

# INSTALLATION DEVELOPMENT ENVIRONMENTAL ASSESSMENT AT SCOTT AIR FORCE BASE, ILLINOIS FINAL

---



## HEADQUARTERS AIR MOBILITY COMMAND



May 2007

---

*Printed on 100% Recycled Paper*

## Report Documentation Page

Form Approved  
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE

**MAY 2007**

2. REPORT TYPE

3. DATES COVERED

**00-00-2007 to 00-00-2007**

4. TITLE AND SUBTITLE

**Installation Development Environmental Assessment at Scott Air Force Base, Illinois**

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

**Science Applications International Corporation, 8421 St. John Industrial Drive Suite 200, St. Louis, MO, 63114**

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT

**Approved for public release; distribution unlimited**

13. SUPPLEMENTARY NOTES

14. ABSTRACT

Scott AFB utilizes numerous wing approved plans to project installation development requirements. These plans propose demolition, construction, renovation, and infrastructure improvement activities intended to ensure that the installation can sustain its current and future national security operations and mission-readiness status. These activities include installation development projects contained in the Scott AFB General Plan and the community of all existing approved development plans. Scott AFB seeks to improve the continuing installation development process by evaluating, in a single EA, all actions proposed in the Scott AFB wing-approved community of plans for installation development. The scope of this Installation Development EA (IDEA) includes an evaluation of alternatives for the various projects and analysis of the cumulative effects on the natural and man-made environments. The Proposed Action includes numerous projects, such as new facility construction facility upgrades, facility repair and renovation, utilities upgrades, community living upgrades infrastructure upgrades, demolition of aging facilities, and recreational upgrades that would be completed/implemented during the next five years. The Proposed Action also includes projects approved in the BRAC 2005 process for Scott AFB. The intent of this IDEA is to address the Proposed Action of implementing installation development actions as found in the community of all existing approved management plans for the installation concerning continuing development on Scott AFB. Through this IDEA, Scott AFB provides a constraints-based environmental impact analysis of installation development actions projected for the installation over the next five years. A constraints approach enables Scott AFB to evaluate environmental concerns that exist throughout the installation and those unique to specific areas of the installation. The analysis draws from the knowledge gained from extensive recent evaluations for similar types of projects to determine the direct, indirect, and cumulative effects of projects that will be completed as part of the installation's development. This EA has been prepared to evaluate the Proposed Action and alternatives, including the No Action Alternative. No potentially significant impacts were determined to be associated with the Proposed Action during the course of preparing this IDEA and therefore the Finding of No Significant Impact is appropriate. Resource areas addressed in the EA include noise, land use, air quality, safety, geological resources, water resources, biological resources, cultural resources, socioeconomics and environmental justice, hazardous materials and waste management, and infrastructure. The EA was made available to the public for comments between March 14 and April 30, 2007.

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:

a. REPORT  
**unclassified**

b. ABSTRACT  
**unclassified**

c. THIS PAGE  
**unclassified**

17. LIMITATION OF ABSTRACT

**Same as Report (SAR)**

18. NUMBER OF PAGES

**158**

19a. NAME OF RESPONSIBLE PERSON

**THIS PAGE INTENTIONALLY LEFT BLANK**

*FINAL*

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**

**ENVIRONMENTAL ASSESSMENT (EA)  
OF INSTALLATION DEVELOPMENT AT  
SCOTT AIR FORCE BASE, ILLINOIS**

---

**INTRODUCTION**

In an effort to improve installation planning and to streamline National Environmental Policy Act (NEPA) compliance, the 375th Airlift Wing (375 AW) and Headquarters (HQ) Air Mobility Command (AMC) have initiated an evaluation in this Environmental Assessment (EA) of all foreseeable and reasonable planned and programmed projects for the next five years. Since the establishment of Scott Air Force Base (AFB), as with all other U.S. Air Force (USAF) installations, a continuing activity of installation development has been occurring. Every year in the history of the installation, structures have been demolished, new facilities constructed, and infrastructure upgraded. This document will constitute an Installation Development Environmental Assessment (or "IDEA"). The intent of this IDEA is to address the Proposed Action of implementing installation development actions with emphasis on avoiding the environmentally sensitive areas on Scott AFB.

The scope of the IDEA includes an evaluation of alternatives for the various projects and analysis of the cumulative effects on the natural and man-made environments. The Proposed Action includes numerous projects, such as new facility construction, facility upgrades, facility repair and renovation, utilities upgrades, community living upgrades, infrastructure upgrades, demolition of aging facilities, and recreational upgrades that would be completed/implemented during the next five years. This Proposed Action also includes the projects approved in the 2005 Base Realignment and Closure (BRAC) process for Scott AFB.

**PURPOSE OF AND NEED FOR THE PROPOSED ACTION**

The purpose of the Proposed Action is to implement installation development projects on Scott AFB as found in the community of all existing wing-approved plans, such as the General Plan. The Scott AFB community of plans was examined to provide a consolidated list of projects that are planned and programmed over the next five years for the continued physical development of the installation to support air mobility and unified command missions. These plans provide a programmed road map for future development of the installation to accommodate future mission and facility requirements.

The need for the Proposed Action is to be able to meet current and future mission requirements and national security objectives associated with Scott AFB. This would involve meeting ongoing mission requirements that necessitate the repair and upgrade of facilities and infrastructure, prepare the installation to accept additional missions from current BRAC actions, and support the morale and welfare of the warfighter.

**DESCRIPTION OF THE PROPOSED ACTION**

The Proposed Action is to implement continuing installation development projects as found in the community of all existing approved development plans for Scott AFB. The projects analyzed in the IDEA fall under three categories: facilities demolition projects, facilities construction projects (to include renovations, alterations, and repairs), and infrastructure projects. This assessment also includes the

projects approved in the 2005 BRAC process for Scott AFB. The analysis contained in this IDEA capitalizes on the knowledge gained from previously prepared and approved Environmental Impact Analysis Process (EIAP) for similar types of projects to determine the direct, indirect, and cumulative effects of projects as an integral element of the installation's development.

***Demolition Projects.*** As part of the Proposed Action, Scott AFB proposes 25 different demolition projects that would occur over the next five years. Seven of these projects are associated with construction projects and may include the demolition of more than one building. The demolition of these facilities has been determined necessary to support the future mission requirements at Scott AFB. These facilities have been deemed too costly to repair or renovate to meet the future mission requirements of Scott AFB. Although the administrative and warehouse facilities were evaluated for re-use, none of them were deemed suitable to accommodate the future mission requirements and were recommended for demolition. The demolition of these facilities would remove approximately 793,289 ft<sup>2</sup> of impervious surfaces, minimizing the area of undisturbed land required for the proposed new facilities. The total square footage of demolished buildings is greater than the total square footage of demolished building footprint due to the demolition of multi-storied facilities.

***Construction Projects.*** The construction portion of the Proposed Action includes 17 facility construction, renovation, and alteration projects that would occur over the next five years. Implementation of these projects is necessary to support the Scott AFB future mission requirements and to comply with force protection criteria. The footprint of these facilities would occupy approximately 1.1 million ft<sup>2</sup>. In order to continue enhancing the compatibility of designated land uses at Scott AFB, the proposed new facilities would be constructed in appropriate land use areas across the installation. For example, aircraft hangars would be constructed within the Aircraft Operations and Maintenance land use area and office buildings would be constructed within the Administration, Medical and Community Service land use area.

***Infrastructure Projects.*** Scott AFB proposes seven facility infrastructure projects that would occur over the next five years to support future mission requirements and to comply with force protection requirements. Facility infrastructure projects include installation or upgrades to paved roadways, parking lots, sidewalks, utilities, recreational areas, and fences to improve the Base infrastructure capacity to meet the demands of the future. The improvements in infrastructure projects would result in approximately 161,182 ft<sup>2</sup> of new, repaired, and extended sidewalks, roads, parking lots, and sports fields.

## **SUMMARY OF ANTICIPATED ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PROPOSED ACTION**

Short-term direct minor adverse effects resulting from construction and demolition activities would occur on the noise environment, air quality, safety, geological resources, water resources, biological resources, and hazardous materials and wastes. Adverse effects associated with construction activities would be localized to the immediate area of construction and would subside following the end of construction in each area affected. Short-term indirect minor beneficial effects on socioeconomics would also occur on the local community from construction costs; however, expenditures associated with construction are short-term and would have no long-lasting community benefits.

Long-term direct minor beneficial effects on land use, safety, and infrastructure would be expected from the construction of new facilities and demolition of existing facilities on the installation.

Short-term minor adverse and long-term minor beneficial effects would be expected as a result of the removal of asbestos-containing material and lead-based paint in older buildings. All removal and abatement procedures would be in accordance with Federal, state, and local regulations. Short-term adverse effects on safety as a result of exposure to fumes could occur during construction activities in

The proposed action would avoid siting projects in wetlands and areas where threatened and endangered species are known to occur. If it is determined that future projects impose adverse effects on wetlands (i.e., if a project is sited in a delineated wetland) or threatened and endangered species (i.e., if a project would adversely affect a protected species under the Endangered Species Act), then additional NEPA analysis and agency coordination will be required.

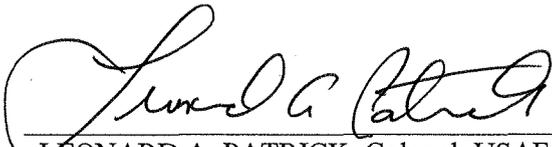
No direct or indirect effects on archaeological resources or traditional cultural properties would be expected because these areas would be avoided during all construction activities. Adverse effects on historical architectural resources are not anticipated within the Scott Field Historic District. If it is anticipated that future projects would impact cultural resources as identified in the Scott AFB Integrated Cultural Resources Management Plan, this work would be coordinated with the Illinois State Historic Preservation Office prior to initiation. Modification or destruction of historic resources would result in adverse effects, but these adverse effects will be mitigated and minimized in accordance with Section 106 of the National Historic Preservation Act. Long-term beneficial effects would be expected by increasing utility and function of historic structures and preventing deterioration.

#### **PUBLIC REVIEW AND INTERAGENCY AND INTERGOVERNMENTAL COORDINATION PLANNING**

The Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) process for the description of practicable alternative actions (DOPAA) was conducted from 27 June to 27 July, 2006. The public review of the draft EA was conducted from March 15 to April 30, 2007.

#### **FINDING OF NO SIGNIFICANT IMPACT/FINDING OF NO PRACTICABLE ALTERNATIVES**

I conclude that the environmental effects of the proposed installation development at Scott AFB are not significant, that preparation of an environmental impact statement is unnecessary, and that a finding of no significant impact (FONSI) is appropriate. The preparation of the EA is in accordance with NEPA, Council on Environmental Quality regulations, and 32 Code of Federal Regulations Part 989, as amended and is herein incorporated by reference.



LEONARD A. PATRICK, Colonel, USAF  
Director, Installations & Mission Support

20 Jun 07

Date

**THIS PAGE INTENTIONALLY LEFT BLANK**

## **ABBREVIATIONS AND ACRONYMS**

126 ARW	126 <sup>th</sup> Air Refueling Wing	CEV	Civil Engineering Flight
375 AW	375 <sup>th</sup> Airlift Wing	CFR	Code of Federal Regulations
375 CES/CEV	375 <sup>th</sup> Civil Engineering Squadron Environmental Management Flight	CWA	Clean Water Act
ACM	Asbestos-containing material	dB	decibel
AF Form	Air Force Form	dBA	decibel A-weighted
AFB	Air Force Base	DISA	Defense Information Systems Agency
AFCA	Air Force Communications Agency	DITCO	Defense Information Technology Contracting Organization
AFI	Air Force Instruction	DoD	Department of Defense
AFIERA	Air Force Institute for Environment, Safety, and Occupational Health Risk Analysis	DOPAA	Description of Proposed Action and Alternatives
AFOSH	Air Force Occupational Safety & Health	EA	Environmental Assessment
AFPD	Air Force Policy Directive	EIAP	Environmental Impact Analysis Process
AICUZ	Air Installation Compatibility Use Zone	EIS	Environmental Impact Statement
AMC	Air Mobility Command	EO	Executive Order
AOC	area of concern	EPCRA	Emergency Planning and Community Right-to-Know
AOD	Area of Development	ERP	Environmental Restoration Program
APZ	Accident Planning Zone	FEMA	Federal Emergency Management Agency
AQCR	air quality control region	FICON	Federal Interagency Committee on Noise
AST	above ground storage tank	FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
AT/FP	Anti-Terrorism/Force Protection	FONPA	Finding of No Practicable Alternative
AW	Airlift Wing	FONSI	Finding of No Significant Impact
BASH	Bird/Wildlife Aircraft Strike Hazard	ft <sup>2</sup>	square feet
bgs	below ground surface	FUB	Facility Utilization Board
BMP	best management practice	HCP	hot cargo pad
BRAC	Base Realignment and Closure	HQ	Headquarters
CAA	Clean Air Act	HUD	Housing and Urban Development
CATEX	categorical exclusion	ICRMP	Integrated Cultural Resources Management Plan
C&D	construction and demolition	IDEA	Installation Development Environmental Assessment
CEQ	Council on Environmental Quality	IDNR	Illinois Department of Natural Resources

**ABBREVIATIONS AND ACRONYMS (CONT'D)**

IICEP	Interagency and Intergovernmental Coordination for Environmental Planning	USAF	United States Air Force
INRMP	Integrated Natural Resources Management Plan	USC	United States Code
LBP	lead-based paint	USEPA	United States Environmental Protection Agency
L <sub>dn</sub>	day-night average sound level	USFWS	United States Fish and Wildlife Service
LUC	Land Use Control	UST	underground storage tank
MFH	Military Family Housing	USTC	United States Transportation Command
MILCON	Military Construction	VOQ/VAQ	visiting officers quarters and visiting airman quarters
MSA	Metropolitan Statistical Area		
MSW	municipal solid waste		
NAAQS	National Ambient Air Quality Standards		
NAF	Non-appropriated Funds		
NEPA	National Environmental Policy Act		
NHRP	National Register of Historic Places		
O&M	Operations and Maintenance		
POL	petroleum oil lubricant		
PSD	Prevention of Significant Deterioration		
QD	quantity distance		
RCRA	Resource Conservation and Recovery Act		
ROI	Region of Influence		
RTA	ready to award		
SARA	Superfund Amendments and Reauthorization Act		
SDDC	Surface Distribution Deployment Center		
SDWA	Safe Drinking Water Act		
SHPO	State Historic Preservation Office		
SR	State Route		
SWPPP	Storm Water Pollution Prevention Plan		
TACO	Tiered Approach to Corrective Action Objectives		
TMDC	Toxic Maximum Daily Load		
USACE	United States Army Corps of Engineers		

## Cover Sheet

### Final Environmental Assessment of Installation Development at Scott Air Force Base, Illinois

**Responsible Agencies:** U.S. Air Force (USAF), Headquarters Air Mobility Command (AMC), Scott Air Force Base (AFB), Illinois, and the 375th Airlift Wing (375 AW) Scott AFB, Illinois.

**Affected Location:** Scott AFB, St. Clair County, Illinois.

**Proposed Action:** Implementation of approved installation development plans, and Base Realignment and Closure (BRAC) approved actions.

**Report Designation:** Draft Environmental Assessment (EA).

**Written comments and inquiries regarding this document should be directed to** Mr. Mostafa Masseoud, HQ AMC/A7PC, 507 Symington Drive, Scott AFB, Illinois 62225-5022.

**Abstract:** Scott AFB utilizes numerous wing approved plans to project installation development requirements. These plans propose demolition, construction, renovation, and infrastructure improvement activities intended to ensure that the installation can sustain its current and future national security operations and mission-readiness status. These activities include installation development projects contained in the Scott AFB General Plan and the community of all existing approved development plans. Scott AFB seeks to improve the continuing installation development process by evaluating, in a single EA, all actions proposed in the Scott AFB wing-approved community of plans for installation development. The scope of this Installation Development EA (IDEA) includes an evaluation of alternatives for the various projects and analysis of the cumulative effects on the natural and man-made environments. The Proposed Action includes numerous projects, such as new facility construction, facility upgrades, facility repair and renovation, utilities upgrades, community living upgrades, infrastructure upgrades, demolition of aging facilities, and recreational upgrades that would be completed/implemented during the next five years. The Proposed Action also includes projects approved in the BRAC 2005 process for Scott AFB. The intent of this IDEA is to address the Proposed Action of implementing installation development actions as found in the community of all existing approved management plans for the installation concerning continuing development on Scott AFB.

Through this IDEA, Scott AFB provides a constraints-based environmental impact analysis of installation development actions projected for the installation over the next five years. A constraints approach enables Scott AFB to evaluate environmental concerns that exist throughout the installation and those unique to specific areas of the installation. The analysis draws from the knowledge gained from extensive recent evaluations for similar types of projects to determine the direct, indirect, and cumulative effects of projects that will be completed as part of the installation's development.

This EA has been prepared to evaluate the Proposed Action and alternatives, including the No Action Alternative. No potentially significant impacts were determined to be associated with the Proposed Action during the course of preparing this IDEA and therefore the Finding of No Significant Impact is appropriate. Resource areas addressed in the EA include noise, land use, air quality, safety, geological resources, water resources, biological resources, cultural resources, socioeconomics and environmental justice, hazardous materials and waste management, and infrastructure. The EA was made available to the public for comments between March 14 and April 30, 2007.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**INSTALLATION DEVELOPMENT ENVIRONMENTAL ASSESSMENT  
AT SCOTT AIR FORCE BASE, ILLINOIS  
FINAL**

---

---

**HEADQUARTERS AIR MOBILITY COMMAND  
COMMUNITY PLANNING BRANCH  
507 SYMINGTON DRIVE  
SCOTT AIR FORCE BASE, ILLINOIS 62225-5022**

**MAY 2007**

**THIS PAGE INTENTIONALLY LEFT BLANK**

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
<b>1 Purpose, Need, and Scope</b> .....	<b>1-1</b>
1.1 Background.....	1-1
1.2 Purpose of and Need for the Proposed Action.....	1-1
1.3 Scope of the Analysis.....	1-3
1.4 Summary of Key Environmental Compliance Requirements .....	1-4
1.4.1 National Environmental Policy Act (NEPA) .....	1-4
1.4.2 Integration of Other Environmental Statutes and Regulations .....	1-4
1.4.3 Interagency and Intergovernmental Coordination for Environmental Planning.....	1-5
1.5 Organization of this Document .....	1-5
<b>2 Description of the Proposed Action and Alternatives</b> .....	<b>2-1</b>
2.1 Proposed Action.....	2-1
2.1.1 Major Installation Constraints .....	2-5
2.1.2 Demolition Projects.....	2-9
2.1.3 Construction Projects .....	2-9
2.1.4 Infrastructure Projects .....	2-10
2.1.5 Summary of Proposed Activities.....	2-10
2.2 Alternatives.....	2-10
2.2.1 Alternative 1 – Acquire Additional Land Surrounding Scott AFB.....	2-11
2.2.2 Alternative 2 – Lease Additional Facilities in the Surrounding Community	2-11
2.2.3 No Action Alternative .....	2-11
2.3 Decision to be Made and Identification of the Preferred Alternative .....	2-12
<b>3 Affected Environment</b> .....	<b>3-1</b>
3.1 Noise .....	3-1
3.1.1 Definition of Resource .....	3-1
3.1.2 Existing Conditions .....	3-1
3.2 Land Use.....	3-2
3.2.1 Definition of Resource .....	3-2
3.2.2 Existing Conditions .....	3-5
3.3 Air Quality.....	3-6
3.3.1 Definition of the Resource .....	3-6
3.3.2 Existing Conditions .....	3-10
3.4 Safety.....	3-12
3.4.1 Definition of the Resource .....	3-12
3.4.2 Existing Conditions .....	3-12
3.5 Geologic Resources.....	3-17
3.5.1 Definition of the Resource .....	3-17
3.5.2 Existing Conditions .....	3-17
3.6 Water Resources.....	3-18
3.6.1 Definition of the Resource .....	3-18
3.6.2 Existing Conditions .....	3-18
3.7 Biological Resources.....	3-19
3.7.1 Definition of the Resource .....	3-19
3.7.2 Existing Conditions .....	3-20
3.8 Cultural Resources.....	3-23
3.8.1 Definition of the Resource .....	3-23
3.8.2 Existing Conditions .....	3-23

## TABLE OF CONTENTS (CONT'D)

<b><u>Section</u></b>	<b><u>Page</u></b>
3.9 Socioeconomics .....	3-24
3.9.1 Definition of the Resource .....	3-24
3.9.2 Existing Conditions .....	3-25
3.10 Infrastructure .....	3-27
3.10.1 Definition of the Resource .....	3-27
3.10.2 Existing Conditions .....	3-27
3.11 Hazardous Materials and Waste .....	3-29
3.11.1 Definition of the Resource .....	3-29
3.11.2 Existing Conditions .....	3-30
<b>4 Environmental Consequences.....</b>	<b>4-1</b>
4.1 Noise .....	4-1
4.1.1 Significance Criteria.....	4-1
4.1.2 Environmental Consequences.....	4-5
4.2 Land Use .....	4-5
4.2.1 Significance Criteria.....	4-5
4.2.2 Environmental Consequences.....	4-6
4.3 Air Quality.....	4-7
4.3.1 Significance Criteria.....	4-7
4.3.2 Environmental Consequences.....	4-8
4.4 Safety .....	4-9
4.4.1 Significance Criteria.....	4-9
4.4.2 Environmental Consequences.....	4-9
4.5 Geologic Resources .....	4-9
4.5.1 Significance Criteria.....	4-9
4.5.2 Environmental Consequences.....	4-9
4.6 Water Resources.....	4-10
4.6.1 Significance Criteria.....	4-10
4.6.2 Environmental Consequences.....	4-10
4.7 Biological Resources.....	4-11
4.7.1 Significance Criteria.....	4-11
4.7.2 Environmental Consequences.....	4-11
4.8 Cultural Resources.....	4-12
4.8.1 Significance Criteria.....	4-12
4.8.2 Environmental Consequences.....	4-12
4.9 Socioeconomics .....	4-13
4.9.1 Significance Criteria.....	4-13
4.9.2 Environmental Consequences.....	4-13
4.10 Infrastructure .....	4-14
4.10.1 Significance Criteria.....	4-14
4.10.2 Environmental Consequences.....	4-15
4.11 Hazardous Materials and Waste .....	4-16
4.11.1 Significance Criteria.....	4-16
4.11.2 Environmental Consequences.....	4-17
4.12 No Action Alternative.....	4-18
<b>5 CUMULATIVE IMPACTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES.....</b>	<b>5-1</b>
5.1 Cumulative Impacts.....	5-1

**TABLE OF CONTENTS (CONT'D)**

<b><u>Section</u></b>	<b><u>Page</u></b>
5.2 Irreversible and Irretrievable Impacts .....	5-4
<b>6 LIST OF PREPARERS .....</b>	<b>6-1</b>
<b>7 REFERENCES.....</b>	<b>7-1</b>

**APPENDICES**

- A List of Proposed Scott AFB Installation Development Projects
- B Applicable Laws, Regulations, Policies, and Planning Criteria
- C Interagency and Intergovernmental Coordination for Environmental Planning  
Correspondence and Distribution List for the DOPAA and Draft IDEA and NOA
- D Air Emission Calculations

**FIGURES**

<b><u>Figure</u></b>		<b><u>Page</u></b>
Figure 1-1.	Location of Scott AFB, IL.....	1-2
Figure 2-1.	Proposed Projects and Future Land Use .....	2-3
Figure 2-2.	Scott AFB Constraints .....	2-7
Figure 3-1.	Scott AFB Existing Noise Contours .....	3-3
Figure 3-2.	Scott AFB Existing Land Use .....	3-7
Figure 3-3.	Scott AFB Project Locations and Constraints.....	3-15

**TABLES**

<b><u>Table</u></b>		<b><u>Page</u></b>
Table 2-1.	Representative Demolition Projects .....	2-9
Table 2-2.	Representative Construction Projects .....	2-10
Table 2-3.	Representative Infrastructure Projects .....	2-10
Table 2-4.	Change in Impervious Surface .....	2-10
Table 3-1.	Percentage of Population Highly Annoyed By Elevated Noise Levels .....	3-2
Table 3-2.	Land Area Exposed To Indicated Sound Levels .....	3-2
Table 3-3.	Existing and Recommended Land Uses Surrounding Scott AFB.....	3-5
Table 3-4.	Future Land Use Area .....	3-6
Table 3-5.	National and Illinois Ambient Air Quality Standards .....	3-9
Table 3-6.	Baseline Emissions at Scott AFB, Calendar Year 2004 .....	3-11
Table 3-7.	Air Emissions Inventory St. Clair County, Illinois, and AQCR 70 Calendar Year 1999.....	3-12
Table 3-8.	Threatened and Endangered Species Documented or Likely to Occur in St. Clair County, with Assessment of Potential for Occurrence on the Installation .....	3-21
Table 3-9.	Population Changes in the Region.....	3-25
Table 3-10.	Employment of Residents in the ROI, MSA, and State of Illinois .....	3-26
Table 3-11.	Income and Poverty Level for Residents in ROI, MSA, and State of Illinois. ...	3-26
Table 3-12.	Educational Attainment for Residents in ROI, MSA, and the State of Illinois ...	3-26
Table 3-13.	Potential Environmental Justice Indicators.....	3-27
Table 3-14.	Composition of Recycled Materials in Tons .....	3-32
Table 3-15.	Summary of IRP sites near IDEA Project Sites .....	3-33
Table 4-1	Potential Impacts Associated With The Scott AFB Demolition Projects.....	4-2
Table 4-2	Potential Impacts Associated With The Scott AFB Construction Projects.....	4-3
Table 4-3	Potential Impacts Associated With The Scott AFB Infrastructure Projects.....	4-4
Table 4-4.	Typical Equipment Sound Levels .....	4-5
Table 4-5.	Proposed Construction and Infrastructure Projects Land Use .....	4-6
Table 4-6.	Construction Emissions – Proposed Action.....	4-8
Table 4-7.	Project Construction and Demolition Waste Generated for Proposed Action ..	4-16
Table 5-1.	Ongoing and Proposed Projects at Scott AFB .....	5-2

# 1 Purpose, Need, and Scope

The 375th Airlift Wing (375 AW) at Scott Air Force Base (AFB), Illinois, and Headquarters (HQ) Air Mobility Command (AMC) believe a comprehensive U.S. Air Force (USAF) Environmental Impact Analysis Process (EIAP) document would improve the continuing activity of installation development and streamline the National Environmental Policy Act (NEPA) compliance process. As a result, 375 AW and HQ AMC have initiated an evaluation in this Environmental Assessment (EA) of foreseeable and reasonable planned and programmed projects that do not impact a sensitive resource or area for the next five years. Since the establishment of Scott AFB, as with all other USAF installations, a continuing activity of installation development has been occurring. Every year in the history of the installation, structures have been demolished, new facilities constructed, and infrastructure upgraded. This document will constitute an Installation Development Environmental Assessment (or “IDEA”). The intent of this IDEA is to address the Proposed Action of implementing installation development actions as found in the community of all existing approved management plans for the installation concerning continuing development on Scott AFB. These projects are a compilation of installation development activities as described in the Scott AFB General Plan (Scott, 2004), and all known and approved Base plans. The IDEA plan coordinates land use planning and infrastructure projects, expedites project execution by using early planning, and encourages agency coordination. In addition to evaluating the projects as described, this EA will serve as a baseline for future environmental analysis of mission and training requirements.

This section of this document includes five subsections: background information on the location and mission of Scott AFB, a statement of the purpose of and the need for the Proposed Action, an overview of the scope of the analysis, a summary of key environmental compliance requirements, and an introduction to the organization of this EA.

## 1.1 Background

Scott AFB is a 2,848-acre active USAF installation under the command and control of AMC. Scott AFB is located in the southwest area of Illinois and in the north-central part of St. Clair County (**Figure 1-1**). Several small and large communities are located within close proximity of the Base. For example, the City of St. Louis is located 20 miles to the west. The City of Lebanon is located to the northeast, Bellville and Shiloh are located to the west, Mascoutah is located to the southeast and O’Fallon is located to the northwest. Scott AFB is headquarters to the 375 AW. In addition to the 375 AW, Scott AFB is also home to more than 40 on-base tenant units, including HQ AMC, Headquarters U.S. Transportation Command (HQ USTC), 18th Air Force, 126th Air Refueling Wing (126 ARW), the 932nd Airlift Wing, the Air Force Communications Agency (AFCA), the Defense Information Technology Contracting Organization (DITCO), and the Defense Information Systems Agency (DISA). The presence of the two unified commands and other tenant units creates a unique multi-service community at Scott AFB, with all branches of service represented.

The mission of Scott Air Force Base is to provide a Total Force team, engaging globally by providing priority airlift, aeromedical evacuation, combat support and medical expertise while ensuring an outstanding quality of life for all. The Base commands and controls all logistics of United States military in air, over land and across the sea. The installation’s tenants are responsible for providing United States aeromedical evacuation capabilities, fly operational support airlift in the C-21, and air refueling missions in the KC-135. Scott Air Force Base supplies forces to theater combatant commanders.

## 1.2 Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to implement installation development projects on Scott AFB as found in the community of all existing 375 AW-approved plans for development on the installation. The community of installation development plans is linked to individual funding programs such as BRAC, Military Construction (MILCON), Operations and Maintenance (O&M), Military Family Housing (MFH), Anti-Terrorism/Force Protection (AT/FP), Nonappropriated Funds (NAF), and others. Projects approved in the 2005 Base realignment and Closure (BRAC) process are also included. The Scott AFB

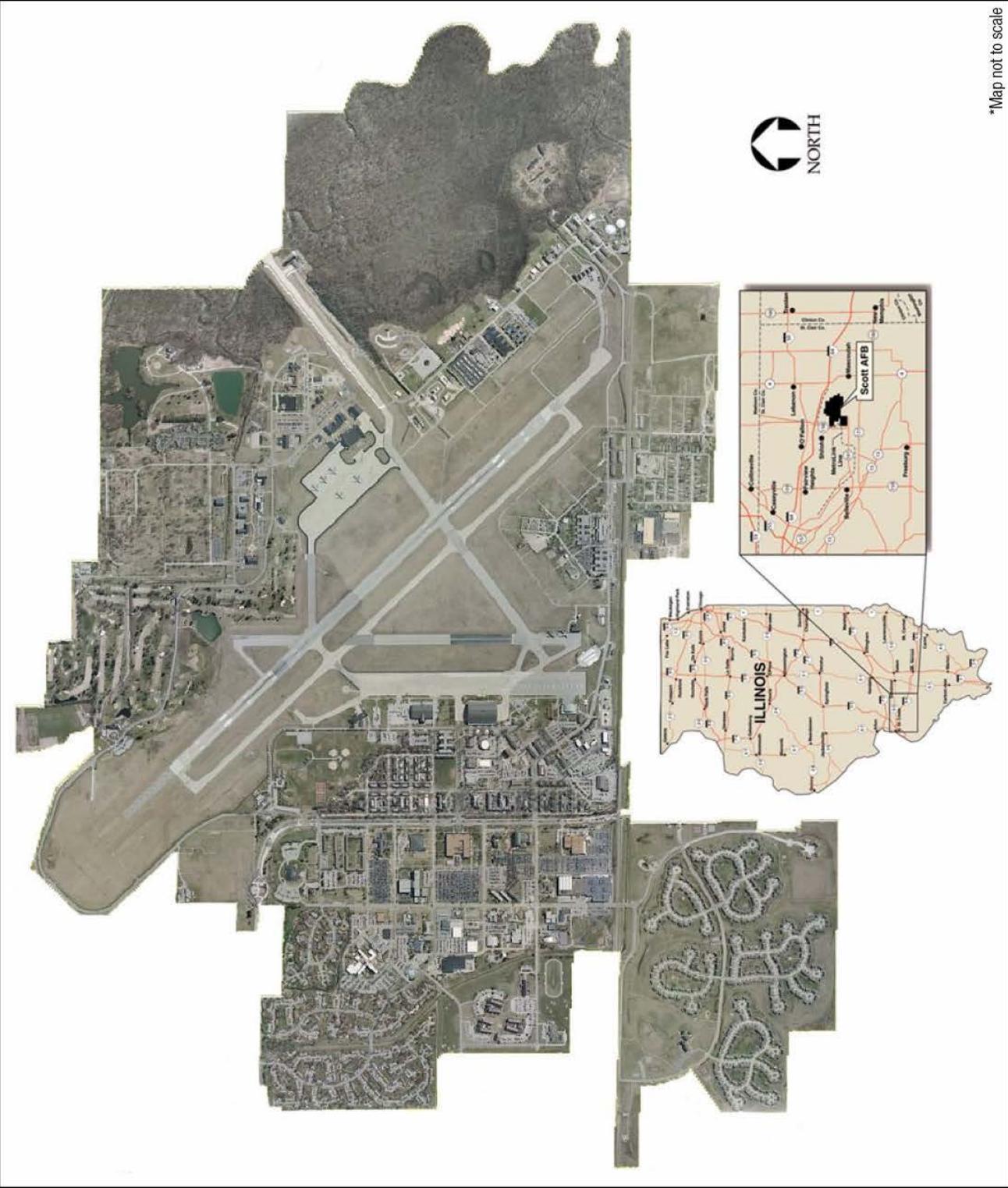


Figure 1-1. Location of Scott AFB, IL

community of wing approved plans was examined to provide a consolidated list of projects that are planned and programmed over the next five years for the continued physical development of the installation to support air mobility. These plans provide a road map for future development of the installation to accommodate future mission and facility requirements. These plans include projects for the installation's future facility development, transportation improvements, airfield and utility infrastructure enhancements, development constraints and opportunities, and land use relationships.

A compilation of projects from the Scott AFB wing-approved community of installation development plans addressed in this IDEA is presented in **Appendix A**. Some of the projects identified in the Scott AFB community of installation development plans are appropriate for the application of Categorical Exclusion (CATEX) rules and are not analyzed in this IDEA.

The need for the Proposed Action is to be able to meet current and future mission requirements and national security objectives associated with Scott AFB. This would involve meeting ongoing mission requirements that necessitate the repair and upgrade of Base utilities, pavements, and facilities; improve the efficiency and effectiveness of forces and provide Distinguished Visitor support with capability to expand; replace older, substandard facilities with new buildings that are on a par with workplaces outside the gate; provide reliable utilities, quality housing, and an efficient transportation system to support Scott AFB; and prepare to accept additional missions from current BRAC actions. In addition, morale and welfare projects that are a critical part of supporting the warfighter are included.

Continued development of infrastructure at Scott AFB must take into account future facilities construction/demolition/renovation, transportation needs, airfield alterations and enhancements, systems improvements, utilities improvements, land use planning, and development constraints and opportunities. Contributions by Scott AFB to national security, as well as prospects for the assignments of additional missions in the future, dictate that the installation implement planning for the next five years. To ensure the complete usefulness of the installation for any tasks assigned, infrastructure projects must take into account—and be capable of supporting—all functions inherent to a USAF installation. These include aircraft operations and maintenance activities, security, administration, communications, billeting, supply and storage, training, transportation, and community quality of life.

### **1.3 Scope of the Analysis**

Scott AFB seeks to improve the continuing installation development process by evaluating, in a single EA, all actions proposed in the Scott AFB wing-approved community of plans for installation development. The scope of the IDEA includes an evaluation of alternatives for the various projects and analysis of the cumulative effects on the natural and man-made environments. The Proposed Action includes numerous projects, such as new facility construction, facility upgrades, facility repair and renovation, utilities upgrades, community living upgrades, infrastructure upgrades, demolition of aging facilities, and recreational upgrades that would be completed/implemented during the next five years. The Proposed Action also includes the projects approved in the BRAC 2005 process for Scott AFB.

This IDEA evaluates the impacts of a Proposed Action that encompasses the continuing activities of demolition, construction, and infrastructure repair/improvements inherent to Scott AFB adapting to ever-evolving mission requirements. This IDEA will identify, document, and evaluate the effects of all activities involved in modernizing and upgrading Scott AFB to meet future requirements. The IDEA will present and analyze potentially adverse direct, indirect, and cumulative environmental impacts resulting from implementation of Scott AFB's installation development (the Proposed Action) with emphasis on avoiding impacts on environmentally sensitive areas.

The scope of this EA includes an evaluation of the Proposed Action and No Action alternatives and an analysis of the cumulative effects on the natural and man-made environments of Scott AFB and surrounding areas. None of the projects contained in this IDEA, as part of the Proposed Action, would impact any environmentally sensitive area such as wetlands, floodplains, endangered species sites or cultural resources. Projects that impact such areas or other sensitive environmental or socioeconomic resources would be the subject of separate NEPA analysis.

The Proposed Action, as described in **Section 2**, contains three categories of installation development: demolition, construction (to include renovations, installations, alterations and repairs) and infrastructure (fences, sidewalks, roads and utility) projects. The categorized lists of proposed projects that comprise the Proposed Action can be found in **Appendix A**. The three categories of installation development were identified for use in this document because they allow for the grouping of development initiatives by common elements of their activity and the nature of their potential environmental impacts. The projects in each category were evaluated not only based on their footprint but also for potential impacts to physical resources, socioeconomics, environmental justice, infrastructure, traffic, safety, noise, air quality, biological resources, geological resources, cultural resources, land use and hazardous materials and waste management.

**Section 4** of this IDEA presents an analysis of each of the projects contained in **Appendix A** and summarizes impacts in **Tables 4-1 – 4-3**.

The collective analysis of all appropriate projects in a single EA will streamline the NEPA review process; eliminate project fractionation and segmentation; facilitate coordination of land use planning; reduce installation, reviewing agency, and major command (MAJCOM) workloads; provide cost savings; help better evaluate potential cumulative environmental impacts; assist in maintaining a baseline for future analysis; and meet the USAF's EIAP goals.

## 1.4 Summary of Key Environmental Compliance Requirements

### 1.4.1 National Environmental Policy Act (NEPA)

NEPA is a Federal law that requires the identification and analysis of potential environmental impacts resulting from proposed Federal actions before those actions are taken. This EA has been prepared in accordance with NEPA (42 United States Code [USC] 4321-4347), the Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of NEPA* (40 CFR §§ 1500-1508), and 32 CFR Part 989, et seq., Environmental Impact Analysis Process (formerly known as *Air Force Instruction [AFI] 32-7061*). CEQ regulations mandate that all Federal agencies use a systematic interdisciplinary approach to environmental planning and the evaluation of actions that might affect the environment. This process evaluates potential environmental consequences associated with a Proposed Action and considers various alternatives to the Proposed Action. The intent of NEPA is to protect, restore, or enhance the environment through well-informed Federal decisions.

Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, states that the USAF will comply with applicable Federal, state, and local environmental laws and regulations, including NEPA. The USAF's implementing regulation for NEPA is the EIAP, 32 CFR 989, as amended.

### 1.4.2 Integration of Other Environmental Statutes and Regulations

To demonstrate compliance with NEPA, the planning and decision making process for actions proposed by the USAF and other federal agencies involves an evaluation of the Proposed Action relative to other relevant environmental statutes and regulations. Application of the NEPA process, however, does not replace procedural or substantive requirements of other environmental statutes and regulations. It addresses them collectively in the form of an EA or EIS, which enables the decision maker to hold a comprehensive view of major environmental issues and requirements associated with the Proposed Action. According to CEQ regulations, the requirements of NEPA must be integrated "with other planning and environmental review procedures required by law or by agency so that all such procedures run concurrently rather than consecutively."

The IDEA examines potential impacts of the Proposed Action and alternatives on physical resources, socioeconomics, environmental justice, infrastructure, traffic, safety, noise, air quality, biological resources, geological resources, cultural resources land use, hazardous materials and waste management. These resources were identified as being potentially affected by the Proposed Action and include applicable elements of the human environment that are prompted for review by EO, regulation, or policy. **Appendix B** contains examples of relevant laws, regulations, and other requirements that are often

considered as part of the analysis. Where useful to provide better understanding, key provisions of the statutes and EOs will be discussed in more detail in the text of the IDEA.

### 1.4.3 Interagency and Intergovernmental Coordination for Environmental Planning

One of the fundamental principles of NEPA is to provide public and agency awareness of Federal actions prior to project implementation. The premise of this principal is that the quality of Federal decisions will be enhanced if the general public and local state and Federal agencies are offered the opportunity to comment and be involved in the planning process. The Intergovernmental Coordination Act and EO 12372, Intergovernmental Review of Federal Programs, require Federal agencies to cooperate with and consider state and local views in implementing a Federal proposal. Air Force Instruction (AFI) 32-7060, Interagency and Intergovernmental Coordination for Environmental Planning (IICEP), requires the USAF to implement an IICEP process, which is used for the purpose of agency coordination and implements scoping requirements.

On June 27, 2006, AMC provided the Description of Proposed Action and Alternatives (DOPAA) for this EA to relevant Federal, state and local agencies for review and comment. These agencies were provided with a 30-day comment period through July 27, 2006. One response from the U.S. Fish and Wildlife Service was received and is included in **Appendix C**. On March 13, 2007 the Draft EA of Installation Development was sent to Federal, state and local agencies for review and comment. In addition, a copy of the Draft EA was placed at local libraries for review and a Public Notice of Availability was published in local papers on March 14, 2007. The comment period extended through April 30, 2007. The distribution list for the Draft EA and the two responses that were received are located in **Appendix C**.

## 1.5 Organization of this Document

This EA is organized into seven sections. **Sections 1 and 2** contain the Purpose and Need and the DOPAA. **Section 3** contains general descriptions of biophysical resources and baseline conditions that potentially could be affected by implementation of the Proposed Action, alternatives to the Proposed Action, or the No Action Alternative. **Section 4** presents an analysis of the environmental consequences for the range of activities (demolition, construction, infrastructure upgrades) covering future installation development. **Section 5** includes an analysis of potential cumulative, irreversible and irretrievable impacts associated with implementation of the Proposed Action. **Section 6** is the list of preparers and **Section 7** lists the sources of information used in the preparation of the document.

**Appendix A** presents the list of proposed Scott AFB installation development projects. **Appendix B** contains descriptions of applicable laws, regulations, policies, and planning criteria. **Appendix C** includes a copy of the IICEP letter mailed to the agencies for this action, the IICEP distribution list, and responses to the IICEP letter. **Appendix D** contains the air quality emission calculations.

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 2 Description of the Proposed Action and Alternatives

This section presents information on the Proposed Action related to the implementation of installation development as described in the Scott AFB wing-approved installation development plans. This assessment also includes the projects contained in the approved 2005 BRAC process recommendations for Scott AFB. **Section 2.1** describes the Proposed Action at Scott AFB. **Section 2.2** identifies alternatives to the Proposed Action, including the No Action Alternative. **Section 2.3** identifies the decision to be made and the Preferred Alternative.

### 2.1 Proposed Action

The Proposed Action is to implement continuing installation development actions as found in the community of all existing wing approved development plans for Scott AFB. This action would enable Scott AFB to meet installation development requirements and therefore ensure readiness for future national defense missions. The Proposed Action consists of 25 demolition, 17 construction, and 7 infrastructure projects. Seven of the construction projects are associated with demolition projects and have the same project number. It is intended that the projects contained in this IDEA will be reviewed during a five year rotational basis and this document may be updated or re-submitted to accommodate substantive change. If during the course of these five years, any of the projects listed in **Appendix A** change substantively, the project could be excluded from the IDEA without affecting other projects originally included in the IDEA.

The projects included as the Proposed Action have been organized into three categories (demolition, construction, and infrastructure upgrade). For the purposes of describing the specific types of projects included as the Proposed Action, representative projects from each of the categories are listed in **Sections 2.1.2, 2.1.3** and **2.1.4**. These representative projects provide examples of the various types of projects within each category. The total suite of projects that make up the Proposed Action are listed in **Appendix A** and evaluated in **Section 4**. The total potential impacts associated with implementation of each of the projects in **Appendix A** will be evaluated in this EA. Implementation of the Proposed Action would allow Scott AFB to properly plan for their future planning and budgeting cycles and ensure their readiness for future national defense and homeland security requirements.

This IDEA will be prepared using a constraints-based EIAP (**Section 2.1.1**). This approach will enable a comprehensive evaluation of environmental concerns located throughout the Base and also those concerns unique to specific areas of Scott AFB. This analysis will utilize the information obtained from extensive recent EIAP evaluations for similar types of projects to determine the direct, indirect and cumulative impacts of projects that would be completed as part of the installation's development plan.

Each project would be sited in accordance with Scott AFB's future land use categories (see **Figure 2-1**) and would result in no impact to sensitive or constrained areas. The exterior and interior design of the new and renovated facilities would follow the design guidelines outlined in the *Air Mobility Command Civil Engineering Squadron Design Guide* and the *Scott AFB Architectural Compatibility Design Plan*. Adherence to these standards would maintain a consistent and coherent architectural character throughout Scott AFB. Landscaping in the form of berms, plants, shrubs, and trees, would be used not only to enhance the professional architectural character and blend the buildings with the surrounding environment but also for Anti-Terrorism/Force Protection (AT/FP) purposes. AT/FP measures would be incorporated in accordance with the *USAF Installation Force Protection Guide*.

None of the projects identified as part of the Proposed Action in this IDEA would impact floodplains, wetlands, threatened or endangered species and or cultural resources. Each of the projects would be sited approximately as shown in **Figure 2-1**. The precise layout and design of these projects is in the early planning stages and therefore, exact surveyed locations and layouts are not finalized. Should locations and final layout of the projects differ substantially from those anticipated (in location, layout, or potential environmental consequences), further environmental analysis would be completed. If it is determined that future projects, conceived outside of this IDEA, impact sensitive resources, separate environmental analysis would be required.

**THIS PAGE INTENTIONALLY LEFT BLANK**



**THIS PAGE INTENTIONALLY LEFT BLANK**

All projects would be designed to comply with current fire and safety codes. To the extent possible, the proposed construction projects would be implemented using sustainable design concepts. Sustainable design concepts emphasize state-of-the-art strategies for site development, efficient water and energy use, and improved indoor environmental quality. Each project has been sited in a manner consistent with the Scott AFB land use categories (see **Figure 2-1**) and would consequently result in minimum impact to the natural or socioeconomic environment of Scott AFB.

### 2.1.1 Major Installation Constraints

There are a number of land use, regulatory, and mission-related constraints within the boundaries of Scott AFB that will influence and limit future development at the installation. The major constraints on Scott AFB are listed below and depicted in **Figure 2-2**. Some constraint areas overlap and therefore the acreages listed below do not add up to the actual total acreage of Scott AFB.

***Airfield Infrastructure, Flight Line, Clear Zones, and Imaginary Surfaces (617 acres).*** These areas would only allow airfield improvements and projects directly associated with airfield operations. All projects within this area must be approved by the facilities utilization board (FUB) and airfield management prior to commencing any construction-related activities.

***Wetlands (398 acres).*** It is U.S. Air Force (USAF) policy not to construct new facilities within the areas containing wetlands where practicable. To construct within areas containing wetlands, appropriate permits from state and federal regulatory agencies must be obtained. In addition, in accordance with Executive Order 11990, a Finding of No Practical Alternative (FONPA) must be prepared and approved by Headquarters Air Mobility Command (HQ AMC).

***Threatened and Endangered Species and Associated Habitats.*** One federally endangered species and two state endangered species have been documented on Scott AFB. Although one Indiana bat (*Myotis sodalis*) has been identified along Silver Creek at Scott AFB, no areas of habitat on Scott AFB have been designated as critical habitat by the United States Fish and Wildlife Service. The state endangered little blue heron (*Egretta caerulea*) and snowy egret (*Egretta thula*) have also been sighted on Scott AFB. No other federal or state-listed species are known to occur on Scott AFB.

***Cultural Resources, Historic Buildings, and Archaeological Sites (456 acres).*** The Scott AFB Historic District as listed on the National Register of Historic Places (NRHP) contains more than 100 historic buildings and encompasses approximately 76 acres of the Base. In addition to the historic district, Scott AFB contains several potential historic archaeological areas that cover approximately 380 acres. Construction within or demolition of cultural resource sites must be coordinated with the State Historic Preservation Office, FUB, and 375th Civil Engineering Squadron Environmental Management Flight (375 CES/CEV).

***Environmental Restoration Program (ERP) Sites (258 acres).*** Scott AFB contains 35 areas of concern (AOC) and ERP sites. Through the use of an ERP waiver process, new facilities may be constructed within certain ERP sites depending upon the level of contamination, clean-up efforts, and land use controls that are applied. Approval of new construction within ERP sites must be obtained by FUB, coordinated with 375 CES/CEV and approved by HQ AMC (if applicable).

***Quantity Distance (QD) arcs.*** There are several areas that are constrained by QD arcs or clear zones at Scott AFB. A QD arc is a circular area that is used as a safety buffer for weapons or explosives. The safety zone associated with the hot cargo pad (HCP) creates the largest area of the Base constrained by a QD zone. The HCP has a 1,250-foot QD clear zone that limits development in this area. The weapons storage area has a QD of 607 feet. A less restrictive QD arc of 300 feet is associated with the explosive ordnance disposal pit in the southeast corner of the Base.

***100-Year Floodplain (464 acres).*** It is USAF policy to avoid constructing new facilities within the 100-year floodplain in order to protect the functions of floodplains, minimize the potential damage to facilities, and to ensure the safety of working personnel. Any construction in the floodplain would require a zero rise study and an associated FONPA as approved by HQ AMC.

**THIS PAGE INTENTIONALLY LEFT BLANK**

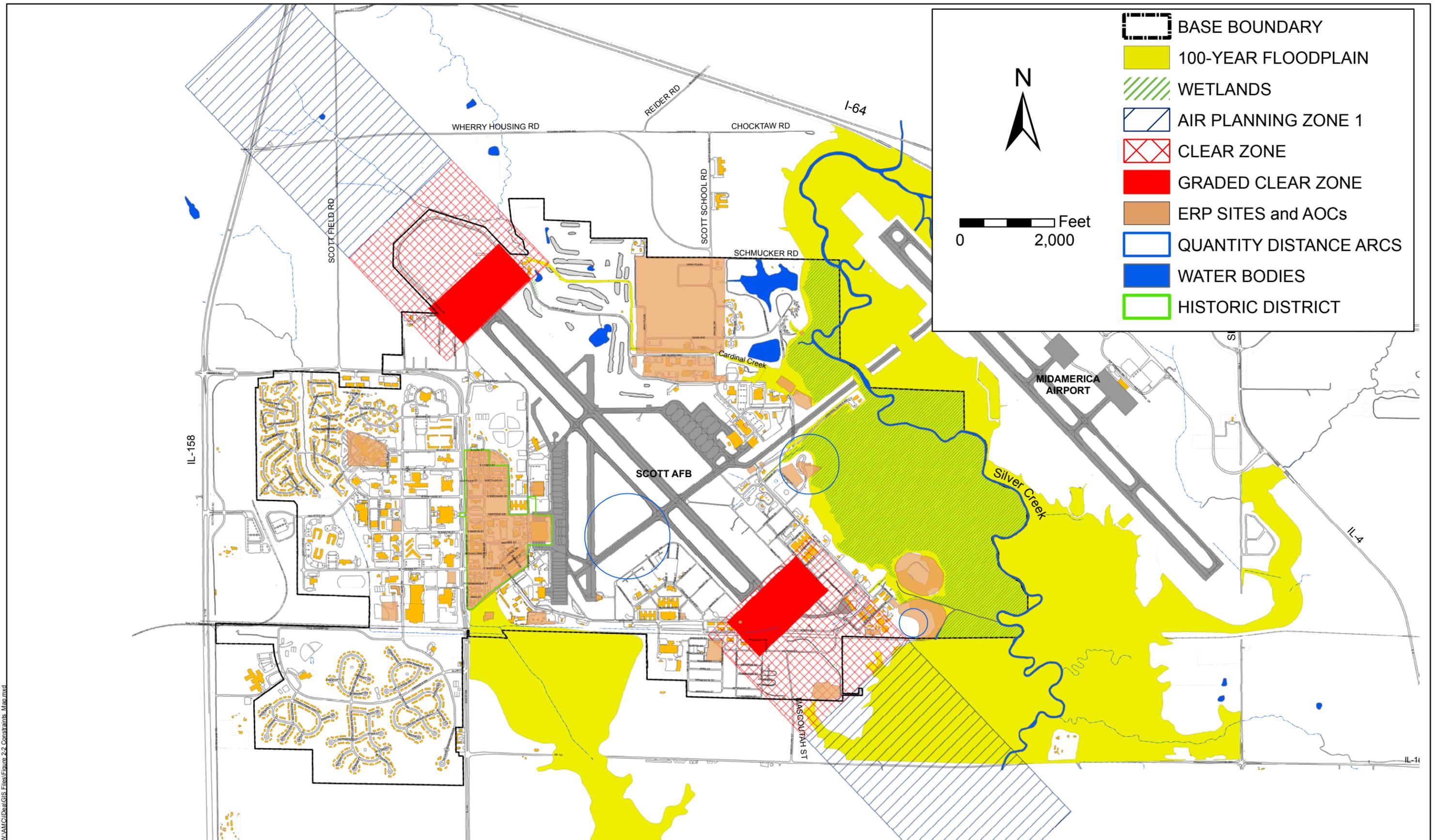


Figure 2-2. Scott AFB Constraints

**THIS PAGE INTENTIONALLY LEFT BLANK**

Scott AFB consists of 2,848 acres. As a general practice, Scott AFB seeks to avoid, where possible, disturbance activities in floodplains, wetlands, areas where sensitive species nest, roost or raise young, and areas designated as culturally sensitive. However, as future mission activities dictate, and due to the expanse of constrained areas on Scott AFB, avoiding or restricting future development within this acreage might not be practical and would limit the installation's ability to successfully accomplish its missions. When these resources can not be avoided, separate and additional NEPA documentation would occur and coordination with the appropriate regulatory agencies will be completed prior to initiating the action. All construction and other activities that would occur in these areas would comply with the requirements of the various local, state and federal policies and regulations that govern such resources as well as Scott AFB Resource Plans and other BMPs.

### 2.1.2 Demolition Projects

As part of the Proposed Action, Scott AFB proposes 25 different demolition projects that would occur over the next five years (**Appendix A**). Seven of these projects are associated with construction projects and may include the demolition of more than one building. The demolition of these facilities has been determined necessary to support the future mission requirements at Scott AFB. These facilities have been deemed too costly to repair or renovate to meet the future mission requirements of Scott AFB. Although the administrative and warehouse facilities were evaluated for re-use, none of them were deemed suitable to accommodate the future mission requirements and were recommended for demolition. The demolition of these facilities would remove approximately 793,289 ft<sup>2</sup> of impervious surfaces, minimizing the area of undisturbed land required for the proposed new facilities. The total square footage of demolished buildings is greater than the total square footage of demolished building footprint due to the demolition of multi-storied facilities.

**Table 2-1** identifies projects that are representative of the type of demolition projects included as part of the Proposed Action. These demolition projects are listed in this section to provide examples of the type of demolition projects that are scheduled to occur over the next five years at Scott AFB. The full list of demolition projects included as part of the Proposed Action is included in **Appendix A** and is labeled **Table A-1**.

**Table 2-1. Representative Demolition Projects<sup>1</sup>**

Project Title	Map ID	Year Proposed	Area Demolished (ft <sup>2</sup> )
Demolish Taxiway J	D9	2008	218,570
Demolish Aero Club Bldg. 3183	D16	2011	2,304
Demolish HQ AMC/Admin Bldg. 1605	D3	2007	4,704

<sup>1</sup>These projects are representative examples and not inclusive of the total list of proposed demolition projects included in this EA as part of the Proposed Action.

### 2.1.3 Construction Projects

The construction portion of the Proposed Action includes 17 facility construction, renovation, and alteration projects that would occur over the next five years as identified in **Appendix A**. Seven of these projects are associated with demolition projects. Implementation of these projects is necessary to support the Scott AFB future mission requirements and to comply with force protection criteria. The footprint of these facilities would occupy approximately one million square feet. In order to continue enhancing the compatibility of designated land uses at Scott AFB, the proposed new facilities would be constructed in appropriate land use areas across the installation. For example, aircraft hangars would be constructed within the Aircraft Operations and Maintenance land use area and office buildings would be constructed within the Administration, Medical and Community Service land use area.

**Table 2-2** identifies projects that are representative of the type of construction projects included as part of the Proposed Action. These construction projects are listed in this section to provide examples of the type of construction projects that are scheduled to occur over the next five years at Scott AFB. The full list of construction projects included as part of the Proposed Action is included in **Appendix A** and is labeled **Table A-2**.

**Table 2-2. Representative Construction Projects<sup>1</sup>**

Project Title	Map ID	Year Proposed	Area Constructed (ft <sup>2</sup> )
Construct Child Development Center	C3	2008	24,219
Construct SDDC Facility (BRAC project)	C31	2008	215,000
Construct Golf Clubhouse/Realign Course (6 holes)	CD26	2010	20,000

<sup>1</sup>These projects are representative examples and not inclusive of the total list of proposed construction projects included in this EA as part of the Proposed Action

### 2.1.4 Infrastructure Projects

Scott AFB proposes seven facility infrastructure projects that would occur over the next five years to support future mission requirements and to comply with force protection requirements (**Appendix A**). Facility infrastructure projects include installation or upgrades to paved roadways, parking lots, sidewalks, utilities, recreational areas, and fences to improve the Base infrastructure capacity to meet the demands of the future. The improvements in infrastructure projects would result in approximately 161,182 ft<sup>2</sup> of new, repaired, and extended sidewalks, roads, parking lots, and sports fields. **Table 2-3** identifies projects that are representative of the type of infrastructure projects included as part of the Proposed Action. These infrastructure projects are listed in this section to provide examples of the type of infrastructure projects that are scheduled to occur over the next five years at Scott AFB. The full list of infrastructure projects included as part of the Proposed Action is included in **Appendix A** and is labeled **Table A-3**.

**Table 2-3. Representative Infrastructure Projects<sup>1</sup>**

Project Title	Map ID	Year Proposed	Project Size (ft <sup>2</sup> )
Repair Eastside Drainage	I20	2008	70,000
Move Existing Jogging Path Outside of Clear Zone	I4	2007	7,185
Renovate the Family Camp Area	I14	2009	9,000

Source Scott AFB, SAIC, 2006

<sup>1</sup>These projects are representative examples and not inclusive of the total list of proposed infrastructure projects included in this EA as part of the Proposed Action

### 2.1.5 Summary of Proposed Activities

As a result of the Proposed Action, there would be approximately 793,289 ft<sup>2</sup> of building footprint demolished. Over the course of the next five years, there would be approximately 1.2 million ft<sup>2</sup> of new facilities developed resulting in an anticipated increase of 870,295 ft<sup>2</sup> of impervious surface (some of the facilities would be multiple levels). Additionally, there would be approximately 161,182 ft<sup>2</sup> of infrastructure improvements that would result with implementation of the Proposed Action. The majority of these improvements would not increase impervious surface, but would simply result in short-term surficial disturbance. **Table 2-4** summarizes the anticipated changes.

**Table 2-4. Change in Impervious Surface**

Project Type	Total Square Footage	Change in Impervious Surface <sup>1</sup>
Demolition <sup>2</sup>	990,744 ft <sup>2</sup>	793,289 ft <sup>2</sup> decrease
Construction	1,043,712 ft <sup>2</sup>	870,295 ft <sup>2</sup> increase
Infrastructure	161,182 ft <sup>2</sup>	61,497 ft <sup>2</sup> increase

<sup>1</sup>Change in impervious surface is not necessarily equivalent to the total square footage because some new facilities are multiple levels, and some projects (infrastructure, in particular) do not increase impervious surface.

<sup>2</sup>Includes demolitions that are associated with construction projects.

Source: Scott AFB/SAIC, 2006

## 2.2 Alternatives

During development of the Scott AFB installation development plans and during the project siting phase, alternative locations for the construction and infrastructure projects were evaluated and the best possible

solution for project siting was selected based on numerous criteria (such as collocation of like services, availability of site, etc.). Based on this evaluation, the proposed locations for each of the construction and infrastructure projects were determined to be optimal (**Figure 2-1**). With regard to alternatives for the demolition projects, each of these were also evaluated for potential re-use options and none were considered suitable for re-use. The Proposed Action and the No-Action alternatives will therefore be carried forward throughout this document.

Upon completion of the IDEA, any subset of the included projects could be implemented without affecting other projects. All of the IDEA projects have been evaluated individually and cumulatively in this EA to determine if the consequences of implementation would cause substantive impacts to the human and natural environments of Scott AFB and surrounding areas. Subsets of projects, as alternatives were not carried forward for further independent analysis based on the determination that subsets would not cause any additional impact beyond that of the Proposed Action.

### **2.2.1 Alternative 1 – Acquire Additional Land Surrounding Scott AFB**

Under this alternative, Scott AFB would acquire land outside its present boundaries to construct facilities needed for future mission requirements. It is important to note that this alternative could only be implemented if designated funded military construction projects have been identified at locations off Scott AFB (AFI 32-9001). Scott AFB is constrained to the east by MidAmerica airport, to the west by Highway 158 and to the south by Route 161 and the city limits of Mascoutah. Although some undeveloped land is located north of Scott AFB, between the current Base boundary and Interstate 64, this area is inside the current Air Installation Compatibility Use Zone (AICUZ) and Accident Planning Zone (APZ) and would therefore be limited in its suitability for development. Further, the Department of Defense (DoD) discourages installations from acquiring additional land unless mission or consolidation requirements force the Air Force to expand the Base boundaries. In fact, the DoD is attempting to dispose of underutilized lands at military installations across the United States. The Proposed Action does not include the acquisition of land surrounding Scott AFB. For these reasons, this alternative is not considered viable and is therefore eliminated from further analysis in the IDEA.

### **2.2.2 Alternative 2 – Lease Additional Facilities in the Surrounding Community**

This alternative consists of leasing office and warehouse space in the surrounding community to house military personnel and provide space for mission operations. Implementation of this alternative would result in the separation of various functional groups from the Base and create an insufficient span of control for the headquarters and command and control functions. The leased facilities would require additional cost and would be required to meet the DoD force protection and security requirements which would incur additional costs. In addition, the 2005 BRAC proposal recommended consolidation of functions onto established federal facilities to provide better security and force protection. Therefore, this alternative is not considered a viable alternative and is eliminated from further analysis in the IDEA.

### **2.2.3 No Action Alternative**

Under the No Action Alternative, the 375 AW would not implement the projects proposed in the community of wing approved installation development plans. In general, implementation of the No Action Alternative would require that the 375 AW continue to operate using existing infrastructure under, in some cases, substandard and inefficient conditions. Under the No Action Alternative, these deficiencies would impair the 375 AW's future ability to successfully conduct their mission.

Future land use, as proposed in the Scott AFB General Plan (2004b), would enhance Scott AFB operations by concentrating similar areas of activities and eliminating underutilized areas. Additionally, there are operational units that are dispersed throughout different buildings on the installation. Inefficient work conditions would continue to exist for the 375th Operations Group as this Group is currently located in 22 different facilities on Base. Current customer service centers are also at separate locations for military and civilian personnel.

Numerous existing facilities are too small to support mission requirements. With the No Action Alternative, overcrowded work conditions would continue to exist at these facilities. Overcrowded work conditions would slow down productivity and reduce the effectiveness of Base operations.

With the No Action Alternative, some unsafe conditions would continue to exist. Unused buildings scheduled for demolition would continue to degrade creating unsafe conditions. Building 3190, six holes of the golf course, and portions of the jogging track would continue to exist within the airfield clear zone. Dormitory Buildings 1810, 1820, and 1830 would remain non compliant with AT/FP guidelines.

With the No Action Alternative, the east side of the Base and some associated buildings would continue to flood during periods of heavy rain.

In general, implementation of the No Action Alternative would require that the 375 AW continue to operate under substandard, inefficient, and in some cases, unsafe conditions. Implementation of the No Action Alternative would require that the 375 AW continue to operate using existing infrastructure under, in some cases, substandard and inefficient conditions.

This alternative will be carried forward for analysis as a baseline against which the impacts of the Proposed Action and alternatives can be evaluated.

### **2.3 Decision to be Made and Identification of the Preferred Alternative**

Upon completion of the EA, Scott AFB would determine whether implementation of the Proposed Action would result in any significant impacts. If, upon completion of this EA, it is determined that implementation of the Proposed Action would result in significant impacts, Scott AFB would develop various mitigation measures to reduce impacts to below the level of significance, initiate the preparation of an EIS, or abandon the Proposed Action. This EA will also be used to guide Scott AFB in implementing the Proposed Action in a manner consistent with the USAF standards for environmental stewardship. The Preferred Alternative for the Proposed Action is set forth in **Section 2.1**.

## 3 Affected Environment

In compliance with the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) guidelines, and 32 Code of Federal Regulations (CFR) Part 989, as amended, **Section 3** describes the environmental resources and conditions most likely to be affected by implementation of the Proposed Action. This section provides information to serve as a baseline for identifying and evaluating environmental and socioeconomic changes likely to result from implementation of the Proposed Action. Baseline conditions represent current conditions. The potential environmental impacts of the Proposed Action and the No Action Alternative on the baseline conditions are described in **Section 4**.

### 3.1 Noise

#### 3.1.1 Definition of Resource

Noise is considered to be unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. Stationary sources are normally related to specific land uses, e.g., housing tracts or industrial plants. Transient noise sources move through the environment, either along relatively established paths (e.g., highways, railroads, and aircraft flight tracks around airports), or randomly. There is wide diversity in responses to noise that not only vary 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).

The physical characteristics of noise, or sound, include its intensity, frequency, and duration. Sound is created by acoustic energy, which produces minute pressure waves that travel through a medium, like air, and are sensed by the ear drum. This action is similar to the ripples in water that would be produced when a stone is dropped into it. As the acoustic energy increases, the intensity or amplitude of these pressure waves increase, and the ear senses louder noise. The unit used to measure the intensity of sound is the decibel (dB). A-weighted sound level measurements (dBA) are used to characterize sound levels that can be sensed by the human ear. “A-weighted” denotes the adjustment of the frequency content of a noise event to represent the way in which the average human ear responds to the noise event. The duration of a noise event, and the number of times noise events occur, are also important considerations in assessing noise impacts.

As a basis for comparison when noise levels are considered, it is useful to note that at distances of about three feet, noise from normal human speech ranges from 63 to 65 dB, operating kitchen appliances range from about 83 to 88 dB, and rock bands approach 110 dB.

The number of times noise events occur during given periods is also an important consideration in assessing noise impacts. The “cumulative” noise metric supporting the analysis of multiple time-varying noise events is the day-night average sound level ( $L_{dn}$ ).

The  $L_{dn}$  metric sums the individual noise events and averages the resulting level over a specified length of time. Thus, it is a composite metric which considers the maximum noise levels, the duration of the events, the number of events that occur, and the time of day during which they occur. This metric adds 10 dB 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 day time. This cumulative metric does not represent the variations in the sound level heard. Nevertheless, it does provide an excellent measure for comparing environmental noise exposures when there are multiple noise events to be considered.

#### 3.1.2 Existing Conditions

Public annoyance is the most common concern associated with exposure to elevated noise levels. When subjected to  $L_{dn}$  levels of 65 dBA, approximately 12 percent of the persons so exposed will be “highly annoyed” by the noise. At levels below 55 dBA, the percentage of annoyance is significantly lower (less than 3 percent), and at levels above 70 dBA, it is significantly higher (greater than 25 percent) (Finegold et al., 1994). **Table 3-1** shows the percentage of the population expected to be highly annoyed at a range of noise levels.

**Table 3-1. Percentage of Population Highly Annoyed By Elevated Noise Levels**

Noise Exposure ( $L_{dn}$ in dBA)	Percent Highly Annoyed
< 65	< 12
65 – 70	12 – 21
70 – 75	22 – 36
75 – 80	37 – 53
80 – 85	54 – 70
> 85	> 71

Source: Finegold et al. 1994

Scott AFB and MidAmerica Airport are co-located aviation facilities located near Belleville, Illinois. Scott AFB and its associated runway are situated in the western portion of the complex; MidAmerica Airport is situated to the east of Scott AFB. Under current conditions, the two facilities support military and civil aviation activity. Together, the two facilities support approximately 125 daily aviation operations. Considering all types of flight activities, a scenario representing an “average day’s” operations was developed. The operations considered included arrivals (landings), departures (takeoffs), and closed patterns. Noise calculations consider the frequency of flight operations, runway utilization, and the flight tracks and flight profiles flown by each type of aircraft.

These levels and types of activity are then combined with information on climatology, maintenance activities, and aircraft flight parameters, and processed through the Air Force’s BASEOPS/NOISEMAP (Moulton, 1990) computer models to calculate  $L_{dn}$ . Once noise levels are calculated, they are plotted on a background map in 5-dB increments from 65 dBA to 85 dBA, as applicable. Noise contours associated with current activities at Scott AFB/MidAmerica Airport are shown in **Figure 3-1**. The land area (in acres) encompassed by each contour is shown in **Table 3-2**.

**Table 3-2. Land Area Exposed To Indicated Sound Levels**

Sound Level ( $L_{dn}$ )	Acres of Land <sup>1</sup>
65 – 70	1736.10
70 – 75	850.09
75 – 80	410.52
80 – 85	193.73
> 85	81.26

Note: 1. Land areas exposed to indicated sound levels. Total area exposed to  $L_{dn}$  65 or greater is approximately 3,271.7 acres.

Source: Wasmer and Maunsell 2002.

**Ground-Based Activity.** Some additional noise results from day-to-day activities associated with operations, maintenance, and the industrial functions associated with the operation of the two airfields. These noise sources include the operation of ground-support equipment, and other transportation noise from vehicular traffic. However, this noise is generally localized in industrial areas on or near the airfield, or on established routes supporting traffic to-and-from the airfield. Noise resulting from aircraft operations remains the dominant noise source in the airfield region.

## 3.2 Land Use

### 3.2.1 Definition of Resource

Land use classifications reflect either natural or human activities occurring at a given location. Land uses resulting from human activities include residential, commercial, industrial, airfield, recreational, agricultural, and other types of developed areas. Natural uses include resource production such as forestry, mining, or agriculture, and resource protection such as conservation areas, wildlands, and parks. Management plans, policies, and regulations regulate the type and extent of land use allowable in specific areas and protection specially designated for environmentally sensitive areas. The region of influence (ROI) for land use for the Proposed Action includes the lands of Scott AFB and the adjacent properties in St. Clair County.

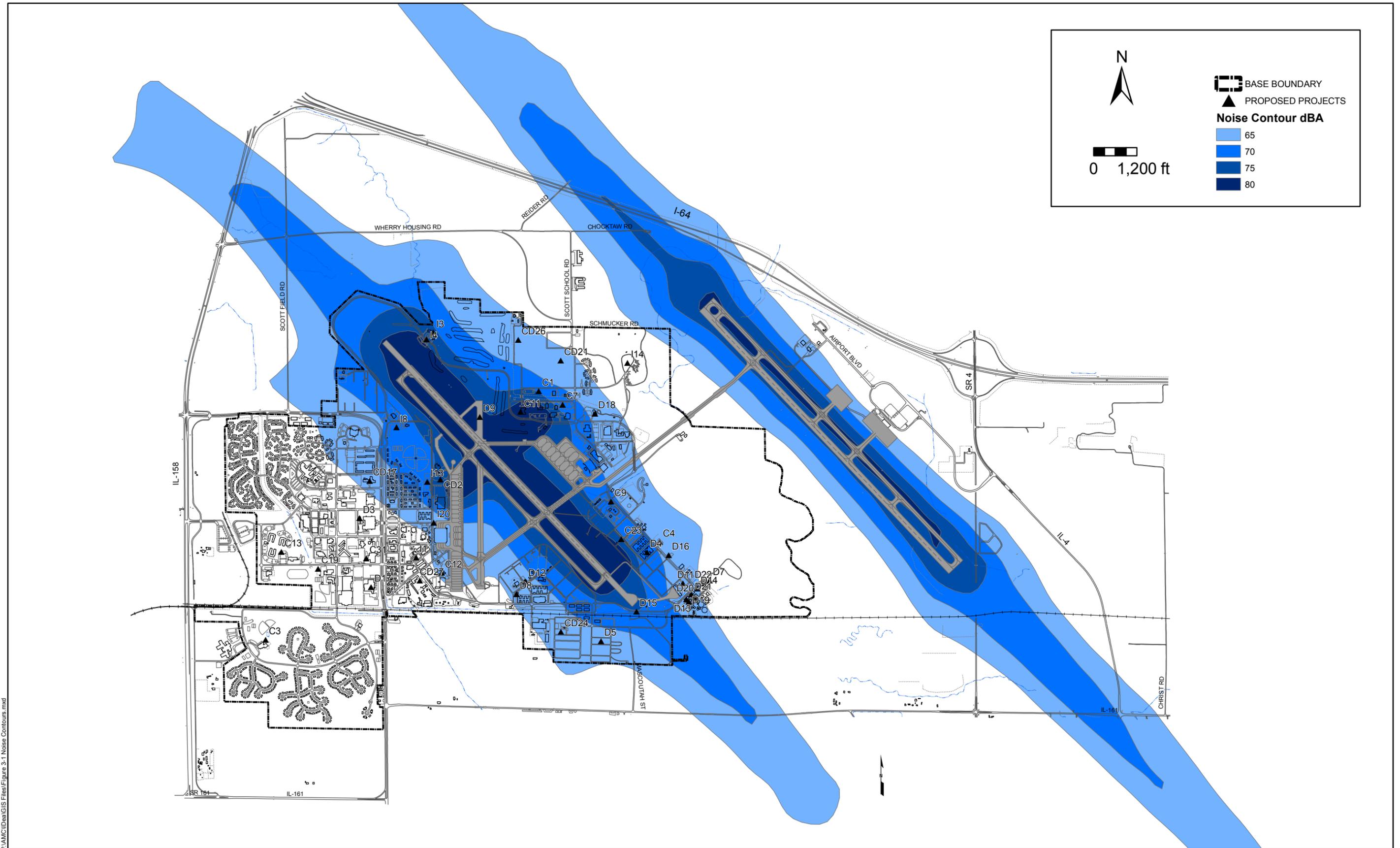


Figure 3-1. Scott AFB Existing Noise Contours

W:\AMC\Deal\GIS Files\Figure 3-1 Noise Contours.mxd

**THIS PAGE INTENTIONALLY LEFT BLANK**

### 3.2.2 Existing Conditions

Scott AFB is 2,848 acres in areal extent and is located in a predominantly agricultural portion of western Illinois. The Base is located immediately south of Interstate 64 (I-64), near the cities of O’Fallon and Belleville (**Figure 1-1**). The Base is adjacent to the MidAmerica Airport. The MidAmerica airport was built as a cooperative effort with Scott AFB, and has a 10,000-foot runway that serves some military customers, in addition to functioning as a commercial passenger and cargo airport. Scott AFB and MidAmerica Airport share runways through a Joint Use Agreement, effectively providing a parallel runway system.

Facilities and operations are grouped by functional areas and land use categories. The functional land use categories for Scott AFB include administration, medical, community service, airfield, aircraft operations and maintenance, community commercial, housing accompanied, housing unaccompanied, maintenance, open space and outdoor recreation and are depicted in **Figure 2-1** (Scott AFB, 2004c).

**Areas Surrounding Scott AFB and MidAmerica Airport/Airport Land Use Planning.** Areas surrounding Scott AFB and MidAmerica Airport were historically tall grass prairie. Most of the surrounding suitable land has been converted to agricultural use for several decades. Agricultural land is interspersed with wetlands, wooded areas, and small rural communities. Employment opportunities at the Base and in St Louis have expanded the economic base for these communities, and supported continued growth (Scott AFB, 2004c).

Most of the land immediately adjacent to the Base and airport is within the County of St. Clair. Surrounding municipalities include the City of O’Fallon, the Village of Shiloh, and the City of Mascoutah. The City of O’Fallon has a Comprehensive Plan and growth is being directed toward the northwest, away from the airport area. The Village of Shiloh, to the west, considers airport activities in its zoning process. The City of Mascoutah, to the southeast, has incorporated recommended compatible land use concepts into its zoning. Some residential development, on the north edge of Mascoutah, (south of MidAmerica Airport) may be a future encroachment concern.

The Air Installation Compatible Use Zone (AICUZ) program has established land use compatibility guidelines that are similar to those used by the Federal Aviation Administration (FAA). The guidelines have been used by the County and local jurisdictions in planning and zoning to prevent future incompatible development around the airport complex. Currently, some existing residential use occurs within the Base’s Accident Potential Zone (APZ) I and residential and quasi-public use in the APZ II (Scott AFB, 2004c). Some residences on the northwest side of the airfield complex are exposed to noise levels above 65 L<sub>dn</sub>.

Because of the economic importance of the Base and MidAmerica Airport, St. Clair County, in cooperation with the Base and surrounding communities, has developed an Airport Environs Overlay Zone to guide and limit the development of incompatible land uses around the airfield (Scott AFB, 2004c). St. Clair County owns the land immediately north of the airport and the Base. This land serves as a buffer from future encroachment. The County has actively pursued legislation to enable the County to acquire land through eminent domain in order to preclude encroachment on airport facilities and uses. St. Clair County’s Future Land Use Plan for the Scott-Joint Use Area defines compatible uses for lands outside the airport and the military-owned lands. **Table 3-3** provides information on future land use recommendations. **Figure 2-1** depicts future land use for Scott AFB.

**Table 3-3. Existing and Recommended Land Uses Surrounding Scott AFB**

Orientation from Scott AFB	Existing Land Use	St. Clair County Future Land Use Recommendation
North	MidAmerica Airport aviation facilities.	Maintain aviation use.
South	Sparsely populated. City of Mascoutah influences land use patterns south of Scott AFB.	Continue rural residential, recreational, and industrial uses.
East	MidAmerica Airport aviation facilities. Highway related commercial uses within I-64/Illinois Route 4 interchange.	Continue commercial highway land uses for area around highway interchange.

**Table 3-3. Existing and Recommended Land Uses Surrounding Scott AFB (Cont'd)**

Orientation from Scott AFB	Existing Land Use	St. Clair County Future Land Use Recommendation
West	Agricultural use immediately west of Air Mobility Drive. Further west, a mix of residential and commercial uses associated with Village of Shiloh.	Implement/allow regional commercial land use for the area along the west side of Air Mobility Drive.

Source: Scott AFB, 2004c

Future land use at Scott AFB is divided into nine primary land use categories (**Figure 2-1**). The following table depicts future land use areas on Scott AFB. The existing development footprint acreage depicted in the table is defined as the footprint of existing structures, roadways, parking, and airfield pavements and does not include stand-off areas necessary to comply with AT/FP guidelines.

**Table 3-4. Future Land Use Area**

Future Use	Land Mass (Acres)	Existing Development Footprint (Acres)
Administration, Medical, Community Service	370	240
Airfield	350	170
Aircraft Operations and Maintenance	120	60
Community Commercial	70	40
Housing Accompanied	370	90
Housing Unaccompanied	50	20
Maintenance	210	60
Open Space	1,080	50
Outdoor Recreation	240	30

Source: SAIC, 2006

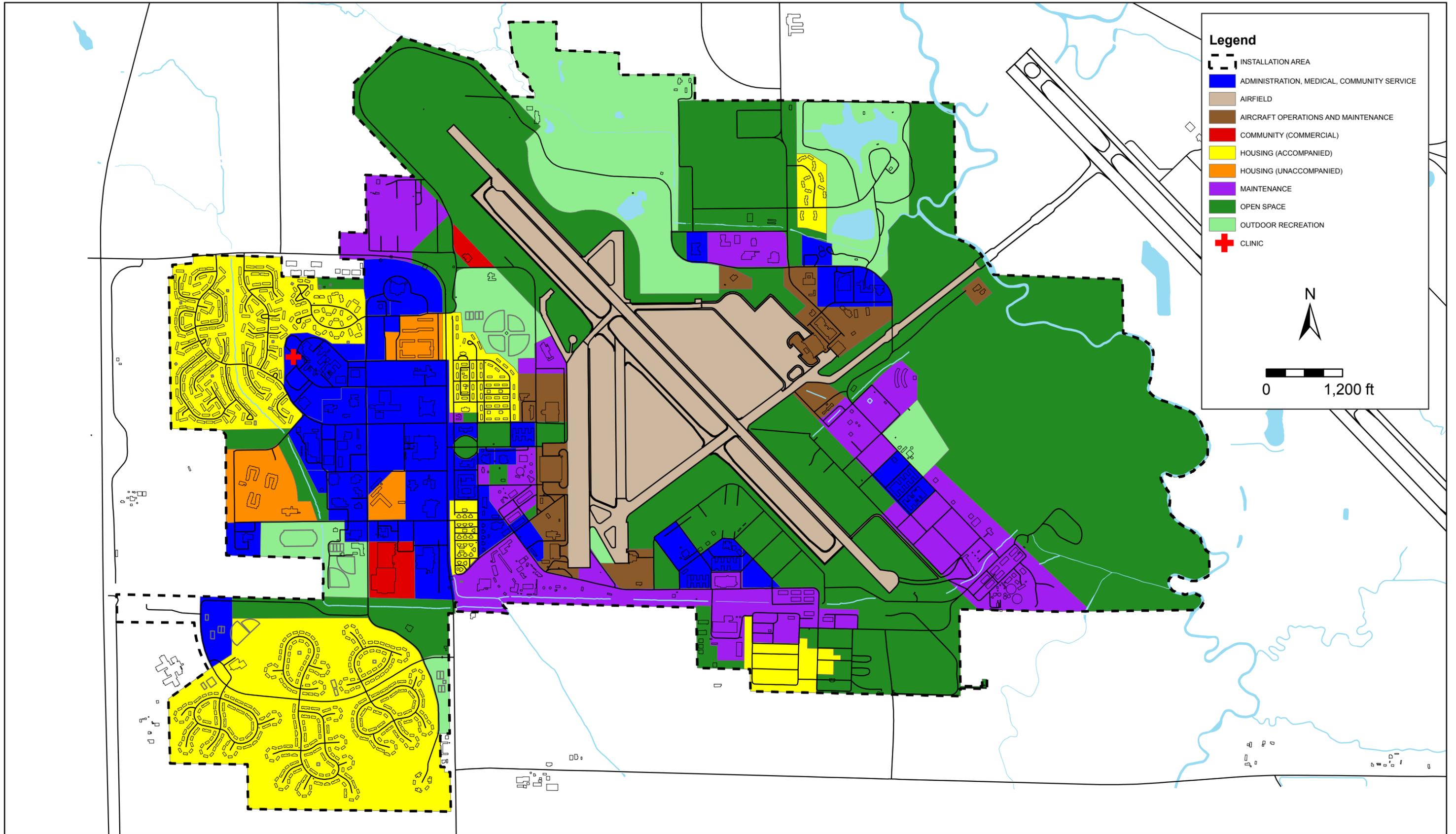
### 3.3 Air Quality

#### 3.3.1 Definition of the Resource

**Federal Air Quality Standards.** Air quality is determined by the type and concentration of pollutants in the atmosphere, the size and topography of the air basin, and local and regional meteorological influences. The significance of a pollutant concentration in a region or geographical area is determined by comparing it to federal and/or state ambient air quality standards. Under the authority of the Clean Air Act (CAA), the United States Environmental Protection Agency (USEPA) has established nationwide air quality standards to protect public health and welfare, with an adequate margin of safety.

These federal standards, known as the National Ambient Air Quality Standards (NAAQS), represent the maximum allowable atmospheric concentrations and were developed for six “criteria” pollutants: ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), respirable particulate matter less than or equal to 10 micrometers in diameter (PM<sub>10</sub>), particulate matter less than or equal to 2.5 micrometers in diameter (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). The NAAQS are defined in terms of concentration (e.g., parts per million [ppm] or micrograms per cubic meter [ $\mu\text{g}/\text{m}^3$ ]) determined over various periods of time (averaging periods). Short-term standards (1-hour, 8-hour, or 24-hour periods) were established for pollutants with acute health effects and may not be exceeded more than once a year. Long-term standards (annual periods) were established for pollutants with chronic health effects and may never be exceeded.

Based on measured ambient criteria pollutant data, the USEPA designates areas of the United States as having air quality equal to or better than the NAAQS (attainment) or worse than the NAAQS (nonattainment). Upon achieving attainment, areas are considered to be in maintenance status for a period of ten or more years. Areas are designated as unclassifiable for a pollutant when there is insufficient ambient air quality data for the USEPA to form a basis of attainment status. For the purpose of applying air quality regulations, unclassifiable areas are treated similar to areas that are in attainment of the NAAQS.



W:\AMC\Deal\GIS Files\Figure 3-2 Existing Land Use.mxd

Figure 3-2 Existing Scott AFB Land Use

**THIS PAGE INTENTIONALLY LEFT BLANK**

**State Air Quality Standards.** Under the CAA, state and local agencies may establish ambient air quality standards (AAQS) and regulations of their own, provided that these are at least as stringent as the federal requirements. The State of Illinois has AAQS that are virtually identical to the federal standards, except that the new federal PM<sub>2.5</sub> and 8-hour O<sub>3</sub> standards do not have an Illinois equivalent. A summary of the NAAQS that apply to the proposed project area is presented in **Table 3-5**. Primary standards, as depicted in this table, set limits to protect public health, including the health of sensitive populations, such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, vegetation, and buildings.

**Table 3-5. National and Illinois Ambient Air Quality Standards**

Air Pollutant	Averaging Time	NAAQS	
		Primary	Secondary
Carbon Monoxide (CO)	8-hour	9 ppm (10 µg/m <sup>3</sup> )	---
	1-hour	35 ppm (40 µg/m <sup>3</sup> )	---
Nitrogen Dioxide (NO <sub>2</sub> )	AAM	0.053 ppm (100 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )
Sulfur Dioxide (SO <sub>2</sub> )	AAM	0.03 ppm (80 µg/m <sup>3</sup> )	---
	24-hour	0.14 ppm (365 µg/m <sup>3</sup> )	---
	3-hour	---	0.5 ppm (1,300 µg/m <sup>3</sup> )
Particulate Matter (PM <sub>10</sub> )	AAM	50 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
	24-hr	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
Particulate Matter (PM <sub>2.5</sub> )	AAM	15 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>
	24-hour	65 µg/m <sup>3</sup>	65 µg/m <sup>3</sup>
Ozone (O <sub>3</sub> )	8-hour	0.08 ppm	0.08 ppm
Lead (Pb) & Lead Compounds	3-month	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>

Notes: AAM = Annual Arithmetic Mean; ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter; --- = not applicable.  
Source: 40 Code of Federal Regulations 50; IAC, 1992.

**State Implementation Plan.** For non-attainment regions, the states are required to develop a State Implementation Plan (SIP) designed to eliminate or reduce the severity and number of NAAQS violations, with an underlying goal to bring state air quality conditions into (and maintain) compliance with the NAAQS by specific deadlines. The SIP is the primary means for the implementation, maintenance, and enforcement of the measures needed to attain and maintain the NAAQS in each state.

**Prevention of Significant Deterioration (PSD).** Section 162 of the CAA further established the goal of prevention of significant deterioration (PSD) of air quality in all international parks; national parks which exceeded 6,000 acres; and national wilderness areas and memorial parks which exceeded 5,000 acres if these areas were in existence on August 7, 1977. These areas were defined as mandatory Class I areas, while all other attainment or unclassifiable areas were defined as Class II areas. Under CAA Section 164, states or tribal nations, in addition to the federal government, have the authority to redesignate certain areas as (non-mandatory) PSD Class I areas, e.g., a national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres. PSD Class I areas are areas where any appreciable deterioration of air quality is considered significant. Class II areas are those where moderate, well-controlled growth could be permitted. Class III areas are those designated by the governor of a state as requiring less protection than Class II areas. No Class III areas have yet been so designated. The PSD requirements affect construction of new major stationary sources in the PSD Class I, II, and III areas and are a pre-construction permitting system.

**Visibility.** CAA Section 169(a) established the additional goal of prevention of further visibility impairment in PSD Class I areas. Visibility impairment is defined as a reduction in the visual range and atmospheric discoloration. Determination of the significance of an activity on visibility in a PSD Class I area is typically associated with evaluation of stationary source contributions. The USEPA is implementing a Regional Haze rule for PSD Class I areas that will address contributions from mobile sources and pollution transported from other states or regions.

Emission levels are used to qualitatively assess potential impairment to visibility in PSD Class I areas. Decreased visibility may potentially result from elevated concentrations of PM<sub>10</sub> and SO<sub>2</sub> in the lower atmosphere.

**General Conformity.** CAA Section 176(c), General Conformity, established certain statutory requirements for federal agencies with proposed federal activities to demonstrate conformity of the proposed activities with each state's SIP for attainment of the NAAQS. Federal activities must not:

- (a) cause or contribute to any new violation;
- (b) increase the frequency or severity of any existing violation; or
- (c) delay timely attainment of any standard, interim emission reductions, or milestones in conformity to a SIP's purpose of eliminating or reducing the severity and number of NAAQS violations or achieving attainment of NAAQS.

General conformity applies only to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment area exceed annual thresholds identified in the rule, a conformity determination is required of that action. The thresholds become more restrictive as the severity of the nonattainment status of the region increases.

**Stationary Source Operating Permits.** In Illinois, the Illinois Environmental Protection Agency (Illinois EPA), Bureau of Air, identifies air pollution problems, proposes appropriate regulations, conducts inspections, and reviews permit applications. Title V of the CAA Amendments of 1990 requires states to issue Federal Operating Permits for major stationary sources. A major stationary source in an attainment or maintenance area is a facility (i.e., plant, base, or activity) that emits more than 100 tons per year (TPY) of any one criteria air pollutant, 10 TPY of a hazardous air pollutant (HAP), or 25 TPY of any combination of HAPs. Thresholds are lower for pollutants for which a region is in nonattainment status. The purpose of the permitting rule is to establish regulatory control over large, industrial activities and to monitor their impact upon air quality. Illinois's Title V program and other air program laws, including licensing (i.e., permitting) are found in Illinois Administrative Code (IAC) Title 35, Subtitle B.

### 3.3.2 Existing Conditions

**Regional Air Quality.** Federal regulations contained in 40 CFR 81 delineate certain air quality control regions (AQCR), which were originally designated based on population and topographic criteria closely approximating each air basin. The potential influence of emissions on regional air quality would typically be confined to the air basin in which the emissions occur. Therefore, the ROI for the proposed action is the Metropolitan St. Louis Interstate Air Quality Control Region (AQCR 70), which includes Bond, Clinton, Madison, Monroe, Randolph, St. Clair, and Washington Counties in Illinois and Franklin, Jefferson, St. Charles, and St. Louis Counties, plus the city of St. Louis in Missouri (40 CFR 81).

**Attainment Status.** A review of federally published attainment status for Illinois in 40 CFR 81.314 indicated that St. Clair County is designated as attainment (i.e., meeting national standards) for CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and Pb, and nonattainment for the new PM<sub>2.5</sub> and 8-hour O<sub>3</sub> standards. For O<sub>3</sub>, the region was in maintenance status for the old 1-hour standard, having achieved attainment on 13 May 2003. Although the 1-hour O<sub>3</sub> standard was revoked on 15 June 2005, certain control measures remain in place until the 8-hour standard can be fully implemented (Kaleel, 2005). Control measures in the St. Louis metropolitan area include gasoline vapor recovery systems; controls on industry; centralized inspection of car emissions; the use of cleaner fuels throughout the region; and a range of transportation control measures: traffic flow improvement projects, intelligent transportation system, and regional ridesharing program (EWGCOG, 2005).

**PSD Class I Areas.** The nearest PSD Class I area is the Mingo National Wildlife Refuge, which is located in southeast Missouri near the town of Puxico, along the Mississippi River, 107 miles south of St. Clair County. Sensitive air quality related values (AQRVs) in the bottomland hardwood swamp, which is administered by the U.S. Fish and Wildlife Service, include vegetation, wildlife, soils, water quality, visibility, odor, and cultural and archaeological resources (NPS, 2005). Additional PSD Class I areas in the region are the Hercules-Glade Wilderness, 210 miles to the southwest; the Upper Buffalo Wilderness,

216 miles to the south-southwest, and Mammoth Cave National Park, 222 miles east of St. Clair County.

**Climate.** Both the warm moist air from the Gulf of Mexico and the cold air masses that originate in Canada affect the climate in southern Illinois, including St. Clair County and the St. Louis metropolitan area. Summers are warm and humid, with temperatures of 90°F or higher occurring 35-40 days per year (with at most five days of 100°F or more per year). Winter temperatures drop below 0°F only two or three days per year with temperatures below freezing occurring approximately 25 days per year. Snowfall averages 18 inches per winter. Normal precipitation is approximately 34 inches per year. Winter months are the driest, with March through May being the wettest months of the year. Thunderstorms occur 40-50 days per year, with a few each year producing large hail and damaging winds. Average winds in St. Clair County average 10-12 miles per hour from the west-northwest during the months of November through April, and 7-9 miles per hour from the south during May through October (NOAA, 1998; NWS, 2005).

**Current Emissions.** Air emissions at Scott AFB include those from stationary and mobile sources. The stationary sources include combustion sources, fuel storage and transfer; and operational sources. The mobile sources include vehicles and aircraft operations. Baseline emissions for the Base are presented in **Table 3-6**. In this table, nitrogen oxides (NO<sub>x</sub>) includes NO<sub>2</sub> and other nitrogen compounds; and sulfur oxides (SO<sub>x</sub>) includes SO<sub>2</sub> and other sulfur compounds. Because volatile organic compounds (VOCs) and NO<sub>x</sub> are precursors to the formation of O<sub>3</sub> in the atmosphere, control of these pollutants is the primary method of reducing O<sub>3</sub> concentrations in the atmosphere. PM<sub>10</sub> includes PM<sub>2.5</sub> and may be used as an upper limit for PM<sub>2.5</sub> emissions. Scott AFB is a minor source of air pollution, with a Federally Enforceable State Operating Permit maintaining its potential emissions from stationary sources below major source levels. The permit covers five jet fuel storage tanks equipped with internal floating roofs, a diesel emergency power generator and natural gas-fired equipment, a jet engine test cell, 11 gasoline storage tanks, one ethylene glycol storage tank, an indoor shooting range controlled by a bag house, and one sulfur dioxide generator.

**Table 3-6. Baseline Emissions at Scott AFB, Calendar Year 2004**

	Annual Emissions (tons per year)				
	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>
Abrasive blasting	-	-	-	-	< 1
Aerospace ground equipment	2	< 1	5	< 1	< 1
Aircraft operations	411	240	54	16	34
Asphalt paving operations	-	2	-	-	-
Degreasing	-	< 1	-	-	-
External combustion	7	< 1	8	< 1	1
Fire training	< 1	< 1	< 1	-	< 1
Fuel cell maintenance	-	< 1	-	-	-
Fuels dispensing/loading	-	29	-	-	-
Internal combustion	3	1	13	< 1	< 1
Jet engine testing	< 1	< 1	< 1	< 1	< 1
Landfill	< 1	-	-	-	-
Munitions and firearms	< 1	-	-	-	-
Paint gun cleaning	-	< 1	-	-	-
Storage tanks	-	8	-	-	-
Surface coating	-	< 1	-	-	< 1
Vehicle emissions	116	10	15	1	1
Woodworking	-	-	-	-	< 1
Wet cooling towers	-	-	-	-	< 1
<b>TOTAL</b>	<b>539</b>	<b>291</b>	<b>96</b>	<b>17</b>	<b>35</b>

- = not applicable

Source: CH2M Hill, 2005

**Regional Air Emissions.** The previous section lists on-base emissions for Scott Air Force Base in St. Clair County, Illinois. The NEPA process, however, must also consider impacts from indirect emissions from stationary and mobile sources related to the project, some of which (for example, commuting of new employees to and from the facility) occur outside of the installation. For comparison purposes, **Table 3-7**

lists county-wide emissions for St. Clair County, Illinois, and for AQCR 70 (which includes St. Clair County), as compiled by the USEPA in its National Emissions Inventory (NEI), which was last updated in 2002 (USEPA, 2006). The 2002 NEI contains estimates of annual emissions for stationary and mobile sources of air pollutants in each country, on an annual basis.

**Table 3-7. Air Emissions Inventory St. Clair County, Illinois, and AQCR 70 Calendar Year 2002**

	Pollutants (In Tons per Year)				
	CO	VOC	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>
St. Clair County, IL					
Stationary Sources	2,806	6,064	1,079	1,619	9,771
Mobile Sources	59,003	4,136	8,523	518	343
AQCR 70					
Stationary Sources	55,057	71,203	81,582	190,037	154,627
Mobile Sources	783,679	60,718	117,454	6,879	4,169

Source: USEPA, 2006

## 3.4 Safety

### 3.4.1 Definition of the Resource

A safe environment is one in which there is no, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Potential safety issues at Scott AFB include ground and AT/FP, explosive, flight, and construction and demolition jobsite safety. Ground safety considerations include issues associated with human activities and operations and maintenance activities that support unit operations. A specific aspect of ground safety includes AT/FP considerations. Explosive safety addresses the management and use of ordnance or munitions associated with installation operations and training activities. Flight safety considerations include aircraft flight risks such as aircraft accidents. Construction and demolition jobsite safety considerations include the prevention of mishaps related to construction and demolition projects. Worker exposure to toxic substances, contaminated materials and soils is another safety issue that is taken into consideration and is discussed in more detail in **Section 3.4.2**.

Construction and demolition jobsite safety is largely a matter of adherence to regulatory requirements imposed for the benefit of employees and the implementation of operational practices that reduce risks of illness, injury, death, and property damage. The health and safety of onsite military and civilian workers are safeguarded by numerous Department of Defense (DoD) and United States Air Force (USAF) regulations designed to comply with standards issued by the Occupational Safety and Health Administration (OSHA) and the United States Environmental Protection Agency (USEPA). These standards specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits for workplace stressors. In addition to the standard government safety requirements, specific health and safety issues are controlled for each project by a specific Health and Safety Work Plan as prepared by the responsible contractor.

Safety and accident hazards can often be identified and reduced or eliminated. Necessary elements for an accident-prone situation or environment include the presence of the hazard with the exposed (and possibly susceptible) population. The degree of exposure depends primarily on the proximity of the hazard to the population. Activities that can be hazardous include transportation, maintenance and repair activities, and the creation of highly noisy environments. The proper operation, maintenance, and repair of vehicles and equipment carry important safety implications. Any facility or human-use area with potential explosive or other rapid oxidation process creates potentially unsafe environments for nearby populations. Extremely noisy environments can also mask verbal or mechanical warning signals such as sirens, bells, or horns.

### 3.4.2 Existing Conditions

Day-to-day ground operations and maintenance activities conducted at Scott AFB are performed in accordance with USAF safety regulations, published USAF Technical Orders, and standards prescribed

by USAF Occupational Safety and Health requirements.

Additionally, the DoD and the USAF have developed a series of AT/FP guidelines for military installations as a result of terrorist activities. These guidelines address a range of considerations that include access to the installation, access to facilities on the installation, facility siting, exterior design, interior infrastructure design, and landscaping (Unified Facilities Criteria 2003; USAF, No Date). The intent of this siting and design guidance is to improve security, minimize fatalities, and limit damage to facilities in the event of a terrorist attack. Many military installations such as Scott AFB were developed before such considerations became a critical concern. Thus, under the current conditions, some facilities do not comply with all AT/FP standards and require specific waivers.

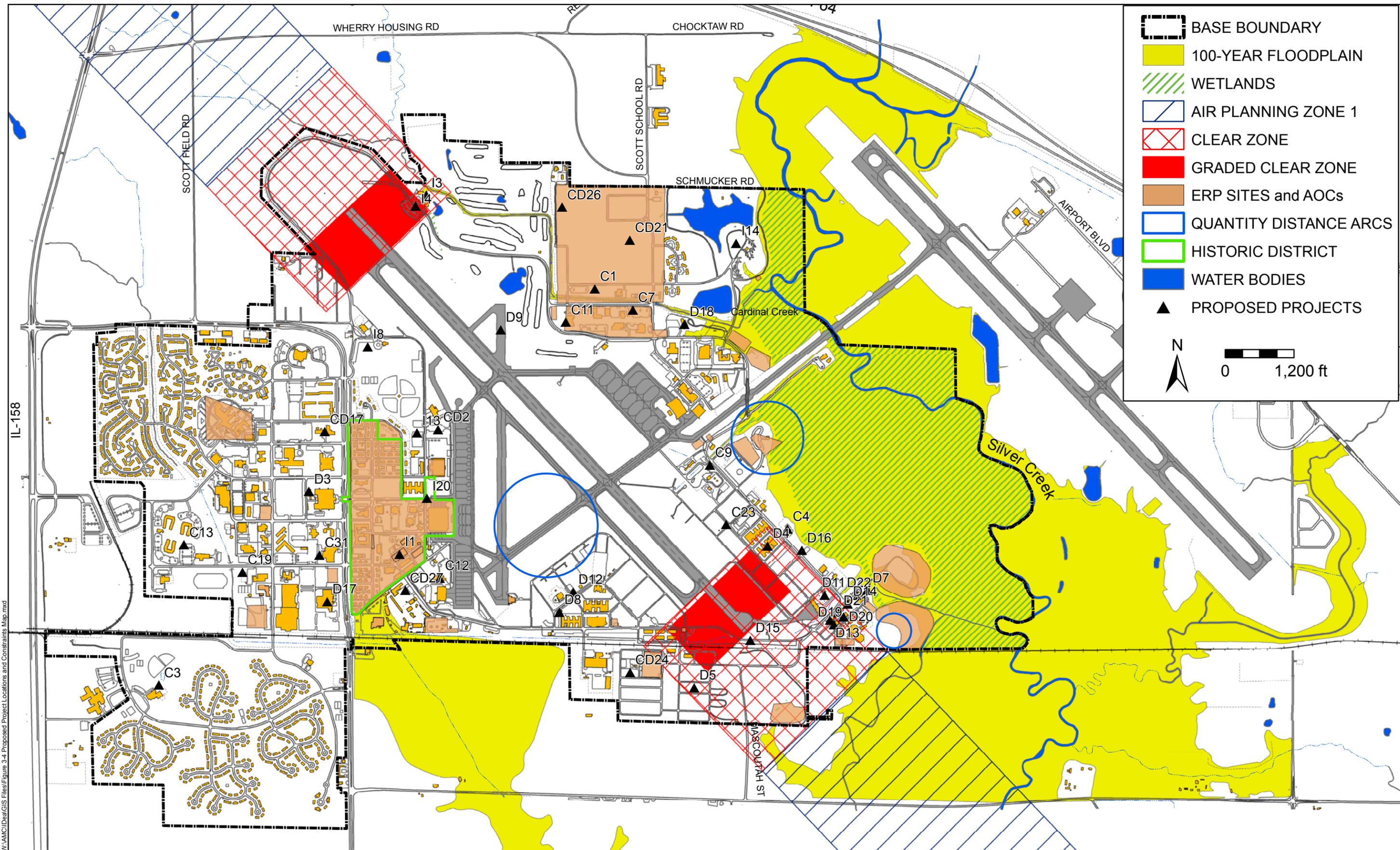
Scott AFB has several restricted use areas for the storage and handling of explosive materials. Air Force Manual 91-201, *Explosives Safety Standards*, defines distances to be maintained between explosive storage areas and other types of facilities. These distances are known as quantity-distance (QD) arcs and the size of the QD arc is dependent on the type and quantity of explosive materials that are being stored. Scott AFB has three primary QD arcs (**Figure 3-3**). The largest QD arc has a 1,250-foot restricted area and is associated with the flight line hot cargo pad (Scott AFB, 2004c). Development or construction is prohibited within QD arcs to maintain personnel safety and minimize damage potential to other facilities.

Scott AFB has several operational constraints associated with the airfield and safety for the Base and adjacent communities. The areas of concern would be the airfield clear zones and accident potential zones (APZ) (**Figure 3-3**). Permissible uses, structure heights, and the construction material in these areas are specifically prescribed in order to protect both the safety of the aircrews and the safety of persons and property on the surface. The Scott AFB General Plan (2004c) identifies 15 airfield clearance violations that have been granted waivers or are pending waivers. The General Plan also describes eight other clearance violations for which permanent exemptions have been granted.

Bird-aircraft strikes constitute a safety concern because of the potential for damage to aircraft or injury to aircrews or local populations if an aircraft crash should occur in a populated area. Over 94 percent of reported bird strikes occur below 3,000 feet above ground level. Approximately 50 percent of bird strikes happen in the airport environment. Migratory waterfowl (e.g., ducks, geese, and swans) are the most hazardous birds to low-flying aircraft because of their size and their propensity for migrating in large flocks at a variety of elevations and times of day. The potential for bird-aircraft strikes is greatest in areas used for migration corridors (flyway) or where birds congregate for foraging or resting (e.g., open water bodies, rivers, and wetlands). A wildlife strike hazard exists at Scott AFB/MidAmerica Airport as the facilities are located close to the Mississippi flyway and are surrounded by suitable avian habitat. The “Scott AFB/MidAmerica Airport Joint Use Plan 91-202 Bird Aircraft Strike Hazard (BASH) Plan” (Scott AFB, 2005i) provides guidance to minimize bird-aircraft strikes.

Construction and demolition jobsite safety and the prevention of accidents is an ongoing activity for any USAF jobsite. All contractors performing construction activities are responsible for complying with USAF safety and OSHA regulations, and are required to conduct construction activities in a manner that does not pose any undue risk to workers or personnel. Industrial hygiene programs address exposure to hazardous materials, use of personal protective equipment, and use and availability of Material Safety Data Sheets. Industrial hygiene is the responsibility of contractors, as applicable. Contractor responsibilities are to review potentially hazardous workplaces; to monitor exposure to workplace chemical (e.g., asbestos, lead, hazardous material), physical (e.g., noise propagation), and biological (e.g., infectious waste) agents; to recommend and evaluate controls (e.g., ventilation, respirators); to ensure personnel are properly protected or unexposed; and to ensure a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures or engaged in hazardous waste work.

**THIS PAGE INTENTIONALLY LEFT BLANK**



IL-158  
 W:\MCI\Dea\GIS Files\Figure 3-4 Proposed Project Locations and Constraints Map.mxd

Figure 3-3. Scott AFB Project Locations and Constraints

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 3.5 Geologic Resources

### 3.5.1 Definition of the Resource

Geologic resources include geology, soils, and topography.

**Geology.** Geologic resources of an area typically consist of surface and subsurface materials and their inherent properties.

**Soils.** The term “soils” refers to unconsolidated materials formed from the underlying bedrock or other parent material. Soils play a critical role in both the natural and human environment. Soil drainage, texture, strength, shrink/swell potential, and erodibility all determine the suitability of the ground to support man-made structures and facilities.

**Topography.** Topography refers to an area’s surface features including its vertical relief. These resources may have scientific, historical, economic, and recreational value.

### 3.5.2 Existing Conditions

**Geology.** The geologic units of St. Clair County include Paleozoic sedimentary rocks and Cenozoic unconsolidated materials. Pennsylvanian Age bedrock lies approximately 85 feet below the surface and includes layers of shale, siltstone, sandstone, limestone, claystone, and coal. The Pennsylvanian strata are approximately 265 feet thick. Water-yielding Chesterian Series sandstones lie beneath the Pennsylvanian strata. Wells in these sandstones yield 20 to 50 gallons per minute (Scott AFB, 2003).

The Herron No. 6 coal bed, with an average thickness of six to seven feet, lies 90 to 200 feet below the surface of Scott AFB and extends out several miles to the west and south. Abandoned subsurface mines are located about one mile southwest of the Scott AFB runway and about two miles northwest of the Base. Scott AFB lies within Seismic Zone IX, which contains the New Madrid Fault Zone, that extends from Cairo, Illinois, on the Ohio River southward through New Madrid, Missouri. The New Madrid Fault Zone is the most active seismic area east of the Rocky Mountains, with almost weekly tremors and on rare occasions, small earthquakes measuring 3.0 to 4.0 or more on the Richter scale. The last major earthquake along this fault was in 1812 and had an estimated magnitude of 8.0 on the Richter scale (United States Geological Survey, 2006).

Glacial and alluvial deposits ranging in thickness from 50 feet to 125 feet dominate surficial geology at the Base. The Base lies on the Springfield Plain subdivision of the Till Plains section of the Central Lowlands Physiographic Province and is located on the west end of the Silver Creek Valley Basin (Scott AFB, 2003).

**Soils.** The predominant soil types at Scott AFB are silt loam and silty clay loam occurring to a depth of 16 inches. They have a moderately high water holding capacity, moderate to high shrink to swell ratio, moderate to high corrosive potential. The topsoil is moderately permeable. These soils are fertile and productive because of their development from tall prairie grass and mixed hardwood forest. The pH varies from 5 to 7.3, requiring occasional lime and fertilizers in accordance with soil tests for agricultural production. Due to the nearly level topography, native soils have undergone only slight alteration due to grading, fill or excavation with construction and development in and around Scott AFB (Scott AFB, 2003).

Scott AFB is located upon two soil associations - the Herrick-Virden Association, and the Wakeland-Bonnie Association. A soil association is a landscape that has a distinctive pattern of soils in defined proportions. Each soil association is comprised from more than one kind of "soil type". A soil type is the smallest mapped soil unit. Each soil association has different land management implications. Also, different soil types have different management prescriptions. Soils types occurring in the two associations also occur in other soil associations, but in different combinations.

**Topography.** Scott AFB is located on the west end of the Silver Creek Valley Basin, which is generally characterized by flat to gently rolling hills. The Base land surface is generally flat. The maximum surface elevation at the Base is 510 feet above mean sea level (MSL) at a till ridge north of the Base golf course.

The lowest surface elevation is approximately 420 feet above MSL along the eastern boundary of the Base within the Silver Creek floodplain. The elevation of Silver Creek east of the Base is about 405 feet MSL (Scott AFB, 2003).

## 3.6 Water Resources

### 3.6.1 Definition of the Resource

Water resources analyzed in this EA include surface water, groundwater, and floodplains.

**Groundwater.** Groundwater includes the subsurface hydrologic resources of the physical environment and is an essential resource. Groundwater properties are often described in terms of depth to aquifer or water table, water quality, and surrounding geologic composition.

**Surface Water.** Surface water resources include lakes, rivers, and streams and are important for a variety of reasons, including economic, ecological, recreational, human health, and storm water management.

**Floodplains.** Floodplains are defined by Executive Order (EO) 11988, *Floodplain Management*, as “the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, the area subject to a one percent or greater chance of flooding in any given year” (that area inundated by a 100-year flood). Floodplain values include natural moderation of floods, water quality maintenance, groundwater recharge, as well as habitat for many plant and animal species.

### 3.6.2 Existing Conditions

**Groundwater.** Scott AFB lies in an area of western Illinois that lacks aquifers of regional significance. Scott AFB and surrounding communities purchase water supplies from the Illinois American Water Company municipal water distribution system, which obtains its water supply from the Mississippi River. No drinking water wells are known to be in use at the Base. However, domestic and agricultural users within about ten miles of the Base obtain a limited amount of water from shallow aquifers.

The significant hydrogeologic units present in the area include alluvium containing sand and gravel lenses, sand and gravel layers within the glacial deposits, and sandstone or other permeable strata within the bedrock. Water quality varies greatly, with water from the surficial deposits usually of slightly better quality than water from the bedrock units. Precipitation is the primary source of groundwater recharge in the area (Scott AFB, 2004c).

The shallow groundwater at Scott AFB is classified by the IEPA as Class 1 Groundwater [i.e., groundwater that meets the Class I potable resource groundwater criteria set forth in the board regulations adopted pursuant to the Illinois Groundwater Protection Act (415 ILCS 5/57.2)].

**Surface Water.** The ROI is located in the Lower Kaskaskia Watershed, which drains approximately 1,060,900 acres (NRCS, 2004). Silver Creek, a tributary of the Kaskaskia River (which is a tributary of the Mississippi River), is located on the east side of Scott AFB. It drains approximately 60 percent of surface runoff from the Base (Scott AFB, 2003; Scott AFB, 2004c). The Illinois EPA rates water quality in Silver Creek as “fair” in the vicinity of Scott AFB. Nutrients and siltation from agricultural operations are the primary non-point sources of water pollution into Silver Creek (Scott AFB, 2003). Ash Creek drains the remainder of Scott AFB.

Surface water features on Scott AFB include North Ditch, South Ditch, Cardinal Creek and Mosquito Creek, all of which are tributaries of Silver Creek, as well as Scott Lake, Cardinal Lake, and the Base golf course ponds (Scott AFB, 2004c).

A substantial percentage of land use at Scott AFB consists of surfaces that are impervious to water infiltration, such as asphalt, concrete, or buildings/facilities. Drainage from these areas is directed by surface topography and perimeter curbing to enclosed storm sewers and open channels (Scott AFB, 2004a).

Storm water runoff is permitted under an industrial storm water permit issued to Scott AFB by the Illinois EPA. Runoff is managed in accordance with the Scott AFB *Final Storm Water Pollution Prevention Plan* (SWPPP), which is a requirement of the permit (Scott AFB, 2004a). The 375<sup>th</sup> Airlift Wing (375 AW) SWPPP is an engineering and management strategy prepared specifically for the 375 AW to improve the quality of the storm water runoff and thereby improve the quality of the receiving waters. The SWPPP also works to minimize storm water runoff thereby enhancing infiltration and subsequent ground water recharge. This plan ensures implementation of best management practices (BMPs) and delineates monitoring, training, and documentation requirements of the 375 AW's National Pollutant Discharge Elimination System storm water permit. The plan includes notification, permit application, and erosion control requirements for any construction activity that will cause a disturbance through clearing, grading, or excavating greater than one acre at the installation.

**Floodplains.** According to the Scott AFB Final Floodplain Survey (2005b) and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (2003), portions of the 100-year and 500-year floodplain associated with Silver Creek and Cardinal Creek are located within the Base boundaries (Scott AFB, 2005; FEMA, 2003). The 100-year and 500-year floodplains associated with Cardinal Creek are located in the northern portion of the installation, while a small portion of the 100-year and 500-year floodplains associated with Silver Creek are located in the eastern portion of the installation (**Figure 3-3**).

## 3.7 Biological Resources

### 3.7.1 Definition of the Resource

Biological resources include native or naturalized plants and animals, and the habitats such as wetlands, forests, and grasslands, in which they exist. Sensitive and protected biological resources include plant and animal species that are federally (United States Fish and Wildlife Service [USFWS]) or state (Illinois) listed for protection. Determining which species occur in an area affected by an action may be accomplished through literature reviews and coordination with appropriate federal and state regulatory agency representatives, resource managers, and other knowledgeable experts.

Under the Endangered Species Act (ESA) (16 United States Code [USC] 1536), an “endangered species” is defined as any species in danger of extinction throughout all or a significant portion of its range. A “threatened species” is defined as any species likely to become an endangered species in the foreseeable future. The USFWS also maintains a list of species considered to be candidates for possible listing under the ESA. Although candidate species receive no statutory protection under the ESA, the USFWS has attempted to advise government agencies, industries, and the public that these species are at risk and may warrant future protection under the ESA.

The Illinois Department of Natural Resources (IDNR) oversees the protection and management of state-protected species under the Illinois Endangered Species Protection Act (520 Illinois Compiled Statutes 10/1-11). Under this Act, the Endangered Species Protection Board determines those species to be state-listed as endangered or threatened for Illinois.

Biological resources also include wetlands. Wetlands are an important natural system with diverse biological and hydrological functions. These functions include water quality improvement, groundwater recharge and discharge, pollution mitigation, nutrient recycling, unique plant and wildlife habitat provision, storm water attenuation and storage, sediment detention, and erosion protection. Wetlands are protected as a subset of the “waters of the U.S.” under Section 404 of the Clean Water Act and incorporate deep-water aquatic habitats and special aquatic habitats (including wetlands). The United States Army Corps of Engineers (USACE) defines wetlands as “those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions”(33 CFR Part 338).

### 3.7.2 Existing Conditions

**Vegetation.** Scott AFB is situated within the Springfield Plain subdivision of the Till Plains section of the Central Lowlands Physiographic Province and is located on the west end of the Silver Creek Valley basin, an area characterized by flat to gently rolling hills (Scott AFB, 2004c). The Base land surface is generally level. Natural vegetative communities within the Base have been largely modified by past Base operations (USAF, 1991). Land use around the Base is mainly agricultural with natural vegetation between fields, along roads and streams, and near residences.

Vegetation on Scott AFB has been characterized into four different community types: Urban Upland, Upland Forest, Non-forested Upland, and Riparian Forest (Scott AFB, 2005d).

The Urban Upland community covers approximately 80 percent of Scott AFB and typically consists of manicured lawns and associated landscaping and trees planted along streets. Other areas included in this community type are the east portion of the Base, the golf course, the driving range, the unpaved areas of the airfield, and the former Cardinal Creek housing area located east of the golf course (Scott AFB, 2005d).

The Upland Forest community is dominated by upland trees such as white oak (*Quercus alba*), northern red oak (*Quercus rubra*), sassafras (*Sassafras albidum*), black walnut (*Juglans nigra*), hickories (*Carya* spp.), black cherry (*Prunus serotina*), and hackberry (*Celtis occidentalis*). Various species of pine (*Pinus* spp.) trees have also been planted in these areas. Amur honeysuckle (*Lonicera maackii*) is established in the Upland Forest and is a prominent component of the understory. Nearly all of the upland forested areas occur between the Silver Creek floodplain and the Family Camp area which is located in the northeast portion of Scott AFB. Other fragments of this community occur as narrow strips along steep fill slopes adjacent to the floodplain (Scott AFB, 2005d).

The Nonforested Upland community is dominated by grass species such as fescue (*Festuca* spp.) and bluegrass (*Poa pratensis*) and typical open-field vegetation such as goldenrod (*Solidago* sp.) with some invasion of smaller trees and shrubs in areas that are not maintained by mowing. The Nonforested Upland areas are found around the Family Camp area, various locations around Scott Lake, an area at the southern end of the airfield, and one other area in the southern portion of the Base around the former landfill (Scott AFB, 2005d).

The Riparian Forest community contains vegetative species common to wetlands, including ash (*Fraxinus* sp.), elm (*Ulmus* sp.), cottonwood (*Populus deltoides*), pin oak (*Quercus palustris*), and silver maple (*Acer saccharinum*). Two species, the hackberry and the shagbark hickory (*Carya ovata*) tend to differentiate the poorly drained riparian forest areas from the poorly drained wetlands. The Riparian Forest has a canopy that is approximately 30 to 40 percent open. The understory of the Riparian Forest is relatively sparse; however, stinging nettle and white heath aster dominate a dense herbaceous layer in this community. The Riparian Forest areas are located throughout the floodplain of Silver Creek and portions of this area have been classified as jurisdictional wetlands (Scott AFB, 2005d). A botanical survey conducted in September 2001 on the Riparian Forest area noted that portions of this area were of high quality and “Regionally Significant” because of the presence of sizable acreage of very good quality floodplain forest along Silver Creek (USACE, 2002).

Much of the Riparian Forest area was previously managed by the installation as commercial forest. Three clear-cut timber sales were completed during the 1980s and 1990s as part of the Forest Management Plan (Scott AFB, 2005e).

**Wildlife.** This section focuses on terrestrial and aquatic wildlife living in a natural, undomesticated setting. Wildlife species found at Scott AFB are generally limited to species that have adapted to existence in a developed, semi-urban, and industrial setting.

Mammal species that may occur in the area include Eastern cottontail (*Sylvilagus floridanus*), woodchuck (*Marmota monax*), eastern gray squirrel (*Sciurus carolinensis*), fox squirrels (*Sciurus niger*), white tailed deer (*Odocoileus virginianus*), Virginia opossum (*Didelphis virginiana*), American beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), raccoon (*Procyon lotor*), and coyote (*Canis latrans*).

Of the 83 bird species detected during a 2001 study, the most common species observed were the

common grackle (*Quiscalus quiscula*), downy woodpecker (*Picoides pubescens*), wood duck (*Aix sponsa*), red-bellied woodpecker (*Melanerpes carolinus*) and white breasted nuthatch (*Sitta carolinensis*). During migratory periods of this study, the indigo bunting (*Passerina cyanea*), blue-gray gnatcatcher (*Poliophtila caerulea*) and the prothonotary warbler (*Protonotaria citrea*) were the most common species (USACE, 2002).

Largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), and crappie (*Pomoxis* spp.) are the primary freshwater fish located in Scott AFB lakes. Both Cardinal Lake and Scott Lake are actively managed for recreational fishing. Other species located in the lakes includes common snapping turtle (*Chelydra serpentina*), painted turtle (*Chrysemys picta*), and northern water snake (*Natrix sipedon*).

**Threatened and Endangered Species.** A review of the Illinois Natural Heritage Database by IDNR indicated that as of August 21, 2006, there were no threatened or endangered species located near the Base or within the immediate vicinity (ECOCAT, 2006). The Illinois Natural Heritage Society database does not provide a conclusive statement on the presence, absence, or condition of a listed species and does not preclude the need for field surveys. Rather, the information contained in the database is based only on the best available information at the time the database was provided. Additionally, a population record for birds typically indicates a site of known breeding or nesting because birds can occur incidentally at many sites during migration (Scott AFB, 2005d).

**Table 3-8** lists special status species that are known to occur in St. Clair County and that could potentially occur on or near Scott AFB. No designated critical habitat is located on or near Scott AFB. It is the policy of the USAF to treat any state-listed species with the same protection afforded to the federally-listed species whenever practicable (Air Force Instruction [AFI] 32-7064). Although not required by the federal ESA, the USAF will provide similar conservation measures for species protected by Illinois state law, when such protection is not in direct conflict with the military mission.

Only one federally-protected species has been documented on Scott AFB. In 2001, a mist net survey captured a single female Indiana bat (*Myotis sodalis*) along Silver Creek (USACE, 2002). The floodplain forest along Silver Creek does provide suitable foraging habitat for the species. Large snags with exfoliating bark and cavities could provide suitable roosting or possibly maternal colony sites. Larger trees exhibiting exfoliating bark could become more suitable as roost trees over time. The USFWS recommended future studies of the Indiana bat at Scott AFB to focus on locating maternity colonies, estimating colony size, identifying primary and alternate roost trees, and determining the Indiana bat's use of Silver Creek and surrounding Scott AFB drainages (Scott AFB, 2005d). These studies are anticipated to be completed in late 2007 or early 2008.

**Table 3-8. Threatened and Endangered Species Documented or Likely to Occur in St. Clair County, with Assessment of Potential for Occurrence on the Installation**

Common Name	Scientific Name	Status	Potential for Occurrence
<b>MAMMALS</b>			
Indiana bat	<i>Myotis sodalis</i>	FE	Possible. One individual was captured in a 2001 survey. Additional surveys anticipated for Fiscal Year (FY) 07 or FY08.
<b>REPTILES</b>			
Eastern massasauga	<i>Sistrurus catenatus catenatus</i>	FC	Low. Unlikely that this species would occur in the fragmented habitat at Scott AFB.
<b>PLANTS</b>			
Decurrent false aster	<i>Boltonia decurrens</i>	FT	Low. Not known from project area. Occurs on sunlit floodplains and open wetlands. Very limited habitat on Base.
Buffalo clover	<i>Trifolium reflexum</i>	ST	Low. Not known from project area. Occurs on dry mesic savannas, flatwoods, and prairies. Suitable habitat could exist.
Green trillium	<i>Trillium viride</i>	SE	Low. Not known from project area. Occurs in bottomland forests. Suitable habitat could exist.
<b>BIRDS</b>			
Bald eagle	<i>Haliaeetus leucocephalus</i>	FT	Low. No open water in the project area. Poor suitable habitat.
Short-eared owl	<i>Asio flammeus</i>	SE	Low. No known nests or sightings in project area. Ground nester prefers meadows, open fields, and prairies.

**Table 3-8. Threatened and Endangered Species Documented or Likely to Occur in St. Clair County, with Assessment of Potential for Occurrence on the Installation (Cont'd)**

Common Name	Scientific Name	Status	Potential for Occurrence
Loggerhead shrike	<i>Lanius ludovicianus</i>	ST	Low. Not known from project area. Prefer open areas with windrows of trees and brush.
Little blue heron	<i>Egretta caerulea</i>	SE	Possible. Sighted during the 2001 bird survey, 2004 habitat survey, and 2005 wetland delineation activities. Breeding potential of this species at Scott AFB is unknown.
Snowy egret	<i>Egretta thula</i>	SE	Possible. Sighted during the 2001 bird survey, 2004 habitat survey, and 2005 wetland delineation activities. Breeding potential of this species at Scott AFB is unknown.

FE = Federal Endangered, FT = Federal Threatened, FC = Federal Candidate, SE = State Endangered, ST = State Threatened  
Sources: IDNR, 2004; USFWS Correspondence August 4, 2006, ECOCAT, 2006.

No studies have found the federal candidate species, the eastern massassauga (*Sistrurus catenatus catenatus*) at the Base. Although potential habitat for the eastern massassauga was found on Scott AFB, this habitat is fragmented; therefore, the eastern massassauga would not likely be able to exist on the Base (Scott AFB, 2005d).

Suitable habitat for the federal-listed decurrent false aster (*Boltonia decurrens*) is limited on Base. In Illinois, known populations of the decurrent false aster occur along the Illinois River. Suitable habitat for the state-listed species, buffalo clover (*Trifolium reflexum*) and green trillium (*Trillium viride*), could exist within the floodplain forests (Riparian Forest community) on Base. However, several vegetative surveys have been conducted over the past ten years and no listed plant species have been observed (Scott AFB, 2005d).

The bald eagle (*Haliaeetus leucocephalus*) is typically attracted to large, open water bodies which are lacking on Scott AFB. As suitable habitat for the federal-listed bald eagle does not exist on or adjacent to the Base, any observed bald eagle occurrences would likely be those of a transient.

Suitable habitat for the state-listed species, short-eared owl (*Asio flammeus*) and loggerhead shrike (*Lanius ludovicianus*), does exist on the Base; however, neither species have been recorded at or near the Base. One little blue heron (*Egretta caerulea*) and one snowy egret (*Egretta thula*) were observed at Scott and Cardinal Lakes during the 2001 bird surveys (USACE, 2002). Both are state-listed species. One little blue heron and one snowy egret were also observed during the July 2004 habitat surveys at Scott Lake and the deep water swamp south of the MidAmerica Airport taxiway (Scott AFB, 2005d). Both species were observed again during the wetland delineation activities (Scott AFB, 2005c). As nesting and breeding potential could not be determined by these surveys, a breeding bird survey has been recommended. No other state-listed bird species have been observed on Base (Scott AFB, 2005d).

**Wetlands and Other Aquatic Habitat.** Section 404 of the Clean Water Act (CWA) established a program to regulate the discharge of dredge and fill material into waters of the U.S., including wetlands. Activities in waters of the U.S. that are regulated under this program include fills for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. Executive Order 11990, *Protection of Wetlands*, requires federal agencies, including the USAF, to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.

In July 2004, in coordination with the St. Louis District USACE, the 375<sup>th</sup> Civil Engineering Squadron Environmental Management Flight (375 CES/CEV) conducted a formal wetland delineation of all areas on Scott AFB. Twenty-four wetlands were observed and delineated during the 2004 field activities (**Figure 3-3**). The majority of these wetlands were palustrine forested wetlands (PFO), located within the forested floodplain of Silver Creek. The largest PFO wetland consisted of 147.5 contiguous acres and is located south of Taxiway G and east of Silver Creek.

Additional wetlands observed included isolated palustrine emergent (i.e., marshes) areas in various developed and undeveloped areas of the Base. The USACE determined that man-made surface waters such as Scott Lake, Cardinal Lake, irrigation ponds, and golf course ponds that were constructed in

mapped upland soils should be considered nonjurisdictional waters. Additionally, isolated wetlands would also be considered nonjurisdictional. This designation extends to nearly all of the waters and wetlands not located within the Silver Creek floodplain, except the pond and wetlands along both sides of Golf Course Road in front of the clubhouse (Scott AFB, 2005c).

Approximately 236 acres of floodplains adjacent to Silver Creek consist of interspersed wetland and nonwetland areas. Because of the complexity of interspersed, this area was classified as a wetland complex that is frequently flooded. A separate jurisdictional wetland delineation and USACE concurrence would be necessary should any future projects occur within this complex.

Essentially every stream on Scott AFB has been channelized. The USACE indicated that these channels would be considered waters of the U.S. if historical stream flow could be identified on historical aerial photography. An evaluation of historical aerial photographs determined that all swales and streams would meet the jurisdictional criteria with the exception of one man-made swale located south of MidAmerica Airport Taxiway within the flight line (Scott AFB, 2005c).

## 3.8 Cultural Resources

### 3.8.1 Definition of the Resource

Cultural resources are historic districts, sites, buildings, structures, or objects considered important to a culture, subculture, or community for scientific, traditional, religious, or other purposes. They include archaeological resources, historic architectural/engineering resources, and traditional resources. Cultural resources that are eligible for listing in the National Register of Historic Places (NRHP) are called historic properties. Historic properties are evaluated for potential adverse impacts from an action. In addition, some cultural resources such as American Indian sacred sites or traditional resources may not be historic properties but they are also evaluated under NEPA for potential adverse effects resulting from an action. These resources are identified through consultation with appropriate American Indian or other interested groups. In 1999, the DoD promulgated its American Indian and Alaska Native Policy emphasizing the importance of respecting and consulting with tribal governments on a government-to-government basis. The Policy requires an assessment, through consultation, of the effects of proposed DoD actions that may have the potential to significantly affect protected tribal resources, tribal rights, and Indian lands before decisions are made by the armed services.

The ROI for cultural resources is the area within Scott AFB which the Proposed Action has the potential to affect existing or potentially occurring archaeological, architectural, or traditional cultural resources. The ROI is defined as each project's footprint, including any areas that could be used temporarily for staging or other project-related activities.

### 3.8.2 Existing Conditions

**Archaeological Resources.** Cultural resource management formally began at Scott AFB in 1975, but it was not until 1986 that a cultural resources program was established. Since that time, numerous cultural resources surveys have been performed as well as test excavations at five historic archaeological sites. These efforts have identified 12 archaeological sites and two historic cemeteries. All of the sites are considered historic, although Native American artifacts are represented at only two of the sites. Only one of the 12 sites was evaluated as NRHP-eligible; following the required impact mitigation, it was destroyed through construction. As a result, there are no known NRHP-eligible archaeological resources at Scott AFB. Most of the Base has been surveyed or is known to be heavily disturbed through the construction and demolition efforts related to the growth period during and after World War II.

**Traditional, Cultural, or Religious Significance to Native American Tribes.** Cultural resources such as American Indian sacred sites or other traditional resources may not be historic properties but they are also evaluated under NEPA for potential adverse effects from an action. These resources are identified through consultation with appropriate American Indian or other interested groups. In 1999, the DoD promulgated its American Indian and Alaska Native Policy emphasizing the importance of respecting and consulting with tribal governments on a government-to-government basis. The Policy requires an assessment,

through consultation, of the effects of proposed DoD actions that may have the potential to significantly affect protected tribal resources, tribal rights, and Indian lands before decisions are made by the armed services.

No traditional resources or Native American issues have been identified at Scott AFB (Scott AFB, 2003a). Although there are no reservations in the State of Illinois, the Kaskaskia and the Kickapoo tribes have judicially established lands near Scott AFB.

**Architectural Resources.** Scott AFB is home to the Scott Field National Historic District (**Figure 2-2**) that is made up of 104 contributing historic buildings and structures. The buildings and structures were inventoried and evaluated in 1992 by Thomason and Associates of Nashville, Tennessee (Scott AFB, 2003). Thomason and Associates also completed the NRHP district nomination that was approved by the Illinois State Historic Preservation Office in 1993 and the National Park Service in 1994. A 1994 evaluation of potentially eligible historic Cold War era resources examined 59 structures. None of the evaluated structures were recommended as eligible at the time; however it was recommended that Building 3200 (Air National Guard [ANG] Alert Hangar) be reevaluated in 2002, on the 50th anniversary of its build date. In December of 2002, Building 3200 was evaluated as eligible for the NRHP under Criterion C: Design/Construction. The ANG alert hangar embodies distinctive characteristics of a particular type of construction, a rare example of an ANG alert hangar, and clearly illustrates, through its distinctive structure and design, the early evolution of this class of buildings.

## 3.9 Socioeconomics

### 3.9.1 Definition of the Resource

Socioeconomics are defined as the basic attributes associated with the human environment, particularly population and economic activity. Regional birth and death rates and immigration and emigration affect population levels. Economic activity typically encompasses employment, personal income, and industrial or commercial growth. Changes in these three fundamental socioeconomic indicators might be accompanied by changes in other components, such as housing availability and the provision of public services. Socioeconomic data at county, state, and national levels permit characterization of baseline conditions in the context of regional, state, and national trends.

Data in these areas provide key insights into socioeconomic conditions that might be affected by an action. Data on employment might identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on personal income in a region can be used to compare the “before” and “after” effects of any jobs created or lost as a result of an action. Data on industrial or commercial growth or growth in other sectors provides baseline and trend line information about the economic health of a region.

In appropriate cases, data on an installation’s expenditures in the regional economy help to identify the relative importance of an installation in terms of its purchasing power and jobs base. Demographics identify the population levels and changes to population of a region. Demographics data might also be obtained to identify, as appropriate to evaluation of an action, a region’s characteristics in terms of race, ethnicity, poverty status, educational attainment level, and other broad indicators.

On February 11, 1994, the President issued EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. This EO requires that federal agencies’ actions substantially affecting human health or the environment do not exclude persons; deny persons benefits; or subject persons to discrimination because of their race, color, or national origin. The essential purpose of the EO is to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, tribal, and local programs and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of where an action

would occur. Such information aids in evaluating whether an action would negatively impact any of the groups targeted for protection in the EO.

Socioeconomic data shown in this section are presented at the U.S. Census Bureau Tract, Metropolitan Statistical Area (MSA), and state levels to characterize baseline socioeconomic conditions in the context of regional, state, and national trends. A MSA is a geographical entity defined for use by federal statistical agencies based on the concept of a core urban area with a high degree of economic and social integration with surrounding communities. Data has been collected from previously published documents issued by federal, state, and local agencies and from state and national databases (e.g., U.S. Bureau of Economic Analysis' Regional Economic Information System).

On April 21, 1997, the President issued EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*. This EO requires federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children. The EO further requires federal agencies to ensure that their policies, programs, activities, and standards address these disproportionate risks. The order defines environmental health and safety risks as, "risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink and use for recreation, the soil we live on, and the products we use or are exposed to)." Such information aids in evaluating whether an action would adversely impact children afforded protection by the EO.

### 3.9.2 Existing Conditions

For the Proposed Action, the socioeconomic baseline is represented using three levels of comparison: the ROI; the St. Louis, Missouri MSA; and the state of Illinois. The ROI was defined by identifying census tracts surrounding Scott AFB. Census tracts 5033.21, 5033.22, 5033.31, 5033.32, 5034.05, 5038, 5039.01, 5043.02, 5043.03, 5043.04, 5043.51, 5043.52, and 5043.53 were defined as the ROI. The St. Louis MSA includes a larger population of people and includes the population within the ROI.

**Social and Economic Conditions.** Scott AFB is approximately 20 miles east of St. Louis, Missouri and is located in St. Clair County, Illinois. **Table 3-9** compares the differences in population in the region between the 1990 Census, the 2000 Census and the most recent population estimates from 2005. St. Clair County is growing at a slower rate than the state and nation and even had a decline in population between 1990 and 2000. Local communities within the Scott AFB region include the cities of Belleville, O'Fallon, Fairview Heights, Lebanon and Mascoutah, and Shiloh Village. The City of Belleville had the highest 2000 population of 41,410 followed by the City of O'Fallon (21,910) and Fairview Heights (15,034). The cities of Lebanon and Mascoutah, and the Village of Shiloh each have 2000 populations of less than 10,000 (U.S. Census Bureau, 2000).

**Table 3-9. Population Changes in the Region**

Location	1990	2000	% change 1990-2000	2005	% change 2000-2005
United States	248,709,873	281,421,906	13.2	296,410,404	5.3
Illinois	11,430,602	12,419,293	8.6	12,763,371	2.8
St. Clair County	262,852	256,082	-2.6	260,067	1.6

Source: U.S. Census Bureau 1990, 2000, and 2005 Population Estimates.

**Table 3-10** lists the industries for residents in the ROI, MSA, and Illinois. The top three industries for the ROI consist of educational, health, and social services; retail trade; and professional, scientific, management, administrative, and waste management services. The top three industries for the MSA and State of Illinois consist of education, health, and social services; manufacturing; and retail trade. As would be expected, there is a larger portion of the population in the ROI employed in the Armed Forces, compared with both the MSA and State of Illinois.

**Table 3-10. Employment of Residents in the ROI, MSA, and State of Illinois**

<b>Economic and Social Indicators</b>	<b>ROI (%)</b>	<b>MSA (%)</b>	<b>Illinois (%)</b>
Employed Persons in Armed Forces	7.2	0.3	0.2
<b>Employed Persons in Civilian Labor Force by Industry</b>			
Agriculture, forestry, fishing, hunting, and mining	0.7	0.7	1.1
Construction	5.0	6.3	5.7
Manufacturing	9.2	14.3	16.0
Wholesale trade	2.4	3.7	3.8
Retail trade	13.5	11.5	11.0
Transportation, warehousing, and utilities	5.6	5.8	6.0
Information	2.8	3.2	3.0
Finance, insurance, real estate, rental and leasing	7.6	7.7	7.9
Professional, scientific, management, administrative, and waste management services	10.2	9.4	10.1
Educational, health, and social services	21.6	20.6	19.4
Arts, entertainment, recreation, food services	8.4	8.0	7.2
Other services (except public administration)	4.9	5.1	4.7
Public administration	8.0	3.8	4.0

Source: U.S. Census Bureau, 2000.

There are about 14,000 persons employed at Scott AFB which includes USAF Active Duty and Reserves, Air National Guard, and civilians. About 60 percent of these jobs are military and 40 percent are civilian. The total Scott AFB community, which is comprised of civilian and military personnel, their dependents, and military retirees, is about 39,600 persons. Total payroll for Scott AFB and tenants in FY 2003 was about \$970 million with about \$412 million in annual expenditures. This included expenditures of \$42 million for construction projects, \$191 million on materials, equipment and supplies, and \$112 million for services (Scott AFB, 2005a).

In 2000, the unemployment rate for the ROI was 2.4 percent, which is lower than the St. Louis MSA (3.7 percent) and the State of Illinois (3.9 percent). As depicted in **Table 3-11**, the ROI has a lower percentage of individuals below the poverty threshold and a higher per capita income and a median household income than both the MSA and the State of Illinois (U.S. Census Bureau, 2000).

**Table 3-11. Income and Poverty Level for Residents in ROI, MSA, and State of Illinois.**

	<b>ROI</b>	<b>MSA</b>	<b>State of Illinois</b>
Persons below poverty level (%)	5.8	9.9	10.7
Per Capita Income (\$)	23,397	22,698	23,104
Median Household Income (\$)	54,836	44,437	46,590

Source: U.S. Census Bureau, 2000

**Table 3-12** depicts the educational attainment within the ROI, MSA, and the State of Illinois. The percent of residents that have obtained a high school diploma (58 percent) is comparable to the MSA (58.1 percent) and slightly higher than the State of Illinois (55.4 percent). The percent of residents that have obtained a bachelor's degree or higher in the ROI (31.4 percent) is higher than the MSA (25.3 percent) and the State of Illinois (26 percent) (U.S. Census Bureau, 2000).

**Table 3-12. Educational Attainment for Residents in ROI, MSA, and the State of Illinois**

<b>Educational Indicators</b>	<b>ROI</b>	<b>MSA</b>	<b>State of Illinois</b>
Percent without high school diploma	10.6	16.6	18.6
Percent high school graduate	58.0	58.1	55.4
Percent bachelor's degree or higher	31.4	25.3	26.0

Source: U.S. Census Bureau, 2000

**Environmental Justice.** Race, ethnicity, and the poverty status of people within the ROI, MSA, and State of Illinois were characterized to establish a baseline for environmental justice analysis. To establish a baseline for environmental justice effects, poverty, and race were examined at the census tract level and compared to the state and MSA averages.

Those 13 census tracts identified as the ROI (Census tracts 5033.21, 5033.22, 5033.31, 5033.32, 5034.05, 5038, 5039.01, 5043.02, 5043.03, 5043.04, 5043.51, 5043.52, and 5043.53) were compared to the MSA and the State of Illinois. Census tracts 5033.31 and 5033.32, which are located west of Scott AFB in the City of Belleville, are discussed in more detail because of their potential for environmental justice concerns (**Table 3-3**).

**Table 3-13. Potential Environmental Justice Indicators**

Economic and Social Indicators	ROI		MSA	State of Illinois
	Census Tract 5033.31	Census Tract 5033.32		
Black or African American (%)	19.7	19.6	18.3	15.1
Native American (%)	0.2	0.4	0.2	0.2
Asian (%)	1.9	2.1	1.4	3.4
Pacific Islander (%)	0.1	0.0	0.0	0.0
Below Poverty (%)	9.0	4.4	9.9	10.7
Per Capita Income (\$)	23,002	21,131	22,698	23,104

Source: U.S. Census Bureau, 2000

Census Tracts 5033.31 and 5033.32 have a higher percentage of Black or African Americans (19.7 and 19.6 percent respectively) than the MSA (18.3 percent) and the State of Illinois (15.1 percent). Within the ROI, Census Tract 5033.31 has the highest percentage of individuals below poverty (9.0 percent) which was lower than the MSA (9.9 percent) and the State of Illinois (10.7 percent). Census Tract 5033.31 has a per capita income higher than the MSA but lower than the State of Illinois. Census Tract 5033.32 has a per capita income lower than both the MSA and the State of Illinois (U.S. Census Bureau, 2000).

## 3.10 Infrastructure

### 3.10.1 Definition of the Resource

Infrastructure refers to the system of public works, such as utilities and transportation that provide the underlying framework for a community. Utilities include such amenities as water, power supply, and waste management. Transportation and circulation refer to roadway and street systems, the movement of vehicles, pedestrian and bicycle traffic, and mass transit. The infrastructure components to be discussed in this section include the transportation network, electricity, natural gas, sanitary sewer, stormwater drainage, solid waste, and potable water.

The infrastructure information was obtained from the *Scott Air Force Base General Plan* (Scott AFB, 2004c). Various infrastructure assessments were completed between February 2002 and February 2004. All infrastructure systems were rated adequate or degraded. No infrastructure systems at Scott AFB were rated unsatisfactory.

### 3.10.2 Existing Conditions

**Airfield.** The Scott AFB airfield pavement system includes a runway, paved overrun, eight taxiways and approximately 33 acres of parking apron. The Scott AFB runway is 8,001 feet long and is located in a northwest/southwest orientation. The Scott AFB runway and taxiways were rated adequate, and the aprons were rated degraded. A large portion of the northeast side of the main apron needs to be replaced. Adjacent to the Base is St. Clair County's MidAmerica Airport which was constructed in cooperation with Scott AFB. MidAmerica Airport has a 10,000-ft runway parallel to the runway at Scott AFB. The runway is in good condition. Under a Joint Use Agreement between the Air Force and St. Clair County, Scott AFB and MidAmerica share runways, which are joined by Taxiway G.

**Electrical System.** The Illinois Power Company supplies electricity to Scott AFB. The majority of the electrical lines are aboveground. In 2004, the electrical system was rated degraded due in part to the use of wooden cross arms in the overhead system. Substation 5 that primarily supplies electrical service to Building 1600 is also nearing the end of its useful life.

**Heating and Cooling System.** The central heating plant at Scott AFB has been decommissioned. No central heating systems serve Base facilities. Scott AFB has three small central chilled water plants. The heating and cooling system at Scott AFB was rated degraded in 2002. Chillers in Buildings 1600 and 1900 are nearing the end of their useful life and should be replaced.

**Liquid Fuel System.** Liquid fuels at Scott AFB consist of JP-8, unleaded gasoline, diesel fuel, bio-diesel and E-85 motor gasoline. Liquid fuel is delivered to three storage tanks at Scott AFB, south of the airfield by commercial tank trucks. The system includes 1,000 feet of piping, and a government vehicle service station. The liquid fuels system at Scott AFB was rated adequate in 2004.

**Natural Gas System.** The Illinois Power company supplies natural gas to Scott AFB. The Base housing area system is approximately four years old and consists of polyethylene (plastic) piping. The natural gas system was rated adequate in 2004. The natural gas system is managed by a private company, Scott AFB Properties, LLC.

**Sanitary Sewer System.** Scott AFB owns and operates the sanitary sewer system consisting of sewer lines, lift stations, and an onsite wastewater treatment plant (WWTP). The WWTP is located within the southern clear zone for the airfield and has a design maximum flow capacity of 3.0 million gallons per day (mgd) and a design average flow capacity of 2.0 mgd. The Scott AFB WWTP is permitted to discharge treated effluent to an unnamed tributary of a local stream, the golf course lake, and Scott Lake. Sludge is used for land application off Base. During periods of heavy rainfall, flow to the WWTP may exceed the plant capacity of 3.0 mgd and wastewater bypasses the plant. This bypass water is chlorinated, and then dechlorinated before being discharged to Mosquito Creek. Rated degraded in 2002 and 2004, problems include the failure of the Shiloh housing force main and overloading of the treatment plant during periods of large volumes of stormwater runoff. Operation of the WWTP is currently being considered for privatization.

**Stormwater Drainage System.** Storm drainage at Scott AFB consists of a series of enclosed storm sewer and open channels. Precipitation is conveyed to major drainage channels which exit to the south and east boundaries of Scott AFB. Scott AFB has been experiencing drainage problems throughout the Base. In February 2003, the USACE, Louisville District conducted a study to assess the cause. The USACE study determined that several factors are contributing to current flooding problems on Scott AFB. These include increased development, improperly graded areas, pipes with little to no slope, and silted-in pipes. The 2004 utility assessment team determined that the storm drainage ditches and culverts require immediate attention to prevent damage from flooding. The Base wide infiltration study identified infiltration issues that cause overloading of the waste treatment facility during major rain events. The stormwater drainage system was rated degraded in 2004.

**Solid Waste Management.** Municipal solid waste (MSW) at Scott AFB is managed in accordance with the guidelines specified in the AFI 32-7042, *Solid and Hazardous Waste Compliance*. This AFI incorporates, by reference, the regulations of Subtitle D, 40 CFR Parts 240 through 244, 257, and 258; and other applicable federal regulations, AFIs, and DoD Directives. In general, AFI 32-7042 establishes the requirement for installations to have a solid waste management program that incorporates the following: a solid waste management plan; procedures for handling, storage, collection, and disposal of solid waste; recordkeeping and reporting; and pollution prevention. The Scott AFB *Solid Waste Management Plan* (1997b) provides guidance for personnel working with solid wastes and sets local management procedures for managing solid waste, preventing pollution, and establishing proper disposal and recycling options. A contractor collects non-recyclable municipal solid wastes for off-base landfill disposal.

Scott AFB has a Qualified Recycling Program that is responsible for the collection, recycling, disposal, tracking and reporting of all solid waste on Base. The recycling program is operated under contract by Challenge and is currently being relocated to an off-base location. The commissary and the Army Air Force Exchange Service (AAFES) have their own recycling programs.

Off-base contractors completing construction and demolition (C&D) projects at Scott AFB, are responsible for disposing of waste generated from these activities. Contractors are required to comply with federal, state, local and USAF regulations for the collection and disposal of MSW from the

installation. Much of this material can be recycled or reused, or otherwise diverted from landfills. All nonrecyclable C&D waste is collected in a dumpster until removal. C&D waste contaminated with hazardous waste, asbestos-containing material (ACM), lead-based paint (LBP), or other undesirable components is managed in accordance with AFI 32-7042.

**Transportation System.** Scott AFB is located within a few miles of Interstates 44, 55, 64, and 70. Belleville and Shiloh Gates are the primary entrances to the Base while the Mascoutah Gate is the commercial entrance. The primary north-south artery within Scott AFB is Scott Drive. All other main roads originate from this principal artery. Portions of Hangar Road and various streets located east of the airfield are located within the Primary Surface (1000 lateral feet off the runway). Portions of South Drive are located within the airfield clear zone.

The region's light rail mass transit system, MetroLink extends to Scott AFB and includes a park-and-ride station immediately west of Scott AFB.

A main line of the Norfolk-Southern Rail line passes through the southern part of Scott AFB in an east/west direction. A portion of the railroad falls within the graded area for the airfield clear zone.

**Potable Water System.** The Illinois American Water Company supplies potable water to Scott AFB through two transmission mains. The total water storage capacity is 2.5 million gallons and the existing storage capacity meets the required maximum daily demand. A water tower (Building 8050), located east of the airfield is located within the 7:1 transitional surface of the runway.

The potable water system at Scott AFB is about 60 years old and is deteriorated and corroded. Rated degraded in 2004, specific problems with the existing system include a deteriorated 16-inch water main, low water pressure in the hospital and fire suppression systems, areas of low chlorine levels, dead-end lines at the Patriots Landing housing area, approximately 15 waterline breaks per year, and improperly functioning elevated water towers. Privatization of the potable water distribution system is currently under consideration.

## 3.11 Hazardous Materials and Waste

### 3.11.1 Definition of the Resource

This section describes the affected environment associated with hazardous materials and petroleum products, hazardous and petroleum wastes, Environmental Restoration Program (ERP) sites, and solid waste at the construction, renovation, and demolition areas.

The terms "hazardous materials" and "hazardous waste" refer to substances defined as hazardous by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA). In general, hazardous materials include substances that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may present substantial danger to public health or the environment when released into the environment. Hazardous wastes that are regulated under RCRA are defined as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes that either exhibit one or more of the hazardous characteristics of ignitability, corrosivity, toxicity, or reactivity, or are listed as a hazardous waste under 40 CFR Part 261. Petroleum products include petroleum-based fuels, oils, and their wastes. The ERP is a DoD program designed to identify, characterize, and remediate environmental contamination from past activities at DoD installations.

Issues associated with hazardous material and waste typically center around waste streams, underground storage tanks (USTs), aboveground storage tanks (ASTs), and the storage, transport, use, and disposal of pesticides, fuels, lubricants, and other industrial substances. When such materials are improperly used in any way, they can threaten the health and well being of wildlife species, habitats, and soil and water systems, as well as humans. This section also considers solid waste.

The management of hazardous materials and hazardous waste is governed by specific environmental statutes. The key regulatory statutes include:

*Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 USC 9601–9675)* as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986. CERCLA/SARA regulates the prevention, control, and compensation of environmental pollution.

*Community Environmental Response Facilitation Act of 1992 (42 USC 9620)*. This act amended CERCLA to require that, prior to termination of federal activities on any real property owned by the federal government, agencies must identify real property where hazardous substances were stored, released, or disposed.

*Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 USC 11001–11050)*. EPCRA requires emergency planning for areas where hazardous materials are manufactured, handled, or stored and provides citizens and local governments with information regarding potential hazards to their community.

*Resource Conservation and Recovery Act of 1976 (42 USC 6901–6992)*. RCRA established standards and procedures for handling, storage, treatment, and disposal of hazardous waste.

*Federal Facility Compliance Act of 1992 (Public Law 102-426)*. This act provides for a waiver of sovereign immunity on the part of federal agencies with respect to federal, state, and local requirements relating to RCRA solid and hazardous waste laws and regulations.

*Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1996 (7 USC 136 et seq.)*. FIFRA provides federal control of pesticide distribution, sale, and use. It also provides certification criteria for pesticide applicators, including contractors.

*Pollution Prevention Act of 1990 (42 USC 13101–13109)*. This act encourages minimization of pollutants and waste through changes in production processes.

*USEPA Regulation on Identification and Listing of Hazardous Waste (40 CFR Part 261)*. This regulation identifies solid wastes subject to regulation as hazardous and to notification requirements under RCRA.

*USEPA Regulation on Standards for the Management of Used Oil (40 CFR Part 279)*. This regulation delineates requirements for the storage, processing, transport, and disposal of oil that has been contaminated by physical or chemical impurities during use.

*USEPA Regulation on Designation, Reportable Quantities, and Notification (40 CFR Part 302)*. This regulation identifies reportable quantities of substances listed in CERCLA and sets forth notification requirements for releases of those substances. It also identifies reportable quantities for hazardous substances designated in the CWA.

Air Force Policy Directive (AFPD) 32-70, Environmental Quality, establishes the policy that the USAF is committed to environmentally sound practices. These include the following:

- Cleaning up environmental damage resulting from its past activities;
- Meeting all environmental standards applicable to its present operations;
- Planning its future activities to minimize environmental impacts;
- Managing responsibly the irreplaceable natural and cultural resources it holds in public trust; and
- Eliminating pollution from its activities wherever possible.

AFPD 32-70 and AFI 32-7000 series incorporate the requirements of all federal regulations, other AFIs, and DoD directives for the management of hazardous materials, hazardous wastes, and special hazards.

The ROI for hazardous materials, hazardous waste, and petroleum products encompasses areas that could be exposed to an accidental release of hazardous substances from the construction, renovation, or demolition activities. Therefore, the ROI for this section includes the locations of proposed projects and their immediate surrounding area within the boundaries of Scott AFB.

### **3.11.2 Existing Conditions**

The 375 CES/CEV is responsible for the implementation of hazardous material and waste plans at Scott AFB. In conformance with the policies established by AFPD 32-70, the 375 CES/CEV has developed

procedures and plans to manage hazardous wastes, hazardous materials, special wastes, and environmental restoration sites on Scott AFB.

**Hazardous Materials.** Throughout the USAF, hazardous materials are managed in accordance with AFI 32-7086, *Hazardous Materials Management*. This instruction establishes procedures and standards that govern the management of hazardous materials. It applies to all USAF personnel who authorize, procure, issue, use, or dispose of hazardous materials, and to those who manage, monitor, or track any of those activities. The 375 CES/CEV manages hazardous materials in accordance with AFI 32-7086.

Hazardous materials and petroleum products are used throughout the installation for various functions, including aircraft refueling, maintenance, and washing; vehicle maintenance and washing; petroleum oil lubricant (POL) distribution and management; facilities maintenance and repair; maintenance of ground support equipment; and aircraft support operations. Hazardous materials used in these functions include fuels and lubricating oils, solvents, paints and thinners, antifreeze, deicing compounds, and acids. At Scott AFB, hazardous materials, with the exception of fuels, are managed through a centralized Base Hazardous Material Pharmacy using an Environmental Management Information System, which tracks the inventory and acquisition of hazardous materials along with hazardous waste disposal and health and safety information (Air Force Institute for Environment, Safety, and Occupational Health Risk Analysis [AFIERA] 2002).

The Base *Spill Prevention Control and Countermeasure Plan* (Scott AFB, 2001b as amended) provides guidance on hazardous material and petroleum storage, spill prevention measures, and contingency procedures including spill containment and cleanup. This plan establishes responsibilities for handling fuels and other hazardous fluids, containing and recovering spills, spill training, and spill reporting procedures. Potential pollutants stored at the installation include JP-8 aviation fuel, #2 fuel oil, gasoline, and diesel fuel, which are stored in underground and aboveground storage tanks and associated distribution systems. In addition, smaller amounts of paints, thinners, lubricants and other industrial chemicals are stored and handled in various buildings. The fuel storage facility is located in the southwest portion of the installation and constitutes the major fuel storage capacity at the installation.

**Hazardous Waste.** Hazardous wastes are managed through the base level *Hazardous Waste Management Plan* (2002). This Plan is currently being revised by the 375 CES/CEV in accordance with AFI 32-7042, *Solid and Hazardous Waste Compliance* (AFIERA, 2002). The *Hazardous Waste Management Plan* provides guidance to Scott AFB personnel on the handling, storage, and disposal of hazardous materials and this plan will implement the “cradle-to-grave” management control of hazardous waste as mandated by USEPA.

Some of the hazardous wastes generated at Scott AFB include spent solvents, photofixer, waste oils, waste cleaning compounds, and various forms of waste paint. The Base Hazardous Waste Management Program covers the handling of universal wastes such as batteries, pesticides, mercury thermostats, and mercury-containing lamps and various special wastes including potentially infectious medical wastes, industrial process wastes, and pollution control wastes.

Scott AFB is regulated as a large quantity generator and maintains USEPA identification number IL7570024177. There are approximately 50 different satellite accumulation points where hazardous wastes are collected on Scott AFB. Building 3306 serves as the central accumulation site for all wastes generated on Scott AFB. This central accumulation site is managed and operated by the 375 CES/CEV.

**Pollution Prevention.** The Scott AFB *Solid Waste Management Plan* provides guidance for personnel who work with solid wastes, and sets local management procedures for managing solid waste, preventing pollution, and establishing proper disposal and recycling options (Scott AFB, 2001c). The plan incorporates current USEPA, state, and local requirements regarding the management of solid waste as they relate to environmental protection during operations conducted at this installation. Solid wastes, other than construction and demolition waste generated at Scott AFB, are disposed at an on-site recycling facility; however this facility is in the process of being relocated to an off-base location. Construction and demolition wastes are transported to and disposed of at an off site landfill. Solid wastes at Scott AFB consist of regular waste from municipal, office, residential, and industrial sources; yard waste, including grass, brush, tree trimmings, and installation grounds and golf course maintenance; high value metal

wastes such as brass casings; and roads and grounds maintenance (Scott AFB, 2005g). The goals of Scott AFB for solid waste management include minimizing waste generation by reusing and recycling materials whenever possible, and increasing the use of materials that are reusable and recyclable. Descriptions of the recycled materials and their amounts are shown in **Table 3-14**. As of 2005, the installation recycled about 40 percent of its non-hazardous solid wastes

**Asbestos.** AFI 32-1052, *Facilities Asbestos Management* provides direction for the management of asbestos and ACM at USAF installations. This instruction requires installations to develop an asbestos management plan for the purpose of maintaining a permanent record of the condition and status of ACM in buildings and other facilities on the installation, as well as documenting asbestos management efforts. In addition, the instruction requires the development of an asbestos operating plan. This plan describes how the installation maintains compliance with the AFI for asbestos-related projects. However, the plan further notes that USEPA policy is to leave asbestos in place if disturbance or removal could pose a threat to human health or the environment.

Scott AFB maintains compliance with the requirements of AFI 32-1052 through the Scott AFB *Asbestos Management Plan* (Scott AFB, 2000a) and the *Asbestos Operations Plan* (Scott AFB, 2000b). This management plan describes procedures for the removal, encapsulation, enclosure, and repair activities associated with ACM-abatement projects. The objective of the plan is to reduce the potential of exposure to potentially hazardous levels of airborne asbestos fibers and assist in maintaining compliance with all federal, state, and local asbestos regulations.

**Lead-Based Paint (LBP).** LBP is regulated through the residential Lead-Based Paint Hazard Reduction Act of 1992. Subtitle B, Section 408 regulates the use and disposal of LBP on federal facilities. Federal agencies are required to comply with applicable federal, state, and local laws and regulations relating to LBP activities and hazards.

USAF policy (USAF, 1993) requires each installation to develop and implement a facility management plan for identifying, evaluating, managing, and abating LBP hazards. The *Lead-Based Paint Management Plan* (Scott AFB, 1996) provides a basic approach to LBP management. The Plan covers designation of responsibilities, identification of hazards, testing procedures, abatement methods, training requirements, and protection of citizens and workers. The Plan also addresses lead exposure from other sources such as lead soldered fittings used in the potable water system and occupational exposure to lead through corrosion control, welding, and cable maintenance operations. The mitigation and monitoring of LBP, disposal, and other hazards are also discussed.

**Table 3-14. Composition of Recycled Materials in Tons**

Material	FY00	FY01	FY02	FY03	FY04
Scrap Metals	216	215	229	206	280
Aluminum Cans	NA	NA	NA	9	11
Auto, Batteries, Tires	NA	66	56	70	74
Fluorescent Bulbs	5	7	3	3	2
Toner Cartridges	1	3	9	1	6
Pallets	19	31	20	5	48
Glass	38	8	0	83	20
Cardboard/Boxboard	866	319	271	244	387
Office Paper and Books	623	470	454	324	440
White Ledger Paper	NA	NA	NA	99	130
Plastics	31	51	21	25	77
126 ARW	NA	NA	NA	16	0
ACR	NA	NA	NA	1	0
FEACR	NA	NA	NA	0	0
Yard Waste	758	1,091	1,447	498	1,573
Cardboard from the BX	NA	NA	NA	16	179
Cardboard from the Commissary	NA	NA	NA	152	621
NA – Not Applicable Source: Scott AFB, 2005g					

**Environmental Restoration Program (ERP).** The restoration program at Scott AFB has grown over the last five years. A systematic approach has been a key factor in site identification. This aggressive program includes 17 projects totaling more than \$9 million. Through limited funding, the program has been able to continue to meet milestones and objectives. Major initiatives include: the implementation of eight projects that investigated 126 sites totaling \$2.7 million; the use of recently promulgated Illinois Environmental Protection Agency (IEPA) regulations to streamline the site investigation and assessment process, saving millions in cleanup costs; the elimination of 60 groundwater wells; the and initiation of "site closeout" for 29 sites. Of the 161 original sites, 73 are now "response complete", 30 of these 73 are "site closeout". At present, 45% of Scott's ERP sites are designated "no further response action planned", a great stride toward final clean-up.

The ROI covered by this EA includes the individual project boundaries within the Scott AFB boundary. Within the ROI for this Proposed Action, there are four ERP sites (OT-09, SS-14, SS-15 and SS-16) and three AOCs (AOC 14, AOC 19 and AOC 23) (**Figure 3-3**). The sites listed as AOC 14 and 23 are the Cardinal Creek Village – South and North areas respectively. Together these AOCs cover approximately 100 acres and both were former housing areas originally constructed in 1952 and completed around 1955. Renovations to these areas were conducted in the early 1980s. The south area consisted of approximately 60 buildings along with open spaces and playgrounds. The north area consisted of approximately 72 buildings also with common areas of open spaces and playgrounds. The units in both areas were vacated in 1999 and demolished shortly thereafter. From 1960 to the late 1980s, chlordane was used to treat the buildings for termite control. The treatment involved the injection of a solution beneath and around the foundation and slabs, thus contaminating the soil. In 1997, the Base conducted a PA/SI of both areas to determine the nature and extent of contamination. This study identified both chlordane and lead at concentrations in the soil that exceeded the Illinois EPA Tier 1 soil cleanup guidance (Scott AFB, 1997a). As a result of this study, a soil management plan was prepared for the excavation and stockpiling of soils in the south area only in advance of relocating the 126 ARW to this area of Scott AFB (Scott AFB, 1997c). In 1998, a Final Decision Document for the excavated soil from the south area was prepared (Scott AFB, 1998). This document designated AOC 14 as a CERCLA AOC and described the selected remedy for the excavated soils. In cooperation with the Illinois EPA, approximately 5,000 cubic yards of soil were excavated from the former housing area and stockpiled into an engineered containment cell located east of Pryor Drive and north of Golf Course Road. Upon completion of the excavation, the soil was capped with an engineered barrier consisting of three feet of clean soil and graded to have the appearance of a landscape berm. This soil will remain at this location until a final action is implemented as part of the ERP (Scott AFB, 1998). Regarding AOC 23, a Preliminary Assessment/Site Investigation (PA/SI) has been completed and a Remedial Investigation/Feasibility Study is currently in the process of being completed.

**Table 3-15. Summary of IRP Sites Near IDEA Project Sites**

Site Name	Contaminants	Current Status and Future Plans
OT-09; Small Arms Firing Range	Metals, solvents & UXO	Remove munitions and treat contaminants offsite. Remediation planned to begin in FY10
SS-14; CAMS	Chlorinated Solvents	Remediation to begin in FY08. Remediation planned to begin in FY10
SS-15; DRMO Yard	PCBs	Remediation planned to begin in FY09.
SS-16; Former Bldg 53	Chlorinated Solvents	Soil excavation and removal and groundwater treatment Remediation planned to begin in FY09.
AOC 14; Cardinal Creek South	Chlordane	CAMU established. Chlordane-impacted soils at CAMU to be removed by late FY07. Land Use Controls may be appropriate in non-CAMU areas.
AOC 19; Base Wide Lead Paint	Lead Paint	Under evaluation
AOC 23; Cardinal Creek North	Pesticides	PA/SI complete. RI/FS underway. Need Risk Assessment. Plan to implement Land Use Controls and enact Soils Management Plan as remedy.

**Site OT09 (Base Small Arms Firing Range)**

The Small Arms Firing Range is located on a grassy undeveloped area covering approximately two acres and consists of a U-shaped berm approximately 30-feet wide at the base and approximately 20-feet high. The firing range was active from about 1959 to 1999 and approximately two tons of lead was fired annually. The shot used at the range was lead and likely had a copper casing. Except for the berms, OT09 is flat and is situated on the edge of the Silver Creek floodplain. Surface/subsurface soil, groundwater, surface water, and sediments have been found to contain contamination that exceeds Illinois EPA cleanup objectives. Lead, dieldrin and 2,4-dinitrotoluene exceeded cleanup objectives in surface/subsurface soils. Dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene and manganese exceed cleanup objectives in surface water. Dieldrin exceeded cleanup objectives in sediments and chloroform, dibenzo(a,h)anthracene, lead, iron, and manganese exceeded cleanup objectives in groundwater. Groundwater flows at the site in an east/northeast direction towards the wooded floodplain. Human and ecological risks at the site include construction workers coming into contact with oxidized lead particulates in soil that could become airborne if soils at the firing range were disturbed. The potential also exists for contaminated groundwater to recharge into Silver Creek, which is about 1,000 feet away. Silver Creek is classified by the Illinois EPA as a "General Use" stream, which takes into consideration agricultural, recreational, and industrial uses. Based on Military Munitions Response Program Guidance dated February 2004, soil sifting to isolate/remove "Munitions and Explosives of Concern" with treatment of contaminants at a permitted off-site facility are the recommend technologies for remediation of a small arms range. Remediation activities at site OT09 are scheduled to begin in FY09.

**AOC 19 Lead Based Paint – Historic District**

AOC 19 is the lead-based paint basewide area of concern. AOC-19 consists of potential lead contaminated sites that exist across Scott AFB. Some of the sites were created by lead-based painting (LBP) activities conducted over the course of approximately 20 years within the historic district of Scott AFB (**Figure 1-1**). The historic district is approximately 76 acres in size and consists of two distinct housing areas (Colonial Housing located in the northern portion of the area and Georgian Housing located in the southwestern portion of the area), and administrative and industrial buildings and structures located in the central and southeastern portions of the area, respectively. The structures within this historic district have been painted with LBP in the past. The painted surfaces of the various buildings and structures have chipped, peeled, and, in some cases, been stripped in the process of being refurbished and lead contamination has been detected in the soil surrounding the residential buildings (Scott AFB, 2005h).

**AOC14 (Cardinal Creek Village -South)**

Cardinal Creek Village South (CCV-S) consists of a temporary Corrective Action Management Unit (CAMU) and an adjoining area that was developed for the beddown of the Air National Guard 126 ARW. In accordance with a February 1998 Record Of Decision with Illinois EPA, the CAMU was created as a temporary storage area for soils generated from multiple excavations of chlordane-impacted soils in a former housing area that was developed for the beddown.

The chlordane originated from pesticides that were applied to soil around residential units as termiticides prior to their ban in 1988. As part of the initial construction activities for the 126 ARW beddown, soil impacted by chlordane at levels exceeding 35 Illinois Administrative Code 742 Tier 2 occupational worker standards was excavated and placed in the CAMU on the ground surface, covered with clean soils and vegetated. Remedial activity planned for CCV-S in FY07 is to remove chlordane-impacted soils from the CAMU and transport them to the Scott landfill to be staged and ultimately covered as part of the landfill closure process. After chlordane-impacted soils are removed and confirmatory samples taken at the CAMU, it is expected that no verifiable risks at the CAMU site would remain. As such, a "No Further Action" determination is anticipated for AOC14 with the ultimate goal of closing out this AOC before 30 Sep 07. Although further active remediation of the non CAMU portions of AOC14 is not planned, a determination has not yet been made on whether development restrictions or land use controls (e.g. prohibitions on groundwater usage and residential developments) are necessary elsewhere at AOC14.

**AOC23 (Cardinal Creek Village -North)**

This AOC is the northern section of the former Cardinal Creek Village housing area, where soils near residential buildings were treated with chlordane for termite control. The buildings were demolished and foundations were removed. Building footprints were backfilled with clean soil and vegetated. A recent Preliminary Assessment/Site Investigation conducted at the site involved collection of surface soil samples from approximately 80 points around the former building foundation locations. The soil samples were all analyzed for pesticides, and a limited number of the samples were tested for various other contaminants. Analytical results showed the presence of pesticides (dieldrin in over half of the samples and chlordane in three of the samples) above the EPA's Tiered Approach to Corrective Action Objectives (TACO) standards and various metals in several samples above background levels and TACO standards. Remedial activity planned for the site consists primarily of landuse restrictions and implementation of a soil management plan in order address potential contaminant exposures to construction workers if future development activities go forward. If this approach is not acceptable, a plan to construct a soil cover over AOC 23 may be necessary to further minimize potential contaminant exposures. Potential risks at the AOC would be primarily to construction workers developing the area comprising AOC23.

**Site SS14 (Former CAMS Facility)**

The former Consolidated Aircraft Maintenance Squadron (CAMS) area is located in the western part of the Base near the intersection of Hangar Road and East Birchard Avenue, in the southwest corner of the parking lot adjacent to Building 450. This site is currently regulated under a Resource Conservation and Recovery Act (RCRA) Closure Permit issued by the Illinois EPA which requires semiannual groundwater monitoring. There are two separate groundwater plumes of trichloroethylene (TCE) contamination at the site. The first plume is adjacent to Building 450 and has had detections of TCE greater than 1,000 mg/L. The contamination is found in two separate groundwater zones near Building 450, one shallow (10-20 feet) and one deep (45-55 feet). A second plume is located at the northeast corner of Building 350 and has had detections of TCE at 52 mg/L. Cis-1,2-Dichloroethene, 1,1,2-trichloroethane, chromium, nickel, tetrachloroethylene (PCE), vinyl chloride, and methylene chloride exceed groundwater cleanup objectives and would also be expected to be found in the subsurface soils in the source areas of the site. Although ozone treatment at one source area of contamination at SS14 has been very effective, future remedial actions to be performed at this site may involve combination(s) of in-situ technologies that include HRC® injections, bioventing and ozone treatment. It is expected that continued monitoring of the groundwater at the site will be necessary for an extended period of time after remediation has been performed and/or until regulatory closure of the site is obtained. A RCRA Closure Plan Modification Request will have to be submitted and approved by the Illinois EPA in order to perform remediation. Remediation activities at site SS14 are scheduled to begin in FY08 with a remedy in place scheduled for September 2011.

**Site SS15 (Former DRMO Storage Yard)**

The Defense Reutilization and Marketing Office (DRMO) Salvage Yard (SS15) is located at the southwest portion of the Base and is bordered on the north by Missouri Street, on the south by Indiana Street, and on the east by Nebraska Street. It has been in operation since the late 1940s and consists of five buildings with a total square footage of approximately 24,500 square feet. The DRMO Salvage Yard is the site of a 14-gallon spill of polychlorinated biphenyls (PCBs) that occurred in 1984. The spill was located outside a fence on the southeast side of the yard. SS15 is flat with a ground elevation of approximately 440 feet above mean sea level. PCBs have been detected in soil and groundwater at the site. PCB detections are concentrated along the fence line on the west side of the yard. Benzo(B)fluoranthene, endrin aldehyde, and dieldrin have also been detected above cleanup objectives in soils at the site. Groundwater at SS15 is three to four feet below ground surface and the PCB detections in groundwater are highly localized and are not moving off-site. Potential human receptors at the site include DRMO salvage yard workers, maintenance workers, or construction workers coming into contact with soil or groundwater at the site. Remediation at the site is expected to include the excavation and off-site disposal of PCB contaminated soil above one ppm from two separate areas at the site. Remediation activities at site SS15 are scheduled to begin in FY08 and expected to be completed by late 2010 with proposed land use controls to follow.

**Site SS16 (Former Building 53)**

Site SS16 is located in the western portion of the Base and was the former home of the Vehicle Maintenance Facility. It consisted of a motor repair room, a sheet metal/welding room, ignition repair room, a wash rack, and three vehicle hoists. The site is currently being used as a parking lot. With the exception of the lift pits and the oil/water separator (OWS), most of the soil contamination at the site is confined to surface soils. Chlorinated solvents have also been detected in groundwater at the site adjacent to the concrete foundation, but contaminated groundwater has only been detected in on-site monitoring wells and has not evidently migrated away from the site. Contaminates above cleanup objectives in soils include TCE, PCE, benzo(a)pyrene, benzo(a)anthracene, and PCBs. PCE and 1,1-Dichloroethene was detected above regulatory limits in groundwater. The parking lot serves as an engineered barrier to prevent direct contact with the contaminated soil at the site, but potential human receptors at the site could include maintenance and construction workers coming into contact with soil or groundwater at the site if the engineered barrier was disrupted or removed. Remediation at the site is expected to include excavation and removal of contaminated soil, removal of the OWS, and restoration of the site back to parking and/or landscaped areas. It is expected that groundwater monitoring at the site will be necessary for ten years after removal actions have been performed. Remediation activities at SS16 are scheduled to begin in late FY08.

## 4 Environmental Consequences

**Section 4** presents an evaluation of the environmental impacts that could result from implementing the Proposed Action or the No Action Alternative. Potential impacts are addressed in the context of the scope of the Proposed Action as described in **Section 2** and in consideration of the potentially affected environment, as characterized in **Section 3**. The general approach for this section is to describe the criteria for determining a significant impact followed by a discussion of the impacts that would occur by implementing the Proposed Action for each resource area. The extent to which an action might affect an environmental resource depends on many factors. Environmental resources can be affected directly, indirectly, or not at all. A listing of each of the Proposed Action projects relative to potential long-term environmental impact is provided as **Tables 4-1 through 4-3**. Potential short-term impacts associated with implementation of the proposed projects are discussed in the respective resource subsections in this section.

The significance of an action is measured in terms of context and intensity. The significance of an action is analyzed in several contexts, such as society as a whole (human, national), the region of influence (ROI), the affected interests, and the locality. Significance might vary with the context of the action.

Intensity refers to the severity of impact. Impacts could be beneficial or adverse. Consideration must be given to whether an impact affects public health or safety, and whether it affects areas having unique characteristics, such as cultural resources or wetlands. The significance of impacts could also depend on the degree of controversy or posing highly uncertain, unique, or unknown risks. Significance can be found where an action sets a precedent for future actions having significant effects, as well as in cases involving cumulative impacts. For example, when considering intensity, consideration must be given to the degree to which the action might adversely affect animal or plant species listed as endangered or threatened or their habitat. Finally, in evaluating intensity, consideration must be given to whether an action threatens a violation of a law or regulation imposed for the protection of the environment.

### 4.1 Noise

#### 4.1.1 Significance Criteria

Noise associated with aircraft operations at Scott Air Force Base (AFB) and MidAmerica Airport, other transportation-related noise, and construction activities associated with the Proposed Action will be considered and compared with current conditions to assess impacts. Data developed during this process will also support analyses in other resource areas.

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 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:

- An  $L_{dn}$  of 55 dBA was identified by the U.S. Environmental Protection Agency (USEPA) 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.
- An  $L_{dn}$  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.

**TABLE 4-1. POTENTIAL IMPACTS ASSOCIATED WITH THE SCOTT AFB DEMOLITION PROJECTS\***

Map ID	Project Title	Infrastructure	Socioeconomics	Noise	Land Use	Air Quality	Safety	Geological Resources	Water Resources		Biological Resources			Cultural Resources		Hazardous Materials and Waste (in ERP site)
									Water Quality	Flood-plains	Habitat	T&E	Wet-lands	Archaeological TCP	Historic Structures	
CD2	Demo. Building 505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CD17 <sup>1</sup>	Demo. Buildings 1520, 1521, and 1523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CD19 <sup>1</sup>	Demo. Buildings 1986 and 1987	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CD21 <sup>1</sup>	Demo. Building 3189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
CD24 <sup>1</sup>	Demo. Building 4205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CD26 <sup>1</sup>	Demo. Buildings 1192 and 1911	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
CD27 <sup>1</sup>	Demo. Buildings 61, 509, 859 and 861	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D3	Demo. HQ AMC/Admin Building 1605	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D4	Demo. Admin. Facility Bldg 3190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D5	Demo. Concrete pads in Clear Zone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D7	Demo. Shredder Building 3283	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
D8	Demolish Facility 741	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D9	Demolish Taxiway J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D11	Demolish Buildings 3207 and 3210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D12	Demo. Building 799	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D13	Demo. Building 3273	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D14	Demo. Building 3277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
D15	Demo. Asphalt Pav. Old South Dr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D16	Demo. Aero Club Building 3183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D17	Demo. US TRANSCOM, Bldg. 1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D18	Demo. Chapel 2, Building 5713	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
D19	Demo. Medical Warehouse 3270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D20	Demo. Medical Warehouse 3272	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
D21	Demo. Medical Warehouse 3275	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
D22	Demo. Medical Warehouse 3279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗

\*Impacts shown in this table reflect only long-term adverse impacts.

<sup>1</sup> These demolition projects are associated with a construction project and therefore have the same Project Number.

- No effects or negligible effects      ⊕ Potential minor beneficial effects      ⊗ Potential minor adverse effects      ■ Potentially significant (greater magnitude than representative projects)

TABLE 4-2. POTENTIAL IMPACTS ASSOCIATED WITH THE SCOTT AFB CONSTRUCTION PROJECTS\*

Map ID	Project Title	Infrastructure	Socioeconomics	Noise	Land Use	Air Quality	Safety	Geological Resources	Water Resources		Biological Resources			Cultural Resources		Hazardous Materials and Waste (in ERP site)
									Water Quality	Flood-plain	Habitat	T&E	Wet-lands	Archaeological TCP	Historic Structures	
C1	Construct Intel Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
CD2 <sup>1</sup>	Construct Squadron Operations Facility/Demo Bldg. 505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C3	Construct Child Development Center	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C4	Doom Bay Addition and Brick Installation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C7	Construct Steel Pole Barn	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
C9	Construct Addition at Petroleum Oil Lubricant Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C11	Addition to Communication Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
C12	Construct Aeromedical Evacuation Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C13	AT/FP for Dorms 1810, 1820, 1830	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CD17 <sup>1</sup>	Construct Distribution and Deployment Processing Center	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
CD19 <sup>1</sup>	Construct New Fitness Center/Demolish Bldgs. 1986 and 1987	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CD21 <sup>1</sup>	Construct New DISA Facility and Parking Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
C23	Construct B-3175 to New Location	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CD24 <sup>1</sup>	Construct New BCE Complex and Parking Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
CD26 <sup>1</sup>	Construct Golf Clubhouse/Realign Course (6 holes)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
CD27 <sup>1</sup>	Construct OG HQ (375th) Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
C31	Construct Permanent SDDC Facility (2005 BRAC-Action)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Impacts shown in this table reflect only long-term adverse impacts.

<sup>1</sup> These construction projects are associated with a demolition project and therefore have the same Project Number

- No effects or negligible effects      ⊕ Potential minor beneficial effects      ⊗ Potential minor adverse effects      ■ Potentially significant (greater magnitude than representative projects)

**TABLE 4-3. POTENTIAL IMPACTS ASSOCIATED WITH THE SCOTT AFB INFRASTRUCTURE PROJECTS\***

Map ID	Project Title	Infrastructure	Socioeconomics	Noise	Land Use	Air Quality	Safety	Geological Resources	Water Resources		Biological Resources			Cultural Resources		Hazardous Materials and Waste (in ERP site)
									Water Quality	Flood-plain	Habitat	T&E	Wet-lands	Archaeological TCP	Historic Structure	
I1	Construct Parking Lot Bldg. 57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	⊗
I3	Install Hydrant And Distribution Water Lines near Bldg. 1192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I4	Move Existing Jogging Path outside Clear Zone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I8	Install Catch Basin Behind Pavilion near Bldg. 382	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I13	Expand Parking Lots (Across from Bldgs. 460/450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I14	Renovate Family Camp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I20	Repair Eastside Drainage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Impacts shown in this table reflect only long-term adverse impacts.

- No effects or negligible effects
- ⊕ Potential minor beneficial effects
- ⊗ Potential minor adverse effects
- Potentially significant (greater magnitude than representative projects)

## 4.1.2 Environmental Consequences

Under the Proposed Action, neither military nor civil aircraft operations at Scott AFB and MidAmerica Airport would change from current conditions. Therefore, aviation-related noise would remain as described in **Section 3.1.2**, and would continue to be the dominant noise source in the region's acoustic environment.

However, under this proposal, Scott AFB would construct new facilities, demolish older facilities, and upgrade other aspects of the installation's supporting infrastructure through additions and alterations. Intermittent short-term adverse impacts from noise would be expected from implementation of the Proposed Action.

Construction would most likely occur over an extended time-frame, and at any one time, only a small number of projects would be expected to be ongoing simultaneously. Therefore, noise associated with active construction sites would be localized, intermittent, and of relatively limited duration. Primary noise sources during such activity would be expected to be heavy vehicles and earth moving equipment. **Table 4-4** shows sound levels associated with typical heavy construction equipment under varying modes of operation.

**Table 4-4. Typical Equipment Sound Levels**

Equipment	SOUND LEVEL (IN dBA) UNDER INDICATED OPERATIONAL MODE*		
	Idle Power	Full Power	Moving Under Load
Forklift	63	69	91
Backhoe	62	71	77
Dozer	63	74	81
Front-End Loader	60	62	68
Dump Truck	70	71	74

\* Measured at 125 feet.  
Source: USAF, 1998

Impacts from construction noise would vary depending upon the type of construction, the area of the construction, and the distance of the construction from potential receptors. Receptors could include office buildings, schools, residences, or recreational areas. The projects associated with the Proposed Action are located throughout Scott AFB. Projects such as the construction in the vicinity of the dormitories (C13) would occur in or near residential areas. Projects such as the demolition of the United States Transportation Command building (CD17) and the addition to the ANG communication facility (C11) would occur in close proximity to existing office buildings. Other projects such as renovation of the family camp (I14) and construction of the golf course clubhouse/realignment of six holes (CD26) would occur near recreational facilities. However, none of the projects included in **Appendix A** would occur within 500 feet of a school.

Given the extent of projects within the Proposed Action, noise related impacts are unavoidable. In some cases noise may be of sufficient level to interfere with conversation in nearby facilities. However, construction activities would occur only during daylight hours and the impacts would be short-term. It is not anticipated that a short-term increase in noise levels would create a significant impact to the surrounding population. Once a construction project is completed, noise levels would return to pre-existing levels and no long-term impacts on the ambient noise levels would occur.

## 4.2 Land Use

### 4.2.1 Significance Criteria

Land use impacts can result if an action displaces an existing use or affects the suitability of an area for its current, designated, or formally planned use. This analysis considers whether the resulting changes improve public safety and well being, and whether they are compatible with surrounding uses and functions. A proposed activity may be incompatible with local plans and regulations that provide for

orderly development to protect the general welfare of the public, or conflict with management objectives of a federal or state agency of an affected area. Compatible land use development would need to comply with federal and state environmental laws and regulations. The significance of potential land use impacts is based on the level of land use sensitivity in areas affected by the Proposed Action and compatibility of the Proposed Action on existing conditions.

Criteria used to evaluate impacts on land use include:

- Potential to disrupt an existing or planned future land use;
- Potential to reduce the suitability of the surrounding land (land not directly impacted by an action) for its current or planned use;
- Potential for inconsistency with the installation's plans, regulations, and guidelines (including the Air Installation Compatible Use Zone [AICUZ] program) that provide for appropriate development of the land; and
- Potential for incompatibility of the action with plans and management objectives for adjacent areas under control of other entities (e.g., state, local, federal).

Projects are evaluated for their potential to affect existing and planned land uses either positively (a beneficial effect), or negatively (a detracting effect).

#### 4.2.2 Environmental Consequences

**Land Use.** Overall, the proposed projects contribute some benefit to the overall functioning and organization of Scott AFB. Although some construction projects are not compatible with existing land use, the changes in land use are compatible with the future land use plans of the installation. For example, some projects are sited on open space and would convert it to a mission-supporting use. Others are located in areas that are already developed with similar or compatible adjacent uses. Each project has been sited appropriately, in consideration of existing environmental and operational constraints and future land use compatibility. Implementation of the Proposed Action would result in an increase in safety and/or functionality for the Base.

None of the construction projects are located in safety zones (areas associated with airfield clearances and explosive setbacks); they are each compatible with AICUZ guidelines and noise exposure level at specific sites (**Table 4-5**); and they do not violate height criteria for safe airfield operations. For some projects, noise during construction may interfere with conversations in nearby facilities, but this would be temporary and have no long term impact on land use.

Proposed projects would not interfere with future land uses on Scott AFB (**Figure 2-1**) and the proposed projects would occur entirely within the boundaries of the Base. In the future however, the Air Mobility Command (AMC) does plan to close some of the ERP sites on Scott AFB by imposing Land Use Controls (LUCs) which would need to be evaluated during the design and construction phases of each of the projects. No impact to off-base locations would result from the implementation of proposed projects since they are set back from the Base boundary and are buffered by intervening activities, vegetation, and terrain.

**Table 4-5. Proposed Construction and Infrastructure Projects Land Use**

Map ID	Title	Existing Land Use	Future Land Use	Existing Noise Level
C1	Construct Intel Facility	Open Space	Administration	70
CD2	Construct Squadron Operations Facility	Maintenance	Aircraft Operations and Maintenance	75
C3	Construct Child Development Center	Community Service	Commercial / Service	<65
C4	Doom Bay Addition and Brick Installation	Maintenance	Maintenance	65
C7	Construct Steel Pole Barn	Maintenance	Administration	70
C9	Construct POL Facility	Maintenance	Maintenance	70

**Table 4-5. Proposed Construction and Infrastructure Projects Land Use (Cont'd)**

Map ID	Title	Existing Land Use	Future Land Use	Existing Noise Level
C11	Addition to Communication Facility	Administration	Administration	80
C12	Construct Aeromedical Evacuation Facility	Aircraft Operations and Maintenance	Aircraft Operations and Maintenance	65
C13	AT/FP for Dorms 1810, 1820, 1830	Housing Unaccompanied	Housing Unaccompanied	<65
CD17	Construct DDPC	Administration	Administration	65
CD19	Construct New Fitness Center	Outdoor Recreation	Commercial / Service	<65
CD21	Construct New DISA Facility	Open Space	Administration	65
C23	Construct Building 3175 to new location	Open Space	Maintenance	75
CD24	Construct New BCE Complex	Maintenance	Maintenance	65
CD26	Construct Golf Clubhouse/Realign Course	Open Space	Administrative	65
CD27	Construct OG HQ 375 AW Facility	Maintenance	Aircraft Operations and Maintenance	<65
C31	Construct Permanent Facility for SDDC	Administration	Administration	
I1	Construct Parking Lot Bldg 57	Maintenance	Administration	<65
I3	Install Hydrant and Distribution Lines near Building 1192	Outdoor Recreation	Outdoor Recreations	75
I4	Move Existing Jogging Path Outside Clear Zone	Open Space	Open Space	75
I8	Install Catch Basin behind Pavilion near Building 382	Outdoor Recreation	Outdoor Recreation	70
I13	Expand Parking Lots	Maintenance	Maintenance	70
I14	Renovate Family Camp	Outdoor Recreation	Outdoor Recreation	<65
I20	Repair Eastside Drainage	Aircraft Operations and Maintenance	Aircraft Operations and Maintenance	65

Source: Scott AFB, 2004c, Scott AFB, 2001a

## 4.3 Air Quality

### 4.3.1 Significance Criteria

Air emissions resulting from the Proposed Action were evaluated in accordance with federal, state, and local air pollution standards and regulations. Air quality impacts from a proposed activity or action would be significant if they:

- Increase ambient air pollution concentrations above any NAAQS;
- Contribute to an existing violation of any NAAQS;
- Interfere with or delay timely attainment of NAAQS; or
- Impair visibility within any federally mandated Federal Class I area.

The approach to the air quality analysis was to estimate the increase in emission levels due to implementation of the Proposed Action.

According to USEPA's General Conformity Rule in 40 CFR Part 51, Subpart W, any proposed federal action that has the potential to cause violations in a NAAQS nonattainment or maintenance area must undergo a conformity analysis. A conformity analysis is not required if the Proposed Action or Alternative Action occurs within an attainment area. Since St. Clair County is nonattainment for the new PM<sub>2.5</sub> and 8-hour O<sub>3</sub> standards, a conformity determination must be performed if project emissions exceed the *de minimis* thresholds of 100 tons per year for the ozone precursors, NO<sub>x</sub> and VOC.

As described in **Section 3.3.1**, Section 169(a) of the CAA established the PSD regulations to protect the air quality in regions that already meet the NAAQS. Certain national parks, monuments, and wilderness areas have been designated as PSD Class I areas, where appreciable deterioration in air quality is considered significant. The nearest PSD Class I area is more than 100 miles from the region potentially affected by the Proposed Action. Therefore, the Proposed Action would be unlikely to have a significant

impact on any PSD Class I areas.

## 4.3.2 Environmental Consequences

### 4.3.2.1 Proposed Action

The Proposed Action would involve construction, demolition, and paving activities, including construction of new buildings and infrastructure, additions to or demolition of existing structures, grading, and paving.

**Construction Emissions.** Emissions during the construction period were quantified to determine the potential impacts on regional air quality. Calculations of emissions from construction, demolition, grading, and paving activities were performed using USEPA emission factors compiled in the *California Environmental Quality Air Quality Handbook* (South Coast Air Quality Management District, 1993), *Calculations Methods for Criteria Air Pollution Emission Inventories* (Jagelski and O'Brien, 1994), and *Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations* (O'Brien and Wade, 2002). The calculations for the air quality determination are located in Appendix D.

The emission factors for building construction include contributions from engine exhaust emissions (i.e., construction equipment, material handling, and workers' travel) and fugitive dust emissions (e.g., from grading activities). Demolition emissions evaluated include fugitive dust and transport of demolition debris offsite. Site preparation, grading, and trenching emissions include fugitive dust from ground disturbance, plus combustive emissions from heavy equipment during the entire construction period. Paving emissions include combustive emissions from bulldozers, rollers, and paving equipment, plus emissions from a dump truck hauling pavement materials to the site. Estimated annual emissions that would occur from construction, demolition, grading, and paving activities under the Proposed Action are presented in **Table 4-6**.

Emissions generated by construction, demolition, and paving projects are temporary in nature and would end when construction is complete. The emissions from fugitive dust (PM<sub>10</sub>) would be considerably less than those presented in **Table 4-6** due to the implementation of control measures in accordance with standard construction practices. For instance, frequent spraying of water on exposed soil during construction, proper soil stockpiling methods, and prompt replacement of ground cover or pavement are standard landscaping procedures that could be used to minimize the amount of dust generated during construction. Using efficient practices and avoiding long periods where engines are running at idle may reduce combustion emissions from construction equipment. Vehicular combustion emissions from construction worker commuting may be reduced by carpooling.

**Table 4-6. Construction Emissions – Proposed Action**

Source	Emissions (In Tons per Year)				
	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>
Construction	16.6	5.2	76.3	0.0	5.4
Demolition	0.8	0.2	0.8	0.0	0.3
Grading/Trenching	0.5	0.1	0.8	0.1	0.3
New Pavement	1.2	0.2	2.1	0.1	0.2
<b>TOTAL</b>	<b>19.2</b>	<b>5.7</b>	<b>80.1</b>	<b>0.2</b>	<b>6.2</b>

\*Assumes construction would occur over a five-year period.  
Source: SAIC, 2006

In general, combustive and fugitive dust emissions would produce localized, short-term elevated air pollutant concentrations, which would not result in any long-term impacts on the air quality in St. Clair County or AQCR 70. The temporary construction-related emissions of PM<sub>10</sub> and SO<sub>x</sub> are not expected to adversely impact the air quality or visibility in any of the PSD Class I areas in the vicinity of the Base.

**Operational Emissions.** Upon implementation of the Proposed Action, air emissions are expected to be slightly more than current emissions, due to utilities such as boilers, heaters, and emergency generators being included with the new facilities. However, new utility equipment would be more efficient and have lower air pollutant emissions than older boilers and heaters at the Base. Nevertheless, the installation or

modification of any air emission sources, such as boiler and heaters, emergency generators, etc., may trigger permitting requirements with the Illinois EPA. It is expected that the new operational emissions would not result in any long-term impacts on the air quality in St. Clair County or AQCR 70.

These projected annual emissions are below the *de minimis* thresholds for conformity with Illinois SIP and less than ten percent of the regional emissions shown in **Table 3-7**. A conformity determination, therefore, is not required for this action.

## **4.4 Safety**

### **4.4.1 Significance Criteria**

Impacts were assessed based on direct effects from implementing the Proposed Action, as well as secondary effects, such as environmental contamination. Impacts related to safety are assessed according to the potential to increase or decrease safety risks to personnel, the public, and property. Unacceptable or unnecessary health and safety risks would be considered significant.

### **4.4.2 Environmental Consequences**

In general, implementation of the Proposed Action would result in positive impacts to safety. Providing new properly sited facilities that support operational requirements with adequate space and improved infrastructure would generally enhance safety. Demolitions of facilities that are no longer in use; demolition of Building 3190 within the airfield clear zone (D4); providing Anti-Terrorism/Force Protection (AT/FP) for dormitory Buildings 1810, 1820, and 1830 (C13); and realigning six holes of the golf course (CD26) and portions of the jogging track outside of the airfield clear zone (I4), would create a safer environment at Scott AFB.

Implementation of the Proposed Action would slightly increase the short-term risk associated with construction contractors performing work at Scott AFB because the level of such activity would increase. Contractors would be required to establish and maintain safety programs. Projects associated with the implementation of the Proposed Action are not anticipated to pose a safety risk to Base personnel, activities at the Base or the public.

Some facilities proposed to be demolished contain asbestos and lead-based paint which would also pose a safety risk to workers. To minimize exposure, all demolition activities would be conducted in accordance with applicable federal, state, and local regulations, as well as existing United States Air Force (USAF) procedures. Licensed contractors would conduct the removal of all hazardous wastes in accordance with all appropriate federal and state regulations.

## **4.5 Geologic Resources**

### **4.5.1 Significance Criteria**

Protection of unique geological features, minimization of soil erosion, and the siting of facilities in relation to potential geologic hazards are considered when evaluating the potential impacts associated with the implementation of a proposed action on geological resources. Generally, impacts can be avoided or minimized if proper construction techniques, erosion control measures, and structural engineering design are incorporated into project development.

Impacts would be considered significant if projects included in the Proposed Action were located on abandoned mines, a new fault line, or other geologic hazards. Impacts to soil resources can result from earth disturbance that would expose soil to wind or water erosion.

### **4.5.2 Environmental Consequences**

There has been no mining under the Base itself, and therefore there is no subsidence risk from such activity (Scott AFB, 2003). The geology of the Scott AFB area does not present any specific constraints to future Base development. However, the possibility of a damaging earthquake continues to exist with

the proximity of the Base to the New Madrid Fault (Scott AFB, 2004c).

Under the Proposed Action, for sites that do not impact ERP sites or AOCs, demolition and construction activities, such as grading, excavating, and recontouring of the soil, would result in soil disturbances. Implementation of best management practices (BMP) such as silt fencing, sediment traps, application of water sprays, and revegetation at disturbed areas would reduce potential impacts related to geologic resources. Soil disturbance at ERP sites and AOCs would be conducted in accordance with applicable soil management plans included for those sites as LUCs. Therefore, impacts on soils at the Base would be site specific and minor.

Since the Base land surface is generally flat, implementation of the Proposed Action is not anticipated to cause or create changes to the topography of Scott AFB or the surrounding area.

## 4.6 Water Resources

### 4.6.1 Significance Criteria

Evaluation criteria for impacts associated with implementation of the Proposed Action on water resources are based on water availability, quality, and use; existence of floodplains; and associated regulations. Implementation of the Proposed Action would have adverse effects if it were to do one or more of the following:

- Reduce water availability to or interfere with the supply of existing users;
- Create or contribute to overdraft of groundwater basins or exceed safe annual yield of water supply sources;
- Endanger public health by creating or worsening adverse health hazard conditions;
- Threaten or damage unique hydrologic characteristics; or
- Violate established laws or regulations that have been adopted to protect or manage water resources of an area.

Impacts of flood hazards related to proposed actions can be significant if such actions are in areas with high probabilities of flooding or in some way alter flood conveyance.

### 4.6.2 Environmental Consequences

With regard to water resources, the primary concerns associated with implementing the Proposed Action include effects on water quality during construction activities, and changes to surface water drainage and groundwater recharge due to increased impervious surface.

**Groundwater.** The rate of groundwater recharge of the upper aquifer (glacial and alluvial deposits) located directly beneath the installation may be impacted due to the increase of impervious surfaces. However, given the developed nature of the Base and the high percentage of impervious surfaces already existing, the change in groundwater recharge is expected to be minimal.

**Surface Water.** Implementation of the Proposed Action would involve approximately a net increase of 2.2 acres of impervious surfaces for the building footprints and pavements of the proposed facilities. Under the conditions of the Scott AFB industrial storm water permit, a Notice of Intent is required to be filed with the Illinois EPA for construction activities disturbing more than one acre. Additionally, implementation of BMPs to minimize the potential for exposed soils or other contaminants from construction activities to reach nearby surface waters in accordance with the Scott AFB SWPPP is required. Such BMPs could include the use of silt fences, covering of soil stockpiles, use of secondary containment for the temporary storage of hazardous liquids, detention/retention ponds, and establishment of buffer areas, as appropriate.

Implementation of the Proposed Action would slightly increase the amount of impervious surface on the installation, resulting in the potential for an increase in the amount of surface runoff. As part of the design for the individual construction projects, mitigation measures such as the installation of appropriately sized detention basins, bio-retention devices, wet ponds, dry detention basins and other mitigation measures

would be evaluated to decrease flooding and protect water quality through sediment and chemical filtration. These mitigation measures would be evaluated on an individual basis to determine the consistency of the mitigation with surrounding land uses. For example, the construction of a permanent wet pond adjacent to the runway would not be compatible. The proposed construction activities may require modifications to the installation storm drainage system (e.g., drainage ditches and basins) and an update to the SWPPP in order to properly manage storm water. Site drainage would be addressed within the updated SWPPP such that there would be no deleterious impacts to receiving waters as a result of the Proposed Action.

Overall, only minor impacts are anticipated based on the total amount of impervious surface on Scott AFB, relative to the approximate 2.2 acres that would result from implementation of the Proposed Action. Although construction activities would have the potential for minor adverse effects on surface water quality, the use of BMPs specified in the Base SWPPP, the development of site-specific SWPPPs (as required) and the evaluation of mitigation measures as explained above would minimize adverse effects. The construction of proposed infrastructure projects would result in a positive impact to the Base's administrative capabilities (**Section 4.10.2**).

**Floodplains.** In accordance with Executive Order (EO) 11988 *Floodplain Management*, the USAF must demonstrate that there are no practicable alternatives to construction within floodplains. None of the projects included as part of the Proposed Action would occur within the 100-year floodplain (**Figure 3-3**). The Proposed Action would not have a direct effect on floodplains. The increase of impervious surfaces on the installation is not expected to affect the 100-year or 500-year predicted flood elevations of Silver Creek or Cardinal Creek. In addition, the implementation of BMPs in accordance with the SWPPP will further mitigate potential impacts.

## 4.7 Biological Resources

### 4.7.1 Significance Criteria

This section evaluates the potential impacts to biological resources associated with implementation of the Proposed Action. The significance of impact on biological resources is based on (1) the importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource; (2) the proportion of the resource that would be affected relative to the occurrence of the resource in the region; (3) the sensitivity of the resource to proposed activities; and (4) the duration of the potential impact. Biological impacts are significant if listed species or high quality habitats are adversely affected. Impacts are also considered significant if disturbances cause reductions in population size or distribution of a listed species.

### 4.7.2 Environmental Consequences

Implementation of the Proposed Action would result in a total loss of approximately 3.2 acres of maintained turf grass and otherwise undeveloped upland land due to building construction, parking lots, and paving. The majority of development would occur in areas that have been disturbed by past construction related activities. A few scattered landscaping trees and shrubs would be cleared for the construction of new facilities and pavement; no forested areas would be impacted by implementation of the Proposed Action.

**Vegetation.** Short-term minor adverse effects on vegetation would occur as a result of construction associated with the implementation of the Proposed Action. Proposed projects would affect urban upland and nonforested upland communities.

The majority of projects associated with the Proposed Action would occur in the improved areas of Scott AFB which would primarily affect urban upland communities. Following construction, all disturbed areas would be landscaped in accordance with Scott AFB standards.

Potential impacts to urban upland communities would also include those impacts to the former Cardinal Creek housing area. The new DISA facility (CD21), golf club house and realignment of a portion of the golf course (CD26) are proposed to be located in the former Cardinal Creek housing area, east of the golf

course. Since the housing was removed, this disturbed area has remained vacant with remnant trees and landscaping features being invaded by common weedy herbaceous species.

Improvements to the Family Camp area (I14) would impact Non-forested Upland community areas; however the proposed impacts are anticipated to be minimal. The proposed improvements to the Family Camp area would occur at the location of a former softball field. Vegetation in this area is characteristic of maintained lawns. Improvement would include the construction of concrete RV pads and associated utilities.

**Wildlife.** The permanent loss of Upland Urban and Non-forested Upland vegetation would have minimal impact on residential wildlife, given that this area does not currently provide quality habitat and given the high level of human activity in the area of proposed activities. Implementation of the Proposed Action would increase the amount of stormwater runoff and sedimentation from Scott AFB. This increase may have a minor adverse impact on wildlife habitat. Temporary impacts to wildlife caused by increased noise and activity levels during construction are expected to be insignificant given that this is an USAF installation where high noise levels are daily occurrences and the fact that many of the projects would be implemented at different times.

**Threatened and Endangered Species.** The majority of the proposed actions are located within the developed portions of the Base and are not anticipated to have any effect on federal or state-listed species or suitable habitat.

The proposed improvements to Family Camp (I14) would not require the removal of trees or affect Scott Lake and are not anticipated to impact habitat for the state-listed species, snowy egret or little blue heron.

**Wetlands.** In accordance with EO 11990, *Protection of Wetlands*, the USAF must demonstrate that there are no practicable alternatives to construction within wetlands. The USAF avoids military operations in wetlands, where possible. None of the proposed projects contained in this Environmental Assessment (EA) as part of the Proposed Action would directly impact wetlands (**Figure 3-3**).

Indirect impacts to wetlands and other aquatic habitats could result from implementation of the Proposed Action. These types of impacts are not quantifiable, are anticipated to be temporary, and would be mitigated through the implementation of BMPs. Potential effects of the proposed construction and demolition include increased turbidity and sedimentation to adjacent wetlands. The implementation of BMPs are anticipated to minimize indirect impacts.

## 4.8 Cultural Resources

### 4.8.1 Significance Criteria

Potential adverse impacts on National Register of Historic Properties (NRHP)-listed or eligible for listing, cultural resources might include physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate legally enforceable restrictions or conditions to ensure preservation of the property's historic significance.

### 4.8.2 Environmental Consequences

**Archaeological Resources.** Under the Proposed Action, Scott AFB would implement 42 projects that include facility demolition, additions to existing facilities, new construction and infrastructure improvements. Although the projects included as part of the Proposed Action involve some level of ground disturbance, all are situated in areas that are heavily disturbed or have been previously surveyed for cultural resources. No archaeological resources have been identified where the projects associated with the Proposed Action would occur; thus, none of the projects are expected to impact historic or Native American archaeological resources.

In the event of a discovery during construction, all work in the immediate vicinity of the discovery would be halted until the resources are identified and documented and an appropriate mitigation strategy developed in consultation with the State Historic Preservation Office (SHPO) and other consulting parties. As outlined in the ICRMP, and in compliance with federal laws (ARPA, NAGPRA, and NHPA), concerned tribal representatives would be notified and consulted about the proposed treatment of human remains and funerary and sacred objects should these be discovered during implementation of the Proposed Action.

***Properties of Traditional, Cultural, and Religious Significance to Native American Tribes.*** There are no known traditional resources at Scott AFB. Therefore, impacts to traditional resources are not anticipated to result from implementation of the Proposed Action.

***Architectural Resource.*** Under the Proposed Action, 29 projects would involve building alterations or demolitions. None of the buildings associated with the alterations or demolitions are NRHP-listed or eligible for listing. Constructing the parking lot for Building 57 project (I1) and repairing the eastside drainage project (I20) are located within the Scott Field Historic District. Neither project is anticipated to adversely impact the Historic District.

## 4.9 Socioeconomics

### 4.9.1 Significance Criteria

This section identifies potential social and economic impacts that might result from the anticipated personnel changes and implementing the Proposed Action at Scott AFB. The methodology for social impacts is based on the *Guidelines and Principles for Social Impact Assessment*, developed by an interorganizational committee of experts in their field (NOAA, 1994). If potential social changes were to result in substantial shifts in populations trends or in adverse effects on housing, utilities, or public services, they would be considered significant impacts.

The economic effects that might result from the anticipated personnel changes and implementing the Proposed Action are estimated using the Economic Impact Forecast System (EIFS) model. This model was developed by the Department of Defense in the 1970's to efficiently identify and address the regional economic effects of proposed military actions. The EIFS is a computer-based model that calculates multipliers to estimate the direct and indirect effects of a given action. Based on the input data and calculated multipliers, the model estimates changes in sales volume, income, employment and population in the ROI, accounting for the direct and indirect effects of the action. An economic change would be considered significant if the estimated changes would fall outside of the historical range of the ROI economic variation (Bragdon and Webster, 2001).

Regarding environmental justice concerns, this section includes an evaluation of the potential adverse disproportionate impacts on low-income and minority populations by implementing the Proposed Action. Included in this discussion is an analysis for health and safety risks that might disproportionately affect children.

### 4.9.2 Environmental Consequences

***Social and Economic Condition.*** Under the Proposed Action, Scott AFB would receive an additional 1,175 personnel which is an 8.4 percent increase in the 2005 Base workforce. Approximately 75 civilian personnel would be added to the new DISA facility (CD21). An additional 1,110 personnel would result from the 2005 BRAC action of relocating the Army Surface Deployment and Distribution Center (SDDC) facilities at Fort Eustis, Alexandria, and Newport News, Virginia and consolidating them with the Air Force Air Mobility Command Headquarters and Transportation Command Headquarters (C31) at Scott AFB. If it is assumed that 80 percent of the 1,175 personnel (approximately 940) and their families (averaged 2 dependents) would relocate to the ROI. This action would increase the 2005 local population (ROI) by 2,820 or one percent. The increase in personnel would have a relatively minor, long-term effect on the local workforce resulting in minor increased demands for housing and public services. However, this increase is not anticipated to result in adverse demands on public services, utilities, or housing within

the ROI.

The EIFS model did not indicate any significant changes to the economy within the ROI as a result of an increase in 1,175 personnel and implementing the Proposed Action. However many direct and indirect, long-term and short-term, beneficial effects on the local economy would be expected. The Proposed Action would generate a total net gain of approximately 2,113 jobs in the ROI, including 1,699 direct and 414 induced (indirect) jobs. It should be noted that construction-related jobs would be short-term. The Proposed Action would also generate positive changes in the other economic indicators estimated by the EIFS model, including a 1.8 percent increase in sales volume and a 1.5 percent increase in regional personal income (EIFS, 2006).

Total construction costs for the Proposed Action are approximated at \$158 million (EIFS, 2006). The expenditures would be spread out over a six-year time period between 2006 and 2012. Although short-term, these construction expenditures would have a direct, beneficial impact on the local economy. Employment associated with construction activities would benefit the local workforce but would also be temporary.

**Environmental Justice.** As discussed in **Section 3.9**, the USAF has issued guidance on environmental analysis for EAs. To comply with EO 12989, ethnicity and poverty status in the ROI have been examined and compared to regional and state statistics to determine if minority or low-income groups could be disproportionately affected by the implementation of the Proposed Action. The review indicates that the residents living within Census Tracts 5033.31 and 5033.32 have a somewhat higher percentage of minorities than the Metropolitan Statistical Area (MSA) and the State of Illinois (**Table 3-13**). Residents within Census Tracts 5033.31 have a higher per capita income than the MSA but a lower per capita income than the State of Illinois. Residents within Census Tracts 5033.32 have a lower per capita income than the MSA and the State of Illinois.

The environment around Scott AFB is influenced by USAF operations, land management practices, vehicular traffic, and emissions sources outside the Base. However, implementation of the Proposed Action is not anticipated to create adverse environmental or health impacts. Consequently, the Proposed Action would not have disproportionate adverse impacts on minority or low-income populations.

In addition, EO 13045 requires that federal agencies identify and assess environmental health and safety risks that might disproportionately affect children. The Proposed Action would not pose any adverse environmental health or safety risks to children living on or in the vicinity of the Base. The likelihood of the presence of children at construction sites where the Proposed Action would occur on Base is considered minimal, which further limits the potential for effects. Therefore implementation of the Proposed Action would not have disproportionate adverse environmental health and safety impacts on children.

## 4.10 Infrastructure

### 4.10.1 Significance Criteria

Effects on infrastructure are evaluated based on their potential for disruption or improvement of existing levels of service and additional needs for energy and water consumption, sanitary sewer and wastewater system demand, and transportation patterns and circulation. Impacts might arise from physical changes to circulation, construction activities, introduction of construction-related traffic on local roads, changes in daily or peak-hour traffic volumes, and energy needs created by either direct or indirect workforce and population changes related to Base activities. An effect might be considered adverse if an action exceeds capacity of a utility. In considering the basis for evaluating the significance of impacts on solid waste, several items are considered. These items, among others include evaluating the degree to which the Proposed Action could affect the existing solid waste management program and capacity of area landfills.

In accordance with Executive Order 13423, the Air Force will evaluate each of the projects included as part of the Proposed Action relative to sustainable building concepts. Where possible, the Air Force will incorporate sustainable building concepts into the engineering design process

## 4.10.2 Environmental Consequences

**Airfield.** Implementation of the Proposed Action would have a beneficial impact on the safety and operation of the airfield by demolishing structures within the airfield clear zone (D4) and realigning portions of the golf course (CD26) and relocating the jogging path (I4) outside of the airfield clear zone. All activities related to the Proposed Action would be coordinated with Airfield Management and the Environmental Flight prior to construction. Special care would be taken during removal of airfield obstructions so that fugitive dust emissions do not adversely affect mission operations associated with lack of visibility. If dust suppression methods are used prior, during, and after construction, no adverse impacts on airfield operations are anticipated to result from implementing the Proposed Action.

**Electrical System.** Implementation of the Proposed Action would result in minor impacts to the electrical system. The proposed construction projects would tie into existing electrical infrastructure that has been determined to be sufficient to meet demands. There would be a net gain of 1,175 personnel which would result in an increase in usage. The proposed construction projects would use **sustainable design concepts to the greatest extent possible**, resulting in more efficient energy use. This more efficient use of energy would likely be a minor difference compared with the total Base usage.

**Heating and Cooling System.** Implementation of the Proposed Action could result in an increased use of heating and cooling systems. The proposed construction projects would use sustainable design concepts to the greatest extent possible, resulting in a more efficient use of energy than current facilities. This more efficient use of energy would likely be a minor difference compared with the total Base usage of electricity.

**Liquid Fuel System.** Implementation of the Proposed Action does not include any projects involving a direct impact to the Base's fuel handling capability; therefore no impacts to the liquid fuel systems are anticipated.

**Natural Gas System.** Implementation of the Proposed Action would result in minor impacts on the Base's natural gas system. The proposed construction projects would use sustainable design concepts to the greatest extent possible, resulting in a more efficient use of energy than current facilities. This more efficient use of natural gas would likely be a minor difference when compared to the total Base usage of natural gas. The proposed construction projects would tie into existing gas lines that are sufficient to meet demands and would not require the construction of new lines.

**Sanitary Sewer System.** Implementation of the Proposed Action would result in minor impacts on the Base's sanitary sewer system. The proposed construction projects would tie into existing sanitary sewer lines that are sufficient to meet projected demands of the additional 1,175 personnel. The proposed construction projects would use sustainable design concepts to the greatest extent possible. This more efficient use of the sewer system would likely be a minor difference compared with the total Base usage.

**Stormwater Drainage System.** The implementation of the Proposed Action would result in an approximate 99,506 ft<sup>2</sup> (approximately 2.2 acres) net increase in impervious surface which would affect the stormwater drainage system (**Section 4.6 Water Resources**). The proposed construction activities would require modifications to the installation storm drainage system (e.g., drainage ditches and basins) and an update to the SWPPP in order to properly manage storm water. Site drainage would be addressed within the updated SWPPP such that there would be no deleterious impacts to receiving waters as a result of implementing the Proposed Action. Additionally, repairing the eastside drainage project (I20) would reduce excess stormwater flow and prevent standing water in low areas on the east side of the Base.

Construction of new buildings and parking lots would create the opportunity to incorporate stormwater management features and bioretention devices into the design of the project. Options such as detention basins and infiltration structures would be considered during the design phase in accordance with the Stormwater Pollution Prevention Plan (Scott AFB, 2004a).

**Solid Waste Management.** Short-term, direct, minor adverse effects would result from increased municipal solid waste production during construction. Solid waste generated from the proposed

construction and demolition activities would consist of building materials such as solid pieces of concrete, metals (conduit, piping, and wiring), and lumber.

Analysis of effects associated with implementation of the Proposed Action is based on the following assumptions: (1) approximately 3.89 pounds of construction debris are generated for each square foot of floor area for new structures and (2) approximately 155 pounds of demolition debris are generated for each square foot of floor area for nonresidential structures (EPA, 1998). **Table 4-7** depicts the estimated tonnage of construction and demolition (C&D) waste that would be generated under the Proposed Action.

**Table 4-7. Project Construction and Demolition Waste Generated for Proposed Action**

Type of C&D Waste	Total C&D Waste (tons)
Construction	2,344
Demolition	77,348
Total	79,692

Source: SAIC, 2006

Approximately 79,692 tons of C&D waste would be generated from implementing the Proposed Action. Contractors would be required to recycle C&D waste to the greatest extent possible as part of Base policy. With adequate available landfill capacity within the surrounding area, these quantities would not cause an adverse impact to area landfills.

**Transportation System.** Implementation of the Proposed Action would require the delivery of materials and the removal of debris from C&D sites. Construction traffic would comprise a small percentage of the total existing traffic. Many of the vehicles would be driven to and kept on-site for the duration of the project, resulting in relatively few additional trips. Potential increases in traffic volume associated with implementation of the Proposed Action would be temporary. All road and lane closures would be coordinated with the Transportation Squadron and Airfield Management and would be temporary in nature; therefore no adverse impact on the transportation system is anticipated.

**Potable Water System.** Implementing the Proposed Action would result in the increase of approximately 1,175 personnel, resulting in an increase in water consumption. The proposed construction projects would tie into existing water infrastructure that is sufficient to meet the proposed increased demands. Additionally, the Proposed Action would implement sustainable design concepts to the greatest extent possible that would minimize the minor increase in water consumption.

## 4.11 Hazardous Materials and Waste

### 4.11.1 Significance Criteria

The qualitative and quantitative assessment of impacts focuses on how and to what degree the alternatives would affect hazardous materials usage and management, hazardous waste generation and management, and waste disposal. The assessment considers the potential for increase in the quantity or toxicity of hazardous substances used or generated. Significant impacts could result if a substantial increase in human health risk or environmental exposure was generated at a level that cannot be mitigated to acceptable standards.

Impacts to hazardous materials and waste management would be considered significant if the action resulted in the generation of 100 kilograms (or more) of hazardous waste or one kilogram (or more) of an acutely hazardous waste in a calendar month, resulting in increased regulatory requirements or if implementation of the Proposed Action resulted in a spill or release of a reportable quantity of a hazardous substance as defined by the USEPA in 40 CFR Part 302. Impacts would also be considered significant if the action resulted in manufacturing, use, or storage of a compound that requires notifying the pertinent regulatory agency according to Emergency Planning and Community Right-To-Know Act or the action resulted in an increase in the potential for exposure of the environment or public to any hazardous material and/or waste through release or disposal practices.

## 4.11.2 Environmental Consequences

**Hazardous Materials.** Construction activities associated with the Proposed Action would require the temporary use of certain hazardous materials such as sealants, primers, paints, solvents, and preservatives. The construction equipment proposed for this project would utilize various fuels, coolants, lubricating oils, and hydraulic fluids. Hazardous materials and petroleum products associated with Scott AFB operations would continue to be managed in accordance with all federal, state, and local regulations, as well as existing Scott AFB procedures. If spilled or leaked onto the construction site, these could be regulated as hazardous substances. During construction, contractors would be required to conduct daily equipment inspections to minimize the potential for a release of hazardous substances. In addition, contractors would be required to store all fuels and other materials in appropriate containers in designated locations. Furthermore, the maintenance or repair of construction equipment would not be conducted on Scott AFB.

**Hazardous Wastes.** Under the Proposed Action, Scott AFB would continue to perform the same functions as it is currently assigned. Because aircraft maintenance, vehicle maintenance, and facility maintenance would remain the same or slightly higher as under current operations, the amount of hazardous and petroleum wastes generated would generally remain the same over the long term. Although some additional hazardous and petroleum wastes would be generated by construction activities, generation of these wastes would occur only for the short duration of the construction activities and would be managed in compliance with all applicable regulations.

Under the Proposed Action, construction and future operation of the proposed facilities would not have a substantial impact on the use, storage, or generation of hazardous wastes at the installation. If a contractor cannot avoid the generation of hazardous waste, the contractor would be responsible for the final disposition of those materials per contract specifications and environmental laws.

Under the Proposed Action, training requirements and aircraft sortie levels would remain the same as current operations and the amount of hazardous and petroleum wastes generated from those operations would remain the same over the long term. The new and remodeled facilities would be constructed with berms and drains leading to oil-water separators, if required, to contain releases of petroleum products. Hazardous materials and waste management plans would be updated, as necessary, as successive construction projects are completed.

**Asbestos and Lead-Based paint (LBP).** Several demolition projects are proposed as part of the Proposed Action. Given the various ages of the buildings to be demolished it is likely that asbestos containing materials (ACM) and LBP would be present in some of the structures. It is anticipated that the costs associated with abatement will affect the overall demolition costs associated with that structure. If asbestos is present, a licensed abatement contractor would remove all friable asbestos materials from the buildings prior to demolition. Scott AFB would ensure the contractor's compliance with the Scott AFB Asbestos Management Plan (Scott AFB, 2000a) and the asbestos operations plan (Scott AFB, 2000b). If lead-based paint is found to be present, a licensed contractor would be retained to conduct an evaluation and determine disposal alternatives.

**Pollution Prevention.** Solid waste generated from implementation of the Proposed Action would consist of building materials such as drywall, solid pieces of concrete, metals (conduit, piping, and wiring), and lumber. Arrangements by the contractor would be made for the storage, disposal, or recycling of C&D debris at a licensed disposal facility. Contractors would be required to recycle C&D debris to the greatest extent possible in accordance with the Base policy. All solid waste would be disposed of in accordance with applicable federal, state, local, and USAF regulations. With adequate available landfill capacity in the surrounding area, these quantities would not cause adverse impacts to the capacity of the area landfill (**Section 4.10.2**).

**Environmental Restoration Program.** With regard to the ERP sites, the Proposed Action includes the construction of facilities within or near four ERP sites (**Figure 3-3**); however, it is anticipated that these sites will be remediated or land use controls will be in place prior to the initiation of construction

activities. Construction projects within the northern portion of AOC 23 are scheduled for completion after a preliminary remedial investigation and feasibility study (RI/FS) have been completed. No construction would occur prior to the completion of an RI/FS. Sites SS-16 and OT-09 are currently both undergoing remediation activities. AOC14 was excavated and contaminated soil was removed for the construction of 126 ARW facilities. However, land use controls such as restrictions on groundwater use may be established for this site. The construction of future projects is not anticipated to impact hazardous materials at these sites. Potential lead contamination in AOC 19 is primarily confined to the residential portions of the historic district and is not anticipated to be impacted by the construction/repairs associated with the eastside drainage project (I20). Although it is anticipated that these sites will be either controlled with land use restrictions or remediated prior to construction, worker protection from potential hazardous materials should still be evaluated and discussed in an appropriate health and safety work plan (HSWP) prior to any new construction. Based on this evaluation, it might be necessary for construction workers to utilize proper personal protective equipment (PPE) per the HSWP while excavating or working near some of the sites mentioned above.

#### **4.12 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be implemented and there would be no effect on noise, air quality, geological resources, water resources, biological resources, cultural resources, socioeconomics, and hazardous materials and waste. However, with the No Action Alternative, some facilities in their current locations would be inconsistent with proposed future land use (**Table 4-3**). For example, many of the Base civil engineering maintenance facilities are located in an area that is proposed for administrative space. Future land use, as proposed in the Scott AFB General Plan (2004b), would enhance Scott AFB operations by concentrating similar areas of activities and eliminating underutilized areas. With the No Action Alternative, some activities with similar functions such as administration, community service, and housing, would continue to be dispersed which would reduce the overall organization and effectiveness of Base operations.

Additionally, there are operational units that are dispersed throughout different buildings on the installation. Inefficient work conditions would continue to exist for the 375<sup>th</sup> Operations Group as this Group is currently located in 22 different facilities on Base. Current customer service centers are also at separate locations for military and civilian personnel. With the No Action Alternative, customer service to military and civilian personnel and retirees and spouses would continue to be inefficient.

Numerous existing facilities are too small to support mission requirements. With the No Action Alternative, overcrowded work conditions would continue to exist at these facilities. Overcrowded work conditions would slow down productivity and reduce the effectiveness of Base operations.

With the No Action Alternative, some unsafe conditions would continue to exist. Unused buildings scheduled for demolition would continue to degrade creating unsafe conditions. Building 3190, six holes of the golf course, and portions of the jogging track would continue to exist within the airfield clear zone. Dormitory Buildings 1810, 1820, and 1830 would remain non compliant with AT/FP guidelines.

With the No Action Alternative, the east side of the Base and some associated buildings would continue to flood during periods of heavy rain.

In general, implementation of the No Action Alternative would require that the 375 AW continue to operate under substandard, inefficient, and in some cases, unsafe conditions. Implementation of the No Action Alternative would require that the 375 AW continue to operate using existing infrastructure under, in some cases, substandard and inefficient conditions.

## 5 CUMULATIVE IMPACTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

### 5.1 Cumulative Impacts

Cumulative impacts to environmental resources result from incremental effects of an action when combined with other past, present, and reasonably foreseeable future projects in the ROI. 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 (or anticipated over the foreseeable future) is required.

To identify cumulative effects, the analysis needs to address two fundamental questions:

1. Does a relationship exist such that affected resource areas of the Proposed Action or alternatives might interact with the affected resource areas of past, present, or reasonably foreseeable actions?
2. If such a relationship exists, then does an EA reveal any potentially significant impacts not identified when the Proposed Action is considered alone?

The scope of the cumulative effects analysis involves both the geographic extent of the effects and the time frame in which the effects could be expected to occur, as well as a description of what resources could potentially be cumulatively affected.

When addressing cumulative impacts on wetlands and waters of the U.S., the geographic extent for the cumulative effects analysis is the watershed in which the Proposed Action and alternatives have the potential to impact, primarily concentrating on past, present, and reasonably foreseeable actions on and within Scott AFB and the surrounding ecosystem.

When addressing cumulative impacts on noise quality, the geographic extent for the cumulative effects analysis is the ROI in which the Proposed Action and alternatives have the potential to impact, primarily concentrating on past, present, and reasonably foreseeable actions near the southwestern boundary of Scott AFB. The time frame for cumulative effects analysis centers on the timing of the Proposed Action and would continue into the foreseeable future; in addition, actions with the potential to impact wetlands and waters of the U.S. that were implemented within the past four years were included for analysis.

For the purposes of this analysis, the temporal span of the Proposed Action is five years and impacts were assessed as if the projects would occur within that five year period. For most resources, the spatial area for consideration of cumulative effects is Scott AFB with the exception of impacts on air quality which considers the County of St. Clair as the ROI. Similarly, impacts on resources and conditions of activities attributable to other actions within the ROI would not augment the direct and indirect effects of the installation development at Scott AFB to the extent that they would significantly increase their effect.

The 375 AW updates facilities at Scott AFB on a continual basis. While it is not practical to catalog all minor projects that could occur over the short-term, the major projects in the ROI have been analyzed as the Proposed Action in the IDEA. Planning efforts in the ROI include the actions described within this EA, as well as those additional projects that are ongoing, or planned outside of the boundaries of Scott AFB. Additional projects within the ROI are discussed below.

Currently ongoing and other actions proposed over the next five years at Scott AFB are shown in **Table 5-1**. Military family housing privatization is one of the on-going projects located both at Scott AFB and within the surrounding community. The privatization of military housing at Scott AFB includes the demolition of 352 units on Base and the construction of 381 new units off-base. A previous environmental assessment conducted in 2005 concluded that there are no significant adverse impacts associated with this housing privatization (USAF, 2005) but it is included in this section to recognize potential cumulative impacts.

As an active military installation, Scott AFB and its tenant organizations undergo changes in mission and training requirements in response to defense policies, current threats, and tactical and technological advances, and as such, require new construction, facility improvements, infrastructure upgrades, and ongoing maintenance and repairs on a continual basis. Although such known construction and upgrades are a part of the analysis contained in this section, some future requirements cannot be predicted. As those requirements surface, future NEPA analysis would be conducted, as necessary.

**Table 5-1. Ongoing and Proposed Projects at Scott AFB**

<b>Project Name/Description</b>	<b>Area (approximate ft <sup>2</sup>)</b>	<b>Anticipated Fiscal Year for Implementation</b>
<b>On-going Projects*</b>		
Construct Explosive Ordnance Disposal Facility	6,405	On-going
Demolition of Various Buildings (800, 853, 854, 855, 878, 3164, 4141, 4157)	58,978	On-going
<b>Proposed Projects over the Next Five Years</b>		
Construct Security Forces Warehouse	6,000	2006-07
Construct C-40 Squadron Operations Facility	21,000	2006-07
Construct a Security Forces Complex	33,906	2007
Construct an Administrative Facility for Headquarters AMC and Headquarters USTC, Phase I and II	210,000	2007-08
Construct a Dormitory for 144 Enlisted Personnel	51,150	2007-08
<b>Total Square Footage</b>	<b>387,439 (9.0 acres)</b>	

\*Housing privatization is not included in this table because this action is being privately funded and conducted by a private entity.  
Source: SAIC, 2006

The goal of the IDEA is to document the known projects proposed at Scott AFB in support of their mission and the mission of tenant units; provide an environmental analysis of these projects; and prepare to implement the appropriate facility improvements as funds become available. It is quite likely that during the course of the next five years, additional projects not included in this analysis may be required. The nature of the military today is that missions are dynamic and planners at the installation level must be proactive in addressing potential impacts associated with these changes.

**Noise.** Construction noise emanating off-site as a result of the Proposed Action, the housing privatization and the activities listed in **Table 5-1** would probably be noticeable in the immediate construction site vicinity, but would not be expected to create long term adverse impacts. The acoustic environment on and near the airfield property is expected to remain relatively unchanged from existing conditions under proposed activities. Cumulative impacts from noise would be expected to be minimal.

**Land Use.** The proposed construction and demolition projects described under the Proposed Action, the housing privatization and the activities listed in **Table 5-1** are expected to enhance overall installation planning and compatibility of functions at Scott AFB. Some existing incompatibilities would be corrected. Cumulative impacts to land use are expected to be minimal.

**Air Quality.** In general, combustive and fugitive dust emissions from proposed construction and demolition activities under the Proposed Action, the housing privatization and those activities listed in **Table 5-1** would produce localized, elevated air pollutant concentrations that would occur for a short duration and would not result in any long-term impacts on the air quality of St. Clair County or AQCR 70. Cumulative impacts to air quality in the County and the AQCR are expected to be minimal.

**Safety.** Implementation of the Proposed Action, the housing privatization or the activities listed in **Table 5-1**, do involve ground activities that could expose workers performing the required site preparation, grading, and building construction to some risk. Strict adherence to all applicable occupational safety requirements would minimize the relatively low risk associated with these construction activities. All projects have been sited outside any quantity-distance arcs, as appropriate. Additionally, the proposed projects would include measures to enhance and correct AT/FP shortfalls as part of the facility designs. Cumulative impacts to safety are expected to be minimal.

**Geologic Resources.** In addition to the development over the course of the construction program associated with the Proposed Action, up to an additional nine acres of surface disturbance could result over the next five years from ongoing construction associated with projects with the boundaries of Scott AFB (**Table 5-1**). The grading of existing soil and placement of structural fill for new facilities would not substantially alter existing soil conditions at the installation because, to a large extent, the construction described above is planned for areas where surface disturbance has previously occurred. BMPs would be used to limit soil movement, stabilize runoff, and control sedimentation. Housing privatization activities outside of the boundaries of Scott AFB are anticipated to impact over 100 acres of soil. Relative cumulative impacts due to the Proposed Action to geologic resources are expected to be minimal.

**Water Resources.** In addition to a net increase of approximately 2.2 acres of impervious surface that would result under the Proposed Action, up to an additional nine acres of impervious surface would be added as a result of the projects listed in **Table 5-1**. To a large extent, the construction described above is planned for areas that already contain a large amount of impervious surface, and therefore much of the proposed construction would occur on already impervious surfaces. In addition, measures to mitigate flooding and decrease sediment and chemical loading into nearby tributaries would be evaluated during the design of each of the projects included as part of the Proposed Action. These measures could include detention basins, vegetated swales, bio-retention devices, micropools, dry detention basins or wet ponds. The Scott AFB SWPPP would be updated to include these projects and would obtain, as appropriate, coverage under an NPDES Construction Storm Water permit from the Illinois EPA. Adherence to the requirements of the permit would include implementation of BMPs to minimize the potential for exposed soils or other contaminants from construction activities to reach nearby surface waters. It is expected that cumulative impacts to water resources would be minimal. When compared to the potential impacts of the housing privatization on water resources the potential impacts of the Proposed Action are minimal.

**Biological Resources.** In general, the Proposed Action and the projects listed in **Table 5-1** are at sites that are highly altered by man. No cumulative impacts to federal or state listed species are anticipated. The Base Environmental Management Flight would coordinate, as necessary, with the USFWS prior to implementation of construction activities to ensure that impacts to sensitive species do not occur. Cumulative impacts to biological resources are expected to be minimal.

**Cultural Resources.** Activities associated with either the Proposed Action, the housing privatization or the projects listed in **Table 5-1** are not expected to impact archaeological, architectural or traditional resources. Cumulative impacts to cultural resources are expected to be minimal.

**Socioeconomics.** Activities associated with the Proposed Action, the housing privatization or the projects listed in **Table 5-1** are not expected to have any major adverse impacts on the economy in the ROI. Additionally these projects are not expected to create adverse environmental or health effects and therefore no disproportionately high or adverse impacts to minority, low-income, or youth populations are expected. Cumulative impacts to socioeconomics and environmental justice are expected to be minimal.

**Infrastructure.** The proposed construction and demolition projects associated with the Proposed Action, the housing privatization, or those actions listed in **Table 5-1** would result in some temporary interruption of utility services and minor hindrance of transportation and circulation during construction activities. These impacts would be temporary, occurring only for the duration of the construction period. In general, infrastructure at Scott AFB would improve under these actions. Cumulative impacts to infrastructure are expected to be minimal.

**Hazardous Materials and Waste.** The proposed construction and demolition projects associated with the Proposed Action, the housing privatization, or those actions listed in **Table 5-1**, would generate construction and demolition waste that would be recycled and/or taken to a local demolition landfill, as appropriate. There are no capacity issues associated with the existing landfills. Hazardous materials and wastes would be handled, stored, and disposed of in accordance with applicable regulations. Some ACM, LBP, and contaminated soils associated with ERP sites would be removed and disposed of per applicable regulations. On other sites, engineered caps or other LUCs may be used. Cumulative impacts as a result of hazardous materials and waste management are expected to be minimal.

## 5.2 Irreversible and Irretrievable Impacts

NEPA CEQ regulations require environmental analyses to identify “...any irreversible and irretrievable commitments of resources that would be involved in the Proposed Action should it be implemented” (40 CFR Section 1502.16). Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Building construction material such as gravel and gasoline usage for construction equipment would constitute the consumption of non-renewable resources.

The primary irretrievable impacts of the Proposed Action would involve the use of energy, labor, materials and funds, and the conversion of some lands from an undeveloped condition through the construction of buildings and facilities. However, all of the land proposed to be utilized has been developed in the past. Irretrievable impacts would occur as a result of construction, facility operation, and maintenance activities. The irretrievable loss of energy, labor, materials and funds associated with implementation of the Proposed Action would be inconsequential to the amount of these resources currently available and being used in other areas around Scott AFB. Direct losses of biological productivity and the use of natural resources from these impacts would be inconsequential.

## 6 LIST OF PREPARERS

This IDEA has been prepared under the direction of the HQ AMC and the 375 AW at Scott AFB, St. Clair County, Illinois by SAIC. The individual preparers of this document are listed below.

Quentina Borgic, Environmental Scientist  
B.S., Anthropology and Geography  
Years of Experience: 2

Tom Daues, Project Manager  
M.S., Natural Resources  
B.S., Biology  
Years of Experience: 14

Lois DuMey, NEPA Specialist  
M.S. Environmental Science  
Years of Experience: 8

David Lingner, Senior Scientist  
Ph.D., Chemistry  
B.S., Chemistry and Mathematics  
Years of Experience: 23

Kenneth Pocklington, Environmental Scientist  
M.S., Environmental Science  
B.S., Biology  
Years of Experience: 2

Brian Tutterow, Environmental Scientist  
B.S., Biology  
Years of Experience: 9

Emily Seaton, Environmental Scientist  
B.S. Biology  
Years of Experience: 1

William Wuest, Senior Environmental Scientist  
M.P.A., Public Administration  
B.S., Political Science  
Years of Experience: 39

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 7 REFERENCES

- Air Force Institute for Environment, Safety, and Occupational Health Risk Analysis (AFIERA). 2002. Hazardous Waste Management Plan, Scott Air Force Base, Illinois.
- Bradgon, K. and Webster, R. 2001. "Economic Impact Forecast System (EIFS) Version 6 User Manual." August.
- CH2M Hill. 2005. "2004 Air Emissions Inventory." Prepared for Scott Air Force Base, May 2005 by CH2M Hill, St. Louis, Missouri.
- East-West Gateway Council of Governments. 2005. "Air Quality History." Website last updated on 15 April 2005
- EIFS. 2006. EIFS Report. U.S. Army Environmental Policy Institute and the Computer Information Sciences Department of Clark Atlanta University. <<http://eifs.cau.edu>>. Accessed September 12, 2006.
- Environmental Protection Agency. 1998. "*Characterization of Building-Related Construction and Demolition Debris in the United States*." Prepared by Franklin Associates. June.
- Federal Emergency Management Agency (FEMA). 2003. National Flood Insurance Rate Map, St. Clair County, Illinois and Incorporated Areas (Panel 240 of 555, Map Number 17163C0240D). November.
- Finegold, L.S., C.S. Harris, H.E. vonGierke. 1994. Community Annoyance and Sleep Disturbance: Updated Criteria For Assessing the Impacts of General Transportation
- Jagielski, K. and O'Brien, J. 1994. *Calculations Methods for Criteria Air Pollution Emission Inventories*, USAF, Armstrong Laboratory, AL/OE-TR-1994-0049. Brooks AFB.
- Kaleel, Rob. 2005. Telephone conversation on 8/3/2005 with Rob Kaleel of the Illinois EPA, Air Quality Planning Division (217-524-4387, [rob.kaleel@epa.state.il.us](mailto:rob.kaleel@epa.state.il.us)).
- IDNR 2006. EcoCAT, Illinois Natural Heritage Database. <http://dnrecocat.state.il.us/ecopublic>. August 2006
- Illinois Department of Natural Resources (IDNR). 2004. Illinois Endangered Species Protection Board "2004 Endangered and Threatened Species List." <http://dnr.state.il.us/espb/datelist.htm>.
- NOAA. 1994. National Oceanic and Atmospheric Administration (NOAA). "Guidelines and Principles for Social Impact Assessment." May.
- Moulton, Carey L. 1990. Air Force Procedure for Predicting Aircraft Noise Around AirBases: Noise Exposure Model (NOISEMAP) User's Manual. Harry G. Armstrong Aerospace Medical Research Laboratory, Human Systems Division, Air Force Systems Command, Wright-Patterson AFB, Ohio. AAMRL-TR-90-011. February.
- National Park Service. 2005. "Mingo National Wildlife Refuge Air Quality Information." Website last updated on 19 May 2005, <http://www2.nature.nps.gov/air/Permits/ARIS/ming/>.
- National Weather Service (NWS). 2005. "The Climatology of St. Louis and the Bi-State Area." National Weather Service, St. Charles, Missouri, website downloaded on 18 July 2005 <http://www.crh.noaa.gov/lx/climate/cli-sum1.htm>.
- National Oceanic and Atmospheric Administration (NOAA). 1998. "Climatic Wind Data for the United States." National Climatic Data Center, National Oceanic and Atmospheric Administration, Asheville, NC, November 1998.

- Natural Resources Conservation Service (NRCS). 2004. Lower Kaskaskia Watershed. Online information obtained at [http://www.il.nrcs.usda.gov/programs/csp/csp\\_lwrkask.html](http://www.il.nrcs.usda.gov/programs/csp/csp_lwrkask.html) on August 23, 2006. December.
- O'Brien, Robert J. and Mark D. Wade. 2002. "Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations." United States Air Force Institute for Environment, Safety and Occupational Health Risk Analysis, Risk Analysis Directorate, Environmental Analysis Division, IERA-RS-BR-SR-2001-0010, Brooks Air Force Base, TX, January 2002.
- Occupational Safety and Health Administration. 1983. Occupational Noise Exposure Standard. Code of Federal Regulations Title 29, Part 1910, Sec. 1910.95 (29 CFR 1910.95).
- Parsons. 1995. Final Multi-Site Preliminary Assessment/Site Investigation.
- Thomason, Phillip J.M., 1992. *Inventory and Evaluation of Historic Building and Structures on Scott Air Force Base, Illinois*. Thomas and Associates, Nashville, Tennessee. Report submitted to the National Park Service, Denver, Colorado, and Headquarters Air Mobility Command, Scott Air Force Base, Illinois. Purchase Order No. PX-1242-1-1112.
- Scott Air Force Base (AFB). 1996. Lead Based Paint Management Plan.
- \_\_\_\_\_. 1997a. Preliminary Assessment/Site Inspection Report Cardinal Creek Housing Area Scott AFB, Illinois. Prepared by Philip Environmental. July 10, 1997
- \_\_\_\_\_. 1997b. Scott Air Force Base Solid Waste Management Plan. September.
- \_\_\_\_\_. 1997c. Soil Management Plan. Cardinal Creek Village Housing Area-South Scott AFB, Illinois. Prepared by CH2MHill. October 1997.
- \_\_\_\_\_. 1998. Final Decision Document. Interim Action for Cardinal Creek Housing Area-South. Scott AFB, Illinois. January 1998.
- \_\_\_\_\_. 2000a. Scott AFB Asbestos Management Plan.
- \_\_\_\_\_. 2000b. Asbestos Operations Plan.
- \_\_\_\_\_. 2001a. Air Installation Compatible Use Zone Study. Scott Air Force Base, Illinois. Feb.
- \_\_\_\_\_. 2001b. Spill Prevention Control and Countermeasure Plan with Amendments in March 2003 and July 2004.
- \_\_\_\_\_. 2001c. Final Solid Waste Management Plan for Scott AFB.
- \_\_\_\_\_. 2003. Integrated Cultural Resources Management Plan (ICRMP). Prepared for the Air Force Institute for Environment, Safety, and Occupational Health Risk Analysis, Brooks AFB, San Antonio, Texas, Prepared by Parsons.
- \_\_\_\_\_. 2004a. Final Storm Water Pollution Prevention Plan. Scott Air Force Base, Illinois. June.
- \_\_\_\_\_. 2004b. Scott Air Force Base General Plan. Scott AFB, Illinois. October.
- \_\_\_\_\_. 2004c. Draft Environmental Assessment for the Joint Use Agreement, St. Clair County, Scott AFB, IL. December
- \_\_\_\_\_. 2005a. "Fact Sheet, US Air Force, Scott Air Force Base Statistics." February.
- \_\_\_\_\_. 2005b. Scott AFB Final Floodplain Survey. Prepared by CH2MHill. Philadelphia, PA. May.
- \_\_\_\_\_. 2005c. Final Wetland Delineation Report. Prepared by CH2MHILL. June 2005.
- \_\_\_\_\_. 2005d. Final Threatened and Endangered Species Habitat Survey. July.
- \_\_\_\_\_. 2005e. Final Forest Management Plan Update. Prepared by CH2MHILL. November 2005.
- \_\_\_\_\_. 2005f. Final Work Plan Preliminary Assessment/Site Inspection At AOC 06, AOC 08, AOC 11, AOC 20, and AOC 22

- \_\_\_\_\_. 2005g. Recycling Option Plan and Feasibility Study for Scott AFB. Prepared by CH2M Hill. May 2005.
- \_\_\_\_\_. 2005h. Final AOC 19 (Lead Sites Basewide) Preliminary Assessment/Site Investigation Report. Scott Air Force Base, Illinois. October.
- \_\_\_\_\_. 2005i. Aircraft Guide to Bird Aircraft Strike Hazard (BASH) Avoidance. June 17.
- South Coast Air Quality Management District. 1993. *CEQA Air Quality Handbook*.
- United States Air Force (USAF). No Date. Installation Force Protection Guide.
- \_\_\_\_\_. 1991. Final EIS for Joint Military-Civilian Use of Scott AFB, IL Volume 1: Impacts Analysis. July.
- \_\_\_\_\_. 1993. Air Force Policy and Guidance on Lead Based Paint in Facilities. June 1993.
- \_\_\_\_\_. 1998. 307 Red Horse EA Noise Survey. Kelly Air Force Base, Texas. 27 October 1998
- \_\_\_\_\_. 2001. Air Installation Compatible Use Zone Study. Scott Air Force Base, Illinois. Feb.
- United States Army Corps of Engineers (USACE). 2002. U.S. Army Engineer Research and Development Center. Environmental Laboratory. Environmental Assessment of Selected Fauna and their Habitats at Scott AFB Illinois: Bat Surveys, Seasonal Avian Inventories, and Botanical Survey of Forested Areas. Vicksburg, Mississippi. February.
- United States Census Bureau (USCB). 1990, 2000, and 2005 Population Estimates. Population Finder for the United States, State of Illinois, and St. Clair County. Available online: [http://factfinder.census.gov/servlet/SAFFPopulation?\\_submenuId=population\\_0&\\_sse=on](http://factfinder.census.gov/servlet/SAFFPopulation?_submenuId=population_0&_sse=on). Accessed June 2006.
- United States Census Bureau (USCB). 2000. "Quick Tables." Tables DP-1 from Summary File 1 and DP-2 and DP-3 from Summary File 3 for Belleville, O'Fallon, Fairview Heights, Lebanon, Mascoutah, Shiloh, St. Clair County, State of Illinois; St. Louis MSA, and Census Tracts 5033.21, 5033.22, 5033.31, 5033.32, 5034.05, 5038, 5039.01, 5043.02, 5043.03, 5043.04, 5043.51, 5043.52, and 5043.53. Available online: <http://factfinder.census.gov>. Accessed June 2006.
- United States 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
- USEPA. 2006. "2002 National Emission Inventory." Database downloaded from USEPA website in December 2006, <http://www.epa.gov/ttn/chief/net/2002inventory.html>.
- United States Geological Survey. 2006. National Earthquake Information Center, United States Geologic Survey. Website accessed August. [http://neic.usgs.gov/neis/eqlists/large\\_usa.html](http://neic.usgs.gov/neis/eqlists/large_usa.html)
- Wasmer, F. and F. Maunsell. 2002. NMPlot Computer Program. Wasmer Consulting.

**THIS PAGE INTENTIONALLY LEFT BLANK**

## **APPENDIX A**

### **LIST OF PROPOSED SCOTT AFB INSTALLATION DEVELOPMENT PROJECTS**

***THIS PAGE INTENTIONALLY LEFT BLANK***

**APPENDIX A**

**Table A-1. Proposed Demolition Projects**

<b>Map ID</b>	<b>Project Number</b>	<b>Project Title</b>	<b>Year Proposed</b>	<b>Total Area Removed (ft<sup>2</sup>)</b>	<b>Project Description</b>
CD2 <sup>1</sup>	VDYD943015 RI	Demolish Building 505	2009	19,332	This facility has consistent roof problems and the HVAC is inadequate for the building. The building has recurring flooding problems that require work stoppages during periods of high rainfall. Once the new Squadron Operations Facility is completed 375 <sup>th</sup> Operations Group personnel will move out of Building 505 and allow it to be demolished.
CD17 <sup>1</sup>	VDYD050109	Demolish Bldgs 1520, 1521, and 1523	2009	30,236	Building demolition is associated with the construction of the Distribution and Deployment Processing Center. Buildings would be demolished prior to construction.
CD19 <sup>1</sup>	VDYD030156	Demolish Building 1986 and 1987	2009	59,572	Building 1986 is in the footprint of the proposed building and would be demolished prior to constructing the new facility. Build 1987 is the current fitness center. This building would be vacated and demolished up completion of the new fitness center.
CD21 <sup>1</sup>	VDYD040216	Demolish Building 3189	2008	63,874	This is a WWII era building that has outlived its serviceable function. The building would be demolished upon completion of the new DISA facility.
CD24 <sup>1</sup>	VDYD040176	Demolish Building 4205	2010	1,298	Building 4205 is an unused facility that is located within the footprint of the proposed BCE complex.
CD26 <sup>1</sup>	VDYD020183	Demolish Buildings 1192 and 1911	2010	20,599	Buildings 1191 and 1192 are located within the clear zone at Scott AFB. Once the new clubhouse is completed these buildings would be vacated and demolished in order to remove an airfield waver.
CD27 <sup>1</sup>	No Project No.	Demolish Bldgs. 61, 509, 859 and 861	2012	131,994	These buildings are located in the proposed footprint of the OG HQ Facility. The buildings would be demolished in order to clear sufficient space for construction of the new facility.

**Table A-1. Proposed Demolition Projects (Cont'd)**

D3	VDYD000054	Demolish HQ AMC/Admin Building 1605	2007	4,704	This is a temporary modular facility that has exceeded its life expectancy and needs to be removed to avoid high maintenance costs.
D4	VDYD000055	Demolish Administrative Facility Bldg 3190	2007	46,540	This facility is a WWII vintage building, high in asbestos content and lead base paint. It also requires high maintenance costs to just keep it unusable in its current function.
D5	VDYD000056	Demolish Concrete pads in Clear Zone	2009	6,400	The majority of mobile homes within this area are vacant. The remaining mobile homes would be removed in order to prepare for construction of the CE complex.
D7	VDYD020241	Demolish Shredder Building 3283	2009	250	Facility is no longer in use and has fallen into disrepair. There are trees growing through it and it has become a base eyesore as well as a maintenance problem.
D8	VDYD021015	Demolish Facility 741	2010	3,800	Facilities, mainly WWII wooden buildings need to be demolished to rid the base of outdated, high maintenance facilities and provide land space for future development.
D9	VDYD040163	Demolish Taxiway J	2008	218,570	This runway is no longer utilized and will be demolished in order to comply with flight line restrictions.
D11	VDYD040301	Demolish Buildings 3207 and 3210	2007	578	These are two small buildings located in clear zone. The New Munitions Facility Constructed and Prior Storage Buildings (Bldgs 3210 and 3207) no longer meet necessary requirements. The buildings would be demolished to remove the airfield waiver.
D12	VDYD040304	Demolish Building 799	2007	2,688	This facility has outlived its serviceable function.
D13	VDYD040306	Demolish Building 3273	2011	9,000	This facility has outlived its serviceable function.
D14	VDYD040307	Demolish Building 3277	2010	9,267	This facility has outlived its serviceable function.
D15	VDYD040316	Demolish Asphalt Pavement Old South Dr.	2006	64,000	This road is no longer serviceable and is no longer in use.
D16	VDYD991017	Demolish Aero Club Building 3183	2011	2,304	This facility has outlived its serviceable function.
D17	No Project No.	Demolish US TRANSCOM, Building 1961	2007	246,234	This facility has outlived its serviceable function.
D18	No Project No.	Demolish Chapel 2, Building 5713	2007	12,904	This facility has outlived its serviceable function.

**Table A-1. Proposed Demolition Projects (Cont'd)**

D19	No Project No.	Demolish Medical Warehouse 3270	2007	9,150	This facility is a WWII era, wood frame building that has outlived its serviceable function. A new modern warehouse is being constructed to replace this facility. Once the new warehouse is complete the facility would be demolished.
D20	No Project No.	Demolish Medical Warehouse 3272	2007	9,150	This facility is a WWII era, wood frame building that has outlived its serviceable function. A new modern warehouse is being constructed to replace this facility. Once the new warehouse is complete the facility would be demolished.
D21	No Project No.	Demolish Medical Warehouse 3275	2007	9,150	This facility is a WWII era, wood frame building that has outlived its serviceable function. A new modern warehouse is being constructed to replace this facility. Once the new warehouse is complete the facility would be demolished.
D22	No Project No.	Demolish Medical Warehouse 3279	2007	9,150	This facility is a WWII era, wood frame building that has outlived its serviceable function. A new modern warehouse is being constructed to replace this facility. Once the new warehouse is complete the facility would be demolished.

<sup>1</sup> These demolition projects are associated with a construction project and therefore have the same Project Number.

**Table A-2. Proposed Construction Projects**

<b>Map ID</b>	<b>Project Number</b>	<b>Project Title</b>	<b>Year Proposed</b>	<b>Total Area Constructed (ft<sup>2</sup>)</b>	<b>Project Description</b>
C1	VDYD052055	Construct Intel Facility	2012	15,000	The Air National Guards (ANG) current communication facility does not have adequate space to meet the increased demand for up to date communication equipment. Construction of this facility would allow the ANG to install needed equipment.
CD2 <sup>1</sup>	VDYD943015 RI	Construct Squadron Operations Facility/Demo Building 505	2009	57,953	The 375th Operations Group is currently scattered throughout the base in a variety of WW II era facilities at least 50 years old. The majority of personnel are working in spaces much smaller authorized under current Air Force guidelines. There is insufficient space to accommodate the Wing Command Center. The effectiveness of operation is directly hindered by current space inadequacies and dispersion of activities. This project will consolidate all squadron operations functions under one roof.
C3	VDYD953021	Construct Child Development Center	2008	24,219	The present capacity of the child development centers on Scott AFB can provide only 35% of the total space/care requirements for children of working parents. Department of Defense Guidelines calculate Scott AFB total number of children needing childcare at 1,184. The two existing facilities can accommodate 392 children, which is the maximum allowed in accordance with MIL-Handbook 1,190 space criteria of 75 square feet per child. The demand for a responsive, dependable, and well managed facility remains high. Available local community facilities lack convenience, especially for single parents assigned or employed at Scott.
C4	VDYD030284	Doom Bay Addition and Brick Installation	2006	5,400	Failure to construct this facility would result in continued operations with a degraded mission capability that is a direct result of inclement weather, which in turn caused numerous work stoppages and leaves vital AMC equipment without storage.

**Table A-2. Proposed Construction Projects (Cont'd)**

C7	VDYD052050	Construct Steel Pole Barn	2012	3,000	The ANG requires additional storage space for various equipment.
C9	VDYD052042	Construct Addition at Petroleum Oil Lubricant Facility	2006	320	The POL Operations Facility is undersized and lacks adequate security. The HVAC system is grossly undersized and does not ventilate correctly. It has problems keeping the POL lab at the proper temperature and JP-8 fumes are frequently present throughout the facility. The current shop area is 320 square feet (16%) under the authorized requirements. There is also very little space for administration storage. The main entrance to the building creates a security problem.
C11	VDYD039182	Addition to Communication Facility	2010	3,200	The current communication facility is undersized and does not meet the requirements of the Air National Guard. This facility would be constructed adjacent to the existing facility.
C12	VDYD040181	Construct Aeromedical Evacuation Facility	2009	21,635	Manning at the 375 AES has increased by 40%. The current AES is housed in Bldg 505. This facility has consistent roof problems and the HVAC is inadequate for the building. The building has recurring flooding problems that require work stoppages during periods of high rainfall. Overall Wing mission accomplishment is severely hindered by the space inadequacies and a substandard work environment.
C13	VDYD040289	AT/FP for Dorms 1810, 1820, 1830	2006	0	The current force protection surrounding the dorms is not up to the most recent Air Force Guidelines. Implementation of this project would correct those deficiencies.
CD17 <sup>1</sup>	VDYD050109	Construct Distribution and Deployment Processing Center	2009	27,437	A centralized deployment center is required that will allow deploying personnel and equipment to be handled at one location adjacent to the flightline. The facility will house the XP offices and will serve as the Deployment Control Center and the Air Passenger Terminal (APT). The building will be the location of the Scott AFB Passenger Terminal for routing traffic usage. This requires relocation into a building that will satisfy force protection guidelines for a Passenger Terminal. The proposed facility will double as the APT in times of deployment, and will collocate all mobility processing into a single building. Force protection measures will be incorporated in accordance with USAF Installation Force Protection Guides.

**Table A-2. Proposed Construction Projects (Cont'd)**

CD19 <sup>1</sup>	VDYD030156	Construct New Fitness Center/Demolish Buildings 1986 and 1987	2009	130,243	The current facility is undersized and cannot provide space to meet the demonstrated need for intramural and base-wide sport activities. Inefficiencies include lack of positive ventilation, deteriorated lighting and electrical systems. Without a new fitness center the physical conditioning and recreational programs will continue to be limited due to facility shortcomings. Base personnel will continue to use substandard, inefficient, and over crowded physical fitness facilities which will adversely impact military fitness and readiness requirements. The health, physical well being and moral that are essential to the development and retention of personnel will continue to suffer. Current programs will have to be curtailed, and some deleted due to poorly configured and inadequate facilities. Expensive renovations and repairs will have to perpetually be made for the fitness center to continue operations. Customers will continue to be inconvenienced and the problem will become worse as other missions move to Scott AFB. This adversely impacts the overall Base mission in addition to morale and retention of highly trained, professional, and qualified Air Force personnel and the overall base mission.
CD21 <sup>1</sup>	VDYD040216	Construct New DISA Facility and Parking Area	2008	378,906	DISA CONUS is currently overcrowded in building 3189. No further expansion is possible due to runway/clear zone restrictions. Additionally, the useful life of the building ends in the year 2013. DISA Headquarter has requested these three DISA entities be consolidated into one facility on Scott AFB.
C23	VDYD040176	Construct B-3175 to New Location	2006	120	The current building is located within in the flightline clear zone. The building needs to be moved in order to eliminate a clear zone waiver.
CD24 <sup>1</sup>	VDYD030153	Construct New BCE Complex and Parking Area	2010	90,064	Currently 375 CES is working out of twenty-two non-contiguous buildings. To plan and coordinate a project for a customer BCE personnel must coordinate work though offices scattered in multiple facilities. The buildings were constructed in the 1930s, 1940s, and 1950s. These buildings are outdated, have a poor functional layout, and the many of the HVAC systems are not functioning correctly. Some flights are located in separate offices because of poor functional layout and improper room sizes.

**Table A-2. Proposed Construction Projects (Cont'd)**

CD26 <sup>1</sup>	VDYD020183	Construct Golf Clubhouse/Realign Course (6 holes)	2010	20,000	Currently six holes of the Base golf course are located within the flightline clear zone. Construction of six new holes outside of the flightline will allow the removal of the flightline waiver for the current golf course and maintain a properly sited and landscaped course to accommodate the recreational needs of base personnel.
CD27 <sup>1</sup>	No Project No.	Construct OG HQ (375th) Facility	2012	51,215	Construct OG Headquarters Facility for the 375 AW to be located in the former CE Complex area. This HQ Facility may also include the 932 AW Operations Group functions.
C31	No Project No.	Construct Permanent SDDC Facility (2005 BRAC-Action)	2008	215,000	The implementation of BRAC at Scott AFB involves an influx of 1,100 new personnel to the base. No current facilities would be able to accommodate the new personnel.

<sup>1</sup>These construction projects are associated with a demolition project and therefore have the same Project Number

**Table A-3. Proposed Infrastructure Projects**

Map ID	Project Number	Project Title	Year Proposed	Total Project Size (ft <sup>2</sup> )	Project Description
I1	VDYD020216	Construct Parking Lot Building 57	2006	22,500	The current area used for parking in Building 57 is the foundation of the former Vehicle Maintenance facility. Bases of the walls are protruding from the ground and metal tracks from old equipment are still present in the ground. The presence of these obstacles hinders the use of the lot as a parking facility. Construction of a parking lot would remove these obstacles and repave the lot.
I3	VDYD720489	Install Hydrant And Distribution Water Lines near Building 1192	2006	22,000	Implementation of this project would correct a code violation in the existing water distribution system.
I4	VDYD030467	Move Existing Jogging Path outside Clear Zone (Net 0 impervious area.)	2006	7,185	Relocation of the jogging path would remove a flight line waiver at Scott AFB.
I8	VDYD040255	Install Catch Basin Behind Pavilion near Building 382	2006	500	Installation of a catch basin would eliminate standing water that is located adjacent to a pavilion and playground.
I13	VDYD050227	Expand Parking Lots (Across from Buildings 460/450)	2006	29,997	The existing parking lots support the current occupants of buildings 450, 352 and 350. With the expansion of the flying mission at Scott AFB the number of personnel using these parking areas will significantly increase. Also, a significant portion of the current parking will be removed with the installation of the new 932nd ARW buildings. The current parking lots will not sustain all the personnel in these facilities.
I14	VDYD006400	Renovate Family Camp	2009	9,000	The current family camp sites 1 to 24 were built 20 years ago and cannot adequately accommodate the newer RV models. Current slots in the camp are rocked and create safety hazards during storms due to muddy conditions. Additionally, the current 24 spaces do not meet the demand for RV slots at the Base.
I20	VDYD050111	Repair Eastside Drainage	2008	70,000	Existing stormwater infrastructure is 50 years old or greater and undersized, causing major backup and flooding in periods of heavy rain. Significant wing money must be allocated annually to the repair of flooded buildings in this area.

**APPENDIX B**  
**APPLICABLE LAWS, REGULATIONS, POLICIES, AND PLANNING CRITERIA**

***THIS PAGE INTENTIONALLY LEFT BLANK***

## **Appendix B**

### **Applicable Laws, Regulations, Policies, and Planning Criteria**

When considering the affected environment, the various physical, biological, economic, and social environmental factors must be considered. In addition to the National Environmental Policy Act (NEPA), there are other environmental laws and Executive Orders (EOs) to be considered when preparing environmental analyses. These laws are summarized below.

#### **Noise**

The Air Installation Compatible Use Zone (AICUZ) Program, (Air Force Instruction [AFI] 32-7063), provides guidance to air bases and local communities in planning land uses compatible with airfield operations. The AICUZ program describes existing aircraft noise and flight safety zones on and near U.S. Air Force (USAF) installations.

#### **Land Use**

Land use planning in the USAF is guided by *Land Use Planning Bulletin, Base Comprehensive Planning* (HQ USAF/LEEVX, August 1, 1986). This document provides for the use of 12 basic land use types found on an Air Force installation. In addition, land use guidelines established by the U.S. Department of Housing and Urban Development (HUD) and based on findings of the Federal Interagency Committee on Noise (FICON) are used to recommend acceptable levels of noise exposure for land use.

#### **Air Quality**

The Clean Air Act (CAA) of 1970, and Amendments of 1977 and 1990 recognize that increases in air pollution result in danger to public health and welfare. To protect and enhance the quality of the Nation's air resources, the CAA authorizes the U.S. Environmental Protection Agency (USEPA) to set six National Ambient Air Quality Standards (NAAQS) which regulate carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide, and particulate matter pollution emissions. The CAA seeks to reduce or eliminate the creation of pollutants at their source, and designates this responsibility to state and local governments. States are directed to utilize financial and technical assistance as well as leadership from the Federal government to develop implementation plans to achieve NAAQS. Geographic areas are officially designated by USEPA as being in attainment or nonattainment to pollutants in relation to their compliance with NAAQS. Geographic regions established for air quality planning purposes are designated as Air Quality Control Regions (AQCRs). Pollutant concentration levels are measured at designated monitoring stations within the AQCR. An area with insufficient monitoring data is designated as unclassifiable. Section 309 of the CAA authorizes USEPA to review and comment on impact statements prepared by other agencies.

An agency should consider what effect an action could have on NAAQS due to short-term increases in air pollution during construction as well as long-term increases resulting from changes in traffic patterns. For actions in attainment areas, a Federal agency might also be subject to USEPA's Prevention of Significant Deterioration (PSD) regulations. These regulations apply to new major stationary sources and modifications to such sources. Although few agency facilities will actually emit pollutants, increases in pollution can result from a change in traffic patterns or volume. Section 118 of the CAA waives Federal immunity from complying with the CAA and states all Federal agencies will comply with all Federal- and state-approved requirements.

## **Safety**

AFI 91-202, *USAF Mishap Prevention Program*, implements Air Force Policy Directive (AFPD) 91-2, *Safety Programs*. It establishes mishap prevention program requirements (including the Bird/Wildlife Aircraft Strike Hazard [BASH] Program), assigns responsibilities for program elements, and contains program management information. This instruction applies to all USAF personnel.

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*, implements AFPD 91-3, *Occupational Safety and Health*, by outlining the AFOSH Program. The purpose of the AFOSH Program is to minimize loss of USAF resources and to protect USAF personnel from occupational deaths, injuries, or illnesses by managing risks. In conjunction with the USAF Mishap Prevention Program, these standards ensure all USAF workplaces meet Federal safety and health requirements. This instruction applies to all USAF activities.

## **Water Resources**

The Clean Water Act (CWA) of 1977 is an amendment to the Federal Water Pollution Control Act of 1972, is administered by USEPA, and sets the basic structure for regulating discharges of pollutants into U.S. waters. The CWA requires USEPA to establish water quality standards for specified contaminants in surface waters and forbids the discharge of pollutants from a point source into navigable waters without a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits are issued by USEPA or the appropriate state if it has assumed responsibility. Section 404 of the CWA establishes a Federal program to regulate the discharge of dredge and fill material into waters of the United States. Section 404 permits are issued by the U.S. Army Corps of Engineers (USACE). Waters of the United States include interstate and intrastate lakes, rivers, streams, and wetlands that are used for commerce, recreation, industry, sources of fish, and other purposes. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Each agency should consider the impact on water quality from actions such as the discharge of dredge or fill material into U.S. waters from construction, or the discharge of pollutants as a result of facility occupation.

Section 303(d) of the CWA requires states and USEPA to identify waters not meeting state water-quality standards and to develop Total Maximum Daily Loads (TMDLs). A TMDL is the maximum amount of a pollutant that a waterbody can receive and still be in compliance with state water-quality standards. After determining TMDLs for impaired waters, states are required to identify all point and nonpoint sources of pollution in a watershed that are contributing to the impairment and to develop an implementation plan that will allocate reductions to each source in order to meet the state standards. The TMDL program is currently the Nation's most comprehensive attempt to restore and improve water quality. The TMDL program does not explicitly require the protection of riparian areas. However, implementation of the TMDL typically calls for restoration of riparian areas as one of the required management measures for achieving reductions in nonpoint source pollutant loadings.

The Safe Drinking Water Act (SDWA) of 1974 establishes a Federal program to monitor and increase the safety of all commercially and publicly supplied drinking water. Congress amended the SDWA in 1986, mandating dramatic changes in nationwide safeguards for drinking water and establishing new Federal enforcement responsibility on the part of USEPA. The 1986 amendments to the SDWA require the USEPA to establish Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs), and Best Available Technology (BAT) treatment techniques for organic, inorganic, radioactive, and microbial contaminants; and turbidity. MCLGs are maximum concentrations below which no negative human health effects

are known to exist. The 1996 amendments set current Federal MCLs, MCLGs, and BATs for organic, inorganic, microbiological, and radiological contaminants in public drinking water supplies.

The Wild and Scenic Rivers Act of 1968 provides for a wild and scenic river system by recognizing the remarkable values of specific rivers of the Nation. These selected rivers and their immediate environment are preserved in a free-flowing condition, without dams or other construction. The policy not only protects the water quality of the selected rivers but also provides for the enjoyment of present and future generations. Any river in a free-flowing condition is eligible for inclusion, and can be authorized as such by an Act of Congress, an act of state legislature, or by the Secretary of the Interior upon the recommendation of the governor of the state(s) through which the river flows.

EO 11988, *Floodplain Management* (May 24, 1977) directs agencies to consider alternatives to avoid adverse effects and incompatible development in floodplains. An agency may locate a facility in a floodplain if the head of the agency finds there is no practicable alternative. If it is found there is no practicable alternative, the agency must minimize potential harm to the floodplain, and circulate a notice explaining why the action is to be located in the floodplain prior to taking action. Finally, new construction in a floodplain must apply accepted floodproofing and flood protection to include elevating structures above the base flood level rather than filling in land.

## **Biological Resources**

The Endangered Species Act (ESA) of 1973 establishes a Federal program to conserve, protect, and restore threatened and endangered plants and animals and their habitats. The ESA specifically charges Federal agencies with the responsibility of using their authority to conserve threatened and endangered species. All Federal agencies must ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction of critical habitat for these species, unless the agency has been granted an exemption. The Secretary of the Interior, using the best available scientific data, determines which species are officially endangered or threatened, and the U.S. Fish and Wildlife Service (USFWS) maintains the list. A list of Federal endangered species can be obtained from the Endangered Species Division, USFWS (703-358-2171). States might also have their own lists of threatened and endangered species which can be obtained by calling the appropriate State Fish and Wildlife office. Some species, such as the bald eagle, also have laws specifically for their protection (e.g., Bald Eagle Protection Act).

The Migratory Bird Treaty Act (MBTA) of 1918, as amended, implements treaties and conventions between the United States, Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless otherwise permitted by regulations, the MBTA makes it unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver, or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not. The MBTA also makes it unlawful to ship, transport or carry from one state, territory or district to another, or through a foreign country, any bird, part, nest, or egg that was captured, killed, taken, shipped, transported, or carried contrary to the laws from where it was obtained; and import from Canada any bird, part, nest, or egg obtained contrary to the laws of the province from which it was obtained. The U.S. Department of the Interior has authority to arrest, with or without a warrant, a person violating the MBTA.

EO 11514, *Protection and Enhancement of Environmental Quality* (March 5, 1970) states that the President, with assistance from the Council on Environmental Quality (CEQ), will lead a national

effort to provide leadership in protecting and enhancing the environment for the purpose of sustaining and enriching human life. Federal agencies are directed to meet national environmental goals through their policies, programs, and plans. Agencies should also continually monitor and evaluate their activities to protect and enhance the quality of the environment. Consistent with NEPA, agencies are directed to share information about existing or potential environmental problems with all interested parties, including the public, in order to obtain their views.

EO 11990, *Protection of Wetlands* (May 24, 1977) directs agencies to consider alternatives to avoid adverse effects and incompatible development in wetlands. Federal agencies are to avoid new construction in wetlands, unless the agency finds there is no practicable alternative to construction in the wetland, and the proposed construction incorporates all possible measures to limit harm to the wetland. Agencies should use economic and environmental data, agency mission statements, and any other pertinent information when deciding whether or not to build in wetlands. EO 11990 directs each agency to provide for early public review of plans for construction in wetlands.

EO 13186, *Conservation of Migratory Birds* (January 10, 2001) creates a more comprehensive strategy for the conservation of migratory birds by the Federal government. EO 13186 provides a specific framework for the Federal government's compliance with its treaty obligations to Canada, Mexico, Russia, and Japan. EO 13186 provides broad guidelines on conservation responsibilities and requires the development of more detailed guidance in a Memorandum of Understanding (MOU). EO 13186 will be coordinated and implemented by the USFWS. The MOU will outline how Federal agencies will promote conservation of migratory birds. EO 13186 requires the support of various conservation planning efforts already in progress; incorporation of bird conservation considerations into agency planning, including NEPA analyses; and reporting annually on the level of take of migratory birds.

## **Cultural Resources**

The American Indian Religious Freedom Act of 1978 and Amendments of 1994 recognize that freedom of religion for all people is an inherent right, and traditional American Indian religions are an indispensable and irreplaceable part of Indian life. It also recognized the lack of Federal policy on this issue and made it the policy of the United States to protect and preserve the inherent right of religious freedom for Native Americans. The 1994 Amendments provide clear legal protection for the use of peyote cactus as a religious sacrament. Federal agencies are responsible for evaluating their actions and policies to determine if changes should be made to protect and preserve the religious cultural rights and practices of Native Americans. These evaluations must be made in consultation with native traditional religious leaders.

The Archaeological Resource Protection Act (ARPA) of 1979 protects archaeological resources on public and American Indian lands. It provides felony-level penalties for the unauthorized excavation, removal, damage, alteration, or defacement of any archaeological resource, defined as material remains of past human life or activities which are at least 100 years old. Before archaeological resources are excavated or removed from public lands, the Federal land manager must issue a permit detailing the time, scope, location, and specific purpose of the proposed work. ARPA also fosters the exchange of information about archaeological resources between governmental agencies, the professional archaeological community, and private individuals. ARPA is implemented by regulations found in 43 CFR Part 7.

The National Historic Preservation Act (NHPA) of 1966 sets forth national policy to identify and preserve properties of state, local, and national significance. The NHPA establishes the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officers (SHPOs), and the

National Register of Historic Places (NRHP). ACHP advises the President, Congress, and Federal agencies on historic preservation issues. Section 106 of the NHPA directs Federal agencies to take into account effects of their undertakings (actions and authorizations) on properties included in or eligible for the NRHP. Section 110 sets inventory, nomination, protection, and preservation responsibilities for federally owned cultural properties. Section 106 of the act is implemented by regulations of the ACHP, 36 CFR Part 800. Agencies should coordinate studies and documents prepared under Section 106 with NEPA where appropriate. However, NEPA and NHPA are separate statutes and compliance with one does not constitute compliance with the other. For example, actions which qualify for a categorical exclusion under NEPA might still require Section 106 review under NHPA. It is the responsibility of the agency official to identify properties in the area of potential effects, and whether they are included or eligible for inclusion in the NRHP. Section 110 of the NHPA requires Federal agencies to identify, evaluate, and nominate historic property under agency control to the NRHP.

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 establishes rights of American Indian tribes to claim ownership of certain “cultural items,” defined as Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, held or controlled by Federal agencies. Cultural items discovered on Federal or tribal lands are, in order of primacy, the property of lineal descendants, if these can be determined, and then the tribe owning the land where the items were discovered or the tribe with the closest cultural affiliation with the items. Discoveries of cultural items on Federal or tribal land must be reported to the appropriate American Indian tribe and the Federal agency with jurisdiction over the land. If the discovery is made as a result of a land use, activity in the area must stop and the items must be protected pending the outcome of consultation with the affiliated tribe.

EO 11593, *Protection and Enhancement of the Cultural Environment* (May 13, 1971) directs the Federal government to provide leadership in the preservation, restoration, and maintenance of the historic and cultural environment. Federal agencies are required to locate and evaluate all Federal sites under their jurisdiction or control which may qualify for listing on the NRHP. Agencies must allow the ACHP to comment on the alteration, demolition, sale, or transfer of property which is likely to meet the criteria for listing as determined by the Secretary of the Interior in consultation with the SHPO. Agencies must also initiate procedures to maintain federally owned sites listed on the NRHP.

EO 13007, *Indian Sacred Sites* (May 24, 1996) provides that agencies managing Federal lands, to the extent practicable, permitted by law, and not inconsistent with agency functions, shall accommodate American Indian religious practitioners’ access to and ceremonial use of American Indian sacred sites, shall avoid adversely affecting the physical integrity of such sites, and shall maintain the confidentiality of such sites. Federal agencies are responsible for informing tribes of proposed actions that could restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites.

EO 13287, *Preserve America* (March 3, 2003) orders Federal agencies to take a leadership role in protection, enhancement, and contemporary use of historic properties owned by the Federal government, and promote intergovernmental cooperation and partnerships for preservation and use of historic properties. EO 13287 established new accountability for agencies with respect to inventories and stewardship.

## **Socioeconomics and Environmental Justice**

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994) directs Federal agencies to make achieving environmental justice part of their mission. Agencies must identify and address the adverse

human health or environmental effects that its activities have on minority and low-income populations, and develop agency-wide environmental justice strategies. The strategy must list “programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations, ensure greater public participation, improve research and data collection relating to the health of and environment of minority populations and low-income populations, and identify differential patterns of consumption of natural resources among minority populations and low-income populations.” A copy of the strategy and progress reports must be provided to the Federal Working Group on Environmental Justice. Responsibility for compliance with EO 12898 is with each Federal agency.

## **Hazardous Materials and Waste**

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 authorizes USEPA to respond to spills and other releases of hazardous substances to the environment, and authorizes the National Oil and Hazardous Substances Pollution Contingency Plan. CERCLA also provides a Federal “Superfund” to respond to emergencies immediately. Although the “Superfund” provides funds for cleanup of sites where potentially responsible parties cannot be identified, USEPA is authorized to recover funds through damages collected from responsible parties. This funding process places the economic burden for cleanup on polluters.

The Pollution Prevention Act (PPA) of 1990 encourages manufacturers to avoid the generation of pollution by modifying equipment and processes, redesigning products, substituting raw materials, and making improvements in management techniques, training, and inventory control. EO 12856, *Federal Compliance with Right-to Know Laws and Pollution Prevention Requirements* (August 3, 1993) requires Federal agencies to comply with the provisions of the PPA and requires Federal agencies to ensure all necessary actions are taken to prevent pollution. In addition, in *Federal Register* Volume 58 Number 18 (January 29, 1993), CEQ provides guidance to Federal agencies on how to “incorporate pollution prevention principles, techniques, and mechanisms into their planning and decision making processes and to evaluate and report those efforts, as appropriate, in documents pursuant to NEPA.”

The Resource Conservation and Recovery Act (RCRA) of 1976 is an amendment to the Solid Waste Disposal Act. RCRA authorizes USEPA to provide for “cradle-to-grave” management of hazardous waste and sets a framework for the management of nonhazardous municipal solid waste. Under RCRA, hazardous waste is controlled from generation to disposal through tracking and permitting systems, and restrictions and controls on the placement of waste on or into the land. Under RCRA, a waste is defined as hazardous if it is ignitable, corrosive, reactive, toxic, or listed by USEPA as being hazardous. With the Hazardous and Solid Waste Amendments (HSWA) of 1984, Congress targeted stricter standards for waste disposal and encouraged pollution prevention by prohibiting the land disposal of particular wastes. The HSWA amendments strengthen control of both hazardous and nonhazardous waste and emphasize the prevention of pollution of groundwater.

The Superfund Amendments and Reauthorization Act (SARA) of 1986 mandates strong clean-up standards and authorizes USEPA to use a variety of incentives to encourage settlements. Title III of SARA authorizes the Emergency Planning and Community Right to Know Act (EPCRA), which requires facility operators with “hazardous substances” or “extremely hazardous substances” to prepare comprehensive emergency plans and to report accidental releases. EO 12856 requires Federal agencies to comply with the provisions of EPCRA. If a Federal agency acquires a contaminated site, it can be held liable for clean-up as the property owner/operator. A

Federal agency can also incur liability if it leases a property, as the courts have found lessees liable as “owners.” However, if the agency exercises due diligence by conducting a Phase I Environmental Site Assessment, it can claim the “innocent purchaser” defense under CERCLA. According to Title 42 U.S. Code (U.S.C.) 9601(35), the current owner/operator must show it undertook “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” before buying the property to use this defense.

The Toxic Substance Control Act (TSCA) of 1976 consists of four titles. Title I established requirements and authorities to identify and control toxic chemical hazards to human health and the environment. TSCA authorized USEPA to gather information on chemical risks, require companies to test chemicals for toxic effects, and regulate chemicals with unreasonable risk. TSCA also singled out polychlorinated bi-phenyls (PCBs) for regulation, and, as a result, PCBs are being phased out. PCBs are persistent when released into the environment and accumulate in the tissues of living organisms. They have been shown to cause adverse health effects on laboratory animals and can cause adverse health effects in humans. TSCA and its regulations govern the manufacture, processing, distribution, use, marking, storage, disposal, clean-up, and release reporting requirements for numerous chemicals like PCBs. TSCA Title II provides statutory framework for “Asbestos Hazard Emergency Response,” which applies only to schools. TSCA Title III, “Indoor Radon Abatement,” states indoor air in buildings of the United States should be as free of radon as the outside ambient air. Federal agencies are required to conduct studies on the extent of radon contamination in buildings they own. TSCA Title IV, “Lead Exposure Reduction,” directs Federal agencies to “conduct a comprehensive program to promote safe, effective, and affordable monitoring, detection, and abatement of lead-based paint and other lead exposure hazards.” Further, any Federal agency having jurisdiction over a property or facility must comply with all Federal, state, interstate, and local requirements concerning lead-based paint.

***THIS PAGE INTENTIONALLY LEFT BLANK***

## **APPENDIX C**

**Interagency and Intergovernmental Coordination for Environmental Planning  
Correspondence and Distribution List for the DOPAA and Draft IDEA and  
NOA**

***THIS PAGE INTENTIONALLY LEFT BLANK***



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS AIR MOBILITY COMMAND

MEMORANDUM FOR: SEE DISTRIBUTION LIST

08 JUN 2006

FROM: HQ AMC/A7P  
507 Symington Drive  
Scott AFB IL 62225-5022

SUBJECT: Description of Proposed Action and Alternatives (DOPAA) for Installation Development (ID) at Scott Air Force Base (AFB), Illinois

1. The Air Mobility Command (AMC) is preparing an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for over the next five years. The DOPAA is included with this correspondence.
2. The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with the Executive Order 12372, *Intergovernmental Review of Federal Programs*, we request your participation by reviewing the attached DOPAA and solicit your comments concerning the proposal and any potential environmental consequences. Also enclosed is the distribution list of those federal, state, and local agencies that have been contacted. If there are any additional agencies that you feel should review and comment on the proposal, please include them in your distribution of this letter and attached materials.
3. Please provide any comments or information directly to HQ AMC/A7P, 507 Symington Dr., Scott AFB, IL 62225-5022 within 30 calendar days upon receipt of this notification.
4. If members of your staff have any questions, our point of contact is Mr. Doug Allbright, HQ AMC/A7PC, (618) 229-0846 or e-mail to [doug.allbright@scott.af.mil](mailto:doug.allbright@scott.af.mil).

A handwritten signature in black ink that reads "Michael W. Hutchison".

MICHAEL W. HUTCHISON, Colonel, USAF  
Chief, Plans and Programs Division  
Directorate of Installations & Mission Support

Attachment:  
DOPAA

DISTRIBUTION: (listed on next page)

**INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR  
ENVIRONMENTAL PLANNING CORRESPONDENCE AND DISTRIBUTION  
LIST FOR THE SCOTT AFB IDEA**

US EPA Region 5  
Mr. Ken Westlake  
77 W. Jackson Blvd., Mail Code B-19J  
Chicago, IL 60604

Illinois Department of Natural Resources  
Region IV  
4521 Alton Commerce Pkwy.  
Alton, IL 62002

Illinois Environmental Protection Agency  
2009 Mall St.  
Collinsville, IL 62234

US Army Corps of Engineers  
St. Louis District  
1222 Spruce St.  
St. Louis, MO 63103-2822

St. Clair County Clerk's Office  
#10 Public Square, 2nd Floor  
Belleville, IL 62220

U.S. Fish and Wildlife Service  
Mike Redmer, Biologist  
1250 South Grove Avenue, Suite 103  
Barrington, IL 60010

Illinois Historic Preservation Agency  
1 Old State Capitol Plaza  
Springfield, IL 62701-1512

Illinois Department of Agriculture  
801 E. Sangamon Ave.  
Springfield, IL 62702

Mr. Ted K. Shekell, AICP  
Planning Director  
255 South Lincoln  
O'Fallon, IL 62269

Terry Draper  
City of Mascoutah  
3 West Main Street  
Mascoutah, IL 62258

Lisa Reime  
City of Mascoutah  
3 West Main Street  
Mascoutah, IL 62258

St. Clair County Economic Development Department  
19 Public Square, Suite 200  
Belleville, Ill 62220

Mr. Norm Etling, P.E.  
Village Engineer  
1 Park Drive  
Shiloh, Illinois 62269

Mr. Mike Malloy, A.I.C.P.  
Director of Economic Development & Planning  
101 South Illinois Street  
Belleville, Illinois 62220



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Marion Illinois Suboffice (ES)  
8588 Route 148  
Marion, IL 62959  
(618) 997-3344

August 4, 2006

Colonel Michael W. Hutchison, USAF  
Chief, Plans and Programs Division  
Directorate of Installations and Mission Support  
HQ AMC/A7P  
507 Symington Drive  
Scott Air Force Base, Illinois 62225-5022

Dear Colonel Hutchison:

This letter is in reference to your request for review and comments on the Description of Proposed Action and Alternatives (DOPAA) for Installation Development at Scott Air Force Base, Illinois. The Fish and Wildlife Service supports the effort of Scott Air Force Base to streamline the National Environmental Policy Act (NEPA) review process by preparing a comprehensive Environmental Assessment (EA) for all foreseeable installation development projects. We look forward to reviewing the draft EA and will make formal comments at that time. These comments are provided under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.); and the Endangered Species Act of 1973, as amended.

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service (Service) information concerning any species, listed or proposed to be listed, which may be present in the area of a proposed action. Therefore, we are furnishing you the following list of species that have ranges that include the concerned area:

<u>Classification</u>	<u>Common Name (Scientific Name)</u>	<u>Habitat</u>
Endangered	Indiana bat ( <i>Myotis sodalis</i> )	Caves, mines; small stream corridors with well developed riparian woods; upland and bottomland forests
Endangered	Illinois cave amphipod ( <i>Gammarus acherondytes</i> )	Karst caves & streams

<u>Classification</u>	<u>Common Name (Scientific Name)</u>	<u>Habitat</u>
Threatened	Decurrent false aster ( <i>Boltonia decurrens</i> )	Disturbed alluvial soils
Threatened	Bald eagle ( <i>Haliaeetus leucocephalus</i> )	Breeds and winters along major rivers and large reservoirs
Endangered	Least tern ( <i>Sterna antillarum</i> )	Bare alluvial and dredge spoil islands
Endangered	Pallid sturgeon ( <i>Scaphirhynchus albus</i> )	Rivers

There is no designated critical habitat in the project area at this time. Suitable habitat for the Illinois cave amphipod, decurrent false aster, bald eagle, least tern, and pallid sturgeon is not known to be present in the project area.

The Indiana bat has been noted as occurring in several Illinois counties. Potential habitat for this species occurs statewide, therefore, Indiana bats are considered to potentially occur in any area with forested habitat. Indiana bats migrate seasonally between winter hibernacula and summer roosting habitats. Winter hibernacula include caves and abandoned mines. Females emerge from hibernation in late March or early April to migrate to summer roosts. Females form nursery colonies under the loose bark of trees (dead or alive) and/or in cavities, where each female gives birth to a single young in June or early July. A maternity colony may include from one to 100 individuals. A single colony may utilize a number of roost trees during the summer, typically a primary roost tree and several alternates. Some males remain in the area near the winter hibernacula during the summer months, but others disperse throughout the range of the species and roost individually or in small numbers in the same types of trees as females. The species or size of tree does not appear to influence whether Indiana bats utilize a tree for roosting provided the appropriate bark structure is present. However, the use of a particular tree does appear to be influenced by weather conditions, such as temperature and precipitation.

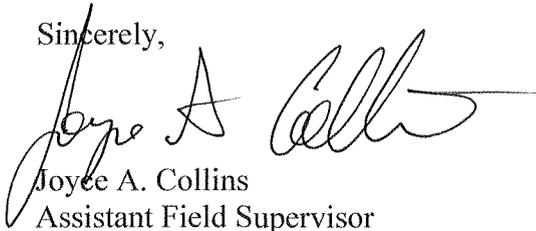
During the summer, Indiana bats frequent the corridors of small streams with well-developed riparian woods, as well as mature bottomland and upland forests. The species forages for insects along stream corridors, within the canopy of floodplain and upland forests, over clearings with early successional vegetation (old fields), along the borders of crop lands, along wooded fence rows, and over farm ponds and in pastures. Although Indiana bats will forage over small openings, they generally prefer forested areas. To avoid impacting this species, tree clearing should be avoided whenever possible. If tree clearing is unavoidable, mist net surveys may be necessary due to the fact that the Indiana bat has previously been documented on Scott Air Force Base.

A biological assessment or evaluation should be included in the draft EA in order to determine if the proposed activity is likely to adversely affect listed species. These comments provide technical assistance only and do not constitute the report of the Secretary of the Interior on the project pursuant to Section 2(b) of the Fish and Wildlife Coordination Act, do not fulfill the requirements under Section 7 of the Endangered Species Act, nor do they represent the review comments of the U.S. Department of the Interior on any forthcoming environmental statement. The Service will make final comments on the proposed project in regards to threatened and endangered species upon our review of the draft EA or any other environmental document that may be prepared.

According to the information provided, none of the proposed installation development activities will take place in streams, wetlands, or floodplain. However, the DOPAA states that there will be an estimated net increase of 1.1 million ft<sup>2</sup> of impervious surfaces within the developed area of the base. Construction and development activities that create impervious surfaces will increase the amount of runoff from developed areas and will likely result in increased sediment entering nearby tributary systems from erosion and increased local flooding. In addition, stormwater runoff from developed areas will likely introduce a variety of chemicals (i.e., petroleum products) to nearby tributary systems. As such, the proposed development is likely to degrade the water quality in the area and therefore, is likely to have significant long-term, adverse impacts on fish and wildlife resources in the area. We recommend the use of stormwater retention basins to retain all stormwater runoff from sites with new impervious surfaces.

Thank you for the opportunity to provide preliminary comments on this DOPAA. Please contact me at (618) 997-3344, ext. 340, should you have any questions.

Sincerely,



Joyce A. Collins  
Assistant Field Supervisor

cc: IDNR (Rettig)

## **DISTRIBUTION LIST FOR THE DRAFT SCOTT AFB IDEA**

Mr. Mike Malloy, A.I.C.P.  
Director of Economic Development & Planning  
101 South Illinois Street  
Belleville, Illinois 62220

US Army Corps of Engineers  
Attn: Ms. Susan.L.Horneman  
St. Louis District  
1222 Spruce St.  
St. Louis, MO 63103-2822

US EPA Region 5  
NEPA Implementation Section  
Mr. Ken Westlake  
77 W. Jackson Blvd. Mail Code B-19J  
Chicago, IL 60604

Illinois Department of Natural Resources  
Mr. Steve Hamer  
Division of Environment and Ecosystems  
1 Natural Resources Way  
Springfield, IL 62702-1271

Illinois Environmental Protection Agency  
Mr. Jerry Kuhn  
1021 North Grand Avenue East  
Springfield, IL 62794-9276

Illinois Historic Preservation Agency  
Attn: Review and Compliance  
1 Old State Capitol Plaza  
Springfield, IL 62701-1512

Mr. Terry Draper  
City of Mascoutah  
3 West Main Street  
Mascoutah, IL 62258

Mr. Ted K. Shekell, AICP  
Planning Director  
255 South Lincoln  
O'Fallon, IL 62229

Mr. Norm Etling, P.E.  
Village Engineer  
1 Park Drive  
Shiloh, Illinois 62269

St. Clair County  
Mr. Mike Mitchell  
Building and Zoning Dept.  
#10 Public Square, 5th Floor  
Belleville, IL 62220

St. Clair County Economic Development Department  
19 Public Square, Suite 200  
Belleville, Ill 62220

U.S. Fish and Wildlife Service  
Mike Redmer, Biologist  
1250 South Grove Avenue; Suite 103  
Barrington, IL 60010



1526.20070403.010

April 3, 2007

Mr. Norm Etling, P.E.  
Village Engineer  
1 Park Drive  
Shiloh, Illinois 62269

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for Construction and Demolition at Scott Air Force Base (AFB), Illinois**

Dear Mr. Etling,

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Maseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mr. Mostafa Maseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.maseoud@scott.af.mil](mailto:mostafa.maseoud@scott.af.mil).

Sincerely,

Tom V. Daues, CHMM  
Project Manager  
314-770-3024



1526-20070403.007

April 3, 2007

Illinois Historic Preservation Agency  
Attn: Review and Compliance  
1 Old State Capitol Plaza  
Springfield, IL 62701-1512

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for Construction and Demolition at Scott Air Force Base (AFB), Illinois**

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Maseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mr. Mostafa Maseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.maseoud@scott.af.mil](mailto:mostafa.maseoud@scott.af.mil).

Sincerely,

Tom V. Daues, CHMM  
Project Manager  
314-770-3024



1526 20070403 004

April 3, 2007

US EPA Region 5  
NEPA Implementation Section  
Mr. Ken Westlake  
77 W. Jackson Blvd. Mail Code B-19J  
Chicago, IL 60604

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for  
Construction and Demolition at Scott Air Force Base (AFB), Illinois**

Dear Mr. Westlake,

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Maseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mr. Mostafa Maseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.maseoud@scott.af.mil](mailto:mostafa.maseoud@scott.af.mil).

Sincerely,

Tom V. Daues, CHMM  
Project Manager  
314-770-3024



April 3, 2007

St. Clair County Economic Development Department  
19 Public Square, Suite 200  
Belleville, Ill 62220

1526 20070403 012

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for Construction and Demolition at Scott Air Force Base (AFB), Illinois**

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Maseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mr. Mostafa Maseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.maseoud@scott.af.mil](mailto:mostafa.maseoud@scott.af.mil).

Sincerely,

Tom V. Daues, CHMM  
Project Manager  
314-770-3024



April 3, 2007

1526.20070403.009

Mr. Ted K. Shekell, AICP  
Planning Director  
255 South Lincoln  
O'Fallon, IL 62229

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for Construction and Demolition at Scott Air Force Base (AFB), Illinois**

Dear Mr. Shekell,

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Masseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mostafa Masseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.masseoud@scott.af.mil](mailto:mostafa.masseoud@scott.af.mil).

Sincerely,

Tom V. Daues, CHMM  
Project Manager  
314-770-3024



1526 20070403 006

April 3, 2007

Illinois Environmental Protection Agency  
Mr. Jerry Kuhn  
1021 North Grand Avenue East  
Springfield, IL 62794-9276

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for Construction and Demolition at Scott Air Force Base (AFB), Illinois**

Dear Mr. Kuhn,

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Maseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mr. Mostafa Maseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.maseoud@scott.af.mil](mailto:mostafa.maseoud@scott.af.mil).

Sincerely,

Tom V. Daues, CHMM  
Project Manager  
314-770-3024



1536 20070403 003

April 3, 2007

US Army Corps of Engineers  
Attn: Ms. Susan L. Horneman  
St. Louis District  
1222 Spruce St.  
St. Louis, MO 63103-2822

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for Construction and Demolition at Scott Air Force Base (AFB), Illinois**

Dear Ms. Horneman,

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Maseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mr. Mostafa Maseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to mostafa.maseoud@scott.af.mil.

Sincerely,

Tom V. Daues, CHMM  
Project Manager  
314-770-3024



1526.20070403.011

April 3, 2007

St. Clair County  
Mr. Mike Mitchell  
Building and Zoning Dept.  
#10 Public Square, 5th Floor  
Belleville, IL 62220

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for  
Construction and Demolition at Scott Air Force Base (AFB), Illinois**

Dear Mr. Mitchell,

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Maseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mr. Mostafa Maseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.maseoud@scott.af.mil](mailto:mostafa.maseoud@scott.af.mil).

Sincerely,

Tom V. Daus, CHMM  
Project Manager  
314-770-3024



1536 20070403 008

April 3, 2007

Mr. Terry Draper  
City of Mascoutah  
3 West Main Street  
Mascoutah, IL 62258

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for  
Construction and Demolition at Scott Air Force Base (AFB), Illinois**

Dear Mr. Draper,

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Maseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mostafa Maseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.maseoud@scott.af.mil](mailto:mostafa.maseoud@scott.af.mil).

Sincerely,

Tom V. Daues, CHMM  
Project Manager  
314-770-3024



1526.20070403.005

April 3, 2007

Illinois Department of Natural Resources  
Mr. Steve Hamer  
Division of Environment and Ecosystems  
1 Natural Resources Way  
Springfield, IL 62702-1271

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for  
Construction and Demolition at Scott Air Force Base (AFB), Illinois**

Dear Mr. Hamer,

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Maseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mr. Mostafa Maseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.maseoud@scott.af.mil](mailto:mostafa.maseoud@scott.af.mil).

Sincerely,

Tom V. Daues, CHMM  
Project Manager  
314-770-3024



April 3, 2007

1526.2007(14)3.002

Mr. Mike Malloy, A.I.C.P.  
Director of Economic Development & Planning  
101 South Illinois Street  
Belleville, Illinois 62220

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for Construction and Demolition at Scott Air Force Base (AFB), Illinois**

Dear Mr. Malloy,

On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Masseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mr. Mostafa Masseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.masseoud@scott.af.mil](mailto:mostafa.masseoud@scott.af.mil).

Sincerely,

Tom V. Daus, CHMM  
Project Manager  
314-770-3024



1526 20070403.013

April 3, 2007

U.S. Fish and Wildlife Service  
Mike Redmer, Biologist  
1250 South Grove Avenue; Suite 103  
Barrington, IL 60010

**SUBJECT: Draft Installation Development Environmental Assessment (IDEA) for  
Construction and Demolition at Scott Air Force Base (AFB), Illinois**

Dear Mr. Redmer,

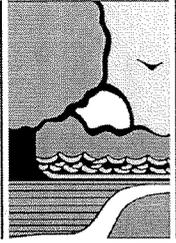
On behalf of the Air Mobility Command (AMC), we are providing you with an Environmental Assessment (EA) of Installation Development (ID) at Scott AFB. Consistent with the Scott AFB Commander's Vision, Scott AFB proposes numerous future installation projects to ensure Scott AFB can meet its required operations for the future national security of the United States. Under the Proposed Action, numerous projects such as construction of new buildings, enhancements to existing structures, infrastructure improvements, transportation upgrades, and demolition of existing aging facilities would be planned for the next five years. The Draft EA is included with this correspondence for your review and comment.

The environmental impact analysis process for the Proposed Action and the No Action Alternative is being conducted by AMC in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Air Force Instruction 32-7060, "Interagency and Intergovernmental Coordination for Environmental Planning" and the Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Draft EA and solicit your comments concerning the proposal and any potential environmental consequences.

Please provide any comments or information directly to Mr. Mostafa Maseoud of HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022 by 30 April 2007. If members of your staff have any questions, our point of contact is Mr. Mostafa Maseoud, HQ AMC/A7PC, (618) 229-0911 or e-mail to [mostafa.maseoud@scott.af.mil](mailto:mostafa.maseoud@scott.af.mil).

Sincerely,

Tom V. Daues, CHMM  
Project Manager  
314-770-3024



# Illinois Department of Natural Resources

One Natural Resources Way • Springfield, Illinois 62702-1271  
<http://dnr.state.il.us>

Rod R. Blagojevich, Governor

Joel Brunsvold, Director

April 5, 2007

Mr. Mostafa Maseoud  
HQ AMC/A7PC  
507 Symington Drive  
Scott AFB, IL. 62225-5022

RE: Draft Installation  
Development Environmental  
Assesment (IDEA) for  
Construction/Demolition at  
Scott Air Force Base, Illinois

Dear Mr. Maseoud:

This letter is in response to the above referenced project that was reviewed by the Illinois Department of Natural Resources. Based on the project as presented the Department of Natural Resources has no further comment and considers consultation closed on this project.

If you have any questions on the above, please contact me at 217-785-5500.

Sincerely,

Steve Hamer  
Transportation Review Program  
Division of Environment and Ecosystems



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 - (217) 782-3397  
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 - (312) 814-6026

ROD R. BLAGOJEVICH, GOVERNOR

DOUGLAS P. SCOTT, DIRECTOR

217-782-0547

April 24, 2007

Mr. Tom V. Daues, CHMM  
Project Manager  
Science Applications International Corporation  
8421 St. John Industrial Dr., Ste 200  
St. Louis, MO 63114

Dear Mr. Daues:

Thank you for the opportunity to review the proposed demolition and construction at Scott Air Force Base.

The Agency has no objections to the project; however permits may be required from the Division of Water Pollution Control for any new sanitary sewers that will serve new buildings of this project. A construction site activity stormwater NPDES permit will be required from the division of Water Pollution Control for the demolition and construction activities of this project. If you have concerns regarding the Division of Water Pollution Control permits, please contact Al Keller, 217- 782-0610.

Asbestos notification may be required to the Bureau of Air, Division of Air Pollution Control at least ten (10) days prior to any demolition project initiation. Please contact Bob Bernoteit, 217-524-0865, if you have questions concerning notification requirements.

Solid and hazardous waste must be properly disposed of or recycled.

If you have need for an Environmental Review in the future, please submit your information to:  
**Illinois Environmental Protection Agency, Deputy Director's Office/MC #1,  
PO Box 19276, Springfield, Illinois 62794-9276, ATTN: DiAnne Schuerman**

Sincerely,

Bernard P. Killian  
Deputy Director



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
OFFICE OF SCIENCE, ECOSYSTEMS, AND COMMUNITIES  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

MAY 02 2007

B-19J

Mostafa Masseoud  
HQ AMC/A7PC  
507 Symington Drive  
Scott AFB, IL 62225-5022

Re: Comments on Draft Installation Development Environmental Assessment for Construction and Demolition Activities at Scott Air Force Base, St. Clair County, Illinois

Dear Mr. Masseoud:

In accordance with Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (U.S. EPA) has reviewed the draft Installation Development Environmental Assessment (IDEA) for proposed construction and demolition activities at Scott Air Force Base (Scott AFB), in St. Clair County, Illinois. According to the IDEA, the project proponents propose to implement the following projects at Scott AFB over the next five years:

1. 25 demolition projects,
2. 17 facility construction, renovation, and alteration projects, and
3. seven facility infrastructure projects.

The IDEA states that the proposed project is needed to meet current and future mission requirements and national security objectives associated with Scott AFB. Based on our review of the IDEA, we submit the following comments:

The IDEA should have provided more information regarding the amount of hazardous substances (such as asbestos and lead-based paint) affected under the proposed project. The IDEA states that the amounts of hazardous materials at Scott AFB are tracked under various management plans. Using these plans, the project proponents should have estimated the amounts of hazardous materials affected by the proposed project, and documented those amounts within the IDEA. Such data in the IDEA would provide comprehensive information about the scope of each hazardous material abatement project needed. Therefore, future environmental documentation should provide the values of amounts of hazardous substances affected by the proposed project.

The IDEA should have more information about plans to mitigate increased storm water flow rates caused by the additional 2.2 acres of impervious surfaces resulting from the proposed project. In an August 4, 2006 letter, the U.S. Fish and Wildlife Service (U.S. FWS) cited adverse effects to water quality and fish and wildlife resources from an increase in storm water runoff. Such

effects would be caused by an increase in sediment and chemicals entering nearby tributary systems. Local flooding would also increase. U.S. FWS recommended the use of retention basins to mitigate storm water flows from sites with new impervious surfaces. In response, the IDEA states, "The proposed construction activities may require modifications to the installation storm drainage system (e.g. drainage ditches and basins) and an update to the SWPPP [Storm Water Pollution Prevention Plan] in order to properly manage storm water. Site drainage would be addressed within the updated SWPPP such that there would be no deleterious impacts to receiving waters as a result of the Proposed Action." The IDEA provides little information about what modifications would be necessary to mitigate storm water impacts from the proposed project; instead it defers a mitigation evaluation beyond the environmental review process. In order to address U.S. FWS comments, future environmental documentation should estimate the additional mitigation needed to treat storm water flows from the proposed project's net addition of 2.2 acres of impervious surfaces on the base.

Finally, we encourage the project proponents to incorporate sustainable building concepts into its construction and renovation plans. These concepts may include the use of green roofs, solar panels, vegetated swales, native plant landscapes, rain barrels, and energy efficient lighting. The implementation of such concepts may reduce Scott AFB's energy consumption, greenhouse gas emissions, and storm water flow rates.

If you have any questions or wish to discuss any aspect of these comments, please contact Newton Ellens of my staff at (312) 353-5562.

Sincerely,



Kenneth A. Westlake, Chief  
NEPA Implementation Section  
Office of Science, Ecosystems, and Communities

cc: Joyce Collins, Assistant Field Supervisor  
U.S. Fish and Wildlife Service  
Marion Illinois Suboffice

**Notice of Availability**  
**Finding of No Significant Impact for the**  
**Environmental Assessment of Installation Development at Scott AFB, Illinois**

The United States Air Force Air Mobility Command (AMC) and Scott Air Force Base, Illinois are proposing to issue a Finding of No Significant Impact (FONSI) based on an Environmental Assessment (EA) of Installation Development on Scott AFB. The analysis considered potential effects of the Proposed Action on eleven resource areas: airspace management, air quality, noise, safety, hazardous materials and waste management, geological resources, water resources, biological resources, land use, cultural resources and socioeconomics and environmental justice. The results, as found in the EA, show that the future proposed installation development projects would not have a significant impact on the environment – indicating that a FONSI would be appropriate. An Environmental Impact Statement should not be necessary to implement the Proposed Action.

Copies of the FONSI and the EA showing the analysis are available for review until April 16, 2007 at the Belleville Public Library located at 121 East Washington St. Belleville, IL 62220 and the Scott Air Force Base Library located at 510 Ward Drive, Building 1940 on Scott Air Force Base, Illinois. Address written comments to Mr. Mostafa Masseoud, HQ AMC/A7PC, 507 Symington Drive, Scott AFB, IL 62225-5022, or email at [mostafa.masseoud@scott.af.mil](mailto:mostafa.masseoud@scott.af.mil).

**THIS PAGE INTENTIONALLY LEFT BLANK**

**APPENDIX D**  
**AIR EMISSION CALCULATIONS**

***THIS PAGE INTENTIONALLY LEFT BLANK***

Scott Inst Dev EA - Air Emission Calculations (Sept 2006)

Scott Inst Dev EA			New Construction				Pavement			Total	
			Building Area SF	Building Footprint SF	Building Stories (10 ft/st)	Building Volume CF	Area SF	Depth Feet	Volume CF	Trenching SF	Surface Area SF
<b>Construction Project</b>											
Construct Intel Facility	C1	VDYD052055	15,000	15,000	1	15000		0			15,000 0.34
Construct Squad. Ops Facility	C2	VDYD943015	57,953	28,977	2	57954		0			57,953 1.33
Construct Child Development Center	C3	VDYD953021	24,219	24,219	1	24219		0			24,219 0.56
Doom Bay Addition and Brick Installation	C4	VDYD030284	5,400	5,400	1	5400		0			5,400 0.12
5YP Construct Parking Lot Building 57	C6	VDYD020216				0	22,500	0.50	11,250		22,500 0.52
Construct Steel Pole Barn	C7	VDYD052050	3,000	3,000	1	3000		0			3,000 0.07
Construct Addition at POL	C9	VDYD052042	320	320	1	320		0			320 0.01
Addition to Communication Facility	C11	VDYD039182	3,200	3,200	1	3200		0			3,200 0.07
Construct Aeromedical Evacuation Facility	C12	VDYD040181	21,635	10,818	2	21636		0			21,635 0.50
AT/FP for Dorms 1810, 1820, 1830	C13	VDYD040289	0	0	0	0		0			0 0.00
Construct Distribution and Deployment Processing Center	C17	VDYD050109	27,437	27,437	1	27437		0			27,437 0.63
Construct New Fitness Center	C19	VDYD030156	130,243	65,122	2	130243		0			130,243 2.99
Construct New VOQ/VAQ	C20	VDYD040123	207,500	51,875	4	207500	25,312	0.50	12,656		232,812 5.34
Construct New DISA Facility	C21	VDYD040216	265,000	265,000	1	265000	113,906	0.50	56,953		378,906 8.70
Construct Customer Service Center	C22	VDYD050112	69,965	69,965	1	69965	67,500	0.50	33,750		137,465 3.16
Const B-3175 to new location	C23	VDYD040176	120	120	1	120		0			120 0.00
Construct New base civil engineering (BCE) Complex	C24	VDYD030153	84,368	84,368	1	84368	5,696	0.50	2,848		90,064 2.07
Construct Golf Clubhouse/Realign Course (6 holes)	C26	VDYD020183	20,000	20,000	1	20000		0			20,000 0.46
Construct OG HQ (375th) Facility	C27	No project #	51,215	51,215	1	51215		0			51,215 1.18
Construct Temporary Lodging Facility	C28	No project #	82,000	82,000	1	82000		0			82,000 1.88
Construct Joint Logistics Center	C30	No project #	300,000	100,000	3	300000	182,464	0.50	91,232		482,464 11.08
Construct Permanent Facility for 500 SDDC personnel.	C31	No project #	215,000	215,000	1	215000		0			215,000 4.94
								0			0 0.00
								0			0 0.00
<b>Infrastructure Project Details</b>											
Install Hydrant And Distribution Water Lines Near Bldg 1192 1100'x 20'	I-3	VDYD720489						0	22,000		22,000 0.51
Move Existing Jogging Path Outside CZ. NET 0 IMPERVIOUS AREA	I-4	VDYD030467						0	7,185		7,185 0.16
SBR Install Catch Basin Behind Pavilion Near Bldg 382 25'x20	I-8	VDYD040255						0	500		500 0.01
Storage And Drainage For Dried Caked Sludge, Bldg 3304	I-9	VDYD040276						0	2,500		2,500 0.06
Expand Parking Lots (Across From Bldgs 460/450)	I-13	VDYD050227					29,997	0.50	14,999		29,997 0.69
Add And Renovate Family Camp, 6400	I-14	VDYD006400						0	9,000		9,000 0.21
Repair Eastside Drainage	I-20	VDYD050111						0	70,000		70,000 1.61
<b>Proposed Action TOTAL</b>			<b>1,583,575</b>	<b>1,123,036</b>		<b>1,583,577</b>	<b>447,375</b>		<b>223,688</b>	<b>111,185</b>	<b>2,142,135 49</b>

Scott Inst Dev EA - Air Emission Calculations (Sept 2006)

		Demolition				Pavement			Grading	Total	Surface
Project Details		Building Area	Building Footprint	Building Stories	Building Volume	Area	Depth	Volume	only	Dist (SF)	Area
		SF	SF	(10 ft/st)	CF	SF	Feet	CF			acres
Demo. HQ AMC/Admin Bldg. 1605 (R/M)	D3	VDYD000054	4,704	4,704	1	47040				4,704	0.11
Demo Admin Facility Bldg. 3190 (R/M)	D4	VDYD000055	46,540	46,540	1	465400				46,540	1.07
Demo Concrete pads in Clear Zone /RM	D5	VDYD000056			NA		6,400	0.5	3200	6,400	0.15
Demo. RG SM Arms System Range (R/M) 8FP	D6	VDYD010025			No building. Moving dirt and removing berm.					113,656	2.61
Demo Shredder Building 3283	D7	VDYD020241	250	250	1	2500				250	0.01
Demo. Facility 741	D8	VDYD021015D4	3,800	3,800	1	38000				3,800	0.09
Demolish Taxiway J	D9	VDYD040163			NA	218,570	1	218570		218,570	5.02
Demolish Buildings 3207 and 3210	D11	VDYD040301	578	578	1	5780				578	0.01
Demolish Building 799	D12	VDYD040304	2,688	2,688	1	26880				2,688	0.06
Demolish Building 3273	D13	VDYD040306	9,000	9,000	1	90000				9,000	0.21
Demolish Building 3277	D14	VDYD040307	9,267	9,267	1	92670				9,267	0.21
Demolish Asphalt Pavement Old South Drive	D15	VDYD040316			NA	64,000	0.5	32000		64,000	1.47
Demolish Aero Club Bldg. 3183	D16	VDYD991017	2,304	1,152	2	23040				1,152	0.03
Demo US TRANSCOM, Bldg 1961	D17	No project #	246,234	82,078	3	2462340				82,078	1.88
Demo Chapel 2, Bldg 5713	D18	No project #	12,904	12,904	1	129040				12,904	0.30
Demo Medical Warehouse 3270	D18	No project #	9,150	9,150	1	91500				9,150	0.21
Demo Medical Warehouse 3272	D20	No project #	9,150	9,150	1	91500				9,150	0.21
Demo Medical Warehouse 3275	D21	No project #	9,150	9,150	1	91500				9,150	0.21
Demo Medical Warehouse 3279	D22	No project #	9,150	9,150	1	91500				9,150	0.21
											0.00



Scott Inst Dev EA - Air Emission Calculations (Sept 2006)  
Emissions Summary-PropAction

Scott AFB Installation Development EA

	Emissions (tons/construction period)				
	CO	VOC	NOx	SOx	PM
Construction	83.0	26.0	381.5	0.0	27.1
Demolition	4.1	0.8	4.0	0.0	1.5
Grading	2.6	0.5	4.2	0.4	1.6
Pavement	6.1	1.2	10.6	0.7	0.9
Commuting	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>95.8</b>	<b>28.5</b>	<b>400.3</b>	<b>1.1</b>	<b>31.1</b>

# of Years	5
------------	---

<b>Annual Total</b>	<b>19.2</b>	<b>5.7</b>	<b>80.1</b>	<b>0.2</b>	<b>6.2</b>
---------------------	-------------	------------	-------------	------------	------------

Scott Inst Dev EA - Air Emission Calculations (Sept 2006)  
Grading-PropAction

**Surface disturbance (Grading)**

Total area disturbed (sq ft)	
Days	
Acres	

Scott Inst Dev EA

Operational schedule (ground disturbance days) = 100 (guesstimate)

**Summary**

	Emissions (tons)				
	CO	HC	NOx	SOx	PM10
Ground disturbing	2.0	0.4	4.1	0.4	1.4
Fuel Combustion	0.6	0.1	0.1		0.0
Worker Travel					
<b>TOTAL</b>	<b>2.6</b>	<b>0.5</b>	<b>4.2</b>	<b>0.4</b>	<b>1.6</b>

Fugitive Dust Sources

Project Duration (working days)	Graded Area (acres)	PM10 Emission Factor* (lb/acre)	Emissions (lbs)	Emissions (tons)
(grading) 100	49.2	55.0	2704.7	1.35

\* (SCAQMD Table 9-2)

Ground disturbing  
Fuel Combustion  
Worker Travel  
**TOTAL**

Combustion (Off-road construction equipment)

Emissions (tons/year)				
VOC	CO	NOx	SO2	PM10
0.5	2.6	4.2	0.4	1.6

Duration (days)	Operation		
	Trench Excavation	Site Grading	Paving
		100	

Emissions (tons/year)				
CO	VOC	NOx	SOx	PM
2.6	0.5	4.2	0.4	1.6

# of Equip	Schedule** (hours/day)	Total hours	Emissions (lbs)				
			CO	HC	NOx	SOx	PM10
Backhoe	0	0	0	0	0	0	0
Trencher	0	0	0	0	0	0	0
Grader	8	800	1002	376	2631	251	125
Asphalt Paver	0	0	0	0	0	0	0
Scraper	1	800	2347	213	4055	427	320
Rollers	1	800	554	158	1584	158	79
			<b>3904</b>	<b>748</b>	<b>8270</b>	<b>836</b>	<b>525</b>
			<b>1.95</b>	<b>0.37</b>	<b>4.13</b>	<b>0.42</b>	<b>0.26</b>

(lbs)  
(tons)

Equipment List	EF (lbs/Bhp-hr) *					Bhp**	EF (lbs/hr) *				
	CO	HC	NOx	SOx	PM10		CO	HC	NOx	SOx	PM10
Backhoe	0.0150	0.0030	0.0220	0.0020	0.0010	79	1.19	0.24	1.74	0.16	0.08
Trencher	0.0200	0.0030	0.0220	0.0020	0.0015	60	1.20	0.18	1.32	0.12	0.09
Grader	0.0080	0.0030	0.0210	0.0020	0.0010	157	1.25	0.47	3.29	0.31	0.16
Asphalt Paver	0.007	0.001	0.023	0.002	0.001	91	0.64	0.09	2.09	0.18	0.09
Scraper	0.011	0.001	0.019	0.002	0.0015	266.76	2.93	0.27	5.07	0.53	0.40
Rollers	0.0070	0.0020	0.0200	0.0020	0.0010	99	0.69	0.20	1.98	0.20	0.10

\* SCAQMD Table A9-8-B, Diesel-fired

\*\* SCAQMD Table 9-8-C

Construction Worker Travel

For Each Worker:

Miles per day = 20 (estimated round trip)  
 Number of workers = 10  
 Duration of Project (working days) = 100

Emission Factors

	CO	VOC	NOx	PM10
grams/mi	29.09	4	2.59	0.085

VMT = 20000 VMT= (mi/d-w) x (days) x (workers)

Emissions = (EF) x (VMT) x conversion

	CO	VOC	NOx	PM10
pounds	1283	176	114	4
<b>tons</b>	<b>0.64</b>	<b>0.09</b>	<b>0.06</b>	<b>0.00</b>



Scott Inst Dev EA - Air Emission Calculations (Sept 2006)  
Construction-PropAction

Building Construction	
Bldg #	sq ft
<b>Total</b>	<b>#####</b> (from DOPAA sheet)

Emission Factors (lbs/const period/1000 sq ft GFA)

Land Use	ROC	CO	NOx	SO2	PM10	Reference
General Industrial	32.8	104.8	481.9	0.0	34.2	CEQA 1993, Table 9-1

Emissions (tons/year)				
CO	VOC	NOx	SOx	PM
83.0	26.0	381.5	-	27.1

Scott Inst Dev EA - Air Emission Calculations (Sept 2006)  
New Pavement-PropAction

New Pavement		sq ft
TOTAL PAVEMENT ADDED	Square Feet	1,123,036
TOTAL PAVEMENT ADDED	Acres	
Paving Rate	sqft/day	4,000
Duration of paving activity	days	280.76

**Dump Truck to Import Paving Materials**

Pavement depth (ft)		
Pavement volume (cu ft)	1,583,577	
Pavement volume (cu yd)	175953	
Miles per round trip	20	Guesstimate
Size of truckload (cu yd)	15	Typical size of dump truck
Total trips	11730	(concrete volume) / (volume/truck)
Total miles	234604	(trips) x (miles/trip)

Vehicle Type	Emission Factor (g/mi)				
	VOC	CO	NOx	SOx	PM
HDDV	2.16	11.22	10.81	0.09	1.65

Emissions (tons/year)				
CO	VOC	NOx	SOx	PM
2.9	0.6	2.8	0.0	0.4

**Paving Equipment Emissions**

Emission Factor Ref.	Emission Factor (lb/hour)				
	CO	ROC	NOx	SOx	PM10
SCAQMD-Misc Diesel	0.675	0.15	1.7	0.143	0.14
Roller	0.300	0.065	0.870	0.067	0.050
Concrete Paver -Diesel	0.806	0.161	1.773	0.161	0.081
Asphalt Paver - Diesel	0.376	0.054	1.235	0.107	0.054

Equipment	Equipmen t	hr/day	Hrs/constr period	Emission Factor Ref.	Emissions (lb/const period)				
					CO	ROC	NOx	SOx	PM10
Bulldozers	1	8	2246.1	SCAQMD-Misc Diesel	1516.1	336.9	3818.3	321.2	314.4
Roller	2	8	4492.1	Roller	1347.6	292.0	3908.2	301.0	224.6
Concrete Paver -Diesel	2	8	4492.1	Concrete Paver -Diesel	3620.7	724.1	7965.5	724.1	362.1
<b>TOTAL</b>					<b>6484</b>	<b>1353</b>	<b>15692</b>	<b>1346</b>	<b>901</b>
<b>Total (tons)</b>					<b>3.2</b>	<b>0.7</b>	<b>7.8</b>	<b>0.7</b>	<b>0.5</b>

Total Emissions	Emissions (tons/year)				
	CO	VOC	NOx	SOx	PM
	6.1	1.2	10.6	0.7	0.9

Scott Inst Dev EA - Air Emission Calculations (Sept 2006)  
Commuting-PropAction

POV Emission Factors  
(from AFIERA, 2002)

(Low Altitude <= 4,000 feet)

	Calendar	CO	VOC	NOx	SOx	PM10	PM2.5	Pb	Carbon	
on-road pct	Year	(g/mi)	(g/mi)	(g/mi)	(g/mi)	(g/mi)	(g/mi)	(g/mi)	(g/mi)	
LDGV	68.9%	1998	22.6	1.8	1.4	0.072	0.71	0.20	0.0015	0.0043
LDGT-1	11.4%	1998	24.6	2.0	1.6	0.096	1.08	0.29	0.0020	0.0043
LDGT-2	8.5%	1998	26.4	2.2	1.8	0.098	2.58	0.66	0.0021	0.0043
HDGV	1.5%	1998	18.3	2.3	3.3	0.154	5.51	1.42	0.0033	0.054
LDDV	3.9%	1998	1.5	0.6	1.2	0.116	0.80	0.28	0.0000	0.100
LDDT	1.9%	1998	1.8	0.9	1.4	0.157	1.59	0.48	0.0000	0.109
HDDV	2.9%	1998	11.3	2.0	6.5	0.512	7.73	2.01	0.0000	0.213
MC	1.0%	1998	23.7	5.2	0.9	0.032	0.08	0.03	0.0012	0.0000
	<b>Weighted Avg</b>		<b>21.6</b>	<b>1.8</b>	<b>1.6</b>	<b>0.1</b>	<b>1.2</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>

(Low Altitude <= 4,000 feet)

	Calendar	CO	VOC	NOx	SOx	PM10	PM2.5	Pb	Carbon	
on-road pct	Year	(g/mi)	(g/mi)	(g/mi)	(g/mi)	(g/mi)	(g/mi)	(g/mi)	(g/mi)	
LDGV	68.9%	2000	14.6	1.0	1.0	0.072	0.71	0.20	0.0015	0.0043
LDGT-1	11.4%	2000	16.2	1.2	1.1	0.096	1.08	0.29	0.0020	0.0043
LDGT-2	8.5%	2000	16.9	1.2	1.2	0.098	2.58	0.66	0.0021	0.0043
HDGV	1.5%	2000	16.6	1.7	3.2	0.154	5.51	1.42	0.0033	0.054
LDDV	3.9%	2000	1.4	0.5	1.1	0.116	0.80	0.28	0.0000	0.100
LDDT	1.9%	2000	1.7	0.7	1.3	0.157	1.59	0.48	0.0000	0.109
HDDV	2.9%	2000	10.9	2.0	6.5	0.512	7.73	2.01	0.0000	0.213
MC	1.0%	2000	22.1	4.7	0.9	0.032	0.08	0.03	0.0012	0.0000
	<b>Weighted Avg</b>		<b>14.2</b>	<b>1.1</b>	<b>1.2</b>	<b>0.1</b>	<b>1.2</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>

POV Commuting Data

Commuting Distance =

20 miles/RT

Weekly schedule =

5 days/week

Annual schedule =

50 weeks

AVR =

1.1 commuters/RT

% of Employees Living On-Base

- %

AVR=Average vehicle ridership

Average model year (baseline) =

n/a

Average model year (proposed) =

1998

#RT/day = #empl/day\*(%commuters/100)/AVR

#miles/yr = #miles/RT \* RT/wk \* wk/yr

Emission Calculation

	Daily	Annual	CO	VOC	NOx	SOx	PM	PM2.5	Pb	Carbon
Manpower	Trips (RT/day)	Miles (miles)	(tons)							
Baseline	-	-	-	0.0	0.0	0.0	0.0	0.0	0.000	0.00
Proposed Action	-	-	-	0.0	0.0	0.0	0.0	0.0	0.000	0.00

***THIS PAGE INTENTIONALLY LEFT BLANK***