation, Utah

Ute Mountain Tribe of the Ute Mountain Reservation, Colorado, New Mexico & Utah

Zuni Tribe of the Zuni Reservation, New Mexico

Library

Tooele City Public Library

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ACRONYMS AND ABBREVIATIONS

a.m.	ante meridian
ACHP	Advisory Council on Historic Preservation
ADEM	Alabama Department of Environmental Management
AFB	Air Force Base
ALA	Ammunition Limited Area
AMC	U.S. Army Materiel Command
AMSL	above mean sea level
ANAD	Anniston Army Depot
AOD	Anniston Ordnance Depot
APE	ammunition peculiar equipment
AQCR	air quality control region
AWWSB	Anniston Water Works and Sewer Board
BCC	birds of conservation concern
BMP	best management practice
BRAC	Base Realignment and Closure
CA	consultation agreement
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CITE	Center of Industrial and Technical Excellence
CO	carbon monoxide
CO_2	carbon dioxide
dB	decibel
dBA	A-weighted decibel
DES	Directorate of Emergency Services
DGRC	Defense Non-tactical Generator and Rail Equipment Center
DNL	day-night sound level
DoD	U.S. Department of Defense
DOT	U.S. Department of Transportation
EA	environmental assessment
EIS	environmental impact statement
EISA	Energy Independence and Security Act of 2007
EO	executive order
EPA	U.S. Environmental Protection Agency
EUL	enhanced use lease
FNSI	finding of no significant impact
FY	fiscal year
GHG	greenhouse gas
HABS	Historic American Buildings Survey
HAER	Historical American Engineering Record
HQ	headquarters
I	interstate
ICRMP	integrated cultural resources management plan
IMPLAN	Impact Analysis for Planning
IRP	Installation Restoration Program
ISO	International Organization for Standardization
IWTP	industrial waste treatment plant

JMC	Joint Munitions Command
kV	kilovolt
L_{eq}	equivalent sound level
MBTA	Migratory Bird Treaty Act
MBTu	one million British thermal units
MCAAP	McAlester Army Ammunition Plant
mgd	million gallons per day
MMRP	Military Munitions Response Program
MOA	Memorandum of Agreement
MVA	megavolt ampere
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NIC	Nichols Industrial Complex
NOI	notice of intent
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPS	National Park Service
NRHP	National Register of Historic Places
O_3	ozone
OIB	Organic Industrial Base
OSHA	U.S. Occupational Safety and Health Administration
p.m.	post meridian
PCP	pentachlorophenol
PCPI	per capita personal income
$PM_{2.5}$	particulate matter 2.5 microns
PM_{10}	particulate matter 10 microns
ppm	parts per million
ROI	region of influence
RONA	record of non-applicability
RRAD	Red River Army Depot
SHPO	state historic preservation office
SO_2	sulfur dioxide
SO_x	oxides of sulfur
STP	sewage treatment plant
SWMU	solid waste management unit
SWPPP	storm water pollution prevention plan
TAC	TexAmericas Center
TACOM	Tank and Automotive Command
TCE	trichloroethylene
TCP	traditional cultural property
TEAD	Tooele Army Depot
tpy	tons per year
U.S.	United States
U.S.C.	United States Code
UDOT	Utah Department of Transportation
UFC	Unified Facilities Criteria
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound

Appendix A Agency Coordination and Responses

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ANAD

Agency Coordination and Responses

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From: Laschet, Matthias [mailto:matthias_laschet@fws.gov]
Sent: Monday, June 13, 2016 4:29 PM
To: Pett, Sam <Sam.Pett@tetratech.com>
Subject: Species list for Anniston project

Mr. Pett

The following species could be found in your project area based on the information you provided to IPAC: Gray bat *(Myotis grisescens)* (E), Indiana bat *(Myotis sodalis)* (E), northern long-eared bat (*Myotis septentrionalis*) (T), Southern clubshell *(Pleurobema decisum)* (E), Pygmy sculpin (*Cottus paulus)* (T), Mohr's Barbara's buttons (*Marshallia mohrii)* (T), White fringeless orchid (*Platanthera integrilabia)* (C), Tennessee yellow-eyed grass *(Xyris tennesseensis)* (E).

Please contact me if you have any questions

--
Matt Laschet
Fish and Wildlife Biologist
U.S. Fish and Wildlife
1208 B Main Street
Daphne, AL 36526
251-441-5842

DEPARTMENT OF THE ARMY
ANNISTON ARMY DEPOT
7 FRANKFORD AVENUE
ANNISTON, ALABAMA 36201-4199

11 MAY 2016

Lisa D. Jones
Acting Executive Director
State Historic Preservation Officer
Alabama Historical Commission
468 South Perry Street
Montgomery, AL 36104

RE: National Historic Preservation Act Consultation for the Proposed Relocation of the Defense Non-Tactical Generator and Rail Equipment Center to Anniston Army Depot

Dear Mrs. Jones:

This letter is to initiate consultation under section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, for the proposed relocation of the Defense Non-Tactical Generator and Rail Equipment Center (DGRC) from Hill Air Force Base in Utah to an Army organic industrial base installation. The DGRC is the Department of the Army's sole provider of overhaul and repair services for military locomotives, rail cars, and power generators. The Army is preparing an environmental assessment (EA) in accordance with the National Environmental Policy Act and is concurrently assessing effects of the proposed project on cultural resources at four alternative locations: Anniston Army Depot, Alabama; McAlester Army Ammunition Plant, Oklahoma; Red River Army Depot, Texas; and Tooele Army Depot, Utah. One of the four alternative locations would be selected for the relocation of the DGRC.

The proposed locations for the Anniston Army Depot (ANAD) alternative are within the Nichols Industrial Complex and include buildings 117, 121, 130, 145, 147, 170, 459, and 474. The Army would accomplish relocation of the DGRC to ANAD through a combination of renovating existing facilities and new construction. Most of these buildings are currently used to support ongoing equipment rebuild functions and that would not change if the decision is made to relocate DGRC to ANAD. Where necessary, building renovations would include lighting, fire protection, electrical and ventilation upgrades, painting, and equipment improvements. At building 170, construction of concrete pits, removal and replacement of railroad track, and extension of a steam-cleaning waste line from building 520A would be expected. At field 9A, an approximately 20,000-square foot concrete hardstand, fencing, load bank electrical service, a 2,000-gallon diesel storage tank, and a 1,000-gallon waste storage tank and associated containment berm would be added.

The Nichols Industrial Complex has been determined to be eligible for the National Register of Historic Places. A memorandum of agreement (MOA) between the Alabama State Historic Preservation Office and ANAD was executed in February 2006 to mitigate ongoing projects taking place within the historic district. The MOA expired in February 2016. ANAD is currently working on a new agreement which covers the historic district and would extend the intent of the original MOA into the future. The expired MOA is attached for your reference. ANAD is looking forward to working with your office to finalize the new MOA in the near future.

In the meantime, ANAD acknowledges that the subject undertaking will require individual consultation with your office. We look forward to coordinating our efforts with your office and will provide you with a copy of the EA when it becomes available.

Should you have any questions, please contact Brad Williard at 256.235.4745 or bradley.s.williard.civ@mail.mil

Sincerely,

Bruce Williams
Director of Risk Management

Enclosure

Memorandum of Agreement
Between the
United States Army
Anniston Army Depot
And the
Alabama State Historic Preservation Officer

SUBJECT: Continued Operation of the Nichols Industrial Complex
2005

Whereas, the United States Army, Anniston Army Depot (ANAD) is responsible for adhering to the provisions of the National Historic Preservation Act and its implementing regulations, including 36 Code of Federal Regulations(CFR) Part 800; and

Whereas, ANAD is responsible for the use, maintenance, and renovation of structures in the Nichols Industrial Area (Industrial Area), a district proposed as eligible for the National Register of Historic Places under Criteria A, for its history in the development and implementation of procedures to repair and rebuild a wide variety of military vehicles, a mission that requires frequent alteration of systems and structures within the complex; and

Whereas, ANAD has consulted with the Alabama State Historic Preservation Officer (SHPO), pursuant to 36 CFR Part 800, which implements Section 106 of the National Historic Preservation Act [16 U.S.C. Section 470(f)], Section 110(f) of the same Act [16 U.S.C. Section 470h-2(f)], and Section 111 of the same Act (16 U.S.C. Section 470h-3); and

Whereas, the Advisory Council on Historic Preservation (ACHP) was invited to consult on this undertaking and has declined to participate; and

Whereas, structures within the historic district designated in the Industrial Area of Anniston Army Depot are at this time known to include several tens of industrial buildings that have as a primary mission function the repair and rebuild of military vehicles. The Alabama SHPO has agreed that these structures are not individually eligible for the National Register of Historic Places but that the Industrial Area as a whole is eligible under Criterion A, that is, properties "[t]hat are associated with events that have made a significant contribution to the broad patterns of our history;" and

Whereas, ANAD has completed inventories and investigations, including archeological survey and historic architectural survey; and

Now, Therefore, ANAD and the State Historic Preservation Officer (SHPO) agree that the undertaking described above shall be implemented in accordance with the following stipulations to take into account the effect of the undertaking on structures in the historic district.

Stipulations - ANAD will ensure that the following measures are carried out:

I. History: Preparation of a history of the Industrial Area. The history will consist of a detailed document, prepared to professional standards, and written in an accessible style. Additional materials will be made available that will be appropriate for use in publicly accessible and available brochures and websites. No photograph images beyond those generated during the Intensive Architectural Survey will be taken.

II. Final Products: A final product consisting of a report, web-related material, and appropriate images will be submitted to the Alabama SHPO. The report will have a publically accessible section on the history of the installation, and will be suitable for placement on ANAD's publically accessible web site.

III. Anti-Deficiency Act

The stipulations of this Agreement are subject to the provisions of the Anti-Deficiency Act. If compliance with the Anti-Deficiency Act alters or impairs ANAD's ability to implement the stipulations of this agreement, ANAD will consult in accordance with the amendment and termination procedures found at Sections V and VI of this agreement.

IV. Dispute Resolution

A. Should the Alabama SHPO object within thirty (30) days to any plans or documents provided by ANAD for review pursuant to this agreement, or to any actions proposed or initiated by ANAD pursuant to this agreement, ANAD shall consult with the objecting party to resolve the objection. If ANAD determines that the objection cannot be resolved, ANAD shall forward all documentation relevant to the dispute to the ACHP. Within thirty (30) days after receipt of all pertinent documentation, the ACHP will either:

(1) Provide ANAD with recommendations, which ANAD will take into account in reaching a final decision regarding the dispute; or

(2) Notify ANAD that it will comment pursuant to 36 CFR 800.7(a)(4), and proceed to comment.

Any ACHP comment will be taken into account by ANAD in accordance with 36 CFR 800.7 with reference to the subject of the dispute.

B. Any recommendations or comment provided by the ACHP pursuant to Stipulation IV A above will pertain only to the subject of the dispute; ANAD's responsibility to carry out all other actions under this Agreement, that are not the subject of the dispute, will remain unchanged.

C. At any time during implementation of the measures stipulated in this Agreement by ANAD, if an objection to any such measure or its manner of implementation is raised by interested persons, then ANAD shall consider the objection and consult, as appropriate, with the objecting party and the consulting parties to attempt to resolve the objection.

V. Amendments:

A. ANAD or Alabama SHPO, or both, may request that this MOA be revised, whereby the parties will consult to consider whether such revision is necessary.

B. If it is determined that revisions to this MOA are necessary, then ANAD and the consulting parties shall consult pursuant to 36 CFR Part 800.6(c)(7), as appropriate, to make such revisions. Except that, reviewing parties must comment on, or signify their acceptance of, the proposed changes to the MOA in writing within thirty (30) days of their receipt.

VI. Termination of Agreement:

A. ANAD, Alabama SHPO, or other consulting party may terminate this MOA by providing thirty (30) days written notice to the other signatory parties. During the period after notification and prior to termination, the consulting parties will consult to seek agreement on amendments or other actions that would avoid termination. In the event of termination, ANAD will comply with 36 CFR 800.4 through 800.6 with regard to individual undertakings.

B. The Parties agree that this MOA will become null and void ten (10) years after the date of the last signature.

C. The effective date of this Memorandum of Agreement shall be the date of the last signature.

D. Execution and implementation of this MOA evidences that ANAD has afforded the ACHP and the SHPO a reasonable opportunity to comment on the repair and renovation within the Industrial Area recommended as eligible for the NRHP, and that ANAD has taken into account the effects of the undertaking on historic properties. Execution and compliance with this MOA fulfills ANAD's Section 106 responsibilities regarding the continuing operation of the Industrial Area at ANAD.

16 Dec 05

COL Alexander B. Raulerson (Date)
Commander
Anniston Army Depot

2 Feb 06

Elizabeth A. Brown (Date)
Alabama State Historic
Preservation Officer

No response to initial SHPO correspondence has been received.

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MCAAP

Agency Coordination and Responses

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oklahoma Ecological Services Field Office
9014 EAST 21ST STREET
TULSA, OK 74129
PHONE: (918)581-7458 FAX: (918)581-7467
URL: www.fws.gov/southwest/es/Oklahoma/

Consultation Code: 02EKOK00-2016-SLI-1473 June 13, 2016
Event Code: 02EKOK00-2016-E-01628
Project Name: McAlester Army Ammunition Plant Proposed DGRC Location

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

To Whom It May Concern:

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

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

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

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

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

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

Non-federal entities conducting activities that may result in take of listed species should consider seeking coverage under section 10 of the ESA, either through development of a Habitat Conservation Plan (HCP) or, by becoming a signatory to the General Conservation Plan (GCP) currently under development for the American burying beetle. Each of these mechanisms provides the means for obtaining a permit and coverage for incidental take of listed species during otherwise lawful activities.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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 Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit through our Project Review step-wise process http://www.fws.gov/southwest/es/oklahoma/OKESFO%20Permit%20Home.htm.

Attachment

Official Species List

Provided by:

Oklahoma Ecological Services Field Office
9014 EAST 21ST STREET
TULSA, OK 74129
(918) 581-7458
http://www.fws.gov/southwest/es/Oklahoma/

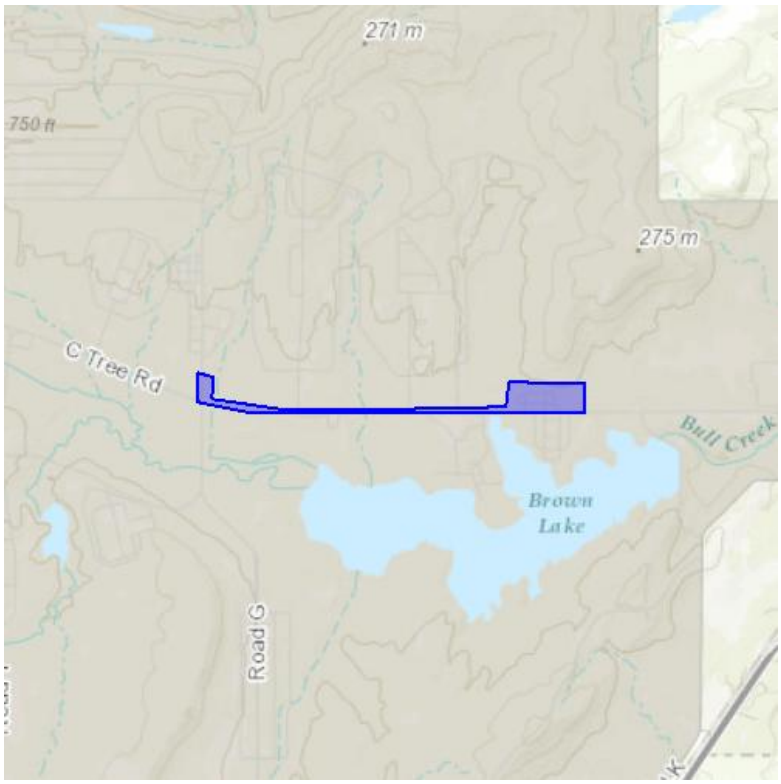
Consultation Code: 02EKOK00-2016-SLI-1473
Event Code: 02EKOK00-2016-E-01628

Project Type: DEVELOPMENT

Project Name: McAlester Army Ammunition Plant Proposed DGRC Location
Project Description: Repurpose Facilities for DGRC Use

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-95.89871406555176 34.8422674697591, -95.90013027191162 34.84261968723761, -95.90008735656738 34.840435914574364, -95.89553833007812 34.839696236504736, -95.86639881134032 34.83973145942067, -95.86639881134032 34.84177436275703, -95.87292194366455 34.84191525077334, -95.87326526641846 34.840083687751125, -95.88596820831299 34.839942796599786, -95.89236259460448 34.839942796599786, -95.89888572692871 34.840647249944865, -95.89871406555176 34.8422674697591)))

Project Counties: Pittsburg, OK

Endangered Species Act Species List

There are a total of 5 threatened or endangered species on your 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. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	**Status**	**Has Critical Habitat**	**Condition(s)**
Least tern *(Sterna antillarum)* Population: interior pop.	Endangered		
Piping Plover *(Charadrius melodus)* Population: except Great Lakes watershed	Threatened	Final designated	
Red Knot *(Calidris canutus rufa)*	Threatened		
Insects			
American Burying beetle *(Nicrophorus americanus)* Population: Entire	Endangered		
Mammals			
Northern long-eared Bat *(Myotis septentrionalis)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Appendix A: FWS National Wildlife Refuges and Fish Hatcheries

There are no refuges or fish hatcheries within your project area.

United States Department of Interior
Fish and Wildlife Service

Project name: McAlester Army Ammunition Plant Proposed DGRC Location

Appendix B: FWS Migratory Birds

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no otherwise lawful activities. For more information regarding these Acts see:
http://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php
http://www.fws.gov/birds/policies-and-regulations/laws-legislations/bald-and-golden-eagle-protection-act.php

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:
http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

For information about conservation measures that help avoid or minimize impacts to birds, please visit:
http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tools at:
http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php

Migratory birds of concern that may be affected by your project:
There are 26 birds on your Migratory birds of concern list.

Species Name	Bird of Conservation Concern (BCC)	Seasonal Occurrence in Project Area
American Kestrel *(Falco sparverius ssp. paulus)*	Yes	Year-round

Bachman's sparrow *(Aimophila aestivalis)*	Yes	Breeding
Bald eagle *(Haliaeetus leucocephalus)*	Yes	Year-round
Bell's Vireo *(Vireo bellii)*	Yes	Breeding
Bewick's Wren *(Thryomanes bewickii ssp. bewickii)*	Yes	Year-round
Dickcissel *(Spiza americana)*	Yes	Breeding
Fox Sparrow *(Passerella liaca)*	Yes	Wintering
Golden eagle *(Aquila chrysaetos)*	Yes	Wintering
Harris's Sparrow *(Zonotrichia querula)*	Yes	Wintering
Hudsonian Godwit *(Limosa haemastica)*	Yes	Migrating
Kentucky Warbler *(Oporornis formosus)*	Yes	Breeding
Le Conte's Sparrow *(Ammodramus leconteii)*	Yes	Wintering
Least bittern *(Ixobrychus exilis hesperis)*	No	Breeding
Little Blue Heron *(Egretta caerulea)*	Yes	Breeding
Loggerhead Shrike *(Lanius ludovicianus)*	Yes	Year-round
Louisiana Waterthrush	Yes	Breeding

(Parkesia motacilla)		
Mississippi Kite *(Ictinia mississippiensis)*	Yes	Breeding
Orchard Oriole *(Icterus spurius)*	Yes	Breeding
Painted Bunting *(Passerina ciris)*	Yes	Breeding
Prothonotary Warbler *(Protonotaria citrea)*	Yes	Breeding
Red-headed Woodpecker *(Melanerpes erythrocephalus)*	Yes	Year-round
Rufous-crowned Sparrow *(Aimophila ruficeps)*	Yes	Year-round
Rusty Blackbird *(Euphagus carolinus)*	Yes	Wintering
Short-eared Owl *(Asio flammeus)*	Yes	Wintering
Sprague's Pipit *(Anthus spragueii)*	Yes	Wintering
Swainson's Warbler *(Limnothlypis swainsonii)*	Yes	Breeding

Appendix C: NWI Wetlands

Wetlands data for your project area was not available at the time of this species list request.

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DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C TREE ROAD
MCALESTER OK 74501-9002

June 21, 2016

Melvena Heisch
Deputy State Historic Preservation Officer
State Historic Preservation Office
Oklahoma History Center
800 Nazih Zuhdi Drive
Oklahoma City, OK 73105

RE: National Historic Preservation Act Consultation for the Proposed Relocation of the Defense Non-Tactical Generator and Rail Equipment Center to McAlester Army Ammunition Plant

Dear Ms. Heisch:

This letter is to initiate consultation under section 106 of the National Historic Preservation Act of 1966, as amended, on the proposed relocation of the Defense Non-Tactical Generator and Rail Equipment Center (DGRC) from Hill Air Force Base in Utah to an Army organic industrial base installation. The DGRC is the Department of the Army's sole provider of overhaul and repair services for military locomotives, rail cars, and power generators. The Army is preparing an environmental assessment (EA) in accordance with the National Environmental Policy Act and is concurrently assessing effects of the proposed project on cultural resources at four alternative locations: Anniston Army Depot, Alabama; McAlester Army Ammunition Plant, Oklahoma; Red River Army Depot, Texas; and Tooele Army Depot, Utah. One of the four alternative locations would be selected for the relocation of the DGRC.

The proposed locations for the McAlester Army Ammunition Plant (MCAAP) alternative are in existing industrial areas of the plant and include buildings 9, 11, 399, and 429. The Army would accomplish relocation of the DGRC to MCAAP through a combination of facility demolition (building 429 and part of building 9), renovating existing facilities (buildings 9, 11, and 399), construction of new facilities, and use of an existing rail yard. Building 429, which consists of approximately 4,200 square feet, would be demolished to make room for an addition to building 9 that would house a new high-bay facility for initial locomotive disassembly and assembly. Demolition being proposed at building 9 includes flooring, a mezzanine, and storage space that consists of approximately 35,000 square feet. Building 11 would be renovated to accommodate a break area for DGRC personnel. At building 399, an addition to house a new cleaning facility is proposed along with a sand-blasting containment area. Other construction would

include concrete pits and installing new railroad track to buildings 9 and 399. Figure 1 shows the location of MCAAP, and Figure 2 shows the proposed project area and buildings.

In 2006, the Advisory Council on Historic Preservation issued "Program Comment for World War II and Cold War Era (1939–1974) Army Ammunition Production Facilities and Plants" and "Program Comment for World War II and Cold War Era (1939–1974) Ammunition Storage Facilities." As applied to MCAAP, the 2006 Program Comments satisfy the Army's responsibilities at the installation for compliance under section 106 regarding the effects of management actions on all properties built between 1939 and 1974. The Army is no longer required to follow the case-by-case review process under section 106 for such effects on those properties. Therefore, any activity that might result in altering or demolishing a historic building at MCAAP has been mitigated under the Program Comments, and it will not be necessary for MCAAP to submit further correspondence to you for this proposed alternative, unless the project changes.

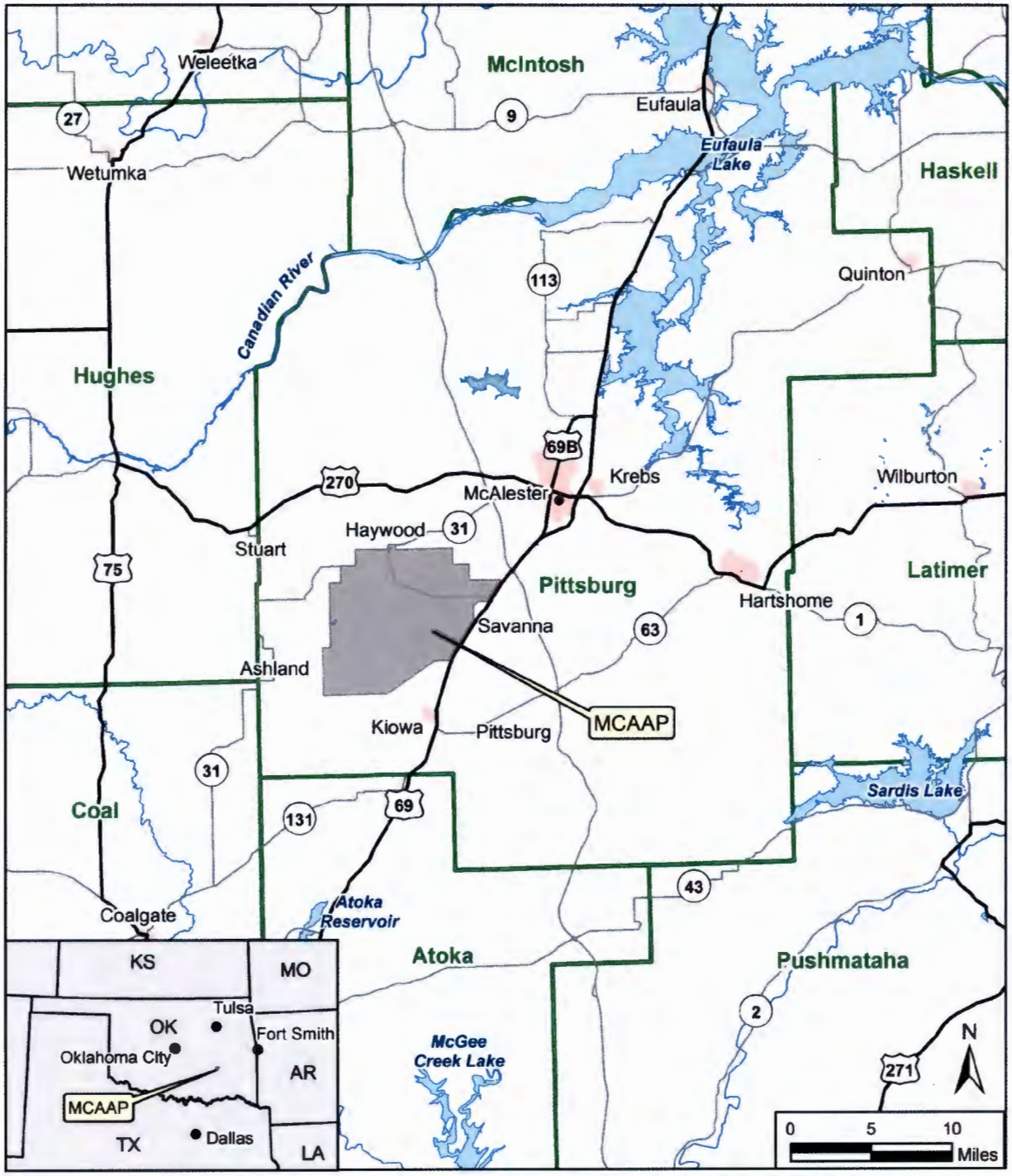
We will keep you informed of any changes to the project, as applicable to MCAAP, and anticipate providing you with a copy of the EA when it becomes available.

For further information please contact Mr. Clayton Johnson, Master Planner at phone (918) 420-7178, or email at clayton.r.johnson26.civ@mail.mil.

Sincerely,

Steven Cox
Director of Engineering
and Public Works

Enclosures
as



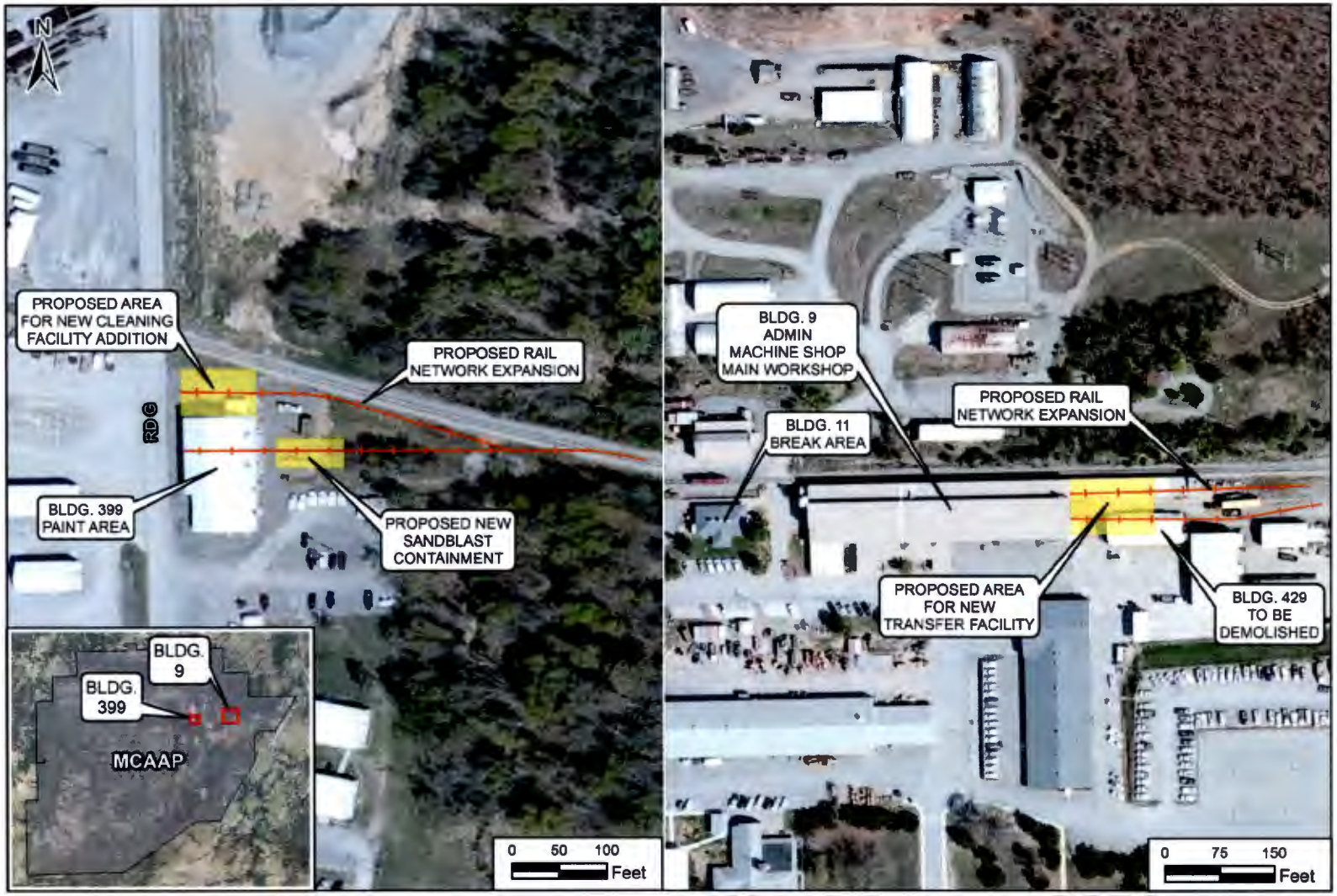
LEGEND

- County Boundary
- U.S. Route
- State Route
- Surface Water
- Urban Area

MCAAP Location

McAlester, Oklahoma

Figure 1



MCAAP Proposed DGRC Location

McAlester, Oklahoma

Figure 2

Source: ESRI 2013. Note: Locations are approximate.

ROUTING AND TRANSMITTAL SLIP

Date
06/21/2016

TO: *(Name, office symbol, room number, building, Agency/Post)*	Initials	Date
1. JMMC-DE Steve Cox		
2. JMMC-DEB David Franks		6-21-16
3. JMMC-DEB Amber Alexander		
4.		
5.		

	Action		File		Note and Return
X	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
	Comment		Investigate	X	Signature
	Coordination		Justify		

REMARKS

Enclosed is the SHPO correspondence for section 106 for the DGRC project.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: *(Name, organization symbol, Agency/Post)*

JMMC-DEB Master Planner, Clayton Johnson

Room Number - Building
6

Phone Number
7178

AUTHORIZED FOR LOCAL REPRODUCTION
Previous Edition is Usable

7540-00-935-5862

OPTIONAL FORM 41 (REV. 3/2007

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No response to initial SHPO correspondence has been received.

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RRAD

Agency Coordination and Responses

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arlington Ecological Services Field Office
2005 NE GREEN OAKS BLVD, SUITE 140
ARLINGTON, TX 76006
PHONE: (817)277-1100 FAX: (817)277-1129
URL: www.fws.gov/southwest/es/arlingtontexas/;
www.fws.gov/southwest/es/EndangeredSpecies/lists/

Consultation Code: 02ETAR00-2016-SLI-0752 June 13, 2016
Event Code: 02ETAR00-2016-E-00814
Project Name: RRAD DGRC Proposed Location

Subject: List of threatened and endangered species that may occur in your proposed project location, and/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, which may occur within the boundary of 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.).

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 section 7(a)(1) of the Act, Federal agencies are directed to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Under and 7(a)(2) and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether their actions may affect threatened and endangered species and/or designated critical habitat. A Federal action is an activity or program authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02).

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 Federal actions 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.

After evaluating the potential effects of a proposed action on federally listed species, one of the

following determinations should be made by the Federal agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action, and the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:
http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

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

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

For additional information concerning migratory birds and eagle conservation plans, please contact the Service's Migratory Bird Office at 505-248-7882.

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 Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: RRAD DGRC Proposed Location

Official Species List

Provided by:

Arlington Ecological Services Field Office
2005 NE GREEN OAKS BLVD
SUITE 140
ARLINGTON, TX 76006
(817) 277-1100
http://www.fws.gov/southwest/es/arlingtontexas/
http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

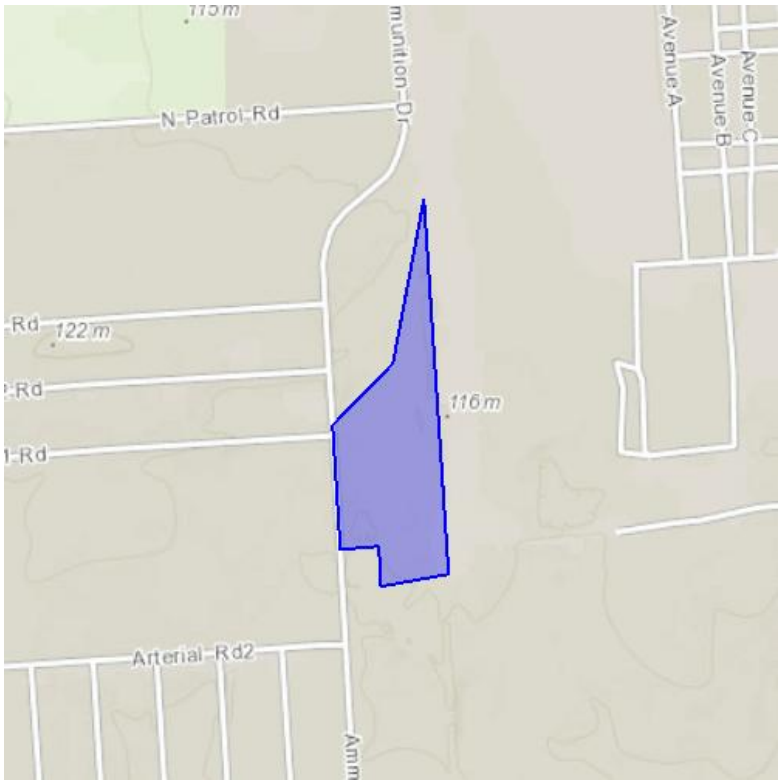
Consultation Code: 02ETAR00-2016-SLI-0752
Event Code: 02ETAR00-2016-E-00814

Project Type: DEVELOPMENT

Project Name: RRAD DGRC Proposed Location
Project Description: DGRC development on Red River Army Depot

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-94.32631731033325 33.4474311767838, -94.32560920715332 33.45056433895611, -94.32505130767822 33.44342056404946, -94.3265962600708 33.443187799581665, -94.32663917541504 33.44395771043768, -94.32754039764404 33.443886091111416, -94.32769060134888 33.44624949765786, -94.32631731033325 33.4474311767838)))

Project Counties: Bowie, TX

Endangered Species Act Species List

There are a total of 3 threatened or endangered species on your 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. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	**Status**	**Has Critical Habitat**	**Condition(s)**
Least tern *(Sterna antillarum)* Population: interior pop.	Endangered		
Piping Plover *(Charadrius melodus)* Population: except Great Lakes watershed	Threatened	Final designated	Wind Energy Projects
Red Knot *(Calidris canutus rufa)*	Threatened		Wind Energy Projects

Critical habitats that lie within your project area

There are no critical habitats within your project area.

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DEPARTMENT OF THE ARMY
US ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND
RED RIVER ARMY DEPOT
100 JAMES CARLOW DRIVE
TEXARKANA TX 75507-5000

5 May 2016

Mark Wolfe
State Historic Preservation Officer
Texas Historical Commission
P.O. Box 12276
Austin, TX 78711-2276

RE: National Historic Preservation Act Consultation for the Proposed Relocation of the Defense Non-Tactical Generator and Rail Equipment Center to Red River Army Depot

Dear Mr. Wolfe:

This letter is to initiate consultation under section 106 of the National Historic Preservation Act of 1966, as amended, for the proposed relocation of the Defense Non-Tactical Generator and Rail Equipment Center (DGRC) from Hill Air Force Base in Utah to an Army organic industrial base installation. The DGRC is the Department of the Army's sole provider of overhaul and repair services for military locomotives, rail cars, and power generators. The Army is preparing an environmental assessment (EA) in accordance with the National Environmental Policy Act and is concurrently assessing effects of the proposed project on cultural resources at four alternative locations: Anniston Army Depot, Alabama; McAlester Army Ammunition Plant, Oklahoma; Red River Army Depot, Texas; and Tooele Army Depot, Utah. One of the four alternative locations would be selected for the relocation of the DGRC.

The proposed location for the Red River Army Depot (RRAD) alternative is a 5-acre wooded parcel, void of any buildings or structure, situated within the northeastern portion of the installation. The Army would accomplish relocation of the DGRC to RRAD through new construction that would consist of an approximately 94,000-square foot building, 90,000 square feet of concrete hardstand, 20,000 square feet of gravel parking, a new rail spur, and utility infrastructure. Figure 1 shows the location of RRAD, and Figure 2 shows the proposed project area.

The proposed project area has been previously surveyed for archaeological and architectural resources, and no known archaeological or architectural resources that are eligible for or are listed on the National Register of Historic Places are located in the area. Therefore, the proposed undertaking is not expected to impact any historic resources.

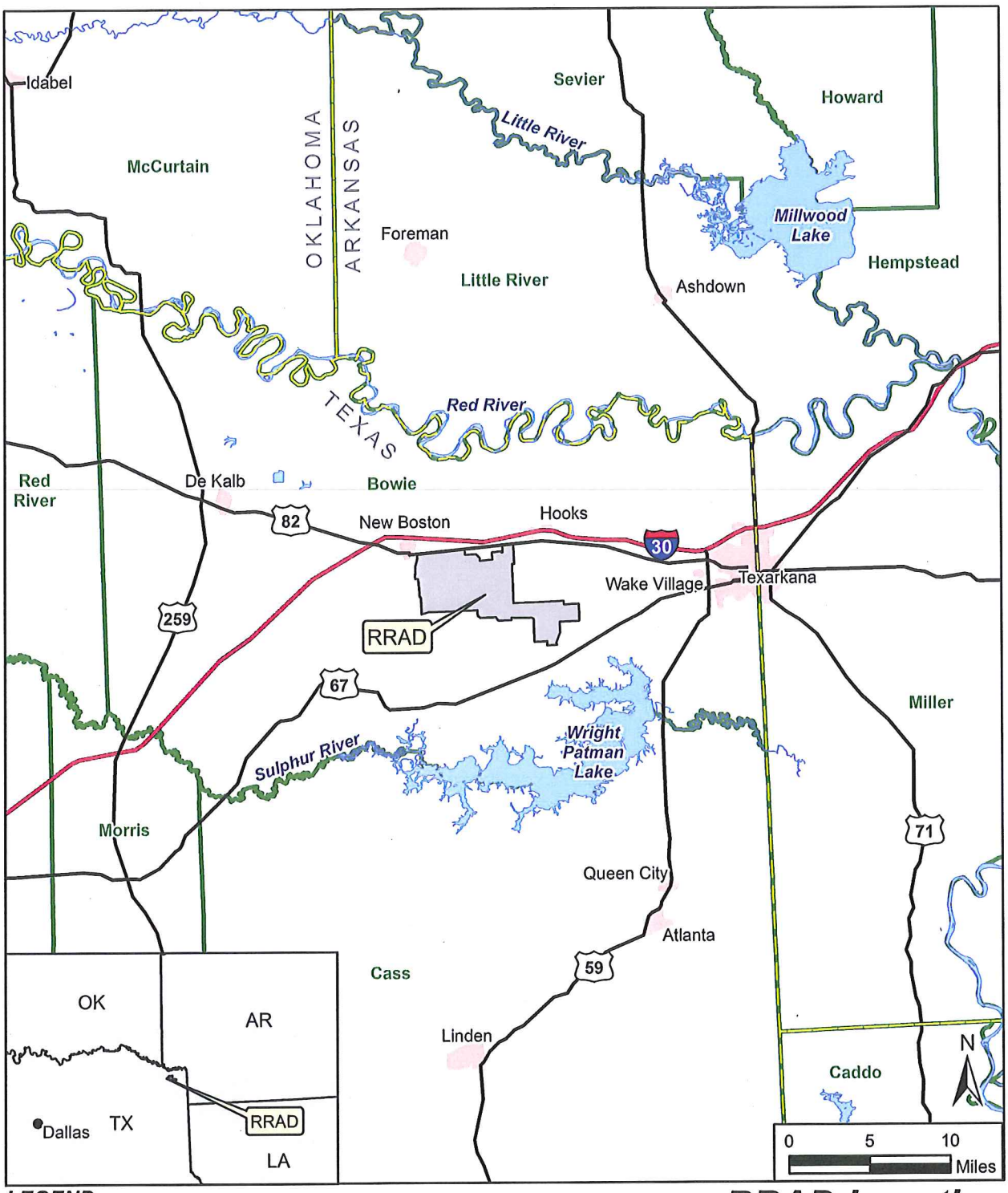
We will keep you informed about any changes with the project, if applicable to RRAD, and will provide you with a copy of the EA when it becomes available. The EA will detail the presence or absence of significant cultural resources within the project area, documented with the previous studies used to make our determinations. At that point, we would welcome your comments on the proposed alternative location.

Should you have any questions, please contact *Dennis Kuykendall* @ 903-334-3738 or *dennis.w.kuykendall4.civ@mail.mil*

Sincerely,

Ross Ramsauer
Chief, Environmental Division,
Red River Army Depot

Enclosures



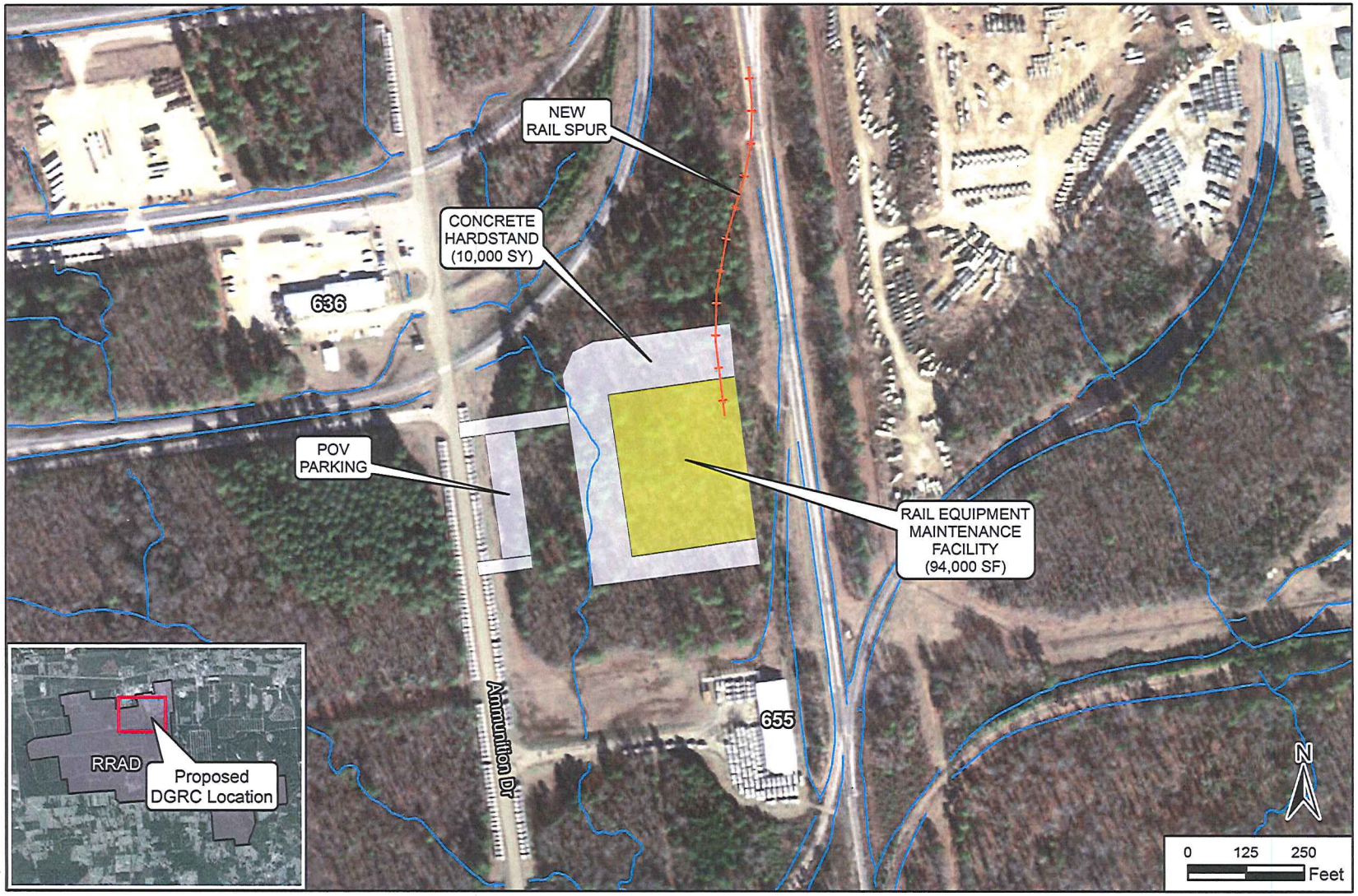
LEGEND

- State Boundary
- County Boundary
- U.S. Route
- Surface Water
- Urban Area

RRAD Location

Red River, Texas

Figure 1



LEGEND

Intermittent Creek

RRAD Proposed DGRC Location

Red River, Texas

Figure 2

Source: ESRI 2015. Note: Locations are approximate.

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No response to initial SHPO correspondence has been received.

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TEAD

Agency Coordination and Responses

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Utah Ecological Services Field Office
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UT 84119
PHONE: (801)975-3330 FAX: (801)975-3331
URL: www.fws.gov; www.fws.gov/utahfieldoffice/

Consultation Code: 06E23000-2016-SLI-0259 June 13, 2016
Event Code: 06E23000-2016-E-00573
Project Name: TEAD DGRC Proposed Location

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

To Whom It May Concern:

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

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

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

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

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

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

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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 Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: TEAD DGRC Proposed Location

Official Species List

Provided by:

Utah Ecological Services Field Office
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UT 84119
(801) 975-3330
http://www.fws.gov
http://www.fws.gov/utahfieldoffice/

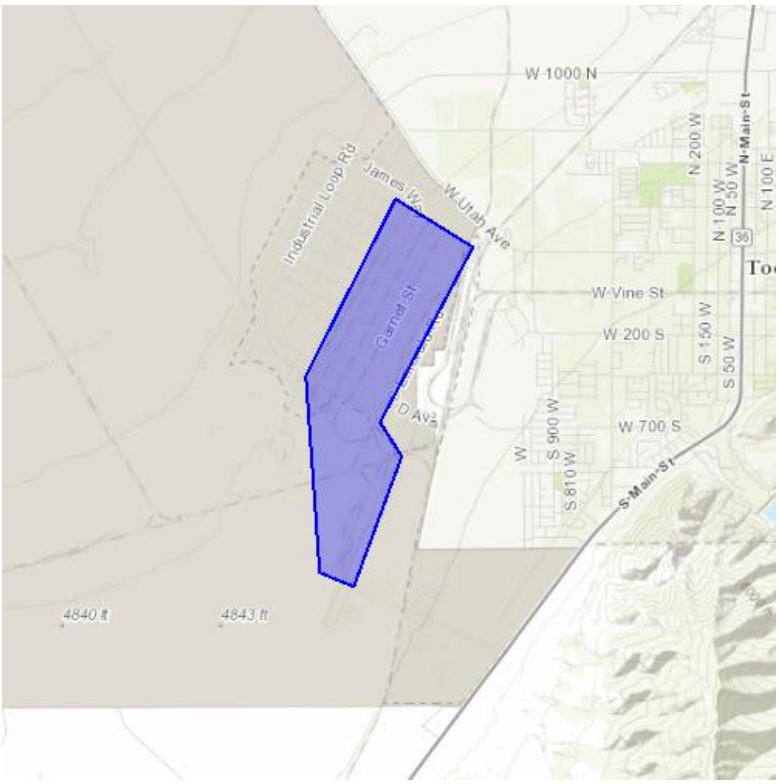
Consultation Code: 06E23000-2016-SLI-0259
Event Code: 06E23000-2016-E-00573

Project Type: DEVELOPMENT

Project Name: TEAD DGRC Proposed Location
Project Description: Repurpose Facilities for DGRC Use

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-112.33125686645508 40.53487247758619, -112.34061241149902 40.539308122278264, -112.35151290893555 40.52306440397067, -112.34988212585449 40.504858933662916, -112.34567642211914 40.50361895483957, -112.33975410461424 40.515560955893264, -112.34241485595703 40.518758179933286, -112.33125686645508 40.53487247758619)))

Project Counties: Tooele, UT

Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your 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. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	**Status**	**Has Critical Habitat**	**Condition(s)**
Yellow-Billed Cuckoo *(Coccyzus americanus)* Population: Western U.S. DPS	Threatened	Proposed	
Flowering Plants			
Ute ladies'-tresses *(Spiranthes diluvialis)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

DEPARTMENT OF THE ARMY
Tooele Army Depot
Tooele, Utah 84074-5000

Brad Westwood
State Historic Preservation Officer
Utah Division of State History
300 S. Rio Grande Street (450 West)
Salt Lake City, UT 84101

RE: National Historic Preservation Act Consultation for the Proposed Relocation of the Defense Non-Tactical Generator and Rail Equipment Center to Tooele Army Depot

Dear Mr. Westwood:

This letter is to initiate consultation under section 106 of the National Historic Preservation Act of 1966, as amended, for the proposed relocation of the Defense Non-Tactical Generator and Rail Equipment Center (DGRC) from Hill Air Force Base to an Army organic industrial base installation. The DGRC is the Department of the Army's sole provider of overhaul and repair services for military locomotives, rail cars, and power generators. The Army is preparing an environmental assessment (EA) in accordance with the National Environmental Policy Act and is concurrently assessing effects of the proposed project on cultural resources at four alternative locations: Anniston Army Depot, Alabama; McAlester Army Ammunition Plant, Oklahoma; Red River Army Depot, Texas; and Tooele Army Depot, Utah. One of the four alternative locations would be selected for the relocation of the DGRC.

The proposed locations for the Tooele Army Depot (TEAD) alternative are in existing industrial areas of the installation and include buildings 507, 541, 594, 687, and 1225. The Army would accomplish relocation of the DGRC to TEAD through a combination of renovating existing facilities and new construction. Building renovations would include roofing repairs, flooring modifications, the addition of an office and break room, equipment installation, and constructing approximately 1,700 linear feet of railroad that would serve buildings 507, 541, and 594. Figure 1 shows the location of TEAD, and Figure 2 shows the proposed project area and buildings.

The proposed project areas for the TEAD alternative are in an existing industrial area and have been previously surveyed for both architectural and archaeological resources. No cultural resources that are eligible for or are listed on the National Register of Historic Places are located in the area. Therefore, the proposed undertaking is not expected to impact any historic resources.

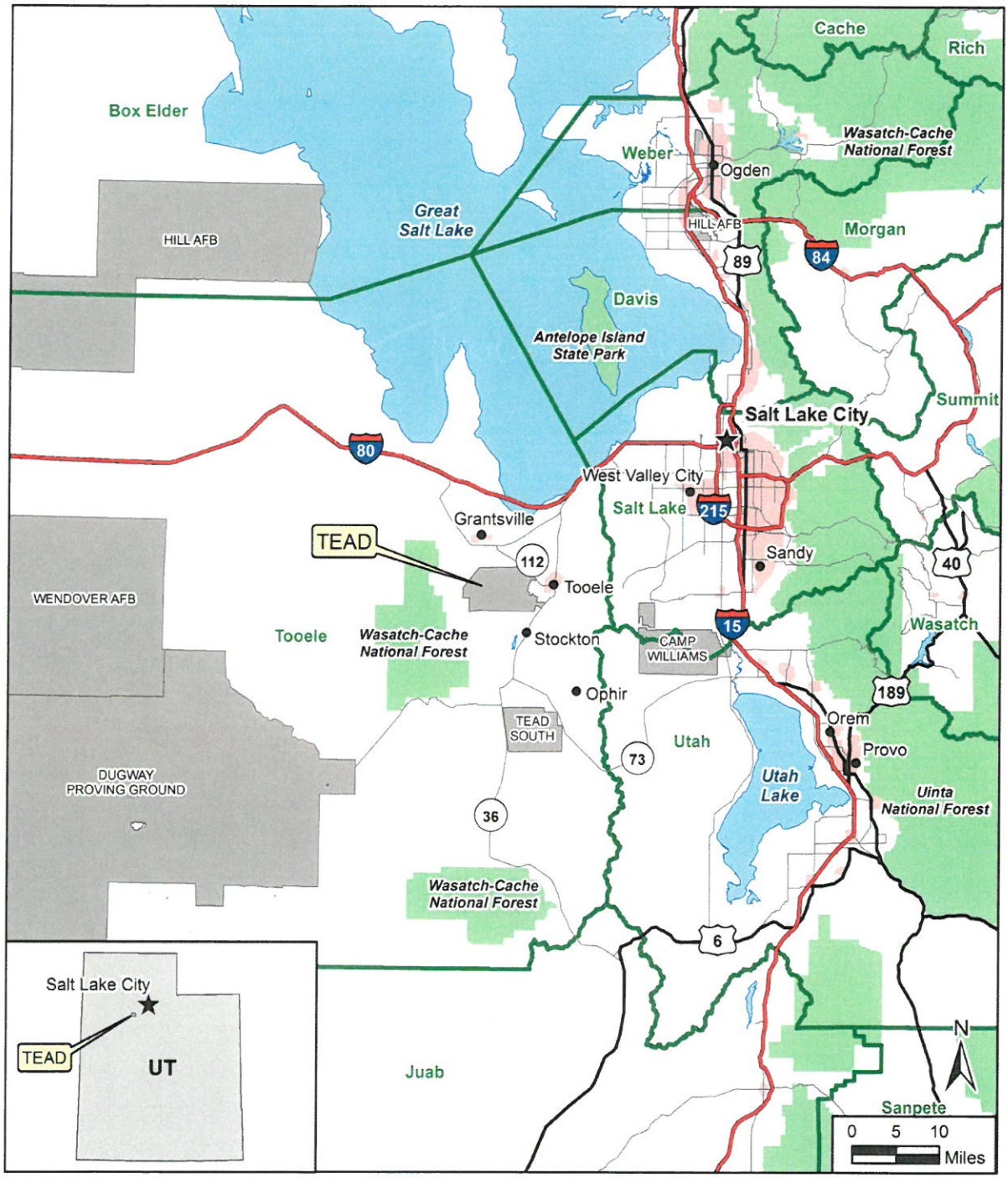
We will keep you informed about any changes with the project, if applicable to TEAD,

and will provide you with a copy of the EA when it becomes available. The EA will detail the presence or absence of significant cultural resources within the project area, documented with the previous studies used to make our determinations. At that point, we would welcome your comments on the proposed alternative location. If you have any questions about this project, please contact TEAD's Cultural Resource Manager (CRM) Mr. Roland Howard at 435-833-3717, roland.o.howard.civ@mail.mil.

Sincerely,

Thomas Turner
Garrison Manager

Enclosures



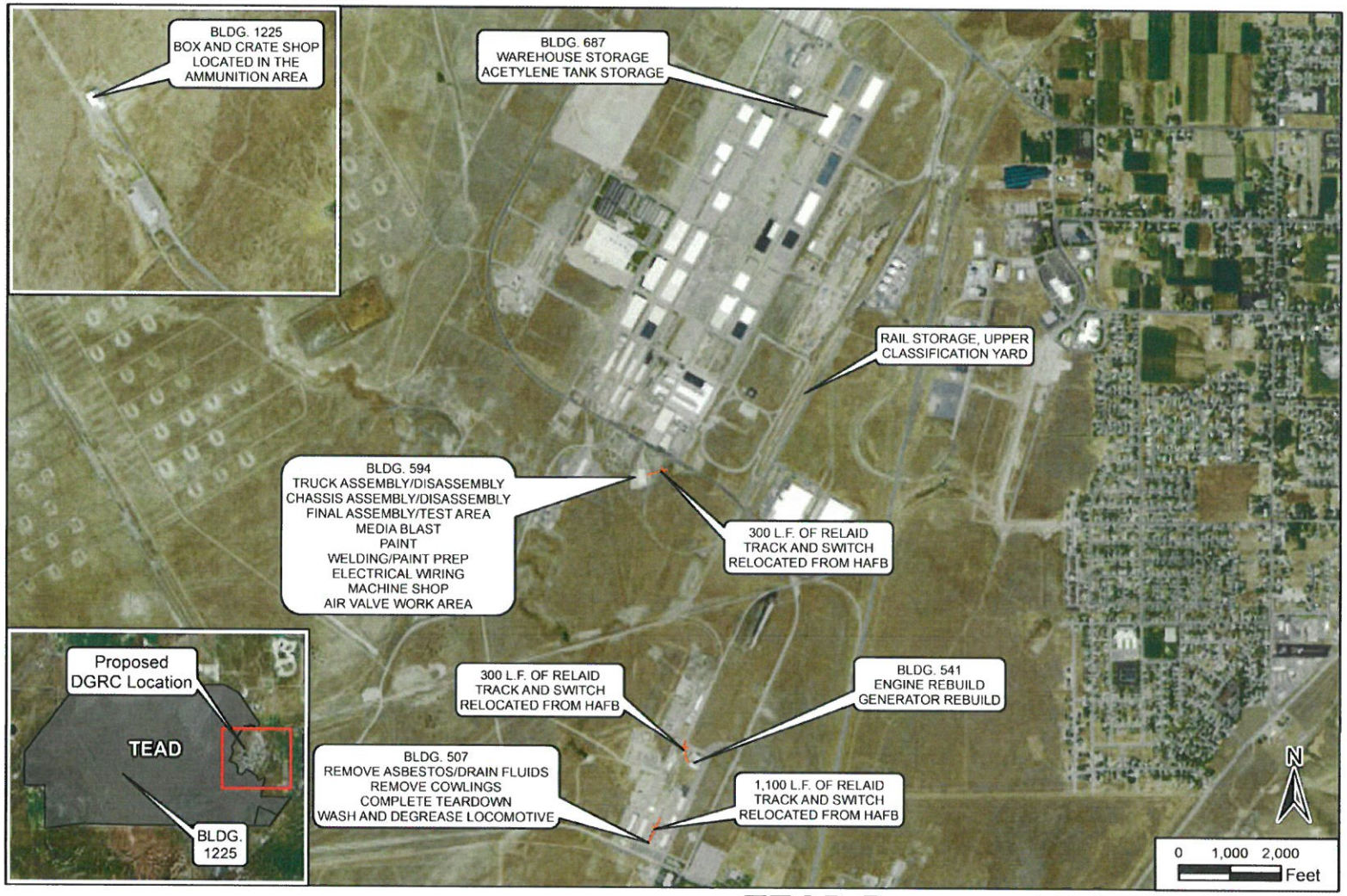
LEGEND

- Military Installation
- County Boundary
- Interstate Highway
- U.S. Route
- State Route
- Surface Water
- Urban Area
- Park

TEAD Location

Tooele, Utah

Figure 1



TEAD Proposed DGRC Location

Tooele, Utah

Figure 2

Source: ESRI 2014. Note: Locations are approximate.

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

To: Roland Howard - Action
cc: Royal Rice

RT
5/24

May 18, 2016

Thomas Turner
Garrison Manager
Department of the Army
Tooele Army Depot
Tooele, Utah 84074-5000

RE: Proposed Relocation of the Defense Non-Tactical Generator and Rail Equipment Center to Tooele Army Depot

In reply please refer to Case No. 16-0590

Dear Mr. Turner:

The Utah State Historic Preservation Office received your submission and request for our comment on May 12, 2016. To be able to provide comments on the alternative location and undertaking, as there appears to be a potential for effects, our office will need additional information (including photographs, dates of construction, historical information, etc.) on Buildings 507, 541, 594, 687, and 1225; and, also additional details on the work activities that will be carried out on the properties. For archaeology, we'll need to know more about what type of ground disturbance will be undertaken and what level of effort was taken to identify any potential sites. We'll await the additional submission of information, including the EA referenced in your letter and the items referenced-above.

This information is provided to assist with Section 106 responsibilities as per §36CFR800. If you have questions, please contact me at clhansen@utah.gov or 801-245-7239.

Regards,

Chris Hansen
Preservation Planner/Deputy SHPO

Rec'd 24 May 2016

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DEPARTMENT OF THE ARMY
Tooele Army Depot
Tooele, Utah 84074-5000

June 22, 2016

Chris Hansen
Preservation Planner/Deputy SHPO
300 S. Rio Grande Street
Salt Lake City, Utah 84101

RE: Proposed Relocation of the Defense Non-Tactical Generator and Rail Equipment Center to Tooele Army Depot–**Case No. 16-0590**

Dear Mr. Hansen:

In regards to the proposed relocation of the Defense Non-Tactical Generator and Rail Equipment Center (DGRC) project we first notified you of in our letter dated May 12, 2016, we would like to provide you with additional information as requested in your May 18, 2016, response (attached)–Case No. 16-0590.

In your response you requested additional information including building photographs, dates of construction, proposed work activities and historical information. Building photographs and dates of construction are attached. Proposed work activities and historical information are presented below.

Implementing, the proposed alternative at TEAD would involve a combination of building renovations (buildings 507, 541, 594, 687, and 1225) and the addition of new railroad spurs. Building renovations would include roofing repairs, flooring modifications, the addition of an office and break room, equipment installation. The buildings are vacant, used for storage, or used for operations similar to existing DGRC functions. Ground disturbance is expected during the construction of approximately 1,700 linear feet of railroad spur that would serve buildings 507, 541, and 594 (see attached figure for approximate spur locations). The spurs are three relatively short sections of track: 300 linear feet near Building 594; 300 linear feet near Building 541; and 1,100 linear feet at Building 507. The track construction is expected to occur on previously disturbed ground within the industrial area.

A historic architectural survey of the subject buildings that are 50-years of age or older was conducted in 2002 by the U.S. Army Corps of Engineers and JRP Historical Consulting Services. The survey completed an inventory and evaluation of 1,169 World War II and Cold War-era buildings and structures at TEAD North built between 1942 and 2000. None of the buildings or structures was recommended eligible for the National

Register of Historic Places (NRHP). The report was sent to the Utah SHPO on June 13, 2002, but no response regarding the report was sent to TEAD from the SHPO. Correspondence regarding this report is enclosed.

An archaeological survey of the industrial area in which Buildings 687 and 594 are located was conducted in March 1996. The survey report is entitled *Evaluation of Selected Historic Properties at Tooele Army Depot North Area: Cold War Era Study and Inventory and Cultural and Paleontological Resources Survey* by Sagebrush Archaeological Consultants. A pedestrian survey of areas that were not determined to be heavily disturbed was performed for this survey; no cultural resource sites dating prior to the establishment of TEAD were located. The TEAD World War II prisoner of war camp identified within the industrial area is not within the proposed project area.

No archaeological investigations have been conducted in the area where Buildings 541 and 507 are located; however, these are developed, paved, and previously disturbed areas.

We will continue to keep you informed about any changes with the project, if applicable to TEAD, and will provide you with a copy of the EA when it becomes available. At that point we would welcome your comments on the proposed alternative location. Should you have any questions, please contact TEAD's Cultural Resources Manager, Mr. Roland Howard at 435-833-3717, roland.o.howard.civ@mail.mil.

Sincerely,

Thomas Turner
Garrison Manager

Enclosures

RAT
5/24

To: Roland Howard - Action
cc: Royal Rice

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

May 18, 2016

Thomas Turner
Garrison Manager
Department of the Army
Tooele Army Depot
Tooele, Utah 84074-5000

RE: Proposed Relocation of the Defense Non-Tactical Generator and Rail Equipment Center to Tooele Army Depot

In reply please refer to Case No. 16-0590

Dear Mr. Turner:

The Utah State Historic Preservation Office received your submission and request for our comment on May 12, 2016. To be able to provide comments on the alternative location and undertaking, as there appears to be a potential for effects, our office will need additional information (including photographs, dates of construction, historical information, etc.) on Buildings 507, 541, 594, 687, and 1225; and, also additional details on the work activities that will be carried out on the properties. For archaeology, we'll need to know more about what type of ground disturbance will be undertaken and what level of effort was taken to identify any potential sites. We'll await the additional submission of information, including the EA referenced in your letter and the items referenced-above.

This information is provided to assist with Section 106 responsibilities as per §36CFR800. If you have questions, please contact me at clhansen@utah.gov or 801-245-7239.

Regards,

Chris Hansen
Preservation Planner/Deputy SHPO

Rec'd 24 May 2016

Project Photographs

TEAD Building 507
Constructed in 1942 and was originally used as a machine/battery shop.

TEAD Building 541
Constructed in 2012.

TEAD Building 594
Constructed in 1983.

TEAD Building 687

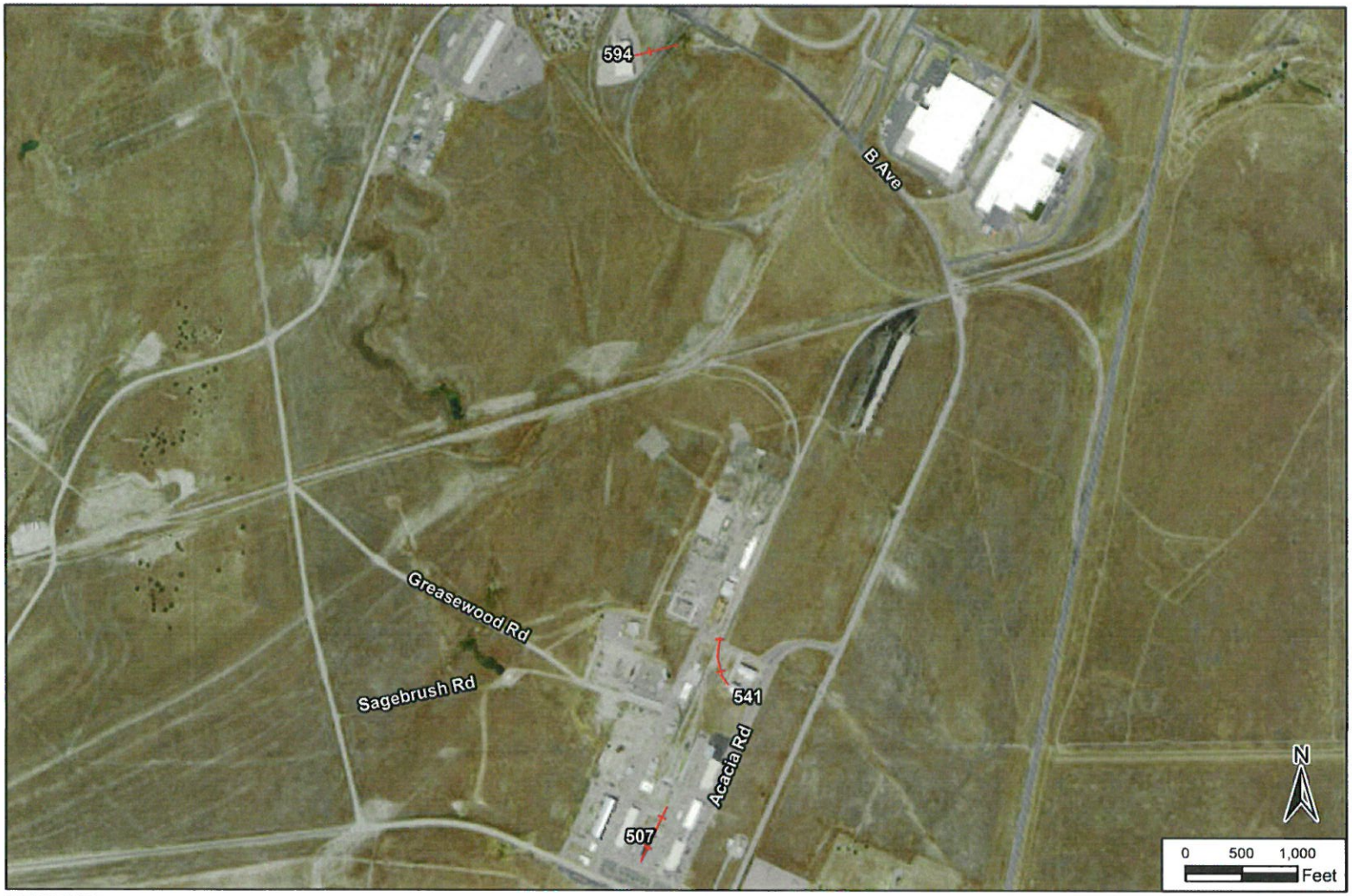
This building was constructed in 1943 as a vehicle storage facility. It is in the Peterson Industrial Depot and TEAD holds a 99-year lease on the building.

TEAD Building 1225
Constructed in 2000 and is in the ammunition area of TEAD.

Approximate location for track extension that would serve Building 507

Approximate location for track extension that would serve Building 541. Track would curve from this general area towards the building

Approximate location for track extension that would serve Building 594. Track would come off of the curve at the middle right of the photograph and lead into the building to the left–building 594.



LEGEND

Proposed New Spur

Proposed Spur Locations

Tooele, Utah

Note: Locations are approximate.

DEPARTMENT OF THE ARMY
TOOELE ARMY DEPOT
TOOELE, UTAH 84074-5000

REPLY TO
ATTENTION OF

June 13, 2002

Environmental Office

SUBJECT: Inventory and Evaluation of Buildings at Tooele Army Depot

Mr. Max J. Evans
State Historic Preservation Officer
Office of Historic Preservation
Utah Division of State History
300 Rio Grande
Salt Lake City, Utah 84101-1182

Dear Mr. Evans:

Pursuant to Section 110(a)(2) of the National Historic Preservation Act of 1966, as amended, (16 U.S.C. 470 *et seq.*), Tooele Army Depot (TEAD) recently completed a historic buildings inventory of all previously unevaluated buildings and structures at TEAD. Enclosed for your review and files is the final report, *National Register of Historic Places, Inventory and Evaluation of Previously Unevaluated World War II and Cold War Era Buildings, Tooele Army Depot, Tooele County, Utah* (enclosure 1). All buildings and structures were recorded on Utah Office of Historic Preservation Site Forms (enclosure 1). Also provided are separate copies of each site form with the original photographs (enclosure 2). At the request of your staff, we left the original photos unmounted.

The historic buildings survey was conducted by JRP Historical Consulting Services, a professional historical architectural firm specializing in National Register evaluations of military properties. In order to determine whether any buildings or structures appear to meet the criteria for listing in the National Register of Historic Places (NRHP), the report includes a historical overview and context for the facility, as well as a detailed discussion of the different type of buildings built during World War II and the Cold War-era on TEAD. Applying the criteria for evaluation pursuant to 36 CFR Part 60.4, the report concludes that none of the buildings and structures on TEAD appear to meet the criteria of listing in the NRHP.

Tooele Army Depot is one of the major ammunition storage and equipment maintenance installations in the United States, supporting other U.S. Army facilities throughout the western U.S. TEAD's on-going mission needs require changes and upgrades in the installations infrastructure. As a result, buildings and structures at TEAD may be modified or removed in the future as part of the need for these upgrades.

Pursuant to §800.4(c)(1)(2) of 36 CFR Part 800, Protection of Historic Properties (revised 2001), the implementing regulations for Section 106 of the National Historic Preservation Act, we request your concurrence with our determination that the buildings and structures identified in enclosure 1 do not qualify for listing in the NRHP.

This report completes the inventory and evaluation of all buildings and structures at TEAD. None of the buildings and structures at TEAD appear to meet the criteria for listing in NRHP. Pursuant to §800.4(d)(1), we request your concurrence that no historic properties will be affected by future undertakings that may altar or remove these buildings.

Should you have any questions or concerns, please contact Cherie Johnston-Waldear, Archeologist, U.S. Army Corps of Engineers, Sacramento District, at (916) 557-6847. The point of contact for this report here at Tooele Army Depot is Bill Ienatsch at (435) 833-2761.

Your continued assistance and cooperation are appreciated.

Sincerely,

Thomas A. Turner

Encls

Thomas A. Turner
Chief, Environmental Office

CF:
Cherie Johnston-Waldear, USACE, CESPK-PD-R, 1325 J Street, Sacramento, CA, 95814-2922

SOSTE-CS-EO (200) July 22, 2002

MEMORANDUM FOR DIRECTOR of PUBLIC WORKS, ATTN: SMATE-PW-IS

SUBJECT: Historic Building Survey

1. Reference 36 CFR Part 800 Protection of Historic Properties

2. Reference report *National Register of Historic Places Inventory and Evaluation of Previously Unevaluated World War II and Cold War Era Buildings, Tooele Army Depot* by the Sacramento Corps of Engineers dated April 2002.

3. The determination of the report was: No Historic Properties Effected.

4. The report was submitted to and received by the State Historical Preservation Officer (SHPO) on 18 June 02. SHPO has not responded. Section 800.3(d) of reference 1 states: If the SHPO does not respond within 30 days to a written finding under this part, a presumption of concurrence with such finding shall be created. TEAD can management all buildings as not historically significant.

5. The POC for this action is the Bill Ienatsch, extension 2761.

Thomas A. Turner
THOMAS A. TURNER
Chief, Environmental Office

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From: Howard, Roland O CIV USARMY JMC (US) <roland.o.howard.civ@mail.mil>
Sent: Thursday, June 30, 2016 4:21 PM
To: Hippert, Greg
Cc: Montgomery, Nicholas D CIV USARMY JMC (US)
Subject: FW: [Non-DoD Source] Re: Tooele Army Depot DRGC Project

FYI....

Roland

-----Original Message-----
From: Christopher Hansen [mailto:clhansen@utah.gov]
Sent: Thursday, June 30, 2016 9:23 AM
To: Howard, Roland O CIV USARMY JMC (US) <roland.o.howard.civ@mail.mil>
Subject: [Non-DoD Source] Re: Tooele Army Depot DRGC Project

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

Roland,
Thanks for the additional information, this is very helpful. We don't have any additional comments at this time and will look forward to the submission of the EA and any 106 submissions in the future.

Regards,

Chris

--
Christopher L. Hansen, Preservation Planner Utah State Historic Preservation Office Utah Division of State History
300 S. Rio Grande Street
Salt Lake City, Utah 84101
Phone: (801) 245-7239
Email: clhansen@utah.gov < Caution-mailto:clhansen@utah.gov >

On Wed, Jun 22, 2016 at 3:03 PM, Howard, Roland O CIV USARMY JMC (US) <roland.o.howard.civ@mail.mil < Caution-mailto:roland.o.howard.civ@mail.mil > > wrote:

Good afternoon Chris,
Please find a digital copy of the letter and packet that has gone out in the mail to you today in response to your questions on our DRGC project (SHPO Case No. 16-0590).

As stated in the letter, we will have the EA out here in the near future and will provide a copy for your review.

If you have any questions in the meantime, please feel free to let me know.

Thanks,

Roland

Roland Howard | Engineering Technician;
Tooele Army Depot | Department of the Army JMTE-GME
P: 435-833-3717 < tel:435-833-3717 > DSN: 790-3717 roland.o.howard.civ@mail.mil < Caution-mailto:roland.o.howard.civ@mail.mil >

Appendix B Air Quality Supporting Documentation

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RECORD OF NON-APPLICABILITY

In Accordance with the Clean Air Act—General Conformity Rule in support of the Environmental Assessment for Relocation of the Defense Non-Tactical Generator and Rail Equipment Center
Hill Air Force Base, Utah

September 7, 2016

The proposed action is to relocate the Defense Non-Tactical Generator and Rail Equipment Center facilities from Hill Air Force Base, Utah, to one of four proposed sites. The identification of the receiving Army Material Command installation would be determined and would depend on mission priorities and funding. General conformity under section 176 of the Clean Air Act has been evaluated according to the requirements of Title 40 of the Code of Federal Regulations Part 93, Subpart B. The requirements of the General Conformity Regulation are not applicable to the proposed action because:

- For all installations other than TEAD, all activities associated with the action are in areas designated by the U.S. Environmental Protection Agency to be "in attainment" for all criteria pollutants; or
- For TEAD, the highest total annual direct and indirect emissions from the proposed action have been estimated at 3.7 tons of NO_x, 0.3 tons fine particulate matter ($PM_{2.5}$), and <0.1 tons sulfur dioxide (SO_2) per year, which would be below the applicability threshold values of and 100 tons for SO_2, $PM_{2.5}$, and NO_x.

For purposes of analysis, it was assumed that individual projects would be compressed into one 12-month period. Therefore, regardless of the ultimate implementation schedule, annual emissions would be less than those specified herein for a project of this size. Changes in facility sites and moderate changes in quantity and types of equipment used would not substantially change the emission estimates, and would not change the determination under the General Conformity Rule or level of effects under the National Environmental Policy Act.

Pamela A. Hutman
Signature

Environmental Division Chief, Headquarters Army Materiel Command
Title

September 7, 2016
Date

Table B-1. Attainment Status and Air Quality Control Region

Installation	AQCR	Attainment Status
Anniston Army Depot	§ 81.199 East Alabama Intrastate	Attainment
McAlester Army Ammunition Plant	§ 81.123 Southeastern Oklahoma Intrastate	Attainment
Red River Army Depot	§ 81.94 Shreveport-Texarkana-Tyler Interstate	Attainment
Tooele Army Depot	§81.52 Wasatch Front Intrastate	PM2.5 Nonattainment and Partial Nonattainment for SO_2

Source: USEPA 2016a.

Table B-2. Construction and Air Regulations by Installation

Name	State	Air Regulations
Anniston Army Depot	AL	Open burning (COA 335-3-3-.01) Fugitive Dust and Fugitive Emissions (COA 335-3-4-.02)
McAlester Army Ammunition Plant	OK	Open burning (252:100-11-1) Visible emissions and particulate matter (252:100-25-1) Control of fugitive dust (252:100-29-1) Control of emission of VOCs (252:100-37-1)
Red River Army Depot	TX	General Air Quality Rules (Chapter 115 TAC A) Visible Emissions and Particulate Matter (Chapter 30 TAC H) Open Burning (Chapter 30 TAC H) Air pollution from Motor Vehicle (Chapter 30 TAC C) Volatile Organic Compounds (Chapter 30 TAC C)
Tooele Army Depot	UT	Permissible Open Burning (Utah Code 19-2-114) Prohibition of Particulate Matter (Utah Code 19-2-102)

Table B-3. Construction Equipment Use

Equipment Type	Number of Units	Days On-site	Hours Per Day	Operating Hours
Excavators Composite	1	115	4	460
Rollers Composite	1	173	8	1,384
Rubber Tired Dozers Composite	1	115	8	920
Plate Compactors Composite	1	115	4	460
Tractors/Loaders/Backhoes	1	230	7	1,610
Pavers Composite	1	58	8	464
Paving Equipment	1	58	8	464

Table B-4. Construction Equipment Emission Factors (lbs/hour)

Equipment	CO	NO_x	VOC	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Excavators Composite	0.5828	1.3249	0.1695	0.0013	0.0727	0.0727	119.6
Rollers Composite	0.4341	0.8607	0.1328	0.0008	0.0601	0.0601	67.1
Rubber Tired Dozers Composite	1.5961	3.2672	0.3644	0.0025	0.1409	0.1409	239.1
Plate Compactors Composite	0.0263	0.0328	0.0052	0.0001	0.0021	0.0021	4.3
Tractors/Loaders/Backhoes	0.4063	0.7746	0.1204	0.0008	0.0599	0.0599	66.8
Pavers Composite	0.5874	1.0796	0.1963	0.0009	0.0769	0.0769	77.9
Paving Equipment	0.0532	0.1061	0.0166	0.0002	0.0063	0.0063	12.6

Source: CARB 2015.

Table B-5. Construction Equipment Emissions (tons)

Equipment	**CO**	**NO_x**	**VOC**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**	**CO_2**
Excavators Composite	0.1341	0.3047	0.0390	0.0003	0.0167	0.0167	27.5037
Rollers Composite	0.3004	0.5956	0.0919	0.0005	0.0416	0.0416	46.4006
Rubber Tired Dozers Composite	0.7342	1.5029	0.1676	0.0011	0.0648	0.0648	109.9886
Plate Compactors Composite	0.0061	0.0076	0.0012	0.0000	0.0005	0.0005	0.9922
Tractors/Loaders/Backhoes	0.3271	0.6235	0.0969	0.0006	0.0482	0.0482	53.7791
Pavers Composite	0.1363	0.2505	0.0455	0.0002	0.0178	0.0178	18.0811
Paving Equipment	0.0123	0.0246	0.0038	0.0000	0.0015	0.0015	2.9297
Total	1.65	3.31	0.45	<0.01	0.19	0.19	259.67

Table B-6. Emissions from Delivery of Equipment and Supplies

Number of Deliveries	2						
Number of Trips	2						
Miles Per Trip	30						
Days of Construction	230						
Total Miles	27,600						
Pollutant	**CO**	**NO_x**	**VOC**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**	**CO_2**
Emission Factor (lbs/mile)	0.0219	0.0237	0.0030	0.0000	0.0009	0.0007	2.7
Total Emissions (lbs)	605.8	654.5	82.6	0.7	23.6	20.4	75,056.4
Total Emissions (tons)	**0.30**	**0.33**	**0.04**	**<0.01**	**0.01**	**0.01**	**37.53**

Source: CARB 2015.

Table B-7. Particulates from Surface Disturbance

TSP Emissions	80.00	lb/acre				
PM_{10}/TSP	0.45					
$PM_{2.5}$/PM_{10}	0.15					
Period of Disturbance	30	days				
Capture Fraction	0.5					
Building/Facility	**Area [acres]**	**TSP [lbs]**	**PM_{10} [lbs]**	**PM_{10} [tons]**	**$PM_{2.5}$ [lbs]**	**$PM_{2.5}$ [tons]**
All Facilities	2.3	5,630	2,534	1.27	190	0.10
Total	**2.3**	**5,630**	**2,534**	**1.27**	**190**	**0.10**

Source: USEPA 1995, 2005.

Table B-8. Emissions from Construction Worker Commutes

Number of Workers	30						
Number of Trips	2						
Miles Per Trip	30						
Days of Construction	58						
Total Miles	104,400						
Pollutant	**CO**	**NO_x**	**VOC**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**	**CO_2**
Emission Factor (lbs/mile)	0.0105	0.0011	0.0011	0.0000	0.0001	0.0001	1.1
Total Emissions (lbs)	1,101.3	115.1	112.7	1.1	8.9	5.5	114,791
Total Emissions (tons)	**0.55**	**0.06**	**0.06**	**0.0006**	**0.00**	**<0.01**	**57.40**

Source: CARB 2015.

Table B-9. Total Construction Emissions (tons)

Activity/Source	CO	NO_x	VOC	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Heavy Equipment	1.65	3.31	0.45	0.0028	0.19	0.19	259.67
Delivery of Equipment	0.30	0.33	0.04	0.0004	0.01	0.01	37.53
Surface Disturbance	0.00	0.00	0.00	0.0000	1.27	0.10	0.00
Worker Commutes	0.55	0.06	0.06	0.0006	0.00	0.00	57.40
Total Emissions	**2.5**	**3.7**	**0.5**	**<0.01**	**1.5**	**0.3**	**354.6**

Source: CARB 2015; SCAQMD 1993; USEPA 1995,

Table B-10. DGRC Operational Emission (2015) (lbs)

PROCESS_NAME	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	VOC	CO_2
ECOM - PH - BAKE OVEN - NATURAL GAS - 2.0 MMBTU/HR	84.4	100.5	0.6	7.6	7.6	5.5	120,570
GSOL - NONAERO - USAGE IN BLDG 1701						7.3	
DEGR - IMMERSION - SAFETY KLEEN 105						144.2	
DEGR - IMMERSION - SAFETY-KLEEN 105						3,381	
ECOM - WATER HEATER - DIESEL <1.6MMBTU/HR	0.5			0.0	2.4	0.7	2,250
03SG - SURF - STANDARD DRY FILTER PAINT BOOTH				2.4	1.5	237.5	
01AS - SURF - STANDARD DRY FILTER PAINT BOOTH				0.1	0.1	47.8	
03SG - SURF - STANDARD DRY FILTER PAINT BOOTH				2.4	1.5	237.5	
01AS - SURF - STANDARD DRY FILTER PAINT BOOTH				0.1	0.1	47.8	
01AS - SURF - COATINGS APPLIED OUTSIDE A BOOTH				0.4	0.3	5.6	
02B - SURF - COATINGS APPLIED OUTSIDE A BOOTH						4.6	
SGUN - PAINT GUN CLEANER - IMMERSION						139.1	
Total (lbs)	85.0	100.0	1.0	13.0	13.0	4,259.0	122,821
Total (tons)	<0.01	<0.01	<0.01	<0.01	<0.01	2.1	61.4

Source: USAF 2016.