

Draft

Environmental Assessment for
Demolition of Homes
Barksdale Air Force Base, Louisiana



June 2022

PRIVACY ADVISORY (FOR DRAFT EIS/EA/ETC)

This Draft EA is provided for public comment in accordance with the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality (CEQ) NEPA Regulations (40 CFR §§1500-1508), and 32 CFR §989, Environmental Impact Analysis Process (EIAP).

The EIAP provides an opportunity for public input on Air Force decision-making, allows the public to offer inputs on alternative ways for the Air Force to accomplish what it is proposing, and solicits comments on the Air Force's analysis of environmental effects. Public commenting allows the Air Force to make better, informed decisions. Letters or other written or oral comments provided may be published in the EA. As required by law, comments provided will be addressed in the EA and made available to the public. Providing personal information is voluntary. Any personal information provided will be used only to identify your desire to make a statement during the public comment portion of any public meetings or hearings or to fulfill requests for copies of the EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of EA. However, only the names of the individuals making comments and specific comments will be disclosed.

Personal home addresses and phone numbers will not be published in the Final EA.

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Draft
FINDING OF NO SIGNIFICANT IMPACT (FONSI)
DRAFT ENVIRONMENTAL ASSESSMENT FOR DEMOLITION OF HOMES
BARKSDALE AIR FORCE BASE, LOUISIANA

Introduction

Barksdale Air Force Base (AFB) has prepared an Environmental Assessment (EA) to consider the potential effects to the human and natural environment associated with demolishing 19 historic duplexes, 2 compatible (i.e., non-historic) duplexes, and 4 historic garages on the western side of the Base. The EA documents the effects analysis of the Proposed Action and complies with the National Environmental Policy Act of 1969 (NEPA, 42 United States Code 4321, et. seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 *Code of Federal Regulations* [CFR], Parts 1500-1508), and the *Environmental Impact Analysis Process* (EIAP) (32 CFR Part 989).

In 2007, Barksdale AFB and BLB Privatized Housing, LLC (BLB) entered into a Military Housing Privatization Initiative ground lease for a term of 50 years. This Ground Lease is for the lease of land and conveyance of improvements at the Barksdale AFB housing area for the long-term construction, demolition, renovation, operation, and maintenance of housing and ancillary facilities intended for the use of airmen and their families. BLB currently operates about 1,090 homes at Barksdale AFB, of which about 229 units are historic homes located within the Barksdale Field Historic District. Unusually cold temperatures and winter storms in early 2021 severely damaged housing units within the Historic District under consideration in this Proposed Action.

Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to ensure all privatized housing remaining on Barksdale AFB is in safe and habitable condition. The structures proposed for demolition are largely damaged beyond repair, considering the impacts of a 2021 winter storm, the cost of repair, and the lack of market interest in renting these units. The Proposed Action is needed as the homes proposed for demolition are largely no longer usable or marketable and present varying degrees of safety hazards in their current, damaged state. Restoration of the structures would require substantial funds for units that have little to no demand, further siphoning limited resources away from the sustainment of the other homes.

Description of the Proposed Action and Alternatives

The Proposed Action is to demolish 19 historic duplexes, 2 compatible duplexes, and 4 historic garages at Barksdale AFB. All historic structures were built between 1930 and 1941. The compatible duplexes were built in 1990. All structures are unoccupied with the exception of 406 Bossier Road, which sustained damage during the winter 2021 storm but is still habitable.

The proposed demolition would involve complete dismantling and removal of all building structures and associated equipment or machinery in accordance with applicable regulatory

requirements, to include proper handling and disposition of the waste. All utilities would be disconnected, cut and capped, and abandoned in place. Basements would be filled and graded. Existing driveways and alleyways would remain in place to facilitate access to nearby homes that would remain in place. Existing landscaping would be removed with the exception of large trees, which would be protected during demolition and left in place to the extent practicable. Demolition would involve minimal ground disturbance; following grading and site work, the site would be re-seeded with native species to minimize the potential for erosion and runoff.

There are no future plans for the project sites following demolition; the sites would remain vacant and maintained by BLB. The sites may be transferred back to Barksdale AFB ownership for future re-development, which may include additional parking to support nearby Base mission support and expansion efforts. There is no current timeline, funding, or project information for this action. This action would be a separate project from this Proposed Action and would be subject to appropriate NEPA analysis and compliance with Section 106 of the National Historic Preservation Act (NHPA) at such time.

The project would adhere to commercially reasonable standards and comply with all local, state, and federal regulations. The proposed demolition would occur over a 6- to 8-month period, potentially starting in late 2022. The projected cost for abatement and demolition would be approximately \$2.5 million.

Project Location. The homes identified for demolition are located throughout the Barksdale Field Historic District. Table 2-1 in the EA lists the specific buildings to be demolished under the Proposed Action; refer to Figures 2-1 and 2-2 in the EA for locations of these structures.

Summary of Environmental Effects

Proposed Action. In compliance with NEPA, CEQ regulations, and EIAP guidelines, the EA focuses on resources that could be affected by the Proposed Action. The Proposed Action would have less than significant effects on air quality, biological resources, geology and soils, hazardous materials and waste, infrastructure and utilities, land use, safety, socioeconomics and environmental justice, and water resources. Barksdale AFB determined that the undertaking would result in an adverse effect to historic properties and is consulting with the Louisiana State Historic Preservation Officer (SHPO) pursuant to Section 106 of the NHPA and implementing regulations at 36 CFR Part 800. A Memorandum of Agreement (MOA) is anticipated to be signed between the BLB, Barksdale AFB, and the SHPO. The MOA would be finalized and signed prior to signature of this FONSI, and this FONSI would be updated as applicable. Potential adverse effects to architectural resources throughout the Barksdale Field Historic District from the undertaking would be mitigated through adherence to the terms of the MOA, which would result in less than significant impacts under NEPA. Details of the environmental consequences can be found in the EA, which is hereby incorporated by reference.

No Action Alternative. The CEQ regulation 40 CFR Part 1502.14(d) and 32 CFR 989.8 specifically require analysis of the “No Action” alternative in all NEPA documents. Under

the No Action Alternative, the structures proposed for demolition would remain in place, and BLB would continue to maintain the properties until an identified need requires further action. This would divert time and funding from currently occupied or potentially habitable housing units toward properties that are generally unsafe to occupy and for which there is currently no market demand to rent. The houses would remain within the Barksdale AFB structure inventory and would require substantial expenditures for maintenance and repairs or mothballing (i.e., securing the building to protect from weather and vandalism) in compliance with Section 106 of the NHPA which states that "neglect of a property resulting in its deterioration or destruction," is an adverse effect (Section 800.9 [b]). Failure to protect these historic structures from the adverse effects of neglect would place Barksdale AFB out of compliance with Section 106 of the NHPA. Although the No Action Alternative does not meet the purpose of and need for the action, it has been carried forward for detailed analysis in the EA as required under NEPA.

Public Notice

Executive Order 12372, Intergovernmental Review of Federal Programs, requires intergovernmental notifications prior to making any detailed statement of environmental effects. NEPA, 40 CFR Parts 1500-1508, and 32 CFR Part 989 requires public review of the EA before approval of the FONSI and implementation of the Proposed Action. Through the Interagency and Intergovernmental Coordination for Environmental Planning process, Barksdale AFB notified relevant federal, state, and local agencies and allowed them 30 days to make known their environmental concerns specific to the Proposed Action. Similarly, consultation letters were sent to the Caddo Nation of Oklahoma to provide notification of the action and to initiate government-to-government consultation in accordance with Section 106 of the NHPA, Agency and Public Coordination. A Notice of Availability for public review of the Draft EA and FONSI was published in the Bossier Press Tribune newspaper on June 1, 2022. The Draft EA and FONSI will be made available for public review from June 1 to July 1, 2022 at the Bossier Parish Central Library, 2206 Beckett St, Bossier City, LA 71111. Copies of all correspondence are provided in Appendix A of the EA.

Finding of No Significant Impact

Based on my review of the facts and analyses contained in the attached EA, conducted under the provisions of NEPA, CEQ Regulations, and Air Force EIAP regulations, I conclude that the Proposed Action would not have a significant environmental impact, either by itself or cumulatively with other known projects, with adherence to mitigation measures specified in the MOA by Barksdale AFB and BLB. Accordingly, an Environmental Impact Statement is not required. This analysis fulfills the requirements of NEPA, the CEQ Regulations and the Air Force EIAP regulations. The signing of this Finding of No Significant Impact completes the EIAP.

Name

Date

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ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit
2 CES/CEA	Asset Management Flight
ACAM	Air Conformity Applicability Model
ACM	asbestos-containing material
AFB	Air Force Base
AFOSH	Air Force Occupational and Environmental Safety, Fire Protection, and Health
AFI	Air Force Instruction
AICUZ	Air Installation Compatible Use Zone
APE	area of potential effect
AQCR	air quality control region
AT/FP	anti-terrorism/force protection
BCFD	Bossier City Fire Department
BLB	BLB Privatized Housing, LLC
BMP	best management practice
BP	before present
CAP	Central Accumulation Point
CEQ	Council on Environmental Quality
CH ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2eq}	carbon dioxide equivalent
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel

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DoD	Department of Defense
DOT	Department of Transportation
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
EMS	Environmental Management System
EPCRA	Emergency Planning and Community Right-to-know Act
FONSI	Finding of No Significant Impact
GHG	greenhouse gas
HABS	Historic American Buildings Survey
HSWA	Hazardous and Solid Waste Amendments
HWMP	Hazardous Waste Management Plan
ICRMP	Integrated Cultural Resources Management Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
LBP	lead-based paint
L _{dn}	day-night average sound level
L _{eq}	equivalent sound level
LDEQ	Louisiana Department of Environmental Quality
LPDES	Louisiana Pollutant Discharge Elimination System
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act

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NO ₂	nitrogen dioxide
NOA	Notice of Availability
NOI	Notice of Intent
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NRHP	National Register of Historic Places
MOA	Memorandum of Agreement
MS4	Multiple Separate Storm Sewer System
O ₃	ozone
OSH	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyls
PM _{2.5}	particulate matter less than 2.5 microns in diameter
PM ₁₀	particulate matter less than 10 microns in diameter
Ppb	parts per billion
PPE	personal protective equipment
Ppm	parts per million
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
RONA	Record of Non-Applicability
SAP	Satellite Accumulation Point
SCFD	Shreveport City Fire Department
SDS	Safety Data Sheet
SHPO	State Historic Preservation Office

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SO ₂	sulfur dioxide
SPCC	Spill Prevention Control and Countermeasures
SWPPP	Stormwater Pollution Protection Plan
tpy	tons per year
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USC	United States Code
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

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1 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

Barksdale Air Force Base (AFB), located in Bossier Parish, Louisiana (see Figure 1-1), is preparing an Environmental Assessment (EA) to consider the potential effects to the human and natural environment associated with demolishing 19 historic duplexes, 2 compatible (i.e., non-historic) duplexes, and 4 historic garages on the western side of the Base. The EA will comply with the National Environmental Policy Act of 1969 (NEPA, 42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 *Code of Federal Regulations* [CFR], Parts 1500-1508), and the *Environmental Impact Analysis Process* (EIAP) (32 CFR Part 989).

1.1 INTRODUCTION

Barksdale AFB is a 21,945-acre installation in northwestern Louisiana that is adjacent to and east of Bossier City in the Shreveport–Bossier City Metropolitan Area (see Figure 1-1). Barksdale AFB is divided into three overall areas: Main Base, Barksdale East, and the East Reservation. The Main Base, or Cantonment Area, encompasses approximately 2,000 acres and contains the Airfield; industrial, administrative, community, and housing facilities; historic district; and most of the installation's urban forest. Barksdale East encompasses approximately 2,000 acres and contains the industrial and administrative area. The East Reservation encompasses approximately 18,000 acres and is used for military training, industrial and administrative functions, community facilities, family housing, parks, outdoor recreation, natural resource conservation, and oil/gas leases. Approximately 16,000 acres of the East Reservation are forested (Barksdale AFB 2017a).

1.2 BACKGROUND

In 2007, Barksdale AFB and BLB Privatized Housing, LLC (BLB) entered into a Military Housing Privatization Initiative ground lease for a term of 50 years. This Ground Lease is for the lease of land and conveyance of improvements at the Barksdale AFB housing area for the long-term construction, demolition, renovation, operation, and maintenance of housing and ancillary facilities intended for the use of airmen and their families. This action was previously analyzed in the 2006 EA for Military Housing Privatization at Barksdale AFB (Barksdale AFB 2006), which considered the environmental impacts associated with conveyance of all housing units at Barksdale AFB to private management. BLB currently operates about 1,090 homes at Barksdale AFB, of which about 229 units are historic homes located within the Barksdale Field Historic District.

The Barksdale Field Historic District was listed on the National Register of Historic Places (NRHP) in 1992. According to a 1995 report (USACE 1995):

The district is unique for its properties as well as for its planning. Barksdale's plan is based on a Beaux-arts radial pattern developed by landscape engineer Captain Norfleet G. Bone and his assistant, Mr. Hugh K. Harris, landscape architect. Plant materials native to the area, such as live oaks, were used in the landscape design. The structures of the historic district were all built between 1930 and 1941 in the French Colonial Revival Style and are characterized by terra-cotta and stucco walls, hipped and gabled red-tile roofs, French windows, and wrought-iron rails. In addition to being architecturally significant, many of the houses in the district have been home to distinguished military families.

Unusually cold temperatures and severe winter storms in early 2021 froze pipes in both occupied and unoccupied housing units, including those located within the Barksdale Field Historic District. Tenants in occupied units were able to identify issues early and prevent significant damage; however, flooding issues, water damage, warping, and especially mold and mildew caused significant issues in some unoccupied homes. Barksdale AFB and BLB agreed that, due to the damage sustained and the estimated costs of repairs, it was more feasible to demolish 19 historic duplexes, 2 compatible (but non-historic) duplexes, and 4 historic garages than to repair and restore the units for lease to future tenants, particularly considering the low market demand for these units. Over the last 5 years, occupancy of homes within the Historic District has averaged about 65 percent, and BLB has prioritized housing occupation within the core of the District, closer to Barksdale Boulevard in the center of the Barksdale Field Historic District. Barksdale AFB and BLB are working with the State Historic Preservation Office (SHPO) to develop a Memorandum of Agreement (MOA) that would allow BLB to demolish these damaged historic buildings. This EA assesses the potential impacts of this demolition, as such an action was not considered in the original EA completed for the 2007 Ground Lease.

1.3 PURPOSE AND NEED

The purpose of the Proposed Action is to ensure all privatized housing remaining on Barksdale AFB is in safe and habitable condition. The structures proposed for demolition are largely damaged beyond repair, considering the impacts of the 2021 winter storms, the cost of repair, and the lack of market interest in renting these units. Estimated costs of mitigation and restoration of each unit is expected to total approximately \$85,000 to \$100,000 per unit, or \$3.6 million to \$4.2 million total, and these costs would be dedicated to units that were low in demand prior to the storm (i.e., only two of the units proposed for demolition were occupied at the time of the 2021 winter storm). Conversely, the projected cost for abatement and demolition would be approximately \$2.5 million. The Proposed Action is needed as the homes proposed for demolition are largely no longer usable or marketable and present varying degrees of safety hazards in their current, damaged state. Restoration of the structures would require substantial funds for units that have little to no demand, further siphoning limited resources away from the sustainment of the other homes.

1.4 INTERAGENCY COORDINATION AND CONSULTATIONS

Through the Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) process, Barksdale AFB provides opportunities for the public to participate in the NEPA process to promote open communication and improve their decision-making process. All persons and organizations identified as having potential interest in the Proposed Action are encouraged to participate in the process.

Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications prior to making any detailed statement of environmental effects. NEPA, 40 CFR Parts 1500-1508, and 32 CFR Part 989 requires public review of the EA before approval of the Finding of No Significant Impact (FONSI) and implementation of the Proposed Action. Through the IICEP process, Barksdale AFB notified relevant federal, state, and local agencies and allowed them 30 days to make known their environmental concerns specific to the Proposed Action. Similarly, consultation letters were sent to the Caddo Nation of Oklahoma (the Caddo; the only federally recognized Native American tribe in Louisiana with whom Barksdale AFB consults). Barksdale AFB does not have a history of consulting with non-federally recognized tribes. These consultation letters provide notification of the action and initiate government-to-government consultation in accordance with Section 106 of the National Historic Preservation Act (NHPA), Agency and Public Coordination. Comments and concerns submitted in the IICEP process will be subsequently incorporated into the analysis of potential environmental impacts conducted as part of the Final EA.

1.5 PUBLIC AND AGENCY REVIEW OF EA

A Notice of Availability (NOA) for public review of the Draft EA and FONSI will be published in the *Bossier Press-Tribune* newspaper. Notification to Base residents was also provided in the Base Housing newsletter. The Draft EA and FONSI will be made available for public review at the Bossier Parish Central Library, 2206 Beckett St, Bossier City, LA 71111 and online at <http://www.barksdale.af.mil>. Barksdale AFB will consider comments received during the public comment period. Copies of all correspondence will be provided in Appendix A.

1.6 ENVIRONMENTAL REVIEW PROCESS

1.6.1 National Environmental Policy Act

NEPA and CEQ regulations (40 CFR Parts 1500 through 1508) require federal agencies to analyze the potential environmental impacts of the Proposed Action and reasonable alternatives and use those analyses in making decisions on whether and how to proceed with those actions. These regulations specify that an EA be prepared to (1) provide sufficient analysis and evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a FONSI; (2) aid in an agency's compliance with NEPA when an EIS is not necessary; and (3) facilitate preparation of an EIS when necessary.

The EIAP is the United States Air Force's (USAF) process for conducting environmental impact analyses, as promulgated at 32 CFR Part 989. To comply with NEPA and complete the EIAP, CEQ regulations and the EIAP are used together. To comply with NEPA and other relevant environmental requirements and to assess potential environmental impacts, the EIAP and decision-making process for the Proposed Action involves a study and examination of all environmental issues pertinent to the proposed demolition of 19 historic duplexes, 2 compatible (i.e., non-historic) duplexes, and 4 historic garages at Barksdale AFB, in the form of this EA.

1.6.2 Other Relevant Laws and Regulations

The intent of NEPA is to assist decision-makers in understanding the environmental consequences of their actions and in taking appropriate measures that protect, restore, and enhance the environment. This EA examines resource areas potentially affected by the Proposed Action in accordance with laws, regulations, EOs, and policies as indicated in the following list.

- Archaeological Resources Protection Act of 1979 (16 United States Code [USC] §§ 470aa–470mm)
- Clean Air Act (42 USC §§ 7401–7671q), to include National Emission Standards for Hazardous Air Pollutants (NESHAP) (40 CFR Parts 61 and 63)
- Clean Water Act (CWA), Sections 401, 402, and 404 (33 USC §§ 1251–1387)
- Endangered Species Act (16 USC §§ 1531–1544)
- EO 11990, *Protection of Wetlands*
- Executive Memorandum on Environmentally and Economically Beneficial Practices on Federal Landscaped Grounds.
- Migratory Bird Treaty Act (16 USC §§ 703–712)
- NHPA of 1966, recodified in 2016 (54 USC § 100101)
- Toxic Substances Control Act of 1976 (15 USC 2601 et seq.)
- Resource Conservation and Recovery Act of 1976
- Comprehensive Environmental Response, Cleanup, and Liability Act of 1980 (42 USC 9601 et seq.)
- EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*
- EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*

1.7 ORGANIZATION AND SCOPE OF THE ENVIRONMENTAL ASSESSMENT

This EA is organized in six sections and three appendices. Section 1 provides the purpose of and need for the Proposed Action. Section 2 describes the Proposed Action and Alternatives, including

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the alternatives analysis and a summary of environmental consequences. Section 3 describes the affected environment and potential environmental consequences. Section 4 describes cumulative effects. Section 5 provides references used to prepare this EA. Section 6 provides a list of individuals who prepared this EA. Appendix A contains agency coordination and public involvement. Appendix B contains a detailed air emissions report. Appendix C includes photos of the damage sustained by these structures.

This EA analyzes potential effects of the Proposed Action and No Action Alternative on the natural and human environment. The proposed building demolition would be conducted within the boundaries of Barksdale AFB. The potential environmental effects would be associated with short-term building demolition and long-term maintenance of the site. At this time, there are no established plans for future reuse of the site currently supporting the structures proposed for demolition. Any potential redevelopment would require assessment in a future NEPA document and coordination with SHPO due to the location within a historic district.

2 PROPOSED ACTION AND ALTERNATIVES

This section presents a detailed description of the Proposed Action and considered alternatives. The details of the Proposed Action form the basis for the analyses of potential environmental impacts presented in Section 3 of this EA. This section includes a discussion of considerations used to identify reasonable alternatives and discusses the No Action Alternative.

2.1 SELECTION STANDARDS FOR ALTERNATIVES

CEQ NEPA Implementing Regulations direct for federal agencies to “evaluate reasonable alternatives to the Proposed Action” (40 CFR 1502.14[a]). A range of reasonable alternatives in this EA was identified by evaluating their ability to meet the Purpose and Need of the Proposed Action and their ability to meet the following screening standards.

Criterion One: Houses identified as candidates for demolition would have one or more of the following characteristics:

- Pose a threat to human health and safety, or the environment.
- Deteriorated beyond the point of economical repair.
- Require more than normal maintenance and its demolition would not create a deficiency.

Criterion Two: Be removed in a manner that complies with applicable and relevant environmental laws and regulations, including the solid waste laws and regulations related to the management of demolition debris, as well as applicable Base policies.

Various alternatives were evaluated as part of the planning process. Options for renovation and partial demolition were considered but eliminated as described in Section 2.4 because they did not meet the Purpose and Need for the Proposed Action. The No Action Alternative also does not meet the Purpose and Need of the Proposed Action, but rather provides a measure of the baseline conditions against which the impacts of the Proposed Action can be compared. As a result, there are two alternatives that represent the reasonable alternatives carried forward for detailed analysis.

2.2 DETAILED DESCRIPTION OF THE PROPOSED ACTION

The Proposed Action is to demolish 19 historic duplexes, 2 compatible (i.e., non-historic) duplexes, and 4 historic garages at Barksdale AFB. All historic structures were built between 1930 and 1941. The compatible duplexes were built in 1990. Table 2-1 lists the specific buildings to be demolished under the Proposed Action; refer to Figures 2-1 and 2-2 for locations of these structures. The photos included as Figure 2-3 are representative of the historic duplexes proposed for demolition under the Proposed Action. Additional photos of the damage sustained by these structures are included in Appendix C. All structures are unoccupied with the exception of 406 Bossier Road, which sustained damage during the winter 2021 storm but is still habitable.

Table 2-1. Buildings to be Demolished under Proposed Action

Building Number	Address	Building Type
2734	400 & 402 Bossier Road	Compatible Duplex
2738	404 & 406 Bossier Road	Compatible Duplex
3161	101 & 103 Langley Drive	Historic Duplex
3260	100 & 102 Fairchild Avenue	Historic Duplex
3650	201 & 203 Luke Avenue	Historic Duplex
3652	205 & 207 Luke Avenue	Historic Duplex
3660	-	Historic Garage
3663	204 & 206 Bong Boulevard	Historic Duplex
3665	208 & 210 Bong Boulevard	Historic Duplex
3727	-	Historic Garage
3729	-	Historic Garage
3731	300 & 302 Selfridge Avenue	Historic Duplex
3733	304 & 306 Selfridge Avenue	Historic Duplex
3735	308 & 310 Selfridge Avenue	Historic Duplex
3739	316 & 318 Selfridge Avenue	Historic Duplex
3740	301 & 303 Luke Avenue	Historic Duplex
3746	313 & 315 Luke Avenue	Historic Duplex
3747	-	Historic Garage
3761	300 & 302 Bong Boulevard	Historic Duplex
3763	304 & 306 Bong Boulevard	Historic Duplex
3765	308 & 310 Bong Boulevard	Historic Duplex
3767	312 & 314 Bong Boulevard	Historic Duplex
3841	400 & 402 Luke Avenue	Historic Duplex
3843	404 & 406 Luke Avenue	Historic Duplex
3844	409 & 411 Luke Avenue	Historic Duplex

The proposed demolition would involve complete dismantling and removal of all building structures and associated equipment or machinery in accordance with applicable regulatory requirements, to include proper handling and disposition of the waste. All utilities would be disconnected, cut and capped, and abandoned in place. Existing driveways and alleyways would remain in place to facilitate access to nearby homes that would remain in place. Existing landscaping would be removed with the exception of large trees, which would be protected during demolition and left in place to the extent practicable. Demolition would involve minimal ground disturbance; following grading and site work, the site would be re-seeded with native species to minimize the potential for erosion and runoff.

There are no future plans for the project sites following demolition; the sites would remain vacant and maintained by BLB. The sites may be transferred back to Barksdale AFB ownership for future re-development, which may include additional parking to support nearby Base mission support and expansion efforts. There is no current timeline, funding, or project information for this action. This action would be a separate project from this Proposed Action and would be subject to appropriate NEPA analysis and Section 106 compliance at such time.

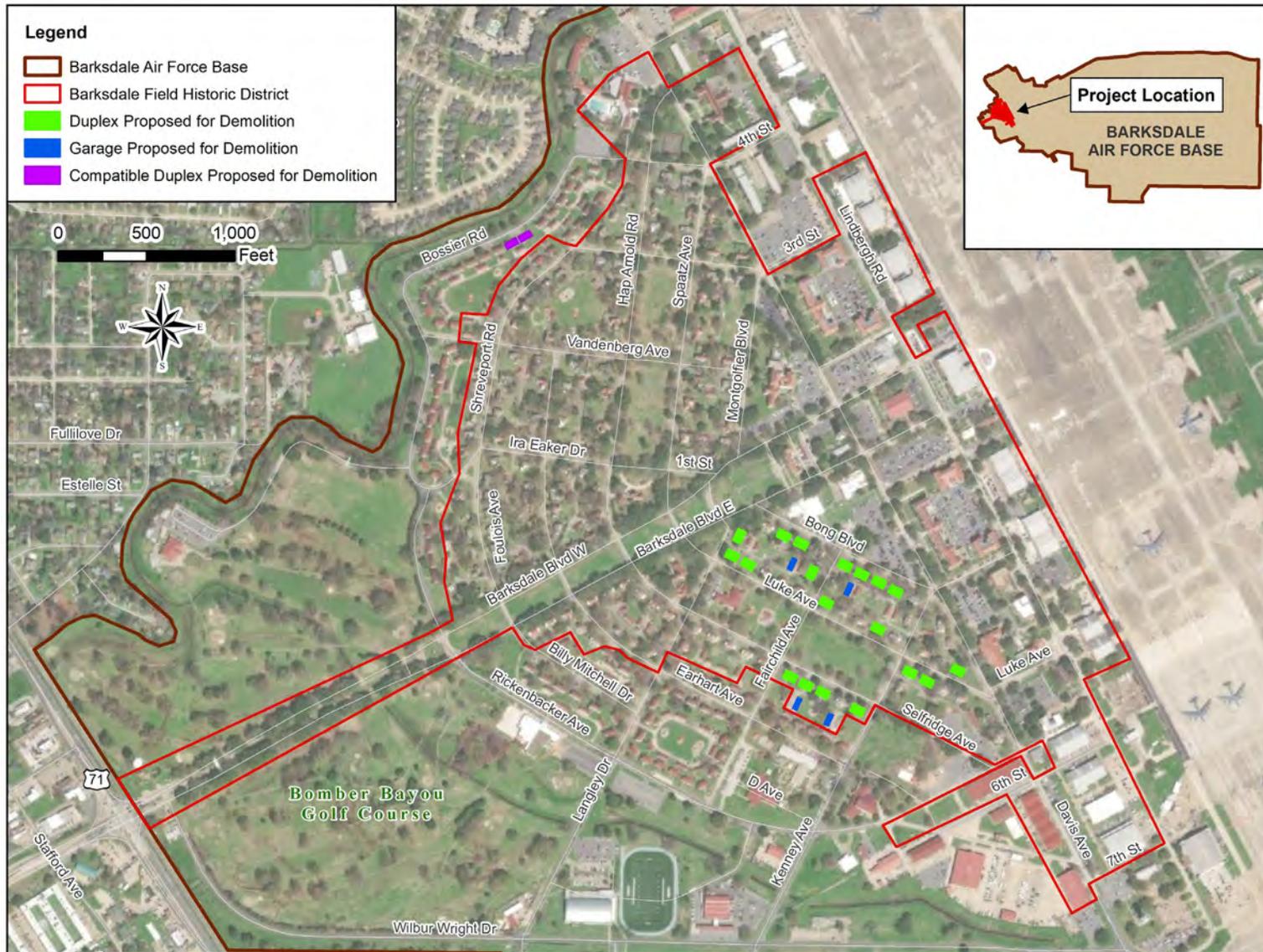


Figure 2-1. Location of Barksdale Field Historic District



Figure 2-2. Structures Proposed for Demolition



Front View of Bldg. 3763 (304 & 306 Bong Boulevard)



Rear View of Bldg. 3746 (313 & 315 Luke Avenue)

Figure 2-3. Representative Exterior Views of Duplexes Proposed for Demolition

Demolition would be completed using standard construction equipment and may include excavators, man lifts, graders, bobcats, and trucks to haul away debris. No other method of demolition such as burning or implosion would be employed. Approximately a dozen construction workers would be onsite within the project area during demolition activities. Some crushing of vegetation may occur surrounding the immediate area of demolition. In total, the combined project area, including the damaged buildings and an approximately 20-foot buffer around each building that could be disturbed due to vehicles and debris, encompasses approximately 4.9 acres, all of which would be temporarily impacted but restored following demolition.

Prior to or during demolition activities, BLB would salvage and/or repurpose certain building materials, pending final terms of the MOA. These materials could include flooring, doors, window components, shutters, gutters, wrought iron window guards, roofing ridge tiles, and chimney caps.

The proposed demolition would occur over a 6- to 8-month period, potentially starting in late 2022. The projected cost for abatement and demolition would be approximately \$2.5 million.

Staging. Laydown and staging of equipment or demolition debris may be required but would be located within the immediate footprints of each house to be demolished or in existing alleys of the houses proposed for demolition. Staging areas would be used for the temporary storage of equipment or demolition debris until transported to an appropriate offsite disposal facility.

Access. Vehicle trips associated with demolition would include delivery trucks for heavy equipment, worker vehicles, and trucks to haul useable, recyclable, and waste materials from the demolition site. A delivery truck is expected to be required for each item of non-road heavy equipment. Worker vehicles would commute to the site daily. Removal of equipment and waste would involve a number of trucks based on the weight or bulk of the material being removed. Removal of demolition waste materials and transportation to offsite landfills would be accomplished generally along pre-established transportation routes through the East Gate to the extent practicable in coordination with BLB, the demolition contractor, and Barksdale AFB. Vehicle and equipment trips and Base access would also generally occur along these routes.

Waste Management. Total demolition of housing and supporting infrastructure would generate solid waste from demolition debris. The demolition contractor would be responsible for solid waste management and disposal off-Base at landfills with appropriate capacity and in accordance with all federal, state, and local regulations.

Based on a Pre-Demolition Hazardous Materials Survey conducted for this project (InDepth Environmental, Inc. 2021), potentially hazardous wastes generated during demolition may include:

- Asbestos-containing materials (ACM) and lead-based paint (LBP). Most structures were built between 1930 and 1941. Given the age of these facilities, it is likely that asbestos and lead abatement would be required during demolition.
- Miscellaneous universal waste including fluorescent lighting ballasts and lamps.

- Potential polychlorinated biphenyls (PCBs) in a set of fluorescent lamps found in one of the units.

The presence of contaminated soil is likely as the landscaping within the project area has historically been treated with pesticides. Further, it is possible that soils may have some degree of lead contamination, as LBP has a tendency to flake and peel from surfaces.

Any other hazardous waste encountered or generated during demolition activities would be stored, transported, and disposed of in accordance with federal, state, and local regulations and in coordination with the Base Hazardous Waste Program Manager. Manifests would be signed by designated staff prior to transporting the waste to a permitted offsite disposal facility. Hazardous materials would be abated, as required, prior to initiation of demolition activities.

Environmental Management Systems. The USAF has implemented an Environmental Management System (EMS) in accordance with EO 13693, *Planning for Federal Sustainability in the Next Decade*, U.S. Department of Defense (DoD) Instruction 4715.17, *Environmental Management Systems*, Air Force Instruction (AFI) 32-7001, *Environmental Management*, and ISO 14001, *International Environmental Management System Standards*. These documents provide guidance on how environmental programs should be established, implemented, and maintained to operate under the EMS framework. Barksdale AFB employs EMS-based processes to comply with all legal obligations and current policy drivers for effective decision-making. The project would adhere to commercially reasonable standards and comply with all local, state, and federal regulations, including:

- Provide a list of all hazardous materials and corresponding safety data sheets (SDSs) prior to commencement of work.
- Prior to beginning any process that would generate a hazardous waste, inform the Environmental Office of the activity, duration, and amount that would be generated.
- Proper notifications would be provided to the Louisiana Department of Environmental Quality (LDEQ) related to ACM and LBP, as applicable.
- Utilize licensed contractors to remove LBP and ACM from the facilities prior to the commencement of demolition to ensure that demolition debris does not contain unsafe levels of hazardous materials.
- Ensure that all appropriate abatement for ACM and LBP is conducted. Ensure that any ACM and LBP is disposed of at designated landfills in accordance with federal and state regulations.
- Ensure that all solid waste is disposed of in an approved off-Base landfill.
- Comply with all applicable federal, state, and local laws, and the Barksdale AFB Storm Water Pollution Prevention Plan (SWPPP), Municipal Separate Storm Sewer System (MS4) Permit, and Spill Prevention, Control, and Countermeasures (SPCC)

Plan regarding water quality protection.

- Ensure compliance with Barksdale AFB's Louisiana Pollutant Discharge Elimination System (LPDES) Permit and implement Section 438 of the Energy Independence and Security Act.
- Take necessary precautions to preserve all pre-existing historical, archeological, and cultural resources, and ensure compliance with the standard operating procedure for inadvertent discovery of Native American remains and/or funerary items.
- Conduct demolition in accordance with the MOA for the site, potentially including the salvage or repurpose of materials. Prior to demolition, appropriate Historic American Buildings Survey (HABS) documentation may be required.
- Take precautions to preserve existing urban forest assets on Barksdale AFB.

2.3 NO ACTION ALTERNATIVE

The CEQ regulations at 40 CFR1502.14(c) and 32 CFR Part 989.8 specifically require analysis of the No Action Alternative in all NEPA documents. Under the No Action Alternative, the structures proposed for demolition would remain in place, and BLB would continue to maintain the properties until an identified need requires further action. This would divert time and funding from currently occupied or potentially habitable housing units toward properties that are generally unsafe to occupy and for which there is currently no market demand to rent. The houses would remain within the Barksdale AFB structure inventory and would require substantial expenditures for maintenance and repairs or mothballing (i.e., securing the building to protect from weather and vandalism) in compliance with Section 106 of the NHPA which states that "neglect of a property resulting in its deterioration or destruction," is an adverse effect (Section 800.9 [b]). Failure to protect these NRHP-listed structures from the adverse effects of neglect would place Barksdale AFB out of compliance with Section 106 of the NHPA. Estimated costs of mothballing each unit are expected to require approximately \$35,000 to \$50,000 per unit (\$1.5 million - \$2.1 million) in initial costs to repair the units to a mothball state, then approximately \$10,000 - \$15,000/unit in annual costs in perpetuity to provide for basic maintenance, utilities, and landscaping. Although the No Action Alternative does not meet the purpose of and need for the action, it has been carried forward for detailed analysis in this EA as required under NEPA.

2.4 ALTERNATIVES ELIMINATED FROM DETAILED CONSIDERATION

As part of the decision-making process, two alternatives were considered but not carried forward for detailed analysis as they were determined infeasible. These alternatives did not meet the purpose of and need for the Proposed Action.

2.4.1 Renovate Damaged Structures

Under this alternative, BLB would not demolish homes damaged by the 2021 winter storm. Instead, the damaged structures would be renovated and repaired in preparation for lease to future

tenants. Renovations would vary between structures depending on the types and extent of specific damage sustained. In general, renovation activities would include interior and exterior work such as new roofs, ceilings, floors, and windows. Mold, ACM, and LBP abatement would be required in order to render the homes safe and habitable, and general cleaning and painting would also be needed. However, renovations would address some, but not all, structural deficiencies present in some homes. This alternative would also require substantial funds while demand for housing in these units is limited. Estimated costs of mitigation and restoration of each unit is expected to total approximately \$85,000 to \$100,000 per unit, or \$3.6 million to \$4.2 million total. Only 2 units described in Table 2-1 were occupied at the time of the 2021 winter storm. There was a lack of market interest in renting these homes before the storm; since being damaged, there is less demand to maintain them. Therefore, this alternative would not satisfy the purpose of and need for the Proposed Action outlined in Section 1.3 and is dismissed from further consideration within this EA.

2.4.2 Partial Demolition

BLB considered an alternative under which some, but not all, of the historic structures identified in Table 2-1 would be demolished. Some historic structures damaged by the 2021 winter storm would remain in their current, unusable state, while continuing to incur maintenance costs. These homes are no longer usable or marketable and present a safety hazard in their current damaged state. As such, this alternative does not meet the purpose of and need for the project outlined in Section 1.3 and is dismissed from further consideration within this EA.

2.5 DECISION TO BE MADE AND PREFERRED ALTERNATIVE

This EA evaluates potential environmental consequences of demolishing 19 historic duplexes, 2 compatible (i.e., non-historic) duplexes, and 4 historic garages at Barksdale AFB. Based on this information, the NEPA decision-maker at Barksdale AFB will determine whether to issue a FONSI or to prepare an EIS. The Preferred Alternative is described in Section 2.2 and depicted in Figure 2-1.

2.6 SUMMARY OF ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CARRIED FORWARD

Table 2-2 provides a summary of the environmental consequences of the Proposed Action and the No Action Alternative. Demolition generating the resource effects is a short-term activity, expected to be completed in early 2023. Environmental consequences are presented in Section 3.

Table 2-2. Summary of Environmental Consequences

Resource	Proposed Action	No Action Alternative
Air Quality	Minor, short-term, adverse impacts due to equipment emissions and dust generation from building demolition.	No change from baseline conditions.
Cultural Resources	Adverse effects to the Barksdale Field Historic District and contributing structures would be mitigated with adherence to terms of the MOA.	No change from baseline conditions.
Soils	Minor, short-term, adverse impacts due to erosion and soil disturbance from building demolition.	No change from baseline conditions.
Hazardous Materials and Waste	Minor, short-term, adverse impacts due to generation of hazardous materials and waste during building demolition. Long term beneficial impacts from removal of ACM/LBP.	No change from baseline conditions.
Noise	Minor, short-term, adverse impacts due to noise generated by demolition equipment.	No change from baseline conditions.
Safety	Minor, short-term, impacts effects due to the inherent occupational risks associated with demolition. Long term beneficial impacts from removing abandoned structures.	No change from baseline conditions.
Socioeconomics	Minor, short-term, beneficial impacts on the local or regional population, income or employment, and housing due to building demolition.	No change from baseline conditions.
Traffic	Minor, short-term, adverse impacts to traffic due to the use of heavy machinery and the hauling of demolition debris.	No change from baseline conditions.
Water Resources	Minor, short-term, adverse impacts due to ground disturbance during building demolition.	No change from baseline conditions.

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes relevant and existing environmental conditions for resources located within each resource's Region of Influence (ROI) that may be affected by the Proposed Action. Information gathered from coordination with installation personnel, review of existing documents, and IICEP correspondence with federal, state, and local agencies was used to describe the affected environment. In compliance with NEPA, CEQ, and EIAP 32 § 989 guidelines, this section focuses on resources that could be affected by the Proposed Action. This section presents the potential environmental consequences of implementing the Proposed Action and the No Action Alternative on air quality, cultural resources, soils, hazardous materials and waste, noise, safety, socioeconomics, traffic, and water resources.

The potential for direct, indirect, and cumulative environmental effects was determined for the resources evaluated. A direct effect is caused by the Proposed Action and occurs at the same time and place. An indirect effect of the Proposed Action occurs at a different time and place but is still reasonably foreseeable (40 CFR Part 1508). Effects were considered negligible if they were not measurably different from existing conditions and minor if the effects were considered small but measurable. Cumulative effects are presented in Section 4.

3.1 RESOURCES NOT CARRIED FORWARD FOR DETAILED ANALYSIS

The determination of issues to be analyzed versus those not carried forward for detailed analysis is part of the scoping process as described in 40 CFR 1501.9(f)(1), which states that resources that would not be affected by an action, or that would only experience negligible impact, may be eliminated from discussion. The following sections describe the resources that were considered but eliminated from further detailed analysis and provide the rationale for the determinations.

3.1.1 Biological Resources

The project area is located in an existing, developed residential area located directly west of the Airfield runway, and is separated from the forests on the eastern portion of the Base by the Airfield. Vegetation found within and around the project area primarily consists of landscaped urban forest comprised of native vegetation that is maintained by groundskeepers on a regular basis. While tree and vegetation removal is not directly part of the Proposed Action, individual plants or vegetation could be cleared or crushed during ground-disturbing activities associated with building demolition. Wildlife that utilize the urban forest as foraging or nesting habitat could be directly affected through removal of vegetation during demolition activities. Indirect effects could also result from noise related to use of heavy machinery and could temporarily displace some wildlife; however, these activities would be temporary and generally consistent with existing human disturbance in the area. Further, the maintained landscape of a residential neighborhood is not

anticipated to provide high-quality habitat for local native species or migratory species. Under the Proposed Action, demolition activities are anticipated to begin in October 2022 and last for approximately 6 to 8 months. This time period would avoid the majority of the nesting season, minimizing potential impacts to nesting migratory birds. Ongoing noise through airfield operation would also preclude many bird species from nesting within Barksdale AFB. Due to indirect noise from ongoing operations at the airfield, lack of high-quality habitat, and timing of planned demolition activities, negligible impacts to migratory birds would be expected. Further, neither threatened nor endangered species inhabit the project area, and there are no rare or uncommon plants within the site. Therefore, overall impacts to vegetation, wildlife, and habitat under the Proposed Action would be negligible, and biological resources are dismissed from further consideration within this EA.

3.1.2 Environmental Justice

Based on CEQ guidance (CEQ 1997), an environmental justice population is present when the minority or low-income population in the affected area exceeds 50 percent or is “meaningfully greater” than the minority or low-income composition of the general area. U.S. Census data for the project’s ZIP Code area (71110) indicates non-minorities comprise approximately 73 percent of the population; approximately 21 percent of the population was reported as Black or African American, and about 4 percent as Asian (U.S. Census Bureau 2019a). Approximately 10 percent of the local population falls below the poverty line, compared to 19 percent of the state population (U.S. Census Bureau 2019b). Only two of the damaged housing units identified for potential demolition in Table 2-1 were occupied in winter of 2021. As only approximately 65 percent of the available housing at Barksdale AFB is occupied, adequate housing options exist to accommodate tenants seeking suitable onsite housing within the installation. As such, the Proposed Action would not result in disproportionately high or adverse effects to minority or low-income populations, and no environmental justice effects would be anticipated. Therefore, environmental justice is dismissed from further consideration within this EA.

3.1.3 Infrastructure and Utilities

Local utility providers in the area include AEP Southwestern Electric Power for electricity and CenterPoint Energy – ARKLA for natural gas (City of Shreveport 2021). Water for the Barksdale AFB water system is purchased from the Shreveport water system (Barksdale AFB 2019). Only two of the housing units identified for demolition in Table 2-1 were occupied prior to the 2021 winter storms and exerting an existing demand for services from these utility providers. Even if at full occupancy, the proposed demolition of these structures would result in a slight decrease in overall utility demand from these providers and would not otherwise affect their capacity to serve other clients. Prior to demolition, all utility lines would be identified and appropriately disconnected and capped, in accordance with requirements summarized in Section 2.2. No impacts to infrastructure and utilities would be anticipated under the Proposed Action, and therefore this resource is dismissed from further consideration within this EA.

3.1.4 Land Use

Barksdale AFB encompasses an area of 21,802 acres. Primary land use is divided into three distinct areas: (1) the Main Base (Cantonment Area) west of the runway, (2) Barksdale East (East Side industrial area) and (3) the East Reservation. The Barksdale Field Historic District is located in the Main Base area adjacent to the Airfield. Land use in this area is primarily residential housing with some administrative and commercial areas. The buildings to be demolished are all residential, and no new facilities are planned for these locations. The sites would remain vacant and maintained by BLB. These sites may be transferred back to Barksdale AFB ownership for future re-development, which may include additional parking to support nearby Base activities; however, there is no current timeline, funding, or project information for this action. This action would be a separate project from this Proposed Action and would require appropriate NEPA analysis and Section 106 compliance. Therefore, overall impacts to land use arising from the Proposed Action would be negligible, and land use is dismissed from further consideration within this EA.

3.1.5 Geology and Topography

The Proposed Action would include the removal of existing 2-story, residential structures. The proposed site disturbance would not be substantial or deep enough to alter lithology, stratigraphy, or geological structures. Therefore, no impacts to geology are anticipated under the Proposed Action. Shreveport, Louisiana, and Barksdale AFB are not prone to earthquakes or landslides (Barksdale AFB 2013; Barksdale AFB 2014). The U.S. Geological Survey (USGS) identified the area as having low risk of geologic hazards (USGS 2014). As such, assessment of geology and geologic hazards is dismissed from further assessment within this EA.

Under the Proposed Action, existing structures would be removed from developed lots, and the resulting material and debris would be removed from the installation for offsite disposal. As such, no effects to topography would be anticipated and therefore, the assessment of topography is dismissed from further assessment within this EA.

3.1.6 Floodplains and Wetlands

The Federal Emergency Management Agency Flood Insurance Rate Map, Number 22015C0418E identifies the project area as Zone X, which is outside of the 100-year floodplain (FEMA 2013). Zone X depicts areas of minimal flood hazard as above the 500-year flood level. As such, floodplains are dismissed from further consideration within this EA.

At Barksdale AFB, wetlands make up approximately 6 percent (2,245 acres) of the land area of the total installation (Barksdale AFB 2017a); however, no wetlands exist within the project area (refer to Figure 3-2 in Section 3.2.9). As such, wetlands are dismissed from further consideration within this EA.

3.2 RESOURCES CONSIDERED IN DETAIL

3.2.1 Air Quality

This section provides a definition of the resource, a description of the affected environment, and a discussion of the environmental effects on air quality for the Proposed Action and the No Action Alternative. This section includes a discussion of criteria air pollutants and greenhouse gases (GHGs) and climate change. Barksdale AFB is within Bossier Parish, which is within the Shreveport-Texarkana-Tyler Interstate air quality control region (AQCR) (40 CFR 81.94); this EA considers the Shreveport-Texarkana-Tyler Interstate AQCR as the ROI for air quality.

3.2.1.1 Definition of Resource

Air Quality. Air quality as a resource incorporates several components that describe the levels of overall air pollution within a region, sources of air emissions, and regulations governing air emissions. Air pollution is the presence in the outdoor atmosphere of one or more contaminants (e.g., dust, fumes, gas, mist, odor, smoke, or vapor) in quantities and of characteristics and duration such as to be injurious to human, plant, or animal life, or to interfere unreasonably with the comfortable enjoyment of life and property.

The Clean Air Act (42 USC 7401-7671q), as amended, assigns the United States Environmental Protection Agency (USEPA) responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that specify acceptable concentration levels of six criteria pollutants: particulate matter (measured as both particulate matter less than 10 microns in diameter [PM₁₀] and particulate matter less than 2.5 microns in diameter [PM_{2.5}]), sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), and lead (Pb). Short-term NAAQS (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term NAAQS (annual averages) have been established for pollutants contributing to chronic health effects. Table 3-1 outlines the NAAQS for each criteria pollutant. Louisiana has accepted the federal standards.

The CAA also requires the USEPA to establish National Emission Standards for Hazardous Air Pollutants (NESHAP) (40 CFR Parts 61 and 63) that regulate hazardous air pollutants or “air toxics.” The list of hazardous air pollutants includes specific compounds that are known or suspected to cause cancer or other serious health effects. Asbestos is regulated under the NESHAP air toxics program (USEPA 2018c).

Table 3-1. National Ambient Air Quality Standards (NAAQS) for Criteria Pollutants

Pollutant	Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)	Primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Lead (Pb)	Primary and Secondary	Rolling 3-month average	0.15 mg/m ³	Not to be exceeded
Nitrogen Dioxide (NO ₂)	Primary	1-hour	100 ppb	98 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and Secondary	Annual	53 ppb	Annual mean
Ozone (O ₃)	Primary and Secondary	8-hour	0.070 ppm	Annual fourth highest daily maximum 8-hour concentration, averaged over 3 years
	Primary	Annual	12 mg/m ³	Annual mean, averaged over 3 years
Particulate Matter (PM _{2.5})	Secondary	Annual	15 mg/m ³	Annual mean, averaged over 3 years
	Primary and Secondary	24-hour	35 mg/m ³	98 th percentile, averaged over 3 years
	Primary and Secondary	24-hour	150 mg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO ₂)	Primary	1-hour	75 ppb	99 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Source: USEPA 2022

mg = microgram; ppm = parts per million; ppb = parts per billion.

Greenhouse Gases and Climate Change. GHGs are gases present in the atmosphere that trap heat close to the surface of the earth and contribute to a rise in surface temperatures (also known as the greenhouse effect). Most GHGs occur naturally in the atmosphere, but their concentrations have increased since the start of the Industrial Revolution in the 1750s as a result of human activities including the burning of fossil fuels. Rising GHG concentrations have led to an increase in global surface temperatures. Global temperatures are expected to continue to rise for the foreseeable future, as human activities continue to add carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and other GHGs to the atmosphere.

Increasing GHG concentrations and the accompanying rise in global temperatures have led to several changes in global climate, relative to pre-industrial conditions. These changes include higher surface temperatures, increased precipitation in some areas and decreased precipitation in others, rising sea levels, an increase in the number and severity of extreme weather events, an increase in the number and intensity of wildfires, and changes in ecosystems and species

distributions. Climate change is likely to continue as GHG concentrations rise; however, even if GHG emissions are greatly reduced, many changes to global climate will likely persist for decades or even centuries.

EO 14008, *Tackling the Climate Crisis at Home and Abroad*, outlines policies that aim to place climate concerns at the center of U.S. foreign policy and national security and adopt a government-wide approach toward responding to these concerns. The EO specifically states that "the Federal Government must drive assessment, disclosure, and mitigation of climate pollution and climate-related risks in every sector of our economy."

EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, tasks the federal government with leading "by example to achieve a carbon pollution-free electricity sector by 2035 and net-zero emissions economy-wide by 2050." To that end, the head of each agency is required to meet a series of goals, including achieving a 65 percent reduction in scope 1 and scope 2 GHG emissions (i.e., those released from sources that are owned or controlled by a federal agency [scope 1] or those resulting from the generation of electricity, heat, or steam purchased by a federal agency [scope 2]) by 2030, as compared to a 2008 baseline.

3.2.1.2 Affected Environment

Air Quality. Federal regulations designate AQCRs in violation of the NAAQS as nonattainment areas. Federal regulations designate AQCRs with levels below the NAAQS as attainment areas. As previously noted, Barksdale AFB is within the Shreveport-Texarkana-Tyler Interstate AQCR. USEPA has designated Bossier Parish as in full attainment for all criteria pollutants (USEPA 2019b). Because all areas associated with the Proposed Action are in attainment, the general conformity rule does not apply. The general conformity rule was established with NEPA in mind, and it is understood that actions of this size within a USEPA-designated attainment area would have less-than-significant effects to air quality. A detailed emissions report is contained in Appendix B.

Because the historic homes and garages that are planned for demolition as part of the Proposed Action were built prior to 1980, asbestos is likely present in these structures (e.g., old floor tiles, ceiling tiles, roof shingles, insulation, etc.) as discussed in Section 3.2.4, Hazardous Materials and Waste.

Climate. Bossier Parish's average high temperature is 93.4 degrees Fahrenheit (°F) in the hottest month of August, and the average low temperature is 36.5 °F in the coldest month of January. Bossier has average annual precipitation of 52.4 inches per year. The wettest month of the year is December with an average rainfall of 5.0 inches (Idcide 2022).

3.2.1.3 Environmental Consequences

Significance Criteria

The Proposed Action would be expected to have a significant adverse impact on air quality if it would: (1) produce emissions that exceed the general conformity rule *de minimis* (of minimal importance) threshold values; or (2) contribute to a violation of any federal, state, or local air regulation.

Proposed Action

Minor, short-term adverse effects would occur as a result of the Proposed Action. The short-term effects would be associated with emissions from demolition equipment, trucks and worker vehicles, and fugitive dust emissions from demolition activities and ground disturbance associated with the Proposed Action. The Proposed Action would not (1) produce emissions that exceed the general conformity rule *de minimis* threshold values or (2) contribute to a violation of any federal, state, or local air regulation. Since the level of effects would be less than significant, no mitigation would be required. However, all reasonable precautions would be taken to minimize air emissions, including but not limited to the following:

- Switching off engines and equipment when no longer in use and avoiding extended idling.
- Using water to control dust from road grading or land clearing.
- Covering exposed soil upon completion of land-disturbing activities, to minimize the amount of dust that becomes airborne.
- Covering debris during truck transport.

LDEQ regulations and rules outline other non-permitting requirements, such as controlling fugitive dust and open burning. Barksdale AFB and any contractors would comply with all applicable air pollution control regulations.

General Conformity. Air quality has been assessed on a regional scale. All activities associated with the Proposed Action are within a region USEPA has designated as in attainment for the NAAQS. Although the area is in attainment and the general conformity rules do not apply, the Air Conformity Applicability Model (ACAM) was used to estimate the total direct and indirect emission from the Proposed Action, which have been compared to the *de minimis* thresholds to determine the level of effects under NEPA (USAF 2020).

Table 3-2 lists total direct and indirect emissions resulting from demolition of the structures identified in Table 2-1. Demolition-related emissions were estimated for fugitive dust, trucks, heavy equipment, and worker vehicles. Total annual emissions resulting from the Proposed Action would not exceed the *de minimis* threshold of 100 tons per year (tpy); therefore, the level of effects would be less than significant. A detailed emissions report is included as Appendix B of this EA.

Table 3-2. Annual Air Emissions Compared to *De Minimis* Thresholds

Year	Emissions (tpy)					
	CO	NO _x	VOC	SO ₂	PM ₁₀	PM _{2.5}
2022	0.608	0.565	0.089	0.001	1.85	0.023
2023	1.17	1.15	0.181	0.003	4.52	0.047
<i>De minimis</i> Threshold	100	100	100	100	100	100
Exceeds <i>De Minimis</i> Thresholds?	No	No	No	No	No	No

Source: USAF 2020 and 40 CFR 93.153.

CFR = *Code of Federal Regulations*; CO = carbon monoxide; NO_x = nitrogen oxides; PM_{2.5} = particulate matter with a diameter of 2.5 microns or less; PM₁₀ = particulate matter with a diameter of 10 microns or less; SO₂ = sulfur dioxide; tpy = tons per year; VOC = volatile organic compounds

It was assumed that demolition activities would begin in October 2022 and last for 8 months. Since the timeframe for the Proposed Action falls across two calendar years, emissions totals are shown separately for each year. However, even total pollutant emissions across the entire project duration would still remain far below the respective *de minimis* thresholds. Therefore, any changes in the implementation schedule would not affect the determination under the general conformity rule or the level of potential impact. Emissions would be well below the *de minimis* thresholds for all criteria pollutants; therefore, the general conformity rule would not apply even if the attainment status of the region was to change in the future.

Asbestos is a hazardous material that can be dangerous to human health if particles are inhaled. Demolition activities would be required to comply with all applicable requirements, as described in Section 3.2.4. Therefore, overall air quality impacts from asbestos would be less than significant.

Air Permitting and Regulatory Review. No new sources of air emissions would remain onsite following completion of demolition activities. Therefore, no new permit requirements would be created. Any future development at the site would be subject to the appropriate permitting and NEPA analyses, depending on the nature and scale of the development.

Greenhouse Gases and Climate Change. Table 3-3 presents estimates of potential GHG emissions that would occur as a result of the Proposed Action, by year. GHG emissions occurring as a result of the Proposed Action would contribute incrementally to global climate change. Currently, no statutory or regulatory thresholds exist against which to compare these emissions to determine their significance; however, given the small quantity of anticipated emissions relative to other global, national, and regional sources, it is expected that any impacts would be less than significant. For context, Table 3-4 provides recent estimates of annual GHG emissions at various geographic scales.

Table 3-3. GHG Emissions from the Proposed Action

Year	CO ₂ e Emissions (metric tons)
2022	143.2
2023	291.6

Source: USAF 2020.
CO₂e = carbon dioxide equivalent.

Table 3-4. Global, National, and Regional GHG Emissions (2018)

Category	CO ₂ e Emissions (metric tons)
Global	48,940,000,000
United States	5,794,000,000
State of Louisiana	216,000,000

Source: ClimateWatch 2022; Dismukes 2021.
CO₂e = carbon dioxide equivalent.

This EA also considers potential impacts of climate change on the Proposed Action, including the possibility that climate change could worsen the Proposed Action’s environmental effects. The predicted impacts of climate change in the Southeastern United States include more intense severe weather events, higher surface temperatures, and sea level rise (USGCRP 2018). It is possible that storm events that occur while demolition activities are ongoing could lead to slightly higher soil erosion impacts than would be the case without climate change; however, any increase in such impacts would likely be less than significant and would be short-term in duration. Existing measures to control soil erosion, such as the use of silt fencing and soil cover, would also mitigate any increase in impacts associated with climate change. Other potential climate change impacts, such as increasing temperatures and sea level rise, would not be expected to have any impact on the Proposed Action or amplify its environmental effects.

No Action Alternative

Under the No Action Alternative, there would be no effects on air quality, either beneficial or adverse. Implementation of the Proposed Action would not take place, and air quality would remain unchanged when compared to existing conditions.

3.2.2 Cultural Resources

This section provides a definition of the resource, a description of the affected environment, and a discussion of the environmental impacts on cultural resources for the Proposed Action and the No Action Alternative. For purposes of distinguishing between effects under NEPA and NHPA, references to “impacts” in Section 3.2.2 refer to effects under NEPA; references to “effects” in Section 3.2.2 refer to effects under the NHPA.

3.2.2.1 Definition of Resource

Cultural resources are historic or prehistoric objects, materials, sites, structures, buildings, or districts that are considered important to a specific culture, subculture, or community for traditional, religious, or other purposes. Cultural resources include archaeological resources, historic architectural or engineering resources, and traditional cultural properties. Depending on the condition and historic use, such resources possess the ability to provide insight into the cultural practices of previous generations or civilizations; they might also retain cultural and/or religious significance to modern groups or descendants.

Archaeological resources are areas where human activity has measurably altered the earth or deposits of physical materials are found (e.g., projectile points, nails, bottles, etc.). Architectural resources include standing buildings, bridges, dams, and designed landscapes of historic significance. Generally, architectural resources must be more than 50 years old to warrant consideration for the NRHP; however, more recent structures might qualify for protection if they are exceptionally unique or if they have the potential to gain significance in the future. Traditional cultural properties can include landscapes, archaeological resources, sacred sites, structures, districts, prominent topographic features, habitat, plants, animals, or minerals considered essential for the preservation of traditional culture.

There are multiple federal laws and regulations that govern the protection of cultural resources; these include the NHPA of 1966, the Archeological and Historic Preservation Act (1974), the American Indian Religious Freedom Act (1978), the Archaeological Resources Protection Act (1979), and the Native American Graves, Protection, and Repatriation Act (1990). Additionally, Barksdale AFB is required to comply with USAF regulations and instructions regarding cultural resources; these include AFI 32-7065, as well as Barksdale AFB's *Integrated Cultural Resources Management Plan* (ICRMP) (Barksdale AFB 2017b). Consultation between Barksdale AFB and federally recognized tribes is mandated by the federal laws mentioned above in addition to EO 13175 (*Consultation and Coordination with Indian Tribal Governments*), DoD Instruction 4710.02 (*DoD Interactions with Federally Recognized Tribes*), and AFI 90-2002 (*Air Force Interactions with Federally Recognized Tribes*).

The NHPA establishes criteria for assessing the significance of cultural resources. Section 106 of the NHPA requires federal agencies to assess the potential effect of their undertakings on historic properties, or sites that are listed or eligible for listing on the NRHP, that are present within the project's area of potential effect (APE) of any government undertaking. Barksdale AFB has consulted with the Louisiana SHPO and appropriate federally recognized tribes (the Caddo) in accordance with Section 106 of the NHPA. Per the Section 106 process, Barksdale AFB has defined the undertaking as the demolition of 19 historic housing duplexes and 4 historic garages identified in Table 2-1 (the Proposed Action also includes two non-historic, but compatible, duplexes). The APE is defined as the Barksdale Field Historic District (see Figure 2-2).

3.2.2.2 Affected Environment

Barksdale AFB is in the Great Bend region of the Caddo area, which includes portions of Arkansas, Louisiana, Oklahoma, and Texas. The Great Bend region has been inhabited for more than 11,000 years (9,000 before present [BP]). Archaeological sites in the Great Bend region reflect occupation during the Paleo-Indian period (prior to 9,000 BP), the Archaic period (7,000 BP to 2,500 BP), the Early Ceramic period (2,500 BP to 1,200 BP), and the Caddoan period (1,200 BP to 300 BP), which refers to the prehistoric cultures believed to be ancestral to the Caddoan-speaking groups that occupied the region at the time of initial European contact. Initial European presence in the region was generally limited to isolated French and American settlers until the United States acquired Louisiana in 1803 and citizens continued to expand west. The first known settlers in Bossier Parish arrived in 1828, and population increased due to the economic activity centered around Shreveport, which increased cotton farming in the region. Oil extraction became important in the region in the early 1900s (Barksdale AFB 2017b).

The property that now supports Barksdale AFB (originally titled Barksdale Field) first served as a large cotton plantation and was donated to the federal government from Bossier City in 1929. Construction of Barksdale Field began in 1931, and expansion of the installation occurred throughout World War II. The installation was renamed Barksdale AFB in 1948 after creation of USAF as a separate branch of the military (Barksdale AFB 2017b).

Archaeological Resources. All areas of Barksdale AFB with archaeological potential have been investigated and inventoried via surveys conducted in 1990, 1993, 1995, 1996–1997, and 1997–1998. There are predetermined areas on Barksdale AFB that are considered to have no potential for prehistoric or pre-installation historic resources; this is due to past ground disturbances caused by construction projects, military/training use, and maintenance tasks/procedures. Cultural resource surveys have identified 120 archaeological sites throughout the installation, 2 of which have been recommended as eligible for listing on the NRHP. Barksdale AFB has provided the SHPO with copies of all study reports, and the SHPO concurred with the eligibility recommendation for the two archaeological sites. No archaeological sites occur in the APE (Barksdale AFB 2017b).

Architectural Resources. A complete inventory of historic architecture on Barksdale AFB has been completed, with surveys being conducted in 1995 and 2006. These surveys identified 1,207 architectural resources representing the pre-World War II, World War II, and Cold War eras. Barksdale AFB does not contain any architectural features from the pre-military period. A total of 263 buildings and structures on Barksdale AFB are listed in the NRHP as part of the Barksdale Field Historic District (see Figure 2-1). In addition, eight Cold War-era buildings are considered eligible for NRHP listing.

The APE is defined as the Barksdale Field Historic District and includes structures listed as contributing to the significance of the district (see Table 2-1). Per a U.S. Army Corps of Engineers Report (1995), the historic district “is significant as a good example of a 20th century planned

community. It contains the largest collection of French Colonial buildings in northwest Louisiana, laid out on a radial street plan that is unique to the region. In addition, it has been home to many individuals significant in both aviation and U.S. military history.” The list of historic features within the Barksdale Field Historic District only includes buildings. However, while not individually considered historic, defining features of the historic district also include the radial transportation plan, landscaping, sidewalks, street lamps, and green spaces (USACE 1995). A total of 19 historic building biographies, representing different types of buildings contributing toward the historic district have been identified. Appendix A of the USACE 1995 report lists all the contributing buildings by type.

Traditional Cultural Properties. Barksdale AFB encompasses land that was previously occupied by the Caddo for thousands of years. The Caddo claim traditional affiliation with prehistoric archaeological sites on the installation but have not identified any traditional cultural properties on Barksdale AFB. The Caddo have expressed concern regarding the potential presence of gravesites and funerary objects within Base boundaries, indicating that a cluster of Caddo pottery vessels, especially decorated types, should be considered indicative of a gravesite, even if human remains are no longer present. Barksdale AFB regularly consults with the Caddo regarding projects involving cultural resource issues and executed a MOA with the tribe in 2002 that includes stipulations and procedures involving the inadvertent discovery of human remains, or other cultural items, during a project (Barksdale AFB 2017b).

3.2.2.3 Environmental Consequences

Significance Criteria

Per NHPA and 36 CFR 800 of its implementing regulations, adverse effects to historic properties occur when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property’s eligibility for the NRHP. Adverse effects on historic properties may include (but are not limited) the physical alteration, damage to, or destruction of all, or part, of a resource. Adverse effects can also occur from alterations to characteristics of the surrounding environment that contribute to the importance of the resource; introduction of visual, atmospheric, or audible elements that are out of character with the property; or alterations to its setting or feeling. Impacts on cultural resources would be considered significant if the Proposed Action caused an unmitigated adverse effect to NRHP-eligible resources.

Proposed Action

The proposed undertaking would include demolition of 19 historic housing duplexes and 4 historic garages identified in Table 2-1 (the Proposed Action also includes two non-historic, but compatible, duplexes). Barksdale AFB has determined that the proposed undertaking would have an adverse effect to historic properties and has consulted with the Louisiana SHPO pursuant to Section 106 of the NHPA and implementing regulations at 36 CFR Part 800. A MOA is being developed between the BLB, Barksdale AFB, and the SHPO (note: the Caddo were invited to participate in the consultation on the MOA but provided no comments). Potential adverse effects to architectural resources throughout the Historic District from the undertaking would be mitigated through adherence to the terms of the MOA, which may include salvaging and/or repurposing of the materials. There are no current plans to redevelop the properties following demolition, and the remaining housing structures would retain their significance in context of the Barksdale Field Historic District.

HABS documentation may be included as part of the MOA and would serve as a mitigation measure to the adverse effects arising from the proposed demolition activities. The HABS documentation may be submitted to the Bossier Parish Historic Center Library and to the Library of Congress for permanent retention, reference, and review by researchers and other interested parties. The need for this Proposed Action and the location of HABS documentation may also be publicized by the Barksdale AFB Public Affairs office in a press release. Final terms of the MOA would be detailed in the Final EA/FONSI, or in a Draft EIS, if it is determined the Air Force is required to prepare an EIS for the Proposed Action.

Archaeological surveys conducted during the 1990s identified areas of Barksdale AFB with potential to contain archaeological resources. No such areas were identified within the APE for this Proposed Action, and no archaeological resources are expected to be encountered during the proposed demolition activities. However, should any human remains or archaeological resources be discovered while implementing the Proposed Action, BLB would halt demolition and contact the Caddo and the SHPO. As previously mentioned, the Caddo have provided no comments regarding the undertaking, and no Traditional Cultural Properties are known to exist within the APE or are expected to be affected by the proposed demolition of the structures identified in Table 2-1.

No Action Alternative

Under the No Action Alternative, BLB would not demolish homes within Barksdale AFB. Adverse effects to historic properties could occur if the houses are allowed to deteriorate. Zero-maintenance procedures and disconnection of utilities in vacant buildings can result in deterioration of the buildings. Under Section 106 of the NHPA, “neglect of a property resulting in its deterioration or destruction,” is identified as an adverse effect (Section 800.9 [b]). However, under the No Action, BLB would maintain the houses as needed to prevent them from falling into complete disrepair,

which would preclude adverse effects from neglect. Preventive maintenance, or proper mothballing as described in the National Park Service's *Preservation Brief 31: Mothballing Historic Buildings* (National Park Service 1993) would protect the buildings from the dangers of neglect. This action would be at a substantial cost to BLB and could impair its ability to properly maintain the larger inventory of historic units that are occupied and market desirable. No impacts to archaeological or traditional resources would be expected. Resources would continue to be managed in compliance with federal law and Air Force regulation.

3.2.3 Soils

This section provides a definition of the resource, a description of the affected environment, and a discussion of the environmental effects on soils for the Proposed Action and the No Action Alternative. This EA considers the ROI for soils to be the area directly underlying the structures proposed for demolition as well as within a 20-foot buffer surrounding each structure. This area collectively amounts to 4.9 noncontiguous acres.

3.2.3.1 Definition of Resource

Soils include the unconsolidated upper layer of the organic remains of clay and rock overlying bedrock. Soils typically are described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain applications or uses. In appropriate cases, soil properties must be examined for their compatibility with construction activities or types of land use. Prime farmland is defined as land that has the best combination of soil characteristics for producing crops (Barksdale AFB 2017a).

3.2.3.2 Affected Environment

The soils on Barksdale AFB range in texture from sand to clay. The soils include acidic, loamy fine sands and silt loams that are rapidly to slowly permeable. Most of the soils are acidic in the upper horizons. In the lower horizons, soil reaction and base saturation increase with depth. Soils are predominately moderately well to well drained, slowly to moderately permeable silt loams over clays or silty clay loams (Barksdale AFB 2017a). Soils underlying the project area are characterized as Urban Land-Coushatta Complex, 0 to 1 percent slopes (U.S. Department of Agriculture Natural Resources Conservation Service [USDA NRCS] 2022). These soils have a hydrologic group rating of D, meaning that they have a very slow infiltration rate and high runoff potential when thoroughly wet; high shrink-swell potential; high water table; a clay layer at or near the surface; are shallow over nearly impervious material; and a very slow rate of water transmission (USDA 2022). Barksdale AFB does not have land that is designated as prime farmland (Barksdale AFB 2017a)

3.2.3.3 Environmental Consequences

Significance Criteria

Effects on soils would be considered significant if the Proposed Action changed the soil conditions in a manner that (1) adversely affects current land uses or (2) causes loss of unique and sensitive soils.

Proposed Action

Short- and long-term, minor, adverse impacts on soils would occur during demolition activities associated with the Proposed Action. Operation of heavy equipment near the structures proposed for demolition would disturb soils and rock material, increasing the potential for erosion. This disturbance and subsequent removal of debris from the installation would temporarily remove vegetation in some areas that could expose soils to erosion. Soil productivity (i.e., the capacity of the soil to produce vegetative biomass) would decline in disturbed areas due to compaction from operation of construction equipment. Soil impacts would be minimized by using construction and stabilization best management practices (BMPs) such as silt fencing, covering exposed soils, implementing interim and permanent erosion control measures, and vegetating disturbed areas with native species following demolition activities. Soils native to the local area would be utilized for backfill of basements and demolished sites during restoration, and soils would be screened and certified as “clean” backfill. Because the level of effects would be less than significant, no mitigation is required. Refer to Section 3.2.4 for discussion of the management of contaminated soils.

No Action Alternative

Under the No Action Alternative, BLB would not demolish homes or associated garages within Barksdale AFB. Soils would remain unchanged when compared to existing conditions, and there would be no disturbance to or impact on soils.

3.2.4 Hazardous Materials and Waste

This section provides a definition of the resource, a description of the affected environment, and a discussion of the environmental effects on hazardous materials and waste for the Proposed Action and the No Action Alternative. This EA considers structures proposed for demolition and a 20-foot buffer surrounding each structure to be the ROI for hazardous materials and waste. This area collectively amounts to 4.9 noncontiguous acres.

3.2.4.1 Definition of Resource

A hazardous material is any item or agent (biological, chemical, radiological, and/or physical) that has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. Hazardous materials are defined and regulated in the United States

primarily by laws and regulations administered by the USEPA, the U.S. Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation (DOT), and the U.S. Nuclear Regulatory Commission (NRC). Each agency has its own definition of a “hazardous material.” More specifically, 49 CFR 171.8, defines hazardous materials as hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions in 49 CFR Part 173. Over 350 hazardous or extremely hazardous substances are listed in 40 CFR Part 355.

Hazardous wastes are wastes with properties that make them dangerous or potentially harmful to human health or the environment. Hazardous wastes can be liquids, solids, contained gases, or sludges. They can be by-products of manufacturing processes or simply discarded commercial products, like cleaning fluids or pesticides. In regulatory terms, hazardous wastes are defined by the Resource Conservation and Recovery Act (RCRA) at 42 USC 6903(5), as amended by the Hazardous and Solid Waste Amendments (HSWA), as “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness, or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or dispose of, or otherwise managed.” These wastes appear on one of four hazardous waste lists (F-list, K-list, P-list, or U-list) or exhibit at least one of the following four characteristics: ignitability, corrosivity, reactivity, or toxicity.

Petroleum products include crude oil or any derivative thereof, such as gasoline, diesel, or propane. These products are considered hazardous materials because they present health hazards to users in the event of incidental releases, spills, or extended exposure to the product vapors.

Due the age of the historic structures identified for potential demolition (see Table 2-1), ACM and LBP may be present within the structures considered for demolition under the Proposed Action. Two categories are used to describe ACM. Friable ACM is defined as any material containing more than 1 percent asbestos (as determined by polarized light microscopy) that, when dry, can be crumbed, pulverized, or reduced to a powder by hand pressure. Nonfriable ACM is material that contains more than 1 percent asbestos and does not meet the criteria for friable ACM. ACM includes sprayed on or troweled on structural members, surfacing materials, vinyl floor tile and associated mastic, and wallboard/joint compound. Potential ACM includes cementitious siding and caulking materials. Although these materials are now known to be hazardous, they were widely used in the building products industry and for housing maintenance for many years. Their presence in and around the housing units does not constitute a health hazard under normal circumstances.

LBP was commonly used prior to 1980 and may be found in the historic structures. LBP has a tendency to flake and peel from surfaces, increasing the chances of lead contamination spreading

from the site of initial application. LBP could also be ingested, which is of concern especially for young children.

Evaluation of hazardous materials and wastes focuses on the storage, transportation, handling, and use of hazardous materials, as well as the generation, storage, transportation, handling, and disposal of hazardous wastes. In addition to posing a threat to humans, the improper release or storage of hazardous materials, hazardous wastes, and petroleum products can threaten the health and well-being of wildlife species, habitats, soil systems, and water resources.

3.2.4.2 Affected Environment

Barksdale AFB manages hazardous materials and hazardous wastes in accordance with federal, LDEQ, and local rules and regulations. Additionally, the USAF controls hazardous materials in accordance with AFI 32-7086, *Hazardous Materials Management*, and hazardous wastes are handled in accordance with AFI 32-7042, *Waste Management* and the Barksdale AFB Hazardous Waste Management Plan (HWMP) (Barksdale AFB 2016). All hazardous waste management activities are coordinated through and approved by the Hazardous Waste section of the Base's Environmental Management Section. In addition, Barksdale AFB's SPCC Plan identifies specific procedures and responsibilities for responding to hazardous material and petroleum product spills. The Environmental Management Section maintains an updated SPCC Plan (Barksdale AFB 2019b), manages the Base's hazardous waste personnel, and coordinates incidental spill responses and contractors. Barksdale AFB contractors are required to follow the hazardous waste requirements according to the Base's *Environmental Requirements for Contractors Working on Barksdale AFB* (Barksdale AFB 2021).

Activities at Barksdale AFB involving the use of hazardous materials and petroleum products include aircraft and vehicle operation and maintenance, infrastructure and equipment maintenance, demolition, and construction. Examples of hazardous materials and petroleum products include oils, lubricants, coolants, batteries, cleaners, hydraulic fluids, adhesives, pesticides, and gasoline and diesel fuels.

Hazardous materials used by Base personnel are managed in compliance with the Emergency Planning and Community Right-to-know Act (EPCRA), Louisiana Department of Public Safety, Office of State Police, LAC 33:V Chapter 101, *Hazard Material Information Development, Preparedness, and Response Act*, and AFI 32-7086. These materials are issued and reissued through the Hazmart central supply facility on Base. This facility tracks all hazardous material from purchase to disposal at Barksdale AFB. Contractors working at the installation must comply with all federal, state, and local regulations concerning the use, storage, and reporting of hazardous materials. Prior to commencement of work on Base, contractors must furnish CES/CEIEC and the Hazmart with a list of all hazardous materials and corresponding SDSs and remain responsible for keeping this list and SDSs current (Barksdale AFB 2019a).

Hazardous wastes and used petroleum products are generated from Barksdale AFB activities and include used oil, fuels, cleaning compounds, paints, demolition debris, and insecticide/pesticides. Barksdale AFB is classified under RCRA as a large quantity hazardous waste generator. Hydraulic fluids and petroleum products, such as gasoline and diesel, are used in heavy vehicles and equipment. Petroleum products used for construction and demolition activities are stored in temporary Aboveground Storage Tanks, as necessary. Hazardous wastes generated by Barksdale AFB are stored in various satellite accumulation areas (SAAs) at the Base. Waste from the SAA is then transferred to the designated hazardous waste central accumulation area until it can be transported offsite for disposal. None of the SAAs nor the central accumulation area are located within the project area.

A Pre-Demolition Hazardous Materials Survey of the structures considered under the Proposed Action was conducted in 2021 (InDepth Environmental, Inc. 2021). Identified ACM that may be found within structures selected for demolition as part of the Proposed Action include:

- Gray duct wrap on original in-wall metal vents and ducts (likely found in at least 15-30 locations per unit);
- Thermal system insulation on 2-inch- and 0.5-inch-diameter pipes in living room ceiling and vertical wall (at least 30-40 linear feet of pipe wrap at each unit);
- Black flooring mastic under subfloors (likely present in the living room of each historic unit and may also be present in kitchens of some historic units); and
- Roofing materials and mastics (assumed present in all historic units)

Appendix A of the Survey lists the sample locations and results, including those for samples collected from structures identified for demolition in Table 2-1 (InDepth Environmental, Inc 2021).

The Pre-Demolition Hazardous Materials Survey also identified that additional hazardous wastes generated during demolition may include potential polychlorinated biphenyls (PCBs) in a set of fluorescent lamps and miscellaneous universal waste in the form of fluorescent lighting ballasts and lamps. Universal waste is a subset of categories of hazardous waste commonly generated by a variety of generators and includes batteries, pesticides, mercury-containing equipment, fluorescent lamps, and aerosol cans. Further, the presence of pesticide-contaminated soil is likely as the landscaping within the project area has historically been treated with pesticides. Onsite soils may have also been contaminated with LBP that has flaked off from the structures.

3.2.4.3 Environmental Consequences

Significance Criteria

Impacts on hazardous materials and wastes would be considered significant if the Proposed Action

would (1) result in noncompliance with applicable federal or LDEQ regulations and health and safety standards; (2) increase the amounts of hazardous materials or wastes generated or procured beyond current Barksdale AFB waste management procedures, permits, and capacities; or (3) disturb or create contaminated sites resulting in negative effects on human health or the environment.

Proposed Action

The Proposed Action would have short-term, less-than-significant adverse effects on hazardous materials and wastes. Minor quantities of hazardous wastes would be generated during demolition of the structures identified in Table 2-1; however, these quantities would not cause the Barksdale AFB to exceed any applicable hazardous waste generation volume limits. Prior to undertaking activities that could generate hazardous waste, the Asset Management Flight (2 CES/CEA) would be notified of the Proposed Action, the duration of the action, and the anticipated amount of waste that would be generated. Shipments of hazardous waste would conform to all applicable laws, regulations, and health and safety standards. Any hazardous waste would be disposed of in accordance with federal, LDEQ, and Barksdale AFB's permits and waste management requirements, and shipments of hazardous waste would be documented on a manifest and signed by a CEA representative.

Types of hazardous waste generated by demolition activities may include, but are not limited to, ACM, LBP, universal waste, and PCBs. Some materials, while essentially inert under normal conditions, can be hazardous in specific circumstances. For example, wood and dry concrete can generate airborne particulates as they are demolished. Wood and other construction materials are also flammable. Prior to demolition, proper measures would be taken to dispose of any ACM and LBP present in the historic structures in accordance with federal and state regulations. In addition, all demolition activities would be conducted in accordance with applicable health and safety requirements, including use of personal protective equipment, to minimize the potential for adverse effects to workers.

Onsite soils would be disturbed through use of heavy machinery and removal of debris. As described in Section 2.2, it is likely that soils within the project area may be contaminated with lead and/or through prior onsite application of pesticides/herbicides and fertilizers. Contaminated soils may be encountered during the proposed demolition activities; however, soils would remain onsite following stabilization. To the extent practicable, construction contractors would attempt to knock dirt from demolition debris in an effort to keep any potential contaminated soils onsite. Any exposed or loosened potentially contaminated soils would be further managed using the soil erosion controls and other BMPs described in Section 3.2.3.3.

The shipment and storage of hazardous materials to and on the site would conform to all applicable laws, regulations, and health and safety standards established by federal, LDEQ, and local authorities. The demolition of the damaged duplexes and garages is not expected to exceed

maximum regulatory requirements for hazardous materials, nor release hazardous materials within the project area or into soil and groundwater supplies.

By complying with generally applicable administrative procedures required by current regulations and applying industry-wide BMPs for the use and storage of hazardous materials as well as management and disposal of hazardous waste, the Proposed Action would result in a less-than-significant impact. Additionally, plans and programs designed to protect water quality, such as the Barksdale AFB SWPPP (Barksdale AFB 2018) would address appropriate storage, spill containment and contingency programs for hazardous materials retained on-site during demolition. The Proposed Action would not result in noncompliance with applicable federal or LDEQ regulations, health and safety standards, or increase the amounts of hazardous materials and waste generated or procured beyond current Barksdale AFB waste management procedures, permits, and capacities, or create contaminated sites leading to negative effects on human or the environmental health. Because the level of effects would be less than significant, no mitigation is required.

No Action Alternative

Under the No Action Alternative, BLB would not demolish homes or associated garages within Barksdale AFB. There would be negligible impacts on hazardous materials and wastes from the minimal generation of waste or handling of materials from any ongoing maintenance of the structures.

3.2.5 Noise

This section provides a definition of the resource, a description of the affected environment, and a discussion of the environmental effects on noise for the Proposed Action and the No Action Alternative. This EA considers the noise ROI as the area within 0.5 mile of the structures proposed for demolition in Table 2-1.

3.2.5.1 Definition of Resource

Sound is a physical phenomenon consisting of vibrations that travel through a medium, such as air, and are sensed by the human ear. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise, distance between noise source and receptor, receptor sensitivity, and time of day. Noise is often generated by activities essential to a community's quality of life, such as construction or vehicular traffic.

Sound varies by both intensity and frequency. The physical intensity or loudness level of noise is expressed quantitatively as the sound pressure level. Sound pressure levels are defined in terms of decibels (dB), which are measured on a logarithmic scale. Sound can be quantified in terms of its amplitude (loudness) and frequency (pitch). Frequency is measured in hertz, which is the number of cycles per second. The typical human ear can hear frequencies ranging from

approximately 20 hertz to 20,000 hertz. Typically, the human ear is most sensitive to sounds in the middle frequencies where speech is found and is less sensitive to sounds in the low and high frequencies.

Since the human ear cannot perceive all pitches or frequencies equally, measured noise levels in dB will not reflect the actual human perception of the loudness of the noise. Thus, the sound measures can be adjusted or weighted to correspond to a scale appropriate for human hearing. The common sound descriptors used to evaluate the way the human ear interprets dB from various sources are as follows:

- **Decibel (dB):** Sound pressure level measurement of intensity. The decibel is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level.
- **A-Weighted Decibel Scale (dBA):** Often used to describe the sound pressure levels that account for how the human ear responds to different frequencies and perceives sound.
- **Hertz:** Measurement of frequency or pitch.
- **Equivalent Sound Level (L_{eq}):** The L_{eq} represents the average sound energy over a given period, presented in decibels.
- **Day-Night Average Sound Level (L_{dn}):** Day-night sound level (L_{dn}) is the 24-hour L_{eq} , but with a 10 dB penalty added to nighttime noise levels (10 p.m. to 7 a.m.) to reflect the greater intrusiveness of noise experienced during this time.
- **Sensitive receptors:** Locations or land uses associated with indoor or outdoor areas inhabited by humans or wildlife that may be subject to significant interference from noise (i.e., nearby residences, schools, hospitals, nursing home facilities, and recreational areas).

The adjusted scales are useful for gauging and comparing the subjective loudness of sounds to humans. The threshold of perception of the human ear is approximately 3 dB. A 5-dB change is considered to be clearly noticeable to the ear, and a 10-dB change is perceived as an approximate doubling (or halving) of the noise level (MPCA 1999). Table 3-5 presents a list of sounds encountered in daily life and their approximate levels in dB.

Table 3-5. Perceived Change in Decibel Level

Noise Level (dBA)	Description	Example of a Typical Sources
140	Threshold of pain	--
125	Uncomfortably loud	Automobile assembly line
120	Uncomfortably loud	Jet aircraft
100	Very loud	Diesel truck
80	Moderately loud	Motor bus
60	Moderate	Low conversation
40	Quiet	Quiet room
20	Very quiet	Leaves rustling

Source: Liu and Lipták 1997

dBA = A-weighted sound level in decibels

Ambient or background noise is a combination of various sources heard simultaneously. Calculating noise levels for combinations of sounds does not involve simple addition, but instead uses a logarithmic scale (HUD 1985). As a result, the addition of two noises, such as a garbage truck (100 dBA) and a lawn mower (95 dBA) would result in a cumulative sound level of 101.2 dBA, not 195 dBA.

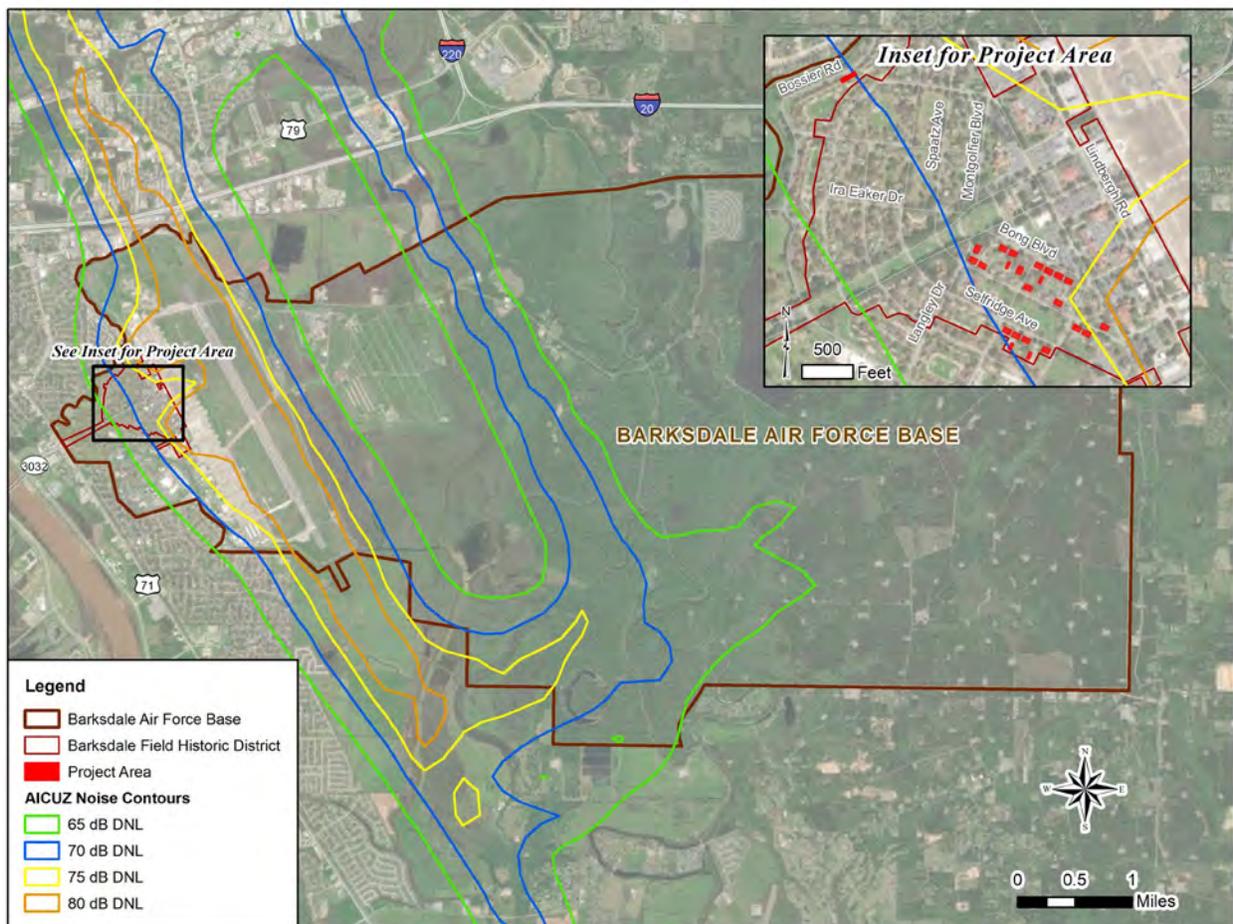
Noise levels decrease (attenuate) with distance from the source. The decrease in sound level from any single noise source normally follows the “inverse square law.” That is, the sound level change is inversely proportional to the square of the distance from the sound source. A generally accepted rule is that the sound level from a stationary source would drop approximately 6 dB each time the distance from the sound source is doubled. Sound level from a moving “line” source (e.g., a train or vehicle) would drop 3 dB each time the distance from the source is doubled (USDOT 2018).

Barriers, both manmade (e.g., sound walls) and natural (e.g., forested areas, hills, etc.) may reduce noise levels, as may other natural factors, such as temperature and climate. Standard buildings typically provide approximately 15 dB of noise reduction between exterior and interior noise levels (USEPA 1978). Noise generated by stationary and mobile sources has the potential to impact sensitive noise receptors, such as residences, hospitals, schools, and churches. Persistent and escalating sources of sound are often considered annoyances and can interfere with normal activities, including sleeping or conversation, such that these sounds could disrupt or diminish quality of life.

The Noise Control Act of 1972 (42 USC 4901) directs federal agencies to comply with applicable federal, state, interstate, and local noise control regulations. The primary responsibility of addressing noise pollution has shifted to state and local governments. In 1974, the USEPA published its document entitled *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin on Safety*, which evaluated the effects of

environmental noise with respect to health and safety (USEPA 1974). The document provides information for state and local agencies to use in developing their ambient noise standards. As set forth in the publication, the USEPA provided information suggesting that an $Leq(24)$ of 70 dB is the level above which environmental noise could cause hearing loss if heard consistently over several years. An L_{dn} of 55 dB outdoors and 45 dB indoors is the threshold above which noise could cause interference or annoyance (USEPA 1974).

USAF administers the Air Installation Compatible Use Zones (AICUZ) program to “promote compatible land development in areas subject to aircraft noise and accident potential” (Barksdale AFB 2009). In accordance with AFI 32-7063, *Air Installation Compatible Use Zones Program*, AICUZ studies are made available to local communities to assist them in preparing local land use plans. As part of the AICUZ study, the installation identifies noise contours related to aircraft operations. Barksdale AFB updated their AICUZ study in 2008 and provided information about the results in the 2009 Barksdale AFB Joint Land Use Study. The project area is located within the 65-74 dBA noise zones (see Figure 3-1).



Source: Barksdale AFB 2009

Figure 3-1. Barksdale AFB Noise Contours

3.2.5.2 Affected Environment

The primary source of noise at Barksdale AFB is military aircraft operations and overflights. Other noise sources include military training, road traffic, and operations that require the use of noise-producing equipment (such as lawn maintenance and construction). The proposed project is located within a residential neighborhood in Barksdale AFB. The primary sources of noise near the site include a nearby airstrip, local road traffic, and the nearby fire station. The project area is predominantly within the 70-74 dBA and minimally within the 65-69 dBA AICUZ noise zones.

Table 3-6 lists the nearby sensitive receptors within 0.5 mile of the proposed demolition sites. Sensitive receptors include residences, schools, daycares, libraries, and medical facilities.

Table 3-6. Nearby Sensitive Receptors

Building to Demolish	Building Type	Receptor Type	Receptor	Direction from Site	Distance (feet)
3729	Garage	Daycare	Child Development Center	South	205
2734	Duplex	Preschool	Hooter Park Head Start Center	Southwest	1,060
3729	Garage	School	Louisiana Tech University	South	1,857
3727	Garage	Library	Barksdale AFB Library	South	2,240
3163	Duplex	Preschool	Hooter Park Head Start Center	Northwest	2,309
3729	Garage	Medical Clinic	Women's Clinic of Barksdale AFB	South	2,460

Source: Google Earth 2022

Note: This table does not include other residences near (i.e., within 50 feet) the buildings to be demolished under the Proposed Action. The buildings proposed for demolition are in a residential community with other residential properties (sensitive receptors) on adjacent or nearby land (see Figure 2-2).

3.2.5.3 Environmental Consequences

Significance Criteria

Effects on noise would be considered significant if the Proposed Action would (1) cause noise levels to exceed federal, state, or local noise ordinances or (2) cause ambient noise levels to change. Considerations of the potential for changes in noise include the addition of new mobile and stationary sources from activities associated with demolition activities.

Proposed Action

Under the Proposed Action, short-term, less-than-significant adverse impacts to the local noise environment would occur. Short-term, minor impacts would occur during demolition activities. Demolition activities would cause temporary increases in ambient noise levels in the immediate vicinity of the construction sites. Construction noise levels are rarely steady in nature, but instead fluctuate depending on the number and type of equipment in use at any given time. There would be times when no large equipment is operating, and noise would be at or near ambient levels. In addition, demolition-related sound levels would vary by distance.

On-site construction noise would mainly occur from site preparations, clearing and grading, demolition, and other associated construction activities including the use of heavy-duty construction equipment (e.g., trucks, backhoes, excavators, front end loaders, rollers, graders, etc.). Table 3-7 presents typical construction equipment (mobile and stationary) and the corresponding noise levels.

Table 3-7. Estimated Construction Noise from Construction Activities

Equipment	Typical Noise Level at 50 feet (dBA)	Typical Noise Level at 500 feet (dBA)	Typical Noise Level at 1,000 feet (dBA)	Typical Noise Level at 1,500 feet (dBA)
Front Loader	80	60	54	50
Backhoe, excavator	80	60	54	50
Tractors, dozers	85	65	59	55
Grader	85	65	59	55
Scraper	85	65	59	55
Truck	84	64	58	54
Cranes (movable)	83	63	57	53
Pneumatic tools	85	65	59	55

Source: Lamancusa 2009; USDOT 2018
 dBA = A-weighted decibel

In general, average equivalent noise levels from typical construction sites range from 79 to 89 dBA at 50 feet (Bolt et al. 1971). Construction noise levels fluctuate depending on the type, number, and duration of use of heavy equipment for construction activities, and differ by the type of activity, distance to noise-sensitive uses, existing site conditions (vegetation to buffer sound), and ambient noise levels. With multiple items of construction equipment operating concurrently, noise levels could be relatively high during daytime periods at locations within several hundred feet of active construction sites. Accounting for the concurrent use of the construction equipment, it is conservatively estimated that noise levels could be up to approximately 90 dBA at 50 feet. Combined construction noise reduces to approximately 64 dBA at 1,000 feet. Considering all proposed project locations, the closest noise-sensitive receptor would be other residential sites located on adjacent property and less than 50 feet away from the housing units proposed for demolition. Table 3-6 provides the locations of the closest sensitive noise receptors.

Using typical noise reductions over a distance, this analysis conservatively estimated a combined construction level of approximately 90 dBA at 50 feet would reduce to approximately 78 dBA at 200 feet at the Child Development Center, 63 dBA at 1,060 feet at the Hooter Park Head Start Center (preschool), and 56 dBA at 2,460 feet at the Women’s Clinic of Barksdale AFB.

Standard buildings with windows and doors shut result in an approximately 15 dBA noise reduction (USEPA 1978). With windows and doors shut the interior noise levels at receptors from

combined construction equipment within 50 feet would reduce to 75 dBA, and within 100 feet would reduce to approximately 69 dBA (USEPA 1978), as noise from a point source generally decreases 6 dBA per doubling of distance (Lamancusa 2009). As a result, noise levels at the nearby Child Development Center would reduce to 63 dBA indoors which is consistent with the existing noise contours for that location (see Figure 3-1).

No long-term increases in the overall noise environment would be expected with the Proposed Action. Noise would end at the conclusion of the proposed demolition activities and there would be no new permanent sources of noise; therefore, no long-term changes in the noise environment would occur and effects would be negligible.

Because the level of effects would be less than significant, no mitigation is required. The following standard BMPs would be implemented by the construction contractors, as appropriate, to limit noise impacts during demolition.

- Stationary equipment and material transportation routes would be located as far away from sensitive receivers as possible.
- Demolition would be limited primarily to daytime hours.
- Equipment would be operated per manufacturer's recommendations, and noise-generating heavy equipment would be shut down when not needed.
- Construction personnel would be directed to operate equipment to reduce noise to the practicable (e.g., speed restrictions, retarder brake restrictions, engine speed restrictions, etc.).

These noise-reducing measures would be briefed to the personnel responsible for implementing these activities. The on-site construction manager would be responsible to bring noise issues, if they arise, to Barksdale AFB for resolution. This information would be incorporated into construction contracts, as applicable.

No Action Alternative

Under the No Action Alternative, BLB would not demolish homes or associated garages at Barksdale AFB. No changes would be made to the existing buildings, and the existing noise environment would remain unchanged.

3.2.6 Safety

This section provides a definition of the resource, a description of the affected environment, and a discussion of the environmental effects on safety for the Proposed Action and the No Action Alternative. This EA considers structures proposed for demolition and a 20-foot buffer surrounding each structure to be the ROI for safety. This area collectively amounts to 4.9

noncontiguous acres.

3.2.6.1 Definition of Resource

A safe environment is one in which there is no, or an optimally reduced, potential for serious bodily injury or illness, death, or property damage. Safety addresses the well-being, safety, and health of members of the public, contractors, and USAF personnel during the Proposed Action. Construction site safety is largely a matter of adherence to regulatory requirements imposed for the benefit of employees and of operational practices that reduce risks of illness, injury, death, and property damage. Safety and accident hazards can often be identified and reduced or eliminated. Necessary elements for an accident-prone situation or environment include the presence of the hazard together with the exposed (and possibly susceptible) population. The degree of exposure depends primarily on the proximity of the hazard to the population.

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*, implements Air Force Policy Directive 91-3, *Occupational Safety and Health*, by outlining the AFOSH Program. The purpose of the AFOSH Program is to minimize loss of USAF resources and to protect USAF personnel from occupational deaths, injuries, or illnesses by managing risks. These standards ensure that all USAF workplaces meet federal safety and health requirements.

Anti-terrorism/force protection (AT/FP) guidelines for military installations are intended to reduce the risk of terrorism and address a range of considerations that include access to the installation, access to facilities on the installation, facility siting, exterior design, interior infrastructure design, and landscaping as specified in Unified Facilities Criteria 4-010-01 (DoD 2020). The intent of this siting and design guidance is to improve security, minimize fatalities, and limit damage to facilities in the event of a terrorist attack.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks* seeks to protect children from disproportionately incurring environmental health or safety risks that might arise as a result of federal government policies, programs, activities, and standards. The health and safety risks related to the Proposed Action that may affect children include the potential presence of LBP in homes proposed for demolition and general construction site safety due to the presence of heavy machinery and debris.

3.2.6.2 Affected Environment

All contractors performing construction on USAF installations are responsible for following federal OSHA regulations (29 CFR Part 1926) except when more restrictive DoD or USAF requirements apply. Contractors are required to conduct these activities in a manner that does not increase risk to workers or the public. These regulations address the health and safety of people at work and cover potential exposure to a wide range of chemical, physical, and biological hazards,

and ergonomic stressors. The regulations are designed to control these hazards by eliminating exposure to the hazards via administrative or engineering controls, substitution, use of personal protective equipment (PPE), and availability of SDSs.

3.2.6.3 Environmental Consequences

Significance Criteria

Effects on safety would be considered significant if the Proposed Action would (1) increase safety hazards, (2) increase safety risks, (3) introduce a new safety risk, or (4) result in noncompliance with laws, regulations, or orders protecting human health and safety.

Proposed Action

Short-term, minor adverse impacts on the safety of construction workers could occur during demolition of the structures identified in Table 2-1. Impacts could result from the exposure of construction workers to the safety hazards associated with demolition activities. Examples of safety hazards could include potential injury associated with use of heavy equipment; slips, trips, or falls; exposure to heat, cold, wet conditions, or hazardous materials; and fire, mechanical, electrical, vision, noise, or respiratory hazards. Contractors working at Barksdale AFB would be required to follow applicable installation, state, and federal regulatory requirements detailing general safety requirements for construction workers. Workers would also be required to wear appropriate PPE including ear protection, steel-toed boots, hard hats, and gloves. Contractors would be required to adhere to federal and state regulations if any contaminated materials are found or handled (see Section 3.2.4).

Safety risks associated with demolition also exist for those beyond the onsite construction workers. The Proposed Action would be located in a residential area in close proximity (approximately 200 feet) from a Child Development Center. As such, there is the potential for residents and children to encounter demolition debris or heavy machinery. To protect children from safety hazards associated with the demolition site, the project areas would be fenced to keep unauthorized persons out of properties at which demolition activities are proposed.

Young children are also at increased risk of lead exposure in historic homes. LBP peels and cracks over time, causing lead-contaminated paint and dust to settle on surfaces within the home or on soils outside. As young children touch contaminated surfaces or put contaminated objects within their mouths, they become susceptible to a variety of adverse health effects, such as damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and hearing and speech problems. No level of lead within a children's blood is considered "safe"; therefore, potential exposure must be minimized (CDC 2021). Disturbing potential LBP present within the structures identified for demolition under the Proposed Action could result in lead-contaminated dust, soil, or debris and a short-term adverse effect from increased risk of exposure. However, proper handling and disposal of such materials would avoid impacts during demolition

and result in a long-term beneficial impact on child safety due to the removal of a potential source of lead contamination.

The Proposed Action would not substantially increase safety hazards or risks during demolition or result in incompatible land use with regard to safety criteria. Safety effects of implementing the Proposed Action would be less than significant, and no mitigation would be required.

No Action Alternative

Under the No Action Alternative, BLB would not demolish homes or associated garages within Barksdale AFB. The homes would be minimally maintained to prevent the structures from falling into complete disrepair and to retain general structural integrity and would be locked to prevent unauthorized entry; therefore, no impacts on safety would be expected.

3.2.7 Socioeconomics

This section provides a definition of the resource, a description of the affected environment, and a discussion of the environmental effects on socioeconomics for the Proposed Action and the No Action Alternative. The ROI for socioeconomic impacts includes Bossier Parish and Caddo Parish because Barksdale AFB is in Bossier Parish and near the border with Caddo Parish.

3.2.7.1 Definition of Resource

Socioeconomics encompasses economies and social elements such as population levels and economic activity. Factors that describe the socioeconomic environment for a geographic area include demographics, median household income, unemployment rates, and employment housing. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on personal income in a region are used to compare the effects of jobs created or lost as a result of a proposed action. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region.

3.2.7.2 Affected Environment

Barksdale AFB is the largest employer in the state of Louisiana with an annual payroll of \$473.1 million. Barksdale AFB's economic impact, which includes pay, contracts, and purchases, totals more than \$810.7 million annually (GBEDF 2022).

Demographics. Barksdale AFB has a population composed of 5,191 active-duty military, 1,463 reservists, 2,263 civilians, and 5,571 family members (Barksdale AFB 2020). The installation also provides services to an estimated 40,000 retirees and their family members who live in the area.

In 2020, the estimated population of Bossier Parish was 128,746, an increase of 10.1 percent relative to the 2010 Census. Conversely, the population of Caddo Parish dropped 6.7 percent relative to the 2010 Census to 237,848.

In 2019, the median household income in Bossier Parish was \$54,268, relative to \$41,797 in Caddo Parish and \$49,469 in the state of Louisiana. The largest segment of non-government employment was devoted to Trade, Transportation, and Utilities, followed by Education and Health Services (BLS 2021).

Housing. The number of housing units in Bossier Parish was estimated to be 58,307 units in 2019, whereas the number Caddo Parish housing units was estimated to be 113,577 units (U.S. Census Bureau 2020). Barksdale AFB offers Unaccompanied Housing facilities for airmen ranked E3 and lower, as well as military family housing.

Schools. Bossier Parish and Caddo Parish offer public education for grades K-12. Programs include special curriculums for the gifted, learning disabled, and physically challenged. Bossier Parish schools have approximately 22,589 students. The Parish has 7 high schools, 13 middle schools, 23 elementary schools, and 10 preschools (GreatSchools 2022a). Caddo Parish schools have approximately 38,199 students. There are 19 high schools, 20 middle schools, 45 elementary schools, and 40 preschools in the Parish (GreatSchools 2022b).

Public Services. Barksdale AFB offers multiple services including recreational facilities and family support activities. The Barksdale AFB 2nd Medical Group provides routine medical and dental services to active duty, retirees, and military dependents. The 2nd Security Forces Squadron and Barksdale Fire Department ensure public safety on the installation.

In addition, Bossier and Caddo parishes have several hospitals and emergency care centers. The Bossier City Fire Department (BCFD) serves and protects the city with 9 fire stations and 191 employees (BCFD 2022). The Shreveport City Fire Department (SCFD) operates 22 stations with 578 personnel (SCFD 2021). In addition, both Bossier City and Shreveport operate city Police Departments and have a Sheriff's office to help ensure public safety.

3.2.7.3 Environmental Consequences

Significance Criteria

Effects on socioeconomics would be considered significant if the action would: (1) substantially change the local business volume, employment, or personal income; or (2) substantially change the population that exceeds the ability of public services to provide adequate service.

Proposed Action

The direct impact associated with the demolition activities is expected to be short-term, minor, and beneficial to the local economy. Benefits associated with the Proposed Action include the purchase of equipment, materials, and services and a temporary increase in employment and income resulting from job opportunities for approximately 12 temporary workers involved in demolition activities for approximately 6 to 8 months. Benefits would be local or regional, depending on

where the goods, services, and workers were obtained. It is likely some construction materials and services would be purchased locally within the Shreveport-Bossier City metropolitan area, as well as in adjacent counties and cities. Also, it is likely that the majority of the temporary construction workforce would be from local and regional construction contractors. Since there would be no permanent employees, changes to population levels in the area as a result of implementing the Proposed Action are not expected to occur.

As stated in Section 1.2, prior to the winter storm in early 2021, the homes proposed for demolition were only partially occupied and the former occupants had already re-located to other permanent housing. As stated in Section 1.7, there are no current plans for future reuse of the sites, such as replacement homes. As a result, demolition of the sites would not cause significant impacts to housing availability in the area. Because the level of effects would be less than significant, no mitigation is required. Overall, socioeconomic impacts from the demolition activities are anticipated to be short-term, beneficial, and minor relative to the total economy of the region.

No Action Alternative

Under the No Action Alternative, BLB would not demolish homes or associated garages within Barksdale AFB. It is expected that there would be no impacts on housing, schools, public health and safety, family support services, or recreational activities. There would be no change in socioeconomics under the No Action Alternative when compared to existing conditions.

3.2.8 Traffic

This section provides a definition of the resource, a description of the affected environment, and a discussion of the environmental effects on traffic for the Proposed Action and the No Action Alternative. The ROI for traffic includes the public roadways and key access points within and near the Base, as well as roadways within Barksdale AFB boundary.

3.2.8.1 Definition of Resource

Transportation systems consist of the road and pedestrian networks. Transportation infrastructure includes major and minor roadways into the installation, security gates, and roadways on the installation. Available capacity and performance of the transportation system indicate the conditions that commuters and other travelers encounter. The traffic network, vehicular traffic, travel patterns, circulation, and parking are described for the study area. The traffic study area includes the roadway networks within and in the vicinity of Barksdale AFB.

3.2.8.2 Affected Environment

Four entry control facilities (gates) provide access to Barksdale AFB. U.S. Highway 71 provides access at the West Gate. Northgate Road provides access at the North Gate, and Industrial Boulevard provides access from Interstate 20 at the East Gate. The East Gate is used by contractors

and service delivery personnel and is the access point for industrial traffic and all explosives deliveries. Bodcau Gate, which is strictly used for private vehicle access, provides access from Bodcau Station Road and Highway 79/80 in the Red Chute community.

Barksdale AFB conducted a transportation level of service analysis in 2012 (Barksdale AFB 2012). The study evaluated 10 two-way, stop-controlled intersections in the Main Base area as well as access to the installation. Although the study did not find any operational issues related to capacity within the installation at present or with anticipated traffic volumes through fiscal year 2020, it was concluded that installation access and gate operations resulted in long processing times and congestion at peak hours, which impacted public roadways in the immediate vicinity. The study concluded that the North Gate should be adequate to process vehicles with manual tandem processing. However, the study found that the West Gate was on the verge of unsatisfactory processing and periodically experiences lengthy wait times and queuing. Similarly, the East Gate did not adequately accommodate the current volume of industrial traffic and did not have adequate queuing distances, resulting in congestion on Industrial Boulevard (Barksdale AFB 2012). An EA was prepared in 2020 to assess the potential impacts associated with replacing the existing East Gate with a new Base entrance and associated Entry Control Facility, to be located near the I-220 and I-20 exchange. If constructed, the proposed project would replace the inadequate and outdated East Gate and alleviate congestion at this access point.

The buildings proposed for demolition under the Proposed Action (see Table 2-1) are located on Bong Boulevard, Fairchild Avenue, Luke Avenue, Selfridge Avenue, Langley Drive, and Bossier Road. The West Gate serves as the most proximate installation access point.

3.2.8.3 Environmental Consequences

Significance Criteria

Effects on traffic and transportation would be considered significant if the Proposed Action would substantially disrupt current traffic patterns or circulation by disrupting access to routes or by considerably increasing the volume of traffic along a route or in a parking area.

Proposed Action

Short-term, minor adverse impacts on transportation are anticipated during demolition. These impacts would occur primarily as a result of increased traffic entering and leaving the Base. Traffic associated with the Proposed Action would consist of trucks transporting heavy equipment, construction worker vehicles, and waste trucks. Heavy equipment anticipated to be present onsite during demolition include one or two excavators, one man lift, one grader, and one bobcat; it is likely that this equipment would be brought onsite at the start of the project and would remain onsite until demolition activities are completed. It is estimated an average of two trucks would also enter and exit the installation each day to remove demolition debris, and an average of five trucks per day would be used to haul soil onsite to backfill basements after houses have been

demolished. There could be temporary periods of heavy truck traffic during demolition activities. Finally, it is estimated that approximately a dozen construction workers would enter and exit the installation on a daily basis for the duration of the project. The resulting increase in truck and worker vehicle traffic could have a minor, temporary adverse impact on traffic in the area, including slightly higher wait times at installation access gates and increased congestion on the roadways leading up to them. Trucks associated with these activities would access the site through the East Gate and would transit to the site via pre-established routes in coordination with BLB and Barksdale AFB personnel. Construction crew privately owned vehicles could access the installation via the West Gate and U.S. Highway 71.

Negligible to minor adverse impacts may also occur as a result of equipment loading and unloading in the vicinity of the demolition sites. Access roads in the immediate vicinity of the demolition sites may be temporarily blocked as trucks enter and exit the area, and during loading and unloading of equipment. These activities would be coordinated with Barksdale AFB and, to the extent practicable, would be conducted during off-peak hours to minimize impacts.

Demolition activities and equipment and materials staging would not have any adverse impacts on traffic and transportation, and no mitigation measures would be required. Laydown and staging of equipment or demolition debris would be located within the immediate footprints of each house to be demolished or on existing alleys of the houses proposed for demolition. Demolition activities would be largely confined to the footprint of each structure to be demolished.

No Action Alternative

Under the No Action Alternative, BLB would not demolish homes or associated garages within Barksdale AFB. No impacts on traffic and transportation would be expected.

3.2.9 Water Resources

This section provides a definition of the resource, a description of the affected environment, and a discussion of the environmental effects on water resources for the Proposed Action and the No Action Alternative. This EA considers the ROI for water resources to be the Red River watershed.

3.2.9.1 Definition of Resource

Water resources include surface water and groundwater quantity and quality. This section describes the qualitative and quantitative characteristics of water resources.

Surface Water. Surface water includes lakes, rivers, and streams and is important for a variety of reasons including irrigation, power generation, recreation, flood control, and human health. The nation's waters are protected under the statutes of the CWA; the goal of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's water so that they can support "the protection and propagation of fish, shellfish, wildlife, and recreation in and on the

water.” Under the CWA Section 402, it is illegal to discharge any point and/or nonpoint pollution sources into any surface water without a National Pollutant Discharge Elimination System (NPDES) permit. The USEPA is charged with administering the NPDES permit program. In Louisiana, the NPDES is administered by the LDEQ under the LPDES.

The LPDES stormwater program requires construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more to obtain coverage under a LPDES permit for their stormwater discharges. Construction that necessitates a permit also requires preparation of a Notice of Intent (NOI) to discharge stormwater and a SWPPP that is implemented during construction. For construction activities that disturb less than 1 acre, no permit coverage is required. However, it is suggested that erosion control be implemented during and after construction for stormwater pollution control during a storm event.

Also, under the requirements of Section 438 of the Energy Independence and Security Act (42 USC §17094) federal facility projects larger than 5,000 square feet must “maintain and restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow.”

Groundwater. Groundwater is water that exists underground in saturated zones beneath the land surface. Groundwater is the water that soaks into the soil from rain or other precipitation and is an essential resource often used for potable water consumption, agricultural irrigation, and industrial applications. Groundwater plays an important part in the overall hydrologic cycle and its properties are described in terms of depth to aquifer or water table, water quality, and surrounding geologic composition.

3.2.9.2 Affected Environment

Surface Water. Barksdale AFB lies within the Red River watershed, which is one of Louisiana's major river systems and is part of the Mississippi River drainage basin. Approximately half of Barksdale AFB lies within the Red River alluvial floodplain. The Red River alluvial floodplain is characterized by flat, slow-draining systems. The Flat River and Red Chute Bayou are the two major water bodies that flow through Barksdale AFB. Surface waters from Barksdale AFB are directed into Red Chute Bayou or the Flat River, which both ultimately flow into the Red River. Several naturally occurring lakes exist on Barksdale AFB, the largest of which is Flag Lake. Approximately 900 acres of surface water occur on Barksdale AFB with most on the East Reservation (approximately 814 acres). The remaining acreage, which is limited to drainage channels, occurs in the Main Base and Barksdale East. No surface water features exist within the project area. Figure 3-2 depicts the unnamed surface waters in the vicinity of the Proposed Action; these streams discharge to Red Chute Bayou across the Airfield.

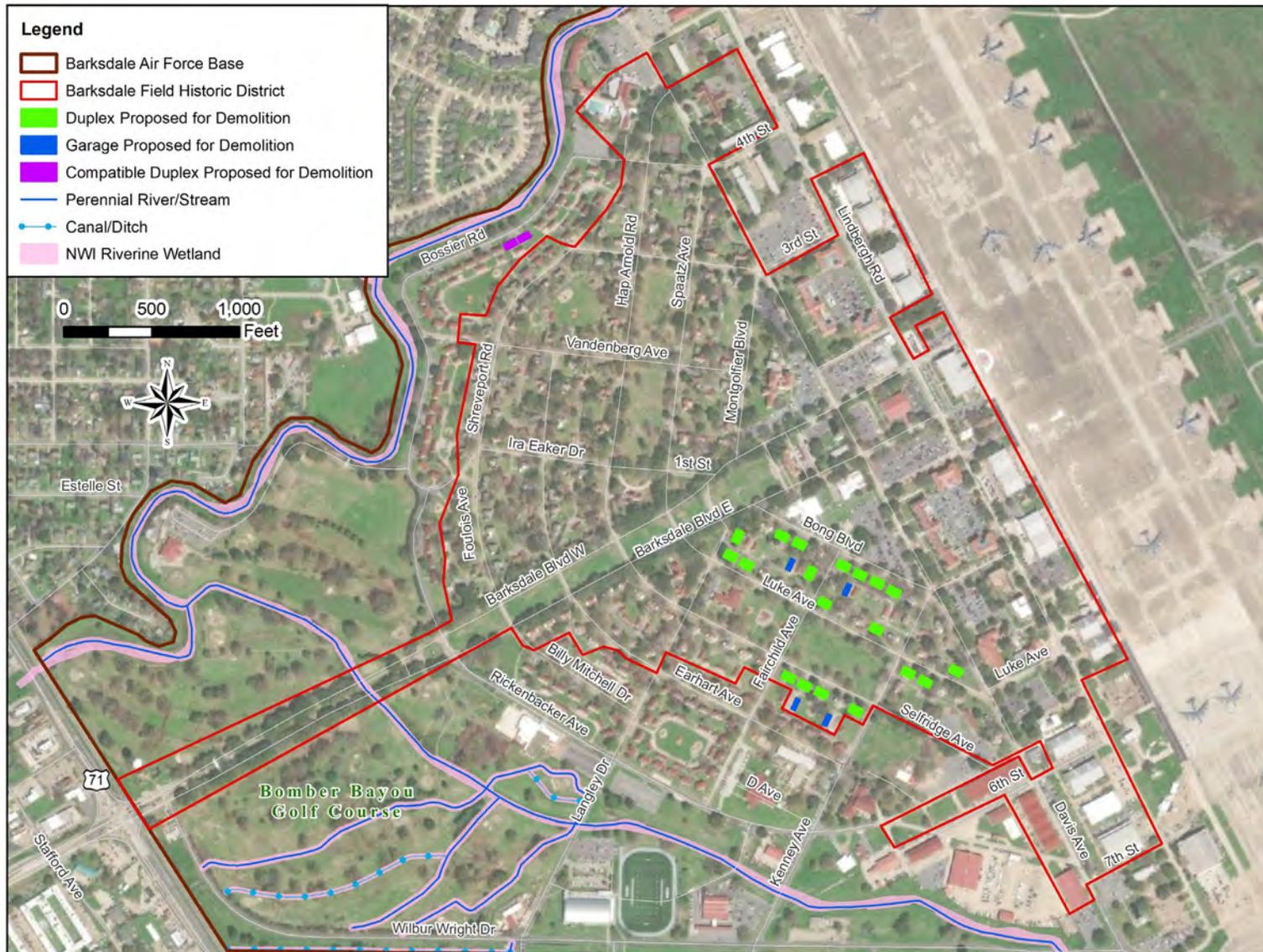


Figure 3-2. Surface Waters in Vicinity of Project Area

Groundwater. Two aquifers lie beneath Barksdale AFB, the Red River Alluvial Aquifer and the Carrizo-Wilcox Aquifer. The Red River Alluvial aquifer is hydraulically connected with the Red River and its major streams (LDEQ 2001). The Carrizo-Wilcox Aquifer is beneath the Red River Alluvial Aquifer (LDEQ 2007). Recharge is accomplished by direct infiltration of rainfall, lateral and upward movement, and overbank stream flooding. Groundwater levels fluctuate seasonally in response to precipitation trends and river stages. Water levels are generally within 30 to 40 feet of the land surface and movement is downgradient toward rivers and streams. Natural discharge occurs by seepage of water into the Red River and its streams, but some water moves into the aquifer when stream stages are above aquifer water levels.

3.2.9.3 Environmental Consequences

Significance Criteria

Effects on water resources would be considered significant if the Proposed Action would (1) reduce water availability or supply, (2) exceed safe annual yield of water supplies, (3) adversely affect water quality, (4) threaten or damage hydrology, or (5) violate water resources laws.

Proposed Action

The Proposed Action would have short-term, less-than-significant, adverse effects on water resources. Effects on water resources would not reduce water availability or supply, exceed safe annual yield of water supplies, adversely affect water quality, threaten or damage hydrology, or violate water resources laws or regulations.

Demolition of the structures identified in Table 2-1 is not anticipated to directly affect surface water resources; however, ground disturbance would increase sedimentation and stormwater runoff, and demolition debris has the potential to contaminate stormwater. Adherence to Barksdale AFB's SWPPP would reduce impacts on groundwater and surface water quality (Barksdale AFB 2018). The SWPPP identifies potential sources of stormwater pollution at demolition sites and describes practices to reduce pollutants in stormwater discharges. BMPs that could be implemented to reduce sedimentation and runoff include temporary diversion terraces, silt fencing, storm drain inlet and outlet protection, and limiting vegetation removal to only the area necessary for demolition activities. In an effort to reduce offsite transport of ACM, LBP, or contaminated soils, demolition debris would be immediately removed from the site for proper disposal to the extent practicable. As necessary, debris piles would be covered (e.g., through use of tarps) until materials could be transported to an appropriate landfill. Soils would be stabilized immediately following demolition activities, and the site would be revegetated with native grasses.

Since the Proposed Action would disturb more than 1 acre but less than 5 acres, a general discharge permit (NPDES Permit LAR100000) would be developed, submitted to LDEQ, and implemented during demolition. This permit requires that the contractor prepare a SWPPP for construction and include the schedule of activities, prohibitions of practices, maintenance procedures, structural

controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants (e.g., measures to reduce impacts for construction site runoff, spills or leaks, waste disposal, or drainage from raw material storage areas). Implementing the Proposed Action would result in less-than-significant effects on water resources at Barksdale AFB. Because the level of effects would be less than significant, no mitigation is required.

No Action Alternative

Under the No Action Alternative, BLB would not demolish homes or associated garages at Barksdale AFB, and no impacts on water resources would be expected.

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4 CUMULATIVE EFFECTS

Cumulative effects on environmental resources result from the incremental effects of an action when combined with other past, present, and reasonably foreseeable future projects in the area (40 CFR 1508.1(g)). Cumulative effects can result from individually minor but collectively substantial actions taken over a period of time. In accordance with NEPA, a discussion of cumulative effects is required (CEQ 1997). Past projects or reasonably foreseeable future projects with the potential to contribute to cumulative effects of the Proposed Action have been evaluated in this section. Future actions that are speculative are not considered in this EA.

4.1 PROJECTS CONSIDERED FOR POTENTIAL CUMULATIVE EFFECTS

This cumulative effect analysis focuses on resources with the greatest potential to be affected by the combined impact of the proposed demolition activities described in Section 2.2 and nearby projects. The project area is located in the Main Base to the west of the Airfield; as such, this cumulative effects analysis only considers those projects located within or planned for the Barksdale Field Historic District itself or the Main Base. While other large construction projects are planned for the Airfield and eastern portions of the Base, the Proposed Action is not expected to contribute to the potential effects of those projects due to the nature and scale of the proposed demolition activities. Table 4-1 identifies projects within the ROI with the potential to contribute toward cumulative effects arising from implementation of the Proposed Action. Figure 4-1 shows the locations of these projects in relation to the Proposed Action.

Table 4-1. Projects Considered for Potential Cumulative Effects

Project Name	Location	Project Summary
Child Development Center Renovations	Historic District	Expand and renovate the CDC East (located at 411 Fairchild Ave) to accommodate additional children.
Renovate Dorm 4323	Historic District	Renovations to existing dormitory, including removing and replacing existing interior finishes in rooms. Finishes would include, but not be limited to, wall coverings, flooring, paint, ceilings, and doors.
Consolidated Communications Facility	Historic District	The project will construct a multi-story consolidated facility to house all functions of the 2nd Communications Squadron.
Main Base Drainage and Road Repair ¹	Main Base	Repair drainage and roads in various locations throughout Main Base.
Main Base Sewer Main Repairs ¹	Main Base	Repair sanitary sewer mains in various locations throughout Main Base.

Source: AFCEC 2020

1. Not pictured on Figure 4-1.

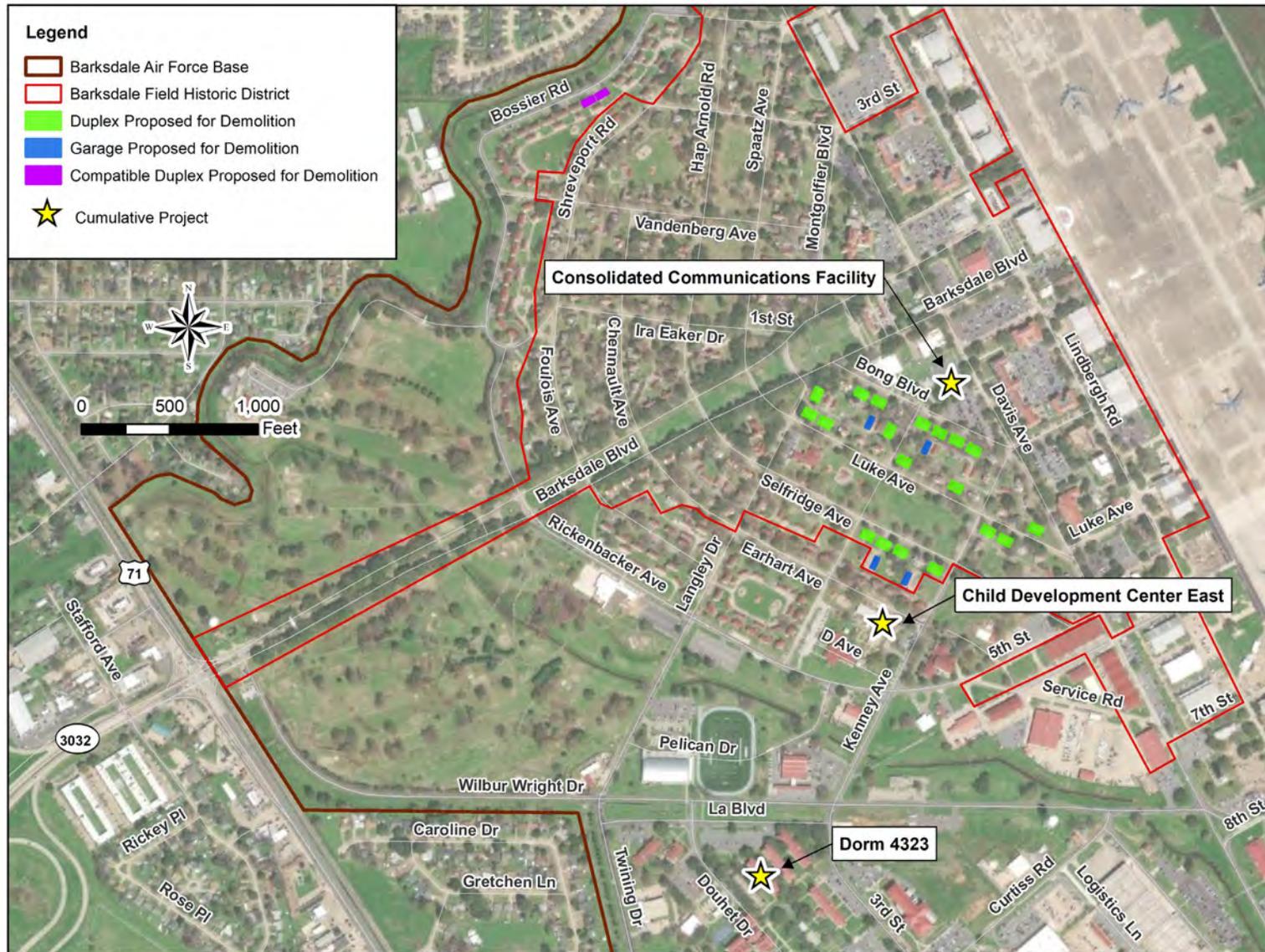


Figure 4-1. Location of Projects Considered in Cumulative Effects Analysis

4.2 CUMULATIVE EFFECTS ON RESOURCE AREAS

The analysis in this EA indicates that implementing the Proposed Action would have no or negligible (i.e., not measurably different from existing conditions) effects on biological resources, environmental justice, infrastructure and utilities, and land use. The analysis indicates that minor effects (i.e., small but measurably different from existing conditions) would be expected for air quality, cultural resources, soils, hazardous materials and waste, noise, safety, socioeconomics, traffic, and water resources. Based on the analysis in Section 3.2 of this EA, this cumulative effect analysis focuses on those resources with the greatest potential to be affected. The following sections present the results of this cumulative effects assessment.

4.2.1 Air Quality

Short-term, less-than-significant cumulative adverse effects would be expected due to temporary construction and demolition activities associated with the Proposed Action and the projects identified in Table 4-1. Construction vehicles and associated ground disturbance would release emissions of potential air pollutants and fugitive dust. All of the projects identified in Table 4-1 involve renovating or repairing existing facilities; as such, no long-term adverse air quality effects are expected. Due to the global nature of climate change, the potential cumulative emissions resulting from implementation of all identified projects within the ROI, including the Proposed Action, would not be expected to measurably contribute toward climate change or increase the concentration of GHGs in the Earth's atmosphere.

4.2.2 Cultural Resources

Short-term, less-than-significant cumulative adverse impacts would be expected. The Proposed Action, renovation of the Child Development Center, renovation of Dorm 4323, and construction of the Consolidated Communications Facility would all occur within the Barksdale Field Historic District. However, the Child Development Center (Building 3725) was constructed in 1971 and is identified as being located within, but not contributing toward the significance of, the Historic District. Likewise, Dorm 4323 is not identified as a contributing structure of the Barksdale Field Historic District (USACE 1995). The Consolidated Communications Facility would be a non-historic, non-contributing element of the Historic District. Repair of existing Main Base drainage, roads, and sanitary sewer mains is not expected to result in additional effects to cultural resources.

4.2.3 Soils

Short-term, less-than-significant cumulative adverse effects to soils would be expected. Effects would be from cumulative soil disturbance associated with the Proposed Action and identified cumulative projects at Barksdale AFB. No long-term effects would be expected, assuming implementation of routine BMPs to manage topsoil and to reduce erosion. The Proposed Action would not adversely affect current land uses or cause loss of unique and sensitive soils or geologic

features.

4.2.4 Hazardous Materials and Waste

Short-term, less-than-significant cumulative adverse effects to hazardous materials and waste would be expected. Short-term effects would be from use of hazardous materials associated with the demolition of homes or associated garages at Barksdale AFB. The Proposed Action would not result in noncompliance with applicable federal or LDEQ regulations or health and safety standards. While additional ACM and LBP could be generated during renovation of the Child Development Center (constructed in 1971), those volumes, in combination with the waste generated during the demolition activities described in Section 2.2, would not increase the amounts of hazardous materials and waste procured or generated beyond current Barksdale AFB waste management procedures, permits, and capacities. No new contaminated sites would be created that would lead to negative effects on human or the environmental health.

4.2.5 Noise

Short-term, less-than-significant cumulative adverse noise effects would be expected. Temporary effects would be limited to demolition, renovation, and repair activities associated with the Proposed Action and the projects identified in Table 4-1. Implementation of standard BMPs identified in Section 3.2.5 would reduce or avoid potential adverse noise impacts to sensitive receptors. No long-term effects would be expected.

4.2.6 Safety

Short-term, less-than-significant cumulative adverse effects to safety would be expected. Short-term adverse effects would be due to potential worker injury associated with the demolition and renovation of structures at Barksdale AFB. Children living in the nearby residential area or attending the Child Development Center could be exposed to greater risks from construction hazards; although such hazardous could generally be avoided through installing fencing to restrict access to construction sites and harmful debris. Long-term beneficial effects would be realized from removal of safety hazards associated with damaged and outdated buildings, including potential hazards to young children through potential exposure to lead in old structures.

4.2.7 Socioeconomics

Short-term, less-than-significant cumulative socioeconomic effects would be expected. Short-term beneficial effects would be from indirect increases in local sales volumes, payroll taxes, and the purchases of goods and services associated with demolition, renovation, and repair projects at Barksdale AFB. No long-term effects would be expected. The Proposed Action in consideration with other projects would not substantially change the demographics, housing, or social services in the area.

4.2.8 Traffic

Short-term, less-than-significant cumulative effects to traffic would be expected. The presence of construction equipment and heavy vehicles could temporarily impede the normal flow of traffic across the Base; however, timing proposed demolition, renovation, and repair activities to avoid the anticipated periods of highest volume on local roads would reduce or avoid potential effects. Trucks hauling debris would be routed to reduce potential traffic effects, and road closures would be limited to the minimum timeframe required for each project. No long-term adverse effects are anticipated; long-term beneficial effects would result from the proposed repair of existing roads.

4.2.9 Water Resources

Short-term, less-than-significant cumulative adverse effects to water resources would be expected. Short-term effects would be from increased water demand, site disturbance, and associated sedimentation arising from demolition, renovation, and repair activities at Barksdale AFB. Potential effects to stormwater would be reduced or avoided through adherence to the installation's SWPPP (Barksdale AFB 2018). Long-term adverse effects would not be expected. The Proposed Action in consideration with other projects would not reduce water availability or supply, exceed safe annual yield of water supplies, adversely affect water quality, threaten or damage hydrology, or violate water resources laws or regulations.

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Appendix A Agency Coordination and Public Involvement

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Appendix B. Air Emissions Calculations

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AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: BARKSDALE AFB
State: Louisiana
County(s): Bossier
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Barksdale Historic Housing Demolition

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

d. Projected Action Start Date: 10 / 2022

e. Action Description:

The Proposed Action is to demolish 19 historic duplexes, 2 compatible duplexes, and 4 historic garages within the Historic District at Barksdale AFB. All historic structures were built between 1930 and 1941. The compatible duplex was built in 1990.

The proposed demolition would involve complete dismantling and removal of all building structures and associated equipment or machinery in accordance with applicable regulatory requirements, to include proper handling and disposition of the waste. All utilities would be disconnected, cut and capped, and abandoned in place. Basements would be filled and graded. Existing driveways and alleyways would remain in place to facilitate access to nearby homes that would remain in place. Existing landscaping would be removed with the exception of large trees, which would be protected during demolition and left in place to the extent practicable. Demolition would involve minimal ground disturbance; following grading and site work, the site would be re-seeded with native species to minimize the potential for erosion and runoff.

There are no future plans for the project sites following demolition; the sites would remain vacant and maintained by BLB. The sites may be transferred back to Barksdale AFB ownership for future re-development, which may include additional parking to support nearby Base mission support and expansion efforts. There is no current timeline, funding, or project information for this action. This action would be a separate project from this Proposed Action and would be subject to appropriate NEPA analysis and Section 106 compliance at such time.

Demolition would be completed using standard construction equipment and may include excavators, man lifts, graders, bobcats, and trucks to haul away debris. No other method of demolition such as burning or implosion would be employed. Approximately a dozen construction workers would be onsite within the project area during demolition activities. Some crushing of vegetation may occur surrounding the immediate area of demolition. In total, the combined project area, including the damaged buildings and an approximately 20-foot buffer around each building that could be disturbed due to vehicles and debris, encompasses approximately 4.9 acres, all of which would be temporarily impacted but restored following demolition.

f. Point of Contact:

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

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

_____ applicable
 not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving “steady state” (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the USAF Air Emissions Guide for Air Force Stationary Sources, the USAF Air Emissions Guide for Air Force Mobile Sources, and the USAF Air Emissions Guide for Air Force Transitory Sources.

“Insignificance Indicators” were used in the analysis to provide an indication of the significance of potential impacts to air quality based on current ambient air quality relative to the National Ambient Air Quality Standards (NAAQSs). These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are “Clearly Attainment” (i.e., not within 5% of any NAAQS) and the GCR de minimis values (25 ton/yr for lead and 100 ton/yr for all other criteria pollutants) for actions occurring in areas that are “Near Nonattainment” (i.e., within 5% of any NAAQS). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. For further detail on insignificance indicators see chapter 4 of the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments.

The action’s net emissions for every year through achieving steady state were compared against the Insignificance Indicator and are summarized below.

Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.089	250	No
NOx	0.565	250	No
CO	0.608	250	No
SOx	0.001	250	No
PM 10	1.847	250	No
PM 2.5	0.023	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	143.2		

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

2023

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.181	250	No
NOx	1.146	250	No
CO	1.173	250	No
SOx	0.003	250	No
PM 10	4.525	250	No
PM 2.5	0.047	250	No
Pb	0.000	25	No
NH3	0.001	250	No
CO2e	291.6		

2024 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	No
NOx	0.000	250	No
CO	0.000	250	No
SOx	0.000	250	No
PM 10	0.000	250	No
PM 2.5	0.000	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	0.0		

None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.



Samir Qadir, Environmental Scientist

4/27/2022

DATE

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Appendix C. Photographs of Structures Proposed for Demolition

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Ceiling of Bldg. 3663 (206 Bong Boulevard)



Ceiling of Bldg. 3767 (312 Bong Boulevard)

Representative Views of Interior Water Damage to Duplexes Proposed for Demolition



Bannister of Bldg. 3663 (206 Bong Boulevard)



Door of Bldg. 3731 (302 Selfridge Avenue)

Representative Photos of Mold and Mildew in Duplexes to be Demolished



Representative Photo of Collapsed Ceiling in Bldg. 3767 (312 Bong Street)