
ENVIRONMENTAL ASSESSMENT

CONSTRUCTION OF A UNITED STATES ARMY RESERVE CENTER AND IMPLEMENTATION OF BRAC 05 REALIGNMENT ACTIONS IN ALLENTOWN-BETHLEHEM, PENNSYLVANIA



February 2009

prepared for

99th Regional Support Command

prepared by

U.S. Army Corps of Engineers

Mobile District

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**CONSTRUCTION OF A UNITED STATES ARMY RESERVE CENTER
AND IMPLEMENTATION OF BRAC 05 REALIGNMENT ACTIONS AT
ALLENTOWN-BETHLEHEM, PA**

Prepared by:

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT



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ENVIRONMENTAL ASSESSMENT

LEAD AGENCY: Mobile District, U.S. Army Corps of Engineers

TITLE OF PROPOSED ACTION: Environmental Assessment for Construction of a United States Army Reserve Center and Implementation of BRAC 05 Realignment Actions at Allentown-Bethlehem, Pennsylvania

AFFECTED JURISDICTIONS: Northampton County, Pennsylvania

PREPARED BY: Byron G. Jorns, Colonel, U.S. Army Corps of Engineers, Mobile District, District Commander

APPROVED BY: Joseph H. Ledlow, Colonel, U.S. Army, 99th Regional Support Command, Regional Engineer.

ABSTRACT: On September 8, 2005, the Defense Base Closure and Realignment Commission (“BRAC Commission”) recommended that certain realignment actions occur in the Allentown-Bethlehem, Pennsylvania area. These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission’s recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission’s recommendations must now be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

To implement the BRAC Commission’s recommendations, the U.S. Army proposes to acquire sufficient and suitable land and construct the necessary facilities to support the changes in force structure and the consolidation of reserve units. This Environmental Assessment (EA) analyzes and documents environmental effects associated with the U.S. Army’s proposed actions in the Allentown-Bethlehem, PA area.

None of the predicted effects of the Proposed Action would result in significant impacts to the quality of the human or biological environment in the Allentown-Bethlehem, PA area. Moreover, mitigation would not be necessary to offset impacts. Therefore, preparation of an Environmental Impact Statement is not required and a Finding of No Significant Impact (FNSI) will be published in accordance with the National Environmental Policy Act (NEPA).

REVIEW PERIOD: Interested parties are invited to review and comment on the EA and Draft FNSI during the 30-day comment period March 6, 2009 through April 4, 2009. The EA and Draft FNSI can be accessed on the World Wide Web at:

http://www.hqda.army.mil/acsim/brac/env_ea_review.htm

Copies of the EA can also be viewed at the following libraries:

Allentown Public Library – Main Branch
1210 Hamilton St.
Allentown, PA 18102

Bethlehem Area Public Library – Main Library
11 West Church St
Bethlehem, PA 18018

Comments on the EA and Draft FNSI should be submitted during the 30-day public comment period via mail, fax, or electronic mail to:

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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

On September 8, 2005, the Base Closure and Realignment (BRAC) Commission recommended that certain realignment actions occur within the Allentown-Bethlehem, Pennsylvania area. These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission's recommendations must now be implemented as provided for in the Defense Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

The following provides the BRAC Commission's recommendations for the Allentown-Bethlehem, PA area (BRAC Commission, 2005):

“Close the Wilson Kramer United States Army Reserve Center in Bethlehem, PA, and the United States Army Reserve Organizational Maintenance Shop in Bethlehem, PA, and relocate units to a new United States Army Reserve Center with an organizational maintenance facility in the Allentown/Bethlehem, PA, area if the Army is able to acquire suitable land for the construction of the facilities.”¹

To implement this recommendation, the U.S. Army (Army) proposes to acquire sufficient and suitable land and construct a new U.S. Army Reserve Center (USARC) and related facilities within the Fort James III Subdivision in Forks Township within the Allentown-Bethlehem, PA area to support the changes in force structure. This EA analyzes the potential environmental impacts associated with the land acquisition and the construction and operation of the proposed USARC.

The BRAC law exempts consideration of the need for the action or alternative installations in preparing environmental documentation pursuant to the National Environmental Policy Act (NEPA). However, an appropriate level of NEPA analysis and documentation is required to analyze how the BRAC actions will be implemented. Table ES-1 lists major environmental statutes, regulations, and Executive Orders (EO) applicable to federal projects.

¹ The BRAC recommendation does not indicate a geographic limit to the Allentown/Bethlehem area. During the site selection process, the Army limited the scope of potential sites to within a 15 mile radius of both Allentown and Bethlehem, PA.

Table ES-1. Major Environmental Statutes, Regulations, and Executive Orders Applicable to Federal Projects

Environmental Resources	Statute, Regulation, or Executive Order
Air	Clean Air Act (CAA) of 1970 (PL 95-95), as amended in 1977 and 1990 (PL 91-604); U.S. Environmental Protection Agency (U.S. EPA), Subchapter C-Air Programs (40 CFR 52-99)
Noise	Noise Control Act of 1972 (PL 92-574) and Amendments of 1978 (PL 95-609); U.S. EPA, Subchapter G-Noise Abatement Programs (40 CFR 201-211)
Water	Federal Water Pollution Control Act (FWPCA) of 1972 (PL 92-500) and Amendments; Clean Water Act (CWA) of 1977 (PL 95-217); U.S. EPA, Subchapter D-Water Programs (40 CFR 100-145); Water Quality Act of 1987 (PL 100-4); U.S. EPA, Subchapter N-Effluent Guidelines and Standards (40 CFR 401-471); Safe Drinking Water Act (SDWA) of 1972 (PL 95-923) and Amendments of 1986 (PL 99-339); U.S. EPA, National Drinking Water Regulations and Underground Injection Control Program (40 CFR 141-149)
Biological Resources	Migratory Bird Treaty Act of 1918; Fish and Wildlife Coordination Act of 1958 (PL 85-654); Sikes Act of 1960 (PL 86-97) and Amendments of 1986 (PL 99-561) and 1997 (PL 105-85 Title XXIX); Endangered Species Act of 1973 (PL 93-205) and Amendments of 1988 (PL 100-478); Fish and Wildlife Conservation Act of 1980 (PL 96-366); Lacey Act Amendments of 1981 (PL 97-79); Responsibilities of Federal Agencies to Protect Migratory Birds (EO 13186)
Wetlands and Floodplains	Section 401 and 404 of the Federal Water Pollution Control Act of 1972 (PL 92-500); U.S. EPA, Subchapter D-Water Programs 40 CFR 100-149 (105 ref); Floodplain Management-1977 (EO 11988); Protection of Wetlands-1977 (EO 11990); Emergency Wetlands Resources Act of 1986 (PL 99-645); North American Wetlands Conservation Act of 1989 (PL 101-233)
Cultural Resources	NHPA (16 USC 470 et seq.) (PL 89-865) and Amendments of 1980 (PL 96-515) and 1992 (PL 102-575); Protection and Enhancement of the Cultural Environment-1971 (EO 11593); Indian Sacred Sites-1966 (EO 13007); American Indian Religious Freedom Act (AIRFA) of 1978 (PL 94-341); Antiquities Act of 1906; Archaeological Resources Protection Act (ARPA) of 1979 (PL 96-95); Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (PL 101-601); Protection of Historic and Cultural Properties (36 CFR 800)
Solid/Hazardous Materials and Waste	Resource Conservation and Recovery Act (RCRA) of 1976 (PL 94-5800), as Amended by PL 100-582; U.S. EPA, subchapter I-Solid Wastes (40 CFR 240-280); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC 9601) (PL 96-510); Toxic Substances Control Act (TSCA) (PL 94-496); U.S. EPA, Subchapter R-Toxic Substances Control Act (40 CFR 702-799); Federal Insecticide, Fungicide, and Rodenticide Control Act (40 CFR 162-180); Emergency Planning and Community Right-to-Know Act (40 CFR 355, 370, and 372); Federal Compliance with Pollution Control Standards-1978 (EO 12088), Superfund Implementation (EO 12580); Strengthening Federal Environmental, Energy, and Transportation Management (EO 13423)
Health and Safety	Occupational Health and Safety Act of 1970 (29 CFR 1910 and 29 CFR 1926)
Environmental Justice	Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898); Protection of Children from Environmental Health Risks and Safety Risks (EO 13045)

ES.2 BACKGROUND AND SETTING

The Fort James III Subdivision is located in Forks Township in Northampton County, PA approximately 11 miles northeast of Bethlehem, PA.

ES.3 PROPOSED ACTION

The Proposed Action is to acquire sufficient and suitable land and construct a new USARC and associated support facilities in the Allentown-Bethlehem, PA area to support six Army Reserve units relocating from the local area. The purpose of the Proposed Action is to implement the BRAC Commission's recommendations pertaining to the Allentown-Bethlehem, PA area.

Facilities - The proposed USARC would provide an approximately 39,386 square feet (SF), 200-member training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, and physical fitness areas for six Army Reserve units. Associated support facilities include an approximately 5,097 SF Organizational Maintenance Shop (OMS), and an approximately 1,369 SF unheated storage building. In addition, there would be approximately 1.65 acres of paved areas including 0.69 acres of military equipment parking (MEP) areas and 0.96 acres of privately-owned vehicle (POV) parking areas and access roads.

Personnel - Implementing the BRAC Commission's recommendations would result in the total assignment of approximately 228 personnel to the new USARC, 208 of whom are reservists and 20 of whom are full-time personnel, though none of these personnel would be permanently moving into the region of influence. Each of the six units will be drilling on one of three weekends each month, meaning that not all personnel will be using the facilities on the same weekend. The maximum number of personnel using the facilities on a drill weekend would be approximately 153.

Equipment - The relocation and realignment of reserve units to the proposed USARC would also bring associated unit vehicles, equipment, and materials. The total number of vehicles that would relocate to the USARC is projected to be approximately 89, including 40 wheeled vehicles, 49 trailers, and 0 tracked vehicles.

ES.4 REALIGNMENT PROCESS

The timeline for implementing the action in the Allentown-Bethlehem area began in late 2005 with Congressional and Presidential approval of the BRAC law followed by the initiation of this NEPA process and related planning activities. New BRAC facilities in the Allentown-Bethlehem area are

programmed through fiscal year 2010 with realignment moves scheduled to occur by 2011. Under the BRAC law, the Army must initiate all realignments not later than September 15, 2007, and complete all realignments not later than September 15, 2011.² This BRAC EA examines the environmental impacts extending into the foreseeable future from efforts that are scheduled to be implemented during the 6-year BRAC implementation window including the acquisition of land, the construction of the proposed new facilities, and the operation of those facilities.

ES.5 ALTERNATIVES

No Action Alternative

Council on Environmental Quality (CEQ) regulations require the inclusion of the No Action alternative in an EA, for it serves as the baseline against which the impacts of the Proposed Action and alternatives can be evaluated. Accordingly, the No Action Alternative is evaluated in this EA.

Under the No Action alternative the Army would not implement the Proposed Action. The six Army Reserve units would continue to train at and operate from their current location with current facilities which are outdated, inadequate, and inefficient; though routine replacement or renovation actions could occur through normal military maintenance and construction procedures as circumstances independently warrant.

Preferred Alternative

The preferred location for the proposed USARC is located in the Fort James III Subdivision located in Forks Township in Northampton County. This site is located approximately 11 miles northeast of Bethlehem, PA. The subdivision consists of approximately 125 acres of industrial zoned land which the owner is willing to subdivide. The Army intends to purchase approximately 8.6 acres of the property (Lots 15 and 16 in the subdivision) to accommodate the facilities and required Anti-terrorism/Force protection (AT/FP) set back requirements. The site is generally flat and would not require extensive site preparation. There is immediate access to all utilities along the street frontage. There are no buildings on the site so no demolition is required. The site is zoned as commercial, retail, industrial, and mixed use.

² Section 2904(a), Public Law 101-510, as amended, provides that the Army must "... initiate all closures and realignments no later than two years after the date on which the President transmits a report [by the BRAC Commission] to the Congress ... containing the recommendations for such closures or realignments; and ... complete all such closures and realignments no later than the end of the six year period beginning on the date on which the President transmits the report ..." The President took the specified action on September 15, 2005.

ES.6 ENVIRONMENTAL CONSEQUENCES

Under the No Action Alternative, the proposed new BRAC facilities would not be constructed, and no environmental impacts would occur.

Under the Preferred Alternative, the Proposed Action would not have any significant adverse effects or impacts on any of the environmental or related resource areas on the Fort James III Subdivision site or to areas surrounding the proposed site. For all resource areas, the effects are evaluated to be at No Effect or No Significant Effect levels.

A summary of impacts by resource area for the No Action Alternative and the Preferred Alternative is provided in Table ES-2.

Table ES-2. Summary of the Impacts of the Proposed Action Alternatives

Resource	No Action Alternative	Preferred Alternative
Land Use		
<i>Regional Geographic Setting and Location</i>	No Effect.	No Effect.
<i>Site Land</i>	No Effect.	No Significant Effect.
<i>Current and Future Development in the Region of Influence</i>	No Effect.	No Significant Effect.
Aesthetic and Visual Resources	No Effect.	No Significant Effect.
Air Quality		
<i>Ambient Air Quality Conditions</i>	No Effect.	No Significant Effect.
<i>Meteorology/Climate</i>	No Effect.	No Effect.
<i>Air Pollutant Emissions at Installation</i>	None. No Significant Impact.	No Significant Effect.
<i>Regional Air Pollutant Emissions Summary</i>	No Effect.	No Significant Effect.
Noise	No Effect.	No Significant Effect.
Geology and Soils		
<i>Geologic and Topographic Conditions</i>	No Effect.	No Significant Effect.
<i>Soils</i>	No Effect.	No Significant Effect.
<i>Prime Farmland</i>	No Effect.	No Effect.
Water Resources		
<i>Surface Water</i>	No Effect.	No Effect.
<i>Hydrogeology/Groundwater</i>	No Effect.	No Significant Effect.

Resource	No Action Alternative	Preferred Alternative
<i>Floodplains</i>	No Effect.	No Effect.
<i>Coastal Zone</i>	No Effect.	No Effect.
Biological Resources		
<i>Vegetation</i>	No Effect.	No Significant Effect.
<i>Wildlife</i>	No Effect.	No Significant Effect.
<i>Threatened, Endangered, and Sensitive Species</i>	No Effect.	No Effect.
Cultural Resources		
<i>Archaeology</i>	No Effect.	No Effect.
<i>Built Environment</i>	No Effect.	No Effect.
<i>Native American Resources</i>	No Effect.	No Effect.
Socioeconomics		
<i>Economic Development</i>	No Effect.	No Significant Effect.
<i>Demographics</i>	No Effect.	No Effect.
<i>Environmental Justice</i>	No Effect.	No Effect.
<i>Protection of Children</i>	No Effect.	No Effect.
Transportation		
<i>Roadways and Traffic</i>	No Effect.	No Significant Effect.
<i>Public Transportation</i>	No Effect.	No Significant Effect.
Utilities		
<i>Potable Water Supply</i>	No Effect.	No Significant Effect.
<i>Sanitary Sewer System</i>	No Effect.	No Significant Effect.
<i>Electrical Service and Distribution</i>	No Effect.	No Significant Effect.
<i>Stormwater System</i>	No Effect.	No Significant Effect.
<i>Natural gas</i>	No Effect.	No Significant Effect.
<i>Communications</i>	No Effect.	No Significant Effect.
<i>Municipal Solid Waste</i>	No Effect.	No Significant Effect.
Hazardous and Toxic Substances		
<i>Uses of Hazardous Materials</i>	No Effect.	No Significant Effect.
<i>Storage and Handling Areas</i>	No Effect.	No Significant Effect.
<i>Site Contamination and Cleanup</i>	No Effect.	No Significant Effect.
Cumulative Effects	No Effect.	No Significant Effect.
Irreversible and Irrecoverable Commitment of Resources	No Effect.	No Significant Effect.

ES.7 MITIGATION RESPONSIBILITY AND PERMIT REQUIREMENTS

None of the predicted effects of the Proposed Action would result in significant impacts; therefore, mitigation is not needed, although the Army may consider the use of Best Management Practices (BMPs) in addition to those required by law, regulation, or the Army. The following permits and or plans would be required in implementing the projects identified in this analysis:

- A Stormwater Pollution Prevention Plan (SWPPP) for the construction phase of the project would be required.
- A stormwater management plan and State Pollutant Discharge Elimination System (SPDES) permit may be required.

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1.0 PURPOSE, NEED, AND SCOPE

1.1 INTRODUCTION

On September 8, 2005, the Base Closure and Realignment (BRAC) Commission recommended that certain realignment actions occur in the Allentown-Bethlehem, PA area. These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission's recommendations must now be implemented as provided for in the Defense Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

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The following are the BRAC Commission's recommendations for the Allentown-Bethlehem, PA area (BRAC Commission, 2005):

“Close the Wilson Kramer United States Army Reserve Center in Bethlehem, PA, and the United States Army Reserve Organizational Maintenance Shop in Bethlehem, PA, and relocate units to a new United States Army Reserve Center with an organizational maintenance facility in the Allentown/Bethlehem, PA, area if the Army is able to acquire suitable land for the construction of the facilities.”³

The BRAC Commission's recommendations considered the Secretary of Defense's justifications for recommended realignment actions in the Allentown-Bethlehem, PA area. The Secretary's justifications, as quoted, are contained in Appendix A.

To implement this recommendation, the U.S. Army (Army) proposes to acquire sufficient and suitable land in the Allentown-Bethlehem, PA area and construct a new U.S. Army Reserve Center (USARC) to support the BRAC-directed changes in force structure. This Environmental Assessment (EA) analyzes

³ The BRAC recommendation does not indicate a geographic limit to the Allentown/Bethlehem area. During the site selection process, the Army limited the scope of potential sites to within a 15 mile radius of both Allentown and Bethlehem, PA.

the potential environmental impacts associated with the land acquisition and the construction and operation of the new USARC.

Details on the Proposed Action are provided in Section 2.0.

1.2 PURPOSE AND NEED

The purpose of the Proposed Action is to implement those elements of the BRAC law that contain the BRAC Commission's recommendation pertaining to the Allentown-Bethlehem, PA area.

The need for the Proposed Action is to improve the ability of the nation to respond rapidly to challenges of the 21st Century. The Army is legally bound to defend the United States and its territories, support national policies and objectives, and defeat nations responsible for aggression that endanger the peace and security of the United States. To carry out these tasks, the Army must adapt to changing world conditions and must improve its capabilities to respond to a variety of circumstances across the full spectrum of military operations. The following discusses three major initiatives that contribute to the Army's need for the Proposed Action.

Base Closure and Realignment. In previous BRAC rounds, the explicit goal was to save money and downsize the military to reap a "peace dividend." In the 2005 BRAC round the Department of Defense's (DoD's) recommendations sought to reorganize its installation infrastructure to more efficiently support its forces, increase operational readiness, and facilitate new ways of doing business. Thus, BRAC represents more than cost savings; it supports advancing the goals of transformation, improving military capabilities, and enhancing military value. The Army needs to carry out the BRAC Commission's recommendations in the Allentown-Bethlehem, PA area to achieve the objectives for which Congress established the BRAC process.

In the Allentown-Bethlehem, PA area this BRAC action is expected to significantly enhance the readiness of the affected units by providing sufficient classroom, storage, and administrative space required to train to Army standards and to meet anti-terrorism/force protection (AT/FP) standards. At the same time, these actions are expected to reduce costs associated with maintaining existing facilities and properties by relocating units from outdated and over utilized facilities into a modern USARC.

1.3 SCOPE

This EA identifies, documents, and evaluates the potential environmental effects of the proposed BRAC realignment actions in the Allentown-Bethlehem, PA area including the land acquisition and the

construction and operation of the proposed facilities. This EA has been developed in accordance with NEPA and implementing regulations issued by the President's Council on Environmental Quality (CEQ) and the U.S. Army.⁴ The purpose of the EA is to inform decision makers and the public of the likely environmental consequences of the Proposed Action and the alternatives for implementing it.

The Defense Base Closure and Realignment Act of 1990 specifies that NEPA does not apply to actions of the President, the Commission, or the DoD, except "(i) during the process of property disposal, and (ii) during the process of relocating functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated" (Sec. 2905(c)(2)(A), Public Law 101-510, as amended). The law further specifies that in applying the provisions of NEPA to the process, the Secretary of Defense and the secretaries of the military departments concerned do not have to consider "(i) the need for closing or realigning the military installation which has been recommended for closure or realignment by the Commission, (ii) the need for transferring functions to any military installation which has been selected as the receiving installation, or (iii) military installations alternative to those recommended or selected" (Sec. 2905(c)(2)(B)). The Commission's deliberations and decisions, as well as the need for closing or realigning a military installation, are exempt from NEPA. Accordingly, this EA does not address the need for realignment.

1.4 PUBLIC PARTICIPATION AND INVOLVEMENT

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

Public participation opportunities with respect to this EA and decision making on the Proposed Action are guided by 32 Code of Federal Regulations (CFR) Part 651. This EA is being made available to the public for 30 days, along with a draft Finding of No Significant Impact (FNSI). During this time the Army will consider any comments submitted by individuals, agencies, or organizations on the Proposed Action, the EA, or draft FNSI. At the conclusion of the comment period, the Army may, if appropriate, execute the

⁴ Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, 40 Code of Federal Regulations (CFR) Parts 1500–1508, and Environmental Analysis of Army Actions, 32 CFR Part 651

FNSI and proceed with implementing the Proposed Action. If it is determined that implementing the Proposed Action would result in significant impacts, the Army will commit to mitigation actions sufficient to reduce impacts below significance levels or publish in the *Federal Register* a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS).

Interested parties are invited to review and comment on the EA and Draft FNSI during the 30-day comment period from March 6, 2009 through April 4, 2009. The EA and Draft FNSI can be accessed on the World Wide Web at:

http://www.hqda.army.mil/acsim/brac/env_ea_review.htm

Copies of the EA can also be viewed at the following libraries:

Allentown Public Library – Main Branch
1210 Hamilton St.
Allentown, PA 18102

Bethlehem Area Public Library – Main Library
11 West Church St
Bethlehem, PA 18018

Comments on the EA and Draft FNSI should be submitted during the 30-day public comment period via mail, fax, or electronic mail to:

Ms. Mona Garrett
99th Regional Readiness Command
99 Soldiers Lane
Coraopolis, PA 15108-2550
fax: (412) 604-8156
email: mona.garrett@usar.army.mil

1.5 IMPACT ANALYSIS PERFORMED

An interdisciplinary team has analyzed the Proposed Action and alternatives in light of existing conditions and has identified relevant beneficial and adverse impacts associated with the action. Section 1.0 of the EA provides the purpose, need, and scope. The Proposed Action is described in Section 2.0 and the alternatives, including the No Action Alternative, are described in Section 3.0. Conditions existing as of 2008 are considered to be the “baseline” conditions and are described in Section 4.0 - Affected Environment and Environmental Consequences. The expected impacts of the Proposed Action, also described in Section 4.0, are presented immediately following the description of baseline conditions for each environmental resource addressed in the EA. Section 4.0 also addresses the potential for

cumulative effects and mitigation measures are identified where appropriate. Section 5.0 presents the findings and conclusions.

1.6 FRAMEWORK FOR ANALYSIS

The selection of the Preferred Alternative rests on numerous factors such as mission requirements, schedule, availability of funding, and environmental considerations. In addressing environmental considerations, the Army is guided by relevant statutes (and their implementing regulations) and Executive Orders that establish standards and provide guidance for environmental and natural resources management and planning.

1.6.1 Relevant Statutes and Executive Orders

Relevant statutes include, but are not limited to, the Clean Air Act (CAA), Clean Water Act (CWA), Noise Control Act, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Archaeological Resources Protection Act (ARPA), Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), Farmland Protection Policy Act (FPPA), Native American Graves Protection and Repatriation Act (NAGPRA), and the American Indian Religious Freedom Act (AIRFA). Executive Orders bearing on the Proposed Action include Executive Order (EO) 11988 (*Floodplain Management*), EO 11990 (*Protection of Wetlands*), EO 12088 (*Federal Compliance with Pollution Control Standards*), EO 12580 (*Superfund Implementation*), EO 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*), EO 13045 (*Protection of Children from Environmental Health Risks and Safety Risks*), EO 13175 (*Consultation and Coordination with Indian Tribal Governments*), EO 13186 (*Responsibilities of Federal Agencies to Protect Migratory Birds*), and EO 13423 (*Strengthening Federal Environmental, Energy, and Transportation Management*). These authorities are addressed in various sections throughout this EA when relevant to environmental resources and conditions. The full text of the laws, regulations, and EOs is available on the Defense Environmental Network & Information Exchange Web site at <http://www.denix.osd.mil>.

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2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 INTRODUCTION

This section describes the Army's Proposed Action for implementing the BRAC Commission's recommendations for the Allentown-Bethlehem, PA area. The following are the BRAC Commission's recommendations for Allentown-Bethlehem, PA area (BRAC Commission, 2005):

“Close the Wilson Kramer United States Army Reserve Center in Bethlehem, PA, and the United States Army Reserve Organizational Maintenance Shop in Bethlehem, PA, and relocate units to a new United States Army Reserve Center with an organizational maintenance facility in the Allentown/Bethlehem, PA, area if the Army is able to acquire suitable land for the construction of the facilities.”⁵

2.2 PROPOSED ACTION/IMPLEMENTATION PROPOSED

The Proposed Action is to acquire sufficient and suitable land in the Allentown-Bethlehem, PA area and construct a new USARC to support six Army Reserve units. Figure 2-1 provides a general area map indicating the location of the proposed USARC site in the larger community.

The Proposed Action is further detailed below, in the *Facilities* (Section 2.2.1), *Equipment* (Section 2.2.2), and *Personnel* (Section 2.2.3) sub-sections.

2.2.1 Facilities

The proposed USARC would provide a 200-member training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, and physical fitness areas for six Army Reserve units. Associated support facilities include an Organizational Maintenance Shop (OMS), and an unheated storage building. The approximate size of the USARC and the additional support facilities are provided in Table 2-1. In addition, there would be approximately 1.65 acres of paved areas including 0.69 acres of military equipment parking (MEP) areas and 0.96 acres of privately-owned vehicle (POV) parking areas and access roads.

⁵ The BRAC recommendation does not indicate a geographic limit to the Allentown/Bethlehem area. During the site selection process, the Army limited the scope of potential sites to within a 15 mile radius of both Allentown and Bethlehem, PA.

Figure 2-1. Project Vicinity Map

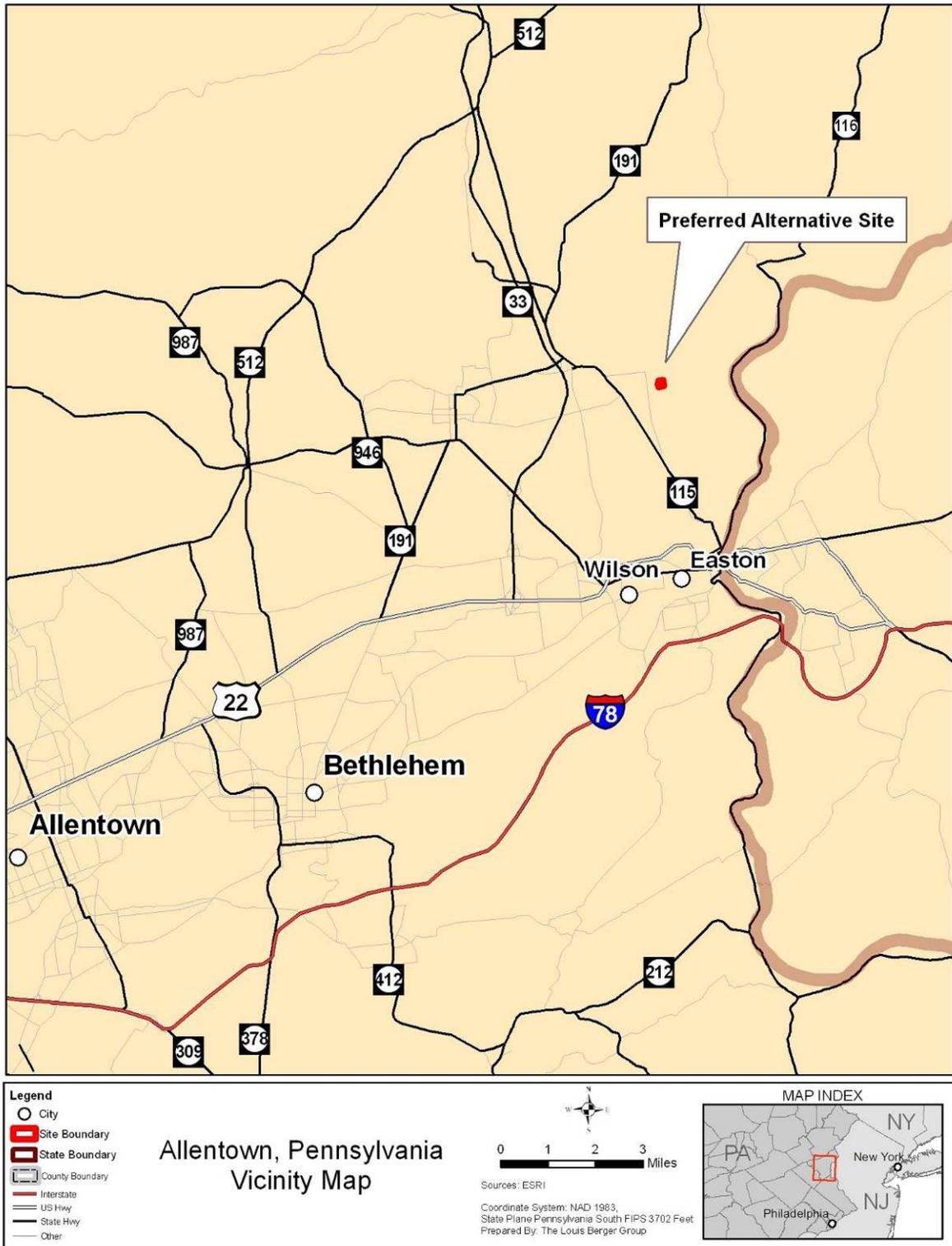


Table 2-1. USARC Complex Building Sizes

Building	Approximate Size (square feet (SF))
U.S. Army Reserve Center	39,386
Organizational Maintenance Shop	5,097
Unheated-unit storage building	1,369

Source: U.S. Army, 2008a

Supporting improvements proposed to complement the USARC and associated facilities include paving, fencing, the extension of utilities to service the project, and general site improvements. AT/FP safety and security measures, including minimum stand-off distance from roads, parking areas and vehicle unloading areas, would be incorporated into the facility designs and siting, and accessibility for disabled persons would also be provided (U.S. Army, 2008a). The preferred location for construction of the proposed facilities is described further under the *Preferred Alternative - Fort James III Subdivision* in Section 3.2 – Alternatives.

2.2.2 Personnel

Implementing the BRAC Commission’s recommendations for the Allentown-Bethlehem, PA area would result in the total assignment of approximately 228 personnel to the new USARC, 208 of whom are reservists and 20 of whom are full-time personnel (see Table 2-2 for a breakdown of the number of personnel by unit relocating to the USARC complex.) Of these personnel none would be permanently moving into the region of influence. Each of the six units would be drilling on one of three weekends each month, meaning that not all personnel would be using the facilities on the same weekend. The maximum number of personnel using the facilities on a drill weekend would be approximately 153. The potential direct and/or cumulative impacts on the environment from the increase in personnel associated with the new USARC are considered in this EA.

Table 2-2. 2005 BRAC Action – Allentown-Bethlehem, PA: Personnel Changes

Action	Organization	From	Total Number of Reservists	Total Number of Full-time Personnel
Incoming	PLT 1, 130 CM CO	Wilson-Kramer USARC Bethlehem, PA	30	0
Incoming	HQ DET, 130 CM CO	Wilson-Kramer USARC Bethlehem, PA	25	7

Action	Organization	From	Total Number of Reservists	Total Number of Full-time Personnel
Incoming	HCC, 744 MP BN	USAR OMS Bethlehem, PA	84	13
Incoming	DET 1, 744 MP BN	USAR OMS Bethlehem, PA	23	0
Incoming	DET 2, 744 MP BN	USAR OMS Bethlehem, PA	23	0
Incoming	DET 3, 744 MP BN	USAR OMS Bethlehem, PA	23	0
		TOTAL	208	20

Source: Arnold, 2008.

2.2.3 Equipment

The relocation and realignment of reserve units to the proposed USARC would also bring associated unit vehicles, equipment, and materials. The total number of vehicles that would relocate to the USARC is projected to be approximately 89, including 40 wheeled vehicles, 49 trailers, and 0 tracked vehicles. Table 2-3 provides a breakdown of the number of vehicles by unit relocating to the USARC complex.

Table 2-3. 2005 BRAC Action – Allentown-Bethlehem, PA USARC: Equipment Changes

Action	Organization	From	Total Number: Wheeled Vehicles	Total Number: Trailers	Total Number: Tracked Vehicles
Incoming	PLT 1, 130 CM CO	Wilson-Kramer USARC Bethlehem, PA	8	7	0
Incoming	HQ DET, 130 CM CO	Wilson-Kramer USARC Bethlehem, PA	12	6	0
Incoming	HCC, 744 MP BN	USAR OMS Bethlehem, PA	14	12	0
Incoming	DET 1, 744 MP BN	USAR OMS Bethlehem, PA	2	8	0
Incoming	DET 2, 744 MP BN	USAR OMS Bethlehem, PA	2	8	0
Incoming	DET 3, 744 MP BN	USAR OMS Bethlehem, PA	2	8	0
		TOTAL	40	49	0

Source: Hoben, 2009

2.3 SCHEDULE

As required by the BRAC statute, the Army must initiate all realignments not later than September 15, 2007, and complete all realignments not later than September 15, 2011.⁶

Implementation of the Proposed Action is proposed to occur over a span of approximately 14 months, as shown in the schedule contained in Table 2-4.

Table 2-4. Schedule of Allentown, PA 2005 BRAC Project

Project Number	Project Title	Estimated Construction Start	Estimated Construction Completion	Estimated Unit Realignment
CAR 10-64725	Armed Forces Reserve Center	January 2010	March 2011	No Later than September 15, 2011

Source: U.S. Army, 2008a

⁶ Section 2904(a), Public Law 101-510, as amended, provides that the Army must "... initiate all closures and realignments no later than two years after the date on which the President transmits a report [by the BRAC Commission] to the Congress ... containing the recommendations for such closures or realignments; and ... complete all such closures and realignments no later than the end of the six year period beginning on the date on which the President transmits the report ... " The President took the specified action on September 15, 2005.

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3.0 ALTERNATIVES TO THE PROPOSED ACTION

3.1 INTRODUCTION

A key principle of NEPA is that agencies are to give full consideration to all reasonable alternatives to a proposed action. Considering alternatives helps to avoid unnecessary impacts and allows analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered reasonable, an alternative must be affordable, capable of implementation, and satisfactory with respect to meeting the purpose of and need for the action. The following discussion identifies alternatives considered by the Army and identifies whether they are feasible and, hence, subject to detailed evaluation in this EA.

Alternatives to the Proposed Action have been examined according to three variables: the means to accommodate realigned units, siting of new construction, and schedule. This section presents the alternatives available for the Proposed Action. This section also describes the No Action alternative, under which the Proposed Action would not be implemented.

3.2 ALTERNATIVES FOR THE PROPOSED ACTION

The BRAC Commission's recommendations direct that the existing Wilson Kramer USARC in Bethlehem, PA, and the Army Reserve OMS in Bethlehem, PA be closed and the units relocate to a new USARC and OMS facility to be constructed in the Allentown-Bethlehem, PA, area if suitable land can be acquired.

Construction of new facilities is driven by the need to ensure adequate space is available for the mission requirements of the realigning units. To facilitate the construction of the proposed facilities a total of eight locations within a 15 mile radius of Allentown and Bethlehem, PA were identified for investigation in two Available Site Identification and Validation (ASIV) reports to determine their feasibility for accommodating the Proposed Action (USACE, 2008a and USACE, 2007). The initial 2007 ASIV identified five sites for investigation; however only one of these sites was considered feasible during the January 2008 site selection survey (U.S. Army 2008b). As a result, a second ASIV was conducted to identify additional potential sites for consideration. During the second search three more sites were identified for investigation. The Army convened a Site Survey Team, made up of U.S. Army, U.S. Army Corps of Engineers (USACE), and contractor members, to determine whether these locations could be

considered reasonable alternatives for implementing the Proposed Action. The following criteria were used to determine if each site was considered feasible for implementing the Proposed Action:

- Net useable area – 8 acres
- Meets AT/FP set back requirements
- Site will support intended constructing and is environmentally clean
- Ready access to public utilities
- Reasonable cut or fill requirements
- Proximity to major roadway corridor
- Expectation that the fair market appraisal will support the purchase price – i.e. land is within budget
- Meets appropriate zoning
- Property is within the Allentown-Bethlehem, PA area (the BRAC language did not specify a geographic limit to the Allentown-Bethlehem area. However, the Army’s search radius was limited to 15 miles around Allentown and Bethlehem, PA (USACE, 2007)).

Of the eight total potential sites identified over the course of the two ASIV reports two were initially considered to be reasonable alternatives. However, the Army could not obtain a Right of Entry (ROE) for one of the properties; therefore, it was dropped from consideration as a potential alternative and only one site (Preferred Alternative) is analyzed in depth in this EA. The other six sites were determined not to be reasonable alternatives because they did not meet all of the evaluation criteria. Therefore, they are not carried forward for analysis in this EA. The location of all eight sites is indicated in Figure 3-1. The location of the Preferred Alternative site is further indicated in Figure 3-2.

Preferred Alternative – Fort James III Subdivision

The preferred location for the proposed USARC is located in the Fort James III Subdivision located in Forks Township in Northampton County. This site is located approximately 11 miles northeast of Bethlehem, PA. The subdivision consists of approximately 125 acres of industrial zoned land which the owner is willing to subdivide. The Army intends to purchase approximately 8.6 acres of the property (Lots 15 and 16 in the subdivision) to accommodate the facilities and required AT/FP set back requirements. The site is generally flat and would not require extensive site preparation. There is immediate access to all utilities along the street frontage. There are no buildings on the site so no demolition is required. The site is zoned as commercial, retail, industrial, and mixed use. This site was identified as a reasonable alternative for the project and is fully evaluated as the Preferred Alternative in this EA.

Figure 3-1. Potential Alternative Sites for the Proposed USARC at Allentown-Bethlehem, PA

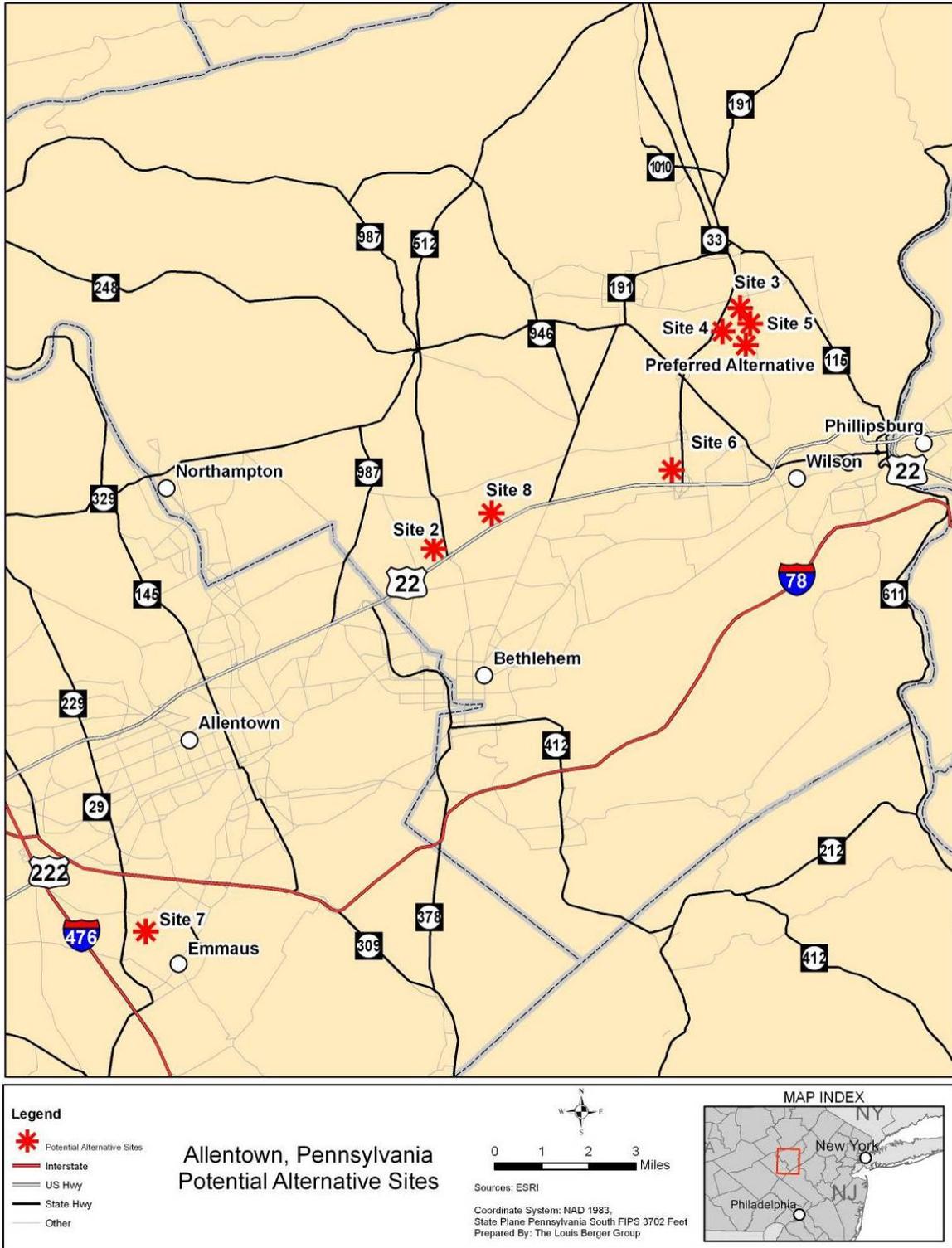


Figure 3-2. Preferred Alternative Site



Locations Dismissed from Further Analysis

During site investigations six sites were dismissed by the Site Survey Team as possible alternative sites because they did not meet all of the evaluation criteria. Therefore, these sites are not carried forward for further evaluation in this EA. The seventh site (Site 2) is not carried forward for analysis because the Army was not able to obtain a ROE for this site. All of the sites dismissed from further evaluation are briefly described below.

Site 2 – Ruppville Rd

This site consists of approximately 10 acres of agricultural land and is currently zoned as retail, commercial, industrial, and mixed use. The site meets the acreage requirements for the proposed project and can accommodate the necessary AT/FP set back requirements. The site is currently used for crops and only a small portion of the property would require grading; therefore, relatively little site preparation is required. The site has easy access off of Route 222 as well as immediate site access to utilities. One disadvantage to this site is that there is an easement for an overhead electrical transmission line that transects the eastern portion of the site, running north-south for approximately 800 feet.

This site was originally considered as a reasonable alternative for implementing the Proposed Action. However, while negotiating a ROE agreement for the property, the Army and the property owner were not able to come to an agreement on the conditions to be included in the ROE. An ROE is necessary for the Army to access the property to further evaluate and appraise the land value prior to making a decision to purchase the property. Since a ROE for the property could not be obtained, the Army is no longer considering this site as a possible location for constructing the new USARC facilities. Therefore, this site is not further evaluated in this EA.

Site 3 – Chrin Commerce Center, Palmer Township, Northampton County

This site currently has very limited access. In addition, it is likely that due to the size of the land parcels that there would likely not be enough space to accommodate the necessary AT/FP setback requirements (U.S. Army, 2008b). Though not part of the selection criteria, another disadvantage of this site is that life support facilities (i.e. lodging etc.) are not in close proximity.

Site 4 – Newlins Mill Road, Palmer Township, Northampton County

This site was deemed not a viable alternative due to very limited access and its proximity to residential housing. Though not part of the selection criteria, two additional disadvantages to this property are that

life support facilities (i.e. lodging etc.) are not in close proximity and there is very little public visibility (U.S. Army, 2008b).

Site 5 – Forks Industrial Park, Parcel V, Forks Township, Northampton County

This site was evaluated to not be a viable alternative because the site is divided by an unused railroad right of way that makes the lots irregular in size. In addition, this site has very limited access, low public visibility, is in close proximity to residential housing, and life support facilities are located some distance away (U.S. Army, 2008b).

Site 6 – South Nulton Avenue, Easton, Northampton County

This site is located adjacent to a residential area and access to the site is limited. Additional environmental problems, including the existence of old underground fuel storage tanks, contributed to finding this site to not be a viable alternative (U.S. Army, 2008b).

Site 7 – Highland & Mowrer Drives, Bethlehem, Lehigh County

After the ASIV report and prior to conducting the site selection survey this property was sold and is therefore no longer a viable option (White, 2008).

Site 8 – Routes 191 & 248, Lower Nazareth, Northampton County

This site was originally considered a reasonable alternative for implementing the Proposed Action. However, additional information provided by the real estate agent representing the developer indicated that the property is encumbered by Conditions, Covenants, and Restrictions (CC&R). The CC&Rs are things that the Army may not, or can not accept, such as annual common user fees and assessments (U.S. Army, 2008b). Therefore, this site is no longer considered a reasonable alternative and is not further evaluated in this EA.

Scheduling Alternatives

The schedule for implementing the Proposed Action must balance the timeframes for constructing the new facilities and the planned arrival dates of incoming units, all within the 6-year limitation of the BRAC law (see Section 2.3). Per BRAC Law, the proposed realignment actions for the Allentown-Bethlehem, PA area were initiated prior to September 15, 2007 as discussed in Section 2.3. Completion of realignment prior to March 2011 is not feasible due to the time required to design and construct the new facilities. Shifting of schedules to accomplish realignment at a date later than September 15, 2011

would unnecessarily delay the realization of benefits to be gained. In addition, Congress requires all BRAC actions to be completed by September 15, 2011. Since earlier implementation is not possible, and since delay is avoidable and unnecessary, alternative schedules are not further evaluated in this EA.

No Action Alternative

CEQ regulations require analysis of the No Action alternative in an EA, for it serves as the baseline against which the impacts of the proposed action and alternatives will be evaluated. Accordingly, the No Action alternative is evaluated in this EA.

Under the No Action alternative the Proposed Action would not be implemented and the Army Reserve units would continue to train at and operate from their current location with current facilities which are outdated, inadequate, and inefficient; though routine replacement or renovation actions could occur through normal military maintenance and construction procedures as circumstances independently warrant.

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4.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

4.1 INTRODUCTION

This section describes the current environmental conditions of the areas that would be affected should the Proposed Action be implemented. It also analyzes the potential effects arising from implementing the Proposed Action. The description of environmental conditions represents the baseline conditions, or the “as is” or “before the action” conditions at the installation and is defined as the level of operations and environmental conditions as of 2008. The baseline facilitates subsequent identification of changes in conditions that would result from the realignment. The environmental consequences portion represents the culmination of scientific and analytic analysis of potential effects arising from implementing the Proposed Action. Direct, indirect, and cumulative effects of the Proposed Action are also addressed.

For each environmental resource area the baseline conditions are presented first followed immediately thereafter by evaluation of the potential impacts of the No Action and the Preferred Alternatives. Where appropriate and definable, a specific Region of Influence (ROI) is indicated for a given resource area.

4.2 LAND USE

4.2.1 Affected Environment

Northampton County is located in the Lehigh Valley, 60 miles north of Philadelphia and 80 miles west of New York City. Adjacent counties include Monroe and Carbon to the north, Bucks to the south, Lehigh to the west, and Monroe County, New Jersey to the east (see Figure 4-1). Northampton County is comprised of 377 square miles and 38 municipalities, including two cities, 19 boroughs and 17 townships (Northampton, 2006). The County has a population of more than 280,000 residents (Northampton, n.d.) and consists of developed areas with residential, commercial, and industrial facilities, as well as agricultural areas. The County Seat is Easton.

4.2.1.1 Site Land Use

The Preferred Alternative site in the Fort James III Subdivision is located less than one mile from State Route 115, near the intersection of Uhler Road and Kessler'sville Road, Forks Township, Northampton County. The project site boundary encompasses approximately 8.6 acres of the 125 acre subdivision. The site was formerly used as agricultural land and is currently vacant with no structures located on it. The site is zoned for commercial, retail, industrial, and mixed use development.

In 2005, the Pennsylvania Department of Conservation and Natural Resources (PADCNR) funded an effort to categorize the existing land use in the state. The 2005 data for land use/land cover was created through interpretation of remotely sensed data. According to the 2005 data, land use at the Preferred Alternative site is agriculture and forest. Though the site was formerly used for agricultural purposes, it is now part of the Fort James III Subdivision which is a new industrial park. In preparation for the future development of the site, the current property owner/developer (J.C. Petrucci Company, Inc.) has substantially reworked the site through grading and other earth moving activities.

According to the Forks Township Zoning Ordinance of 2006, the Preferred Alternative site is located in the area designated as an Employment Center (EC) District (Forks, 2006a). The purpose of the EC District is to promote and encourage employment opportunities within the Township for desirable office, service and manufacturing uses. The EC district is intended to be the Township's multi-purpose district, which could permit both research-office and manufacturing uses (Forks, 2006b).

4.2.1.2 Current and Future Development in the Region of Influence

The ROI for the Proposed Action includes Northampton County, located in Pennsylvania's Lehigh Valley. The Lehigh Valley is Pennsylvania's third most populated metropolitan region. Its principal cities include Allentown, Bethlehem, and Easton (LVCVB, 2008). Between 2000 and 2007, the Lehigh valley was the 2nd fastest growing metropolitan region in the northeast U.S., adding approximately 63,500 people (+8.6%) (LVEDC, n.d.). Approximately 80 percent of this growth was from net immigration (LVEDC, n.d.). The ROI is described in further detail in Section 4.10, Socioeconomics.

4.2.2 Environmental Consequences

Impacts to land use were determined by the following criteria:

No Effect – No impacts to surrounding land use from the proposed project.

No Significant Effect – The impact to land use would be measurable or perceptible, but would be limited to a relatively small change in land use that is still consistent with the surrounding land uses.

Significant Effect – The impact to land use would be substantial. Surrounding land uses are expected to substantially change in the short- and long-term. The action would not be consistent with the surrounding land use.

4.2.2.1 No Action Alternative

Under the No Action alternative, the Proposed Action would not be implemented. Therefore there would be no effects on land use at the site within the Fort James III Subdivision.

4.2.2.2 Preferred Alternative - Fort James III Subdivision

Regional Geographic Setting and Location - No effects are expected on local and regional setting as a result of implementing the Proposed Action at the Preferred Alternative site. Impacts on land use on the site are expected to be limited in scope to the site itself.

Site Land Use - Implementing the Proposed Action at the Preferred Alternative site would have no significant effects on land use. While land use at the preferred site, as designated in 2005, is currently classified as agriculture and forest, it has already been taken out of agricultural use and significantly altered as part of the Fort James III Subdivision by the current property owner/developer through grading and other earth moving activities. Construction and operation of a USARC at the Preferred Alternative site would be consistent with Forks Township zoning for this site which is designated as an EC District. Intended uses for the multi-purpose EC district include office, service, and manufacturing uses.

Construction of the USARC and related facilities would remove the site area from availability for potential future use or development, and would result in a minor overall reduction in open, undeveloped space within the county.

Current and Future Development in the Region of Influence – Effects from construction and operation of the new USARC would not be significant since the project would be compatible with the township's zoning. Development impacts associated with project construction within the ROI are discussed in Section 4.10 *Socioeconomics*. In general, short-term construction requirements and no net increase in personnel living within the ROI would add minimal financial capital to the local and

regional economy and would not create an additional demand for housing or businesses that provide goods and services.

4.3 AESTHETICS AND VISUAL RESOURCES

4.3.1 Affected Environment

Geographically, the Preferred Alternative site is located in a semi-rural area approximately 2.5 miles from Route 33, northeast of Bethlehem, PA, within Fork Township, Northampton County. The property consists of approximately 8.6 acres of vacant land in a new industrial park zoned as commercial, retail, industrial and mixed use. The general visual character of the area can be described as a semi-rural, with several small agricultural land holdings in the site vicinity extending north and east. To the south and west, a mix of heavy industrial land uses as well as some residential developments occupy the landscape.

The topography of the site and vicinity is characterized by gently sloping land, with elevations ranging from approximately 350 to 400 feet above sea level. The site is surrounded by a mix of cultivated lands, residential developments and various commercial business establishments. Vegetation in the vicinity of the proposed project is comprised of narrow sections of forest lining property boundaries and present intermittently along roadways (See Figure 4-2). Larger tracts of agricultural areas generally predominate nearer to the Delaware River to the east, while more developed semi-urban land uses feature more prominently near Route 33 to the west.

There are no designated protected viewsheds or historic resources in the vicinity of the site. Some site preparation has occurred at the Fort James III Subdivision, which has included the construction of a new access road and new utility lines extending into the development site. Several other lots within the subdivision have been sold and there are plans to construct a lumber distribution center as well as a cold food storage warehouse in the southern portion of the subdivision. Construction on both of these facilities would be completed prior to construction of the proposed USARC and would be a part of the existing conditions (The Express Times, 2007).

Figure 4-2. Visual Features of the Preferred Site



View facing north from western edge of proposed site.

4.3.2 Environmental Consequences

To evaluate the alternatives, the following criteria have been established to define the level of impacts to visual resources:

No Effect – No impacts to the viewshed of any historic resources and/or the aesthetic character of the installation from the proposed project.

No Significant Effect – No permanent direct or indirect impacts to the viewsheds of any historic resources and/or the aesthetic character of the installation from the proposed project would be expected. Any temporary visual disturbances that alter the character of the viewshed would be returned to its original state following the action.

Significant Effect – Direct or indirect impacts to the viewsheds of any historic resources of the installation are anticipated, and these effects would be greater in number, extent, and/or duration than non-significant impacts. Significant impacts could include disturbances (such as the long-term alteration of the viewshed that would require mitigation) that could alter the character of the viewshed of a historical resource, and the viewshed might not resume its original state following the action.

4.3.2.1 No Action Alternative

Under the No Action alternative the Army would not purchase any property to construct new facilities; therefore there would be no effect on Aesthetic or Visual Resources.

4.3.2.2 Preferred Alternative – Fort James III Subdivision

Under the Preferred Alternative, no significant effects would occur to Aesthetic or Visual Resources. The USARC facilities would be constructed on commercially zoned land in an area of mixed industrial and agricultural land uses. The development of the site would have an impact on aesthetics if the chosen exterior design were substantially at variance with the design and materials of nearby structures. However, the design of the USARC facilities is not expected to conflict with that of the existing industrial development in the vicinity. While the project site is visible from certain public vantage points, the proposed facility will be similar in scale to existing land uses in the area and, by providing the required AT/FP stand-off distances, would fit with the scale and nature of neighboring developments. In addition, on property adjacent to the Fort James III Subdivision to the northwest of the preferred site a new Pennsylvania Army National Guard Armory is proposed to be built, though the timeframe for this construction is not known (USACE, 2007). As a result, the proposed Army facilities would not substantially impact the visual character of the surrounding land.

While site preparation would involve minor site preparation, the USARC, once constructed, would not conflict visually with existing topographic features or land uses. Impacts to site aesthetics would occur from the resulting loss of the open space once the site was developed. However, given the current industrial character of the site vicinity, and the proposed neighboring developments the removal of this open space would not significantly reduce the visual or aesthetic quality of the site.

4.4 AIR QUALITY

The U.S. Environmental Protection Agency (U.S. EPA) defines ambient air in 40 CFR Part 50 as “that portion of the atmosphere, external to buildings, to which the general public has access.” In compliance

with the CAA and the 1977 and 1990 Clean Air Act Amendments (CAAA), the U.S. EPA has promulgated National Ambient Air Quality Standards (NAAQS). The NAAQS were enacted for the protection of the public health and welfare, allowing for an adequate margin of safety. To date, the U.S. EPA has issued NAAQS for seven criteria pollutants: carbon monoxide (CO), sulfur dioxide (SO₂), particles with a diameter less than or equal to a nominal 10 micrometers (PM₁₀), particles with a diameter less than or equal to a nominal 2.5 micrometers (PM_{2.5}), ozone (O₃), nitrogen dioxide (NO₂), and lead (Pb). Areas that do not meet NAAQS are called non-attainment areas.

4.4.1 Affected Environment

Northampton County, PA is part of the Allentown, PA airshed and has been classified by the U.S. EPA as being in attainment for all criteria air pollutants. The county was previously in non-attainment for 8-hour ozone standard, but was reclassified as in attainment on March 4, 2008.

The state and federal ambient standards for this pollutant is presented in Table 4-1.

Table 4-1. Ambient Air Quality Standards

Pollutant	Federal Standard	Pennsylvania Standard
Ozone (O ₃): 8-Hour Average	0.075 ppm	0.075 ppm

Sources: U.S. EPA, 2008c; PADEP, n.d.

To regulate the emission levels resulting from a project, federal actions located in non-attainment areas are required to demonstrate compliance with the general conformity guidelines established in 40 CFR Part 93 Determining Conformity of Federal Actions to State or Federal Implementation Plans (the Rule). Section 93.153 of the Rule sets the applicability requirements for projects subject to the Rule through the establishment of *de minimis* levels for annual criteria pollutant emissions. These *de minimis* levels are set according to criteria pollutant non-attainment area designations. Projects below the *de minimis* levels are not subject to the Rule. Those at or above the levels are required to perform a conformity analysis as established in the Rule. The *de minimis* levels apply to direct and indirect sources of emissions that can occur during the construction and operational phases of the action.

Northampton County, PA is in attainment for all criteria pollutants; therefore a General Conformity Determination is not required for the Proposed Action.

4.4.1.1 Ambient Air Quality Conditions

Ambient air quality is monitored in Northampton County by stations meeting the U.S. EPA's design criteria for State and Local Air Monitoring Stations (SLAMS) and National Air Monitoring Stations (NAMS). There are two ozone monitors operating in Northampton County, PA. The highest and second highest values recorded at these stations from 2004 through 2008 are presented in Table 4-2.

Table 4-2. Existing Monitoring Data within Northampton County, PA

Monitoring Station	Year*				
	2004	2005	2006	2007	2008
#420950025 – Washington & Cambria Sts	0.105/0.090	0.089/0.088	0.096/0.089	0.093/0.089	0.094/0.082
#420958000 – 17 th and Spring Garden Sts	0.101/0.084	0.087/0.083	0.099/0.088	0.088/0.082	0.091/0.079

1st/2nd highest data,

*Ozone values are in parts per million (ppm)

NAAQS: O3: 8-hour average = 0.075 ppm

Source: U.S. EPA, 2008a

4.4.1.2 Meteorology/Climate

Temperature is a parameter used in calculations of emissions for air quality applicability. The climate in Allentown, PA varies seasonally. The average summer high temperature in Northampton County, which includes the project site, is 84 degrees Fahrenheit (F) and the average winter low temperature is 19 degrees F (TWC, n.d.).

4.4.1.3 Regional Air Pollutant Emissions Summary

The U.S. EPA calculates the Air Quality Index (AQI) for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide. The U.S. EPA collects data daily to determine air quality for the region, and releases it in the form of the AQI, which runs from zero to 300, with zero being no air pollution and 300 representing severely unhealthy air pollution levels. An AQI value between 101 and 150 indicates that air quality is unhealthy for sensitive groups who may be subject to negative health effects. Sensitive groups may include those with lung or heart disease who will be negatively affected by lower levels of ground level ozone and particulate matter than the rest of the general public. An AQI value between 151 and 200 is considered to be unhealthy and may result in negative health effects for the general public, with more

severe effects possible for those in sensitive groups. AQI values above 200 are considered to be very unhealthy (Clean Air Partners, n.d.).

Table 4-3 displays the AQI data for Northampton County, PA.

Table 4-3. AQI Data for Northampton County, PA

Year	Unhealthy for Sensitive Groups (Days)	Unhealthy (Days)
2004	16	1
2005	17	0
2006	10	1
2007	11	0
2008	6	0

Note: 2008 data is through October, 2008
U.S. EPA, 2008b

4.4.2 Environmental Consequences

4.4.2.1 No Action Alternative

Implementation of the No Action alternative would not change current conditions and therefore there would be no effect on the current air quality conditions in the region.

4.4.2.2 Preferred Alternative – Fort James III Subdivision

Emissions from construction activities would be expected as a result of the Proposed Action. These emissions would be temporary and only occur during the construction period. Construction of the Proposed Action would involve equipment mobilization, site preparation, foundations, exterior masonry work, and interior and exterior utilities. Hence, the main air quality concerns would include emissions resulting from operations of 1) on-site construction equipment and 2) motor vehicles including construction/material delivery trucks and worker vehicles. During construction, techniques to minimize fugitive dust would be employed, as appropriate, to minimize construction emissions. All controls on fugitive dust would conform to established regulations.

Northampton County is in attainment for all criteria air pollutants; therefore a General Conformity Applicability Analysis is not warranted. Long term air quality impacts would be expected from the operation of the USARC including commuter vehicles, water heating, and boiler use. However,

because the new facilities are replacing the existing Wilson Kramer USARC which is located in the same airshed, these impacts are expected to be negligible and would have no significant impact on the local or regional air quality.

4.5 NOISE

Noise is generally defined as unwanted sound. Sound is all around us; it becomes noise when it interferes with normal activities such as speech, concentration, or sleep. Noise associated with military installations is a factor in land use planning both on- and off-base. In particular, noise associated with airfield and airspace operations can be of concern to on-base personnel and surrounding communities. Noise also emanates from vehicular traffic associated with new facilities and from project sites during construction. Ambient noise (the existing background noise environment) can be generated by a number of noise sources, including mobile sources, such as airplanes, automobiles, trucks, and trains; and stationary sources such as construction sites, machinery, or industrial operations. In addition, there is an existing and variable level of natural ambient noise from sources such as wind, streams and rivers, wildlife and other sources.

The Noise Control Act of 1972 (42 U.S.C. 4901 to 4918) was enacted to establish noise control standards and to regulate noise emissions from commercial products such as transportation and construction equipment. The Noise Control Act exempts noise from military weapons or equipment designated for combat use.

The standard measurement unit of noise is the decibel (dB), which represents the acoustical energy present. Noise levels are measured in A-weighted decibels (dBA), a logarithmic scale which approaches the sensitivity of the human ear across the frequency spectrum. A 3-dB increase is equivalent to doubling the sound pressure level, but is barely perceptible to the human ear. Table 4-4 presents some familiar sounds and their decibel levels.

Federal and local governments have developed their own standards, which are often used to determine acceptable noise levels for the purpose of protecting individuals from hearing damage. For example, the U.S. EPA has established both indoor and outdoor levels, which aim to protect public health and welfare by taking into account levels that will prevent hearing damage, sleep disturbance, and communication disruption. An outdoor limit of 55 dB and an indoor limit of 45 dB will protect against speech interference and sleep disturbance for noise sensitive receptors, which include but are not limited to residences, schools, medical facilities, and churches. The Occupational Safety and Health

Administration (OSHA) has developed a workplace noise exposure standard of 90 dBA for the duration of an 8-hour period, with a maximum of 140 dBA for impulsive noise, such as a siren or gunshot.

Table 4-4. Familiar Sounds and Their Decibel Levels (dB)

Sound	Decibel Level (dB)
Whisper	30
Normal Conversation	50-65
Vacuum cleaner at 10 feet	70
Lawnmower	85-90
Train	100
Nearby Jet Takeoff	130

Source: NYCDEP, 2008

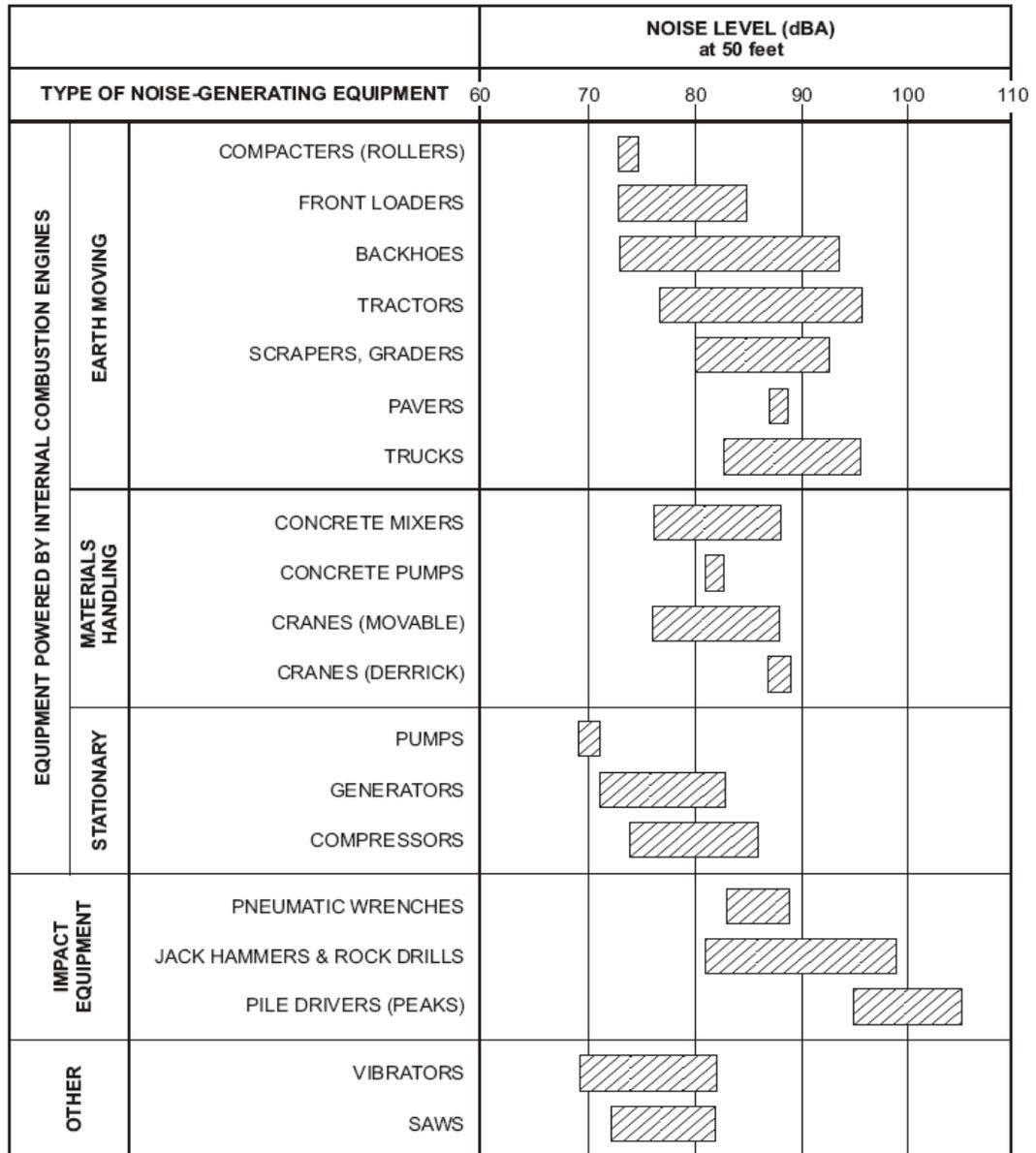
Noise From Construction: Instances of increased noise are expected during the construction phase associated with any project. Measures that serve to limit noise during construction include limiting on-site activities to daytime hours; limiting truck traffic ingress/egress to the site to daytime hours; promoting awareness that producing prominent discrete tones and periodic noises (e.g., excessive dump truck gate banging) should be avoided as much as possible; requiring that work crews seek pre-approval for any weekend activities, or activities outside of daytime hours; and employing noise-controlled construction equipment to the maximum extent possible. Typical construction equipment and operation noise levels are presented in Figure 4-3.

As a general rule for estimating noise emission, sound from a stationary source will diminish approximately 5 dBA with each doubling of distance (FTA, 2006). For example, if a noise from a source reaches 75 dBA at 50 feet, it will be 70 dBA at 100 feet and 65 dBA at 200 feet, and so on. Since high levels of noise can affect the health of construction/demolition workers, application of federal OSHA standards for occupational noise exposure associated with construction (29 CFR 1926.52) is also required.

4.5.1 Affected Environment

On-site sources of noise are negligible in comparison to off-site sources in the vicinity of the Fort James III Subdivision. Currently the preferred site location is vacant land. The only noise being generated on site is temporary in nature and limited to construction vehicles that may be performing earth moving activities while preparing the site for future development/sale. In the Fort James III Subdivision to the

Figure 4-3. Typical Construction Equipment Noise Levels



Source: U.S. EPA, 1971.

south of the preferred site location two new warehousing/distribution facilities are expected to be operational within the year (The Express-Times, 2007), which is prior to implementation of the Proposed Action if it goes forward. Once operational, these facilities will become part of the existing noise environment. Noise from these facilities would likely be generated by heating, ventilation, and air conditioning (HVAC) systems as well as truck traffic entering and leaving the distribution centers. Other substantial contributions to noise in the project vicinity include small aircraft related to the

Braden Airpark, which is located approximately one mile southwest of the site. There are no schools or other sensitive receptors located in the immediate vicinity of the site.

4.5.1.1 Noise from Facility and Vehicle Operations

Once facilities are constructed, noise can be generated from facility operations and the vehicles associated with these facilities. Aside from negligible HVAC related noise, the majority of operations at military facilities do not generate high levels of noise themselves. Most noise is usually created by vehicles associated with these facilities, including organizational vehicles used for training and operations, government and private delivery vehicles, commuter shuttles or buses, and personal vehicles used for commuting purposes. However, the noise impact created by facility and vehicle operations is rarely considered significant.

4.5.2 Environmental Consequences

The following criteria have been developed to assess noise impacts:

No Effect – Natural sounds would prevail; noise generated by construction and operation of the facility would be infrequent or absent, mostly immeasurable.

No Significant Effect – Noise levels would exceed natural sounds, as described under no effect, but would not exceed applicable noise standards.

Significant Effect – Noise levels would exceed applicable noise standards on a temporary, short-term, or permanent basis or for a prolonged period of time.

4.5.2.1 No Action Alternative

No effects would be expected. Implementation of the No Action alternative would not alter the existing noise at the Fort James III Subdivision.

4.5.2.2 Preferred Alternative – Fort James III Subdivision

Noise From Construction – Temporary adverse noise impacts related to construction activities would be expected to occur. No demolition activities would be required. Site preparation for constructing the new facilities would involve the use of heavy machinery, including earth moving, materials handling and impact equipment. These activities typically generate noise levels of 85 dBA at 50 feet from the source. At these levels, impacts would not be significant and could be further reduced by employing noise-controlled construction equipment to the extent possible and confining construction activities to

normal working hours, between 7:00 a.m. and 6:00 p.m. on weekdays, when existing ambient noise levels in the vicinity of the site are at their highest.

The arrival and staging of heavy equipment and materials would be scheduled to occur during normal work hours to the greatest extent possible to avoid noise disturbances to adjacent properties. Contractors would be expected to comply with any applicable noise regulations and local ordinances regarding construction noise. Compliance with the OSHA standards for occupational noise exposure associated with construction (29 CFR 1926.52) would address the construction workers hearing protection. As a result, construction would contribute only minimally to existing noise levels.

Noise from Facility Operations – Once the USARC is constructed; noise would be generated from the day-to-day use of the facilities. Aside from negligible HVAC related noise, most noise would be created by vehicles associated with the USARC, including organizational vehicles used for training and operations, government and private delivery vehicles, and personal vehicles used for commuting purposes. The noise impact created by facility and vehicle operations is rarely considered significant.

Under the Proposed Action, there would be an estimated increase of approximately 228 personnel relocating to the proposed USARC. However, as a reserve center, the majority of these individuals will be reporting to the site on weekends and not all report on the same weekend. The maximum number of individuals reporting on any given weekend is expected to be approximately 153 and would only contribute negligible amounts of noise to the current environment. The 20 full-time personnel commuting to the site daily would also only contribute negligible amounts of traffic noise to the current noise environment.

In addition to commuter traffic, vehicle maintenance operations associated with the OMS would contribute to the noise environment. However, only routine maintenance would be performed and therefore would only contribute negligible amounts of noise to the existing noise environment.

Since the Fort James III Subdivision is characterized by industrial/commercial uses, with two warehousing/storage facilities expected to be in operation to the south of the USARC, construction of the USARC, and the minimal noise associated with the USARC during the weekday and weekend drill periods would not present a substantial increase over existing noise levels. The addition of vehicles and personnel into the area, while contributing incrementally to noise in the site vicinity, would not present a substantial change to existing noise levels. Therefore, overall noise-related impacts from the proposed USARC and its associated facilities would not be significant.

4.6 GEOLOGY AND SOILS

4.6.1 Affected Environment

Geological resources consist of all bedrock and soil materials within an area. Geologic factors such as soil stability and seismic properties influence the stability of structures. Soil, in general, refers to unconsolidated earthen materials overlying bedrock and other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erodability all determine the ability for the ground to support structures and facilities. Soils typically are described in terms of their type, slope, physical characteristics, and relative compatibility or limitations with regard to particular construction activities and types of land use. Topography consists of the physiographic, or surface, features of an area and is usually described with respect to elevation, slope, aspect, and landforms. Long-term geological, erosional, and depositional processes typically influence topographic relief of an area.

4.6.1.1 Geologic and Topographic Conditions

The Fort James III Subdivision site is situated within the Great Valley Section of the Piedmont Physiographic Province of Pennsylvania, which consists of a very broad lowland that lies south of Blue Mountain in southeastern Pennsylvania. The lowland has gently undulating hills eroded into shales and siltstones on the north side of the valley and a lower elevation flatter landscape developed on limestones and dolomites on the south side (PADCNr, 2008). Geologically, the site is located on the Allentown formation and is underlain by dolomite and limestone of the Cambrian age. The site itself contains approximately 8.6 acres of undeveloped land, though it has been substantially modified by the current property owner through grading and other earth moving activities. The topography of the site and vicinity is characterized by moderately rolling hills, with elevations ranging from approximately 350 to 400 feet above sea level.

4.6.1.2 Soils

Major soils associations occur in the vicinity of the project site are: Clarksburg silt loam; Duffield and Duffield-Ryder silt loam; Washington silt loam; and limestone udorthents. These soils are described as deep to very deep, moderately to well drained soils formed in old glacial drift, in residuum from limestone bedrock, calcareous and noncalcareous shale, and sandstone. The only soils found within the proposed project site itself are Washington Silt Loam soils, which are described in Table 4-5 (USDA, 2008).

Table 4-5. Soils Identified within the Fort James III Subdivision Project Area

Soil Mapping Unit	Site	Soil Characteristics	Hydric Soil ¹	Important Farmlands ²
Washington silt loam	Preferred Site	The Washington component is found in valleys and uplands. Slopes are 3 to 8 percent at the project site. The parent material consists of local till derived from limestone. Depth to a root restrictive layer, bedrock, lithic, is 60 to 99 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 2e.	This soil does not meet hydric criteria.	Areas with this type of soil mapping unit are considered Prime Farmlands

Notes: ¹ Hydric Soils - Those soils that are sufficiently wet in the upper part to develop anaerobic conditions during the growing season. Considered one of the three indicators of the presence of wetlands (i.e., hydric soils, hydrophytic vegetation, and hydrology).

² Prime farmland designation does not constitute a recommendation for a particular land use. In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply (USDA, 2008).

"Prime farmland" is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland. Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses (USDA, 2008).

4.6.1.3 Prime Farmland

The Farmland Protection Policy Act (FPPA) was passed in order to minimize the amount of land irreversibly converted from farmland due to Federal actions. Prime farmland, as defined by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas (NRCS, 2008). Land that is zoned for commercial development, such as the Preferred Alternative site, does not qualify as Prime Farmland, and is therefore not subject to the FPPA.

4.6.2 Environmental Consequences

To assess the magnitude of impacts to geology, topography, and soils in the area of the project sites, the following impact thresholds were used.

No Effect - Geology, topography, or soils would not be impacted or the impact to these resources would be below or at the lower levels of detection. Any impacts would be slight.

No Significant Effect - Impacts to geology, topography, or soils would be detectable. Impacts to undisturbed areas would be proportionally small to the site.

Significant - Impacts on geology, topography, or soils would be readily apparent and result in a change to the character of the resource over a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and may or may not be successful.

4.6.2.1 No Action Alternative

No impacts would be expected. Implementation of the No Action alternative would not alter the existing soils or geologic conditions at the site being considered under the Proposed Action.

4.6.2.2 Preferred Alternative – Fort James III Subdivision

Geologic and Topographic Conditions – No significant adverse impacts to geologic or topographic conditions would be expected under the Preferred Alternative. The site is relatively flat. Construction of new facilities would not require extensive site preparation. As a result, considerable alterations of the general topographic character of the site would not occur.

Soils – No significant adverse impacts to soils would be expected under the Preferred Alternative. In preparation for the future development/sale of the property within the Fort James III Subdivision the current land owner has substantially disturbed the existing soils through grading and other earth moving activities. While construction activities for the proposed USARC facilities would compact soils, require minor leveling and grading, and disturb soil layer structure, these impacts would be considered minor and not significant, given the extensive soil modifications that have already occurred on the site.

During construction activities soil erosion and sediment production would be minimized by following a state approved sediment and erosion control plan. Soil productivity (the capacity of the soil to produce vegetative biomass) would be eliminated on-site in the footprints of the building structures and parking facilities. Disturbed areas outside of these footprints, however, would be reseeded and landscaped following construction activities, and soil productivity in these areas would return. In addition,

measures would be included in site plans to minimize long term erosion and sediment production at the site.

Prime Farmland – No impacts to prime farmlands would be expected. Although the site contains soils considered prime farmland, the proposed project site is zoned as commercial/industrial and therefore is not subject to the FPPA. The Proposed Action would also not remove prime farmland from the prime farmland inventory as the property has already been removed by local land use planning and zoning.

4.7 WATER RESOURCES

4.7.1 Affected Environment

4.7.1.1 Surface Water

The preferred site for the Proposed Action (i.e. Fort James III Subdivision in Forks Township, Northampton County, PA) is located in the Delaware River Basin, Bushkill Watershed. There are no natural surface water bodies on the site or in close proximity. The nearest water body is the Bushkill Creek located approximately one mile to the west of the site. The Delaware River is located just over one mile to the east. Stormwater from the site is discharged to groundwater via percolation and to a drainage ditch along the western border of the property (USACE, 2008b). The drainage ditch eventually discharges to Bushkill Creek.

Wetlands – The National Wetland Inventory (NWI) map indicates that there are no wetlands located on or in close proximity to the proposed site.

4.7.1.2 Hydrogeology/Groundwater

There are no water wells or public supply wells on or in the immediate vicinity of the preferred site for the Proposed Action. However, based on soils present in the vicinity, the depth to the water table is likely to be 3 to 6 feet (EcolSciences, 2005). According to a study of estimated ground-water availability in the Delaware River Basin, 1997-2000 (Sloto and Buxton, 2007) ground water withdrawal in the Bushkill Watershed was 0.364 million gallons per day per square mile ((Mgal/d)/mi²). However, only 0.001((Mgal/d)/mi²) was for domestic water use. According to the study, the major source of groundwater withdrawal was from mining operations to dewater quarries.

4.7.1.3 Floodplains

The drainage ditch that runs in a north-south orientation just west of the preferred site has a 100-year floodplain associated with it (PADEP, 2008). However, the preferred site for the USARC lies outside of this 100-year floodplain (USACE, 2008b).

4.7.1.4 Coastal Zone

The preferred site for the Proposed Action is not located within the Pennsylvania coastal zone (PADEP, 2008).

4.7.2 Environmental Consequences

An assessment of impacts to water resources at Fort Hamilton was conducted and the following thresholds are used to describe the level of magnitude of these effects:

No Effect – Current water quality and hydrologic conditions would not be altered or conditions do not exist for impacts to occur.

No Significant Effect – Impacts (chemical, physical, or biological effects) would be either not detectable, or detectable, but at or below water quality standards or criteria. Alterations in water quality and hydrologic conditions relative to historical baseline may occur, however, only on a localized and short-term basis.

Significant Effect – Impacts (chemical, physical, or biological effects) would be detectable and would be frequently altered from the historical baseline or desired water quality conditions; and/or chemical, physical, or biological water quality standards or criteria would be locally, slightly and singularly, exceeded on either a short-term or prolonged basis.

4.7.2.1 No Action Alternative

Under the No Action Alternative, there would be no effect on area water resources.

4.7.2.2 Preferred Alternative – Fort James III Subdivision

Surface Water/Wetlands – No effects would be expected as there are no surface waters or wetlands on or in close proximity to the preferred site within the Fort James III Subdivision. During site preparation, earthworks, and construction activities on the site, Best Management Practices (BMPs) for erosion and sediment controls would ensure that stormwater runoff would not impact Bushkill Creek via discharge to the drainage ditch to the west of the project site. Potential BMPs include installation of silt fences,

coverage of soil piles with mulch, installation of hay bales, and maintaining exposed surface soils in a damp state.

The proposed project would create approximately 2.7 acres of impervious surfaces; increasing the amount of stormwater runoff produced on-site. Specific stormwater management measures for the Proposed Action have not yet been designed. However, all stormwater generated on-site from the proposed facilities would be treated for both quality and quantity on-site and any stormwater that may be discharged off-site would meet all state and local regulatory and permit requirements, thus minimizing any potential impacts to surface waters. Potential solutions for treating stormwater quality and quantity could include installing oil-water separators (OWS) and creating a stormwater management basin on-site. Final calculations for the amount of stormwater expected to be generated by the new USARC facilities and how that stormwater will be adequately managed for both quality and quantity will be finalized during the facility design process.

The OMS conducts routine vehicle maintenance operations (e.g. oil changes etc.) so the potential for fuel and lubricant spills at the proposed facilities suggests that there may be minor effects associated with the operation of the new USARC. However, as has been the standard for other USARCs/OMSs that the Army has constructed recently, the proposed OMS design would likely include floor drains that convey flow through an OWS prior to discharging to either the stormwater management facilities or sanitary sewer system, thus minimizing or eliminating the likelihood of pollutants entering the stormwater.

Hydrogeology/Groundwater - No significant impacts to groundwater resources would be expected. Construction and operation of facilities on the site would adhere to existing applicable groundwater protection protocols as required under the Safe Drinking Water Act. Leaks from vehicles and vehicle maintenance operations could pose a threat to groundwater resources. However, the potential for spills and leaks to impact groundwater would be minimized by the paving of the MEP area thus preventing infiltration of pollutants into the soils and groundwater, on-site clean-up procedures and equipment, the likely installation of an OWS(s) associated with the OMS, and adherence to Army safety procedures for vehicle maintenance and the operation of equipment. In addition, vehicle operations and maintenance performed at the OMS only involves small amounts of fuels, oils, and lubricants, thus substantially reducing the potential for larger spills or leaks.

All of these measures would help ensure that any potential effects to groundwater would likely be negligible and have no significant impacts.

Floodplains – The preferred site for the proposed USARC lies outside the 100-year floodplain so there would be no effects.

Coastal Zone - The preferred site for the USARC lies outside the Pennsylvania Coastal Zone so there would be no effects.

4.8 BIOLOGICAL RESOURCES

4.8.1 Affected Environment

4.8.1.1 Vegetation

The Preferred Alternative site at the Fort James III Subdivision consists of approximately 8.6 acres of vacant land that was used for agricultural crops in the past. The site has been substantially modified by the current landowner/developer through grading and other earth moving activities. Currently, minimal vegetation, consisting mostly of grasses and weeds occurs on the property. There are also some scattered, mixed hardwood trees that line the western boundary of the property.

4.8.1.2 Wildlife

At present, the proposed site has not had a comprehensive inventory of wildlife resources. However, wildlife species occurring at the site would be typical of those that inhabit or migrate through the Mid-Atlantic Region, inhabit open fields with scattered trees and are tolerant to human disturbances. Given the proposed site is located in a developing industrial park, wildlife species expected to occur include grey squirrel (*Sciurus carolinensis*), white-tailed deer (*Odocoileus virginianus*), eastern cottontail (*Sylvilagus floridanus*), eastern chipmunk (*Tamias striatus*), and European starling (*Sturnus vulgaris*).

4.8.1.3 Threatened, Endangered, and Sensitive Species

The U.S. Fish and Wildlife Service (USFWS) have responsibility for the listing of threatened and endangered species, and they make determinations as to whether formal Section 7 consultations under the Endangered Species Act (ESA) are necessary in regards to the Proposed Action.

The altered environment of the preferred site provides little high-quality habitat for species of plants and wildlife and it is not known to support any Federal- or Pennsylvania State-listed rare, threatened, or endangered species of plants or animals.

4.8.2 Environmental Consequences

The following thresholds were used to determine the magnitude of effects on wildlife and wildlife habitat and vegetation, with separate criteria being used to evaluate impacts to threatened and endangered species:

No Effect – No impacts to native species, their habitats, or the natural processes sustaining them would occur, or such conditions do not exist for impacts to occur.

No Significant Effect – Impacts would be detectable, but would not be expected to be outside the natural range of variability and would not have any long-term effects on native species, their habitats, or the natural processes sustaining them. Occasional responses to disturbance by some individuals could be expected, but without interference to feeding, reproduction, or other factors affecting population levels. Sufficient habitat would remain functional to maintain viability of all species.

Significant Effect – Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they would be expected to be outside the natural range of variability for long periods of time or be permanent. Population numbers, population structure, genetic variability, and other demographic factors for species might have large, short-term declines, with long-term population numbers significantly depressed. Frequent responses to disturbance by some individuals would be expected, with negative impacts to feeding, reproduction, or other factors resulting in a long-term decrease in population levels. Loss of habitat might affect the viability of at least some native species.

Impacts to threatened and endangered species were classified using the following terminology, as defined under the ESA:

No effect – The proposed action would not affect a listed species or designated critical habitat OR listed species or designated critical habitat are not present.

May affect / not likely to adversely affect – Effects on special status species are discountable (i.e., extremely unlikely to occur and not able to be meaningfully measured, detected, or evaluated) or completely beneficial.

May affect / likely to adversely affect – When an adverse effect to a listed species may occur as a direct or indirect result of proposed actions and the effect is either not discountable or completely beneficial.

Likely to jeopardize proposed species/adversely modify proposed critical habitat – The appropriate conclusion when the Army Reserve identifies situations in which actions could jeopardize the continued existence of a proposed species or adversely modify critical habitat to a species within and/or outside the proposed project boundaries.

4.8.2.1 No Action Alternative

Under the No Action alternative, the proposed new USARC would not be constructed on the preferred site; therefore, no impacts to biological resources would occur.

4.8.2.2 Preferred Alternative – Fort James III Subdivision

Vegetation – No significant adverse effects would be expected as a result of implementing the Proposed Action at the Preferred Alternative site. With the exception of the few, scattered, trees along the western perimeter of the parcel, the site consists of vacant land that has been substantially disturbed with minimal vegetation on site, consisting mostly of grasses. The preferred site is large enough that with the required AT/FP setbacks it is unlikely that the trees along the western perimeter of the property would need to be cleared. Any grasses growing on the site would be disturbed during site preparation for the construction of the new facilities; however, new landscape vegetation would be planted around the facilities once construction is complete.

Wildlife – No significant adverse effects would be expected as a result of implementing the Proposed Action at the Preferred Alternative site. Some species, particularly birds, would be temporarily discouraged from the area through noise and/or dust. Wildlife in the immediate area would scatter to adjacent open areas and would gradually return once construction is complete. Diversity of wildlife on-site is limited and species that utilize this area have adapted to living in conditions in habits altered by humans.

Threatened, Endangered, and Sensitive Species – No federal- or state-listed threatened or endangered species are known to occur at the preferred site and the Proposed Action would be expected to have no adverse impacts on any Federal or state listed species.

As part of this EA, the 99th RSC initiated consultation with the USFWS, the PA Fish and Boat Commission (PAFBC), the PA Game Commission (PAGC), and the PA Department of Conservation and Natural Resources (PADCNR) seeking confirmation that implementing the Proposed Action at the Preferred Alternative site will not adversely impact any federal- or state-listed species. Initial consultation letters were sent to the USFWS, PAFBC, PAGC, and PADCNR on January 20, 2009 and are included in Appendix B. Appendix B will include responding correspondence from the USFWS, PAFBC, PAGC, and PADCNR when it has been received.

4.9 CULTURAL RESOURCES

This section assesses impacts on buildings, sites, structures, districts, and objects eligible for, or included in, the National Register of Historic Places (NRHP); National Historic Landmarks (NHL); archaeological resources as defined by the Archaeological Resources Protection Act of 1979; and Native American sacred sites for which access is protected under Executive Order 13007 (1996) and the American Indian Religious Freedom Act (AIRFA) of 1978.

This section is drawn from review and research of information from the Pennsylvania State Historic Preservation Office's Cultural Resources Geographic Information System. In addition, it includes a review of the National Park Service's online listing of NRHP properties. It also includes field research conducted in November 2008, and Native American consultation conducted as part of NEPA compliance activities for this project.

4.9.1 Affected Environment

The ROI is equivalent to the Area of Potential Effects (APE) under Section 106 of the National Historic Preservation Act (36 CFR 800.16[d]). It is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The cultural resources ROI considered for this project includes the area immediately surrounding the proposed Army Reserve Center site, taking into consideration the built environment within the viewshed of the proposed undertaking.

The preferred site encompasses approximately 8.6 acres in the Fort James III Subdivision, Forks Township, Pennsylvania. The subdivision is under development as an industrial park. The current land owner/developer is currently preparing the preferred site (and the subdivision as a whole) for future development/sale and has substantially modified the site through the installation of underground utilities, grading of the site with heavy construction machinery and stockpiling dirt from excavations on

adjacent lots in the subdivision. This site development is being undertaken by the owner/developer and is independent of the possible future development of this site by the Army.

4.9.1.1 Prehistoric and Historic Background

The preferred site is located in the Great Valley Section of the Ridge and Valley Physiographic Province. It is in the Delaware River Basin, Bushkill Creek Watershed. This portion of the state was near the last glacial maximum during the late Pleistocene.

The prehistory of Pennsylvania began circa 14,000 B.C., with the first settlement of the region by nomadic hunting and gathering groups. Prehistorians have defined four major periods of cultural development in Pennsylvania: the Paleoindian (14,000 to 8000 B.C.), Archaic (8000 to 1800 B.C.), Transitional (1800 to 1200 B.C.), and Woodland (1200 B.C. to A.D. 1500) periods. The periods mark points in a progression from highly mobile hunter-gatherers (Paleoindians) to sedentary villagers who were engaged in various forms of plant and fish harvesting (Woodland).

The environment of the region was dynamic in prehistory, and played a role in regional settlement patterns and lifeways. The Paleoindian period coincided with the end of the Pleistocene era, when the climate was considerably colder than today and the landscape was dominated by taiga/boreal forests. The subsequent Archaic period coincided with the advent of the Holocene era, and the onset of more contemporary climactic conditions.

Paleoindian settlement patterns in Pennsylvania were characterized by a semi-nomadic existence within a defined territory, with a focus on hunting and the exploitation of sources of high-quality stone for the manufacturing of tools. Pleistocene megafauna, such as mastodon and mammoth, may have been hunted during the early portion of this period, while the hunting emphasis after 10,000 B.C. was likely on deer, elk, and caribou. Based on data from the Shawnee-Minisink site in Monroe County, the Paleoindian diet also included a variety of seeds, hawthorn plums, blackberries, and fish remains. Sites have been identified at rock overhangs, on well-drained landforms near streams and inland swamps, as well as at other highly productive habitats (PHMC, 2008). Paleoindian artifacts have also been recovered near sources of high quality stone used for tool-making.

During the Archaic period, indigenous groups expanded their subsistence base and began to take advantage of the emergent deciduous forests. Sites have been found in a wide variety of settings, including: upland landforms, swamp margins, estuarine settings, and near springs (Custer, 1989). Prehistorians believe that population densities rose markedly over the course of the Archaic period,

with groups gradually living in smaller territories and developing micro-regional cultures (PHMC, 2008). The end of the Archaic period, circa 3000 B.C., marked the beginning of intensive gathering and processing of tree and plant food resources by native peoples, as well as the intensive exploitation of fish and shellfish resources. Toolkits expanded during this period to include a variety of woodworking tools (adzes, celts, axes) and durable food processing tools (such as mortars, and pestles) (PHMC, 2008). Large sites have been identified along major streams, and are thought to relate to seasonal fish and shellfish harvesting. Smaller sites have been identified in upland and interior locales, and are thought to relate to seasonal exploitation of plant resources.

At the end of the Archaic Period (circa 1800 B.C.) two distinctive artifacts appear in the archaeological record – steatite bowls and broadspear projectile points. These artifacts are taken together as hallmarks of the Transitional Period. Sites from this period are commonly found on terraces along major streams. Artifacts suggest that long distance trade networks were established, perhaps linking the people of the Middle Atlantic region to cultures developing in the southeastern U.S. and in the Ohio and Mississippi Valleys (PHMC, 2008).

The Woodland period was a time when indigenous groups became increasingly focused on agriculture and when settlements became more focused on year-round encampments. Smaller procurement sites have been identified in upland settings. Fish, wild plants, and game continued to be highly important parts of the diet for most local groups in Pennsylvania. The period is marked by the introduction of ceramics. Early ceramics were initially modeled after their steatite precursors, but gradually became thinner and more refined, more elaborately decorated, and more durable. There were changes over time in the extent of regional trade and interaction (PHMC, 2008).

Indian communities in the Delaware River basin had a long and complex set of interactions with European settlers. The native people in the area are generally known as the “Delaware Indians” or “Lenni Lenape”. This portion of the upper Delaware River was initially settled by Dutch traders in 1710. More substantial settlement came in 1728-1730, when thirty Scotch-Irish families settled near today’s Allen Township. Indian communities remained relatively stable in the area until 1737, when the well-known “Walking Purchase” took place. Through this acquisition, the Lenni Lenape were largely displaced from the upper Delaware basin. A noteworthy exception was Moses Tunda Tatamy, or Tashawaylennahan, who was a Lenape translator and guide. In gratitude for his service to the Penn family, he was given 325 acres in the Lehigh Valley, including what would become Forks Township. The land was first given to Mr. Tatamy in 1738, and transfer was solidified by a more formal sale in

1741. He remained in Forks Township with his family until his death in approximately 1760. The Borough of Tatamy was named after him (Henry, 1860 and Ellis, 1887).

European settlement of the Lehigh Valley grew markedly after the Walking Purchase of 1737. Moravian missionaries were part of the early settlement, and the missionaries formed the communities of Nazareth (1740) and Bethlehem (1741). Easton was also established in the middle of the eighteenth century. The French and Indian War (1754-1763) caused some disruptions in the area, although there were no major conflicts, and settlement of the Lehigh Valley grew after the war's end (Henry, 1860 and Ellis, 1887).

Bethlehem and the Lehigh Valley have a long industrial history. Coal mining began in the late eighteenth century and developed into a major industry in the nineteenth century. Transportation systems developed in the nineteenth century to facilitate the transport of coal to Philadelphia and to the northeast. This included canals, which were constructed through the Lehigh Valley in the 1820s, and railroads which followed after the canals and were constructed along the valley in the middle of the nineteenth century. Iron production in Bethlehem started in 1857 by what would become the Bethlehem Steel Corporation. The Bethlehem area continued to grow as an industrial center in the late nineteenth and first half of the twentieth century (Henry, 1860 and Levering, 1903).

Forks Township lies to the north of the Lehigh River, northeast of Bethlehem, and the area remained primarily rural and agricultural throughout its history. The lands were principally settled by German immigrants in the last half of the eighteenth century. While most of the land was used for farming, the Bushkill River, Little Bushkill River, and their tributaries were used for milling and other industrial purposes in the eighteenth and nineteenth centuries (Ellis, 1877). The Stockertown area was involved in cement manufacturing in the early twentieth century, with gravel mines in Tatamy and the surrounding area. Railroads were established in the area in the 1870s, eventually known as the Lehigh and New England Railroad. The rail lines ran near the preferred site to the west and south. The preferred site appears to have been either farmland or undeveloped during the late nineteenth and twentieth centuries.

4.9.1.2 Status of Cultural Resource Inventories and Section 106 Consultations

The preferred site for the USARC has not been previously inventoried for built resources (buildings, sites, structures, districts, or objects) or archaeological resources and there has been no prior Section 106 consultation regarding the site.

The proposed location for the USARC has no standing structures and is not part of a planned landscape. There are no NRHP-listed or NRHP-eligible built resources (buildings, sites, structures, districts, or objects) within the ROI for the preferred site.

The preferred site has not been previously surveyed for archaeological resources and contains no identified archaeological sites. Two archaeological surveys have been conducted nearby and identified no resources near the preferred site (French, 2005; Bergman, 1991). The preferred site locale is an area of low archaeological potential given the extensive ground disturbance that has occurred in the area. No archaeological resources are likely in the area.

Due to the preferred site being substantially disturbed by the current land owner/developer, and in accordance with Pennsylvania State Historic Preservation Office (SHPO) guidelines, a Record of Disturbance Form has been prepared and transmitted to the SHPO (see Appendix B). This accompanied an Intergovernmental and Interagency Coordination letter that was sent to the Pennsylvania SHPO on January 20, 2009 describing the proposed BRAC action in the Allentown-Bethlehem, PA area (see Appendix B). Appendix B will include responding correspondence from the PA SHPO when it has been received.

4.9.1.3 Native American Resources

To date, no traditional cultural properties or Native American sacred sites have been recorded at the preferred site. On January 20, 2009 an initial coordination letter describing the Proposed Action was sent to the Delaware Nation (see Appendix B). The tribe has expressed an interest in consulting on projects in Pennsylvania. Appendix B will include responding correspondence from the tribe when it has been received.

4.9.2 Environmental Consequences

Potential impacts to cultural resources have been evaluated based on the extent of resources that are eligible for or listed on the NRHP in the area. This analysis parallels the procedures for determining the effects of a Federal undertaking upon historic properties under 36 CFR 800 implementing Section 106 of the NHPA.

For each valid alternative in the EA, an assessment has been made of what NRHP resources, if any, are within its potential area of impact and the reasonably foreseeable nature and extent of any impact. Usually, Cultural Resource Management Plans and underlying historic architectural and archaeological

studies for Federal installations provide sufficient data to make this assessment. Where such information is inadequate, the requirement for additional effort to identify historic properties is noted.

The following provides an explanation of the characterization of impacts to cultural resources as “no effect, not significant, and significant” in comparison with the terminology of “no effect, no adverse effect, and adverse effect” used in NHPA.

Section 106 Scale

Per 36 CFR 800.11 (i) *effect* means alteration to the characteristics of a historic property that qualify it for inclusion or eligibility for the National Register. Per 36 CFR 800.5 (a) (1), the effect becomes *adverse* when “an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.” Examples of adverse effects include: the physical destruction of all or part of the historic property; an alteration of the property that is not consistent with the Secretary of Interior’s Standards for the Treatment of Historic Properties (36 CFR 68); the removal of the property from its historic setting; changing the character of the property’s use or of the physical features of its setting that contribute to its significance; and the introduction of visual, aural, and atmospheric elements that diminish the integrity of the property’s significant historic features.

Environmental Impacts to Cultural Resources vs. the Section 106 Scale

No effect – This equates to *no effect* for Section 106.

No Significant Effect – An impact that alters or has the potential to alter the historic characteristics or setting of an NRHP property but does not diminish its integrity. This equates to *no adverse effect* for Section 106.

Significant Effect – An impact that diminishes or destroys the integrity of an NRHP property. This equates to *adverse effect* for Section 106.

In the practice of Section 106 consultation, adverse effects can often, but not always, be mitigated, when the loss of integrity of the NRHP resource is justified, and/or balanced against other competing interests. The results of the consultation process are usually memorialized in a Section 106 Memorandum of Agreement containing mitigation stipulations. Neither the initial identification of a significant impact to cultural resources or a determination of adverse effect under Section 106 necessarily precludes a FNSI under NEPA. The loss of NRHP cultural resources would have to be

major in scale and importance and without any acceptable feasible mitigation measures to negate a FNSI.

4.9.2.1 No Action Alternative

Under the No Action alternative the Army would not purchase and construct the USARC on the approximately 8.6 acre parcel within the Fort James III Subdivision. Therefore, there would be no effects on cultural resources.

4.9.2.2 Preferred Alternative – Fort James III Subdivision

Implementing the Proposed Action under the Preferred Alternative has been reviewed against the baseline knowledge of cultural resources at the 8.6 acre site in the Fort James III Subdivision. The proposed USARC would be constructed on a location where there are no archaeological resources or historic buildings, sites, structures, districts, or objects. The Preferred Alternative would therefore have no effects on cultural resources.

4.10 SOCIOECONOMICS

The Affected Environment and Environmental Consequences sections of the Socioeconomics resource area of this EA are presented in limited detail. This is due to the fact that none of the personnel relocating to the proposed USARC would be permanently moving into the ROI from the current USARC which is located just over the county line to the west in Lehigh County. Because there would be no change in the baseline population two resources, *Housing* and *Quality of Life*, which are normally addressed in Socioeconomics, are not evaluated in this EA.

4.10.1 Affected Environment

The socioeconomic ROI for Allentown-Bethlehem is Northampton County. This county comprises the area in which the predominant socioeconomic effects of the Proposed Action would take place. The geographical extent of the ROI is based on the location of businesses that would provide goods and services to the USARC and its employees.

The baseline year for the socioeconomic analysis is 2007, and though the analysis tries to reflect the most current conditions much of the economic and demographic data for the ROI are only available through the years 2005 and 2006. The description of the affected environment is based on the most recent data available to accurately reflect the current economic and social conditions of the ROI. Due to the fact that all of the personnel relocating to the proposed USARC would not be permanently

moving into the ROI only a brief overview of the regional economic activity and demographic data and trends is presented.

4.10.1.1 Economic Development

4.10.1.1.1 Regional Economic Activity

The ROI’s regional economy is composed of non-farm industries such as government and government enterprises, manufacturing, retail, professional and technical services, health care and social services, finance and insurance, construction, and accommodation and food services. These sectors account for virtually 100 percent of jobs in the ROI County. No one industry dominates the regional economy: retail trade (12.2 percent); government and government enterprises (11.9 percent); manufacturing (11.4 percent); healthcare and social assistance (8.9 percent); and construction (7.2 percent), these industries accounted for 66, 774 or 51.6 percent of jobs out of the a total of 129,457 jobs in the ROI in 2006 (Stats Indiana 2006). Farm jobs in the ROI are practically non-existent accounting for only 0.4 percent of jobs.

In 2007 the unemployment rate for the ROI was 4.4 percent which was below the national unemployment rate of 4.6 percent during the same period but the same as the Commonwealth of Pennsylvania’s unemployment rate of 4.4 percent. The ROI’s annual unemployment rate has decreased by 13.6 percent of the past 5 years (Stats Indiana, 2007a and 2007b).

4.10.1.2 Demographics

The ROI’s population was estimated to be 293,522 inhabitants in 2007. On average, the ROI has experienced a growth rate of 9 percent since 1980 (Stats Indiana, 2007c). Population data for the ROI, Pennsylvania, and the U.S. overall are provided in Table 4-6 for comparison purposes.

Table 4-6. Population Trends, 1980 -2007

Location	1980	1990	2000	2007
Northampton County (ROI)	225,418	247,110	267,066	293,522
Pennsylvania	11,864,720	11,882,842	12,281,054	12,432,792
United States	226,542,250	248,790,925	281,421,906	301,621,157

Source: Stats Indiana, 2007c and 2007d

4.10.1.3 Environmental Justice

On February 11, 1994, President Clinton issued EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. The EO is designed to focus the attention of federal agencies on the human health and environmental conditions in minority communities and low-income communities. Environmental justice analyses are performed to identify potential disproportionately high and adverse impacts from proposed actions and to identify alternatives that might mitigate these impacts. Data from the U.S Department of Commerce 2000 Census of Population and Housing were used for this environmental justice analysis. Minority populations included in the census are identified as Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and other Pacific Islander, Hispanic, of two or more races, and other. Poverty status, used in this EA to define low-income status, is reported as the number of persons with income below the poverty level. The 2000 Census defines the poverty level as \$8,794 of annual income, or less, for an individual, and \$17,603 of annual income, or less, for a family of four.

In 2005, the median household income was \$53,147 for Northampton County residents compared to \$44,545 for the commonwealth of Pennsylvania. The average poverty rate for the ROI in 2005 was 7.3 percent, which is lower than the national poverty rate of 13.3 percent, and Pennsylvania's state-wide poverty rate of 11.9 percent. In 2007, the ROI's population was comprised of the following ethnic groups: 92.8 percent white, 4.5 percent black, and 8.8 percent Hispanic. Note that these figures do not add to exactly 100 percent because Hispanics may be counted as white, black, and/or Hispanic by the U.S. Census Bureau, and hence there is a level of "double-classification". The elderly (65 plus) accounted for 14.5 percent of the ROI's population and the median age in the county is 39.3 (Stats Indiana, 2007c and 2005a, b, and c).

4.10.1.4 Protection of Children

On April 21, 1997, President Clinton issued Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This Executive Order directs each federal agency to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. EO 13045 recognizes that a growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health and safety risks. These risks arise because children's neurological, immunological, digestive, and other bodily systems are still developing; children eat more food, drink more fluids, and breathe more air in proportion to their body weight than adults; children's size and weight may diminish their protection from standard safety features; and children's behavior patterns make them more susceptible

to accidents because they are less able to protect themselves. Therefore, to the extent permitted by law and appropriate, and consistent with the agency's mission, President Clinton has directed each federal agency to (1) make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children, and (2) ensure that the agency's policies, programs, and standards address disproportionate health risks to children that result from environmental health risks or safety risks. Examples of risks to children include increased traffic volumes and industrial or production-oriented activities that would generate substances or pollutants children might come into contact with or ingest. Actions or alternatives indicating potential disproportionate risks to children will be identified and addressed in Section 4.10.2.1 and 4.10.2.2.4 of this EA.

4.10.2 Environmental Consequences

The economic effects of implementing the Proposed Action are estimated using the Economic Impact Forecast System (EIFS) model, a computer-based economic tool that calculates multipliers to estimate the direct and indirect effects resulting from a given action. Changes in spending and employment associated with the renovation of housing represent the direct effects of the 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.

For purposes of this analysis, a change is considered significant if it falls outside the historical range of ROI economic variation. To determine the historical range of economic variation, the EIFS model calculates a rational threshold value (RTV) profile for the ROI. This analytical process uses historical data for the ROI and calculates fluctuations in sales volume, income, employment, and population patterns. The historical extremes for the ROI become the thresholds of significance (i.e., the RTVs) for social and economic change. If the estimated effect of an action falls above the positive RTV or below the negative RTV, the effect is considered to be significant. Appendix C discusses this methodology in more detail.

4.10.2.1 No Action Alternative

No direct or indirect effects would be expected. Under the No Action alternative, the working population and expenditures in the ROI would remain unchanged from baseline levels and no new construction would take place. Therefore, economic activity levels and ROI population growth would be the same as under the baseline conditions and there would be no disproportionately high and adverse impacts to minority or low income populations. Hence, the No Action alternative would not result in any environmental justice impacts. Furthermore, no significant adverse impacts on children as related

to EO 13045 were identified for the No Action alternative, as Installation boundaries do not cross into areas with children populations. Hence, the No Action Alternative would result in no environmental justice impacts nor have any adverse impact on the children population.

4.10.2.2 Preferred Alternative – Fort James III Subdivision

4.10.2.2.1 Economic Development

Minor direct and indirect beneficial effects would be expected under the Proposed Action.

The total number of personnel relocating to the proposed USARC would be 228, of which 208 are reservists, and 20 of whom are full-time personnel. It is assumed that none of the 228 personnel relocating to the new USARC would be permanently moving into the ROI. Therefore, there would be no new incoming personnel to the ROI.

Construction expenditures on goods and services, equipment, and salaries under the Proposed Action are expected to be the major contributor to increased sales and employment, due to the associated increase in expenditures on labor and materials during the construction period, although this would be short-term in nature. These effects are assessed to be minor direct and indirect beneficial effects of the Proposed Action. The estimated construction start date is January 2010 with an estimated construction completion date of March 2011. It is assumed that the construction period would be approximately 14 months and that expenditures would be approximately \$15,497,000 for land acquisition and construction.

The Proposed Action would generate an estimated 61 direct and 122 induced jobs for a total of 184 jobs created within the ROI. This increase in employment would represent a 0.17 percent increase in the region's employment levels, and would fall far below the positive RTV of 5.21 percent. It should be noted that employment associated with construction activities would be temporary in nature and would not extend beyond 2011. The Proposed Action would also generate minor positive changes to other economic measures in the area, including a 0.52 percent increase in sales volume for a total of \$46,492,000 within the ROI, and a 0.12 percent increase in regional personal income. Again, these changes are very minor and do not exceed the positive RTVs for their respective categories. Tables 4-7, 4-8, and 4-9 provide summaries of the EIFS model inputs, outputs and RTV values respectively.

Table 4-7. Forecast Input for the EIFS Model

EIFS REPORT Northampton County – Forecast Input	
Change In Local Expenditures	\$15,497,000
Change In Civilian Employment	0
Average Income of Affected Civilian	\$0
Percent Expected to Relocate	0%
Change In Military Employment	0
Average Income of Affected Military	\$0
Percent of Military Living On-base	0%
Employment Multiplier	3.0
Income Multiplier	3.0

Table 4-8. EIFS Report for Allentown-Bethlehem USARC – Forecast Output

Forecast Output		
Employment Multiplier	3.0	
Income Multiplier	3.0	
Sales Volume – Direct	\$15,497,000	
Sales Volume – Induced	\$30,994,000	
Sales Volume – Total	\$46,492,000	0.52%
Income – Direct	\$2,484,768	
Income - Induced	\$4,969,537	
Income – Total (place of work)	\$7,454,306	0.12%
Employment – Direct	61	
Employment – Induced	122	
Employment – Total	184	0.17%
Local Population	0	
Local Off-base Population	0	0%

Table 4-9. EIFS Report for Allentown-Bethlehem USARC – RTV Summary

RTV Summary				
	Sales Volume	Income	Employment	Population
Positive RTV	13.29 %	11.16%	5.21%	1.63%
Negative RTV	-6.14 %	-5.07%	-3.43%	-0.44%

4.10.2.2.2 Demographics

No significant direct or indirect effects would be expected. Under the Proposed Action, there would be no military or civilian personnel permanently moving into the ROI; therefore, there would be no changes in the population of the ROI.

4.10.2.2.3 Environmental Justice

No effects would be expected. The Proposed Action would not result in adverse impacts on any demographic group residing or working within the economic ROI. Therefore, there would be no disproportionately high and/or adverse impacts on minority populations or low income populations.

4.10.2.2.4 Protection of Children

No significant direct or indirect effects would be expected. The Preferred Alternative site is located in a developing industrial park with no residential areas in the immediate vicinity of the proposed project site. The facilities would be fenced from general access and buffered from the surrounding industrial facilities. During construction activities all measures necessary would be taken to ensure there is no public access to the site. Operation of the facilities would not pose a health risk to children or to the general public. Therefore, there would be no adverse impacts or disproportionate effects on children.

4.11 TRANSPORTATION

4.11.1 Affected Environment

4.11.1.1 Roadways and Traffic

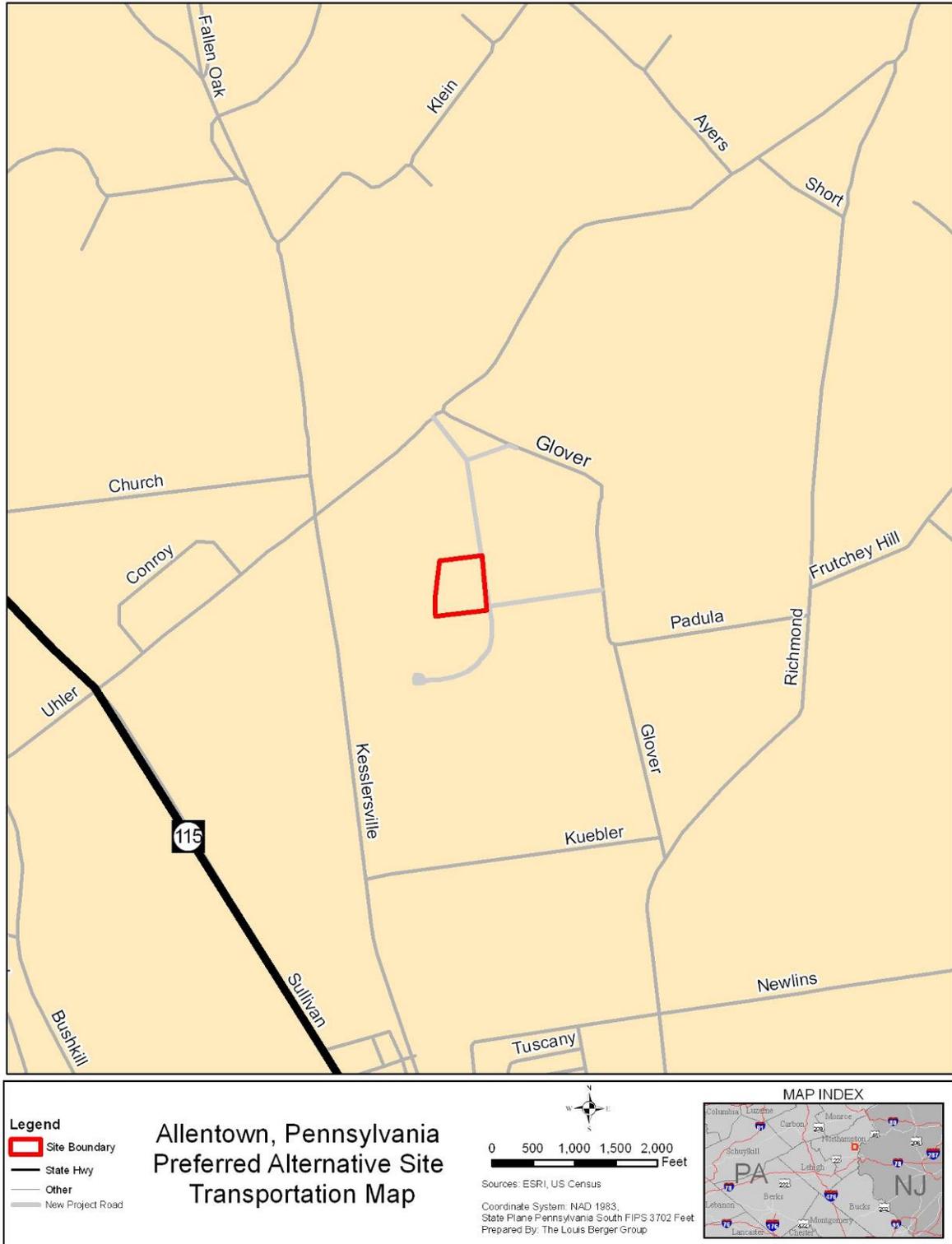
The proposed USARC would be constructed on land that will be purchased by the Army in an Industrial/Commercial complex and not on an existing military installation. The approximately 8.6 acre preferred site is located within the Fort James III Subdivision, Forks Township, Northampton County. This site is currently vacant and only produces minor sporadic traffic associated with site preparation work being done by the current land owner/developer.

4.11.2 Affected Environment

4.11.2.1 Roadways and Traffic

Local Area Roadways – The proposed site is accessible from an internal road within the Fort James III Subdivision (see Figure 4-4). This road connects directly to Uhler Road which is a two-lane arterial street. According to 2006 Pennsylvania Department of Transportation (PennDOT) data, the Average Annual

Figure 4-4. Local Area Transportation Map – Preferred Alternative Site



Daily Traffic (AADT) on Uhler Road is 5,100. Other regional roads in the vicinity of the proposed site include Route 115 (6,800 AADT) and Kesslersville Road (3,700 AADT) (PennDOT, 2006).

4.11.2.2 Public Transportation

Buses. The project site is currently served by several bus routes operated by Lehigh and Northampton Transportation Authority (LANTA). LANTA Route 5 operates locally between Center Square and the Forks/Palmer Industrial Park within close proximity to the proposed site. Service is provided twice during the morning peak period and twice during the afternoon peak period on weekdays. No service is provided on Saturdays and Sundays on this route. Service is also provided on LANTA Route S operating between Slate Belt and Bethlehem. This route operates on Main Street, Uhler Road, and Route 115 just under one mile from the proposed site. The route operates about every two hours on weekdays and Saturdays. No service is provided on Sundays (LANTA, n.d.).

Railways. There is no passenger rail that serves the study area.

4.11.3 Environmental Consequences

The following criteria have been developed to assess the transportation impacts for each of the alternatives:

No Effect – No alterations of traffic patterns and trends would result from the action.

No Significant Effect – Short- or long-term alterations of traffic patterns and trends would result from the action. The intersections and gates may reach capacity but this change would be temporary or managed through improvements.

Significant Effect – Traffic patterns would be permanently altered from the action. The intersections and gates would reach capacity and extensive delays would develop.

4.11.3.1 No Action Alternative

Implementing the No Action alternative would not alter the existing transportation infrastructure at the preferred site being considered under the Proposed Action or in surrounding areas. Therefore, no effects would be expected.

4.11.3.2 Preferred Alternative – Fort James III Subdivision

It is anticipated that the construction of the Preferred Alternative would be completed by 2011. Under the Preferred Alternative, no significant effects on traffic would be expected during the construction of

the proposed facility. However, some short-term adverse impacts could occur depending on the measures taken to manage disruptions, such as requiring most of the construction vehicles delivering materials to do so outside peak traffic hours and designating sufficient parking and storage space for construction related vehicles and materials. The construction project would be relatively small and construction related traffic is not expected to be significant.

It is projected that the approximately 20 full-time employees would access the site on weekdays. It is anticipated that most of these employees would arrive at the site during the morning peak period and depart the site during the afternoon peak period. The 208 reservists projected to be assigned to this USARC would only access the site on weekends. Since drilling occurs over the course of three weekends a month, not all units drill on the same weekend. As a result, the maximum number of reservists projected to access the site on any weekend would be 153. It is anticipated that all of the reservists would travel between the site and their homes/hotel on both Saturday and Sunday when they train since there would be no berthing facilities on the site. Similar to project weekday travel, all personnel would arrive at the site during the morning peak period and depart the site during the afternoon peak period on both weekend days.

An estimate of the trips generated by the proposed USARC was prepared using the procedures established by the Institute of Transportation Engineers (ITE) *Trip Generation*, Seventh Edition. The USARC use was modeled as an office building (General Office Building - Code 710) because the full-time employees and reservists are projected to arrive in the morning, stay throughout the day, and leave in the evening similar to office workers. Based on a survey of office developments, the trips generated were associated to an independent variable and time period of analysis (AM and PM peak hours on weekdays) through a regression analysis. Because the number of employees (full-time and reservists) is projected, this was used as the independent variable for projecting the total number of trips generated by the USARC during the AM and PM peak hours.

The directional distribution of trips entering and exiting the proposed development site were also estimated based upon the General Office Building Code (710) for the weekday AM and PM peak hours. The number of trips was calculated based upon 88 percent entering and 12 percent exiting during the AM peak hour and 17 percent entering and 83 percent exiting during the PM peak hour. These percentages were used to calculate the number of vehicles projected to exit the site during the AM peak hour and enter the site during the PM peak hour. These same percentages were used to calculate both weekday and weekend trips.

Using the trip generation procedure outlined by the ITE, the trips projected by the Proposed Action were estimated (Table 4-10). These trips reflect the net increase in activity as the result of implementing the Proposed Action under the Preferred Alternative.

Table 4-10. Additional Trips Generated by the Preferred Alternative

	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Weekday						
Armed Forces Reserve Center	13	1	14	2	15	17
Weekend						
Armed Forces Reserve Center	84	12	96	20	97	117

Based upon the relatively small number of additional trips generated under the Preferred Alternative, no significant effects would be expected during operations of the proposed USARC.

4.12 UTILITIES

4.12.1 Affected Environment

The ROI is defined as utility services on the Preferred Alternative site located within the Fort James III Subdivision site and any potential effects on public utility service providers in the area of these sites. Local municipal utility entities provide all major utilities (electricity, water, natural gas, and sewer). The new USARC facilities will have to tie into each of the local municipal utility systems which were extended to the proposed site as part of the overall development of the Fort James III Subdivision when the access road into the subdivision was constructed (Vozar, 2008). The local municipal utility entities are anticipated to have sufficient capacity to meet needs of the proposed USARC.

4.12.1.1 Potable Water Supply

Twelve inch municipal water supply lines are located along the access road into the Fort James III Subdivision site. According to the Easton Suburban Water Authority, the water system is capable of providing a domestic demand of approximately 15,000 gallons per month (USACE, 2008b).

4.12.1.2 Sanitary Sewer Service

There is no wastewater treatment facility located on the proposed Fort James III Subdivision site. Sanitary sewer service (collection) is provided by the Easton Area Joint Sewer Authority. An eight inch sanitary sewer line runs within the access road into the Fort James III Subdivision, and two

connection points are available to the Preferred Alternative site location for connection to the system (USACE, 2008b).

4.12.1.3 Electrical Service and Distribution

Electrical service is available from lines running adjacent to the access road into the Fort James III Subdivision site. The proposed new USARC facility would have immediate access to tie into existing electrical service provided by First Energy.

4.12.1.4 Stormwater System

Stormwater from the Preferred Alternative site is discharged to groundwater via percolation and to a drainage ditch along the western border of the property (USACE, 2008b). The drainage ditch eventually discharges to Bushkill Creek. There is a stormwater management basin located on Lot 14 of the Fort James III Subdivision, which is adjacent to the north of the Preferred Alternative site. This stormwater basin is sized to provide stormwater management control for Lots 4, 5, 6, 13, and 14 of the Fort James III Subdivision (USACE, 2008b).

4.12.1.5 Natural Gas

Natural Gas service is located along the access road into the Fort James III Subdivision. The proposed new USARC facility would have immediate access to tie into existing natural gas supply lines provided by UGI Utilities, Inc.

4.12.1.6 Communications

Communications system, such as telephone and cable are available via Verizon and are located along the access road into the Fort James III Subdivision. The new USARC facility would be able to access existing services located in close proximity to the site.

4.12.1.7 Solid Waste

There is no municipal solid waste landfill or a construction and demolition debris landfill located on the Fort James III Subdivision site.

4.12.2 Environmental Consequences

To assess whether impacts to utilities were potentially significant, the following impact thresholds were used to define significance for each utility:

No Effect – The proposed action does not impact the human or natural environment.

No Significant Effect – An impact to the human and/or natural environment would occur, but it is less than thresholds indicated below for “significant effect.”

Significant Effect – thresholds for significance are defined below:

General Utility Construction – Impacts from construction of utilities would be considered potentially significant if expected to cause human health and safety issues considerably above industry norms and there were no ways to mitigate.

Potable Water Supply – Impacts would be considered potentially significant if the proposed action or alternatives would require more potable water than could be reliably provided by the provider or available potable water sources, leading to shortages.

Wastewater System – Impacts would be considered potentially significant if the proposed action or alternatives would require more wastewater treatment capacity than could be reliably provided by the provider’s wastewater treatment system, potentially leading to the discharge of effluents in excess of standards.

Stormwater System – Impacts would be considered potentially significant if the proposed action or alternatives would not comply with State or Federal laws governing stormwater discharges.

Energy Sources – Impacts would be considered potentially significant if the proposed action or alternatives would require energy in quantities that would exceed local and/or regional capacities for supply, leading to potentially unreliable service or shortfalls of electrical power.

Communications – Impacts would be considered potentially significant if the proposed action or alternatives would require communication systems to meet mission requirements that could not be provided by the local providers.

Municipal Solid Waste – Impacts would be considered potentially significant if the proposed action or alternatives would require collection and/or disposal that could not be provided in a reliable manner, which could cause waste to accumulate or be disposed of in a manner that could adversely affect human health or the environment.

4.12.2.1 No Action Alternative

Under the No Action Alternative, no changes would occur at the Preferred Alternative site and current conditions would prevail without change. No effects on utilities would occur.

4.12.2.2 Preferred Alternative – Fort James III Subdivision

Overall effects on utilities as a result of implementing the Preferred Alternative would be negligible, since existing utility services are readily available and it is anticipated that due to the industrial nature of the subdivision that all utilities have adequate capacity to accommodate the proposed facilities. Some highly localized, temporary disruptions would be expected as utility lines and linkages are adjusted or extended as necessary to suit the specifics of the proposed USARC facilities.

Current capacity for domestic water supply is approximately 15,000 gallons per month, and according to the Easton Suburban Water Authority, this system should have adequate capacity to meet the demands for the proposed facilities (USACE, 2008b). During the design of the new facilities all other utility capacities (sanitary sewer, electrical, telecommunication, and natural gas) would be verified to confirm that adequate capacity exists to support the new USARC usage demand. Solid waste from the new USARC would be collected and transported to a licensed disposal facility by private contractors and it is anticipated that the local landfill would have adequate capacity to accommodate the increased refuse from construction activities as well as from the operation of the facilities.

Stormwater BMPs would be employed at the site during and after construction of the new facilities. A stormwater management plan and State Pollutant Discharge Elimination System (SPDES) permit may be required. The new USARC facility would be required to adhere to all state and federal stormwater management and permitting regulations.

There are currently no impervious surfaces on the Preferred Alternative site. The new proposed USARC facilities would create approximately 2.70 acres of impervious surfaces on the site; increasing the amount of stormwater runoff. While specific stormwater management measures for the Proposed Action have not yet been designed, all stormwater generated on-site from the proposed facilities would be treated for both quality and quantity on-site and any stormwater that may be discharged off-site would meet all state and local regulatory and permit requirements. Potential solutions for treating stormwater quality and quantity could include installing an OWS and creating a stormwater management basin on-site. While there is an existing stormwater management basin located immediately to the north of the Preferred Alternative site, it was designed by the current land owner to provide stormwater management control for Lots 4, 5, 6, 13, and 14 of the Fort James III Subdivision (USACE, 2008b); thus it is not available for use by the Army's proposed facilities to be located on Lots 15 and 16. Final calculations for the amount of stormwater expected to be generated by the new

USARC facilities and how that stormwater will be adequately managed for both quality and quantity will be finalized during the facility design process.

4.13 HAZARDOUS AND TOXIC SUBSTANCES

Hazardous materials are substances that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may present a substantial danger to public health or the environment if released. These typically include reactive materials such as explosives, ignitables, toxics (such as pesticides), and corrosives (such as battery acid). When improperly stored, transported, or otherwise managed, hazardous materials can significantly affect human health and safety and the environment.

4.13.1 Affected Environment

4.13.1.1 Hazardous Materials Use

An Environmental Conditions of Property (ECP) report is being prepared by the Army for the Preferred Alternative site. While the report is not yet finalized, a draft of the report indicated that there is currently no use of hazardous materials at the Preferred Alternative site (USACE, 2008c). However, the site was formerly used as agricultural land. Therefore it is possible that residual herbicides or pesticides may be present in onsite soils at levels exceeding current PA Department of Environmental Protection (PADEP) Statewide Health Standards.

4.13.1.2 Hazardous Waste Storage and Handling Areas

There is no hazardous waste storage or handling areas located on the Preferred Alternative site (USACE, 2008c).

4.13.1.3 Site Contamination Cleanup

As part of the ECP that is being prepared for the Preferred Alternative site a search of federal and state database listings was conducted to identify hazardous waste and spill sites in the general vicinity of the property and to assess whether any of the sites listed in those databases could adversely impact the environmental quality of the subject property. The database search conducted as part of the ECP did not identify any hazardous waste or spill sites on the Preferred Alternative site or on adjacent sites that could potentially impact the Preferred Alternative site (USACE, 2008c). In 2005, a Phase 1 Environmental Site Assessment (ESA) was conducted for a parcel of property within the subdivision just north of the Preferred Alternative site (EcolSciences Inc., 2005). The database search for that ESA

also did not identify any hazardous waste or spill sites in the immediate vicinity (including the Preferred Alternative site).

4.13.2 Environmental Consequences

For the purposes of assessing the significance of impacts related to hazardous and toxic substances, the following impact thresholds were developed:

No Effect – There would be no hazardous materials or waste handled, stored, used, or disposed of.

No Significant Effect – Action would result in hazardous materials or waste being handled, stored, used, or disposed; but all hazardous or toxic materials and/or wastes could be safely and adequately managed in accordance with all applicable regulations and policies, with limited exposures or risks.

Significant Effect – Action would result in a substantial amount of waste to be handled, stored, used, or disposed of, and this could not be safely or adequately handled or managed by the proposed staffing, resulting in unacceptable risk, exceedance of available waste disposal capacity, or probable regulatory violation.

4.13.2.1 No Action Alternative

No effects would be expected under the No Action alternative, for the proposed new facilities would not be constructed.

4.13.2.2 Preferred Alternative – Fort James III Subdivision

Implementing the Proposed Action under the Preferred Alternative would result in no significant adverse effects in relation to hazardous or toxic substances.

The proposed USARC building would consist primarily of office space, administrative service, weapons simulator, and physical fitness areas. There would be minimal use of hazardous materials, such as janitorial products and printing supplies. Any hazardous materials will be handled and stored in accordance with applicable regulations and label precautions and will not have any significant adverse impacts, though some negligible long-term adverse effects would be expected from the very minimal increase in use of hazardous materials and waste generated by the proposed facilities.

The proposed OMS facility would include vehicle service bays for routine vehicle maintenance (e.g. oil changes etc.) and a controlled waste storage area. Routine vehicle maintenance activities require the use of several types of hazardous materials including degreasers, solvents, and batteries which would be stored and used in limited quantities. All hazardous materials would be handled and stored in compliance with all Army, federal, State, and local laws and regulations governing the use of and reporting requirements for hazardous materials and control of hazardous materials to minimize hazards to public health and damage to the environment. The application of BMPs, such as the use of drip trays and mats, would be implemented to reduce the possibility for small amounts of materials to migrate off-site or impact area natural resources. All waste materials would be disposed of in accordance with all regulatory requirements through licensed contractors.

4.14 CUMULATIVE EFFECTS SUMMARY

A cumulative impact is defined as “the impacts on the environment that result from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertake such other actions” (40 CFR 1508.7). The section goes on to note: “such impacts can result from individually minor but collectively significant actions taking place over a period of time.” Cumulative impacts associated with implementation of the Preferred Alternative would include any impacts from other on-going actions that would be incremental to the impacts of constructing the proposed USARC complex and realigning units to the Preferred Alternative site in the Fort James III Subdivision in Forks Township, Pennsylvania.

Other projects considered for their cumulative impacts include the Pennsylvania National Guard Armory proposed for the parcel of property immediately to the northwest of the Preferred Alternative site, as well as the Weyerhaeuser wood products distribution center and the Henningsen cold food storage warehouse, both being constructed within the Fort James III Subdivision and slated to be operational prior to the construction of the Proposed Action (The Express-Times, 2007). The specifics of the National Guard Armory are not known at this time e.g. number of personnel, number of military vehicles etc, so its impacts can only be analyzed in a qualitative manner. Though the exact size of the Weyerhaeuser distribution center and the Henningsen storage warehouse are not known, combined they are being constructed on 30 acres of the total 125 acre subdivision (The Express-Times, 2007). The Weyerhaeuser facility is reportedly going to employ a total of 100 personnel within 3 years while the Henningsen facility is reportedly going to employ approximately 75 persons initially (The Express-Times, 2007). Other future developments within the Fort James III Subdivision would also contribute

to cumulative impacts; however, no other lots have been sold at this time (Vozar, 2008b), so any future developments can not be analyzed at this time other than in a very qualitative manner.

4.14.1 No Action Alternative

Implementation of the No Action alternative would avoid new impacts that could interact with the impacts of other project actions. Therefore, there would be no cumulative impacts associated with the No Action alternative.

4.14.2 Preferred Alternative – Fort James III Subdivision

Implementation of the other projects under consideration would not likely cause any significant cumulative effects and the proposed USARC facilities would only contribute minimally to any adverse or beneficial impacts. No cumulative impacts would occur to land use, for the subdivision has already removed the sites from agricultural use and the site is currently zoned for industrial use. The Fort James III Subdivision used to be agricultural land, so with the construction of multiple industrial/commercial buildings in the subdivision some adverse impacts would occur to the visual and aesthetic resources of the surrounding area. However, these impacts would not be considered significant due to the current zoning in the area allowing industrial development. Construction of the USARC and storage of military vehicles on-site would contribute minimally to aesthetic and visual impact for it would be in keeping with the industrial nature of the surrounding sites as well as with the military context of the new Pennsylvania National Guard Armory. Due to construction activities and the operation of new industrial facilities, including increased commuter and warehousing traffic, there would be some cumulative impacts on both air quality and noise. These impacts would not likely be considered significant since the region is rural in nature and in attainment for all criteria pollutants. There are also no sensitive noise receptors in the immediate vicinity. Any noise from construction activities would be temporary and road traffic is rarely considered significant.

The soils in the subdivision have already been substantially modified so there would be no additional impacts to geology or soils and there are no surface water resources in the immediate vicinity of the subdivision so there would be no cumulative impacts to surface waters. The subdivision was formerly agricultural fields that provided very limited habitat for wildlife. Any vegetation within the footprint of the new facilities would be lost; however, most sites outside of the building footprints and parking areas within the subdivision would likely be reseeded and landscaped, providing improved habitat for species such as grey squirrels, rabbits, and birds that are tolerant of human disturbance.

There are no known cultural resources on or in the vicinity of the proposed project site, so there would be no cumulative impacts to cultural resources. The Fort James III Subdivision will bring new short and long term jobs and commerce to the ROI through construction and operation of the new businesses that are developed. However, given the size of the Proposed Action, it would contribute only minimally to the overall socioeconomic benefit. With only 20 full time employees and a maximum drill weekend of 153 personnel, the Proposed Action would also only contribute minimally to the increased traffic generated by the new industrial park and PA National Guard Armory. Though, a new access road has been constructed into the industrial park, the full impact of the new subdivision on traffic cannot be quantified at this time since it is not known how many or what types of industry will be developed in the future. The USARC would only contribute minimally to the increased demand for utilities, for only 20 fulltime employees would use the facilities during the week, and during the weekends when the USARC demand would be the greatest, the demand generated by other facilities would be at their lowest. Similar to traffic, the full impact of the subdivision and National Guard Armory on utilities can't be quantified at this time, for the demands of the individual facilities are not known at this time. However, it is anticipated that with the approved development of an industrial park utilities are adequate to handle the increase in demand. It is not known what, if any, hazardous materials the National Guard Armory or the other industries in the subdivision use or produce as waste. However, given the administrative nature of the USARC, the that fact that only routine vehicle maintenance is performed at the OMS, and no fuel storage tanks would be constructed as part of the Proposed Action, the USARC would only contribute minimally to any adverse impacts that may affect hazardous materials.

4.15 IRREVERSIBLE AND IRRETRIEVALBE COMMITMENT OF RESOURCES

Irreversible and irretrievable resource commitments are related to the non-renewable resources and the effects that the use of these resources have on future generations.

Irreversible effects primarily result from use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame.

Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the disturbance of a cultural site).

4.15.1 No Action Alternative

Implementation of the No Action Alternative would not result in the irreversible or irretrievable commitment of resources.

4.15.2 Preferred Alternative – Fort James III Subdivision

The Proposed Action would result in minimal loss of vegetation and wildlife habitat on the Preferred Alternative site. The location of the proposed facilities has been previously disturbed by the current land owner. The Proposed Action would remove open space or undeveloped land, but only land that provides marginal biological habitat.

The materials and energy required for the construction, operation, and maintenance of the proposed facilities also represent irretrievable commitments of resources. The total amount of construction materials required for the Proposed Action is relatively insignificant when compared to the resources available in the region. The energy required for construction consists of the fuels necessary to operate heavy construction equipment and trucks. Although energy conservation is a vital and critical issue, the energy resource commitment to the Proposed Action is not anticipated to be excessive in terms of region-wide usage. Materials and energy are not in short supply and their use would not have an adverse effect upon continued availability of these resources. Construction, operation, and maintenance would also require a substantial expenditure of Federal funds that would not be directly retrievable.

4.16 MITIGATION SUMMARY

None of the predicted effects of the Proposed Action would result in significant impacts; therefore, mitigation is not needed. However, the Army may consider the use of BMPs in the construction and operation of the USARC and associated facilities, including specific measure to reduce potential erosion, stormwater runoff, and sediment transport during site preparation and construction activities.

5.0 FINDINGS AND CONCLUSIONS

5.1 FINDINGS

5.1.1 Consequences of the No Action Alternative

Under the No Action alternative, the proposed new USARC and the associated facilities would not be constructed, and no environmental impacts would occur.

5.1.2 Consequences of the Preferred Alternative

The Proposed Action would not have any significant adverse effects on any of the environmental or related resource areas of the proposed site in the Fort James III Subdivision or to areas surrounding the subdivision. All of the resource areas were evaluated to be at the No Effects or No Significant Effect levels.

A summary of impacts by resource area for the No Action and Preferred Alternatives is provided in Table 5-1.

Table 5-1. Summary of the Impacts of the Proposed Action Alternatives

Resource	No Action Alternative	Preferred Alternative
Land Use		
<i>Regional Geographic Setting and Location</i>	No Effect.	No Effect.
<i>Site Land</i>	No Effect.	No Significant Effect.
<i>Current and Future Development in the Region of Influence</i>	No Effect.	No Significant Effect.
Aesthetic and Visual Resources	No Effect.	No Significant Effect.
Air Quality		
<i>Ambient Air Quality Conditions</i>	No Effect.	No Significant Effect.
<i>Meteorology/Climate</i>	No Effect.	No Effect.
<i>Air Pollutant Emissions at Installation</i>	None. No Significant Impact.	No Significant Effect.
<i>Regional Air Pollutant Emissions Summary</i>	No Effect.	No Significant Effect.
Noise	No Effect.	No Significant Effect.
Geology and Soils		

Resource	No Action Alternative	Preferred Alternative
<i>Geologic and Topographic Conditions</i>	No Effect.	No Significant Effect.
<i>Soils</i>	No Effect.	No Significant Effect.
<i>Prime Farmland</i>	No Effect.	No Effect.
Water Resources		
<i>Surface Water</i>	No Effect.	No Effect.
<i>Hydrogeology/Groundwater</i>	No Effect.	No Significant Effect.
<i>Floodplains</i>	No Effect.	No Effect.
<i>Coastal Zone</i>	No Effect.	No Effect.
Biological Resources		
<i>Vegetation</i>	No Effect.	No Significant Effect.
<i>Wildlife</i>	No Effect.	No Significant Effect.
<i>Threatened, Endangered, and Sensitive Species</i>	No Effect.	No Effect.
Cultural Resources		
<i>Archaeology</i>	No Effect.	No Effect.
<i>Built Environment</i>	No Effect.	No Effect.
<i>Native American Resources</i>	No Effect.	No Effect.
Socioeconomics		
<i>Economic Development</i>	No Effect.	No Significant Effect.
<i>Demographics</i>	No Effect.	No Effect.
<i>Environmental Justice</i>	No Effect.	No Effect.
<i>Protection of Children</i>	No Effect.	No Effect.
Transportation		
<i>Roadways and Traffic</i>	No Effect.	No Significant Effect.
<i>Public Transportation</i>	No Effect.	No Significant Effect.
Utilities		
<i>Potable Water Supply</i>	No Effect.	No Significant Effect.
<i>Sanitary Sewer System</i>	No Effect.	No Significant Effect.
<i>Electrical Service and Distribution</i>	No Effect.	No Significant Effect.
<i>Stormwater System</i>	No Effect.	No Significant Effect.
<i>Natural gas</i>	No Effect.	No Significant Effect.
<i>Communications</i>	No Effect.	No Significant Effect.
<i>Municipal Solid Waste</i>	No Effect.	No Significant Effect.
Hazardous and Toxic Substances		

Resource	No Action Alternative	Preferred Alternative
<i>Uses of Hazardous Materials</i>	No Effect.	No Significant Effect.
<i>Storage and Handling Areas</i>	No Effect.	No Significant Effect.
<i>Site Contamination and Cleanup</i>	No Effect.	No Significant Effect.
Cumulative Effects	No Effect.	No Significant Effect.
Irreversible and Irrecoverable Commitment of Resources	No Effect.	No Significant Effect.

5.2 CONCLUSIONS

Based on the analysis performed in this EA, implementation of the Proposed Action at the preferred site would have no significant direct, indirect, or cumulative effects on the quality of the natural or human environment. Preparation of an EIS is not required. Issuance of a FNSI is appropriate.

None of the predicted effects of the Proposed Action would result in significant impacts; therefore, mitigation is not needed, although the Army may consider the use of BMPs in addition to those required by law, regulation, or the Army. The following permits and or plans would be required in implementing the projects identified in this analysis:

- A Stormwater Pollution Prevention Plan (SWPPP) for the construction phase of the project would be required.
- A stormwater management plan and State Pollutant Discharge Elimination System (SPDES) permit may be required.

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6.0 LIST OF PREPARERS

U.S. Army Corps of Engineers, Mobile District

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Cynthia Gose	BRAC Project Manager	B.S. Chemical Engineering. Responsible for the overall management of the BRAC NEPA document preparation.	25 years

The Louis Berger Group, Inc.

Name	Title	Education/Responsibility	Experience
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Jess Commerford, AICP	Senior Vice President	B.G.S. Political Science. M.S. Urban and Regional Planning. Responsible for all sections prepared by Louis Berger staff.	18 years
George Dizelos	GIS Specialist	B.S. Geography/GIS and Computer Cartography. Responsible for GIS analysis and mapping.	1 year
Gregory Katz, RPA	Archaeologist	M.A. Anthropology. B.A. Anthropology. Responsible for Cultural Resources.	8 years
Charlie LeeDecker	Cultural Resource Lead	M.A. Anthropology, B.A. Anthropology. Responsible for Cultural Resources.	32 years
Michael F. Monteleone, AICP, P.P.	Manager of Transportation Planning	M.R.P. City and Regional Planning. Responsible for Transportation.	21 years
Catherine Price	Senior Environmental Engineer	B.S., Chemistry, B.S., Chemical Engineering. Responsible for Utilities and Hazardous Wastes and Toxic Substances	27 years
Josh Schnabel	Environmental Planner	M.A. Geography/ Environmental Planning. Responsible for Aesthetic and Visual Resources, Noise, and Geology and Soils	5 years

Name	Title	Education/Responsibility	Experience
Spence Smith	Environmental Scientist	B.S. Zoology, M.A. Biology. Project management, water resources and all sections prepared by Louis Berger staff.	12 years
Kim Wilczewski	Economist	B.A. Economics Responsible for Socioeconomic sections/EIFS modeling	8 years
Julia Yuan	Environmental Scientist	B.S. Environmental and Forest Biology/Forest Resources Management, M.P.S Forest and Natural Resources Management. Responsible for Land Use and Biological Resources.	5 years

7.0 AGENCIES CONTACTED

This section identifies local, state and federal agencies that were contacted or consulted during the EA process.

Federal Officials and Agencies

U.S. Fish and Wildlife Service

Native American Tribes

Delaware Nation

State and City Officials and Agencies

Pennsylvania Fish and Boat Commission

Pennsylvania Game Commission

Pennsylvania Department of Conservation and Natural Resources

Pennsylvania Historical and Museum Commission

Libraries

Allentown Public Library – Main Branch

Bethlehem Area Public Library – Main Library

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9.0 ACRONYMS

AADT	Average Annual Daily Traffic
AEPI	U.S. Army Environmental Policy Institute
AIRFA	American Indian Religious Freedom Act
APE	Area of Potential Effect
AQI	Air Quality Index
Army	U.S. Army
ARPA	Archaeological Resources Protection Act
ASIV	Available Site Identification and Validation
AT/FP	Anti-Terrorism/Force Protection
BMP	Best Management Practice(s)
BRAC	Base Closure and Realignment
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CC&R	Conditions, Covenants and Restrictions
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (also known as SuperFund)
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COBRA	Cost of Base Realignment Actions
CWA	Clean Water Act
dB	Decibels
dba	A-weighted Decibels

DD	Defense Department (forms only)
DoD	Department of Defense
EA	Environmental Assessment
EC	Employment Center
ECP	Environmental Conditions of Property
EIFS	Economic Impact Forecast System
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
ESA	Environmental Site Assessment
F	Fahrenheit
FNSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FWPCA	Federal Water Pollution Control Act
HVAC	Heating, Ventilation, and Air Conditioning
ITE	Institute of Transportation Engineers
LANTA	Lehigh and Northampton Transportation Authority
(Mgal/d)/mi ²	million gallons per day per square mile
MEP	Military Equipment Parking
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act

NAMS	National Air Monitoring Stations
NEPA	National Environmental Policy Act
NHL	National Historic Landmarks
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NO ₂	nitrogen dioxide
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O ₃	Ozone
OMS	Organizational Maintenance Shop
OSHA	Occupational Safety and Health Administration
OWS	Oil Water Separator
PA	Pennsylvania
PADCNR	Pennsylvania Department of Conservation and Natural Resources
PADEP	Pennsylvania Department of Environmental Protection
PAFBC	Pennsylvania Fish and Boat Commission
PAGC	Pennsylvania Game Commission
Pb	Lead
PennDOT	Pennsylvania Department of Transportation
PL	Public Law
PM ₁₀	particles with a diameter less than or equal to a nominal 10 micrometers
PM _{2.5}	particles with a diameter less than or equal to a nominal 2.5 micrometers
POV	Privately-Owned Vehicle
ppm	parts per million

RCRA	Resource Conservation and Recovery Act
ROE	Right of Entry
ROI	Region of Influence
RTV	Rational Threshold Value
SDWA	Safe Drinking Water Act
SHPO	State Historic Preservation Office
SF	square feet
SLAMS	State and Local Air Monitoring Stations
SO ₂	sulfur dioxide
SPDES	State Pollution Discharge Elimination System
SWPPP	Stormwater Pollution Prevention Plan
TSCA	Toxic Substance Control Act
USACE	U.S. Army Corps of Engineers
USARC	U.S. Army Reserve Center
USC	United States Code
USDA	U.S. Department of Agriculture
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

APPENDIX A— SECRETARY OF DEFENSE JUSTIFICATION FOR BRAC ACTIONS AT ALLENTOWN/BETHLEHEM, PA

Reserve Component Transformation in Pennsylvania

Secretary of Defense Recommendation

Close the Wilson Kramer United States Army Reserve Center in Bethlehem, PA, and the United States Army Reserve Organizational Maintenance Shop in Bethlehem, PA, and relocate units to a new United States Army Reserve Center with an organizational maintenance facility in the Allentown/Bethlehem, PA, area if the Army is able to acquire suitable land for the construction of the facilities.

Secretary of Defense Justification

This recommendation transforms Reserve Component facilities throughout the Commonwealth of Pennsylvania. The implementation of this recommendation will enhance military value, improve homeland defense capability, greatly improve training and deployment capability, create significant efficiencies and cost savings, and is consistent with the Army's force structure plans and Army transformational objectives.

This recommendation is the result of a state-wide analysis of Reserve Component installations and facilities conducted by a team of functional experts from Headquarters, Department of the Army, the Office of the State Adjutant General, and the Army Reserve Regional Readiness Command.

This recommendation closes eleven Army Reserve Centers, one Armed Forces Reserve Center, and seven Organizational Maintenance Shops throughout the Commonwealth of Pennsylvania and constructs six multicomponent, multifunctional Armed Forces Reserve Centers, with six co-located Organizational Maintenance Facilities capable of accommodating National Guard and Reserve units. This recommendation reduces military manpower and associated costs for maintaining existing facilities by collapsing sixteen geographically separated facilities into six modern Armed Forces Reserve Centers. This recommendation reduces the number of separate DoD installations by relocating to an existing base. The Department understands that the Commonwealth of Pennsylvania will close PAARNG Readiness Centers: Lewisburg, PA, Sunbury, PA, Berwick, PA, Scranton, PA, and

Williamsport, PA. The Armed Forces Reserve Centers will have the capability to accommodate these units if the state decides to relocate the units from these closed facilities into the new AFRCs.

This recommendation provides the opportunity for other Local, State, or Federal organizations to partner with the Reserve Components to enhance homeland security and homeland defense at a reduced cost to those agencies.

Although not captured in the COBRA analysis, this recommendation avoids an estimated \$110.4M in mission facility renovation costs and procurement avoidances associated with meeting AT/FP construction standards and altering existing facilities to meet unit training and communications requirements. Consideration of these avoided costs would reduce costs and increase the net savings to the Department of Defense in the 6-year BRAC implementation period and in the 20-year period used to calculate NPV.

Community Concerns

There were no formal expressions from the community.

Commission Findings

The Commission found no reason to disagree with the recommendation of the Secretary of Defense. In addition, the Commission notes that the Army's process was well thought-out and inclusive of the leadership of the Reserve Components and the State.

Commission Recommendations

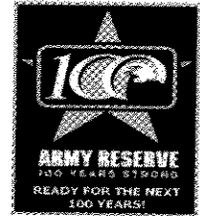
The Commission found the Secretary's recommendation consistent with the final selection criteria and force structure plan. Therefore, the Commission approved the recommendation of the Secretary.

APPENDIX B— FEDERAL AND STATE COORDINATION LETTERS

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5231 SOUTH SCOTT PLAZA
FORT DIX, NEW JERSEY 08640-5000



REPLY TO
ATTENTION OF

January 20, 2009

Mr. John David Denismore, Supervisor
U.S. Fish & Wildlife Service
Pennsylvania Field Office
315 Allen Street, Suite 322
State College, Pennsylvania 16801-4850

Subject: Intergovernmental and Interagency Coordination of Environmental Planning (IICEP) for the Construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA Area

Dear Mr. Denismore:

The Department of the Army (Army) is preparing an Environmental Assessment (EA) for the proposed construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA area. On September 8, 2005, the Defense Base Closure and Realignment Commission ("BRAC Commission") recommended to close the Wilson Kramer USARC in Bethlehem, PA, and the U.S. Army Reserve Organizational Maintenance Shop (OMS) in Bethlehem, PA, and relocate units to a new USARC with an OMS in the Allentown-Bethlehem, PA, area if the Army is able to acquire suitable land for the construction of the facilities. These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law.

The EA will analyze and document potential environmental effects associated with the DA's proposed realignment actions. The EA is being prepared in strict accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 et seq.); the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508); and Environmental Analysis of Army Actions (32 CFR Part 651).

The proposed USARC would provide an approximately 39,386 square feet (SF), 200-member training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, and physical fitness areas for six Army Reserve units. Associated support facilities include an approximately 5,097 SF OMS, and an approximately 1,369 SF unheated storage building. In addition, there would be approximately 1.65 acres of paved areas including 0.69 acres of military equipment parking (MEP) areas and 0.96 acres of privately-owned vehicle (POV) parking areas and access roads.

The Army is evaluating one alternative for implementing the proposed action. The preferred alternative is to construct the facilities on approximately 8.5 acres of land to be purchased in the Fort James III Subdivision located in Forks Township in Northampton County, PA. This site is a new industrial park located approximately 11 miles northeast of Bethlehem, PA (see Enclosure 1).

The Army is initiating this consultation in accordance with NEPA and the Endangered Species Act to evaluate the potential impacts (both beneficial and adverse) of implementing the proposed action. Construction activities will be conducted in accordance with local practices and standards, and based on information available it is not anticipated that the project will impact any federally listed species, migratory birds, or wetlands. Please confirm that no federally endangered, threatened or candidate species occur in the project area and that no additional or formal consultation under Section 7 of the Endangered Species Act is necessary.

Thank you in advance for your cooperation in this matter. If there are any questions or if there is a need for additional information, please contact:

Mona Garrett
Base Transition Coordinator
(412) 604-8168
Mona.Garrett@usar.army.mil

Please provide any comments within 30-days.

Sincerely,

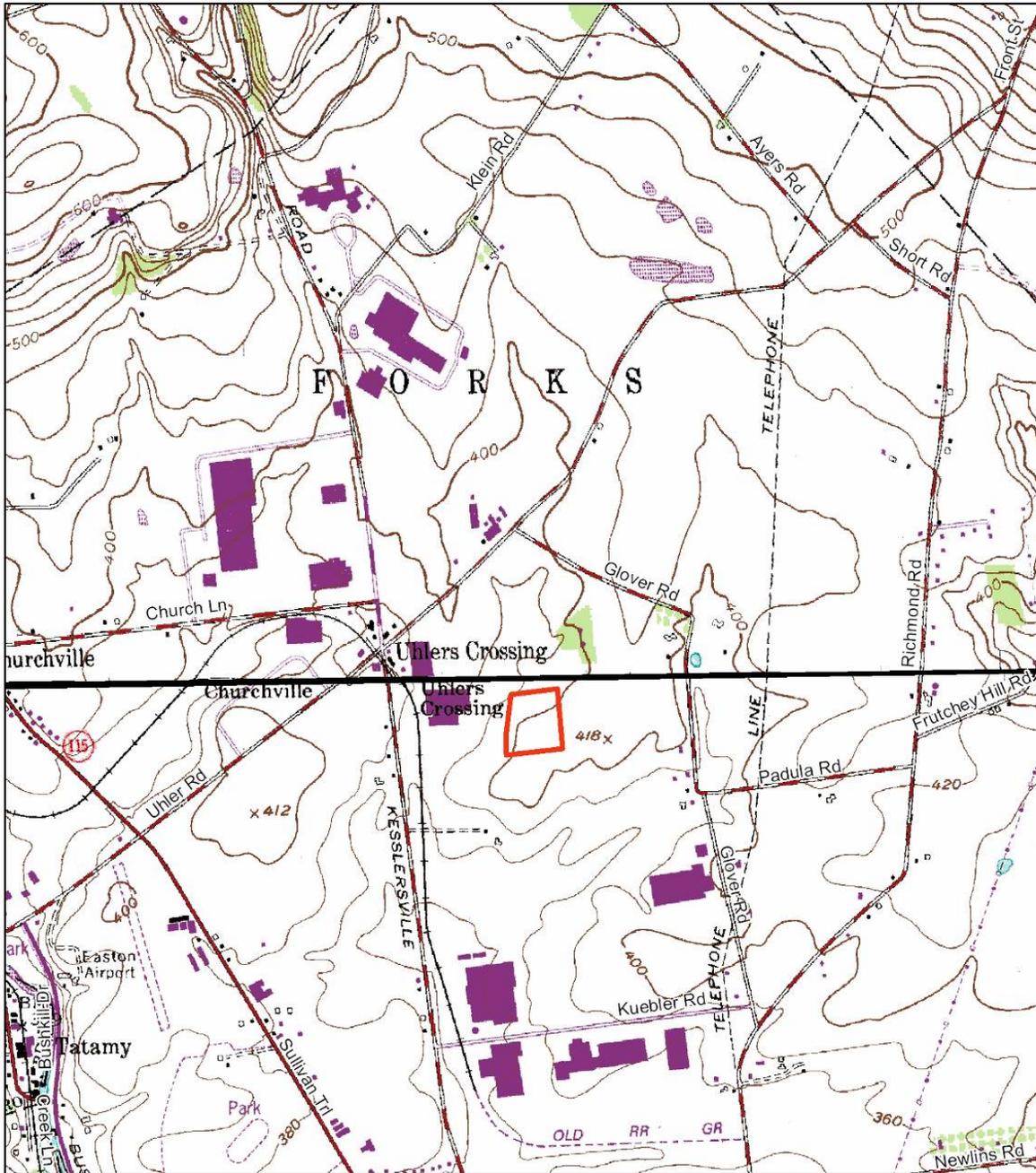

JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Enclosure

Enclosure 1

Preferred Alternative Location for BRAC Proposed Action

USGS Topographic Quadrangle



<p>Legend</p> <p> Site Boundary</p> <div style="text-align: center;"> </div> <p>0 500 1,000 1,500 2,000 Feet</p>	<p>Preferred Alternative Site (Bangor and Easton Quadrangle)</p> <p><small>Sources: US Census Bureau, FAMAP, USGS, ESRI Coordinate System: NAD 1983, State Plane Pennsylvania South FIPS 3702 Feet Prepared By: The Louis Berger Group</small></p>	<p style="text-align: center;">QUAD INDEX</p> <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td>Wind Gap Quad</td> <td>Bangor Quad</td> <td>Belvidere Quad</td> </tr> <tr> <td>PA</td> <td>Site Boundary</td> <td>ND</td> </tr> <tr> <td>Nazareth Quad</td> <td>Easton Quad</td> <td>Bloomsbury Quad</td> </tr> </table>	Wind Gap Quad	Bangor Quad	Belvidere Quad	PA	Site Boundary	ND	Nazareth Quad	Easton Quad	Bloomsbury Quad	<p style="text-align: center;">MAP INDEX</p>
Wind Gap Quad	Bangor Quad	Belvidere Quad										
PA	Site Boundary	ND										
Nazareth Quad	Easton Quad	Bloomsbury Quad										

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5231 SOUTH SCOTT PLAZA
FORT DIX, NEW JERSEY 08640-5000



REPLY TO
ATTENTION OF

January 20, 2009

Christopher Urban, Chief, Natural Diversity Section
Pennsylvania Fish and Boat Commission
Division of Environmental Services
450 Robinson Lane
Bellefonte, PA 16823

Subject: Intergovernmental and Interagency Coordination of Environmental Planning (IICEP) for the Construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA Area

Dear Mr. Urban:

The Department of the Army (Army) is preparing an Environmental Assessment (EA) for the proposed construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA area. On September 8, 2005, the Defense Base Closure and Realignment Commission ("BRAC Commission") recommended to close the Wilson Kramer USARC in Bethlehem, PA, and the U.S. Army Reserve Organizational Maintenance Shop (OMS) in Bethlehem, PA, and relocate units to a new USARC with an OMS in the Allentown-Bethlehem, PA, area if the Army is able to acquire suitable land for the construction of the facilities. These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law.

The EA will analyze and document potential environmental effects associated with the Army's proposed realignment actions. The EA is being prepared in strict accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 et seq.); the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508); and Environmental Analysis of Army Actions (32 CFR Part 651).

The proposed USARC would provide an approximately 39,386 square feet (SF), 200-member training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, and physical fitness areas for six Army Reserve units. Associated support facilities include an approximately 5,097 SF OMS, and an approximately 1,369 SF unheated storage building. In addition, there would be approximately 1.65 acres of paved areas including 0.69 acres of military equipment parking (MEP) areas and 0.96 acres of privately-owned vehicle (POV) parking areas and access roads.

The Army is evaluating one alternative for implementing the proposed action. The preferred alternative is to construct the facilities on approximately 8.5 acres of land to be purchased in the Fort James III Subdivision located in Forks Township in Northampton County, PA. This site is a new industrial park located approximately 11 miles northeast of Bethlehem, PA (see Enclosure 1).

The Army is initiating this consultation in accordance with NEPA to evaluate the potential impacts (both beneficial and adverse) of implementing the proposed action. Construction activities will be conducted in accordance with local practices and standards, and based on information available it is not anticipated that the project will impact any state or federally listed species, migratory birds, or wetlands. We seek confirmation from the PA Fish and Boat Commission that this BRAC-related action will not adversely impact any of the wildlife resources of the Commonwealth of Pennsylvania. The Army is also sending coordination letters to the PA Department of Conservation and Natural Resources and the PA Game Commission.

Thank you in advance for your cooperation in this matter. If there are any questions or if there is a need for additional information, please contact Mona Garrett at the following:

Mona Garrett
Base Transition Coordinator
(412) 604-8168
Mona.Garrett@usar.army.mil

Please provide any comments within 30-days.

Sincerely,


JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5231 SOUTH SCOTT PLAZA
FORT DIX, NEW JERSEY 08640-5000



REPLY TO
ATTENTION OF

January 20, 2009

James Leigey, Wildlife Impact Review Coordinator
Pennsylvania Game Commission
Division of Environmental Planning and Habitat Protection
Bureau of Wildlife Habitat Management
2001 Elmerton Avenue
Harrisburg, PA 17110

Subject: Intergovernmental and Interagency Coordination of Environmental Planning (IICEP) for the Construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA Area

Dear Mr. Leigey:

The Department of the Army (Army) is preparing an Environmental Assessment (EA) for the proposed construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA area. On September 8, 2005, the Defense Base Closure and Realignment Commission ("BRAC Commission") recommended to close the Wilson Kramer USARC in Bethlehem, PA, and the U.S. Army Reserve Organizational Maintenance Shop (OMS) in Bethlehem, PA, and relocate units to a new USARC with an OMS in the Allentown-Bethlehem, PA, area if the Army is able to acquire suitable land for the construction of the facilities. These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law.

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The Army is initiating this consultation in accordance with NEPA to evaluate the potential impacts (both beneficial and adverse) of implementing the proposed action. Construction activities will be conducted in accordance with local practices and standards, and based on information available it is not anticipated that the project will impact any state or federally listed species, migratory birds, or wetlands. We seek confirmation from the PA Game Commission that this BRAC-related action will not adversely impact any of the wildlife resources of the Commonwealth of Pennsylvania. The Army is also sending letters to the PA Department of Conservation and Natural Resources and the PA Fish and Boating Commission.

Thank you in advance for your cooperation in this matter. If there are any questions or if there is a need for additional information, please contact:

Mona Garrett
Base Transition Coordinator
(412) 604-8168
Mona.Garrett@usar.army.mil

Please provide any comments within 30-days.

Sincerely,


JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5231 SOUTH SCOTT PLAZA
FORT DIX, NEW JERSEY 08640-5000



REPLY TO
ATTENTION OF

January 20, 2009

Ms. Aura Stauffer, Chief
Ecological Services Section, Bureau of Forestry
Pennsylvania Department of Conservation and Natural Resources
6th Floor, Rachel Carson State Office Building
400 Market Street
Harrisburg, PA 17105-8552

Subject: Intergovernmental and Interagency Coordination of Environmental Planning (IICEP) for the Construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA Area

Dear Ms. Stauffer:

The Department of the Army (Army) is preparing an Environmental Assessment (EA) for the proposed construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA area. On September 8, 2005, the Defense Base Closure and Realignment Commission ("BRAC Commission") recommended to close the Wilson Kramer USARC in Bethlehem, PA, and the U.S. Army Reserve Organizational Maintenance Shop (OMS) in Bethlehem, PA, and relocate units to a new USARC with an OMS in the Allentown-Bethlehem, PA, area if the Army is able to acquire suitable land for the construction of the facilities. These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law.

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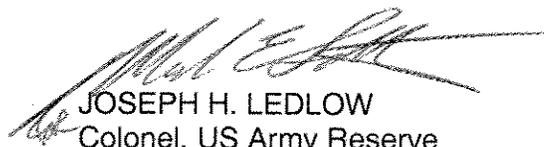
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Thank you in advance for your cooperation in this matter. If there are any questions or if there is a need for additional information, please contact:

Mona Garrett
Base Transition Coordinator
(412) 604-8168
Mona.Garrett@usar.army.mil

Please provide any comments within 30-days.

Sincerely,



JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5231 SOUTH SCOTT PLAZA
FORT DIX, NEW JERSEY 08640-5000



REPLY TO
ATTENTION OF

January 20, 2009

Ms. Barbara Franco
State Historic Preservation Officer
Pennsylvania Historical and Museum Commission
300 North Street
Harrisburg, PA 17120

Subject: Intergovernmental and Interagency Coordination of Environmental Planning (IICEP) for the Construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA Area

Dear Ms. Franco:

The Department of the Army (Army) is preparing an Environmental Assessment (EA) for the proposed construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA area. On September 8, 2005, the Defense Base Closure and Realignment Commission ("BRAC Commission") recommended to close the Wilson Kramer USARC in Bethlehem, PA, and the U.S. Army Reserve Organizational Maintenance Shop (OMS) in Bethlehem, PA, and relocate units to a new USARC with an OMS in the Allentown-Bethlehem, PA, area if the Army is able to acquire suitable land for the construction of the facilities. These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law.

The EA will analyze and document potential environmental effects associated with the Army's proposed realignment actions. The EA is being prepared in strict accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 et seq.); the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508); and Environmental Analysis of Army Actions (32 CFR Part 651). Included in the EA will be the evaluation of possible effects on historic properties, including archeological sites, as outlined in the implementing regulations for Section 106 of the National Historic Preservation Act.

The proposed USARC would provide an approximately 39,386 square feet (SF), 200-member training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, and physical fitness areas for six Army Reserve units. Associated support facilities include an approximately 5,097 SF OMS, and an approximately 1,369 SF unheated storage building. In addition, there would be approximately 1.65 acres of paved areas including 0.69 acres of military equipment parking (MEP) areas and 0.96 acres of privately-owned vehicle (POV) parking areas and access roads.

The Army is evaluating one alternative for implementing the proposed action. The preferred alternative is to construct the facilities on approximately 8.5 acres of land to be purchased in the Fort James III Subdivision located in Forks Township in Northampton County, PA. This site is a new industrial park located approximately 11 miles northeast of Bethlehem, PA. The site has been substantially disturbed (e.g. grading, stock piling of soils, installation of utilities etc.) in preparation for selling lots within the subdivision and there are no structures on site.

Based on our review of background information and current field conditions, we have concluded that the proposed project site is not within an archeologically sensitive area, nor is it in or immediately adjacent to any National Register-eligible or listed historic site or district. We anticipate that the undertaking will have no adverse effects on any historic properties.

We welcome your input and request your confirmation of this determination.

We are enclosing a completed Request to Initiate Consultation Form which includes a map that illustrates the area where the project is planned, as well as a Record of Disturbance Form. If there are any questions or if there is a need for additional information, please contact

Mona Garrett
Base Transition Coordinator
(412) 604-8168
Mona.Garrett@usar.army.mil

Please provide any comments within 30-days.

Sincerely,


JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Enclosure

BHP Use Only
ER #

**Request to Initiate Consultation in Compliance with the State History Code and
Section 106 of the National Historic Preservation Act**

Applicant Information (print neatly, this will be used in the return envelope)			
Applicant Name	U.S. Army Corps of Engineers, Mobile District		
Street Address	P.O. Box 2288		
City	Mobile	Phone Number	251-694-3881
State/ZIP	Alabama 36628		

Contact Person to Receive Response (if applicable) (print neatly, this will be used in the return envelope)			
Name/Company	Mr. Charles LeeDecker	The Louis Berger Group	
Street Address	2445 M Street, NW, Suite 400		
City	Washington	Phone Number	202-303-2667
State/ZIP	D.C. 20037-1435		

Project Information			
Project Title	Base Realignment and Closure (BRAC) Actions, United States Army Reserve Center, Allentown/Bethlehem, Pennsylvania		
Project Location and/address	Near junction of Uhler Road and Glover Road, Tatamy area		
Municipality	Fork Township	County Name	Northampton
If this project was ever reviewed before, include previous ER #			

Project Type (Check all that apply)			
Government Funded/Sponsored or On Government Land?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Specify Agency and/or Program Name Below			
State Agency:	_____	Local:	_____
Federal Agency:	U.S. Army	Other:	_____

Permits or Approvals Required			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Specify Agency and/or Program Name Below			
Anticipated Permits:			
State Agency:	_____	Program:	_____
Federal Agency:	_____	Program:	_____

Agency Office to Receive Response (Check all that apply)			
Army Corps of Engineers:	<input type="checkbox"/> Philadelphia	<input type="checkbox"/> Baltimore	<input type="checkbox"/> Pittsburgh
DEP Office:	<input type="checkbox"/> Central Office	<input type="checkbox"/> Regional Office:	_____
<input type="checkbox"/> District Mining Office:	_____		
<input checked="" type="checkbox"/> Other: (provide address)	_____		
U.S. Army Corps of Engineers, Mobile District	P.O. Box 2288, Mobile AL 36628		

BHP Use Only
ER #

Required Project Information for BHP/SHPO Review

Total Acres in the property under review: 8.55

Total acres of earth disturbance for this proposed activity: Undetermined

Are there any buildings or structures within the project area? Yes No
Approximate age of buildings:

Project located in or adjacent to a historic district? Yes No Unsure

Name of Historic District _____

Submissions Must Also Include:

MAP LOCATION: A 7.5 USGS Map showing the project boundary and the Area of Potential Effect (APE). The APE should include indirect effects, such as visual and audible impacts. Federal Projects must provide an explanation of how the APE was determined.

PHOTOS: Photos of all buildings or structures in the APE over 50 years old. If the property is over 50 years old submit a Historic Resource Form with this initial request. The forms are available at <http://www.phmc.state.pa.us/bhp/inventories>.

PROJECT DESCRIPTION NARRATIVE: Provide a detailed project description describing the project, any ground disturbance, any previous land use, and age of all effected buildings in the project area. Attach a site map showing the location of all buildings in the project area.

I have reviewed all DEP Permit Exemptions listed on the DEP website www.dep.state.pa.us.

In addition, federal agencies must provide:

Measures that will be taken to identify consulting parties including Native Americans.

Measures that will be taken to notify and involve the public.

The information on this form is needed to determine whether potential historic or archaeological resources are present. Additional historic information or investigation may be requested to determine the significance of the resources or the effects of the project on those resources. *Form and attachments must be submitted by mail. Submissions via e-mail will not be accepted.*

Signature Block

 20 JAN 09

Applicant's Signature _____ Date _____

Please Print and Mail Completed Form and Required Information to:

**PA Historical & Museum Commission
Bureau for Historic Preservation
400 North Street
Commonwealth Keystone Building 2nd Floor
Harrisburg, PA 17120-0093**



Pennsylvania Historical & Museum Commission
 Bureau for Historic Preservation • State Historic Preservation Office
Record of Disturbance Form

ER# _____
DATE <u>1/21/2009</u>

(submit after initial field view, Phase IA Investigation, or Phase I Investigation)

1. Project Identification:

ER Number _____

Project Name &/or Agency Tracking #: Allentown/Bethlehem U.S. Army Reserve Center

Agency: U.S. Department of Defense **Applicant:** U.S. Army Corps of Engineers

Preparers Name and affiliation: Gregory M. Katz, RPA, The Louis Berger Group

Date Prepared: 01/02/2009

Project Area County/Municipality (list all)

County	Municipality
Northampton	Forks Twp.

2. Project Setting: (check all that apply)

- urban/suburban; rural
 upland; floodplain/terrace (active; stable terrace)

7.5" USGS Quadrangle(s) Name (list all):

Name	Date
Bangor	1994
Easton	1994

Physiographic Zone(s)(list All. Use DCNR Map 13 compiled by W.D. Sevon, Fourth Edition, 2000.):

Physiographic Zone
Great Valley Section of the Ridge and Valley

Project Area Drainage(s), (list all) (Sub-basin and Watershed can be obtained from CRGIS):

Sub-basin	Watershed	Major Stream	Minor Stream
Delaware River, Sub Basin 2	C	Lehigh River	Bushkill

3. Basic Field Conditions:

(Text fields will expand as needed. Please be complete)

Area of APE / Project Area in hectares: 3.5 Hectares tested: 0

General Description of APE / Project Area: The APE is located in Forks Township, Northampton County, near Uhlers Crossing. The APE is in Fort James Subdivision III, south of Uhler Road and west of Glover Road. The APE is on a hilltop and hillslope. The APE was previously an agricultural field, but it has been converted to an industrial park which is in active construction. The site is currently open with no vegetation cover. There are no perennial streams in proximity to the APE.

Type of Proposed Project / Impact: The U.S. Army proposes to construct a new U.S. Army Reserve Center at the site. The new facility will include training space, vehicle maintenance space, and deployment equipment storage space. Detailed plans for the new facility have not been developed.

Date of field investigation(s): 11/25/08

Description of Field Conditions and Disturbance:

The receiving site was visited in November 2008 and there was active construction of an industrial park. At the receiving site, the developers of the industrial park had conducted some site preparation activities, such as the installation of underground utilities. Heavy machinery was grading the site and stockpiling dirt from excavations on adjacent lots in the subdivision. Two auger tests were excavated in the APE to examine soil profiles; neither of the tests reached undisturbed soils. The entirety of the receiving site has been graded or disturbed through the installation of utilities and infrastructure.

4 Methodology Used to Determine Disturbance: (check all that apply; attach any supporting documents)

- PASS file Research
- Informant Data
- Surface Survey
- Test Units
- Other: _____
- Contacted Local Historical Association/Commission/Park/Etc.
- Historic Records/Maps/Photos
- Geomorphological Borings
- Geomorphological Trenches
- SCS Soil Maps
- STPs
- Remote Sensing

Professional Geomorphologist was Present or Not Present During Field Investigations

Name: _____ Affiliation: _____

Formal Geomorphological Report Prepared: Yes No

5. Previously Recorded Archaeological Sites within APE / Project Area:

PASS Site Number	Particular disturbance in this area

6. Required Attachments:

- 7.5' USGS Quadrangle Map delineating APE / Project Area
- APE map showing location of any test units &/or orientation of photographs
- At least two (2) supporting photographs with descriptions of view and view direction
- Engineering / Project Plans if prepared
- Geomorphological Report if prepared
- Representative excavation profiles and descriptions

List all other attachments to this Record of Disturbance Form:

Attachment Type

Attachment to Request to Initiate Consultation Form

Area of Potential Effects. In accordance with Section 106 of the National Historic Preservation Act (36 CFR 800.16[d]), the Area of Potential Effects (APE) is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE for this project includes the area immediately surrounding the proposed U.S. Army Reserve Center (USARC) site, taking into consideration the built environment within the viewshed of the proposed undertaking. The APE has been established as the area within 200 feet of the property boundaries for the proposed USARC site.

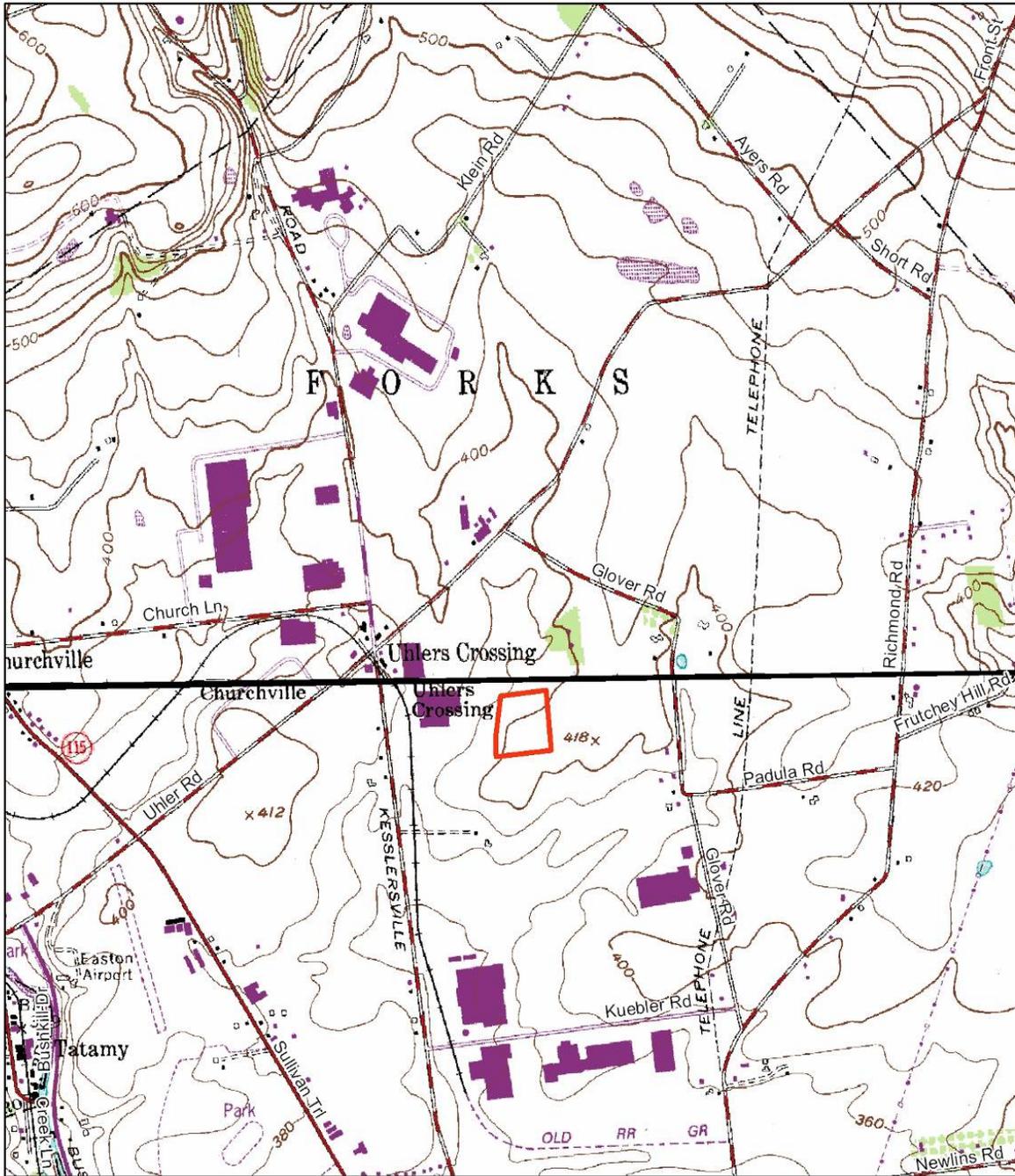
The APE contains no standing structures and is not part of a planned landscape.

Project Description Narrative. The Proposed Action is to close the existing Wilson Kramer Memorial Army Reserve Center (USARC) in Bethlehem, PA, and the United States Army Reserve Organizational Maintenance Shop (OMS) in Bethlehem, PA, and construct a new USARC in the Allentown-Bethlehem area. The new facility will include training space, vehicle maintenance space, and deployment equipment storage space. Detailed plans for the new facility have not been developed. The preferred receiving site is approximately 8.5 acres of area in the Fort James Subdivision III, Fork Township, Northampton County.

The existing USARC buildings to be vacated will be excessed through an appropriate real estate transaction (lease, exchanges, sale, etc.) in exchange for fair compensation to the U.S. Army Reserve. At this time, it is not known what type of real estate transaction would take place or what the potential future land uses would be for the existing USARC property; therefore, analysis of this action is not possible at this time. Prior to disposal of the USARC properties in Bethlehem-Allentown separate compliance documentation will be prepared to address any issues relating to the excessing of the buildings and property.

Consulting Parties and Public Involvement. Interested parties are being invited to review and comment on the Draft EA and to take part in Section 106 consultation. A Notice of Availability will be published on approximately February 17, 2009 in the Express-Times newspaper. On 1/20/09 an initial coordination letter describing the Proposed Action was sent to the Delaware Nation and the Delaware Tribe of Indians. The Pennsylvania SHPO will be forwarded copies of responding correspondence from the tribes when it has been received.

USGS Topographic Quadrangle Preferred Alternative Location for BRAC Proposed Action



Legend

Site Boundary

**Preferred Alternative Site
(Bangor and Easton Quadrangle)**

Sources: US Census Bureau, FAMAP,
USGS, ESRI
Coordinate System: NAD 1983,
State Plane Pennsylvania South FIPS 3702 Feet
Prepared By: The Louis Berger Group

QUAD INDEX

Wind Gap Quad	Bangor Quad	Belvidere Quad
PA	PA	PA
Nazareth Quad	Easton Quad	Bloomsbury Quad

MAP INDEX

0 500 1,000 1,500 2,000 Feet



Map Showing the APE (Red), Project Limits (Blue), Auger Test Locations, and Photograph Locations
(Note: Aerial Base is from 2005 and does not necessarily depict current conditions – i.e. new access road into the industrial park and other land disturbances)



Photograph 1. Haul Road and Soil Piles in Central Portion of Receiving Site (View W)



Photograph 2. Utilities and Landscaping along Road Frontage (View SW)

Auger Test Log

Date: November 25, 2008

Excavator: Gregory Katz (The Louis Berger Group Inc.)

Test # 1. Location is approximately 15 meters west of Braden Boulevard on a hilltop. Lot 15 of the Fort James Subdivision. Minimal grass cover over channery soil.

0-5 cm	Strong brown (7.5YR 5/6) clay loam mixed with dark yellowish brown (10YR 3/4) loam. Mixed gravels.
(5 cm)	Rock refusal

Test # 2. Location is approximately 15 meters west of Braden Boulevard on a hilltop. Lot 16 of the Fort James Subdivision. Minimal grass cover over channery soil.

0-6 cm	Strong brown (7.5YR 5/6) clay loam mixed with dark yellowish brown (10YR 3/4) loam. Mixed gravels.
(6 cm)	Rock refusal

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5231 SOUTH SCOTT PLAZA
FORT DIX, NEW JERSEY 08640-5000



REPLY TO
ATTENTION OF

January 20, 2009

Ms. Tamara Francis
Cultural Preservation Director
Delaware Nation Cultural Preservation Office
P.O. Box 825
Anadarko, OK 73005

Subject: Proposed Base Realignment and Closure (BRAC) Actions
Allentown-Bethlehem Area - U.S. Army Reserve Center, Forks Township,
PA

Dear Ms. Francis:

The Department of the Army (Army) is preparing an Environmental Assessment (EA) for the proposed construction of an U.S. Army Reserve Center (USARC) in the Allentown-Bethlehem, PA area. On September 8, 2005, the Defense Base Closure and Realignment Commission ("BRAC Commission") recommended to close the Wilson Kramer USARC in Bethlehem, PA, and the U.S. Army Reserve Organizational Maintenance Shop (OMS) in Bethlehem, PA, and relocate units to a new USARC with an OMS in the Allentown-Bethlehem, PA, area if the Army is able to acquire suitable land for the construction of the facilities. These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law.

The EA will analyze and document potential environmental effects associated with the Army's proposed realignment actions. The EA is being prepared in strict accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 et seq.); the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508); and Environmental Analysis of Army Actions (32 CFR Part 651).

The Army plans to use the NEPA process to fulfill the requirement to take into account the effect of the undertaking on historic properties, as outlined in the implementing regulations for Section 106 of the National Historic Preservation Act. In accordance with the procedures found at 36 CFR 800.8, we are hereby notifying you of our intent to fulfill the requirements of Section 106 through the NEPA process. A copy of the EA will be provided to you for review when it becomes available.

The proposed USARC would provide an approximately 39,386 square feet (SF), 200-member training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, and physical fitness areas for six Army Reserve units. Associated support facilities include an approximately 5,097 SF OMS, and an approximately 1,369 SF unheated storage building. In addition, there would be approximately 1.65 acres of paved areas including 0.69 acres of military equipment parking (MEP) areas and 0.96 acres of privately-owned vehicle (POV) parking areas and access roads.

The Army is evaluating one alternative for implementing the proposed action. The preferred alternative is to construct the facilities on approximately 8.5 acres of land to be purchased in the Fort James III Subdivision located in Forks Township in Northampton County, PA. This site is in an industrial park near the town of Tatamy and is located approximately 11 miles northeast of Bethlehem, PA (see Enclosure 1). Based on our review of background information and current field conditions, we have concluded that the receiving site is not within an archeologically sensitive area, nor is it in or immediately adjacent to any National Register-eligible or listed historic site or district. We anticipate that the undertaking will have no adverse effects on any historic properties.

We welcome your input on this project and thank you in advance for your cooperation. If there are any questions or if there is a need for additional information, please contact:

Mona Garrett
Base Transition Coordinator
(412) 604-8168
Mona.Garrett@usar.army.mil

Please provide any comments within 30-days.

Sincerely,


JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Enclosure

**APPENDIX C— ECONOMIC IMPACT
FORECAST SYSTEM (EIFS) MODEL**

SOCIOECONOMIC IMPACT ASSESSMENT

Socioeconomic impacts are linked through cause-and-effect relationships. Military payrolls, local procurement of goods and services, and construction projects all contribute to the economic base of the region of influence (ROI). In this regard, changes in the Allentown-Bethlehem, PA area, per the Proposed Action, would have a multiplier effect on the local and regional economy. With the Proposed Action, direct jobs would be created, generating new income and increasing personal spending. This spending generally creates secondary jobs, increases business volume, and increases revenues for schools and other social services.

THE ECONOMIC IMPACT FORECAST SYSTEM

The U.S. Army (Army) with the assistance of many academic and professional economists and regional scientists developed the Economic Impact Forecast System (EIFS) to address the economic impacts of actions requiring analysis under the National Environmental Policy Act (NEPA) and to measure their significance. As a result of its designed applicability, and in the interest of uniformity, EIFS is used in NEPA assessments for a number of Army BRAC NEPA documents. The entire system is designed for the scrutiny of a populace affected by the actions being studied. The algorithms in EIFS are simple and easy to understand, but still have firm, defensible bases in regional economic theory.

EIFS was developed under a joint project of the U.S Army Corps of Engineers (USACE), the U.S. Army Environmental Policy Institute (AEPI), and the Computer and Information Science Department of Clark Atlanta University, Georgia. EIFS is an on-line system, and the EIFS Web application is hosted by the USACE, Mobile District. The system is available to anyone with an approved user-id and password. University staff and the staff of USACE, Mobile District is available to assist with the use of EIFS.

The databases in EIFS are national in scope and cover the approximately 3,700 counties, parishes, and independent cities that are recognized as reporting units by federal agencies. EIFS allows the user to define an economic ROI by identifying the counties, parishes, or cities to be analyzed. Once the ROI is defined, the system aggregates the data, calculates multipliers and other variables used in the various models in EIFS, and prompts the user for forecast input data.

THE EIFS MODEL

The basis of the EIFS analytical capabilities is the calculation of multipliers that are used to estimate the impacts resulting from Army-related changes in local expenditures or employment. In calculating the

multipliers, EIFS uses the economic base model approach, which relies on the ratio of total economic activity to basic economic activity. Basic, in this context, is defined as the production or employment engaged to supply goods and services outside the ROI or by federal activities (such as military installations and their employees). According to economic base theory, the ratio of total income to basic income is measurable (as the multiplier) and sufficiently stable so that future changes in economic activity can be forecast. This technique is especially appropriate for estimating aggregate impacts and makes the economic base model ideal for the EA and EIS process.

The multiplier is interpreted as the total impact on the economy of the region resulting from a unit change in its base sector; for example, a dollar increase in local expenditures due to an expansion of its military installation. EIFS estimates its multipliers using a location quotient approach based on the concentration of industries within the region relative to the industrial concentrations for the nation.

The user inputs into the model the data elements which describe the U.S. Army action: the change in expenditures, or dollar volume of the construction project(s); change in civilian or military employment; average annual income of affected civilian or military employees; the percent of civilians expected to relocate due to the U.S. Army's action; and the percent of military living on-post. Once these are entered into the EIFS model, a projection of changes in the local economy is provided. These are projected changes in sales volume, income, employment, and population. These four indicator variables are used to measure and evaluate socioeconomic impacts. Sales volume is the direct and indirect change in local business activity and sales (total retail and wholesale trade sales, total selected service receipts, and value-added by manufacturing). Employment is the total change in local employment due to the proposed action, including not only the direct and secondary changes in local employment, but also those personnel who are initially affected by the military action. Income is the total change in local wages and salaries due to the proposed action, which includes the sum of the direct and indirect wages and salaries, plus the income of the civilian and military personnel affected by the proposed action. Population is the increase or decrease in the local population as a result of the proposed action.

THE SIGNIFICANCE OF SOCIOECONOMIC IMPACTS

Once model projections are obtained, the Rational Threshold Value (RTV) profile allows the user to evaluate the significance of the impacts. This analytical tool reviews the historical trends for the defined region and develops measures of local historical fluctuations in sales volume, income, employment, and population. These evaluations identify the positive and negative changes within

which a project can affect the local economy without creating a significant impact. The greatest historical changes define the boundaries that provide a basis for comparing an action's impact on the historical fluctuation in a particular area. Specifically, EIFS sets the boundaries by multiplying the maximum historical deviation of the following variables:

		Increase	Decrease
Sales Volume	X	100%	75%
Income	X	100%	67%
Employment	X	100%	67%
Population	X	100%	50%

These boundaries determine the amount of change that will affect an area. The percentage allowances are arbitrary, but sensible. The maximum positive historical fluctuation is allowed with expansion because economic growth is beneficial. While cases of damaging economic growth have been cited, and although the zero-growth concept is being accepted by many local planning groups, military base reductions and closures generally are more injurious to local economics than are expansion.

The major strengths of the RTV are its specificity to the region under analysis and its basis on actual historical data for the region. The EIFS impact model, in combination with the RTV, has proven successful in addressing perceived socioeconomic impacts. The EIFS model and the RTV technique for measuring the intensity of impacts have been reviewed by economic experts and have been deemed theoretically sound.