FINAL ENVIRONMENTAL ASSESSMENT
PERIMETER FENCE UPGRADE AND
DEMOLITION OF TWO SHEDS AND TWO WATER TANKS
LAKE KICKAPOO AIR FORCE SPACE SURVEILLANCE STATION
TEXAS

November 2012

Air Force Space Command
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FINDING OF NO SIGNIFICANT IMPACT
Perimeter Security Fence Upgrade, Demolish Two Sheds and Two Water Tanks
Lake Kickapoo Air Force Space Surveillance Station, Texas

Pursuant to provisions of the National Environmental Policy Act (NEPA), 42 U.S. Code 4321 *et seq*, implementing Council on Environmental Quality (CEQ) Regulations, 40 Code of Federal Regulations (CFR) 1500-1508, and 32 CFR Part 989, *Environmental Impact Analysis Process* (EIAP), the U.S. Air Force (Air Force) conducted an assessment of the potential environmental consequences of installing a new eight-foot high chain-link perimeter fence and demolishing two sheds and two water tanks. This Environmental Assessment (EA), Perimeter Security Fence Upgrade and Demolition of Two Sheds and Two Water Tanks, Lake Kickapoo AFSSS, TX, incorporated by reference in this finding, considers the potential impacts of the Proposed Actions on the natural and human environments.

Proposed Action and Alternatives

The Proposed Action is to upgrade the existing barbed-wire fence with an eight-foot high chain-link fence with an outrigger on the top and demolish two sheds and two water tanks. The No Action Alternative would be not to upgrade the fence and not to demolish the two sheds and two water tanks.

Summary of Findings

Geology, Topography, Soils: Implementing one or more of the Actions will not impact the geology or topography of the Installation but will have minor impacts on soils. The impacts to soils will be unavoidable but temporary and insignificant. No long-term impacts will occur.

Air Quality: The construction and demolition activities from implementing one or more of the Actions will have an unavoidable short-term impact on air quality. Exhaust emissions from construction equipment and personal vehicles will be generated, and fugitive dust will be generated during the construction and demolition. These emissions will be minimal, given the short duration of use, the limited types and quantity of equipment to be used, and the limited area to be disturbed. Air emissions from the Actions are not expected to affect attainment of the immediate or adjacent Air Quality Regions and the action is exempt from conformity analysis.

Water Resources: A negligible amount of surface water may be impacted during the construction of the new perimeter fence; impacts will be insignificant. A small amount of siltation may occur near the fence but it will be localized and not significant. Stabilization, maintaining existing vegetation and/or revegetating sites to maximize soil productivity will minimize impacts.

Biological Resources: The loss of minimal vegetation and temporary displacement of wildlife during construction and demolition activities will be an unavoidable impact; however, not significant. All of the project areas are located on semi-improved lands and are not considered critical habitat.

Cultural Resources: No known cultural resources have been identified in the areas for any of the projects. No archaeological artifacts of any significance were located during a 2002 survey for cultural resources

and considering the high level of ground disturbance that has occurred on the Installation, no other potential impacts are likely.

Asbestos: An asbestos survey will be conducted on the sheds prior to demolition. Any asbestos identified will be removed prior to demolition. The quantity of any waste and the short duration of the removal process would result in insignificant impacts.

As there are no adverse environmental impacts that will result from implementation of the Actions, no mitigation measures are necessary. The management practices identified in the EA are standard construction management practices that will be implemented by the contractor.

Finding of No Significant Impact

Based upon my review of the facts and analyses contained in the attached EA, conducted in accordance with the provisions of NEPA, the CEQ Regulations, and 32 CFR Part 989, I conclude that the Proposed Actions will not have a significant environmental impact, either by itself or cumulatively with other ongoing projects at Lake Kickapoo AFSSS, will not involve an element of high risk or uncertainty on the human environment, and its effects on the quality of the human environment are not highly controversial. Accordingly, an Environmental Impact Statement is not required. The signing of this Finding of No Significant Impact (FONSI) completes the environmental impact analysis process.

3 JAN 2013

MITCHELL A. KATOSIC, Lt Col, USAF
Commander, 20th Space Control Squadron

Date

FINAL
ENVIRONMENTAL ASSESSMENT
FOR THE
PERIMETER SECURITY FENCE UPGRADE AND
DEMOLITION OF TWO SHEDS AND TWO WATER TANKS
LAKE KICKAPOO AIR FORCE SPACE SURVEILLANCE STATION, TEXAS

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Acronyms and Abbreviations

ACM	Asbestos Containing Material
AFH	Air Force Handbook
AFI	Air Force Instruction
AFSPC	Air Force Space Command
AFSSS	Air Force Space Surveillance Station
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DoD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
°F	Degrees Fahrenheit
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
HAP	Hazardous Air Pollutants
INRMP	Integrated Natural Resources Management Plan
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places

OSHA	Occupational Safety and Health Administration
RACM	Regulated Asbestos Containing Material
SIP	State Implementation Plan
U.S.	United States
USAF	U.S. Air Force
USC	United States Code
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

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1.0 PURPOSE AND NEED FOR PROPOSED ACTION

This environmental assessment (EA) evaluates the potential for environmental consequences from one construction and four demolition projects planned for Lake Kickapoo Air Force Space Surveillance Station (AFSSS), Texas. The Air Force proposes to complete five separate construction / demolition projects, all of which are evaluated in this EA in the interests of efficiency, economy, and cumulative impacts. These projects focus on sustaining the current mission while ensuring the longevity of the Installation through the upgrade and replacement of buildings and infrastructure.

1.1 BACKGROUND AND LOCATION

The Air Force Space Surveillance System, known as the "space fence", is a radar system that detects and tracks objects in orbit over the United States (U.S.). The space fence is comprised of nine field stations (three transmitter sites and six receiving sites) across the southern U.S. from Georgia to California, and is under the command of the 20th Space Control Squadron, Detachment 1 of the U.S. Air Force Space Command (AFSPC). The Lake Kickapoo AFSSS in Texas is one of the three transmitter sites. The mission of Lake Kickapoo AFSSS is to maintain constant surveillance of space by detecting and tracking objects in orbit over the U.S. to assist with national security requirements. Lake Kickapoo AFSSS is the largest of the transmitter sites that are part of the space fence. The transmitters emit a continuous beam (i.e., fence) of radar energy while the receivers "listen" for radar returns from objects in orbit passing through the fence. Orbiting satellites and other objects that cross the fence reflect radio waves back to earth, where the waves are collected at the six receiver sites.

Lake Kickapoo AFSSS is located in Archer County, Texas, approximately 30 miles southwest of Wichita Falls and 10 miles southwest of Archer City (see Figures 1 and 2). Lake Kickapoo AFSSS is situated on approximately 180 acres of government-owned land. The current use of the property surrounding Lake Kickapoo is vacant, undeveloped rangeland. Texas Farm-to-Market Road 2178 divides the subject property into North and South sites. Regional land uses include farming, ranching and oil exploration. The nearest residential or commercial development is located in Archer City, approximately 10 miles to the east.

Facilities and infrastructure at the Installation include the 10,660 foot transmitter antenna and supporting infrastructure, including the central operations building, four bay driver buildings, and several support buildings and structures. Operation and maintenance of Lake Kickapoo AFSSS are provided by contract personnel.

1.2 PURPOSE AND NEED

Each of the projects has its own specific purpose; these are discussed in the following paragraphs. These projects are intended to allow the Installation to carry out their assigned responsibilities in ways that fully satisfy mission requirements, foster safe operational practices, and protect human health and the

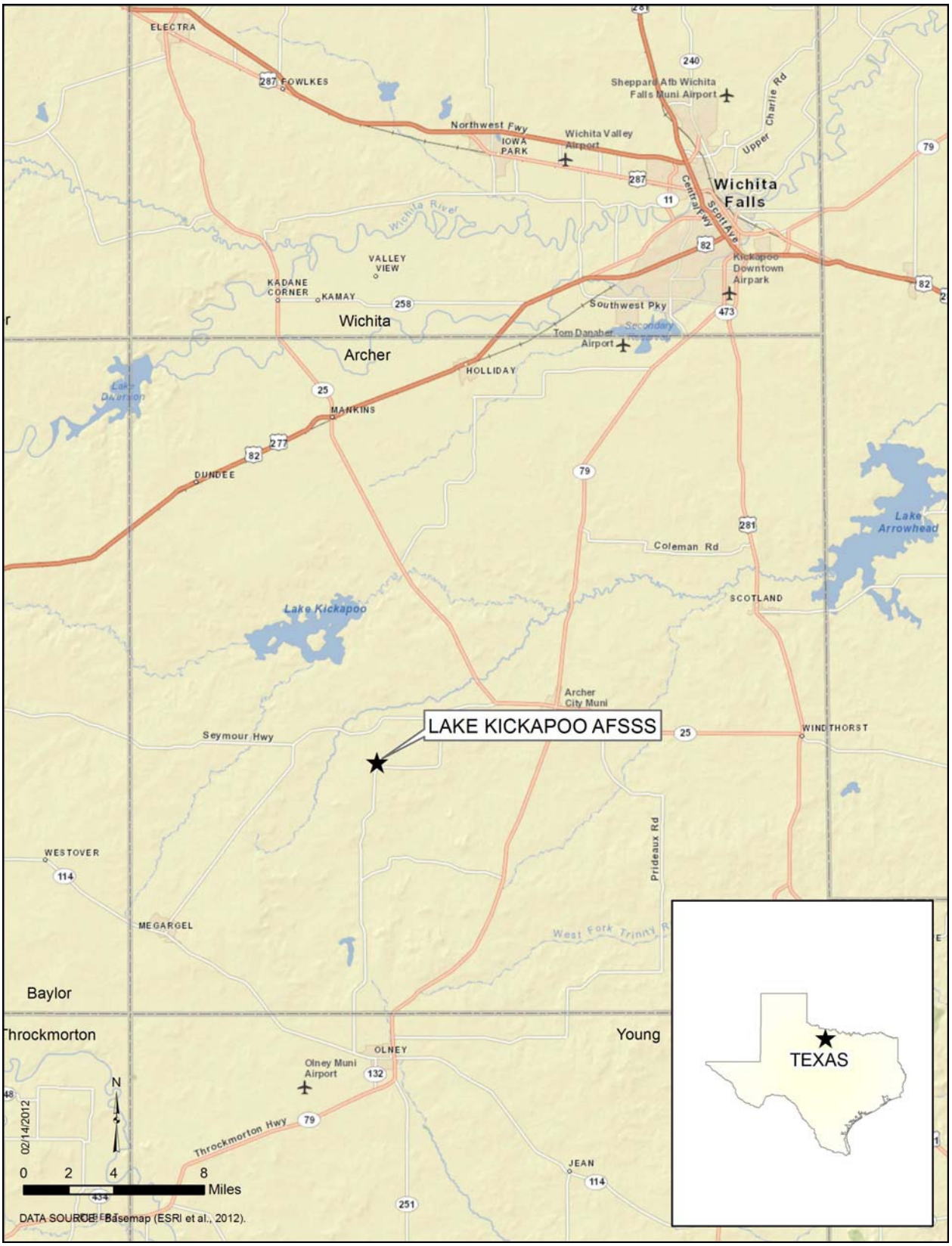

Figure 1. Location of Lake Kickapoo AFSSS

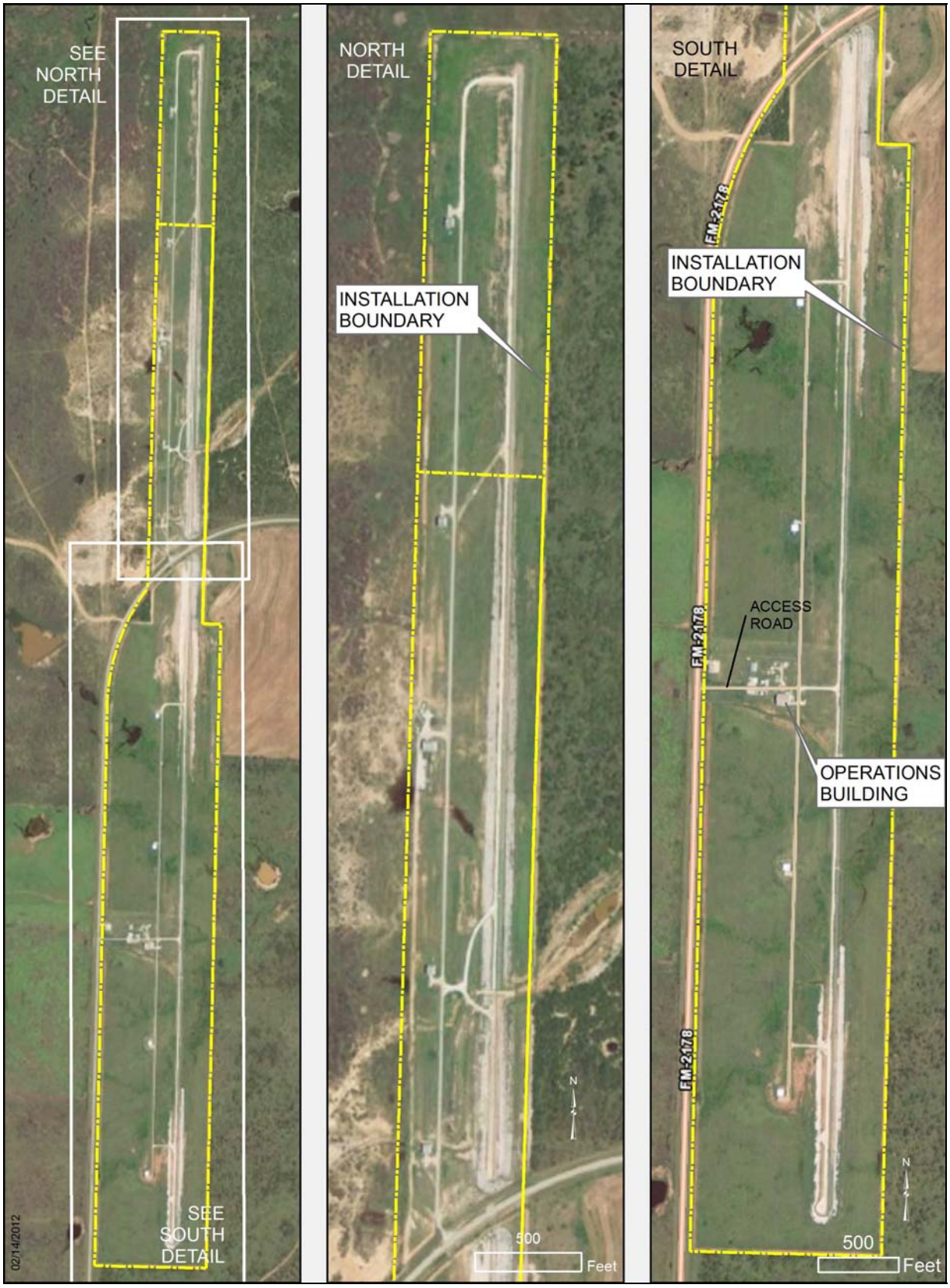

Figure 2. Lake Kickapoo AFSSS – Aerial View of Installation

environment. These construction / demolition projects are necessary to support the Installation's mission. The projects are described below.

1.2.1 Perimeter Security Fence Upgrade

The 180 acre site is surrounded by a three strand barbed wire fence. In accordance with Department of Defense (DoD) Instruction 2000.16, DoD Combating Terrorism Standards, Air Force Instruction (AFI) 31-101, The Air Force Installation Security Program, and Air Force Handbook (AFH) 32-1084, Facility Requirements, DoD installation are required to implement antiterrorism / force protection construction standards and to develop protective measures for DoD assets. Lake Kickapoo AFSSS has chosen to implement antiterrorism/force protection standards in accordance with AFH 32-1084 and AFI 31-101, by constructing a new perimeter fence around the Installation. AFH 32-1084 states that "a fence serves as a legal and physical demarcation of a boundary. It is an obstruction which must be jumped, climbed, or cut through to gain entry. From a security and law enforcement point of view, such actions would be regarded as unauthorized entry. Signs are displayed at appropriate and regular intervals on the exterior boundary of the fence line describing the type of area and conditions for entry. This combination of fencing and signs is intended to discourage trespass or unauthorized entry to legal entry points."

The purpose of the action is to implement antiterrorism/force protection measures and increase security for personnel and increase protection of the antennas. Currently, there is a three-strand barbed wire fence along the perimeter of the Installation. Type A fencing (the type specified as the Proposed Action) is listed in AFH 32-1084 for areas of high mission value. Type B fences (such as the existing barbed wire fence) are typically used for a perimeter boundary for isolated portions of an Installation or as a livestock barrier.

1.2.2 Demolish Two Sheds and Two Water Tanks

The purpose of the action is to dispose of facilities that are excess to the needs of the current mission at Lake Kickapoo AFSSS, have outlived their usefulness, or present safety concerns. Also, a focused effort to consolidate storage space is necessary due to a history of storage dispersement throughout several buildings, making managing antenna parts, supplies and equipment cumbersome.

The two sheds are badly deteriorated, and demolition is recommended, warranting a Condition Code 3 (Forced Use, Substandard). Condition codes are defined in the Air Force Project Managers Guide for Design and Construction (June 2000) and are the evaluation of the ability of a building to support the present occupant. Condition Code 3 means these sheds cannot be raised to meet Class A standards to house the function for which it is currently designated. Class A standards mean the building is adequate and can house the function for which it is currently designed with reasonable maintenance and without major alteration or reconstruction.

The two 15,000 gallon water tanks are metal cylindrical structures that sit on concrete pads. Prior to 2008, water was purchased from Archer City and transported by a potable water truck to fill these on-site tanks. The Installation is now connected to the Archer City Public Utility for continuous water supply; therefore, these water tanks are no longer used.

1.3 SCOPE OF THE ENVIRONMENTAL REVIEW

The scope of this environmental review is to analyze potential environmental impacts and concerns from construction of a new perimeter fence and demolition of two sheds and two water tanks. An advertisement announcing the availability of the Draft Final EA and Finding of No Significant Impact (FONSI) for public review was published in the Times Record News on November 11, 2012. A copy of the Draft Final EA was placed in the Wichita Falls Public Library, 600 11th Street, Wichita Falls, Texas. The Draft Final EA was also made available on the internet at ftp://ftp.pbainc.com/public. Appendix A contains a copy of the notice of availability.

After reviewing the environmental impact analysis and public and/or agency comments, the Air Force has decided that the environmental effects are not significant. The Air Force will issue a FONSI; an environmental impact statement (EIS) is not necessary based on the limited impacts identified in the EA.

1.4 REGULATORY REQUIREMENTS AND GUIDANCE

The Air Force prepared this EA in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 USC 4321-4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and Department of the Air Force Environmental Impact Analysis Process (32 CFR 989). This EA analyzes the environmental consequences of implementing the Proposed Actions for Lake Kickapoo AFSSS and provides information to the public and to the Air Force decision-makers regarding the potential significance of the federal action. Other federal laws and executive orders (EO) related to environmental issues addressed in this EA are briefly described in Table 1.

TABLE 1. FEDERAL LAWS AND EXECUTIVE ORDERS

Title	Citation	Description
Endangered Species Act	16 USC 1531	Requires federal agencies to evaluate the effects of their actions on endangered or threatened species of fish, wildlife, and plants and take steps to conserve and protect these species and their critical habitat.
Migratory Bird Treaty Act	16 USC 703	Provides for the protection of migratory birds and prohibits their unlawful take or possession.
Clean Water Act	33 USC 1251	Establishes limits on the amounts of specific pollutants discharged to surface waters to restore and maintain the chemical, physical and biological integrity of the water as established by ambient water quality standards.
Floodplain Management	EO 11988	Requires federal agencies to evaluate the potential effects of actions on floodplains and to consider alternatives to avoid adverse effects and incompatible development wherever possible.
Clean Air Act	42 USC 7401	Establishes policy to protect and enhance the quality of the nation's air resources to protect human health and the environment. Federal actions must conform to a State Implementation Plan and cannot cause or contribute to new violations of National Ambient Air Quality Standards.

Title	Citation	Description
Federal Noxious Weed Act	7 USC 2801	Requires federal agencies to develop management programs to control undesirable plants on federal lands that have the potential to impact agriculture, wildlife resources or public health.
Invasive Species	EO 13112	Directs federal agencies to make efforts to prevent the introduction and spread of invasive plant species.
Protection of Wetlands	EO 11990	Requires federal agencies to take action to avoid, to the extent practicable, the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.
Occupational Safety and Health Act of 1970	32 CFR 989.27	Requires the assessment of direct and indirect impacts of proposed actions on the safety and health of Air Force employees and others at a work site.
National Historic Preservation Act	16 USC 470	Requires federal agencies to determine the effect of their actions on cultural resources and take certain steps to ensure these resources are located, identified, evaluated and preserved.
Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations	EO 12898	Directs federal agencies to identify and address any disproportionately high and adverse human or environmental impacts of federal actions on minority or low-income populations.
Strengthening Federal Environmental, Energy, and Transportation Management	EO 13423	Sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, renewable energy, sustainable buildings, electronics stewardship, fleets, and water conservation.
Federal Leadership in Environmental, Energy, and Economic Performance	EO 13514	Expands on EO 13423 and sets sustainability goals for Federal agencies and focuses on making improvements in their environmental, energy and economic performance.

1.5 APPLICABLE REGULATIONS AND PERMITS

- Installation contractors would follow safety guidelines of the Occupational Safety and Health Administration (OSHA) as presented in the Code of Federal Regulations. Should any Installation employees participate in the Proposed Actions, they would comply with relevant Air Force occupational safety and health standards.
- Under Section 402 of the Clean Water Act, discharge of pollutants into waters of the U.S. requires a National Pollutant Discharge Elimination System (NPDES) permit from the U.S. Environmental Protection Agency (USEPA). In order to discharge storm water from a construction site, all construction projects that disturb one acre or more of land must seek coverage under a NPDES general construction permit for small construction activities that disturb at least one acre, but less than five acres of land. The contractor would be required to apply the current construction industry Best Management Practices in accordance with federal requirements and NPDES General Permit requirements. Disturbance includes, but is not limited to soil disturbance, clearing, grading, and excavation. Large construction activities are defined as being five or more acres.
- Texas does have Asbestos Health Protection Rules, Texas Administrative Code Title 25, Part 1; however, military installations are excluded from coverage by these rules.

1.6 ORGANIZATION

This EA follows the recommended outline in the CEQ and Air Force NEPA-implementing regulations.

Section 1.0—Purpose and Need for the Actions provides background information about the Installation; the purpose and need for the Proposed Actions; the scope of the environmental review; applicable regulatory requirements; permits and a brief description of how the document is organized.

Section 2.0—Provides details of the Proposed Actions and the No Action Alternative.

Section 3.0—Affected Environment provides a description of the existing conditions of the areas potentially affected by the Proposed Actions.

Section 4.0—Environmental Consequences provides an analysis of potential direct, indirect, and cumulative impacts to environmental resources that may result from implementing the Proposed Actions or Alternatives.

Section 5.0— References provides a listing of the references used in preparing this EA.

Section 6.0—List of Preparers lists the names, affiliations, and qualifications of the document preparers.

Appendices—Provides a List of Agencies, Organizations, and Individuals Contacted for information in the preparation of this document and a copy of the Notice of Availability.

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2.0 PROPOSED ACTION AND ALTERNATIVES

This Section describes the Proposed Actions for each project and the No Action Alternative. CEQ regulations require the inclusion of the No Action Alternative. The No Action Alternative serves as a baseline against which the impacts of the Proposed Actions and Alternatives are compared. There are five proposed construction/demolition projects described individually in terms of proposed functions, locations, and construction/demolition.

2.1 SELECTION CRITERIA FOR ALTERNATIVES

In accordance with 32 CFR Part 989.8(c) the development of site-selection criteria is an effective mechanism for the identification, comparison, and evaluation of reasonable alternatives. The following site selection criteria were developed to be consistent with the purpose and need for the actions.

- Support the Installation's mission to detect orbital objects passing over America;
- Be protective of facilities, human health and the environment;
- Not violate provisions of the National Historic Preservation Act;
- Meet current Air Force design standards and energy goals;
- Have sufficient space to house all necessary parts and equipment;
- Enhance security for the space surveillance system program;
- Meet antiterrorism force protection standards; and
- Impacts to natural resources such as floodplains, wetlands, water bodies and threatened and endangered species and habitats must be minimized to the maximum extent practicable. Unavoidable impacts must be addressed according to federal, Air Force, state and local regulations.

2.2 PROPOSED ACTIONS BY PROJECT

The Air Force is proposing five separate construction/demolition projects in support of the mission at Lake Kickapoo AFSSS. The proposed projects would occur at various locations around the Installation. Table 2 presents a list of the projects.

TABLE 2. CONSTRUCTION / DEMOLITION PROJECTS

Number	Project Number (if applicable) and Name
1	Perimeter Security Fence Upgrade
2	Demolish Old Generator Shed
3	Demolish Storage Shed
4	Demolish 15,000 Gallon Water Tank
5	Demolish 15,000 Gallon Water Tank

2.2.1 Perimeter Security Fence Upgrade

2.2.1.1 Proposed Action

The Proposed Action is to upgrade the three-strand existing barbed-wire fence with an eight-foot high chain link fence with an outrigger on the top. This includes fencing on both sides of the farm road that intersects the Installation. It is estimated that 3.7 acres of soil may be disturbed when installing the new perimeter fence. This estimate assumes a three-foot buffer on either side of the perimeter fence and includes both the North and South portions of the Installation as illustrated in Figure 3.

The fence would be a seven-foot high, nine gauge steel wire fabric, chain-link fence with one outrigger (facing outward) with three strands of barbed wire. The overall height of the fence with outrigger would be eight feet. The fence would be constructed in the same location as the existing barbed wire fence (see Figure 4). Foundations for line posts, constructed of concrete, would be 12 inches in diameter with a minimum depth of 42 inches below grade. Foundations or terminal and gate posts would be 18 inches in diameter.

The existing barbed wire perimeter fence would be maintained until installation of the proposed new security fence is complete. The contractor would then remove the existing barbed wire perimeter fence and recycle the materials as applicable.

2.2.1.2 No Action Alternative

The No Action Alternative would be not to install a new perimeter fence. Not constructing the new fence would be in non-compliance with current antiterrorism/ force protection measures to protect the base perimeter boundary at Lake Kickapoo AFSSS.

2.2.2 Demolish Two Old Sheds and Two Water Tanks

2.2.2.1 Proposed Action

The Proposed Action is to demolish the two sheds and two water tanks. The two sheds shown in Photo 1 are outdated, no longer used and planned for demolition. The sheds are on concrete slabs with no basements. Demolition of the two sheds would disturb 897 and 320 square feet or a total of 1,217 square feet (assumes a four foot buffer around the sheds). Asbestos surveys would be conducted prior to demolition. The water tanks are shown in Photo 2. Demolition of the two water tanks would disturb 428 square feet each for a total of 856 square feet (assumes a four foot buffer around the tanks).

All demolition materials would be properly disposed of, off-site. All materials would be recycled to the fullest extent possible and all trucks used to haul materials would be covered to prevent materials from littering roadways and surrounding areas. Debris not reused, recycled, or considered as inert waste would be disposed of in the local landfill. Any utilities to these structures would be disconnected prior to demolition. After demolition, the land would be graded and restored to natural vegetation.

Figure 3. Location of Perimeter Fence, Lake Kickapoo AFSSS

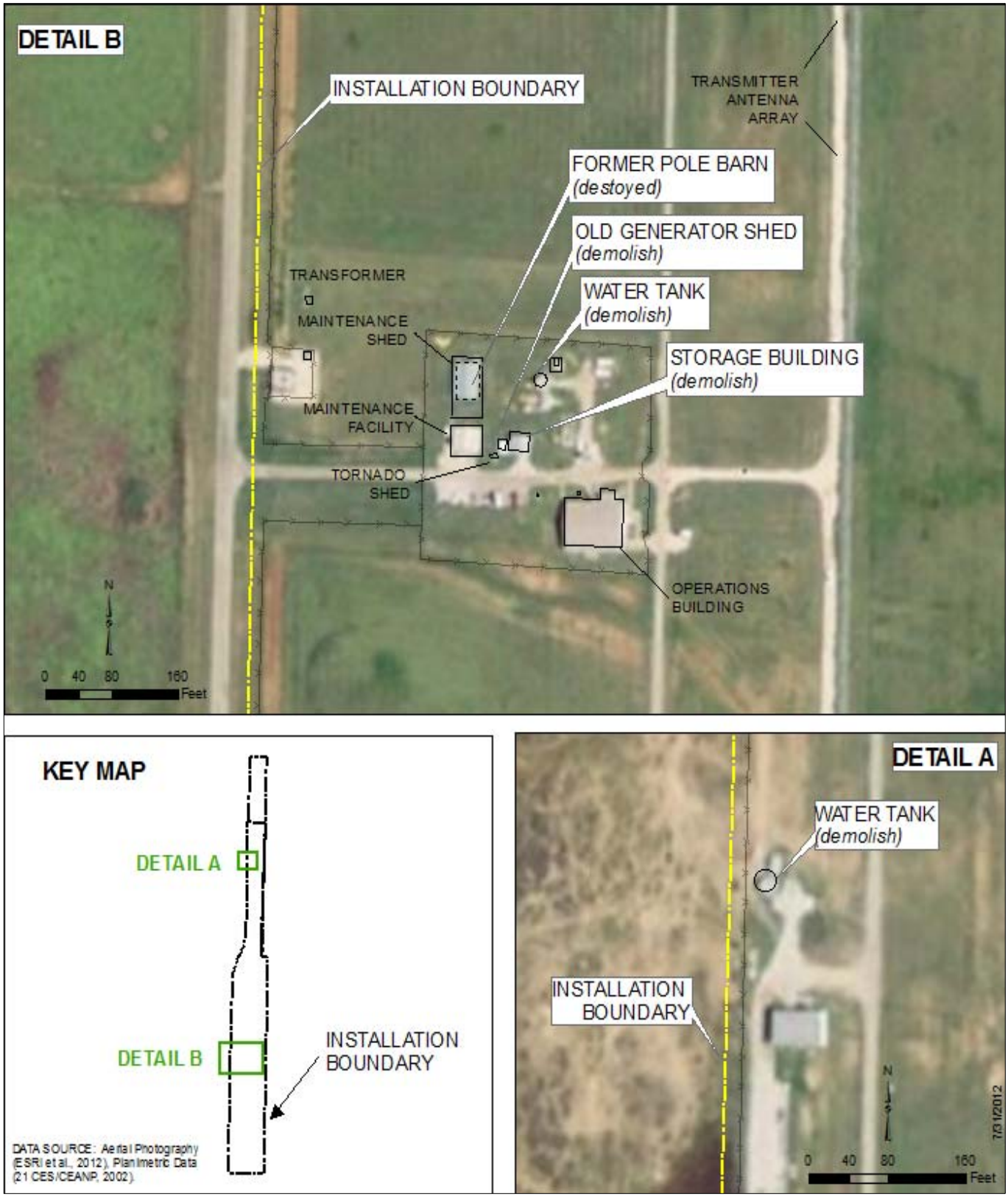

Figure 4. Proposed Actions, Lake Kickapoo AFSSS

2.2.2.2 No Action Alternative

The No Action Alternative would be not to demolish the two sheds or the two water tanks. Because of the inadequacy of the existing sheds, the no action alternative would cause materials and equipment used to maintain the Installation to become exposed to the elements, making the contents vulnerable to deterioration and a much shorter life span. Because the two existing water tanks are no longer needed to supply water, the No Action Alternative would primarily be centered on the inherent deterioration of the water tanks no longer used and therefore no longer maintained. Eventually, the deteriorating tanks may cause unsafe conditions on the ground, near the tanks, due to falling debris.

2.3 ALTERNATIVE CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS

An alternative to constructing the perimeter security fence was considered but eliminated from further analysis. The alternative considered and reason for elimination is discussed below.

2.4 INSTALL SECURITY CAMERAS ALONG THE PERIMETER OF THE INSTALLATION

An alternative to constructing a security fence around the Installation boundary is to install security cameras on poles every 200 feet around the perimeter of the Installation. Monitored security cameras can detect intruders crossing a particular boundary or entering a protected zone. These cameras would have to withstand outdoor weather conditions such as extreme heat, cold, dust, and rain. The cameras would require power supply cables to be installed. A backup power system would be required to compensate for power loss (due to natural events or tampering by an intruder). Although an allowable alternative under DoD Instruction 2000.16, this alternative was eliminated from further consideration due to the requirements for power supply cables to be installed over the area and the need for a backup power supply system.

Photo 1: Storage Sheds for Demolition

Photo 2: Water Tank for Demolition

3.0 AFFECTED ENVIRONMENT

This Section describes the environment at Lake Kickapoo AFSSS and the area surrounding the Installation that may be affected by implementing the Proposed Actions. The existing environmental conditions serve as a baseline from which to identify and evaluate potential environmental changes attributable to the Proposed Actions and alternatives. The intent of NEPA is to focus the analysis on the human (i.e., physical, biological, and social) environment potentially affected by the Proposed Actions. Resources and areas of the human environment that are not present on or in the vicinity of Lake Kickapoo AFSSS, or that would not be affected by the Proposed Actions or alternatives are not described in this Section. Table 3 lists these resources and provides the rationale for excluding them from further description and from impact analysis in Section 4.

TABLE 3. RESOURCES NOT DESCRIBED OR EVALUATED

Resource	Rationale for Excluding from Evaluation
Noise	There are no noise sensitive receptors on or in the vicinity of the Installation. Noise sources within the Installation are limited to vehicles, including the tractor used to mow the facility. The nearest residence is several miles from the Installation. Lake Kickapoo AFSSS does not generate noise that would affect sensitive receptors in nearby communities.
Outdoor Recreation	The Installation does not support public outdoor recreation opportunities because of the military mission, small land area, and lack of natural resources and facilities.
Land Use	Lake Kickapoo AFSSS encompasses approximately 180 acres of government-owned land. The 180 acres occupied by the Installation includes approximately 25 acres classified as improved grounds, which includes the access road, antenna arrays, and the operational facilities. The remainder of the Installation is designated as semi-improved grounds.
Visual Quality	The Installation is isolated and the antenna arrays, single-story buildings, and infrastructure have limited visual appeal. Implementing the Proposed Actions would not adversely affect the scenic view of observers from public access locations.
Hazardous Materials and Hazardous Wastes	Hazardous materials include cleaning supplies, paints and grounds maintenance materials which are stored in flammable storage lockers. There would be no long-term increase in hazardous materials or wastes from implementing the Proposed Actions.
Radon	Radon testing performed in 1999 indicates levels at Lake Kickapoo AFSSS are 0.8 which is below the threshold of 4.0 pico-Curies per liter set by the USEPA. (USAF, 2004).
Lead-Based Paint	No known lead-based paint exists in any buildings on the Installation (USAF, 2004).
Polychlorinated Biphenyls	No known polychlorinated biphenyls transformers, capacitors or hydraulic systems are located on the Installation (USAF, 2004).
Utilities	The Proposed Actions would not increase utility requirements or usage in the long-term. Short-term utility increases during construction / demolition would

Resource	Rationale for Excluding from Evaluation
	not result in significant impacts to utility providers and electrical and water distribution systems are adequate.
Energy Management	The use of vehicles and other energy-consuming equipment is monitored by the Air Force for abuse and unnecessary use beyond that needed to maintain the mission. Engines would be turned off when vehicles and equipment are parked unless maintenance operations require the engine to be running. Generators would only be used when necessary and turned off when not in use. Energy consumption to complete the Proposed Actions would not be considered excessive for the action. To minimize energy consumption and greenhouse gas emissions, when materials are required for the Proposed Actions they would be procured from within or close to the project area as practicable to reduce fuel use from transporting materials. Contractors would be requested to use appropriately-sized equipment for the construction /demolition projects and maintain construction equipment and haul trucks in good working order so fuel efficiency is maximized.
Occupational Safety and Health	Contractor personnel would be responsible for ensuring ground safety and compliance with all applicable occupational health and safety regulations and worker compensation programs. Contractors would also be required to conduct construction activities in a manner that would not pose any risks to personnel in the project areas. The contractor would also be responsible for managing exposure to hazardous materials, use of personal protective equipment, and availability of Material Safety Data Sheets.
Transportation	Implementing the Proposed Action would not affect vehicular access to the Installation or disrupt or improve traffic patterns.
Socioeconomics	There would be small beneficial impacts to local employment and income from the construction / demolition projects. Construction jobs would most likely be filled by persons living in the area.
Environmental Justice[1] Protection of Children[2]	No environmental justice populations are established in the vicinity of Lake Kickapoo AFSSS. There would be no disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

[1] EO 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations
[2] EO 13045, Protection of Children from Environmental Health Risks and Safety Risks

3.1 GEOLOGY, TOPOGRAPHY, AND SOILS

The Installation is located in the southern Great Plains near the northwestern edge of the Gulf Coastal Plain at an elevation of 1,106 feet. The geology underlying the Installation consists of Permian mudstone, sandstone, siltstone, and conglomerates of the Nocona and Archer City Formations. Quaternary gravels, terrace deposits, and alluvium are present along the major drainages in the vicinity. A geological map of the area is shown in Figure 5.

There are 10 soil types within the Installation. The soils within the Installation boundary consist primarily of Tillman clay loams in the south site and a mix of Kamay silt loam in the north site. Areas of Grandfield sandy loam, Knoco-Vernon complex, Vernon-Knoco complex and Winters Loam are also present in the north site, as shown on the soil map of the area (Figure 6). Small areas of Port-Wheatfield soil along drainages are occasionally flooded (USDA, 2012). Soil drainage is generally slow, and most soils at

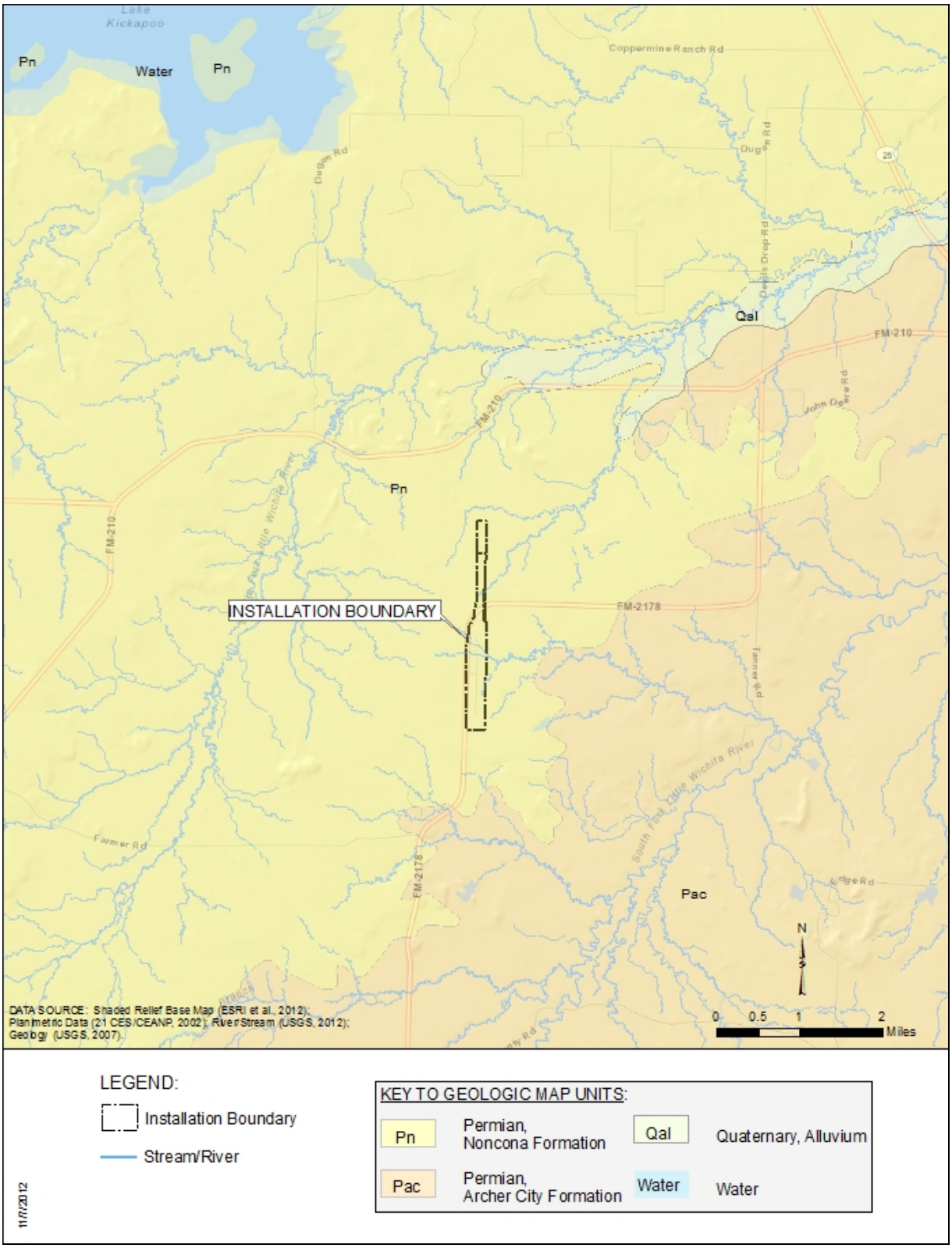

Figure 5. Geological Map of Lake Kickapoo AFSSS and Vicinity

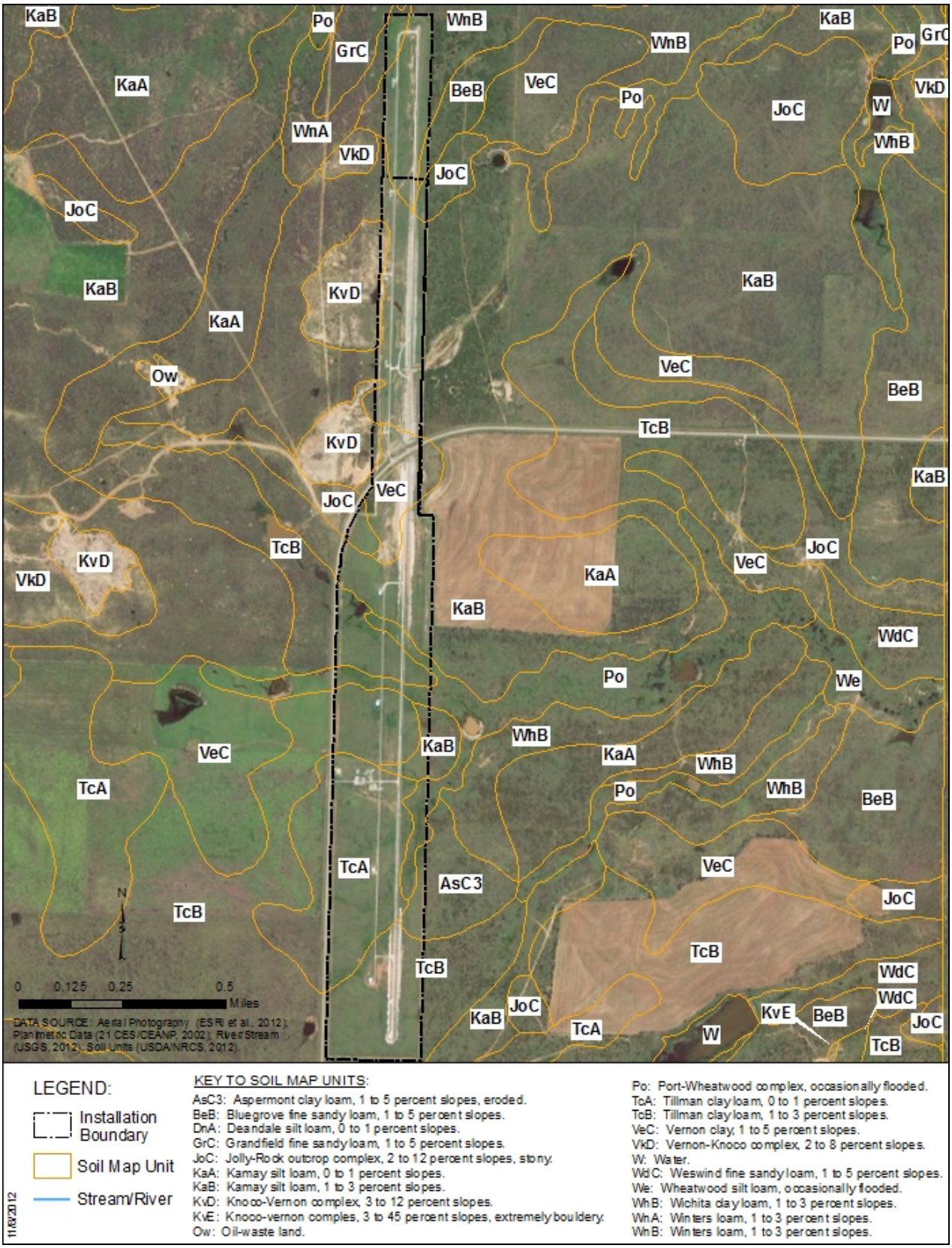

Figure 6. Soil Map of Lake Kickapoo AFSSS and Vicinity

the site are rated as hydrological group D, for soils that have a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission (USDA, 2012). Table 4 shows the characteristics of the soils at the Installation.

TABLE 4. SOIL CHARACTERISTICS AT LAKE KICKAPOO AFSSS

Soil Name and Symbol	**Slope**	**Permeability**	**Wind and Water Erosion potential**	**Shrink-swell potential**
AsC3	1-5 percent, eroded	Moderate	Moderate	Moderate
BeB	1-5 percent	Moderately slow	Moderate	Moderate
GrC - Grandfield fine sandy loam	1-5 percent	Moderate	Moderate	Low
JoC – Jolly-rock outcrop complex	2-12 percent	Moderate	Wind slight; water is moderate or severe depending on slope and the percentage of rock at the surface	Low
KaB – Kamay silt loam	1-3 percent	Slow	Wind slight; water moderate	High
KvD – Knoco – Vernon complex	3-12 percent	Very slow	Wind slight; water severe	High
Po – Port-Wheatwood complex – occasionally flooded	0-1 percent, occasionally flooded	Moderate	Slight	Moderate
TcA – Tillman clay loam	0-1 percent	Slow	Slight	High
TcB – Tillman clay loam	1-3 percent	Slow	Wind slight; water moderate	High
VeC – Vernon clay	1-5 percent	Slow	Wind slight; water severe	High
VkD – Vernon – Knoco complex	2-8 percent	Very slow	Wind slight; water severe	High
WnA – Winters loam	0-1 percent	Moderately slow	Water slight; wind moderate	Moderate
WnB – Winters loam	1-3percent	Moderately slow	Moderate	Low

USDA, 2012; ERSI et. al., 2012

3.2 AIR QUALITY

The USEPA established the National Ambient Air Quality Standards (NAAQS) for criteria pollutants, which are those compounds that cause or contribute to air pollution which could endanger public health and the environment. These pollutants may directly or indirectly originate from diverse mobile and stationary sources such as vehicles, maintenance activities, fuel storage tanks, prescribed burns and wildfires and clearing and grading ground surfaces. Air quality is determined by comparing ambient air levels with the upper concentration limits of the NAAQS for each criteria pollutant. Geographic areas that

exceed NAAQS are designated as non-attainment for the specific pollutant that is in violation of the standard, whereas areas that meet NAAQS are designated as being in attainment for the criteria pollutant.

The Installation lies within the Abilene-Wichita Falls Intrastate Air Quality Control Region. USEPA has designated Archer County as "unclassifiable/attainment" (40 CFR 81.344). Air emission sources at the Installation include three 230 kilowatt emergency diesel generators that each has an internal 300 gallon diesel fuel tank. There is also one 10 kilowatt emergency diesel generator which provides additional backup and has an associated 250 gallon diesel fuel tank. The emergency generators are operated one hour monthly for testing and maintenance. These emergency sources are exempt from permit requirements under Texas air regulation Title 30, Part I, Chapter 106, Subchapter W (USAF, 2004).

The General Conformity Rule, promulgated by the USEPA at 40 CFR Parts 51 and 93, requires that the federal government may not engage, support or provide financial assistance for permit or license, or approve any activity that fails to conform to the State Implementation Plan (SIP). A General Conformity Evaluation is a review process designed to ensure that federal plans, programs, and projects are consistent with the SIP and the local clean air plan, and that they do not contribute to air quality degradation that would adversely affect State efforts to attain or maintain the NAAQS. The General Conformity Rule applies to all federal actions that are taken in nonattainment and maintenance areas. Since the proposed projects are located in an attainment area, a general conformity evaluation is not required.

The climate at the Lake Kickapoo AFSSS is typical of the southern Great Plains. Average maximum winter temperatures are near 50°F. Minimum winter temperatures are between 20°F and 30°F. Average maximum summer temperatures are near 100°F. Minimum summer temperatures are near 70°F. Annual rainfall averages slightly less than 30 inches. Most rainfall occurs in the months of May, June, September and October. Average wind speed in the spring is 14 miles per hour.

3.3 WATER RESOURCES

The Seymour Aquifer is a major aquifer extending across north-central Texas and underlies the Installation. The aquifer consists of Quaternary-age, alluvial sediments unconformably overlying Permian-age rocks. Water is contained in isolated patches of alluvium as much as 360 feet thick composed of discontinuous beds of poorly sorted gravel, conglomerate, sand, and silty clay. Almost all of the groundwater pumped from the aquifer (90 percent) is used for irrigation, with the remainder used primarily for municipal supply. The depth to groundwater varies from 4 to 55 feet but averages 23 feet. Water features are shown in Figure 7.

The Installation lies within the Little Wichita Watershed. There is a well-developed surface drainage in the area, and two small intermittent streams cross the Installation, draining to the east and northeast via intermittent tributaries to the South Fork of the Little Wichita River (Navy, 2003) (see Figure 7). A small pond is present just south of where Ranch Road 2178 crosses the Installation. The Federal Emergency Management Agency (FEMA) has not classified the area for flood hazards (FEMA, 2009). Separate pumphouses and the water storage tanks proposed for demolition are located in the north and south portions of the Installation.

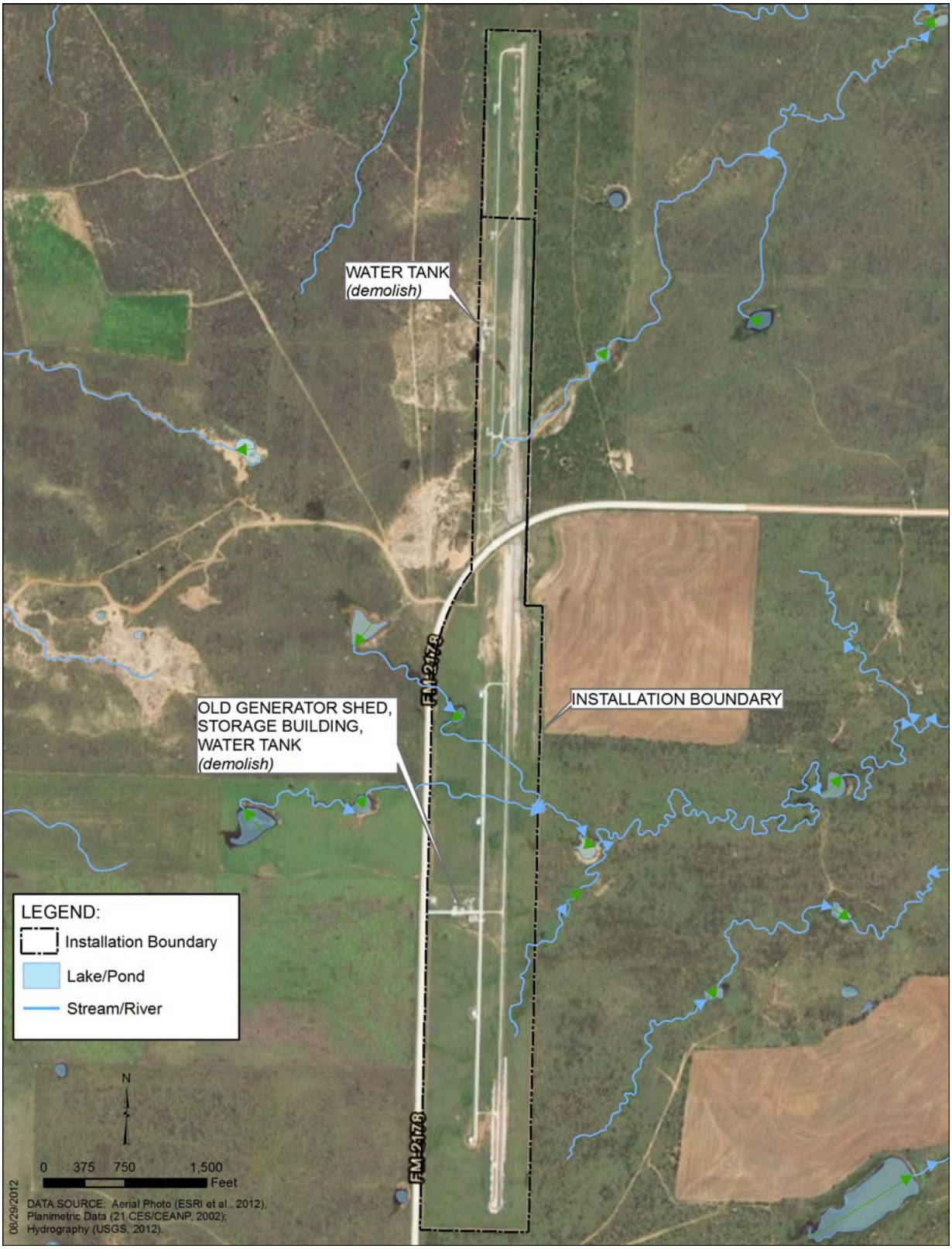

Figure 7. Water Resources at Lake Kickapoo

There are no storm drains at the Installation. Storm water runoff is primarily by sheet flow across the property in an easterly direction. At various locations along the antenna, runoff is conveyed to the east by a system of earthen ditches and culverts. In the event of discharge of oil spill beyond the Installation property, the material would flow to the eastern adjoining property. The eastern property line is approximately 590 feet from the access road at the south side and 365 feet from the access road at the north side. From the adjoining property, storm water ultimately drains to an unnamed tributary to the Little Wichita River and eventually to Lake Arrowhead, approximately 20 miles from the property.

3.4 BIOLOGICAL RESOURCES

The biological resources of interest include the common native and introduced plants and animals, species afforded special protections, and the vegetative communities on and adjacent to the Installation.

3.4.1 Vegetation

The Installation is primarily mowed grassland containing both native and non-native grasses, such as Johnson grass (*Sorghum halepense*), Bermuda grass (*Cynodon dactylon*), silver bluestem (*Bothriochloa laguroides*), and little bluestem (*Schizachyrium scoparium*). The few shrubs in the mowed area include mesquite (*Prosopis glandulosa*) and lotebush (*Zizyphus obtusifolia var. obtusifolia*). A single stock pond on the south site contains hackberry (*Celtis laevigata var. smallii*) and black willow (*Salix nigra*). Forbes are dominated by silver leaf nightshade (*Solanim elaginafolium*), western ragweed (*Ambrosia cumanensis*), milkweeds (*Asclepias spp*.), and Russian thistle (*Salsola iberica*) (USAF, 2007c). The plant species identified as occurring on the Installation are listed in Table 5.

TABLE 5. PLANT SPECIES FOUND AT LAKE KICKAPOO

Scientific Name	Common Name
Ambrosia cumanensis	Western ragweed
Asclepias spp.	Milkweeds
Bothriochloa laguroides	Silver bluestem
Bouteloua curtipendula	Sideoats grama
Buchloe dactyloides	Buffalo grass
Celtis laevigata var. *smallii*	Hackberry
Chloris verticillata	Tumble windmillgrass
Cynodon dactylon	Bermuda grass
Helianthus annuus	Annual sunflower
Iva annua	Sumpweed
Panicum obtusum	Vine mesquite
Prosopis glandulosa	Mesquite
Psoralidium spp.	Scurfpea
Salix nigra	Black willow
Salsola iberica	Russian thistle
Schizachyrium scoparium	Little bluestem
Solanim elaginafolium	Silver leaf nightshade
Solanum rostratum	Buffalo-bur
Sorghum halepense	Johnson grass
Sphaeralcea spp	Globe mallows
Tridens albescens	White tridens
Zizyphus obtusifolia var. *obtusifolia*	Lotebush
Source: USAF, 2007c	

3.4.2 Invasive Species and Noxious Weeds

An invasive plant species survey was conducted at Lake Kickapoo AFSSS in October 2006. No invasive species were present at the Installation at the time of the survey. Vegetation at the Installation is comprised of native and disturbance species; however, no invasive species were found (USAF, 2007c).

3.4.3 Wildlife

Wildlife occurrences at the Installation are limited because of the small land area of the Installation, the fenced perimeter, and the lack of suitable habitat. Typical species that have been observed include the Texas horned lizard and white-tailed deer.

3.4.4 Protected Species

A protected species is so designated because of federal or state regulations or federal land management agency policies that restrict the use of the species and its habitat. A species is listed under the Endangered Species Act because of danger of its extinction as a consequence of economic growth and development without adequate conservation. A species listed as threatened or endangered under the Act receives federal protection. Most birds are protected by the Migratory Bird Treaty Act (MBTA). The MBTA provides protection of nearly all species of birds from harm by prohibiting the destruction of active nesting habitat. The Texas Department of Agriculture and Texas Department of Fish and Game list species of native flora and fauna identified for preservation and protection because populations are declining and habitats are deteriorating.

There are no federal listed threatened or endangered plant or wildlife species, or designated critical habitat known to occur on or in the vicinity of Lake Kickapoo AFSSS. The federally endangered whooping crane and bald eagle have been documented in Archer County, but are unlikely to roost within the Installation due to the lack of suitable habitat. One state threatened wildlife species, the Texas horned lizard has been observed on Lake Kickapoo AFSSS. The state threatened Texas kangaroo rat could potentially occur at Lake Kickapoo AFSSS, but no sign of habitation by this species was documented in a 1997 survey (USAF, 2009a).

3.5 CULTURAL RESOURCES

Cultural resources are the physical remains of past human activity and include prehistoric and historic sites, structures, features, or locations considered important to a culture or a community for scientific, traditional, religious, or other reasons. AFI 32-7065, Cultural Resource Management, provides the Air Force with guidance on compliance with the National Historic Preservation Act, and applicable federal, state and local regulations.

Formerly referred to as the Naval Space Command Surveillance Station, Lake Kickapoo, the Lake Kickapoo AFSSS was built under the U.S. Department of the Navy in 1961. The Installation is located on an ancient upland setting, indicating no potential for buried archaeological deposits. According to Installation personnel, due to land scraper undulations across the Installation, some areas were bladed or cut down or trenches up to five meters deep were excavated, while other areas required earthern platforms to be constructed in order to provide a level surface for the two-mile long antenna. Excavation of drainage

ditches, placement of underground cables, and building construction have also resulted in ground disturbance.

No archaeological investigations have occurred on the Installation and no archaeological resources have been identified. A cultural resource inventory of the Lake Kickapoo AFSSS was conducted in 2002. Several structures on the Installation – the transmitter array, main operations building and nine bay driver buildings; all constructed between 1961 and 1964 - were found to be eligible for listing on the National Register of Historic Places (NRHP) (Navy, 2003). No historic artifacts were identified during the survey.

3.6 ASBESTOS

Asbestos is a regulated substance because it is a known carcinogen and a cause of asbestosis (a lung disease). Asbestos is a designated Hazardous Air Pollutant (HAP) under the National Emission Standards for Hazardous Air Pollutants (NESHAP) of the Clean Air Act (CAA). When asbestos poses a health danger from the release of airborne fibers (because it is in a friable state), Air Force policy (AFI 32-1053, Facility Asbestos Management) is to remove or isolate it. There are three main categories of asbestos-containing materials (ACM) that must be managed during building demolition:

- Category I non-friable ACM—packings, gaskets, resilient floor covering, pliable sealants and mastics and asphalt roofing products containing more than one percent asbestos.
- Category II non-friable ACM—any material, excluding Category I non-friable ACM, containing more than one percent asbestos that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.
- Regulated ACM (RACM):
    - Friable ACM (dry ACM that can crumble or be reduced to powder by hand pressure);
    - Category I non-friable ACM that has become friable;
    - Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading; or
    - Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by NESHAP 40 CFR Part 61.141.

Generally, Category I or Category II non-friable ACM can be left in place unless it is disturbed during demolition activities. Category I or Category II non-friable ACM can be disposed as solid waste (trash). All RACM is subject to regulations under NESHAP and must be removed prior to demolition activities. Asbestos can be found in almost any building material and is routinely found in insulation, blown acoustic ceiling finishes, flooring and roofing materials. Less commonly used as a building material since the mid-1970s, asbestos is still in use or distribution in certain materials such as flooring and roofing.

An asbestos survey was not available and based on the date of construction of the buildings (1961) and the fact that data indicating that the buildings are asbestos free is not available, an additional survey should be completed prior to demolition.

4.0 ENVIRONMENTAL CONSEQUENCES

This Section discusses the potential for significant impacts to the human environment as a result of implementing the Proposed Actions or the No Action Alternative. As defined in 40 CFR 1508.14, the human environment is interpreted to include natural and physical resources, and the relationship of people with those resources. Accordingly, this analysis has focused on identifying types of impacts and analyzing their potential significance. This Section discusses the effects that the Proposed Actions or the No Action Alternative could generate in the environmental resource areas described in Section 3.

The concept of significance used in this assessment includes consideration of both the context and the intensity or severity of the impact, as defined by 40 CFR 1508.27. Severity of an impact could be based on the magnitude of change, the likelihood of change, the potential for violation of laws or regulations, the context of the impact (both spatial and temporal), and the resilience of the resource. Significant impacts are effects that are most substantial and should receive the greatest attention in decision making. Impacts that are not significant result in little or no effect to the existing environment and cannot be easily detected. If a resource would not be affected by a proposed activity, a finding of no impact is noted. If a resource would be measurable improved by a proposed activity, a beneficial impact was noted. Best management practices are included as necessary to minimize potential adverse consequences of the federal action. No significant impacts were identified; therefore, no mitigation measures are listed or required.

This Section is organized by resource element in the same order as introduced in Section 3. The Section concludes with a discussion of Cumulative Impacts, Irreversible and Irretrievable Commitment of Resources, and Short-Term Use and Long-Term Productivity.

4.1 GEOLOGY, TOPOGRAPHY, AND SOILS

The geological resources within the proposed project area were studied to determine the potential impacts from implementing the Proposed Actions and No Action Alternative. Geological studies, the soil survey for Archer County, and topographic contours were reviewed to characterize the existing environment. Construction activities that could influence resources were evaluated to predict the type and magnitude of impacts.

4.1.1 Potential Site-Specific Project Impacts

The projects are evaluated for project specific impacts in the following subsections.

4.1.1.1 Potential Impacts of Upgrading the Perimeter Security Fence

4.1.1.1.1 Proposed Action

Implementing the Proposed Actions would not impact the geology or topography of the Installation but would have minor impacts on soils. Impacts to geological resources would not occur because the soil depths exceed the drilling depth along the entire perimeter of the fence boundary. Replacing the existing perimeter fence would disturb approximately 3.5 acres of soils from boring, grading, and compaction by

equipment during construction activities but would not be significant. The soil removed from the holes would be used for grading around the installed posts and along the length of the fence if necessary.

Best management practices include limiting grading and ground disturbing activities to the frequency and the areas necessary to complete the proposed activities. Daily watering, stabilization, and maintaining existing vegetation and/or revegetating sites by planting low-growing native ground cover would reduce wind and water erosion in the disturbed area. Grading and construction activity should be curtailed during strong wind conditions to minimize soil erosion from wind.

4.1.1.1.2 No Action Alternative

Current operations at the Installation would continue. The proposed new fence would not be built; therefore, geology, topography and soil resources would not be impacted.

4.1.1.2 Potential Impacts of Demolishing Two Sheds and Two Water Tanks

4.1.1.2.1 Proposed Action

Demolishing these two sheds and two water tanks would not impact the geology or topography of the Installation but would have minor impacts on soils. Impacts to geological resources would not occur because the sheds and water tanks sit on concrete foundations and the soil depths exceed the depth of excavation to remove the concrete foundations. Soils have been previously disturbed in the areas where the sheds and water tanks are located. If the concrete foundations are left in place impacts to soils would be insignificant. Demolition for both sheds would disturb 1,217 square feet (0.027 acres) of soil and would have temporary and insignificant impacts to soils. Demolition of both water tanks would disturb 428 square feet each (0.018 acres) of soil and would have temporary and insignificant impacts to soils.

Best management practices include limiting grading and ground disturbing activities to the frequency and the areas necessary to complete the proposed activities. Daily watering, stabilization, and maintaining existing vegetation and/or revegetating sites by planting low-growing native ground cover would reduce wind and water erosion in the disturbed area. Grading and demolition activity should be curtailed during strong wind conditions to minimize soil erosion from wind.

4.1.1.2.2 No Action Alternative

The shed and water tanks would not be demolished; therefore, geology, topography and soil resources would not be impacted.

4.2 AIR QUALITY

4.2.1 Potential Site-Specific Project Impacts

The projects are evaluated for project specific impacts in the following subsections.

4.2.1.1 Potential Impacts of Upgrading the Perimeter Security Fence

4.2.1.1.1 Proposed Action

Construction activities for the perimeter fence would generate emissions of criteria pollutants from grading and excavating, operation of construction equipment, trucks driving on paved and unpaved roads, and worker vehicles. Each type of equipment would be used very briefly and would consequently generate a very small amount of emissions. The impacts on air quality due to construction are expected to be localized and very short-term. Therefore, the minimal emissions of criteria pollutants from construction activities would have a negligible impact on air quality.

Because of the small quantity of potential emissions generated during construction and the generally dispersive meteorological conditions (an average of 14 miles per hour winds) the activities would not exceed or contribute to an exceedance of air quality standards. Because the Installation is located in an air quality control region designated as attainment with federal and state ambient air quality standards, a CAA Section 176(c) General Conformity evaluation is not required. This action is exempt from further conformity analysis pursuant to 40 CFR 93 subpart B 93.153.

During construction, air quality impacts could occur from dust carried off-site and combustive emissions from construction equipment. The primary risks from blowing dust particles relate to human health and human nuisance values. Fugitive dust can contribute to respiratory health problems and create an inhospitable working environment. Deposition on surfaces can be a nuisance to those living or working downwind of the construction site. Measures that would be implemented to reduce or eliminate fugitive dust emissions would include:

- *Watering/Irrigation*. Watering the ground surface until it is moist is an effective dust control method for haul roads and other traffic routes. This practice can be applied to almost any site. When suppression methods involving water are used, care would be exercised to minimize over-watering that could cause the transport of mud onto adjoining roadways, ultimately increasing the dust problem.
- *Vegetative Cover*. In areas not expected to handle vehicle traffic, vegetative stabilization of disturbed soil is often desirable. Vegetation provides coverage to surface soils and decreases wind velocity at the ground surface, thus reducing the potential for dust to become airborne.
- *Mulch*. Mulching can be a quick and effective means of dust control for recently disturbed areas.

The Proposed Action would have short-term, but not significant, impacts on air quality generated by construction activities. There would be no long-term impacts.

4.2.1.1.2 No Action Alternative

There would be no new impact to air resources under the No Action Alternative. Existing Installation operations and maintenance would continue.

4.2.1.2 Potential Impacts of Demolishing Two Sheds and Two Water Tanks

4.2.1.2.1 Proposed Action

Demolition activities for the sheds and water tanks would generate emissions of criteria pollutants from grading and excavating, operation of construction equipment, trucks driving on paved and unpaved roads, and worker vehicles. Each type of equipment would be used very briefly and would consequently generate a very small amount of emissions. The impacts on air quality due to demolition are expected to be localized and very short-term. Therefore, the minimal emissions of criteria pollutants from demolition activities would have a negligible impact on air quality.

Because of the small quantity of potential emissions generated during demolition and the generally dispersive meteorological conditions (an average of 14 miles per hour winds) the activities would not exceed or contribute to an exceedance of air quality standards. Because the Installation is located in an air quality control region designated as attainment with federal and state ambient air quality standards, a CAA Section 176(c) General Conformity evaluation is not required. This action is exempt from further conformity analysis pursuant to 40 CFR 93 subpart B 93.153.

During demolition, air quality impacts could occur from dust carried off-site and combustive emissions from construction equipment. The primary risks from blowing dust particles relate to human health and human nuisance values. Fugitive dust can contribute to respiratory health problems and create an inhospitable working environment. Deposition on surfaces can be a nuisance to those living or working downwind of the construction site. Measures that would be implemented to reduce or eliminate fugitive dust emissions would include:

- *Watering/Irrigation*. Watering the ground surface until it is moist is an effective dust control method for haul roads and other traffic routes. This practice can be applied to almost any site. When suppression methods involving water are used, care would be exercised to minimize over-watering that could cause the transport of mud onto adjoining roadways, ultimately increasing the dust problem.
- *Vegetative Cover*. In areas not expected to handle vehicle traffic, vegetative stabilization of disturbed soil is often desirable. Vegetation provides coverage to surface soils and decreases wind velocity at the ground surface, thus reducing the potential for dust to become airborne.
- *Mulch*. Mulching can be a quick and effective means of dust control for recently disturbed areas.

The Proposed Action would have short-term, but not significant, impacts on air quality generated by demolition activities. There would be no long-term impacts.

4.2.1.2.2 No Action Alternative

Existing Installation operations and maintenance would continue, there would be no impacts to air quality.

4.3 WATER RESOURCES

The analysis focused on the proximity of the construction and demolition activities in relation to surface waters, hydrogeology at the sites and water quality in the local area. Maps showing topography, watersheds and drainage were reviewed.

4.3.1 Potential Site-Specific Project Impacts

The projects are evaluated for project specific impacts in the following subsections.

4.3.1.1 Potential Impacts of Upgrading the Perimeter Security Fence

4.3.1.1.1 Proposed Action

Direct impacts to water resources would result primarily from disturbing the ground during construction activities and from altering surface hydrology. Excavation for the fence posts would likely be three to four feet and would not have a significant impact on groundwater. A spill or leak of fuel or lubricants is not likely during construction of the fence, but if one occurs, it would be cleaned up immediately in accordance with the Installation's Spill Plan (USAF, 2012) to prevent contamination of the groundwater. Given the small amount of oil and fluids used by construction equipment, impacts to the water quality of aquifer underlying the Installation would not be significant.

Short-term disturbances from construction activities during the proposed fence construction could cause wind and water erosion. Storm water runoff would negligibly increase around the areas of concrete footings for fence posts. Runoff would be localized and would not impact storm water drainage in the area. There would not be any increase in potential storm water contamination from construction of the fence (the fence is not located next to any parking lots or other areas of potentially contaminated runoff). Impacts from storm water runoff would not be significant. A negligible amount of surface water may be impacted during the construction of the new perimeter fence. The Proposed Action would temporarily disturb the grassed waterway of the existing streams that intersect the Installation at the fence line. A small amount of siltation may occur near the fence but it would be localized and not significant. Stabilization, maintaining existing vegetation and/or revegetating sites to maximize soil productivity would minimize impacts.

A minimal amount of water would be used during construction for concrete, equipment washing and other construction-related purposes. There would be no impact on water demand. There would be no impacts to water quality and long-term water use would remain at existing levels.

All construction projects that disturb one acre or more of land must seek coverage under a NPDES general construction permit. The permit would be for small construction activities that disturb at least one acre, but less than five acres of land. Disturbance includes, but is not limited to soil disturbance, clearing, grading, and excavation. Since this project disturbs more than one acre of land a permit would be required.

4.3.1.1.2 No Action Alternative

Current operations at the Installation and activities to manage the water resources would continue and no impact to the water resources on or adjacent to the Installation would occur.

4.3.1.2 Potential Impacts of Demolishing Two Sheds and Two Water Tanks

4.3.1.2.1 Proposed Action

Impacts to groundwater would not occur because the sheds and water tanks sit on concrete foundations and limited excavation and grading would be necessary. Grading the sites after the sheds and tanks are demolished would disturb an area of less than one acre. A spill or leak of fuel or lubricants is not likely during demolition of the sheds and tanks, but if one occurs, it would be cleaned up immediately to prevent contamination of the groundwater. Given the small amount of oil and fluids used by construction equipment, impacts to the water quality of aquifer underlying the Installation would not be significant.

Short-term disturbances from the proposed demolition activities could cause wind and water erosion. Limited rainfall and a relatively flat slope would minimize runoff. Runoff would be localized and would not impact storm water drainage in the area. Impacts from storm water runoff would not be significant. Stabilization, maintaining existing vegetation and/or revegetating sites to maximize soil productivity would minimize impacts.

A minimal amount of water would be used during demolition for equipment washing and other construction-related purposes. The Proposed Actions would not result in a change in personnel authorizations so there would be no impact on water demand. There would be no impacts to water quality and long-term water use would remain at existing levels.

All construction projects that disturb one acre or more of land must seek coverage under a NPDES general construction permit. Since this Action disturbs less than one acre of land a permit would not be required.

4.3.1.2.2 No Action Alternative

Current operations at the Installation and activities to manage the water resources would continue and no impact to the water resources on or adjacent to the Installation would occur.

4.4 BIOLOGICAL RESOURCES

The analysis focused on the proposed construction and demolition locations relative to various habitats on Lake Kickapoo AFSSS. The Integrated Natural Resources Management Plan (USAF, 2009a), Survey of Rare, Threatened and Endangered Plants and Animals (USAF, 1998) and the Invasive Species Report (USAF, 2007c) were reviewed to provide data on existing biological resources on the Installation.

4.4.1 Potential Site-Specific Project Impacts

The projects are evaluated for project specific impacts in the following subsections.

4.4.1.1 Potential Impacts of Upgrading the Perimeter Security Fence

4.4.1.1.1 Proposed Action

The loss of minimal vegetation and temporary displacement of wildlife during construction of the fence would be an unavoidable impact, but not significant. The project area is located on semi-improved lands and is not considered critical habitat. The existing perimeter fence is currently cleared of vegetation.

The amount of vegetation disturbed by construction of the fence would be kept to the minimum amount required to complete the activities. Concrete would be substituted for small, evenly distributed areas of soil (a 12-inch diameter circle every 10-feet), thus decreasing the overall area of potential vegetative habitat on the Installation. The minimal amounts of soil displaced and the non critical habitat on the Installation would not result in any significant impacts to vegetation. Disturbed areas could be re-established with native grasses for drought tolerance and survivability in the local area. Additional measures proposed to minimize adverse effects could include using straw bales, silt fences, silt traps, and covering stockpiles during grading activities to contain waterborne erosion and reduce or prevent it from reaching storm sewers and ditches. After construction is complete and the area is revegetated, no long-term impacts to vegetation would occur. Following these best management practices would ensure noxious weeds establishment is avoided in the areas disturbed by construction activities.

Significant impacts to wildlife from the construction of the fence are not expected to occur since habitat alteration would be minor. The Installation had an existing barbed-wire fence so the new fence would not impact small mammals as they would have adequate forage within the fenced area, or be able to manipulate an exit from the fenced area without harm. Medium to large mammals would continue to be excluded from accessing the Installation. No significant impacts are expected to the Texas horned lizard or the Texas kangaroo rat; these species would also be able to move from the area without harm.

4.4.1.1.2 No Action Alternative

Current operations would continue at the Installation. Vegetation control and removal for mission operations would continue and since habitat value of the Installation is very low continued impacts to any wildlife would be negligible.

4.4.1.2 Potential Impacts of Demolishing Two Sheds and Two Water Tanks

4.4.1.2.1 Proposed Action

The loss of minimal vegetation and temporary displacement of wildlife during demolition activities would be an unavoidable impact, but not significant. The project area is located on semi-improved lands and is not considered critical habitat. Short-term impacts to vegetative resources during demolition activities would not be significant.

The amount of vegetation disturbed by demolition activities would be kept to the minimum amount required to demolish the sheds and tanks. Disturbed areas could be re-established with native grasses for drought tolerance and survivability in the local area. Additional measures proposed to minimize adverse effects could include using straw bales, silt fences, silt traps, and covering stockpiles during grading activities to contain waterborne erosion and reduce or prevent it from reaching storm sewers and ditches.

After construction is complete and the area is revegetated, no long-term impacts to vegetation would occur. Following these best management practices would ensure noxious weeds establishment is avoided in the areas disturbed by construction activities.

4.4.1.2.2 No Action Alternative

Current operations would continue at the Installation. Vegetation control and removal for mission operations would continue and since habitat value of the Installation is very low continued impacts to any wildlife would be negligible.

4.5 CULTURAL RESOURCES

The analysis focused on the proposed location for the construction and demolition in relation to any historic buildings or archaeological resources. The historic resources survey and archaeological status report were reviewed.

4.5.1 Potential Site-Specific Project Impacts

The projects are evaluated for project specific impacts in the following subsections.

4.5.1.1 Potential Impacts of Upgrading the Perimeter Security Fence

4.5.1.1.1 Proposed Action

No known cultural resources have been identified in the area for the proposed fence construction. This area was previously disturbed during construction of the existing fence. No archaeological artifacts of any significance were located during a 2002 survey for cultural resources and considering the high level of ground disturbance that has occurred on the Installation, no other potential impacts are likely. The Operations Building, transmitting antenna, and the nine bay driver buildings, NRHP eligible structures, would not be disturbed as part of this Action.

Should any unknown archaeological resources be uncovered during construction activities, the Installation would follow procedures described in AFI-32-7065, Cultural Resource Management.

4.5.1.1.2 No Action Alternative

For the No Action Alternative, current conditions would not change and impacts to cultural resources would not occur.

4.5.1.2 Potential Impacts of Demolishing Two Sheds and Two Water Tanks

4.5.1.2.1 Proposed Action

No known cultural resources have been identified in the area for the proposed sheds and tanks demolition. No archaeological artifacts of any significance were located during a 2002 survey for cultural resources and considering the high level of ground disturbance that has occurred on the Installation, no other potential impacts are likely. The Operations Building, transmitting antenna, and the nine bay driver buildings, NRHP eligible structures, would not be disturbed as part of this Action. The sheds and water tanks scheduled for demolition are not eligible for listing on the NRHP.

Should any unknown archaeological resources be uncovered during construction activities, the Installation would follow procedures described in AFI-32-7065, Cultural Resource Management.

4.5.1.2.2 No Action Alternative

For the No Action Alternative, current conditions would not change and impacts to cultural resources would not occur.

4.6 ASBESTOS

The analysis focused on issues relating to removal and disposal of asbestos and included a review of federal and state laws and regulations.

4.6.1 Potential Site-Specific Project Impacts

The projects are evaluated for project specific impacts in the following subsections.

4.6.1.1 Potential Impacts of Upgrading the Perimeter Security Fence

4.6.1.1.1 Proposed Action

There would be no impacts related to asbestos from this Action.

4.6.1.1.2 No Action Alternative

There would be no impacts related to asbestos from the No Action Alternative.

4.6.1.2 Potential Impacts of Demolishing Two Sheds and Two Water Tanks

4.6.1.2.1 Proposed Action

An asbestos survey would be conducted on the sheds prior to demolition. Any asbestos identified would be removed prior to demolition in accordance with the Air Force and local regulations. The removal and disposal of any asbestos in these sheds would be performed by trained contractor personnel in accordance with all applicable Federal, state, local and Air Force regulations.

The quantity of waste and the short duration of the removal process would be an insignificant impact. The water tanks proposed for demolition are not suspected to contain asbestos.

4.6.1.2.2 No Action Alternative

Under the No Action Alternative, all asbestos-containing building materials would remain in place. ACM that has the potential to become friable could expose workers to asbestos fibers and the potential for handling of ACM during maintenance procedures. The potential impact to human health and the environment from the No Action Alternative is minor but could become significant if the ACM became friable.

4.7 CUMULATIVE IMPACTS

This section describes the impacts to the environment that may potentially occur because of the additive (i.e., cumulative) effects of implementing the Proposed Actions with other past, present, and reasonably

foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Past and present actions on the Installation center on the mission – maintaining the Installation to keep the antenna array operational and personnel safe. Lake Kickapoo AFSSS is an active military Installation and is subject to regular maintenance and improvement of facilities to maintain mission readiness. Other than past routine maintenance, no major changes to the mission or new facility construction other than the Proposed Actions are planned for the Installation. Future actions by others in the vicinity of the Installation include commercial real estate development.

Cumulative impacts associated with the Proposed Actions include an incremental decrease in available habitat. The use of construction-related vehicles and their short-term impacts on air quality is unavoidable. The short-term increases in air emissions and the minimal impacts predicted for other resource areas would not be significant when considered cumulatively with other previous, ongoing, or reasonably foreseeable activities. No other known construction is planned for the Installation or adjacent areas.

4.8 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The irreversible and irretrievable commitment of resources would most likely involve the commitment of concrete, energy, fuel, labor, and fencing materials. The irretrievable resources to be committed are typical for the scale of the proposed project. Implementation of best construction management practices, standard equipment maintenance schedules, and use of energy conservation and recycling measures during the fence construction and demolition of the sheds and tanks would minimize the use of irretrievable resources. None of these materials are considered rare and the long-term commitment of these resources would not have a substantial effect on their future availability.

4.9 SHORT-TERM USE AND LONG-TERM PRODUCTIVITY

The definitions of short-term and long-term are based on the scope of the Proposed Actions. Short-term use of the environment, as it relates to the Proposed Actions would encompass the construction and demolition period. Long-term productivity would occur after the construction and demolition has ended. During construction soil would be excavated and there would be associated dust emissions. Excavation and construction would not have a significant effect and impacts would be minimized through best management practices. The fence would have a long useful life and therefore, high long-term productivity.

5.0 LIST OF PREPARERS

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Appendix A – Public Notice of Availability

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Affidavit of Publication

THE STATE OF TEXAS
COUNTY OF WICHITA

#285855

NOTICE OF AVAILABILITY
DRAFT FINAL ENVIRONMENTAL ASSESSMENT (EA)
AND FINDING OF NO SIGNIFICANT IMPACT (FONSI)

UPGRADE OF PERIMETER SECURITY FENCE, DEMOLITION OF TWO SHEDS AND TWO WATER TANKS
LAKE KICKAPOO AFSSS, TEXAS

An EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality implementing NEPA to analyze the potential environmental consequences of upgrading the perimeter security fence and demolishing two sheds and two water tanks at Lake Kickapoo AFSSS. The EA analyzes potential impacts from geology, topography and soils; air quality; water resources; biological resources and cultural resources. The Draft Final EA and FONSI, dated November 2012 are available for review on line at ftp://ftp.pbainc.com/public and at the following library:

Wichita Falls Public Library
600 11th Street, Wichita Falls

Public comments on the Draft Final EA will be accepted through December 7, 2012. Written comments and inquiries on the EA and FONSI should be directed to Ms. Melissa Trenchik, 21 CES / CEANP, 580 Goodfellow Street, Peterson AFB, Colorado 80914 or email: melissa.trenchik@peterson.af.mil

On this 12th day of November 2012 A D...
ɔnally appeared before me, the undersigned authority
ɣ Salan, Sales Assistant for the Times Publishing
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November 11, 2012

Kathy Salan

Sales Assistant for Times Publishing Company of Wichita Falls

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