RCS 05-077

EGLIN AIR FORCE BASE
FLORIDA

FINAL
ENVIRONMENTAL ASSESSMENT

FOR THE EGLIN DORMITORY
MASTER PLAN

MARCH 2006

Report Documentation Page

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FINDING OF NO SIGNIFICANT IMPACT
FOR
THE DORMITORY MASTER PLAN AT EGLIN AIR FORCE BASE, FL
RCS 05-077

Pursuant to the Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act (40 Code of Federal Regulations [CFR] 1500-1508), 32 CFR Part 989, the U.S. Department of the Air Force has conducted an Environmental Assessment (EA) of the probable environmental consequences for the implementation of the Dormitory Master Plan (DMP) which will consist of the demolition of three dormitories and the construction of six three-story dormitories at Eglin Air Force Base (AFB), Florida.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action

To meet the capacity requirements and improve infrastructure at Eglin AFB, the Proposed Action is to perform activities designated in the DMP. The action will include the demolition of dormitories 17, 19 and 20 (115,255 total square feet) and construction of six three-story facilities to accommodate 288 occupants (approximately 16,251 square feet each; 99,126 square feet total). Additionally, a parking lot is proposed to alleviate parking concerns.

The Air Force would design each new dormitory facility with reinforced concrete foundations, slab floors, masonry walls and roofs. Each facility would contain individual living rooms for each airman as well as bathroom and kitchen facilities. Additionally, the Air Force would incorporate storage and lounge areas as well as supporting facilities into the design and construction. The Air Force anticipates completion of all project-related activities within a 10-year time frame.

The Air Force proposes to conduct the DMP activities within the boundary of the existing dormitory area. While the exact location of each footprint within the area is unknown, environmental impact analysis assumed that construction would take place anywhere within this general area and identified environmental constraints and potential impacts to facilitate the design and planning process.

Alternative 1

Under Alternative 1 the Air Force would construct 12 single-story facilities at 12,788 square feet each as opposed to 6 two-story facilities to accommodate 288 occupants. Additionally, demolition of the "old" Non-Commissioned Officers (NCO) Club (approximately 34,100 square feet) would occur. Alternative 1 is similar in all other respects to the Proposed Action.

No Action Alternative

Under the No Action Alternative, Eglin AFB would continue to operate and maintain the existing dormitory facilities and would not demolish existing dormitories or construct new facilities. Airmen would continue to be housed in marginal facilities that could result in lower

morale and decreased retention rates. This would reduce the effectiveness of personnel and potentially affect the U.S. Air Force mission.

The Air Force conducted analysis to determine the potential impacts to the human and natural environment resulting from the Proposed Action and the No Action Alternative. No significant impacts to resources have been identified. A detailed discussion of issues analyzed and management strategies used to reduce potential impacts is given in Chapters 4 (Environmental Consequences) 5 (Plans, Permits, and Management Actions) of the EA.

FINDING OF NO SIGNIFICANT IMPACT

The Environmental Impact Analysis Process Environmental Assessment Working Group of the Environmental Protection Committee reviewed the EA and concluded that the proposed implementation of the DMP and associated demolition and construction activities at Eglin AFB, Florida would not have a significant adverse impact of a long-term nature to the quality of the human or natural environment. Therefore, an Environmental Impact Statement will not be prepared. This analysis fulfills the requirements of the National Environmental Policy Act, the President's Council on Environmental Quality, and codified at 32 CFR Part 989.

TIMOTHY P. GAFFNEY, Colonel, USAF
Commander, 96th Civil Engineer Group

2 May 06
Date

RCS 05-077

FINAL
ENVIRONMENTAL ASSESSMENT

FOR THE EGLIN DORMITORY MASTER PLAN

96th Civil Engineer Group
Environmental Management Division
96 CEG/CEV
Eglin AFB, FL 32542

MARCH 2006

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LIST OF ACRONYMS, ABBREVIATIONS, AND SYMBOLS

%	Percent
^{O}C	Degrees Celsius
796 CES/CEOP	796 Civil Engineering Squadron, Civil Engineering Planning Office
96 CEG/CEV	96th Civil Engineer Group, Environmental Management Division
96 CEG/CEVC	96th Civil Engineer Group, Environmental Compliance Branch
96 CEG/CEVCE	96th Civil Engineer Group, Environmental Engineering Section
96 CEG/CEVCP	96th Civil Engineer Group, Pollution Prevention Section
96 CEG/CEVH	96th Civil Engineer Group, Cultural Resources Branch
96 CEG/CEVR	96th Civil Engineer Group. Environmental Restoration Branch
96 CEG/CEVSN	96th Civil Engineer Group, Natural Resources Section
96 CEG/CEVSP	96th Civil Engineer Group, Environmental Analysis Section
96 CES	96th Civil Engineering Squadron
ACAM	Air Conformity Applicability Model
ACBM	Asbestos Containing Building Materials
AST	Aboveground Storage Tank
AF	Air Force
AFB	Air Force Base
AFI	Air Force Instruction
AICUZ	Air Installation Compatible Use Zone
AWWA	American Water Works Association
BAH	Basic Allowance for Housing
BMP	Best Management Practice
BRAC	Base Realignment and Closure
BX	Base Exchange
CAA	Clean Air Act
CCCL	Coastal Construction Control Line
CEM	Continuous Emissions Monitoring
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
CWPA	Coastal Wetlands Protection Act
CZMA	Coastal Zone Management Act
dBA	A-Weighted Decibels
DoD	Department of Defense
DMP	Dormitory Master Plan
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EO	Executive Order
ERP	Environmental Restoration Program
EPCRA	Emergency Planning and Community Right-to-Know
ETS	Emission Tracking System
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
GIS	Geographic Information System
HAPs	Hazardous Air Pollutants
HRMA	Housing Requirements Market Analysis
lb	Pound(s)
LBP	Lead-Based Paint
L_{dn}	Day-Night Average Sound Levels

LIST OF ACRONYMS, ABBREVIATIONS, AND SYMBOLS (CONT'D)

$L_{eq(8)}$	Equivalent Sound Level for a Period of Eight Hours
$L_{eq(24)}$	Equivalent Sound Level for a Period of Twenty-Four Hours
mg/m^3	Milligrams per Cubic Meter
$\mu g/m^3$	Micrograms per Cubic Meter
mm	Millimeters
MMcf	Million Cubic Feet
MS4	Municipal Separate Storm Sewer Systems
NAAQS	National Ambient Air Quality Standards
NAF	Non Appropriated Funds
NCO	Non Commissioned Officer
NEI	National Emissions Inventory
NEPA	National Environmental Policy Act
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
O_3	Ozone
Pb	Lead
PCB	Polychlorinated Biphenyl
POL	Petrol, Oil, and Lubricants
$PM_{2.5}$	All Particles Less Than or Equal to 2.5 Micrometers in Diameter
PM_{10}	All Particles Less Than or Equal to 10 Micrometers in Diameter
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SARA	Superfund Amendments and Reauthorization Act
SEL	Sound Exposure Level
SER	Significant Emissions Rate
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SWDA	Safe Water Drinking Act
TCLP	Toxicity Characteristic Leaching Procedure
TDY	Temporary Duty
TSP	Total Suspended Particulate
U.S.	United States
USACE	U.S. Army Corps of Engineers
USAF	United States Air Force
USEPA	U.S. Environmental Protection Agency
UST	Underground Storage Tank
UTA	Unit Training Assembly
VOC	Volatile Organic Compound

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1. PURPOSE AND NEED FOR ACTION

1.1 PROPOSED ACTION

The Proposed Action is for the Air Force proponent (796 Civil Engineering Squadron/Civil Engineering Planning Office [796 CES/CEOP]) to implement a Dormitory Master Plan (DMP) that allows for expansion of dormitory facilities and infrastructure through the demolition and construction of new dormitory facilities at Eglin Air Force Base (AFB) (Figure 1-1). The DMP would outline the requirements for the demolition of older dormitory structures and the construction of new buildings and infrastructure at existing sites located on Eglin AFB Main Base (Figure 1-2). Under the Proposed Action, the DMP would involve the demolition of three existing dormitories and construction of six new dormitory buildings which would provide billeting for approximately 288 occupants. The DMP would also involve improvement of associated roads and construction of parking areas. This would be the first of three phases planned over the next 16 years. Chapter 2 provides more detailed information for the proposed project activities.

1.2 NEED FOR THE PROPOSED ACTION

A major U.S. Air Force (USAF) objective is to provide unaccompanied enlisted personnel with housing conducive to their proper rest, relaxation and personal well being. To ensure that enlisted personnel have these personal amenities, properly designed and furnished living quarters which provide a degree of individual privacy are essential to the successful accomplishment of the increasingly complicated and important jobs that these personnel perform. The USAF has recognized the importance of the retention of these highly trained airmen is essential to the overall USAF mission. Therefore, the USAF has established a DMP to provide a strategy to ensure that the personal needs of airmen are met.

Eglin has a requirement to provide 288 unaccompanied enlisted personnel units for airmen (U.S. Air Force, 2003). This requirement is based on the 2003 Housing Requirements Market Analysis (HRMA), which is a methodology to determine the ability of the private sector to potentially house military families under the supposition that the minimum number of military housing units will be the sole housing available in five years. Also, the dormitories proposed for demolition were constructed in 1954 and, based on the 2000 DMP, the ventilation and roofs of each are in need of significant repair (U.S. Air Force, 2001). The construction of the new dormitories would demonstrate compliance with the Air Force Dormitory Design Guide of providing 355 square feet per occupant. These construction activities would meet the USAF established criteria specified in the new uniform barracks construction standard, known as "Dorm -4-Airman Module" and construction of the new dormitory facilities would aid the USAF and Eglin AFB in their strategic goal of airmen retention. Demolition of three older dormitories (Dormitory 17, 19, and 20) during the various construction phases would create the adequate space necessary to construct the new dormitories. During this phase of the project, the Air Force does not anticipate impacts to any other buildings in the area. The site of the new dormitory construction is in close proximity to the fitness center, dining, Non-Commissioned Officer (NCO) Club, tennis courts and the Chapel. Also, construction of a new parking area (32,357 square feet) will take place, which will alleviate parking congestion in areas associated with Buildings, 1,11,13,22 and 862.

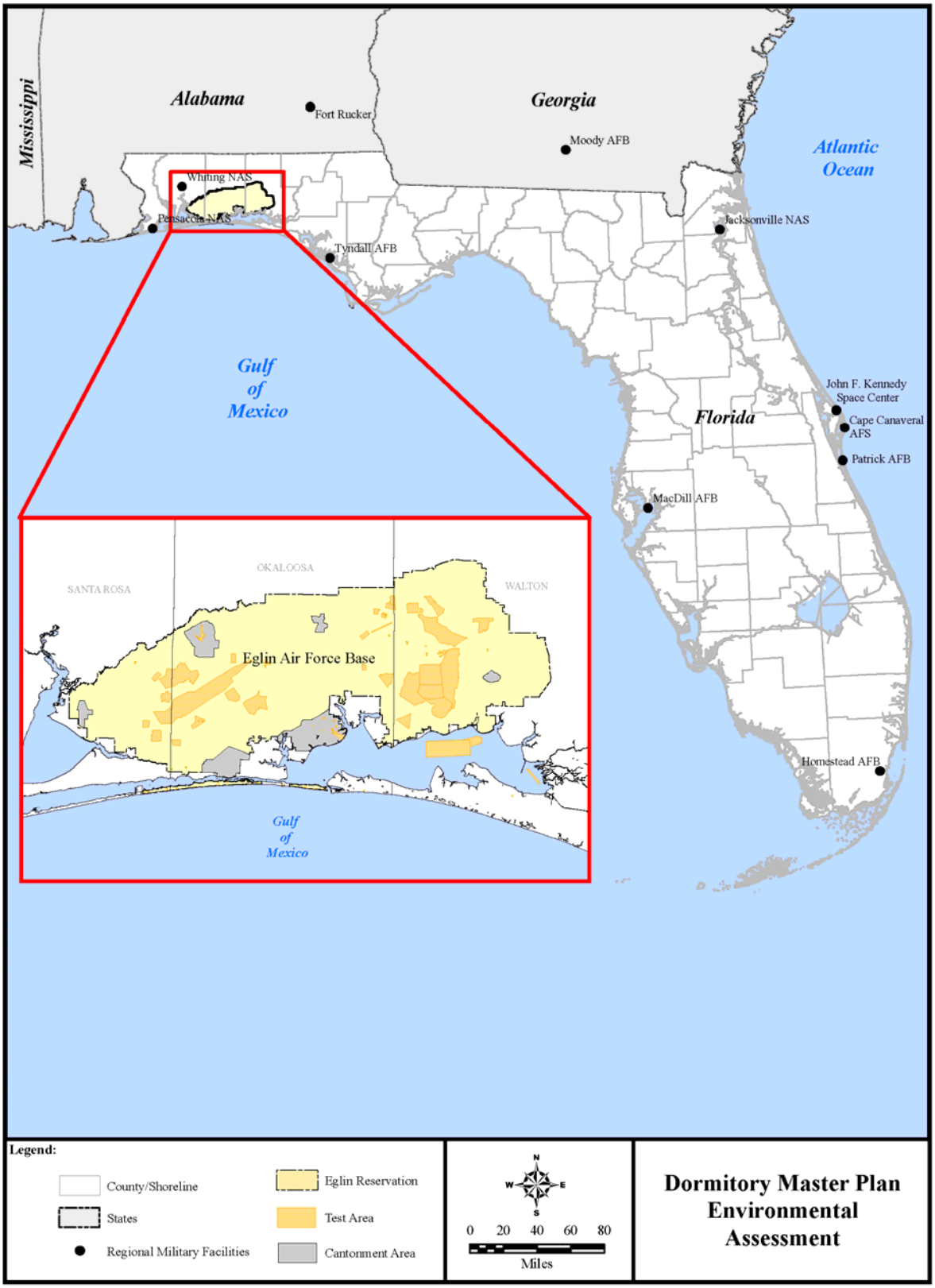

Figure 1-1. Location of Eglin AFB

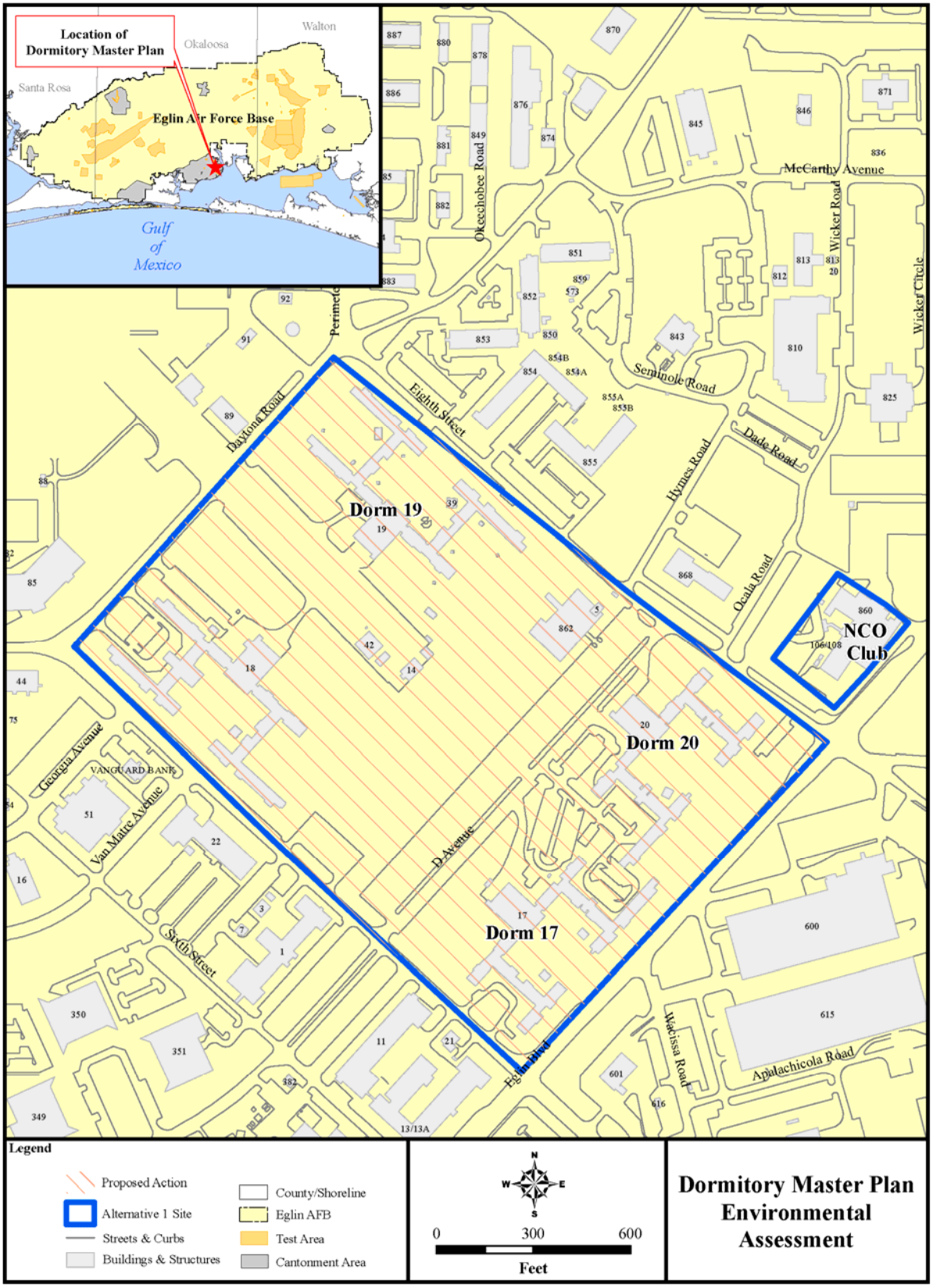

Figure 1-2. Location of Proposed Action

1.3 OBJECTIVE OF THE PROPOSED ACTION

The objective of the Proposed Action is to establish a master plan outlining a strategy for meeting unaccompanied housing needs of airmen through dormitory revitalization. The DMP would involve demolition of existing structures and construction of new dormitories and parking facilities.

By implementing the Proposed Action, Eglin AFB would be able to meet the growing housing demands of unaccompanied enlisted personnel and provide the quality living aesthetics necessary to develop the long term retention status of airmen that the USAF seeks.

1.4 RELATED ENVIRONMENTAL DOCUMENTATION

Table 1-1 provides a list of documents associated with projects that involve similar activities or actions within the vicinity of the Proposed Action.

Table 1-1. Related Environmental Documentation

Title	Control Number	Date	Decision
Eglin AFB Security Fences Final Environmental Assessment	RCS: 02-315	10 January 2003	Signed Finding of No Significant Impact (FONSI)
Eglin AFB Military Family Housing Privatization Environmental Impact Statement.	RCS: 03-791	10 March 2005	Currently under review

1.5 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

This document was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations of 1978, and 32 Code of Federal Regulations (CFR) Part 989. To initiate the environmental analysis, the proponent (796 CES/CEOP) submitted an Air Force (AF) Form 813, Request for Environmental Impact Analysis, to the 96 Civil Engineering Group, Environmental Analysis Section (96 CEG/CEVSP). The 96 CEG/CEVSP reviewed the AF Form 813 and determined that the Environmental Impact Analysis Process (EIAP) Working Group should address the Proposed Action.

1.5.1 Issues Eliminated from Detailed Analysis

1.5.1.1 Biological Resources

The expansion of living quarters has the potential to influence biological resources (plants and animals) and related habitats (foraging and nesting areas). However, no sensitive species or habitats have been documented on Eglin's AFB proper in the planned area of construction and demolition. In addition, the proposed site is developed and consists mainly of pavement and some areas of manicured grass. Thus, the Air Force does not anticipate adverse impacts to sensitive species and habitats and did not carry this issue forward for further analysis.

1.5.1.2 Safety

The Air Force and its developing contractors would perform all activities associated with the DMP in accordance with AF instructions and Occupational Safety and Health Administration (OSHA) safety standards. The Air Force does not anticipate safety issues associated with the Proposed Action.

1.5.1.3 Environmental Justice/Protection of Children

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, requires federal agencies to identify community issues of concern during the NEPA process, particularly those issues relating to decisions that may have an impact on low-income or minority populations. The construction and demolition activities associated with the DMP would not affect any low-income or minority populations.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, mandates that all federal agencies assign a high priority to addressing health and safety risks to children. The EO also requires that federal agencies coordinate research priorities on children's health and ensure that their standards take into account special risks to children. The Air Force does not expect construction and demolition activities associated with DMP to expose children to elevated health and safety risks as the proposed locations are not residential areas or utilized for recreation.

1.5.1.4 Land Use

The current land use designation for the proposed location is Unaccompanied Housing. The land use designation for this area would not change as a result of the Proposed Action. The Air Force does not anticipate potential land use conflicts and has not carried this issue forward for detailed analysis.

1.5.1.5 Cultural Resources

Cultural resources consist of prehistoric and historic districts, sites, structures, artifacts, and any other physical evidence of human activity considered important to a culture or community for scientific, traditional, religious, or other reasons. There are no historic structures or known archaeological sites within or adjacent to the proposed location. Consequently, the Air Force has not carried this issue forward for further analysis. However, project personnel must report any findings of historic artifacts during the construction activities to Eglin's 96 Civil Engineering Group, Cultural Resources Branch (96 CEG/CEVH) immediately and project personnel must halt work so that further site evaluation and protection measures are implemented.

1.5.1.6 Wetlands/Floodplains

EO 11990, *Protection of Wetlands* and EO 11988, *Floodplain Management*, require government agencies to analyze the effects of their action on wetlands and floodplains and avoid or mitigate these impacts when possible. There are no wetlands or floodplains within or adjacent to the proposed location. The Air Force therefore eliminated wetlands and floodplains from further detailed analysis.

1.5.1.7 Transportation

The Proposed Action would involve intermittent stoppages or slowing of traffic associated with movement of construction equipment. These stoppages are likely to last only a few minutes, and would not occur on major transportation corridors. As a result, the Air Force does not anticipate adverse impacts associated with transportation and has not carried the issue forward for detailed analysis.

1.5.2 Issues Studied in Detail

Preliminary analysis based on the scope of the Proposed Action identified the following potential environmental issues warranting detailed analysis: air quality, noise, soils, hazardous materials and waste, utilities, water quality, and socioeconomics.

1.6 APPLICABLE REGULATORY REQUIREMENTS AND COORDINATION

Due to the increase in impervious surface area, the Proposed Action would require the Air Force to obtain approved design and construction permits in accordance with Rule 62-25, FAC. (FDEP, 2002).

A National Pollutant Discharge Elimination System (NPDES) and Rule 62-621, Florida Administrative Code (FAC). Storm water Permit is required for construction projects greater than one acre in size. Since the project meets this stipulation this would require the Air Force to attain the permit to implement the Proposed Action.

Eglin is currently operating under a Title V air operation permit. This permit regulates all stationary air emission sources on the Eglin Military Complex. Proponent activities must comply with all the applicable requirements in the Title V permit.

The Air Force must perform the activities associated with the construction efforts in compliance with 62-550 FAC., 62-55 FAC., 62-604 FAC., American Water Works Association (AWWA) Standards, Ten State Standards, and Water Management District laws and permits. Also, the Air Force must obtain a permit for Constructing a Domestic Wastewater Collection/Transmission System (62-604 FAC) for the described construction activities per Florida Department of Environmental Protection (FDEP) requirements.

The Air Force or their designated representative must notify FDEP, as outlined in Chapter 62-257 FAC. Rule 62-257 Asbestos Program, of renovation and demolition activities that involve the wrecking or taking out of any load supporting structural member and/or removal of a defined amount of asbestos containing material. A copy of this notification will be available through the 96th Civil Engineering Group, Environmental Management Division (96 CEG/CEV). Additionally, all fluorescent tubes and Polychlorinated Biphenyl's (PCB) containing fixtures (such as ballasts) must be removed and appropriately disposed of prior to demolition.

The proponent or their designated representative is required to obtain a digging permit prior to project implementation. Within 30 days of a digging permit application, project personnel must

contact all adjacent utility easement holders so that they may identify the exact location of underground utility lines prior to digging.

The FDEP will review a consistency determination under the 96th Civil Engineering Group, Natural Resource Section (96 CEG/CEVSN). 96 CEG/CEVSN will prepare a Coastal Zone Management Act determination for submittal.

1.7 DOCUMENT ORGANIZATION

This Environmental Assessment (EA) follows the organization the CEQ regulations (40 CFR, Parts 1/500-1508) established. This document consists of the following chapters.

1.0 Purpose and Need for Action
2.0 Description of the Proposed Action and Alternatives
3.0 Affected Environment
4.0 Environmental Consequences
5.0 Plan, Permit, and Management Requirements
6.0 List of Preparers
7.0 List of Contacts
8.0 References and Applicable Documents
Appendix A – Air Quality
Appendix B – Wetland Protection Regulations

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2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

As required by federal regulation, this EA addresses the possible environmental impacts of the Proposed Action and No Action alternative. Section 2.5 provides a summary of the issues and potential impacts associated with the Proposed Action and the No Action alternative.

2.1 PROPOSED ACTION (6-DORM PLAN)

To meet the capacity requirements and improve infrastructure at Eglin AFB, the Proposed Action is to perform activities designated in the DMP:

- Demolition:
  - Dormitories 17, 19, and 20 (115,255 total square feet).
- Construction:
  - Six three-story facilities to accommodate 288 occupants (approximately 16,521 square feet each; 99,126 square feet total).
  - Two common buildings (approximately 3,168 square feet).
  - Parking lot to alleviate parking concerns (approximately 32, 357 square feet).

The Air force would design each new dormitory facility with reinforced concrete foundation and slab floors, masonry walls and roofs. Each facility would contain individual living rooms for each airman as well as bathroom and kitchen facilities. Additionally, the Air Force would incorporate storage and lounge areas as well as supporting facilities into the design and construction. The Air Force anticipates completion of all project-related activities within a 10-year time frame.

While it is unknown exactly where the Air Force would choose to locate the buildings and associated parking areas, the Air Force would construct the facilities within the general area as Figure 2-1 shows. Environmental impact analysis assumes that construction could take place anywhere within this general area and identifies environmental constraints and potential impacts to facilitate the design and planning process.

2.2 ALTERNATIVE 1 (12-DORM PLAN)

Under Alternative 1 the Air Force would construct 12 single-story facilities at 12,788 square feet each as opposed to 6 three-story facilities to accommodate 288 beds. Additionally, the "old" NCO Club (approximately 34,100 square feet) would be demolished. Alternative 1 is similar in all other respects to the Proposed Action.

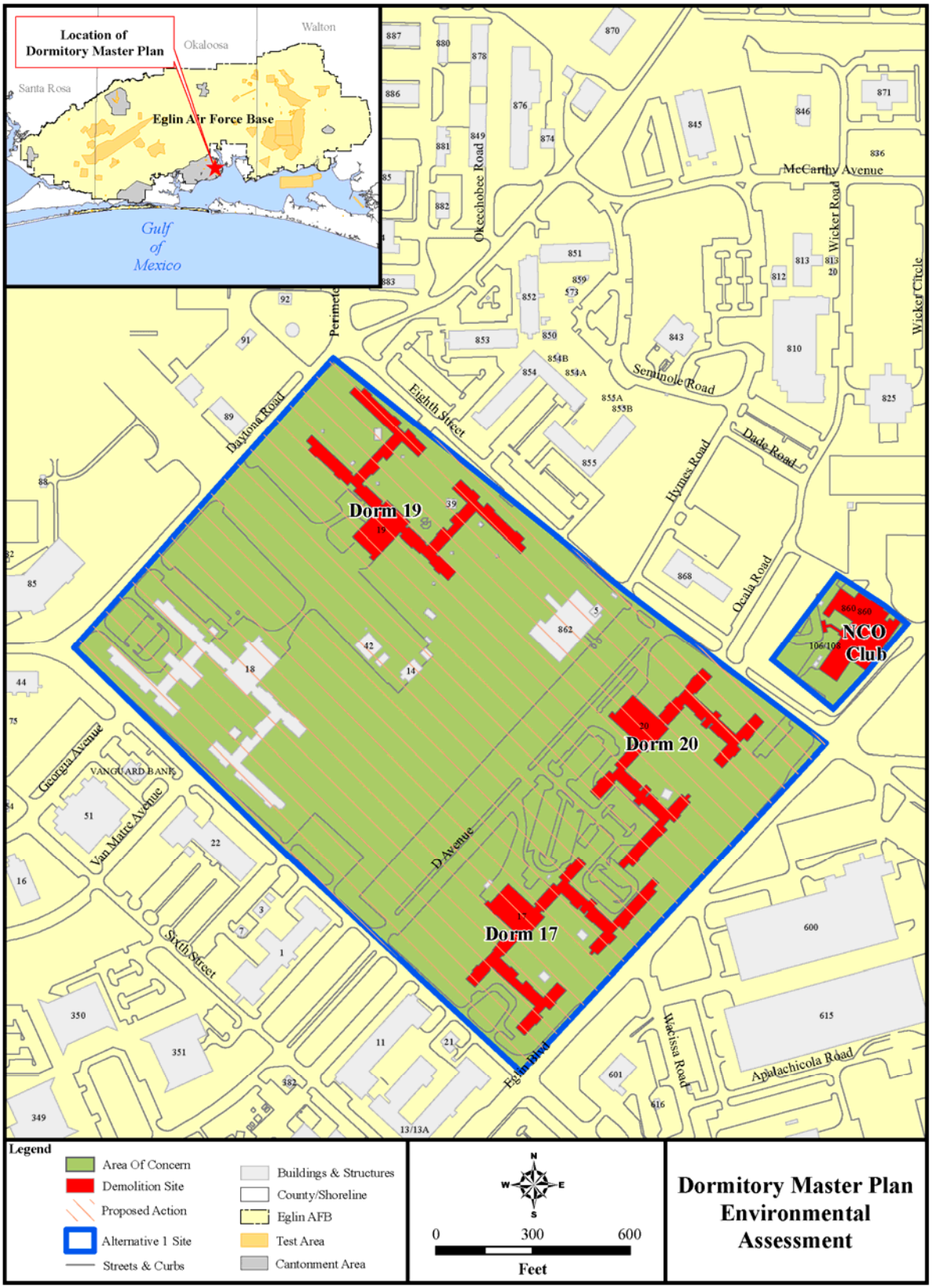

Figure 2-1. Proposed Project Activities

2.3 NO ACTION ALTERNATIVE

Under the No Action Alternative, Eglin AFB would continue to operate and maintain the existing dorm facilities and would not demolish existing dormitories or construct new facilities. Airmen would continue to be housed in marginal facilities that could result in lower morale and decreased retention rates. This would reduce the effectiveness of personnel and potentially affect the USAF mission.

2.4 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

The Air Force considered construction of 6 two-story dormitory facilities. However, the Air force did not carry this alternative forward since it was determined that the construction of three-story facilities was more cost effective.

Additionally, the Air Force evaluated remodeling the present dormitory configurations but this will not demonstrate compliance with the present Air Force Dormitory Design Guidance.

2.5 ALTERNATIVES COMPARISON

Table 2-1 provides a summary of the environmental impacts associated with the Proposed Action and action alternatives for comparison purposes.

Table 2-1. Action Alternative Environmental Impact Summary

Issue Area	Alternative		
	Proposed Action (6-Dorm Plan)	**Alternative 1 (12-Dorm Plan)**	**No Action**
Air Quality	Environmental analysis found that the Proposed Action would not result in an exceedance of threshold criterion for significant air quality impacts. Therefore, the Air Force does not anticipate adverse impacts to air quality.	The Alternative 1 action is similar to the Proposed Action with the exception that demolition of the NCO Club for parking would occur. The addition of this demolition would not result in an exceedance of threshold criterion for significant air quality impacts. Therefore, the Air Force does not anticipate adverse impacts to air quality under Alternative 1.	There would be no demolition or construction activities associated with the No Action Alternative. Consequently, the environment within and adjacent to the alternative locations would remain as baseline and there would be no impacts associated with air quality beyond the scope of normal conditions and influences at these locations.

Table 2-1. Action Alternative Environmental Impact Summary Cont'd

Issue Area	Alternative		
	Proposed Action (6-Dorm Plan)	**Alternative 1 (12-Dorm Plan)**	**No Action**
Noise	The noise levels associated with the Proposed Action would be short-term and intermittent. Potential noise levels associated with demolition and construction activities received at nearby locations would not negatively impact hearing of individuals.	The Alternative 1 action is identical to the Proposed Action with the exception of the demolition of the NCO Club. The noise impacts to individuals located near the site is comparable to the Proposed Action. The Air Force does not anticipate adverse impacts associated with noise.	There would be no demolition or construction activities associated with the No Action Alternative. Consequently, the environment within and adjacent to the alternative locations would remain as baseline and there would be no impacts associated with noise beyond the scope of normal conditions and influences at these locations.
Soils	The soils within the Proposed Action area are naturally prone to medium-risk erosion. Demolition activities could exacerbate soil erosion. As a result, the Air Force would implement erosion control measures so that a minimum of erosion would occur. These include (but are not limited to) silt screens, hay bales and grass seeding in appropriate situations to minimize that surface runoff transport of sediments. The Air Force does not anticipate adverse erosion impacts provided the Best Management Practices (BMPs) identified above are implemented.	Potential erosion impacts would be the same as those described under the Proposed Action. Consequently, erosion control BMPs would be required. The Air Force does not anticipate adverse impacts associated with soil erosion under Alternative 1.	There would be no demolition or construction activities associated with the No Action Alternative. Consequently, the environment within and adjacent to the alternative locations would remain as baseline and there would be no impacts associated with soils beyond the scope of normal conditions and influences at these locations.
Hazardous Materials/Waste	The Air Force does not anticipate short or long-term adverse impacts associated with storage tanks, asbestos, lead based paints (LBPs), and hazardous materials/waste management under the Proposed Action provided 96 CEG/CEVC reviews all construction project programming documents, designs, and contracts to ensure that requirements associated with these program areas are met.	Potential impacts associated with Alternative 1 are the same as the Proposed Action. Therefore, the Air Force does not anticipate short or long-term adverse impacts associated with storage tanks, asbestos, LBPs, and hazardous materials/waste management.	There would be no demolition or construction activities associated with the No Action Alternative. Consequently, the environment within and adjacent to the alternative locations would remain as baseline and there would be no impacts associated with hazardous materials and/or waste beyond the scope of normal conditions and influences at these locations.

Table 2-1. Action Alternative Environmental Impact Summary Cont'd

Issue Area	Alternative		
	Proposed Action (6-Dorm Plan)	**Alternative 1 (12-Dorm Plan)**	**No Action**
Infrastructure	The Proposed Action would not result in a net increase of residents; therefore the Air Force does not expect additional demands on the infrastructure service providers. Project personnel would be required to coordinate with utility providers to ensure all lines are identified to avoid conflicts or disruption of services. Thus, the Air Force does not expect adverse impacts to utility infrastructure under the Proposed Action.	Potential impacts associated with Alternative 1 are the same as the Proposed Action. Therefore, the Air Force does not expect adverse impacts to utility infrastructure under Alternative 1.	There would be no demolition or construction activities associated with the No Action Alternative. Consequently, the environment within and adjacent to the alternative locations would remain as baseline and there would be no impacts associated with infrastructure beyond the scope of normal conditions and influences at these locations.
Water Quality	Coordination between the Proponent, the Environmental Engineering Section (96 CEG/CEVCE), and the contractor would be required to obtain all stormwater permits and any necessary utility extension permits. All appropriate permits would be obtained prior to the commencement of any ground-disturbing activities. The Air Force does not expect any impacts to water quality under the Proposed Action, given the attainment of all required permits and the implementation of site-specific management actions.	Potential impacts and related requirements associated with Alternative 1 are the same as the Proposed Action. Therefore, the Air Force does not expect adverse impacts to water quality under Alternative 1.	There would be no demolition or construction activities associated with the No Action Alternative. Consequently, the environment within and adjacent to the alternative locations would remain as baseline and there would be no impacts associated with water quality beyond the scope of normal conditions and influences at these locations.

Table 2-1. Action Alternative Environmental Impact Summary Cont'd

Issue Area	Alternative		
	Proposed Action (6-Dorm Plan)	**Alternative 1 (12-Dorm Plan)**	**No Action**
Socioeconomics	Local communities in the Region of Influence (ROI) would benefit from the job opportunities associated with construction and demolition activities over the period of the project. The Air Force anticipates that the local and regional construction industry is capable of meeting the demand for labor associated with construction of the dormitories. The Air Force does not expect permanent relocation of workers (and their dependents) associated with the project over the 10-year construction time period.	Impacts under Alternative 1 would be the same as under the Proposed Action. Consequently, the Air Force does not anticipate adverse impacts associated with socioeconomics under Alternative 1.	There would be no demolition or construction activities associated with the No Action Alternative. Consequently, the environment within and adjacent to the alternative locations would remain as baseline. Airmen would continue to be housed in marginal facilities that may result in lower morale and decreased retention rates. This would reduce the effectiveness of personnel, potentially affecting the mission of the USAF at Eglin AFB.

2.6 PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS IN THE REGION OF INFLUENCE

Cumulative impacts to environmental resources result from incremental effects of proposed actions when combined with other past, present, and reasonably foreseeable future projects in the ROI of the project. Cumulative impacts can result from individually minor, but collectively substantial, actions undertaken over a period of time by various agencies (federal, state, and local) or individuals. In accordance with NEPA, a discussion of cumulative impacts resulting from projects that are proposed, under construction, or recently completed is required (as provided in Chapter 4). Short- and long-term planning efforts at Eglin AFB include this action as well as several others, as described below.

The relevant past and present actions associated with the impacts of the Proposed Action include existing base development and operations plus nearby land development and infrastructure improvements such as roads, pipelines, and power transmission lines. Additionally, the 2004 and 2005 hurricane seasons resulted in Florida's exposure to numerous hurricanes with Hurricane Ivan causing significant damage to the Florida panhandle in September 2004, affecting employment and housing markets throughout northwest Florida. Past and present actions in and around the action areas associated with these activities may have cumulative effects on the local environment.

On Eglin there are plans to use the Ben's Lake area and a portion of the Wherry housing area for future development of community services and hospital expansion. These plans are in the early concept phase and the Air Force only considers them as "desirables" for these areas.

The Okaloosa County Regional Airport is planning an expansion to its rental car lot. Although the action itself is dissimilar to the Proposed Action, the demolition and construction activities would result in impacts similar to the Proposed Action. Additionally, the Florida Department of Transportation is planning an upgrade to the intersection of State Road 85 and State Road 123 by constructing an overpass at the intersection and at the airport exit, and widening traffic lanes in the immediate vicinity of the intersection. Construction activities would be similar to those described under this Proposed Action. Work on both of these projects is anticipated to begin in late 2006 / early 2007.

Eglin AFB and the Veterans Administration are currently developing a proposal for a 16,200 square foot (0.372 acre) community-based outpatient clinic on a 10-acre parcel of land adjacent to the Eglin Regional Hospital. In addition to the facility parking lots and sidewalks, the Veterans Administration would build an access road and a stormwater retention pond. The total amount of land to be cleared for this development would be approximately 4.02 acres.

Eglin AFB is currently in the process of evaluating, through NEPA, plans to privatize military family housing. This process would involve the demolition of approximately 2,590 existing dwellings and construction of 2,015 new units in phases. Locations under consideration include Eglin Main Base, Poquito Bayou, and Camp Pinchot.

On 9 November 2005 Congress passed into law the Base Realignment and Closure (BRAC) Commission's recommendations for reshaping the Defense Department's infrastructure and force structure. By statute, the Defense Department now has until 15 September 2007 to begin closing and realigning the installations as called for in the report, with the process requiring completion by 15 September 2011 (DoD, 2005 website:http://www.defenselink.mil/news/Nov2005/20051109_3280.html). At Eglin AFB, the BRAC process will involve several actions:

- Relocation of the Joint Strike Fighter training program's instructor pilots, operations support personnel, maintenance instructors, maintenance technicians, and other associated personnel and equipment to Eglin AFB.
- Relocation of the Weapons and Armaments In-Service Engineering Research, Development & Acquisition, and Test and Evaluation program to Eglin AFB.
- Relocation of the Defense Threat Reduction Agency National Command Region conventional armament Research program to Eglin AFB.
- Relocation of the 7th Special Forces Group from Fort Bragg, N.C.
- Relocation of the Air & Space Sensors, Electronic Warfare & Electronics and Information Systems Test & Evaluation program from Eglin AFB to Edwards AFB, California.

At completion, the BRAC process would result in Eglin's net gain of 2,140 military and 78 civilian personnel (this does not include family members) (U.S. Air Force http://www.af.mil/brac/florida.asp#Anchor-Eglin-17209).

Within the context of the BRAC discussion above, the Proposed Action does not involve the addition of personnel, and the connection to BRAC activities is related to the potential for

construction activities associated with the BRAC actions to incrementally contribute to cumulative impacts within the ROI. It is unclear at this time how many buildings (to include support infrastructure and housing) the Air Force would need to construct as part of the BRAC activities. In terms of support infrastructure, these requirements are in the planning stages. With respect to housing, the Air Force is planning on conducting another HRMA in early 2006. As with previous HRMAs, this study would compare the number of military personnel needing homes with the number of suitable and affordable homes available to these personnel within a 60-minute commute of the installation. The military personnel needing homes would include but not be limited to the additional personnel. The comparison would lead to a conclusion that the existing number planned for privatized housing is either sufficient or deficient.

If the number of planned housing were sufficient, the bed-down of these personnel and missions at Eglin would likely occur within the civilian community and a minimal number of houses would need to be constructed. If it is deficient in that there are too few homes on-base to accommodate those who cannot find housing off-base (or if it is deficient in that there are too many homes), then the Air Force would determine how best to fulfill its responsibilities under NEPA. The Air Force would assess the incremental impacts of these additional personnel, whether housed on- or off-base, in a subsequent NEPA document. Assuming, however, that the HRMA finds a deficit in off-base housing for military personnel (whether as a direct result of BRAC or of the civilian housing market), the impacts of additional construction are likely to be similar in type but greater in intensity than those herein described where the degree of the increase in intensity is directly proportional to the additional homes required. (In other words, the addition of 10 new homes would have few impacts on any media, while the addition of 1,000 new homes would greatly impact all media).

3. AFFECTED ENVIRONMENT

The affected environment section of this report describes the potential impacts the Proposed Action could have on the location and receptors. This chapter is organized by the following sections: Air Quality, Noise, Geology/Soils, Hazardous Materials/Waste, Utilities, Water Quality, and Socioeconomics.

3.1 AIR QUALITY

Identifying the affected area for an air quality assessment requires knowledge of air emission sources, pollutant types, emissions rates and release parameters, proximity to other emissions sources, and local as well as regional meteorological conditions.

3.1.1 Definition of the Resource

The type and amount of pollutants emitted into the atmosphere determines air quality, the size and topography of the air basin, and the prevailing meteorological conditions. The levels of pollutants are generally expressed on a concentration basis in units of part per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). The air quality analysis centers on Okaloosa County since the proposed activities would occur specifically in this county.

Pollutant concentrations are compared to the National Ambient Air Quality Standards (NAAQS) and state air quality standards to determine potential effects. These standards represent the maximum allowable atmospheric concentration that may occur and still protect public health and welfare with a reasonable margin of safety. The NAAQS identify maximum allowable concentrations for the following criteria pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter equal to or less than 10 microns in diameter (PM_{10}), and lead (Pb) (USEPA, 2004). In the case of SO_2, the state of Florida has established more stringent standards (FAC, 1996).

Based on measured ambient air pollutant concentrations, the U.S. Environmental Protection Agency (USEPA) designates whether areas of the U.S. are meeting the NAAQS or not. Those areas demonstrating compliance with the NAAQS are considered "attainment" areas, while those that are not are known as "non-attainment." Those areas that cannot be classified on the basis of available information for a particular pollutant are "unclassifiable" and are treated as attainment until proven otherwise.

3.1.2 Existing Conditions

3.1.2.1 Regional Air Quality

The FDEP operates air quality monitors in various counties throughout the state (FDEP, 2004). Although there are no ambient monitors in Okaloosa County, there are monitors in neighboring Santa Rosa and Bay Counties. USEPA has classified all counties within the state of Florida as "attainment" for criteria pollutants per FDEP.

In addition, the Clean Air Act (CAA) establishes a national goal of preventing degradation or impairment in attainment areas. As part of the Prevention of Significant Deterioration Program (PSD), areas were designated as Class I, II, or III. National parks and wilderness areas are designated by Congress as Class I areas, where any appreciable deterioration in air quality is considered significant. Class II areas are those where moderate, well-controlled industrial growth could be permitted. Eglin AFB is in a Class II area. Class III areas allow for greater industrial development. Currently there are no designated Class III areas in the U.S.

Under the PSD program, before construction of a new major source of air emissions, the source's emissions are estimated to determine if significant emissions rate (SER) thresholds are exceeded. If a source is to be modified, then the Air Force evaluates and compares its emissions to the SER thresholds to determine if modifications are significant. The SER thresholds are used to ascertain whether pollution controls or air quality dispersion modeling are necessary for the construction project (USEPA, 1990). It should be noted that mobile sources as well as those associated with construction activities are excluded from the PSD applicability process.

3.1.2.2 Baseline Emissions

An air emissions inventory qualitatively and quantitatively describes the amount of emissions from a facility or within an area. Emissions inventories are designed to locate pollution sources, define the type and size of sources, characterize emissions from each source, and estimate total mass emissions generated over a period of time, normally a year. These annual rates are typically represented in tons per year. Inventory data establish relative contributions to air pollution concerns by classifying sources and determining the adequacy as well as necessity of air regulations. Accurate inventories are imperative for development of appropriate air quality regulatory policy. These inventories include stationary sources and encompass equipment/processes such as boilers, electric generators, surface coating and fuels handling operations. Mobile sources include motor vehicles, aerospace ground support equipment and aircraft operations.

For comparison purposes, the USEPA 1999 National Emissions Inventory (NEI) data for Okaloosa County is presented in Table 3-1 (the 2002 USEPA Inventory was not utilized since it is still in draft form). The county data includes emissions data from point sources (a name and location identified stationary source), area sources (a point source whose emissions are too small to track individually, such as a home or small office building; or a diffuse stationary source, such as wildfires or agricultural tilling), and mobile sources (any kind of vehicle or equipment with gasoline or diesel engine, airplane, or ship).

In order to evaluate the air emissions and their impact to the overall ROI, the emissions associated with the project activities to the total emissions on a pollutant-by-pollutant basis for the ROI's 1999 NEI data. Potential impacts to air quality are identified as the total emissions of any pollutant that equals 10 percent or more of the ROI's emissions for that specific pollutant (Shipley Associates, 1995). The 10 percent criteria approach is used in the General Conformity Rule as an indicator for impact analysis for non-attainment and maintenance areas and, although the entire state of Florida is attainment, the General Conformity Rule's impact analysis was utilized to provide a consistent approach to evaluating the impact of construction and aircraft emissions. To provide a more conservative evaluation the impacts screening in this analysis

used a more restrictive criteria than required in the General Conformity Rule. Rather than comparing emissions from construction activities to regional inventories (as required in the General Conformity Rule), the Air Force compared emissions to the individual county (Okaloosa) potentially impacted, which is a smaller area. Emissions associated with construction and mobile source activities are the main issues the Proposed Action generates and are the focus of the air analysis in Chapter 4.

Table 3-1. Baseline Emissions Inventory for Okaloosa County (tons/year)

Source Type	NO_x	CO	PM_{10}	VOC	SO_2
Point source	1,458	50,296	5,502	8,718	16
Non-road	1,072	15,033	144	1,969	115
On-road	5,061	40,563	146	4,114	192
Area source	1,196	46,093	10,865	5,385	345
Totals	***8,787***	***151,985***	***16,657***	***20,186***	***668***

Source: USEPA 1999 NEI Data

CO = Carbon Monoxide; PM_{10} – All particles less than or equal to 10 micrometers in diameter; NO_x = Nitrogen Oxides; NR = Not reported; SO_2 = Sulfur Dioxide; VOC = volatile organic compound

3.2 NOISE

This section discusses noise sources and ambient noise levels within the proposed location. In the project region, ambient noise (the surrounding background noise) currently exists as a result of vehicle transportation and other human activities. Vehicles and aircraft operating in the vicinity are the primary contributors to the ambient noise in the project location.

3.2.1 Definition of the Resource

Noise, as addressed in this document, is sound that injures, annoys, interrupts, or interferes with normal activities or otherwise diminishes the quality of the environment. It may be intermittent or continuous, steady or impulsive. It may be stationary or transient. Stationary sources are normally related to specific land uses (e.g., industrial plants or some military training activities). Transient noise sources move through the environment, either along relatively established paths (e.g., highways, railroads, and aircraft flying a specific flight track), or randomly (e.g., military training conducted in a training area). There is wide diversity in responses to noise that vary not only according to the type of noise and the characteristics of the sound source, but also according to the sensitivity and expectations of the receptor, the time of day, and the distance between the noise source (e.g., an aircraft) and the receptor (e.g., a person or animal).

3.2.2 Existing Conditions

3.2.2.1 Noise Measurements and Thresholds

Based on numerous sociological surveys and recommendations of Federal interagency councils, the most common benchmark referred to is a Day-Night Average Sound Level (L_{dn}) of 65 A-Weighted Decibels (dBA). This annual average threshold is often used to determine residential land use compatibility around airports, highways, or other transportation corridors. Two other average noise levels are also useful:

- The USEPA identified a L_{dn} of 55 dBA as a level "requisite to protect the public health and welfare with an adequate margin of safety" (USEPA, 1974). Noise may be heard, but there is no risk to public health or welfare.
- A L_{dn} of 75 dBA is a threshold above which effects other than annoyance may occur. It is 10 to 15 dBA below levels at which hearing damage is a known risk (OSHA, 1983). However, it is also a level above which some adverse health effects cannot be categorically discounted.

Public annoyance is the most common impact associated with exposure to elevated noise levels. When subjected to L_{dn} of 65 dBA, approximately 12 percent of persons so exposed will be "highly annoyed" by the noise. At levels below 55 dBA, the percentage of annoyance is correspondingly lower (less than 3 percent). The percentage of people annoyed by noise never drops to zero (some people are always annoyed), but at levels below 55 dBA, it is reduced enough to be essentially negligible (Finegold et al., 1994).

The L_{dn} sums individual noise events and determines the average of the resulting level over a specified length of time, usually a 24-hour period. Thus, it is a composite metric representing the maximum noise levels, the duration of the events, and the number of events that occur. However, this metric also considers the time of day during which noise events occur. This metric adds 10 decibels to those events that occur between 10:00 P.M. and 7:00 A.M. to account for the increased intrusiveness of noise events that occur at night when ambient noise levels are normally lower than during the daytime.

3.3 GEOLOGY/SOILS

3.3.1 Geology

The geological formations of Eglin AFB are in a general order of sequence, from the youngest top layers to the oldest lower layers. There are primarily two formations: the Pleistocene/Holocene Terrace and Stream sediments and the Pleistocene Citronelle Formation. These are not only the top formations; they are also the youngest. The Dormitory Master Plan would not directly affect the Miocene-Pliocene Coarse Clastics, the Miocene Alum Bluff Group and the Pensacola Clay formation, which are older formations underlying these.

The Pleistocene/Holocene Terrace and Stream deposits underlie soils and sediments in the vicinity of the proposed Dormitory Master Plan. Characteristic of these deposits are undifferentiated alluvial, fluvial, floodplain and coastal sediments. Quartz (siliclastics), shells (aragonite) and freshwater carbonates are abundant. Some areas of shell deposits are interspersed with clay lenses that streams and rivers in the area deposited. This formation is the result of deltaic action resulting in deposits of unconsolidated to poorly consolidated clayey sands and gravel. Kaolinite is present as massive lenses. Organic matter, such as plant and fossil remains are abundant but lack a marine origin. Hardpan, a dark, rusty-brown cemented limestone, is present in the Citronelle Formation.

3.3.2 Soils

Depending on their properties and the topography in which they occur, soils have varying degrees of susceptibility to erosion. Soil disturbance associated with construction and

demolition may potentially result in erosion and the transport of eroded soils into nearby drainages. Portions of the affected environment that have been built up, such as areas of existing housing, are characterized by impervious surfaces (i.e., areas that water cannot seep into, such as roads, driveways, and structures). During rainfall events, water moves across impervious surfaces into storm water drains and holding ponds, and is ultimately transported into local water bodies. The Clean Water Act prohibits the deposition of sediments into surface waters. Sediments affect water clarity, decrease oxygen levels in water, and transport pollutants.

The Proposed Action site is located on previously developed areas of Eglin AFB Main Base, where the predominant soil type is classified as Lakeland Series. The southeastern edge along Eglin Boulevard, however, has soil that is classified as the Foxworth Series. Figure 3-1 shows the soil types within the project area.

Lakeland Series Soil

The Lakeland series consists of very deep, excessively drained, rapidly permeable, strongly acidic soils that formed in thick beds of eolian, fluvial, or marine sands on broad, nearly level to very steep uplands in the Lower Coastal Plain. Depth to seasonal water table is more than 80 inches. Sand or fine sand comprises the majority of the entire series; at 10 to 40 inches below the ground, silt and clay make up 5 to 10 percent of the soil. Permeability is moderate to very rapid (6.0 to 20 inches per hour) for Lakeland soils (U.S. Department of Agriculture, 1995). Slopes are primarily 0 to 12 percent. The Lakeland soils are easily eroded because they lack cohesiveness and have limited water-holding capacity. The establishment and maintenance of vegetation is difficult because the soils are too sandy or are on steep slopes (U.S. Air Force, 1996).

Foxworth Series Soil

The Foxworth series consists of very deep soils that formed in sandy marine or from eolian sediments. These soils are on broad, nearly level, and gently sloping uplands and steep side slopes that can lead to drainage tributaries. Slopes range from 0 to 8 percent but most commonly are 0 to 5 percent. Runoff is very slow and permeability is rapid or very rapid. The water table fluctuates between depths of 48 to 72 inches below the soil surface for 1 to 3 months during most of the year and 30 to 48 inches for less than 30 cumulative days in some years. Thickness of sand exceeds 80 inches. Reaction ranges from very strongly acid to slightly acid throughout. Texture is sand or fine sand and silt, plus clay (U.S. Air Force, 1996).

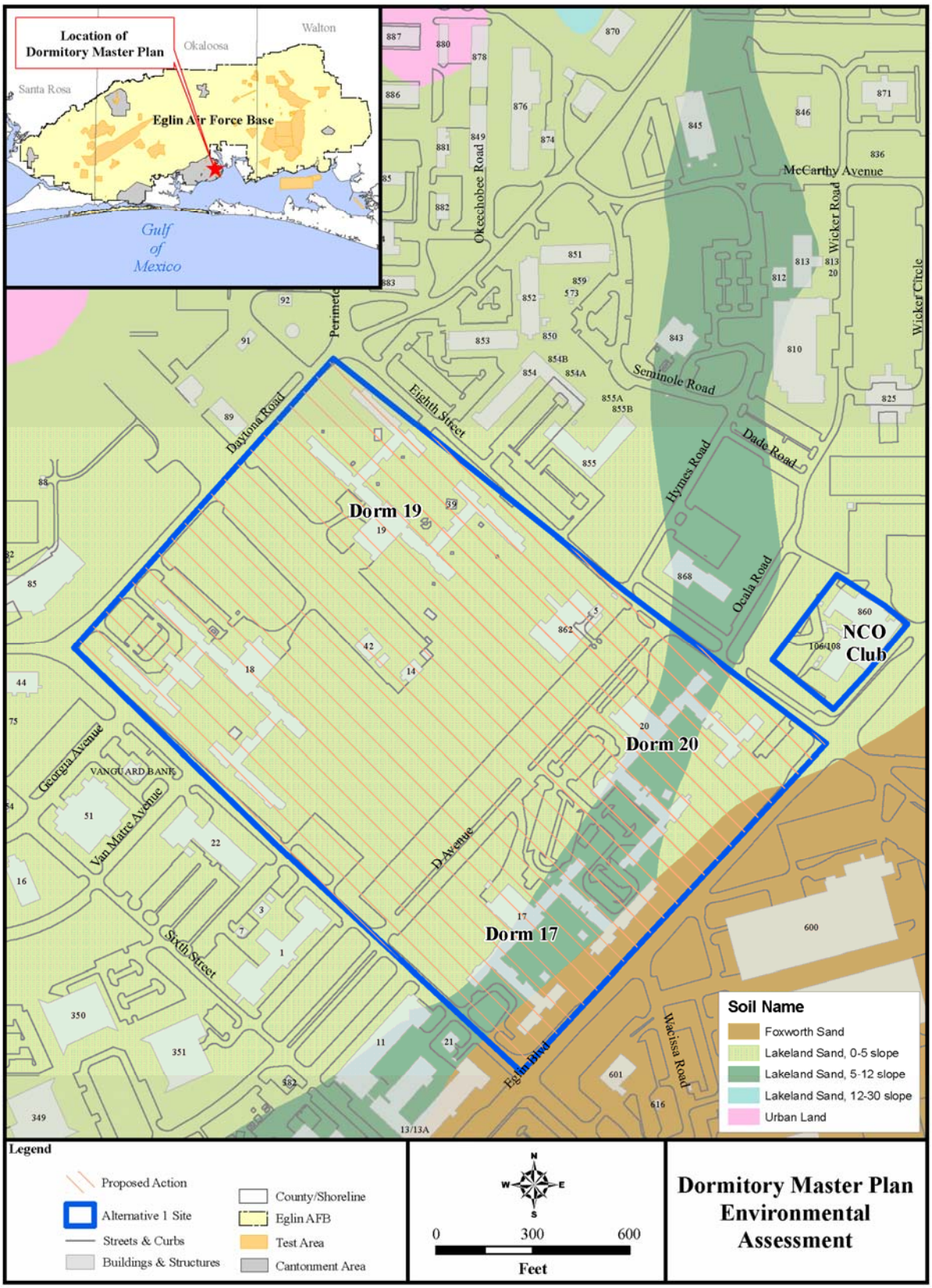

Figure 3-1. Soil Types

3.4 HAZARDOUS MATERIALS/WASTE

3.4.1 Definition of the Resource

For the purposes of this discussion, *hazardous materials* and *hazardous substances* are defined under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. 9601 (4) as:

(a) Any substance designated pursuant to Section 311(b)(2)(A) of the Federal Water Pollution Control Act.

(b) Any element, compound, mixture solution, or substance designated pursuant to Section 102 of this Act.

(c) Any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress).

(d) Any toxic pollutant listed under Section 307 (a) of the Federal Water Pollution Control Act.

(e) Any hazardous air pollutant listed under Section 112 of the CAA.

(f) Any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to Section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (a) through (f) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, synthetic gas usable for fuel, or mixtures of natural gas and synthetic gas.

Hazardous materials are subject to and managed according to both Federal and Florida regulations. Federal laws regarding management of hazardous materials include the Emergency Planning and Community Right-to-Know Act (EPCRA) (42 U.S.C. 1001 et seq.) as part of the Superfund Amendments and Reauthorization Act (SARA) Title III (10 U.S.C. Sections 2701 et seq.). Management of hazardous materials in the workplace is regulated under OSHA regulations at 29 CFR 1910.1200.

Under Federal law, the transportation of hazardous materials is regulated in accordance with the Hazardous Materials Transportation Act, 49 U.S.C. 5101 (replaced 1801) et seq. For the transportation of hazardous materials, Florida has adopted Federal regulations that implement the Hazardous Materials Transportation Act, found at 49 CFR 178.
State laws pertaining to hazardous materials management include the Florida Right-to-Know Act, Florida Statutes Title 17, Chapter 252, the Hazardous Waste section of the FDEP and the Florida Department of Transportation (FDOT) Motor Carrier Compliance Department that implements 49 CFR 178 under Florida statute annotated Title 29 Section 403.721.

The following issue items were determined to be relevant for this assessment and are addressed in this section.

- *Environmental Restoration Program Sites (ERP)* – The Air Force uses ERP to identify, characterize, and remediate past environmental contamination on Air Force installations.
- *Storage Tanks* – 96 CEG/CEVC manages underground storage tanks (UST) and aboveground storage tanks (AST) containing hazardous materials.
- *Asbestos-Containing Building Materials* – Renovation or demolition of buildings with Asbestos Containing Building Materials (ACBMs) has a potential for releasing asbestos fibers into the air. Asbestos fibers could be released due to disturbance or damage from various building materials such as pipe and boiler insulation, acoustical ceilings, sprayed-on fireproofing, and other material used for soundproofing or insulation.
- *Lead-Based Paint* – LBP is defined as paint on surfaces that contains lead in excess of 1.0 milligram per square centimeter as measured by an X-ray fluorescence spectrum analyzer, or 0.5 percent lead by weight. Waste containing levels of lead exceeding a maximum concentration of 5.0 milligrams per liter, as determined using the USEPA Toxic Characteristic Leaching Procedure, is defined as Resource Conservation and Recovery Act (RCRA)-regulated hazardous waste under 40 CFR 261, as adopted by FDEP, FAC. 62-730.030, and requires specific handling, storage, and disposal requirements.
- *Hazardous Materials Management* – Hazardous materials, listed under CERCLA and EPCRA, are defined as any substance that may present substantial danger to public health, welfare, or the environment due to quantity, concentration, or physical, chemical, or infectious characteristics. Examples of hazardous materials include petroleum products/fuels, natural gas, synthetic gas, and toxic chemicals. Hazardous wastes, listed under RCRA, are defined as any solid, liquid, or contained gaseous or semisolid waste, or any combination of wastes that pose a substantive present or potential hazard to human health or the environment. In addition, hazardous wastes must meet either a hazardous characteristic of ignitability, corrosivity, toxicity, or reactivity under 40 CFR 261, or be listed as a waste under 40 CFR 263.

3.4.2 Existing Conditions

3.4.2.1 Environmental Restoration Program Sites

Regulations affecting ERP sites and management protocols at Eglin AFB are detailed in the Environmental Restoration Program Management Action Plan (U.S. Air Force, 2002). While there are no ERP sites located within the housing areas, there are several ERP sites located within close proximity (see Figure 3-2). However, based on environmental investigations conducted, none of the sites are likely to cause, or contribute to, a release of any hazardous substance or any petroleum product on the proposed project area.

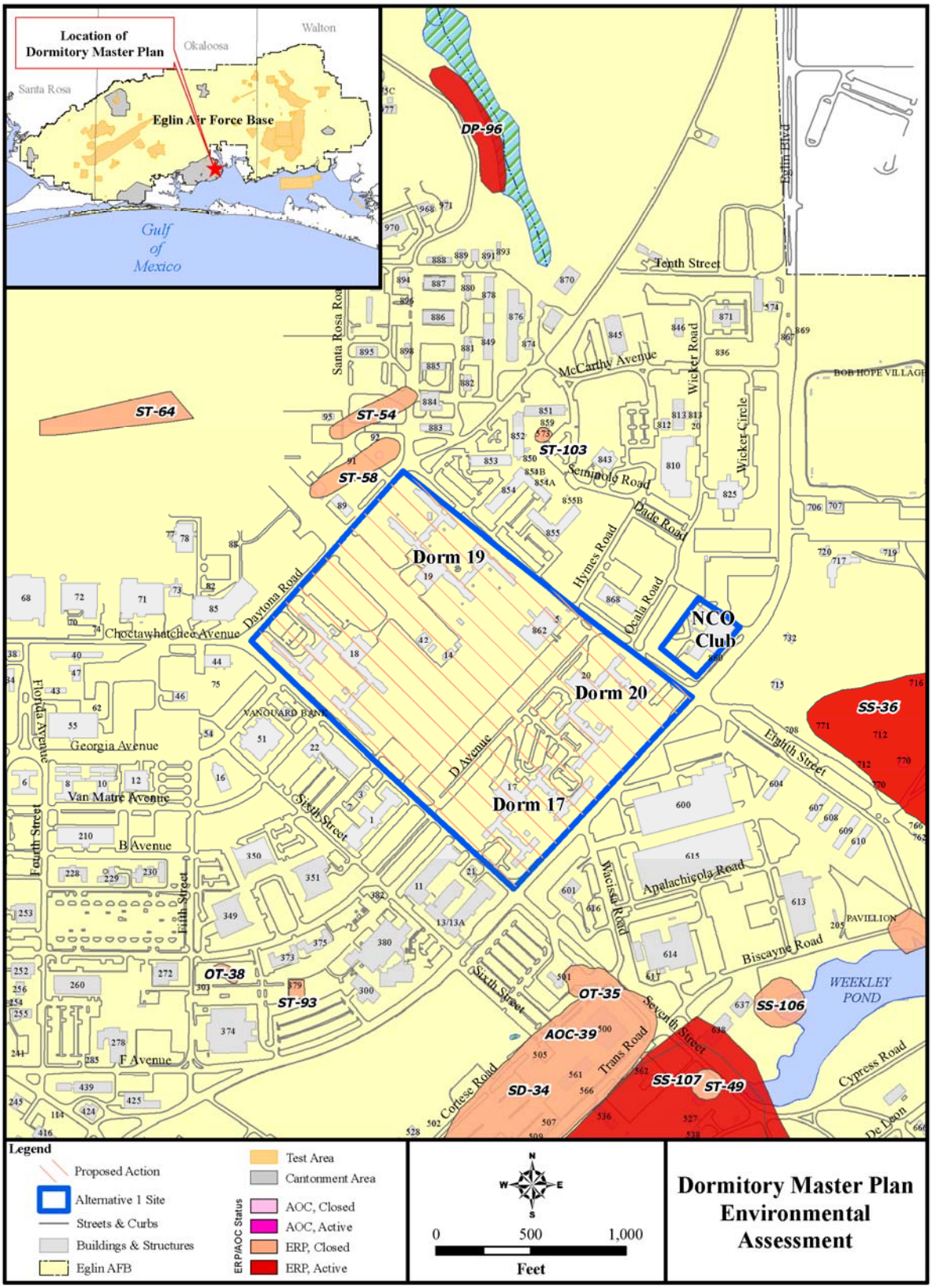

Figure 3-2. ERP Sites

3.4.2.2 Storage Tanks

96 CEG/CEVC implements and manages Storage Tank Management at Eglin AFB for USTs and ASTs that contain hazardous materials. Base personnel implement the *Oil and Hazardous Substance Pollution Contingency Plan* (96 CEG Plan 32-6) that establishes responsibilities and provides procedures to base personnel in responding to and remediation of hazardous substance releases at Eglin AFB (U.S. Air Force, 1997).

- FDEP regulates ASTs with a capacity of 550 gallons or more under 62-762 FAC. Additionally, ASTs are subject to provisions under the Clean Water Act in 40 CFR 112. The operation and construction of ASTs are also subject to National Fire Protection Association fire codes and the Uniform Fire Code.
- Underground Storage Tanks (USTs) are subject to federal regulations under RCRA, particularly USEPA Technical Standards and Corrective Action Requirements for Owners and Operators of USTs (40 CFR 280), as mandated under the federal 1984 Hazardous and Solid Waste Amendments, Subtitle I, to RCRA. Eglin USTs are also subject to the applicable provisions of the Clean Water Act (USEPA Regulations on Oil Pollution Prevention [40 CFR 112]). Under 62-761 FAC, a UST system is defined as an underground tank and all integral piping and release detection systems associated with tanks with a capacity of 110 gallons or more that store regulated substances. The intent of Chapter 62-761 is to provide UST removal and disposal requirements, as well as requirements for UST system installation, construction, registration, and maintenance.

The Spill Prevention Control and Countermeasure Plan is followed to prevent/reduce the release of hazardous substances from storage tanks and to properly manage new and existing storage tanks. Table 3-2 lists the several ASTs and USTs that contain hazardous materials located within the Proposed Action location.

Table 3-2. Storage Tanks Located within Project Area

Type of Tank	Bldg #	Tank ID	Tank Location	Contents	Tank Status	Usage	Size (gal)
AST	17	17-1	Dining Hall	Diesel	Active	Gen <550	100
UST	17	17-2	Dining Hall	Diesel	Removed	Heat	10000
UST	18	18-1	Dining Hall	Diesel	Active	Heat	10000
AST	18	18-2	Dormitory	Diesel	Active	Emergency Generator	79
UST	19	19-1	Dormitory	Diesel	Removed	Heat	10000
AST	19	19-2	RG-20, Site 8	Diesel	Active	Vehicular	120
AST	19	19-3	RG-20, Site 8	Unleaded	Active	Vehicular	120
UST	20	20-1	Dormitory	Diesel	Inactive	Heat	10000
UST	860	860-1	NCO Open Mess	Diesel	Removed	Heat	6000
AST	862	862-1	The Breeze Dining Facility	Used Cooking Oil	Active	Cooking Oil	260

Source: Eglin AFB Storage Tank Management Inventory Database, September 2005
AST = Aboveground Storage Tank; UST = Underground Storage Tank

3.4.2.3 Asbestos

Forty-five (45) percent of the buildings on Eglin are known to contain friable ACBM and 86 percent are known to contain non-friable ACBM (Kauffman, 2005). Eglin AFB implements the 2004 Asbestos Program Management Contingency Plan (96 CEG Plan 32-3) in conjunction with Federal and state laws to manage ACBM. The Plan provides policies and procedures used in controlling the health hazards ACBM creates and for the abatement of ACBM under controlled conditions. The Plan also addresses potential health hazards to building occupants and maintenance personnel. Incorporated in the plan are the responsibilities of all individuals and organizations that support ACBM abatement activities. 96 CEG/CEVC is responsible for implementing, updating and coordinating the plan. 96 CEG/CEVC receives ACBM identification and sampling support from the Bioenvironmental Engineer and abatement support from the Civil Engineer In-House Abatement Team. Additionally, an on-call qualified contractor is retained for abatement that is beyond the capabilities of the in-house asbestos abatement team.

Table 3-3 shows the buildings in the project area that have been surveyed for ACBM and whether they have undergone abatement for the asbestos. However, this survey information does not include destructive sampling and therefore buildings that are scheduled for demolition should be re-inspected.

Table 3-3. Project-Related Buildings Asbestos Data

Building Number	Asbestos Presence	Samples Taken	Asbestos Abatement
14	Insulation, Pipe Wrap, and Mud Joint Compound	1996, 1997, 1998	None
17	Floor tiles w/mastic, carpet mastic, wall mastic, basecove w/mastic, drywall, joint compound, pipe insulation, fire doors	1994, 1996, 1998	1998, 2002
19	Floor tiles w/mastic, carpet mastic, insulation, textured ceiling, pipe insulation, pipe fittings	1997	1992, 1997, 2000, 2001, 2003
20	Floor tiles w/mastic, pipe insulation, pipe fittings	1996	2000, 2003
42	Floor tiles w/mastic, wall plaster, ceiling tiles, spray insulation	1989	1991
106/108	Floor tiles w/mastic, ceiling tile, hard plaster	1989	None
860	Floor tiles w/mastic, breeching, ceiling tile, hard plaster, leveling compound	1989, 1998	None

Source: Kauffman, 2005

3.4.2.4 Lead-Based Paint

The LBP Poisoning Prevention Act (42 U.S.C. 4821 et seq.), as amended by the Residential Lead-Based Paint Hazard Reduction Act of 1992 (P.L. 102-550, also known as Title X), requires identification and elimination of LBP hazards in Federal housing. In 1993 OSHA, under 29 CFR 1926, extended the permissible exposure limit for general industrial workers to 50 micrograms per cubic centimeter of air, to include workers in the construction field.

To ensure identification of any LBP threat to human health and the environment, Air Force policy requires that a LBP survey of high-priority facilities be conducted. High-priority facilities include housing, transient lodging facilities, schools, day care facilities, playgrounds, and other

facilities that children under the age of seven frequent. The *Lead-Based Paint Management Plan* (96 CEG Plan 32-4), completed in October 2000, addresses all Federal, state, and Air Force guidance, assigns roles and responsibilities, and describes compliance methods. The 96th Civil Engineering Squadron (96 CES) executes the Plan with 96 CEG/CEVC currently managing analysis and database management.

Based on communication from Eglin AFB, data is unavailable to support that LBP is present (Kauffman, 2005). LBP activities were discontinued at Eglin in 1978 and Buildings 17, 19, and 20 were constructed in 1954 while building 860 was completed in 1955.

3.4.2.5 Hazardous Material Management

Routine household hazardous wastes are generated in Eglin AFB housing areas, including batteries, fluorescent bulbs, pesticides, paint/paint cans, and pool chemicals. "Do-it-yourself" vehicle maintenance activities may also generate used oil or other lubricants. Eglin provides guidance and information on proper disposal of household hazardous waste and encourage residents to take their wastes to on-base/off-base collection centers for recycling and disposal. Currently, disposal of household hazardous waste, except used oil, is allowed with other household trash. Residents may dispose of used oil, filters and greases at the Eglin AFB Automotive Skills Development Center. Other residential hazardous wastes may be turned in at the South County Road Department, located on Ready Avenue in Fort Walton Beach. Okaloosa County's Mobile Household Hazardous Waste Collection Center also provides a convenient, on-site service to residents for the disposal of hazardous household wastes.

3.5 INFRASTRUCTURE

3.5.1 Definition of the Resource

This section discusses utilities serving the existing and proposed project areas, which include water supply, wastewater treatment, electricity and natural gas. Additionally, this section identifies utility providers and the major attributes of utility systems in these areas such as existing capacity and existing demand.

3.5.2 Existing Conditions

3.5.2.1 Potable Water

The FDEP regulates potable water supply systems in Florida. The Florida Safe Drinking Water Act and FDEP rules have incorporated Federal primary and secondary drinking water standards as identified in the Safe Drinking Water Act (42 U.S.C. 201, 300 et seq.) and the National Primary Drinking Water Regulations. FDEP classifies Public water supply systems as a system that has at least 15 service connections or regularly serves 25 individuals daily at least 60 days of the year. The Florida Water Resources Act (Florida Statutes, Title 28 Section 373) requires a comprehensive approach to water management based on regional hydrological boundaries. Eglin's water supply systems service areas on Eglin AFB Main Base.

As Figure 3-3 indicates, there are main potable water lines that surround and traverse the proposed project location supplying water to the existing dormitories.

3.5.2.2 Wastewater Treatment

796 CES manages, operates, and maintains Eglin's wastewater treatment plants. 96 CEG/CEVCE, manages wastewater treatment facility permits and related compliance requirements, in accordance with applicable Air Force regulations.

The Clean Water Act (33 U.S.C. 1151 et seq., 1251 et seq.) is the basic Federal legislation governing wastewater discharges. The implementing Federal regulations include the NPDES permitting process (40 CFR 122), general pretreatment programs (40 CFR 403), and categorical effluent limitations, including limitations for pretreatment of direct discharges (40 CFR 405, *et seq*.).

The Florida Air and Water Pollution Control Act (Florida Statutes, Title 28 Section 403) governs industrial and domestic wastewater discharges in the state. The FDEP delegated the Northwest Florida Water Management District as the enforcement authority. The implementing state regulations are contained in FAC. 62. These regulations establish water quality standards, regulate domestic wastewater facility management and industrial waste treatment, establish domestic wastewater treatment plant monitoring requirements, and regulate stormwater discharge. There are no permitted discharges of wastewater effluent to Choctawhatchee Bay due to Eglin AFB making available the use of land for spray irrigation.

As Figure 3-3 indicates, there are main sanitary sewer lines that surround the area and connect the existing dormitories to the main sewer system.

3.5.2.3 Electricity

The Gulf Power Company serves all of Santa Rosa County and much of Okaloosa County (including the cities of Fort Walton Beach, Cinco Bayou, Destin, Mary Esther, Shalimar, Crestview, Niceville, and Valparaiso). Gulf Power is an operating company of the Southern Electric System, along with Georgia Power Company, Alabama Power Company, Mississippi Power Company, and Savannah Electric. As the largest system in the nation, Southern Electric pools power and draws as needed. The primary source of electrical power for the project area is the combustion turbine plant near Freeport, Florida.

As Figure 3-4 indicates, there are main electric lines that surround and traverse the proposed project location supplying power to the existing dormitories.

3.5.2.4 Natural Gas

Okaloosa County Gas District supplies natural gas to most of Okaloosa County, including Fort Walton Beach, Cinco Bayou, Destin, Mary Esther, Niceville, Okaloosa Island, Shalimar, Valparaiso, Eglin, and unincorporated areas. Okaloosa Gas District has contract reservations on two major pipelines, Gulf South Pipeline and Florida Gas Transmission, for a combined total maximum daily quotient of 34,000 million cubic feet (MMcf) per day within the tri-county area of Santa Rosa, Okaloosa, and Walton Counties (Bruechner, 2002).

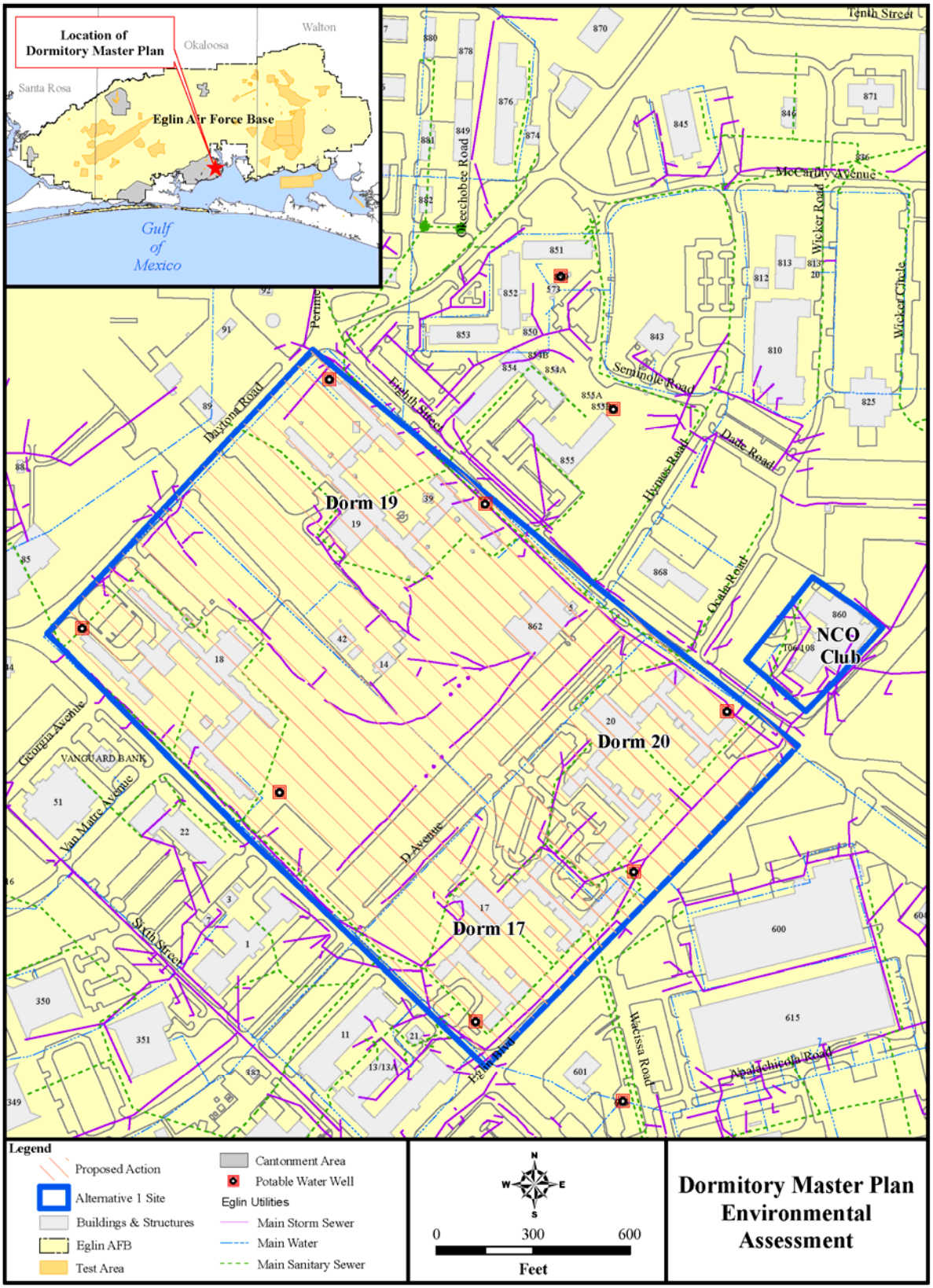

Figure 3-3. Location of Water and Sewer Lines

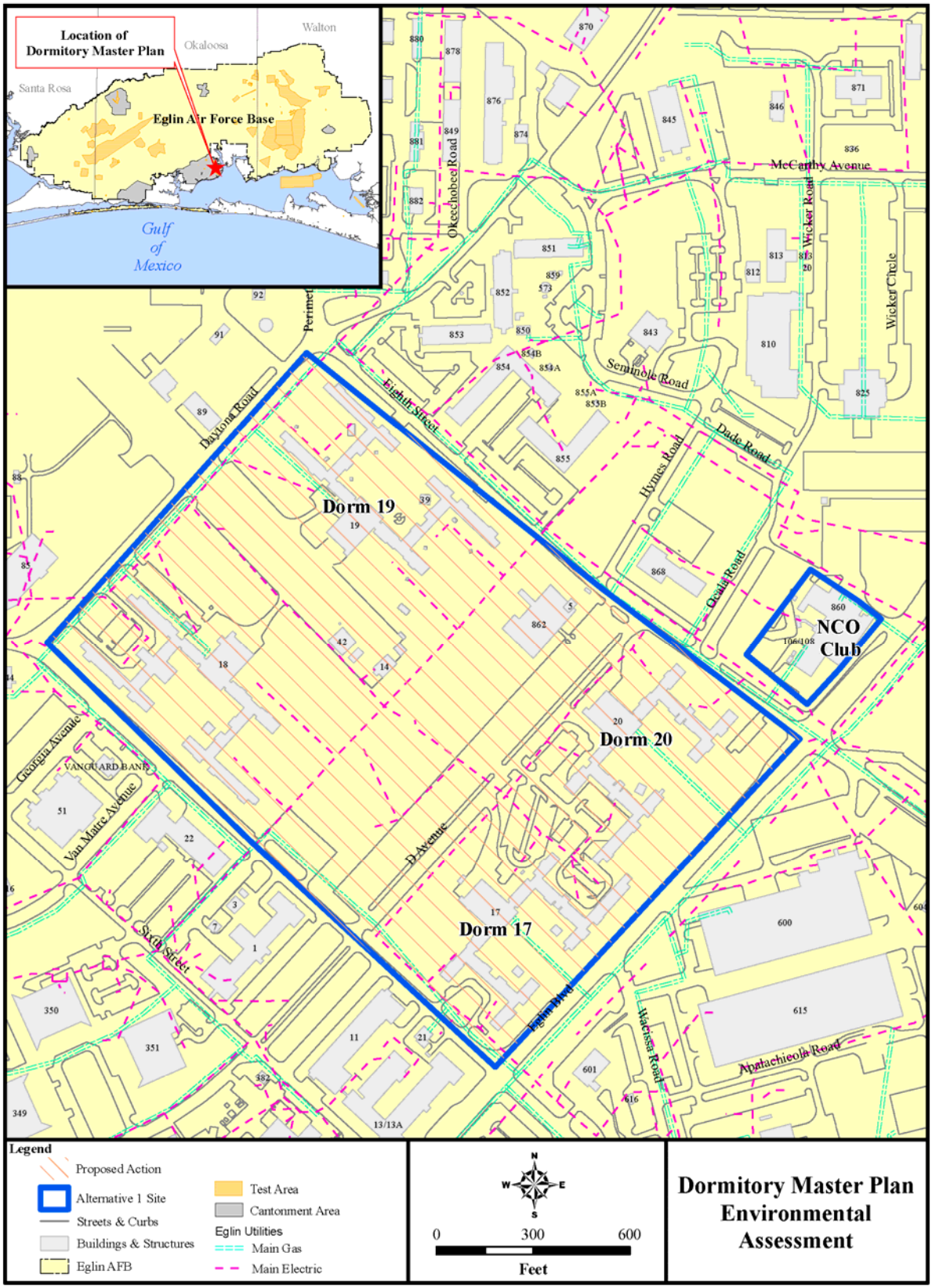

Figure 3-4. Location of Electric and Natural Gas Lines

Natural gas is provided to Eglin AFB from the Okaloosa Gas District through nine metering and three regulating stations. The theoretical capacity of the gas pipeline into Eglin is a maximum throughput in excess of 68,000 MMcf per day. The total base demand for natural gas in 2001 was approximately 698,000 MMcf or 1,900 MMcf per day.

As Figure 3-4 indicates, there are main natural gas lines that surround the project location and supply the existing dormitories.

3.6 WATER QUALITY

3.6.1 Definition of the Resource

This section provides descriptions of the qualitative and quantitative characteristics of water resources on Eglin AFB. There are no surface water (e.g. ponds, streams, etc.) resources in the vicinity of the proposed project location. This section will examine groundwater and stormwater. Below is site-specific information on the water resources associated with Eglin's Main Base. Pertinent regulations are provided in Appendix B, *Wetland Protection Regulations*.

3.6.2 Existing Conditions

3.6.2.1 Stormwater

The land clearing and construction, including the addition of any new impervious surface during this project, increases the potential for impacts from the increased rate and volume in stormwater runoff to hydrology and soil (erosion). Figure 3-3 shows the existing storm sewer system within the project area. The discharge of untreated stormwater may reasonably be expected to be a source of pollution of water of the state and would therefore be subject to FDEP regulations. A more detailed description of stormwater rules may be found in Florida Statute Chapter 62-25. Florida Statute Chapter 62-621 provides the general requirements for NPDES stormwater permitting at construction sites.

3.7 SOCIOECONOMICS

3.7.1 Definition of the Resource

Socioeconomic factors are associated with the human environment and include such things as population, employment, and economics, which define the economic trends in the immediate area of the Proposed Action.

3.7.2 Existing Conditions

3.7.2.1 Population

The population of the ROI increased by more than 75,000 persons (29.9 percent) over the period of 1990 to 2000 at an average annual rate of 2.65 percent (U.S. Census Bureau, 2004).

In Okaloosa County, of the communities that surround Eglin AFB, two experienced low (Niceville) and negative (Fort Walton Beach) population change. Although they are the largest

in terms of resident population, they have limited land available for development and are approaching build-out. Conversely, the communities of Crestview (north of the Eglin Reservation) and Destin (in the extreme eastern coastal section of the county) experienced rapid growth. The population of Crestview increased by 4,880 additional residents or almost 50 percent between 1990 and 2000 (at an average annual rate of 4.09 percent), while that of Destin increased by 3,309 persons or almost 38 percent (at an average annual rate of 3.24 percent) (U.S. Census Bureau, 2004).

Population located in the unincorporated portion of the county increased by just over 20 percent between 1990 and 2000, at an average annual rate of 1.89 percent. Just over 60 percent of the increase in population of Okaloosa County between 1990 and 2000 occurred in the unincorporated sections of the county (U.S. Census Bureau, 2004).

Approximately 10,000 active duty personnel are currently assigned to Eglin AFB and reside locally. Of this number, 2,142 families reside in Eglin family housing and 783 airmen currently live in dormitory housing. The remaining persons live off-base in the surrounding communities. (Lawhon, 2005)

3.7.2.2 Employment

Personnel employed at Eglin include all individuals required to accomplish base missions at Eglin AFB Main Base, including activities associated with Eglin AFB Main Base, the auxiliary fields (with the exception of Hurlburt Field), and land and water test areas.

While the number of personnel employed at Eglin AFB has grown since 1982, the total active duty population has decreased by 11 percent (Table 3-4).

Total full- and part-time employment in the ROI increased by an average annual rate of 3.3 percent, or over 46,000 jobs, between 1990 and 2000. This compares to a rate of 2.8 percent for Florida and 1.8 percent for the nation over the same time period. The growth rate experienced in the preceding decade was considerably higher (4.3 percent annually) and was also noticeably higher than that for the state (3.8 percent) and nation (2.0 percent) (USDOC, 2004).

Table 3-4. Employment at Eglin AFB

	1982	1990	1991	1999	2000	2001	%Change from 1990
Personnel - Military							
Active Duty	10,569	8,544	9,377	7,562	7,615	8,249	-3.45%
Students/Trainees		275	121	321	335	317	15.27%
Personnel - Civilian							
Appropriated Fund	3,692	4,858	4,832	3,791	3,726	3,764	-22.52%
NAF/BX		845	987	1336	1,262	1,191	40.95%
Contractors	1,240	1,156	1,129	2,691	3,057	4,285	270.67%
Private Business On Base		105	45	44	53	55	-47.62%
Total Direct Employment[(a)]	15,501	15,783	16,491	15,745	16,048	17,861	13.17%

Notes: [(a)] Excludes reservists, retirees, and dependents; BX = Base Exchange; NAF = Non Appropriated Funds
Source: U.S. Air Force, 2003, Environmental Baseline Resource Appendices

3.7.2.3 Economics

Through employment and other expenditures, Eglin AFB contributes millions of dollars to the regional economy. Table 3-5 provides itemization of this contribution and summarizes the changes that have occurred in these aspects of the economy since 1990.

Table 3-5. Eglin AFB Regional Economic Contribution (Millions of Dollars)

	1982	1990	1991	1999	2000	2001	%Change from 1990 [c]
Payrolls - Military ($)							
Active Duty	$186	$244	$242	$238	$249	$259	6.43%
Living On Base	$71	$100	$101	$59	$65	$60	-39.5%
Living Off Base	$115	$144	$140	$178	$184	$199	27.7%
Reservists [a]	$0	$8	$8	$12	$12	$14	60.5%
Students/Trainees	$0	$0	$0	$7	$7	$7	5.60%
Retirees	$90	$425	$459	$711	$731	$764	79.9%
Payrolls - Civilian ($)							
Appropriated Fund	$100	$169	$186	$183	$185	$181	7.15%
NAF/BX	$7	$5	$9	$17	$19	$19	295%
Contractors	$0	$30	$46	$177	$183	$199	564%
Private Business On Base	$0	$1	$1	$1	$1	$1	33.5%
Total Direct Payrolls [b]	**$293**	**$457**	**$492**	**$634**	**$649**	**$681**	**48.9%**
Expenditures ($)							
Construction	$8	$32	$34	$35	$32	$57	78.6%
Services (local economic area contracts)	$621	$245	$269	$70	$81	$79	67.7%
BX/Commissary	$0	$1	$0	$2	$2	$3	272%
Health	$12	$8	$7	$8	$9	$9	8.23%
Education	$5	$2	$2	$5	$5	$6	174%
TDY	$0	$3	$5	$4	$7	$7	124%
Other Materials, Equipment and Supplies	$0	$0	$0	$16	$16	$18	14.7%
Total Expenditures	**$646**	**$290**	**$318**	**$141**	**$153**	**$178**	**-38.6%**

Source: U.S. Air Force, 2003, Environmental Baseline Resource Appendices.

Notes: Blank entries represent data not reported. [a] Assigned to the 919 Special Operations Wing at Duke Field. [b] Excludes retirees. [c] Numbers are not normalized to constant base year dollars

BX = Base Exchange; NAF = Non Appropriated Funds; TDY = Temporary Duty

4. ENVIRONMENTAL CONSEQUENCES

This chapter details the potential impacts of the Proposed Action, Alternative 1, and the No Action Alternative in relation to the issues and resources identified in previous chapters of this document.

Issues include:

- Air Quality
- Noise
- Soils/Erosion
- Hazardous Materials/Waste
- Water Quality
- Infrastructure
- Socioeconomics

4.1 AIR QUALITY

This section discusses the potential impacts to air quality because of the Proposed Action, Alternative Action and No Action Alternative. For the analysis of the various Proposed Actions, a threshold on an individual pollutant-by-pollutant basis was established.

In order to evaluate the air emissions and their impact to the overall ROI, the emissions associated with the project activities were compared to the total emissions on a pollutant-by-pollutant basis for the ROI's 1999 NEI data. Potential impacts to air quality are identified as the total emissions of any pollutant that equals 10 percent or more of the ROI's emissions for that specific pollutant. The 10 percent criteria approach is used in the General Conformity Rule as an indicator for impact analysis for non-attainment and maintenance areas and although the entire state of Florida is attainment, the General Conformity Rule's impact analysis was utilized to provide a consistent approach to evaluating the impact of construction and aircraft emissions. To provide a more conservative evaluation, the impacts screening in this analysis, used a more restrictive criteria than required in the General Conformity Rule. Rather than comparing emissions from construction activities to regional inventories (as required in the General Conformity Rule), emissions were compared to the individual county (Okaloosa) potentially impacted, which is a smaller area.

A Department of Defense(DoD) developed model, the Air Conformity Applicability Model (ACAM), which the U.S. Air Force uses for conformity evaluations, was utilized to provide a level of consistency with respect to emissions factors and calculations. Air emissions estimated using ACAM is compared to the established 10 percent criterion for Okaloosa County as represented in the USEPA 1999 NEI. USEPA 1999 NEI data was used since 2002 NEI data has not been published in a final format. Emissions associated with construction activities are the main issues the Proposed Action generated and were the focus of the air analysis.

4.1.1 Proposed Action (6-Dorm Plan)

Fugitive dust and CO constitute the majority of the emissions from the project overall. A construction operation incorporates grading operations, construction worker trips, stationary equipment (e.g., generators and saws), mobile equipment, and acres paved. Approximately 79 percent of the total PM_{10} emissions for the project are associated with grading activities during the early stages of the construction phase. $PM_{10,}$ and CO are the primary pollutants of concern, constituting 76 percent of overall project emissions. A majority of the CO emissions are associated with stationary equipment (e.g., saws and generators).

Air emissions were evaluated against each individual pollutant as represented in the 1999 NEI for Okaloosa County. If the project activities exceeded ten percent or the annual emissions on a corresponding pollutant-by-pollutant basis, then air quality was impacted. Since the 10 percent criterion was not exceeded then it was assumed that there were no adverse impacts to air quality. Table 4-1 provides a tabular representation of the project emissions overall while Table 4-2 provides a breakdown of each construction activity.

Table 4-1. Proposed Action Estimated Construction Emissions

	Total Project Emissions Tons				
	CO	**NO_x**	**SO_2**	**VOC**	**PM_{10}**
	59	16	2	18	54
Okaloosa County	151,985	8,787	668	20,186	16,657
Percentage of County Emissions	0.04%	0.19%	0.27%	0.09%	0.33%

Table 4-2. Proposed Action Estimated Construction Emissions by Construction Activity

Source Category	Emissions Tons/ Yr				
	CO	**NOx**	**SO_2**	**VOC**	**PM_{10}**
Grading Equipment	0.00	0.00	0.00	0.00	42.00
Grading Operations	0.09	0.34	0.03	0.04	0.03
Acres Paved	0.00	0.00	0.00	0.00	9.83
Mobile Equipment	5.95	14.18	1.75	1.30	0.00
Coatings	0.00	0.00	0.00	14.17	1.14
Stationary Equipment	40.34	1.04	0.05	1.51	0.03
Workers Trips	12.43	0.71	0.00	0.76	0.10
Totals	**59**	**16**	**2**	**18**	**53**

4.1.2 Alternative 1 (12-Dorm Plan)

The Alternative Action is similar to the Proposed Action with the exception that demolition of the NCO Club for potential parking would occur. This additional demolition effort along with the stated emissions associated with the Proposed Action would not exceed the 10 percent

criterion established as an impact threshold; therefore, no adverse impacts are expected to the air quality.

4.1.3 No Action Alternative

The No Action Alternative would involve no construction activities and therefore would not increase air emissions above the established 10 percent criterion.

4.1.4 Cumulative Impacts

The project would incrementally contribute air pollution emissions during construction and demolition. This contribution would relate to regional air quality goals and attainment standards, but the contribution from the project would be negligible. Air emissions associated with the project represent only a small percentage of Okaloosa County's annual emissions, and would be intermittent and temporary. Project emissions would not contribute to other county emissions in any appreciable manner.

4.1.5 Management Actions

Impacts to air quality are expected to be minimal. However, the implementation of BMPs to minimize fugitive dust emissions is recommended, as PM_{10} emissions are approximately 79 percent of the total emissions portfolio. As previously indicated, grading activities associated with the construction phase create the majority of those emissions. The emissions produced would be on a temporary basis and create an elevated short-term PM_{10} concentration, which would fall off rapidly with distance from the source. Therefore, it is anticipated that the effects to overall air quality would be minor. In order to minimize the potential impact to air quality, reasonable precautions such as the use of water for dust suppression should be taken to reduce emissions of unconfined particulate matter.

4.2 NOISE

Daily activities at Eglin AFB contribute noise to the region. Aircraft operations and vehicle traffic constitute the greatest on-going sources of noise in the area. However, during the construction and demolition of the Proposed Action, diesel generators, support equipment, and other heavy earth moving equipment would operate on the construction site on a limited basis. Noise resulting from the use of this equipment and other construction activities is addressed below.

Table 4-3 illustrates sound exposure levels (SELs) associated with typical equipment, in varying operating modes (idle power, full power, etc.), considered in the analysis. These SEL values form the basis for the calculation of time-averaged noise levels originating from the construction site.

Table 4-3. Typical Equipment Sound Levels

Equipment	Sound Level (in dBA) Under Indicated Operating Mode[1]		
	Idle Power	Full Power	Moving Under Load
Dozer	63	74	81
Dump Truck	70	71	74
Excavator	62	66	72
Forklift	63	69	91
Front-end loader	60	62	68
Grader	63	68	78
Sweeper	64	76	85
Tractor-trailer	67	78	77

[1] Measured at 125 feet
Source: U.S. Air Force, 1998

To analyze the potential noise energy at various distances from the sources, the calculations are based on the types of equipment, operating mode, the operating time in that mode, and the location each piece would most likely be in use. The data is used to distribute the total noise throughout the site to determine the total noise levels that emanates off-site.

4.2.1 Proposed Action (6-Dorm Plan)

Many factors contribute to the ability or inability for the noise to travel, such as distance from source, atmospheric conditions (temperature and humidity), terrain, and topography. The assumptions for this assessment were conservative in nature, therefore actual sound levels emanating off-site are expected to be somewhat lower than those shown. Noise associated with the Proposed Action would be associated with demolition and construction activities. Aircraft operations would still dominate the average noise environment.

The time-averaged noise levels at a range of distances from the perimeter of the activity area are summarized in Table 4-4.

Table 4-4. Calculated Construction and Demolition Noise Levels Associated with the Proposed Action

Distance From Site Edge (feet)	North/South		East/West	
	$L_{eq(8)}$ (dBA)	$L_{eq(24)}$ (dBA)	$L_{eq(8)}$ (dBA)	$L_{eq(24)}$ (dBA)
100	68	64	65	60
200	67	62	61	56
300	66	66	59	54
400	65	61	58	53
500	64	60	57	52

dBA= A-Weighted Decibels
L_{eq} = The equivalent continuous sound pressure level, or a measure of the average sound pressure level during a period of time (8 or 24 hours), in decibels.

There are several buildings within 100 feet of the construction and demolition area. The proximity of the construction to these locations equates to a $L_{eq(24)}$ between 64 and 68 dBA. The potential levels received at these nearby locations would not negatively impact hearing of individuals located at these sites as the noise disturbance would be short-term and intermittent.

Finally, it should also be noted that the areas considered are already exposed to elevated L_{dn} (between 60 and 65 dB) resulting from aviation operations. While the noise from construction activities may be noticed while it is occurring, its overall duration would be relatively brief and would not be expected to significantly alter the acoustic environment of the region.

4.2.2 Alternative 1 (12-Dorm Plan)

The Alternative Action is identical to the Proposed Action with the exception that demolition of the NCO Club would occur. The noise impacts to individuals located near the site are comparable to the Proposed Action and therefore would not negatively impact hearing of individuals located at sites within 100 feet of the construction and demolition areas. The noise associated with the construction activities would be short-term and intermittent.

4.2.3 No Action Alternative

Under the No Action Alternative, implementation of the activities identified as components of the Dormitory Master Plan would not occur. Therefore, construction and demolition activities would not occur and noise associated with these activities would not occur.

4.2.4 Cumulative Impacts

No adverse noise impacts have been identified with respect to the implementation of the Proposed Action or Alternatives. Noise associated with construction and demolition activities would be short-term and would cease upon project completion. As a result, the Proposed Action or Alternatives would not contribute to any cumulative impacts associated with noise.

4.2.4.1 Management Actions

Impacts associated with noise would be temporary and intermittent. Consequently, impacts are expected to be minor. BMPs that would further minimize the potential for annoyance during construction and demolition activities include the following:

- Conduct demolition and construction activities between 7:30 a.m. and 4:30 p.m.
- As is practicable, no demolition or construction activities on weekends or holidays.

4.3 SOILS/EROSION

This section discusses potential soil erosion that could arise from the proposed demolition and construction activities. The issue of concern associated with demolition and construction projects are, 1) the potential for the transport of soils caused by stormwater runoff from increased impervious surface areas (i.e., roads, buildings, and compacted soil) and 2) soil erosion.

Soils within the affected environment are sandy, have a slope range of 0 to 12 percent-characteristics that can be conducive for a high amount of erosion. The potential for surface runoff to impact water bodies is discussed in subsequent sections.

4.3.1 Proposed Action (6-Dorm Plan)

Road and infrastructure construction at the Proposed Action area has little potential to affect soils and create conditions that could result in serious erosion. The Proposed Action would consist of the demolition of Dormitories 17, 19, and 20 (a total of 115,255 square feet). Construction consists of six three-story buildings (a total of 99,072 square feet), two common buildings (3,168 square feet) and a parking lot (32,357 square feet). The surrounding areas consist of an urban landscape with already existing impervious surfaces.

The soils within the Proposed Action area are naturally prone to medium-risk erosion. However, since the Proposed Action area already contains structures, is relatively flat, and does not require the removal of vegetation areas, rainfall events will have little affect in transporting soils into local water bodies. The proposed reinforced concrete foundations would further reduce the risk of erosion. However, the demolition portion of the project could exacerbate soil erosion if erosion minimization measures (BMPs) are not practiced so that the transportation of sediments is not increased. As such, Eglin would implement erosion control measures so that a minimum of erosion would occur. These include (but are not limited to) silt screens, hay bales and grass seeding in appropriate situations so that surface runoff does not contaminate local water bodies.

4.3.2 Alternative 1 (12-Dorm Plan)

Road and infrastructure construction at the Proposed Action area has little potential to affect soils and create conditions that could result in serious erosion. Alternative 1 activities consist of the construction of 12 single-story buildings and the demolition of the old NCO Club (34,100 square feet). This increase in amount of surface coverage is negligible between the Proposed Action and the Alternative Action. Since the soils within the Alternative Action are naturally prone to medium risk erosion, it is expected that Eglin AFB will adhere to BMPs (as mentioned above) to reduce the risk of erosion. Therefore it is expected that soil erosion will be minimal.

4.3.3 No Action Alternative

Under the No Action Alternative, the existing dorm facilities would remain unchanged. Improvements would not occur, and airmen would continue to live in existing housing. Soils within the intersection and project area would be unaffected under this alternative.

4.3.4 Cumulative Impacts

Construction and demolition activities in the Proposed and Alternative Action could potentially increase erosion, although no known surface waters would be affected. With proper engineering, additional erosion at any of the dorm sites (17, 19, and 20) and parking lot, or the old NCO Club should not be a concern and as such, no cumulative impacts are expected as a result of the Proposed Action or Alternative Actions.

4.3.5 Management Actions

- Where applicable, rough grade slopes or use terrace slopes to reduce erosion.
- If activities are to occur on sloped areas, add vegetative zones to minimize soil creep.

Inspection and maintenance of BMPs are required under the stormwater construction general permit. If activities are to impact water runoff areas and creeks, instill the use of hay bales and silt fences to halt soil slump into waterways.

4.4 HAZARDOUS MATERIALS/WASTE

4.4.1 Proposed Action (6-Dorm Plan)

4.4.1.1 Storage Tanks

Both ASTs and USTs are located within the proposed project site as Table 3-2 lists. Analysis assumed that the developer would avoid disturbance of active tanks during construction and demolition activities thereby negating impacts associated with disturbance of storage tanks. Coordination with 96 CEG/CEVC would be required prior to project implementation to identify avoidance areas. However, Tank 20-1, which is an out of service heating oil tank, would be removed from the construction area.

If planned construction and demolition activity requires the disturbance of existing storage tanks, then the Spill Prevention Control and Countermeasure Plan must be followed to prevent/reduce the release of hazardous substances from storage tanks and to properly manage new and existing storage tanks. Chapter 62-761 FAC provides UST removal and disposal requirements, as well as requirements for UST system installation, construction, registration, and maintenance. Similarly, FDEP regulates ASTs with a capacity of 550 gallons or more under 62-762 FAC. Provided that the removal, closure or installation of ASTs/USTs is coordinated through 96 CEG/CEVC and these guidelines and regulations are followed, there is no significant impact anticipated from this action. However, because of the inherent possibility of accident or spill, base personnel must also implement the *Oil and Hazardous Substance Pollution Contingency Plan* (96 CEG Plan 32-6) which establishes responsibilities and provides procedures to base personnel in responding to and remediation of hazardous substance releases at Eglin (U.S. Air Force, 1997).

4.4.1.2 Asbestos

The following buildings have been surveyed for ACBM and have undergone abatement as Table 3-3 shows.

- Building 17
- Building 19
- Building 20

Air Force Instruction (AFI) 32-1052 requires that when safety and budgetary considerations permit, complete removal of ACBM should be included in military construction program facility projects. Rule FAC 62-257 and 40 CFR 61-145 state that when a building is to be demolished or a renovation of a load-supporting structural member is to be performed, notification to FDEP must be made 10 days prior to the action and a copy of this notice must be sent to the 96th Civil Engineering Group, Pollution Prevention Section (96 CEG/CEVCP). A licensed contractor must be used when removing asbestos-containing building materials and personnel should adhere to

established procedures set forth for the safe handling and transport of these materials as outlined in Chapter 5, Plans, Permits, and Management Actions.

Asbestos must be removed prior to demolition of buildings. New facilities constructed would not contain asbestos, even though asbestos is still used in manufacturing and could be installed in new facilities The Eglin AFB Environmental Management Division must review all construction project programming documents, designs and contracts to ensure that requirements associated with asbestos are met. Abatement is only required when removing LBP prior to demolition, and disposal. With management requirements met, there are no anticipated adverse impacts resulting from asbestos contamination under the Proposed Action.

4.4.1.3 Lead-Based Paint

Currently no data regarding the presence or absence of LBP is available for the projected demolition of any facilities under the Proposed Action (Kauffman, 2005). As a result, all facilities would need to be sampled or surveyed to evaluate the potential for LBP occurrence, and project designs must stipulate appropriate abatement and disposal requirements for LBP (if required), as outlined in Chapter 5 of this document.

LBP-containing materials do not have to be treated as hazardous waste as long as these materials are not removed from a structure prior to demolition and the LBP-containing materials are recycled. If LBP materials are removed to a landfill, the Toxicity Characteristic Leaching Procedure must not exceed 5.0 milligrams per liter (Kauffman, 2004). The USEPA issued a memorandum on 31 July 2000 stating that waste generated as part of LBP activities conducted at residences including single-family homes, apartment buildings, public housing, and military barracks are no longer classified as hazardous wastes but are considered as household waste. Thus, they are excluded from RCRA's hazardous waste management and disposal regulations.

Newly constructed facilities would not contain LBP.

The Eglin AFB Environmental Management Division must review all construction project programming documents, designs, and contracts to ensure that requirements associated with LBP are met. With management requirements met, no anticipated long-term or significant impacts associated with LBP would occur under the Proposed Action.

4.4.1.4 Hazardous Material Management

If removal and/or closure of storage tanks is required, it would be managed in accordance with federal, state, and Air Force regulations to ensure all proper applicable requirements are met.

Potential impacts related to storage and uses of hazardous materials are associated with the potential for petroleum, oil, and lubricant (POL) spills to occur and contaminate soils and surface/groundwater. All handling of fuels would be in accordance with applicable federal, state, and Air Force regulations, which include AFI 23-201, Fuels Management. Should a POL spill occur during operations of the facilities, the presence of spill response equipment would ensure quick response by on-base personnel. Management requirements stated in 96 CEG Plan 32-6 would be followed as well as applicable federal and state management requirements. With these management requirements in place, the Air Force does not anticipate potential impacts related to

vehicle use, maintenance, and POL spills or tank removals and closures associated with the Proposed Action.

State of Florida and Air Force regulations would be implemented to ensure that all hazardous waste is properly handled to reduce the potential risks to the population. Any hazardous wastes or by-products created from daily operations of the facilities would be properly identified, separated, labeled, stored, and discarded in accordance with applicable federal, state, and Air Force regulations. Therefore, the Air Force does not anticipate significant impacts from hazardous waste associated with the Proposed Action.

4.4.2 Alternative 1 (12-Dorm Plan)

4.4.2.1 Storage Tanks

The treatment of storage tanks in the project area would be the same as in the Proposed Action. Proposed actions assume that the developer would avoid disturbance of storage tanks and coordinate planning with 96 CEG/CEVC to identify avoidance areas. If existing tanks are to be disturbed, the Spill Prevention Control and Countermeasure Plan must be followed to prevent/reduce the release of hazardous substances from storage tanks and to properly manage new and existing storage tanks. Base Personnel must also implement the *Oil and Hazardous Substance Pollution Contingency Plan* (96 CEG Plan 32-6) which establishes responsibilities and provides procedures to base personnel in responding to and remediation of hazardous substance releases at Eglin AFB (U.S. Air Force, 1997).

4.4.2.2 Asbestos

Under Alternative 1, demolition of the existing dormitories would be the same as in the Proposed Action with the addition of the NCO Club (Building 860) demolition. In addition to the buildings listed under the Proposed Action, the NCO Club has been surveyed for ACBM but has not undergone abatement (as indicated in Table 3-3).

- Building 860 (NCO Club)

These buildings would require asbestos abatement as set forth in AFI 32-1052, *Facilities Asbestos Management*, prior to demolition or renovation.

As in the Proposed Action, demolishing the buildings that contain asbestos would negate the potential impacts from asbestos exposure to individuals frequenting the buildings. Asbestos handling and abatement procedures would be the same as those described under the Proposed Action. With management requirements met, there are no anticipated adverse impacts resulting from asbestos contamination under this alternative.

4.4.2.3 Lead-Based Paint

Under Alternative 1, demolition of the existing dormitories would be the same as in the Proposed Action. There is no data regarding the presence or absence of LBP in the NCO Club (Building 860). Consequently, this facility would also need to be sampled or surveyed to evaluate the potential for LBP occurrence, and project designs must stipulate appropriate abatement and

disposal requirements for LBP (if required). Handling and abatement procedures associated with LBP would be the same as those identified under the Proposed Action, and no adverse impacts to human health or the environment are anticipated.

As in the Proposed Action, newly constructed facilities would not contain LBP.

4.4.2.4 Hazardous Material Management

Under Alternative 1, the Management of Hazardous Materials would be the same as under the Proposed Action.

4.4.3 No Action Alternative

Under the No Action Alternative, implementation of the activities identified as components of the Dormitory Master Plan would not occur. Therefore, no adverse affects are anticipated from the No Action Alternative. However, since AFI 32-1052 requires that complete removal of ACBM should be included in military construction program facility projects, the asbestos abatement of the dormitory facilities would need to be addressed prior to any action involving these buildings.

4.4.4 Cumulative Impacts

No adverse impacts associated with hazardous waste have been identified with respect to the implementation of the Proposed Action or Alternative 1. No adverse impacts to Hazardous Materials and Wastes have been identified in available analyses of the foreseeable future actions. The demolition of buildings containing asbestos and LBP associated with the Proposed Action and with Eglin's military family housing project would provide a long-term beneficial impact by negating current and future adverse human health effects from exposure. The removal and proper disposal of asbestos-containing materials and potential LBP contamination would result in beneficial, long-term impacts to human health and the environment. Consequently, when taken into a regional context (e.g., within the Eglin Reservation and the surrounding community), continued asbestos and LBP abatement could be considered to have a positive cumulative impact on human health and the environment. No negative cumulative impacts are expected to occur.

4.4.5 Management Actions

4.4.5.1 Asbestos

- A licensed contractor must be used to remove asbestos-containing building materials.
- New facilities would not contain asbestos.

4.4.5.2 Lead-Based Paint

- New facilities would not contain LBP.

4.4.5.3 Storage Tanks

- The Air Force or their designated contractor must provide spill response equipment that would ensure an immediate response to a regulated spill event.

4.5 INFRASTRUCTURE

This section describes the potential impacts associated with utility infrastructure, which includes electricity, wastewater, potable water supply, storm sewer, and natural gas serving the proposed work site. This section also addresses the potential for disruption of utility service and analyzes the potential for utility usage at the site to exceed the design or permit capacity of the respective utility system. Analysis focuses on assessing any increased utilization, identifying potential problems related to connecting to existing utilities, and identifying coordinating and procedural requirements associated with establishing new utility infrastructure.

4.5.1 Proposed Action (6-Dorm Plan)

Under the Proposed Action, the Air Force would demolish existing dormitories (Buildings 17, 19, and 20), which total 115,255 total square feet (2.65 acres) and construct 6 (six) three-story facilities at 99,072 total square feet (2.27 acres). The Proposed Action would accommodate 288 occupants. In addition, 32,357 square feet (0.75 acre) of parking area would be added to address existing parking concerns.

Construction crews would coordinate with the 96th Civil Engineering Group, Environmental Engineering Section (96 CEG/CEVCE) prior to any ground disturbance to ensure no adverse impacts to existing infrastructure services including electrical, potable water, storm sewer, and natural gas services would occur during construction and demolition activities. Through such coordination, a disruption of utility service can be avoided. The Air Force or their designated contractor will obtain any permits associated with new utility lines or extensions prior to any construction. Applicable permits have been identified in Chapter 5 of this document.

The proposed construction and demolition activities and improvements to road and parking infrastructure would not adversely impact the electrical infrastructure at the proposed work site. The Proposed Action will not result in a net increase of residents; therefore, no additional demands on electrical usage are expected. Furthermore, the Air Force may elect to utilize more energy efficient construction principles (e.g., better insulation, energy saving appliances, etc.) in an effort to reduce energy consumption (U.S. Air Force, 2005a). Thus, no adverse impacts to this utility are expected under the Proposed Action.

Proposed construction and demolition activities and improvements to road and parking infrastructure would not adversely impact the wastewater infrastructure at the proposed work site since the Proposed Action will not result in a net increase of residents.

The construction and demolition activities as well as improvements to road and parking infrastructure associated with the Proposed Action would not adversely affect the potable water infrastructure at the proposed work site. Since the Proposed Action will not result in a net increase of residents, additional demands on the potable water service provider are not expected. Additionally, the Air Force may elect to utilize more water efficient construction principles (e.g., better plumbing, water saving appliances, etc.) in an effort to reduce water consumption (U.S. Air Force, 2005a). Thus, no adverse impacts to this utility are expected under the Proposed Action.

The Proposed Action would increase the total impervious area resulting in a net increase from new building construction (0.88 acre) and additional parking (0.75 acre) for a total of 1.63 acres. To comply with state mandates, the Proposed Action would involve the construction of a stormwater management system to provide on-site treatment of stormwater. On-site storage of stormwater would prevent direct discharge of stormwater runoff to any surface waters, thereby reducing potentially adverse impacts to water quality (FDEP, 2002). Adherence to the BMPs identified in Chapter 5 will help to reduce the potential for soil erosion and sedimentation. The addition of any new stormwater infrastructure must not adversely impact the seasonal-high water table.

Applicable permitting requirements would be satisfied in accordance with 62-25 FAC and NPDES. The Proponent and its contractor shall adhere to all applicable regulatory requirements, which would serve to either offset or minimize any potential impacts from construction operations. A notice of intent to use the generic permit for stormwater discharge under the NPDES program would be submitted prior to project initiation according to Section 403.0885, Florida Statutes. The Proposed Action would also require coverage under the generic permit for stormwater discharge from construction activities that disturb one or more acres of land (FAC 62-621). A comprehensive stormwater, erosion, and sedimentation control plan and a stormwater pollution prevention plan would be incorporated into the final design plan. Construction activities would require coordination between the proponent, 96 CEG/CEVCE, and the contractor to obtain all stormwater permits and any necessary utility extension permits, which they would need to obtain prior to the commencement of any ground-disturbing activities. No impacts to the existing stormwater infrastructure are expected from the Proposed Action, given the attainment of aforementioned permits and the implementation of site-specific management action (detailed in Chapter 5).

Since the Proposed Action will not result in a net increase of residents, no additional demands on the natural gas service provider are expected. Without an increased demand, the Proposed Action would not adversely impact the natural gas infrastructure at the proposed work site. Furthermore, the Air Force may elect to utilize more energy efficient construction principles (e.g., better insulation, energy saving appliances, etc.) in an effort to reduce energy consumption (U.S. Air Force, 2005a).

4.5.2 Alternative 1 (12-Dorm Plan)

Under Alternative 1, the Air Force would construct 12 (twelve) single-story facilities at 153,456 square feet (3.52 acres) each to accommodate 288 occupants. Under Alternative 1, 32,357 square feet (0.75 acre) of parking area will be added to address existing parking concerns. The demolition of existing dormitories (Buildings 17, 19, and 20) is also proposed under Alternative 1. Unlike the Proposed Action, demolition of the existing NCO Club would occur under this alternative. This structure is approximately 34,100 square feet (0.78 acre) and is located at the intersection of Eighth Street and Eglin Boulevard (Figure 1-2).

The demolition of the existing NCO Club is not likely to result in additional impacts that have not been identified under the Proposed Action. The Air Force or their designated representative will obtain any permits associated with new utility lines or extensions prior to any construction.

Thus, no adverse impacts are expected under this alternative to the utility infrastructure which includes the electrical, potable water, storm sewer, and natural gas services.

4.5.3 No Action Alternative

Under the No Action Alternative, implementation of the activities identified as components of the Dormitory Master Plan would not occur. Therefore, no adverse affects are anticipated under this alternative to the existing utility infrastructure, which include electrical, potable water, storm sewer, and natural gas services.

4.5.4 Cumulative Impacts

Several on-going and future projects are planned for Eglin AFB; however, the nature of these projects are not expected to place additional, cumulative demands on existing utility infrastructure or utility demands. Coordination between project planners and the Environmental Engineering Section (96 CEG/CEVCE) would help protect Eglin's current infrastructure. No adverse impacts on utilities have been identified in available analyses of the foreseeable future actions. As a result, no cumulative impacts associated with the utility infrastructure are expected to occur.

4.5.5 Management Actions

Ground disturbance and additional impervious surfaces (e.g. concrete, asphalt) from the Proposed Action or Alternative 1 would promote stormwater runoff, which may lead to potential water quality impacts. To avoid or offset such impacts, the Air Force and its contractor shall implement site design plans and obtain all necessary permits to help protect natural resources on Eglin AFB.

4.6 WATER RESOURCES

The construction and demolition activities area are likely to increase the potential for pollutants and hydrocarbons (i.e., oils, fuels) to migrate into stormwater. Without the implementation of site-specific management actions, the introduction of such pollutants may adversely impact the water quality of nearby surface waters such as Weekly Pond (Figure 3-2). Any potential impacts are addressed below.

Potential impacts associated with water quality are related to the potential for increased rate and volume of stormwater runoff, increased amounts of sediment and pollutant runoff during and after rain events. The construction and demolition activities may also present the potential for increased sedimentation. The addition of new impervious surfaces may also increase the pollutants carried off site by stormwater runoff (sheet flow). Proper stormwater management designs and erosion control measures would minimize the potential for erosion and adverse water quality impacts (FDEP, 2002). The amount of impervious surface will vary slightly from the Proposed Action and Alternative 1. Tables 4-5 and 4-6, respectively present this data.

4.6.1 Proposed Action (6-Dorm Plan)

The Proposed Action would result in an additional 1.63 acres of impervious surface (Table 4-5). Extensive developed (urban) area and vegetative cover exists between the proposed work site and Weekly Pond (Figure 3-2). This ground cover acts as a pollution filter, intercepting surface water runoff before it reaches Weekly Pond. Vegetative cover adjacent to these resources will help capture sediment during runoff events and minimize potential impacts (FDEP, 2002). Weekly Pond is located 1,499 feet from the proposed work site, allowing sufficient distance for interception and treatment of runoff.

Table 4-5. Total Impervious Surface from the Proposed Action

Construction Activity	New Impervious Surface	
Net increase from construction and demolition	38,333 Square feet	0.88 Acre
New parking area	32,670 Square feet	0.75 Acre
TOTAL	71,003 Square feet	1.63 Acres

NOTE: 43,560 square feet = 1 acre

To comply with state mandates, the Proposed Action would involve the design of a stormwater management plan and associated permitting (discussed in greater detail in Section 4.5, Infrastructure). Effective stormwater management would prevent direct discharge of stormwater runoff to any surface waters, thereby reducing potentially adverse impacts to water quality (FDEP, 2002). The construction and demolition activities associated with the Proposed Action must not adversely impact the existing stormwater infrastructure at the site. Construction activities would require coordination between the Proponent, 96 CEG/CEVCE, and the contractor to obtain all stormwater permits and any necessary utility extension permits, which they would need to obtain prior to the commencement of any ground-disturbing activities. No impacts to water quality are expected under the Proposed Action, given the attainment of all required permits and the implementation of site-specific management action (detailed in Chapter 5).

4.6.2 Alternative 1 (12-Dorm Plan)

Alternative 1 would result in an additional 1.65 acres of impervious surface (Table 4-6). Weekly Pond is located 1,499 feet from the proposed work site, allowing sufficient distance for interception and treatment of runoff (as detailed above in the Proposed Action).

Table 4-6. Total Impervious Surface from Alternative 1

Construction Activity	New Impervious Surface	
Net increase from construction and demolition	39,204 Square feet	0.90 Acre
New parking area	32,670 Square feet	0.75 Acre
TOTAL	71,874 Square feet	1.65 Acres

NOTE: 43,560 square feet = 1 acre

To comply with state mandates, Alternative 1 would include compliance with all stormwater regulations identified under the Proposed Action (above). Unlike the Proposed Action, demolition of the existing NCO Club would occur under this alternative. The construction and demolition activities associated with this alternative would not adversely impact the existing stormwater infrastructure at the site. No impacts to water quality are expected from

Alternative 1, given the attainment of all required permits and the implementation of site-specific management actions (detailed in Chapter 5).

4.6.3 No Action Alternative

Under the No Action Alternative, implementation of the activities identified as components of the Dormitory Master Plan would not occur. Therefore, no adverse affects are anticipated to water quality under this alternative.

4.6.4 Cumulative Impacts

Several on-going and future projects are planned for Eglin AFB; however, the nature of these projects are not expected to place additional cumulative demands on water quality. Coordination between project planners and 96 CEG/CEVCE would help protect Eglin's current water quality and ensure no adverse impacts occur. As a result, no cumulative impacts associated with water quality are expected to occur.

4.6.5 Management Actions

The potential for impacts to water resources is expected to be minimal. Thus, no mitigations would be required. However, this assumes that either the Air Force or developer would implement BMPs as a condition of permitting requirements. While specific requirements would not be determined until the permitting process is completed, the list of BMPs for controlling erosion during or after construction activities is extensive. A few typical BMPs that are likely to be required include:

- Installation of entrenched sediment fence (silt fence) and staked hay bales prior to, during, and throughout the entire construction process to prevent fill material and runoff from entering surface waters.
- Inclusion of stormwater features designed to control runoff associated with the additional impervious surface, land clearing, grading, and excavating.
- The design and construction of paved surface areas to incorporate a slope sufficient enough to direct potential runoff away from wetland areas; all drainage improvements and related infrastructure should be designed and constructed in such a manner that the natural hydrologic conditions are not severely altered.
- Restoration of native vegetation and grading of demolition sites as soon as practicable to reduce soil erosion.
- Once design plans are available, performance of a comprehensive FDEP-approved hydrologic calculation to effectively calculate the volume of stormwater runoff associated with post-construction conditions and allow for proper design and implementation of stormwater management systems.
- Training of all construction personnel regarding proper management techniques.

4.7 SOCIOECONOMIC RESOURCES

4.7.1 Proposed Action (6-Dorm Plan)

Under the Proposed Action the Air Force would demolish dormitories 17, 19, and 20 and construct six (6) three-story facilities and two common buildings. Currently, 783 airmen live in dormitory housing on Eglin AFB. The Proposed Action would displace 288 airmen into the surrounding communities throughout the phases of the project (Dorsey, 2005). Although a redistribution of persons within the region would occur, the total number of residents would remain the same.

Over the period of 1990–2002 an average of almost 1,750 housing units were constructed annually in Okaloosa County. Within the three-county ROI the average exceeded 3,900 annually. Currently, a number of residential developments that exceed 200 units are planned and under construction in the northern section of Okaloosa County as well as in Walton County. The displacement of military personnel would be temporary; therefore, no impacts on population and housing are expected under the Proposed Action.

The local community has recently felt additional pressures due to the recent effects of the 2004 and 2005 hurricane seasons. The effects of the storm seasons' widespread damage displaced over one million people. Displacement of these individuals may have an affect in reducing the rental inventories available in Okaloosa County; however, based on Emerald Coast Realtors Association data there has only been an eight percent decrease in the available rental inventory from 2004 totals as of October 2005 (Roberts, 2005). Based on DoD provided information, BAH (basic allowance for housing) varies according to rank. Airmen that would typically reside in the dormitories at Eglin AFB could anticipate receiving, on average, an allowance of approximately $700 per month (DoD, 2005). This allowance is in addition to annual military salaries. Since the average cost of rental property is $547 (Roberts, 2005), military provided BAH would be sufficient to cover rental costs and the rental inventory does not appear to be significantly impacted from 2004 to 2005. Eglin AFB does not anticipate that implementation of the Proposed Action would have an impact on the local housing economy.

Local communities in the ROI would benefit from the job opportunities associated with construction and demolition activities over the period of the project. The Air Force anticipated that the local and regional construction industry is capable of meeting the demand for labor associated with construction of the dormitories. Permanent relocation of workers (and their dependents) over the 10-year construction time period directly attributable to implementation of the project is not expected.

Project-related expenditures on materials and services, as well as the direct workers personal spending, provide an added stimulus to the regional economy. Additionally, spending would increase in the region from the relocation of personnel living on-base to areas off-base. This displacement of military personnel during the life of the project would increase revenue into the surrounding counties from financial obligations associated with rent and utilities, as well as the potential for off-base spending on household goods and supplies. However, additional spending associated with the displacement of military personnel into areas surrounding Eglin AFB would be temporary.

4.7.2 Alternative 1 (12-Dorm Plan)

Under Alternative 1 the Air Force would construct 12 single-story facilities as well as demolish dormitories 17, 19, 20 and the "old" NCO Club. Impacts under Alternative 1 would be the same as under the Proposed Action; therefore, there would not be an adverse impact on the overall housing economy and the impact on construction positions would be beneficial. The project related expenditures on materials and services, as well as the personal spending by direct workers, provide an added stimulus to the regional economy.

4.7.3 No Action Alternative

Under the No Action Alternative, Eglin AFB would continue to operate and maintain the existing dorm facilities and would not demolish existing dormitories or construct new facilities. This alternative would not benefit employment or the local economy. Additionally, no impacts would occur to the local housing market. However, airmen would continue to be housed in marginal facilities that may result in lower morale and decreased retention rates. This may reduce the effectiveness of personnel potentially affecting the USAF mission at Eglin AFB.

4.7.4 Cumulative Impacts

There is no proposed increase in personnel associated wit the Proposed Action. Cumulative socioeconomic impacts from the proposed project are related to employment and economic expenditures associated with implementation of this project and other projects identified in Section 2.7. Impacts to the socioeconomic environment from the Proposed Action and alternatives would be beneficial, although minor. Overall, given the scope of BRAC and the housing privatization project, this project represents only a small percentage of the overall economic impact from a cumulative standpoint, and no adverse cumulative socioeconomic impacts are anticipated.

4.7.5 Management Actions

In accordance with EO 13101, Affirmative Procurement (buying products containing recycled materials) should be used if economical and practical.

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5. PLANS, PERMITS, AND MANAGEMENT ACTIONS

The following is a list of plans, permits, and management actions associated with the Proposed Action. The environmental impact analysis process for this EA identified the need for these requirements which were developed through cooperation between the proponent and interested parties involved in the Proposed Action. These requirements are, therefore, to be considered as part of the Proposed Action and implementation would be through the Proposed Action's initiation. The proponent is responsible for adherence to and coordination with the listed entities to complete the plans, permits, and management actions.

5.1 PLANS

- Site Design Plan.
- Stormwater Pollution Prevention Plan.
- Stormwater, Erosion, and Sedimentation Control Plan.
- Permits and authorization through FDOT and/or Okaloosa County prior to construction.

5.2 PERMITS

- Storm Water Facility Design and Construction Permit.
- Generic Permit for Storm Water Discharge from Construction Activities that Disturb One or More Acres of Land (NPDES permit).
- Wastewater Permit: The Air Force and its contractor would be required to obtain a Constructing a Domestic Wastewater Collection/Transmission System (62-604 FAC).
- Storm Sewer Permit: The Air Force and its contractor would be required to adhere to Phase II Municipal Separate Storm Sewer Systems (MS4) to permitting requirements.
- Base Civil Engineering Work Clearance Request, AF Form 103, 19940801 (*EF-V3*).
- Utility Extension Permits.
- Comply with Eglin's Title V permit and all applicable requirements.
- Coastal zone consistency determination in accordance with Florida's Coastal Zone Management Act (CZMA).

5.3 MANAGEMENT ACTIONS

5.3.1 Hazardous Materials/Waste

- State notification must be made prior to demolition and a copy of this notice must be sent to 96 CEG/CEVCP at least 10 days prior to demolition. Also, remove any PCB items prior to demolition (such as light ballasts). If there are any questions contact Stephen Kauffman with 96 CEG/CEVCP at 882-7665.

- Coordinate disposal of hazardous materials with 96 CEG/CEVCP. A Toxicity Characteristic Leaching Procedure (TCLP) test is required for materials associated with demolished buildings.
- Contact 96 CEG/CEVCP Hazardous Materials office about all hazardous materials used in construction projects. All paints, solvents, and adhesives must be approved, documented, and tracked in the Installation Hazardous Materials Management Program.
- Adhere to management requirements outlined within associated regulations and Eglin AFB's Hazardous Waste Management Plan. The Air Force requires contractors to adhere to State and Federal regulations for hazardous waste management.
- Adhere to requirements in Rule 62-257, FAC, Asbestos Program.
- Contact the 96th Civil Engineering Group, Environmental Restoration Branch (96 CEG/CEVR) if unusual soil coloration and/or odors are detected and if small arms debris is found in these construction locations.
- Fluorescent bulbs in the buildings that are demolished must be packaged securely and labeled with "Universal Waste, Mercury Lamps" for recycling as determined in Rule 62-737.300, FAC.
- Asbestos fibers are a cancer and lung disease hazard. Applicable state or local jurisdictions require current licenses for the removal, transporting, and disposal of asbestos-containing materials.

5.3.2 Soil/Erosion

- Where applicable, rough grade slopes or use terrace slopes to reduce erosion.
- The Air Force requires inspection and maintenance of BMPs under the stormwater construction general permit.

5.3.3 Water Resources

- Permits and site plan designs would include site-specific management requirements for erosion and sediment control.
- Entrenched silt fencing and staked hay bales would be installed and maintained along the perimeter of demolition debris stockpile areas.
- Demolition debris stockpiles would be removed in a timely manner.
- Waste receptacles, including dumpsters, would be covered to prevent rainwater from entering.
- Drinking water and wastewater collection/transmission lines would be properly abandoned during demolition of existing facilities.
- Inclusion of stormwater features designed to control runoff associated with the additional impervious surface, land clearing, grading, and excavating.
- Restoration of native vegetation and grading of demolition sites as soon as practicable to reduce soil erosion.

- Adopt conservation practices such as low flush toilets, low-flow faucets, and aerators for sinks/showers to preserve water supplies.

5.3.4 Infrastructure

- Coordination with local utility providers is required for water, sewer, electrical, and natural gas utility hook-ups and installation.
- Coordination with 96 CEG prior to ground disturbance activities is required to identify buried utility lines.
- Coordination with the FDEP to obtain all necessary permits and authorizations prior to any ground disturbance activities.
- Utilization of sustainable development principles and practices as set forth in the *Air Force Sustainability Facilities Guide*.
- Landscaping efforts will utilize native plants per the requirements of EO 13148, Greening the Government through Leadership in Environmental Management per the requirements of Section 207, Environmental and Economically Beneficial Landscaping, which requires the USAF to promote sustainable management of federal lands through the implementation of cost-effective, environmentally sound landscaping practices, and programs to reduce averse impacts to the natural environment.

5.3.5 Air Quality

- Reasonable precautions would be taken to minimize fugitive particulate emissions during ground-disturbing/construction activities in accordance with Rule 62-296, FAC.

5.3.6 Socioeconomics

- In accordance with EO 13101, Affirmative Procurement (buying products containing recycled materials) should be used if economical and practical.

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6. LIST OF PREPARERS

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Name/Title	Project Role	Qualifications
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Sherri Baker-Littman Cultural Resources Specialist & Geoscientist B.A. Anthropology M.S. Geology& Geophysics	Author	6 years geology, 15 years environmental science
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Becky Garrison Technical Editor	Technical Editor	25 years editing experience
Bob Penrose Environmental Specialist B.S. Biology	Author	1 year experience
Henry McLaurine Air Quality Scientist M.S. Biology B.S. Environmental Science	Project Manager, Author	12 years air quality experience
Michael Nation Environmental Scientist B.S. Environmental Science/Policy, Minor in Geography A.A. General Science	Geographic Information System (GIS)	4 years experience as an environmental consultant; GIS Arc View applications
Amy Sands Environmental Scientist B.S. Environmental Studies	Author	2.5 years environmental science
Dave Robau Wetland Scientist B.S. Environmental Science	Author	3 years environmental science

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7. REFERENCES

40 CFR 1508.7. Council On Environmental Quality Guidance On NEPA Analyses.

Bruechner, P., 2002. Personal communication between Paul Bruechner (Okaloosa Gas Company) and SAIC regarding natural gas supply to Eglin Air Force Base. 10 January 2002.

Department of Defense (DOD), 2005. Per Diem, Travel and Transportation Allowance Committee. Website accessed at: https://secureapp2.hqda.pentagon.mil/perdiem/bah.html.

Dorsey, R., 2005. Personal communication between Mr. Roddy Dorsey, 96 CEG/CEMHD, and SAIC regarding occupancy and displacement of airmen occupying dorms. 13 October 2005.

Eglin AFB Storage Tank Management Inventory Database, Sept. 2005.

Finegold, L. S., C. S. Harris, and H. E. vonGlerke, 1994. Community Annoyance and Sleep Disturbance: Updated Criteria for Assessing the Impacts of General Transportation Noise on People. Noise Control Engineering Journal. January-February.

Florida Administrative Code (FAC) 62-204.240 (1)(a-b) Ambient Air Quality Standards; Florida Department of Environmental Protection. March 1996.

———— 62-621; Florida Department of Environmental Protection.

Florida Department of Environmental Protection (FDEP), 2002. Technical Report. Florida Stormwater, Erosion, and Sedimentation Control Inspector's Manual.

————, 2004. Florida's Environmental Protection, State Air Monitoring Reports. Available on the Internet at http://www.dep.state.fl.us/air/ozone/RollingAttain.asp; Ad Hoc Air Monitoring Report 2000 – 2004.

Florida Statutes 403.0885, Florida Department of Environmental Protection.

Kauffman, S., 2004. Personal communication with Stephen Kauffman and SAIC (Kathryn Tucker) regarding lead-based paint and asbestos disposal, 24 February 2004.

————, 2005. Personal communication with Stephen Kauffman and SAIC (Bob Penrose) regarding lead-based paint and asbestos in the project area. 23 September 2005.

Lawhon, 2005. Personal communication with Kathy Lawhon, Eglin Military Family Housing Office and SAIC (Jerron Barnett) regarding Eglin personnel living in military housing. 27 September 2005.

Occupational Safety and Health Administration (OSHA), 1983. Occupational Noise Exposure Standard. CFR, Title 29, Part 1910, Section 1910.95 (29 CFR 1910.95).

Roberts, J., 2005. Personal communication with Ms. Jeannie Roberts, JME Realty - Fort Walton Beach, and SAIC regarding availability and pricing of rental units. 20 October 2005.

Shipley Associates, 1995. *How to Write Quality EIS's and EA's: Guidelines for NEPA Documents*; pgs. 34-35. Mr. Larry H. Freeman, PhD.

U.S. Air Force, 1996. *Environmental Baseline Study - Resource Appendices* (SAIC). AFDTC (Air Force Test Development Center), 46 TW/XPE, Range Environmental Planning Office, Eglin Air Force Base, FL. 32542-6808.

References

U.S. Air Force, 1997. AFDTC Plan 32-6, Eglin AFB Oil and Hazardous Substance Pollution Contingency Plan, Eglin AFB, FL, May 1997.U.S. Air Force, 1998. 307 Red Horse EA Noise Survey, Kelly Air Force Base, TX. 27 Oct. 1998.

————, 2002. *Eglin Air Force Base Environmental Restoration Program Management Action Program*. October.

————, 2003. *Environmental Baseline Study Resource Appendices Volume I*. Eglin Air Force Base. December.

————, 2005a. *Air Force Sustainability Guide*. Air Force Center for Environmental Excellence. http://www.afcee.brooks.af.mil/dc/dcd/arch/rfg/index.html.

U.S. Census Bureau, 2004. United States Census Bureau, American FactFinder, http://factfinder.census.gov/.

U.S. Department of Agriculture, 1995. *Soil Survey of Okaloosa County, Florida.* Soil Conservation Service.

U.S. Department of Commerce (USDOC), 2004. United States Department of Commerce, Bureau of Economic Analysis, http://www.bea.doc.gov/bea/regional.

U.S. Department of Transportation, 1995. *Transit Noise and Vibration Impact Assessment.* Office of Planning, Federal Transit Administration, Washington, D.C.

U.S. Environmental Protection Agency (USEPA), 1974. Information on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety. EPA Report 550/9-74-004.

————, 1990. Draft New Source Review Workshop Manual: *Prevention of Significant Deterioration and Nonattainment Permitting*, Office of Air Quality Planning and Standards. October.

————, 2004. 40 CFR 50, www.access.gpo.gov/nara/cfr/cfr-retrieve.html#page1. November 1971 with multiple amendments through 30 July 2004.

APPENDIX A

AIR QUALITY

AIR QUALITY

This appendix presents an overview of the Clean Air Act (CAA) and the state of Florida air quality program. The appendix also discusses emission factor development and calculations including assumptions employed in the air quality analyses.

Air Quality Program Overview

National Ambient Air Quality Standards:

In order to protect public health and welfare, the U.S. Environmental Protection Agency (USEPA) has developed numerical concentration-based standards or National Ambient Air Quality Standards (NAAQS) for six "criteria" pollutants (based on health-related criteria) under the provisions of the CAA Amendments of 1970. There are two kinds of NAAQS: primary and secondary standards. Primary standards prescribe the maximum permissible concentration in the ambient air to protect public health including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards prescribe the maximum concentration or level of air quality required to protect public welfare including protection against decreased visibility, damage to animals, crops, vegetation, and buildings *(40 CFR Part 51).*

The CAA gives states the authority to establish air quality rules and regulations. These rules and regulations must be equivalent to, or more stringent than, the federal program. The Division of Air Resource Management within the Florida Department of Environmental Protection (FDEP) administers the state's air pollution control program under authority of the Florida Air and Water Pollution Control Act and the Environmental Protection Act.

Florida has adopted the NAAQS except for sulfur dioxide (SO_2). USEPA has set the annual and 24-hour standards for SO_2 at 0.03 parts per million (ppm) (80 micrograms per cubic meter [$\mu g/m^3$]) and 0.14 ppm (365 $\mu g/m^3$), respectively. Florida has adopted the more stringent annual and 24-hour standards of 0.02 ppm (60 $\mu g/m^3$) and 0.1 ppm (260 $\mu g/m^3$), respectively. In addition, Florida has adopted the national secondary standard of 0.50 ppm (1,300 $\mu g/m^3$). Federal and state of Florida ambient air quality standards are presented in Table A-1 *(FAC).*

Based on measured ambient air pollutant concentrations, the USEPA designates areas of the U.S. as having air quality better than (attainment) or worse than (nonattainment) the NAAQS and unclassifiable. Those that cannot be classified on the basis of available information as meeting or not meeting the NAAQS for a particular pollutant are "unclassifiable" and are treated as attainment until proven otherwise. Some attainment areas can be further classified as "maintenance" areas. Maintenance areas are those areas previously classified as nonattainment and have successfully reduced air pollutant concentrations below the standard. Maintenance areas are under special maintenance plans and must operate under some of the nonattainment area plans to ensure compliance with the NAAQS. All areas of Florida are in compliance with the NAAQS.

Table A-1. National and State Ambient Air Quality Standards

Criteria Pollutant	Averaging Time	Federal Primary NAAQS[1,2,3]	Federal Secondary NAAQS[1,2,4]	Florida Standards
Carbon Monoxide (CO)	8-hour 1-hour	9 ppm[5] (10 mg/m^3)[6] 35 ppm (40 mg/m^3)	No standard No standard	9 ppm (10 $\mu g/m^3$)[7] 35 ppm (40 $\mu g/m^3$)
Lead (Pb)	Quarterly	1.5 $\mu g/m^3$	1.5 $\mu g/m^3$	1.5 $\mu g/m^3$
Nitrogen Dioxide (NO_2)	Annual	0.053 ppm (100 $\mu g/m^3$)[7]	0.053 ppm (100 $\mu g/m^3$)	0.053 ppm (100 $\mu g/m^3$)
Ozone (O_3)	1-hour[8] 8-hour[9]	0.12 ppm (235 $\mu g/m^3$) 0.08 ppm (157 $\mu g/m^3$)	0.12 ppm (235 $\mu g/m^3$) 0.08 ppm (157 $\mu g/m^3$)	0.12 ppm (235 $\mu g/m^3$) 0.08 ppm (157 $\mu g/m^3$)
Particulate Matter ≤10 Micrometers (PM_{10})	Annual 24-hour[10]	50 $\mu g/m^3$ 150 $\mu g/m^3$	50 $\mu g/m^3$ 150 $\mu g/m^3$	50 $\mu g/m^3$ 150 $\mu g/m^3$
Particulate Matter ≤2.5 Micrometers ($PM_{2.5}$)	Annual 24-hour[11]	15 $\mu g/m^3$ 65 $\mu g/m^3$	15 $\mu g/m^3$ 65 $\mu g/m^3$	15 $\mu g/m^3$ 65 $\mu g/m^3$
Sulfur Dioxide (SO_2)	Annual 24-hour 3-hour	0.03 ppm (80 $\mu g/m^3$) 0.14 ppm (365 $\mu g/m^3$) No standard	No standard No standard 0.50 ppm (1300 $\mu g/m^3$)	0.02 ppm (60 $\mu g/m^3$) 0.10 ppm (260 $\mu g/m^3$) 0.50 ppm (1300 $\mu g/m^3$)

Source: FAC, 1996.

1. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year.
2. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 millimeter (mm) of mercury; ppm refers to parts per million by volume.
3. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
4. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
5. ppm = parts per million
6. mg/m^3 = milligrams per cubic meter
7. $\mu g/m^3$ = micrograms per cubic meter
8. The ozone one-hour standard still applies to areas that were designated nonattainment when the ozone eight-hour standard was adopted in July 1997. The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than 1 averaged over a three-year period.
9. The 8-hour ozone standard is attained when the 3-year average of the annual fourth-highest daily maximum 8-hour average is not greater than 0.08 ppm.
10. The PM_{10} 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
11. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

Each state is required to develop a state implementation plan (SIP) that sets forth how CAA provisions would be imposed within the state. The SIP is the primary means for the implementation, maintenance, and enforcement of the measures needed to attain and maintain the NAAQS within each state and includes control measures, emissions limitations, and other provisions required to attain and maintain the ambient air quality standards. The purpose of the SIP is twofold. First, it must provide a control strategy that would result in the attainment and

maintenance of the NAAQS. Second, it must demonstrate that progress is being made in attaining the standards in each nonattainment area.

In attainment areas, major new or modified stationary sources of air emissions on and in the area are subject to Prevention of Significant Deterioration (PSD) review to ensure that these sources are constructed without causing significant adverse deterioration of the clean air in the area. A major new source is defined as one that has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specific major source thresholds: 100 or 250 tons/year based on the source's industrial category. A major modification is a physical change or change in the method of operation at an existing major source that causes a significant "net emissions increase" at that source of any regulated pollutant. Table A-2 provides a tabular listing of the PSD significant emissions rate (SER) thresholds for selected criteria pollutants *(USEPA, 1990)*. (PSD SER and increment thresholds have been established for PM_{10}, but not for $PM_{2.5}$.). It should be noted that mobile source emissions as well as those associated with construction activities are excluded from the PSD applicability process.

The goal of the PSD program is to: 1) ensure economic growth while preserving existing air quality, 2) protect public health and welfare from adverse effects which might occur even at pollutant levels better than the NAAQS, and 3) preserve, protect, and enhance the air quality in areas of special natural recreational, scenic, or historic value, such as national parks and wilderness areas. The CAA requires sources subject to PSD review to obtain a permit before commencing construction. The permit process requires an extensive review of all other major sources within a 50-mile radius and all Class I areas within a 62-mile radius of the facility. Emissions from any new or modified source must be controlled using best available control technology. The air quality, in combination with other PSD sources in the area, must not exceed the maximum allowable incremental increase identified in Table A-3. National parks and wilderness areas are designated as Class I areas, where any appreciable deterioration in air quality is considered significant. Class II areas are those where moderate, well-controlled industrial growth could be permitted. Class III areas allow for greater industrial development.

Table A-2. Criteria Pollutant Significant Emissions Rate Increases Under PSD Regulations

Pollutant	Significant Emissions Rate (tons/year)
PM_{10}	15
Total Suspended Particulate (TSP)	25
SO_2	40
NO_x	40
Ozone (VOC)	40
CO	100

Source: Title 40 CFR Part 51

Table A-3. Federal Allowable Pollutant Concentration Increases Under PSD Regulations

Pollutant	Averaging Time	Maximum Allowable Concentration ($\mu g/m^3$)		
		Class I	Class II	Class III
PM_{10}	Annual	4	17	34
	24-hour	8	30	60
SO_2	Annual	2	20	40
	24-hour	5	91	182
	3-hour	25	512	700
NO_2	Annual	2.5	25	50

Source: Title 40 CFR Part 51
$\mu g/m^3$ = Micrograms per cubic meter

Florida has a statewide air quality-monitoring network that is operated by both state and local environmental programs *(FDEP, 2003).* The air quality is monitored for carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide. The monitors tend to be concentrated in areas with the largest population densities and not all pollutants are monitored in those areas. The air quality monitoring network is used to identify areas where the ambient air quality standards are being violated and plans are needed to reduce pollutant concentration levels to be in attainment with the standards; also included are areas where the ambient standards are being met but plans are necessary to ensure maintenance of acceptable levels of air quality in the face of anticipated population or industrial growth.

The end-result of this attainment/maintenance analysis is the development of local and statewide strategies for controlling emissions of criteria air pollutants from stationary and mobile sources. The first step in this process is the annual compilation of the ambient air monitoring results, and the second step is the analysis of the monitoring data for general air quality exceedances of the NAAQS as well as pollutant trends.

The FDEP Northwest District operates monitors in several northwest counties, including Bay, Escambia, Holmes, Leon, Santa Rosa, and Wakulla counties. Over the years of record there have been exceedances (pollutant concentration greater than the numerical standard) of an NAAQS. However, there has not been a violation (occurrence of more exceedances of the standard than is allowed within a specified time period) of an ambient standard *(FDEP, 2003).* Currently, the state of Florida is attainment for all criteria pollutants.

Regulatory Comparisons

In order to evaluate the air emissions and their impact to the overall region of influence (ROI). The emissions associated with the construction activities were compared to the total emissions on a pollutant-by-pollutant basis for the ROI's 1999 NEI data. Potential impacts to air quality are then identified as the total emissions of any pollutant that equals 10 percent or more of the ROI's emissions for that specific pollutant. The 10 percent criteria approach is used in the General Conformity Rule as an indicator for impact analysis for nonattainment and maintenance areas and although the entire state of Florida is attainment, the General Conformity Rule's impact analysis was utilized to provide a consistent approach to evaluating the impact of construction emissions.

To provide a conservative evaluation, the impacts screening in this analysis, used a more restrictive criteria than required in the General Conformity Rule. Rather than comparing emissions from construction activities to regional inventories (as required in the General

Conformity Rule), emissions were compared to the individual counties potentially impacted, which are a smaller area.

Project Calculations:

Construction Emissions:

Construction emissions calculations were completed using the calculation methodologies described in the U.S. Air Force Air Conformity Applicability Model (ACAM). As previously indicated, a conformity determination is not required since Okaloosa County is designated "attainment," the ACAM was used to provide a level of consistency with respect to emissions factors and calculations.

The ACAM evaluates the individual emissions from different sources associated with the construction phases. These sources include grading activities, asphalt paving, construction worker trips, stationary equipment (e.g. saws and generators), and mobile equipment emissions *(U.S. Air Force, 2003).* Phase I construction incorporates those activities associated with grading activities while Phase II construction includes the actual construction activities.

Certain assumptions were made to develop the air quality analysis. It was assumed that an area 25 percent larger than the total square footage necessary for the overall construction footprint will be graded. This increase would ensure that a conservative approach was used to calculate emissions. Based on these assumptions, the construction emissions were calculated using the methodology expressed below.

Grading Activities:

Grading activities are divided into grading equipment emissions and grading operation emissions. Grading equipment calculations are combustive emissions from equipment engines and are ascertained in the following manner:

$VOC = .22 \text{ (lbs/acre/day)} * \text{Acres} * DPY_1 / 2000$

$NO_x = 2.07 \text{ (lbs/acre/day)} * \text{Acres} * DPY_1 / 2000$

$PM_{10} = .17 \text{ (lbs/acre/day)} * \text{Acres} * DPY_1 / 2000$

$CO = .55 \text{ (lbs/acre/day)} * \text{Acres} * DPY_1 / 2000$

$SO_2 = .21 \text{ (lbs/acre/day)} * \text{Acres} * DPY_1 / 2000$

Where Acres = number of gross acres to be graded during Phase I construction.

DPY_1 = number of days per year during Phase I construction which are used for grading

2000 = conversion factor from pounds to tons

All emissions are represented as tons per year.

Grading operations are calculated using a similar equation from the Sacramento Air Quality Management District and the South Coast Air Quality Management Districts *((Sacramento*

Metropolitan Air Quality Management District, 1994 and South Coast Air Quality Management District, 1993 as cited in U.S. Air Force, 2003). These calculations include grading and truck hauling emissions.

PM_{10} (tons/yr) = 60.7 (lbs/acre/day) * Acres * DPY_1 / 2000

Where Acres = number of gross acres to be graded during Phase I construction.

DPY_1 = number of days per year during Phase I construction which are used for grading

2000 = conversion factor from pounds to tons

Calculations used in the environmental assessment assumed that there were no controls used to reduce fugitive emissions. Also, it was assumed that construction activities would occur within 365 days and grading activities would represent 16 percent of that total. Therefore, 60 days was the duration established for grading operations. Emissions factors were derived from the Sacramento Air Quality Management District and the South Coast Air Quality Management District *(Sacramento Metropolitan Air Quality Management District, 1994 and South Coast Air Quality Management District, 1993 as cited in U.S. Air Force, 2003).*

Asphalt Paving:

VOC emissions are released during asphalt paving and are calculated using the following methodology:

VOC_{PT} (tons/yr) = (2.62 lbs/acre) * Acres Paved / 2000

Acres Paved = total number of acres to be paved at the site during the year.

2000 = conversion factor from pounds to tons

It was assumed that a minimum of 19 percent of the overall area (5.4 acres) to be used for the project would be paved with asphalt. The specific emissions factors used in the calculations were available through Sacramento Air Quality Management and the South Coast Air Quality Management Districts *(Sacramento Metropolitan Air Quality Management District, 1994 and South Coast Air Quality Management District, 1993 as cited in U.S. Air Force, 2003).*

Construction Worker Trips:

Construction worker trips during the construction phases of the project are calculated and represent a function of the square feet of construction.

Trips (trips/day) = .42 (trip/1000 ft^2/day) * Area of construction

Total daily trips are then applied to the following factors depending on the corresponding years.

Year 2005 through 2009:

VOC_E = .016 * Trips

NOx_E = .015 * Trips

$PM10_E$ = .0022 * Trips

CO_E = .262 * Trips

Year 2010 and beyond:

VOC_E = .012 * Trips

NOx_E = .013 * Trips

$PM10_E$ = .0022 * Trips

O_E = .262 * Trips

E = emissions

To convert from pounds per day to tons per year:

VOC (tons/yr) = VOC_E * DPY_{II}/2000

No_x (tons/yr) = NOx_E * DPY_{II}/2000

PM_{10}(tons/yr) = $PM10_E$ * DPY_{II}/2000

CO (tons/yr) = CO_E * DPY_{II}/2000

Where: Area of Construction = total square footage to be constructed in the given year of construction.

2000 = conversion factor from pounds to tons

DPY_{II} = number of days per year during Phase II construction activities.

Stationary Equipment:

Emissions from stationary equipment occur when gasoline powered equipment (e.g. saws, generators, etc.) is used at the construction site.

VOC = .198 * (GRSQFT) * DPY_{II}/ 2000

NOx = .137 * (GRSQFT) * DPY_{II}/ 2000

PM10 = .004 * (GRSQFT) * DPY_{II}/ 2000

CO = 5.29 * (GRSQFT) * DPY_{II}/ 2000

SO_2 = .007 * (GRSQFT) * DPY_{II}/ 2000

Where GRSQF = Gross square feet of the construction area impacted during phase II

DPY_{II} = number of days per year during Phase II construction

2000 = conversion factor from pounds to tons

Emissions factors were derived from the Sacramento Air Quality Management District and the South Coast Air Quality Management District *(Sacramento Metropolitan Air Quality Management District, 1994 and South Coast Air Quality Management District, 1993 as cited in U.S. Air Force, 2003).*

Mobile Equipment:

Mobile equipment emissions include pollutant releases associated with forklifts, dump trucks, etc., used during Phase II construction.

$VOC = .17 * (GRSQFT) * DPY_{II}/ 2000$

$NO_x = 1.86 * (GRSQFT) * DPY_{II}/ 2000$

$PM_{10} = .15 * (GRSQFT) * DPY_{II}/ 2000$

$CO = .78 * (GRSQFT) * DPY_{II}/ 2000$

$SO_2 = .23 * (GRSQFT) * DPY_{II}/ 2000$

Where: GRSQF = Gross square feet of the area to be constructed during Phase II

DPY_{II} = number of days per year during Phase II construction

2000 = conversion factor from pounds to tons

Emissions factors were derived from the Sacramento Air Quality Management District and the South Coast Air Quality Management District *(Sacramento Metropolitan Air Quality Management District, 1994 and South Coast Air Quality Management District, 1993 as cited in U.S. Air Force, 2003).*

National Emissions Inventory

The National Emissions Inventory (NEI) is operated under USEPA's Emission Factor and Inventory Group, which prepares the national database of air emissions information with input from numerous State and local air agencies, from tribes, as well as from industry. The database contains information on stationary and mobile sources that emit criteria air pollutants and hazardous air pollutants (HAPs). The database includes estimates of annual emissions, by source, of air pollutants in each area of the country, on an annual basis. The NEI includes emission estimates for all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands. Emission estimates for individual point or major sources (facilities), as well as county level estimates for area, mobile and other sources, are available currently for years 1996 and 1999 for criteria pollutants, and HAPs.

Criteria air pollutants are those for which USEPA has set health-based standards. Four of the six criteria pollutants are included in the NEI database:

Carbon Monoxide (CO)

Nitrogen Oxides (NO_x)

Sulfur Dioxide (SO_2)

Particulate Matter (PM_{10} and $PM_{2.5}$)

The NEI also includes emissions of VOCs, which are ozone precursors, emitted from motor vehicle fuel distribution and chemical manufacturing, as well as other solvent uses. VOCs react with nitrogen oxides in the atmosphere to form ozone. The NEI database defines three classes of criteria air pollutant sources:

- Point sources - stationary sources of emissions, such as an electric power plant, that can be identified by name and location. A "major" source emits a threshold amount (or more) of at least one criteria pollutant, and must be inventoried and reported. Many states also inventory and report stationary sources that emit amounts below the thresholds for each pollutant.
- Area sources - small point sources such as a home or office building, or a diffuse stationary source, such as wildfires or agricultural tilling. These sources do not individually produce sufficient emissions to qualify as point sources. Dry cleaners are one example, i.e., a single dry cleaner within an inventory area typically would not qualify as a point source, but collectively the emissions from all of the dry cleaning facilities in the inventory area may be significant and therefore must be included in the inventory.
- Mobile sources - any kind of vehicle or equipment with a gasoline or diesel engine, airplane, or ship.

The main sources of criteria pollutant emissions data for the NEI are:

- For electric generating units - USEPA's Emission Tracking System / Continuous Emissions Monitoring Data (ETS/CEM) and Department of Energy fuel use data.
- For other large stationary sources - state data and older inventories where state data was not submitted.
- For on-road mobile sources - the Federal Highway Administration's (FHWA's) estimate of vehicle miles traveled and emission factors from USEPA's MOBILE Model.
- For non-road mobile sources - USEPA's NONROAD Model.
- For stationary area sources - state data, USEPA-developed estimates for some sources, and older inventories where state or USEPA data was not submitted.
- State and local environmental agencies supply most of the point source data. USEPA's Clean Air Market program supplies emissions data for electric power plants.

References:

Florida Administrative Code (FAC) 62-204.240 (1)(a-b) Ambient Air Quality Standards; Florida Department of Environmental Protection. March 1996.

Florida Department of Environmental Protection (FDEP), 2003. Florida's Environmental Protection, State Air Monitoring Reports. http://www.dep.state.fl.us/air/ozone/RollingAttain.asp; Ad Hoc Air Monitoring Report 2000 – 2004.

40 CFR 51, Code of Federal Regulations, Title 40, Part 51. www.access.gpo.gov/nara/cfr/cfr-retrieve.html#page1.

U.S. Air Force, 2003, U.S. Air Force Air Conformity Applicability Model Technical Documentation, Air Force Center for Environmental Excellence. May 2003.

U.S. Environmental Protection Agency (USEPA), 1990. *Draft New Source Review Workshop Manual: Prevention of Significant Deterioration and Nonattainment Permitting.* Office of Air Quality Planning and Standards. October 1990.

U.S. Environmental Protection Agency, 1999. *1999 National Emissions Inventory Database*; Office of Air Quality Planning and Standards, Technology Transfer Network, Clearing House for Inventories and Emissions Factors, http://www.epa.gov/ttn/chief/net/1999inventory.html. February 1999.

APPENDIX B

WETLAND PROTECTION REGULATIONS

WETLAND PROTECTION REGULATIONS

In an effort to protect important wetland resources, a number of federal, state and Air Force regulations have been instituted. The following is a brief discussion of some of the predominant regulations regarding wetlands conservation.

Clean Water Act. In 1972, Congress passed the Federal Water Pollution Control Act Amendments, also known as the Clean Water Act (CWA). Section 401 puts the authority in the hands of the state to grant, deny, or condition issuance of federal permits that may result in a discharge to U.S. waters. This section allows states a means of protecting wetlands and offsetting unavoidable impacts by obtaining mitigation proposals prior to granting 401 certification.

Section 402 of the CWA works to control water pollution from point sources by requiring National Pollution Discharge Elimination System (NPDES) permits from any point source that discharges any pollutant to U.S. waters.

Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (USACE) and authorized state agency (FDEP) for the discharge of dredged or fill material into the waters of the U.S., including wetlands.

Rivers and Harbors Act 1899. The permit process derived from Section 10 of the River and Harbor Act requires authorization from the Secretary of the Army, acting through the USACE for the construction of any structure in or over any navigable water of the United States. The law applies to any dredging or disposal of dredged materials excavation, filling, re-channelization, or any other modification of a navigable water of the U.S., and applies to all structures, including the residential, commercial, and governmental boat dock and piers.

Executive Order (EO) 11990, Protection of Wetlands. In order to minimize the destruction, loss or degradation of wetlands on federal lands EO 11990 prohibits federal agencies from undertaking, providing assistance for activities, or leasing space located in wetlands unless there are no practicable alternatives and all practicable measures to minimize harm to wetlands have been implemented (1977, 42 Fed. Reg. 26961).

EO 11988, Floodplain Management. Executive Order 11988 prohibits federal agencies from the occupancy and modification of floodplains and floodplain development unless there is no practicable alternative. This EO requires federal agencies to make every effort to reduce the risk of flood loss, minimize the impact of floods on human health, safety, and welfare, and preserve the natural beneficial value of floodplains. The EO stipulates that federal agencies proposing actions in floodplains consider alternative actions to avoid adverse effects, avoid incompatible development in the floodplains, and provide opportunity for early public review of any plans or proposals. The proponent must include mitigation measures if adverse effects are unavoidable. Parts of the floodplain that are also considered wetlands will, in addition to floodplain zonings, receive protection from federal, state, and local wetland laws.

Safe Drinking Water Act. The U.S. Environmental Protection Agency approves state programs to enforce the Safe Water Drinking Act (SWDA). The SWDA's primary purpose is to stop

organic chemicals from entering drinking water systems. This is accomplished by establishing water quality standards from drinking water, monitoring public water systems, and guarding against groundwater contamination from injection wells (42 United States Code §§300f-300j-26).

Watershed Protection and Flood Protection Act. The Watershed Protection and Flood Protection Act (16 U.S.C. §§ 1001-1009), and its subsequent amendments, authorizes federal assistance for planning and carrying out projects in watershed areas for conservation and use of land and water, and flood prevention. The Act is intended to preserve, protect, and improve terrestrial and aquatic resources.

North American Wetlands Conservation Act. Under the North American Wetlands Conservation Act (16 U.S.C. §§ 4401-4414) Wetlands are afforded protection in order to maintain "healthy populations of migratory birds in North America." Under this legislation, the Act holds that wetland ecosystems provide "essential and significant habitat for fish, shellfish, and other wildlife of commercial, recreational, scientific, and aesthetic values."

Coastal Wetlands Protection Act. The Coastal Wetlands Protection Act (CWPA) aims to preserve the natural state of the coastal wetland ecosystems and to prevent destruction of these areas that are not designed to serve a higher public interest. The CWPA provides additional authority to protect tidal wetlands.

APPENDIX C

PUBLIC REVIEW

20060117003

17 January 2006

Niceville Library
206 N Partin Drive
Niceville, FL 32578-1244

RE: **Environmental Assessment Public Review**
Eglin Dormitory Master Plan on Eglin AFB, Florida

To Whom It May Concern:

Enclosed please find a copy of the Eglin Dormitory Master Plan Draft Environmental Assessment to implement a Dormitory Master Plan that allows for expansion of dormitory facilities and infrastructure through the demolition and construction of new dormitory facilities at Eglin Air Force Base. The U.S. Air Force is required by law to submit the Environmental Assessment to a library located in the proposed area for an initial public review period. This correspondence is a request on behalf of Eglin Air Force Base for placement of the Environmental Assessment in your library for a review period beginning on 23 January 2006 and concluding on 21 February 2006. At the conclusion of the 30-day review period, please return, by mail, to Mr. Henry McLaurine, SAIC, 1140 N. Eglin Parkway, Shalimar, Florida 32579.

Any questions regarding the Environmental Assessment should be directed to Mr. Mike Spaits, 96 CEG/CEVPA, Eglin Air Force Base, at (850) 882-2878. Thank you very much for your assistance.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Henry McLaurine
Technical Lead

Enclosure

Science Applications International Corporation
1140 N. Eglin Parkway | Shalimar, FL 32579 | tel: 850.651.1053 | fax: 850.651.0775 | www.saic.com

20060117004

17 January 2006

Ms. Trisha Gould
Ft. Walton Beach Library
185 Miracle Strip Parkway, SE
Ft. Walton Beach, FL 32548-6614

RE: **Environmental Assessment Public Review**
Eglin Dormitory Master Plan on Eglin AFB, Florida

Dear Ms. Gould:

Enclosed please find a copy of the Eglin Dormitory Master Plan Draft Environmental Assessment to implement a Dormitory Master Plan that allows for expansion of dormitory facilities and infrastructure through the demolition and construction of new dormitory facilities at Eglin Air Force Base. The U.S. Air Force is required by law to submit the Environmental Assessment to a library located in the proposed area for an initial public review period. This correspondence is a request on behalf of Eglin Air Force Base for placement of the Environmental Assessment in your library for a review period beginning on 23 January 2006 and concluding on 21 February 2006. At the conclusion of the 30-day review period, please return, by mail, to Mr. Henry McLaurine, SAIC, 1140 N. Eglin Parkway, Shalimar, Florida 32579.

Any questions regarding the Environmental Assessment should be directed to Mr. Mike Spaits, 96 CEG/CEVPA, Eglin Air Force Base, at (850) 882-2878. Thank you very much for your assistance.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Henry McLaurine
Technical Lead

Enclosure

Science Applications International Corporation
1140 N. Eglin Parkway | Shalimar, FL 32579 | tel: 850.651.1053 | fax: 850.651.0775 | www.saic.com

Public Notification

In compliance with the National Environmental Policy Act, Eglin Air Force Base announces the availability of the Draft Environmental Assessment (EA) for RCS 05-77, the Dormitory Master Plan at Eglin Air Force Base, Florida, for public review.

The Proposed Action would include the demolition of dormitories 17, 19 and 20 (115,255 total square feet) and construction of six three-story facilities to accommodate 288 occupants (approximately 16,251 square feet each; 99,126 square feet total). Additionally, the Air Force proposes construction of a parking lot to alleviate parking concerns, and anticipates completion of all project-related activities within a 10-year time frame. While the exact location of each footprint within the area is unknown, environmental impact analysis assumed that construction would take place anywhere within this existing dormitory area and identified environmental constraints and potential impacts to facilitate the design and planning process.

Your comments on this Draft EA are requested. Letters or other written or oral comments provided may be published in the Final EA. As required by law, the Air Force will address comments in the Final Dormitory Master Plan EA and make them available to the public. Any personal information provided will be used only to identify your desire to make a statement during the public comment period or to fulfill requests for copies of the Final EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EA. However, only the names and respective comments of respondent individuals will be disclosed. Personal home addresses and phone numbers will not be published in the Final EA.

Copies of the Draft EA may be reviewed at the Fort Walton Beach Public Library, 185 SE Miracle Strip Parkway, Fort Walton Beach, Florida and the Niceville Library, 206 Partin Drive, Niceville, Florida. Copies will be available for review from 30 January, 2006, through 15 February, 2006. Comments must be received by 18 February, 2006.

For more information or to comment on the Proposed Action, contact: Mr. Mike Spaits, 96 CEG/CEV-PA, 501 De Leon Street, Suite 101, Eglin AFB, FL 32542-5133, or email: spaitsm@eglin.af.mil. Tel: (850) 882-2878. Fax: (850) 882-6284.

MEMO

6 March 2006

FROM: 96th CEG/CEV-PA

TO: **C**EVSP

SUBJECT: **PUBLIC NOTICE Environmental Assessment For "Dormitory Master Plan" Eglin AFB, Florida**

A public notice was published in the *Northwest Florida Daily News* on Jan. 29th, 2006 to disclose completion of the Draft EA, selection of the preferred alternative, and request comments during the 15-day pre-decisional comment period.

The 15-day comment period ended on Feb. 15th, with the comments required to this office not later than Feb. 18th, 2006.

No comments were received during this period.

//SIGNED//
Mike Spaits
Environmental Public Affairs

APPENDIX D

FEDERAL AGENCY
COASTAL ZONE MANAGEMENT ACT (CZMA)
NEGATIVE DETERMINATION

FEDERAL AGENCY COASTAL ZONE MANAGEMENT ACT (CZMA) NEGATIVE DETERMINATION

Introduction

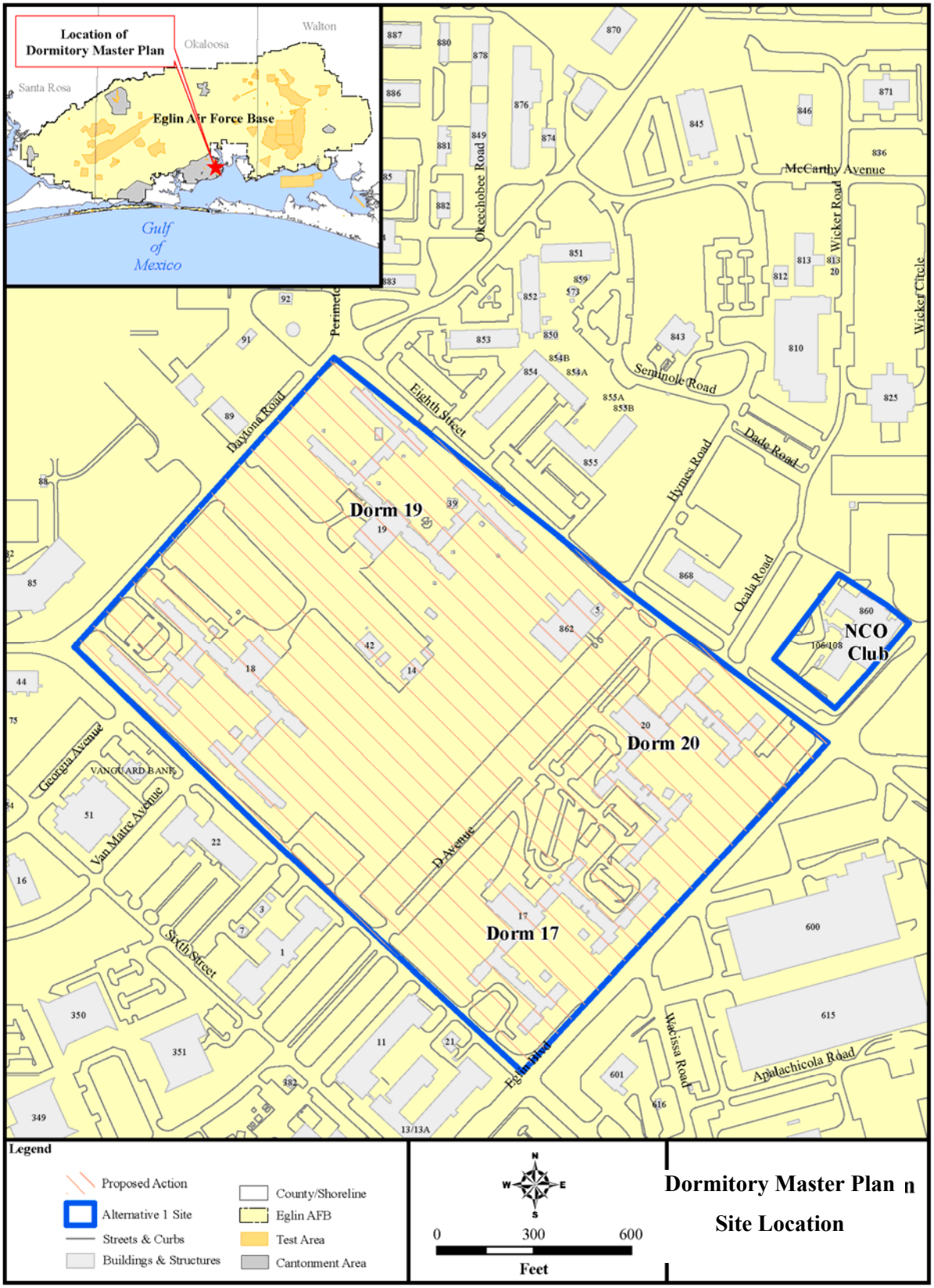
This document provides the State of Florida with the U.S. Air Force's Negative Determination under Section 307 of the Coastal Zone Management Act, 16 U.S.C. § 1456, and 15 C.F.R. Part 930.35. The information in this Negative Determination is provided pursuant to 15 C.F.R. Section 930.35 (b).

Proposed Federal Agency Action

The Proposed Action is for the Air Force proponent (796 Civil Engineering Squadron/Civil Engineering Planning Office [796 CES/CEOP]) to implement a Dormitory Master Plan (DMP) that allows for expansion of dormitory facilities and infrastructure through the demolition and construction of new dormitory facilities at Eglin Air Force Base (AFB). The DMP will outline the requirements for the demolition of older dormitory structures and the construction of new buildings and infrastructure at existing sites located on Eglin AFB Main Base (Figure 1). Under the Proposed Action, the DMP will involve the demolition of three existing dormitories and construction of six three-story dormitory buildings over a period of 10 years to cover the need for approximately 288 occupants. The DMP will also involve improvement of associated roads and construction of parking areas.

Federal Review

After review of the Florida Coastal Management Program and its enforceable policies, the U.S. Air Force has made a determination that this activity is one that will not have an effect on the state of Florida coastal zone or its resources.


Location of Dormitory Master Plan
Okaloosa
Walton
Santa Rosa
Eglin Air Force Base
Gulf of Mexico
Dorm 19
Dorm 20
Dorm 17
NCO Club
McCarthy Avenue
Okeechobee Road
Wicker Road
Wicker Circle
Seminole Road
Eighth Street
Daytona Road
Hymes Road
Dade Road
Ocala Road
Georgia Avenue
Van Matre Avenue
D Avenue
Sixth Street
Eglin Blvd
Wacissa Road
Apalachicola Road
VANGUARD BANK
Legend
Proposed Action
Alternative 1 Site
Streets & Curbs
Buildings & Structures
County/Shoreline
Eglin AFB
Test Area
Cantonment Area
N
W
E
S
0
300
600
Feet
Dormitory Master Plan n
Site Location

Florida Coastal Management Program Consistency Review

Statute	Consistency	Scope
Chapter 161 *Beach and Shore Preservation*	The proposed project would not adversely affect beach and shore management, specifically as it pertains to: - The Coastal Construction Permit Program. - The Coastal Construction Control Line (CCCL) Permit Program. - The Coastal Zone Protection Program. All land activities would occur on federal property.	Authorizes the Bureau of Beaches and Coastal Systems within FDEP to regulate construction on or seaward of the states' beaches.
Chapter 163, Part II *Growth Policy; County and Municipal Planning; Land Development Regulation*	The Proposed Action would not affect local government comprehensive plans.	Requires local governments to prepare, adopt, and implement comprehensive plans that encourage the most appropriate use of land and natural resources in a manner consistent with the public interest.
Chapter 186 *State and Regional Planning*	The Proposed Action would not have a negative affect on state plans for water use, land development or transportation.	Details state-level planning requirements. Requires the development of special statewide plans governing water use, land development, and transportation.
Chapter 252 *Emergency Management*	The Proposed Action would not increase the state's vulnerability to natural disasters. The Proposed Action would not impact emergency response and evacuation procedures.	Provides for planning and implementation of the state's response to, efforts to recover from, and the mitigation of natural and manmade disasters.
Chapter 253 *State Lands*	All activities would occur on federal property.	Addresses the state's administration of public lands and property of this state and provides direction regarding the acquisition, disposal, and management of all state lands.
Chapter 258 *State Parks and Preserves*	The Proposed Action would not affect state parks, recreational areas and aquatic preserves.	Addresses administration and management of state parks and preserves (Chapter 258).
Chapter 259 *Land Acquisition for Conservation or Recreation*	The Proposed Action would not affect tourism and outdoor recreation.	Authorizes acquisition of environmentally endangered lands and outdoor recreation lands (Chapter 259).
Chapter 260 *Recreational Trails System*	The Proposed Action would not affect opportunities for recreation on state lands.	Authorizes acquisition of land to create a recreational trails system and to facilitate management of the system (Chapter 260).
Chapter 375 *Multipurpose Outdoor Recreation; Land Acquisition, Management, and Conservation*	The Proposed Action would not affect opportunities for recreation on state lands.	Develops comprehensive multipurpose outdoor recreation plan to document recreational supply and demand, describe current recreational opportunities, estimate need for additional recreational opportunities, and propose means to meet the identified needs (Chapter 375).

Statute	Consistency	Scope
Chapter 267 *Historical Resources*	There would be no impact to cultural resources as a result of the Proposed Action.	Addresses management and preservation of the state's archaeological and historical resources.
Chapter 288 *Commercial Development and Capital Improvements*	The Proposed Action would occur on federal property. The Proposed Action would not have an effect on future business opportunities on state lands, or the promotion of tourism in the region.	Provides the framework for promoting and developing the general business, trade, and tourism components of the state economy.
Chapter 334 *Transportation Administration*	The proposed project would not have an impact on transportation.	Addresses the state's policy concerning transportation administration (Chapter 334).
Chapter 339 *Transportation Finance and Planning*	The proposed project would have no effect on the finance and planning needs of the state's transportation system.	Addresses the finance and planning needs of the state's transportation system (Chapter 339).
Chapter 370 *Saltwater Fisheries*	The Proposed Action would not have an effect on saltwater fisheries.	Addresses management and protection of the state's saltwater fisheries.
Chapter 372 *Wildlife*	The Proposed Action would not have an effect to wildlife resources.	Addresses the management of the wildlife resources of the state.
Chapter 373 *Water Resources*	The Proposed Action will likely increase the potential for impact from the increased rate and volume of stormwater runoff, due to an increase in impervious surface area. In order to limit the effects the Proposed Action would have on water resources, best management practices will be used to control erosion and stormwater runoff. Florida Statute Chapter 62-25 and Florida Statute Chapter 62-621 will be followed for permitting requirements.	Addresses the state's policy concerning water resources.
Chapter 376 *Pollutant Discharge Prevention and Removal*	The Proposed Action will not have an impact to the transfer, storage, or transportation of pollutants.	Regulates transfer, storage, and transportation of pollutants, and cleanup of pollutant discharges.
Chapter 377 *Energy Resources*	The Proposed Action would not affect energy resource production, including oil and gas, and the transportation of oil and gas.	Addresses regulation, planning, and development of energy resources of the state.
Chapter 380 *Land and Water Management*	The Proposed Action would occur on federally owned lands. Under the Proposed Action, development of state lands with regional (i.e., more than one county) impacts would not occur. No changes to coastal infrastructure such as capacity increases of existing coastal infrastructure, or use of state funds for infrastructure planning, designing or construction would occur.	Establishes land and water management policies to guide and coordinate local decisions relating to growth and development.
Chapter 381 *Public Health, General Provisions*	The Proposed Action does not involve the construction of an on-site sewage or treatment system.	Establishes public policy concerning the state's public health system.
Chapter 388 *Mosquito Control*	The Proposed Action would not affect mosquito control efforts.	Addresses mosquito control effort in the state.
Chapter 403 *Environmental Control*	The Proposed Action would not exceed the 10 percent criterion established as an impact threshold; therefore, no adverse impacts are expected to the air quality.	Establishes public policy concerning environmental control in the state.

Penrose Robert M CTR USAF 96 CEG/CEVSN

From: Milligan, Lauren [Lauren.Milligan@dep.state.fl.us]
Sent: Friday, January 20, 2006 8:37 AM
To: Penrose Robert M CTR USAF 96 CEG/CEVSN
Cc: Miller Bob CIV USAF 96 CEG/CEVSNW; Nunley Jerry M CTR USAF 96 CEG/CEVSN; Atchison William P CTR USAF 96 CEG/CEVSN
Subject: RE: Department of the Air Force - Negative Determination - Dormitory Master Plan on Main Base, Eglin Air Force Base, Okaloosa County, Florida

Mr. Robert M. Penrose
Eglin AFB - 96 CEG/CEVSN
107 Highway 85 North
Niceville, FL 32578

RE: Department of the Air Force - Negative Determination - Dormitory Master Plan on Main Base, Eglin Air Force Base - Okaloosa County, Florida.
SAI # FL200601201817

Dear Bob:

The Florida State Clearinghouse is in receipt of your notice regarding the U.S. Air Force's proposal to develop a plan for demolition of three older dormitory buildings and construction of six new dormitory buildings plus associated infrastructure over a ten-year period on Eglin Air Force Base. Department staff does not object to the Air Force's negative determination and agrees that the proposed action meets the requirements of 15 CFR 930.35.

Staff notes the Air Force's intention to comply with the requirements of Rules 62-25 and 62-621, Florida Administrative Code. For further information, please contact Mr. Cliff Street, P.E., in the DEP Northwest District Office in Pensacola at (850) 595-8300, ext. 1135.

Thank you for the opportunity to review this proposal. If you have any questions or need further assistance, please contact me at (850) 245-2170.

Sincerely,

Lauren P. Milligan, Environmental Consultant
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Blvd, Mail Station 47
Tallahassee, Florida 32399-3000
ph. (850) 245-2170
fax (850) 245-2190

From: Penrose Robert M CTR USAF 96 CEG/CEVSN [mailto:robert.penrose.ctr@eglin.af.mil]
Sent: Wednesday, January 18, 2006 3:56 PM
To: Milligan, Lauren
Cc: Miller Bob CIV USAF 96 CEG/CEVSNW; Nunley Jerry M CTR USAF 96 CEG/CEVSN; Atchison William P CTR USAF 96 CEG/CEVSN

1/20/2006

Subject: Department of the Air Force - Negative Determination - Dormitory Master Plan on Main Base, Eglin Air Force Base, Okaloosa County, Florida

Ms. Lauren P. Milligan, Environmental Consultant
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Boulevard, Mail Station 47
Tallahassee, FL 32399-4700

Re: Department of the Air Force – Negative Determination – Dormitory Master Plan on Main Base, Eglin Air Force Base, Okaloosa County, Florida

Dear Lauren:

Attached is the US Air Force's proposal to provide FDEP with details for the Dormitory Master Plan on Main Base, Eglin AFB. We are submitting this CZMA Negative Determination under 15 C.F.R. 930.35. Please consider a five-day review period on this project and a response via e-mail.

If you require additional information or have any questions or concerns, I can be reached at (850) 883-1154.

Thank you,

Bob Penrose
Environmental Scientist, SAIC
Natural Resources Section, Eglin AFB
Office: 850-883-1154
Fax: 850-882-5321
penrose@eglin.af.mil

1/20/2006