EXHIBIT L

FINAL ENVIRONMENTAL ASSESSMENT

Central Issue Facility at Joint Base McGuire-Dix-Lakehurst, New Jersey

MAY 2013

Prepared by: EHS Technologies, Moorestown, NJ

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Finding of No Significant Impact (FONSI)

Environmental Assessment (EA)
Central Issue Facility at
Joint Base McGuire-Dix-Lakehurst (JB MDL) New Jersey

PURPOSE

The purpose of the Proposed Action is to provide a modern warehouse facility specifically designed for central issue operations required to support multi-service uniform requirements.

The U.S. Army on JB MDL has prepared this EA IAW the National Environmental Policy Act (NEPA); Council on Environmental Quality (CEQ) regulations implementing NEPA; and Title 32, Code of Federal Regulations, Part 989, as amended, "Environmental Impact Analysis Process" (EIAP).

Description of the Proposed Action

The Proposed Action is to construct a medium-sized USACE Standard Design central issue facility for operations required to support multi-service uniform requirements in the Dix cantonment area within the boundaries of JB MDL. The facility is required for the receipt, stock, issue, exchange, and turn-in of designated Organizational Clothing and Individual Equipment (OCIE) items to soldiers.

Alternatives Considered

Alternative 1 – Construct and Operate a Central Issue Facility on the Dix portion of JB MDL (Preferred Alternative).

Under Alternative 1, the Army will construct a modern and efficient central issue facility near existing warehousing and storage facilities on Dix. The proposed site is specifically located within the industrial portion of the Dix cantonment area. The proposed site is considered a "greenfield site" which is an undeveloped site earmarked for commercial development or industrial projects and is bounded by Loop Street, Supply Road and Center Road. The northwestern portion of the proposed site extends slightly past Ramp Street. The central issue facility will be permanent construction with reinforced concrete foundations, concrete floor slabs, insulated metal panel and block walls, Styrene-Butadiene-Styrene modified bitumen roof, mechanical systems, electrical systems, and a sprinkler system. The facilities currently used for central issue facility operations will be repurposed upon completion of the Proposed Action, for similar storage functions.

Alternative 2 – No Action Alternative.

As required under NEPA and 32 CFR 989, the No Action Alternative (Alternative 2) is retained in this EA for comparative analysis. Under this alternative, JB MDL would not conduct the Proposed Action described under Alterative 1. The No Action Alternative equates with a "no-build" scenario whereby the project site would remain in its current condition.

Summary of Anticipated Environmental Impacts Associated with the Proposed Action

Based on the analysis in the EA, which is herewith incorporated by reference, I determine that no significant adverse effects are expected on any resource area as a result of the implementation of the proposed action. We will adhere to all installation management plans, policies and procedures. Furthermore, the project will adhere to several best management practices to minimize environmental impacts. Overall, the analysis in the EA indicates that the construction and operation of a central issue facility, as described under the Proposed Action, will not result in or contribute to significant adverse direct, indirect, or cumulative impacts to the resources in the region.

Public Review and Comment

The Interagency and Intergovernmental Coordination for Environmental Planning process associated with the preparation of the EA was conducted for 30 days, beginning 18 January 2013. The public and agency review of the Draft EA and Draft FONSI was conducted between 5 April 2013 and 6 May 2013. The notification of availability of the Draft EA and Draft FONSI was accomplished through publication of a legal Notice of Availability (NOA) in the *Burlington County Times*, the local newspaper that services the Dix region. A copy of the Draft EA and related documents were made available for public review at the Pemberton Branch of the Burlington County Library. All public comments received were addressed in the Final EA.

Finding of No Significant Impact (FONSI)

The Air Force, JB MDL has determined that the Preferred Alternative is Alternative 1 and that JB MDL will proceed with the construction of the central issue facility on Dix.

I conclude that the environmental effects of the Proposed Action at JB MDL are not significant, that preparation of an Environmental Impact Statement (EIS) is unnecessary, and that a FONSI is appropriate. The EA, prepared IAW NEPA, CEQ regulations, and 32 Code of Federal Regulations 989 as amended, is herein incorporated by reference.

JOHN M. WOOD, Colonel, USAF
Commander, Joint Base McGuire-Dix-Lakehurst

28 JUN 13
Date

1 Attachment:

Environmental Assessment

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List of Acronyms

AFB	Air Force Base
AFI	Air Force Instruction
APE	Area of Potential Effect
AST	Aboveground storage tank
AT/FP	Anti-Terrorism/Force Protection
BMPs	Best Management Practices
BRAC	Base Realignment and Closure
CAA	Clean Air Act
CDP	Census designated place
CEA	Classification exemption area
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CIP	Capital Improvements Program
CMP	Comprehensive Management Plan
CO	Carbon monoxide
CR	County route
CWA	Clean Water Act
dB	Decibels
dBA	A-weighted decibels
DERP	Defense Environmental Restoration program
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
G2G	Government to Government
ICRMP	Integrated Cultural Resources Management Plan
IDP	Installation Development Plan
IMP	Insulated Metal Panel
INRMP	Integrated Natural Resources Management Plan
IRP	Installation Restoration Program
JB MDL	Joint Base McGuire-Dix-Lakehurst
kV	kilovolt
LBP	Lead based paint
LEED	Leadership in Energy and Environmental Design
mgd	Million gallons per day
mgm	Million gallons per month
MMRP	Military Munitions Response Program
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NJ	New Jersey
NJAC	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NOx	Nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NR	National Register
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
O_3	Ozone
OCIE	Organizational Clothing and Individual Equipment
OSHA	Occupational Safety and Health Administration
Pb	Lead
PCB	Polychlorinated biphenyls
PM	Particulate matter
QD	Quantity Distance
RCRA	Resource Conservation and Recovery Act
RONA	Record of Non Applicability
SDWA	Safe Drinking Water Act
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
Tpy	Tons per year
TSP	Total suspended particulate
U.S.	United States
USACE	United States Army Corps of Engineers

USAR	United States Army Reserve
USEPA	United States Environmental Protection Agency
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGBC	United States Green Building Council
USGS	United States Geological Survey
UST	Underground storage tank
UXO	Unexploded ordnance
VOC	Volatile organic carbon

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1. PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

The United States (U.S.) Army Corps of Engineers (USACE) and U.S. Army Reserve (USAR) propose to construct a central issue facility (approximately 50,000 square feet) on the Dix portion of Joint Base McGuire-Dix-Lakehurst (JB MDL) in Burlington County, New Jersey (NJ) (Figure 1-1). This Environmental Assessment (EA) addresses the potential environmental, socioeconomic, and cultural impacts of this proposal at JB MDL.

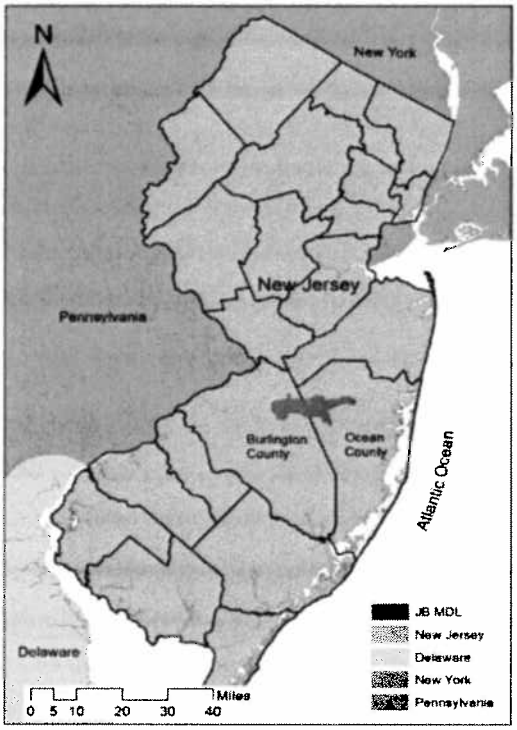

Figure 1-1. Location of JB MDL

This EA has been prepared to document the potential for environmental impacts resulting from the construction of a central issue facility (the Proposed Action) on JB MDL. This EA has been prepared under the provisions of, and in accordance with, the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 et seq.), Council on Environmental Quality [CEQ] Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), Army Regulation 200-1 (Environmental Protection and Enhancement), 32 CFR 651 (Environmental Analysis of Army Actions), and 32 CFR 989 (Air Force Environmental Impacts Analysis Process).

1.2 Purpose and Need

The mission of the Dix area of JB MDL is to provide support to assigned and attached activities and support the training of active and reserve soldiers. The Proposed Action is needed to provide a modern warehouse facility specifically designed for central issue operations required to support multi-service uniform requirements. The facility is required for the receipt, stock, issue, exchange, and turn-in of designated Organizational Clothing and Individual Equipment (OCIE) items to soldiers. The facility is needed to support the Rapid Fielding Initiative, Army Combat Uniforms, Individual Chemical Equipment and climatic equipment requirements.

Central issue operations are currently conducted in a World War II-era facility that is over 60 years old. Support posts are located throughout the facility making it inefficient for modern storage requirements. The overhead area is too low and the lighting is inadequate. Sufficient space does not exist to fully support current pre-deployment and mobilization requirements.

1.3 Scope and Content of the Environmental Assessment

This EA evaluates the individual and cumulative effects of the alternatives with respect to land use, air quality, topography and soils, water resources, biological resources, cultural resources, hazardous materials and waste, socioeconomics and environmental justice, infrastructure, noise, transportation and traffic, and human health and safety.

1.4 Decisions to be Made

The Army Reserve will decide on whether to implement the Proposed Action to construct a central issue facility or to continue to operate in an inadequate and inefficient facility that does not support modern warehousing requirements (No Action Alternative). JB MDL will decide whether or not to allocate the land for the project. If necessary, JB MDL will also decide upon the methodology and best management practices (BMPs) that would be followed to safely and effectively conduct the Proposed Action while minimizing adverse environmental effects.

1.5 Interagency Coordination and Public Involvement

NEPA ensures that environmental information is made available to the public during the decision-making process and prior to actions being taken. The premise of NEPA is that the quality of Federal decision-making will be enhanced if proponents provide information on their actions to State and local governments and the public involving them in the planning process. The Intergovernmental Coordination Act and Executive Order (EO) 12372 – *Intergovernmental Review of Federal Programs*, which has since been superseded by EO 12416 – *Intergovernmental Review of Federal Programs* and subsequently supplemented by EO 13132 – *Federalism,* require Federal agencies to cooperate with and consider State and local views in implementing a Federal proposal.

Public participation is a significant component of the NEPA process. The following provides a listing of key public notification and participation events that have occurred as part of this environmental review process:

- JB MDL conducted intergovernmental coordination for environmental planning pursuant to the requirements of NEPA by sending letters regarding the scope of the assessment to Federal, State and local governmental agencies and Federally-recognized Native American Tribes. The Final EA provides a list of agencies contacted during initial scoping (Chapter 8). Copies of the letters received from the respective agencies are included in Appendix A.
- JB MDL published and distributed the Draft EA and Draft Finding of No Significant Impact (FONSI) for a 30-day public comment period between April 5, 2013 and May 6, 2013. The mailing list for the Draft EA is provided in Chapter 9. Notification of the availability of the Draft EA and FONSI has been accomplished through publication of a legal Notice of Availability in the Burlington County Times, the local newspaper that services the Dix region (Appendix D). Upon distribution of the Draft EA to the public, a copy of the Draft EA and related documents were made available for public review at the Pemberton Branch of the Burlington County Library. The JB MDL Public Affairs Officer was the primary point of contact for any inquiries from the local news media.
- Copies of received responses/comments on the Draft EA have been provided in the Final EA (Appendix E). Revisions were made as appropriate, to the Final EA and Final FONSI based on the comments received.

2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The Proposed Action is to construct a medium-sized USACE Standard Design central issue facility for operations required to support multi-service uniform requirements. The Proposed Action design includes a base bid and options that would be decided upon when the Army receives contractor's bids for construction of the project. The base bid consists of a 39,000 square foot central issue facility with no parking lot, only a bus lane. The highest option includes an approximately 50,000 square foot facility including a 19 space aggregate parking lot and bus lane. For purposes of analysis in this EA, the impact discussions analyze potential impacts for the highest option; however, should the Army elect to construct the base bid option, the impacts presented in this EA would be minimized accordingly.

2.2 Alternatives

This EA evaluates the individual and cumulative effects of the following alternatives with respect to land use, air quality, soils, water resources, biological resources, cultural resources, materials and waste, energy, socioeconomics and environmental justice, infrastructure, noise, transportation and traffic, and human health and safety.

2.2.1 Alternative 1- Preferred Alternative

Under Alternative 1, the Army would construct a modern and efficient central issue facility at the northwest corner of the intersection of Supply Road and Center Road, near existing warehousing and storage facilities on Dix (Figure 2-1). The central issue facility would be permanent construction with reinforced concrete foundations, concrete floor slabs, insulated metal panel and block walls, Styrene-Butadiene-Styrene modified bitumen roof, mechanical systems, electrical systems, and a fire sprinkler system. Construction activities would include land clearing, paving, general site improvements, and extension of utilities to serve the facility. A Conex storage container gravel lot is also proposed along Ramp Street to provide overflow storage. The facilities currently used for central issue facility operations would be repurposed upon completion of the Proposed Action, for similar storage functions.

The proposed site location (Figure 2-1) is 8.9 acres in size and consists of maintained lawn. The site is surrounded by four roadways: Ramp Street to the north, Loop Street to the east, Supply Road to the south and Center Road to the west. There are existing Conex storage containers located in the northwest portion of the site. These containers would be removed by JB MDL prior to construction of the central issue facility.

The design of the building would meet Leadership in Energy and Environmental Design (LEED) Silver criteria and would follow USACE standard designs for central issue facilities. Section 2.2.1.2 discusses the LEED components planned to be incorporated into the facility to obtain LEED Silver status. All construction in this project would comply with the Anti-Terrorism/Force Protection (AT/FP) standards outlined in United Facilities Criteria 4-010-01 'Department of Defense (DoD) Minimum Antiterrorism Standards for Buildings.' Physical security measures incorporated into the design include maximum standoff distances from roads, parking areas, and vehicle unloading areas. As shown in red in Figure 2-2 a 56 foot AT/FP buffer has been included into the maximum design option. A portion of Ramp Street would also be gated for security measures between the location of the dumpster and the container area as shown in orange in Figure 2-2.

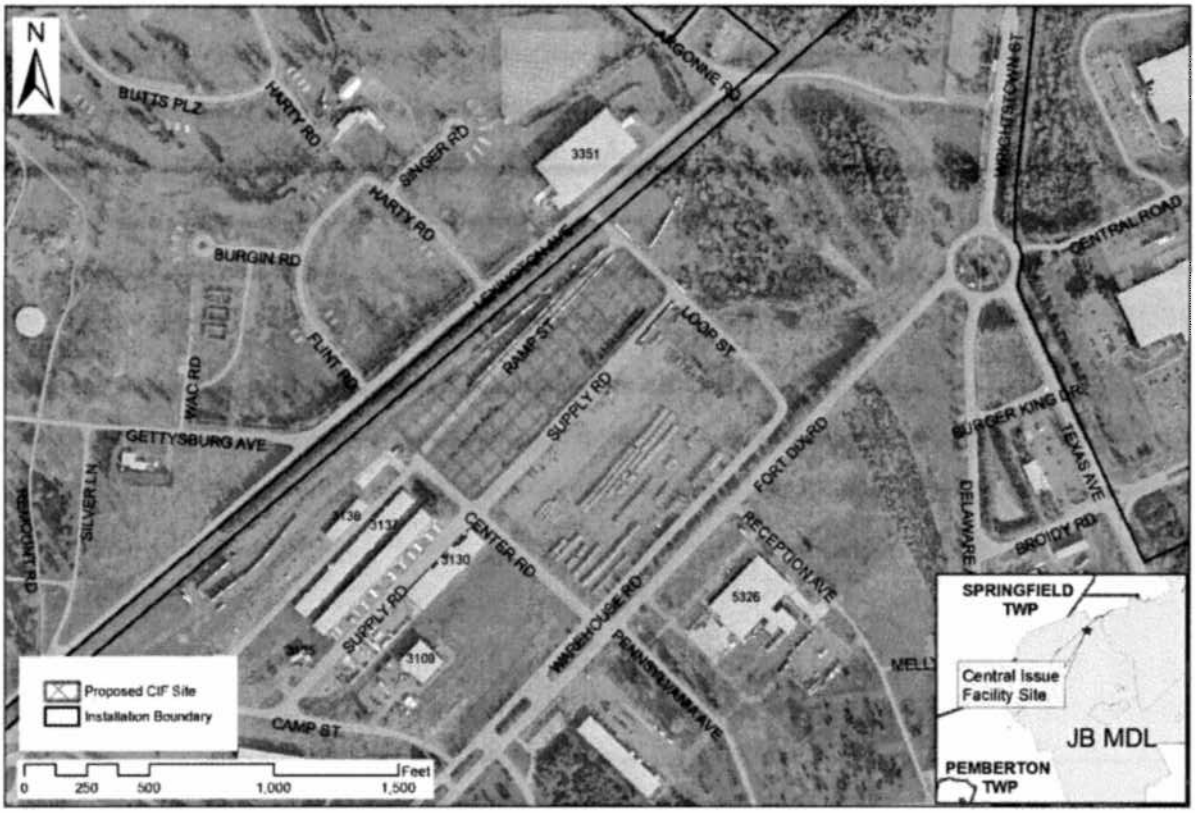

Figure 2-1. Location of the Proposed Central Issue Facility

Construction of the facility would take approximately 18 months beginning in Spring 2014. It is estimated that up to 45 construction workers would be required at the site at any given time. Construction activities would include site preparation, build-out of support areas and the central issue facility, and installation of equipment. No roadway demolition is required for construction of the central issue facility. Site demolition would include relocation of an existing sanitary sewer line that runs northwest through the middle of the site. This line would be re-routed around the proposed facility and would tie back in on the eastern side of the site. All necessary utilities (e.g., electricity, natural gas, communications, sanitary sewer and potable water) needed for operations of the facility are in close proximity to the site along Supply Road, Center Road, and Lexington Avenue.

A National Pollutant Discharge Elimination System (NPDES) permit would be required as there would be more than one acre of disturbance. Specific stormwater control BMPs would be developed during final site design and could include BMPs such as temporarily seeding bare soil areas with appropriate native vegetation to reduce onsite soil erosion. See Section 2.2.3 for a list of BMPs known at this time to be implemented during construction of the central issue facility. In order to provide positive drainage away from the proposed facility, the building would be constructed on approximately five feet of fill. Fill excavated for the construction of the proposed extended dry detention basin in the northern portion of the site would be used toward the fill needed to build the site up five feet. Constructing the facility on five feet of fill would allow positive drainage away from the building. Drainage would be conveyed to the northern portion of the site in drainage swales to an extended dry detention basin to control stormwater runoff (Figure 2-2).

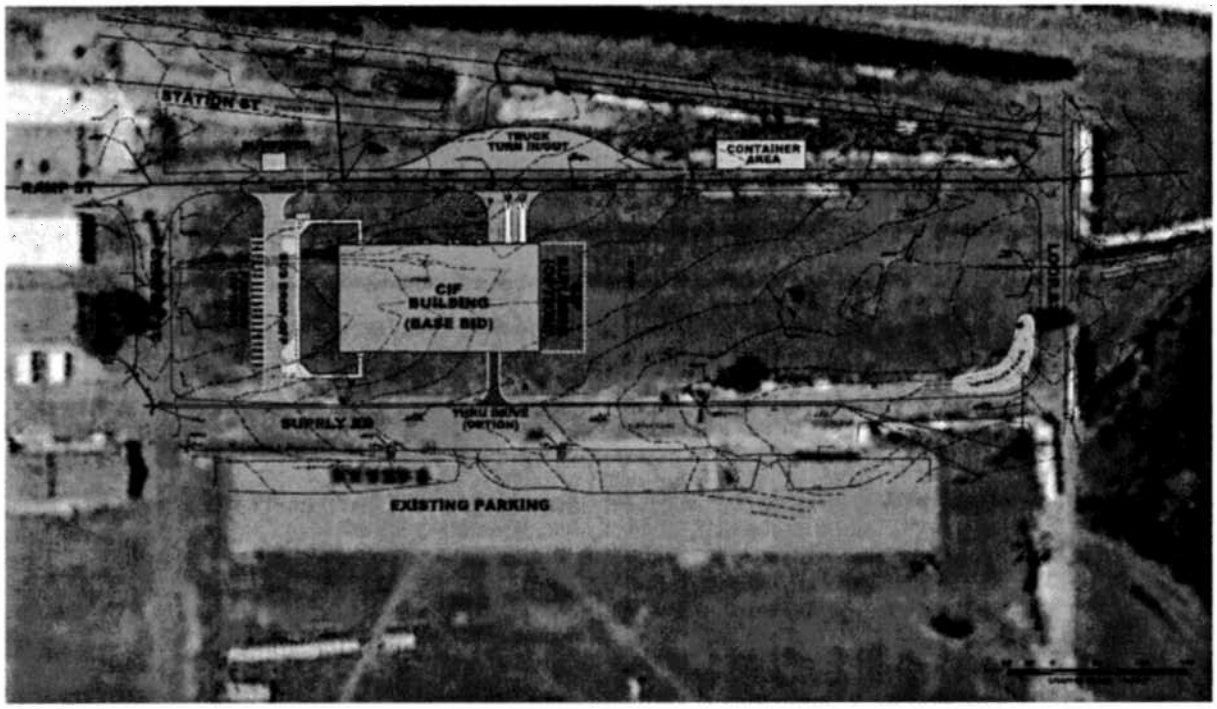

Figure 2-2. Proposed Site Layout

The existing roadways around the site would be maintained. A pavement core would be taken to determine if any additional reinforcing/pavement surface would be needed on Ramp Street to account for the increased truck traffic. The proposed loading docks and walkways would be concrete pavement with the truck circulation area being aggregate pavement. The bus access drive connecting Supply Road with Ramp Street and the 19 personal vehicle parking spaces included in the maximum design option would also be aggregate.

2.2.1.1 Site History

Historic aerial photographs dating back to 1931 show the proposed site location was undeveloped until 1940. In 1944 there was a railroad that ran along Ramp Street and by 1948 there were several railroads that ran northeast to southwest through the entire site. The railroad was still in use in 1984 when Conrail abandoned the former Pennsylvania RR mainline serving Fort Dix and removed their track. The Army owned tracks were removed in 1993. From 1993 to present, the site appears to have remained vacant. In late 2013, a ground penetrating radar survey will be conducted on the site to identify any subsurface obstructions (e.g. remnant rail lines) that would need to be removed prior to construction of the central issue facility.

2.2.1.2 LEED Components

The proposed central issue facility would attain a U.S. Green Building Council (USGBC) LEED Green Building Silver Rating. By meeting LEED Silver certification, the project would meet the requirements stated in United Facilities Criteria 4-030-01 Sustainable Development Section 2-2.1 Army which states, "All military vertical building construction projects starting with the fiscal year 2008 military construction program will achieve the Silver level of LEED. LEED Ratings have a scoring system based on a set of required "prerequisites" and a variety of "credits" in six major categories: sustainable sites; water efficiency; energy and atmosphere; materials and resources; indoor environmental quality; and innovation and design process. In LEED Version 3, new construction and major renovations for

commercial buildings can qualify for four levels of certification: Certified, Silver, Gold, and Platinum. Certification is granted solely by the USGBC responsible for issuing the LEED system used on the project. LEED is a point-based system where building projects earn LEED points for satisfying the specific green building criteria. The minimum certification at Silver level is 50 to 59 points. The Army's pre-certification estimates for the central issue facility total 53 points out of the possible 59 points.

The Army plans to utilize sustainable building materials to the extent practicable and would integrate a variety of green construction practices. The Army intends to use sustainable design and energy systems to offset building energy costs. The Army chose an optimized building position to assist in reducing energy costs and plan to implement a cool roof, insulated metal panel walls, daylighting and LED lighting, occupancy sensors, metering, and high volume low velocity fans into the proposed facility. The LEED components would help JB MDL meet renewable energy goals from the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007. Below is a brief description of the proposed onsite sustainable design measures:

- **Cool Roof**: A roofing that has high solar reflectance and absorbs only small amounts of heat, which can reduce heat transfer to the indoors and enhance roof life and durability.
- **Insulated Metal Panel**: The function of insulated metal panel (IMP) walls is to insulate buildings, reducing energy demand. IMPs reduce temperature fluctuation in a space, by acting as an air barrier and providing insulation and moisture protection. IMPs are well suited for commercial buildings due to their excellent thermal and weatherproofing performance characteristics
- **Daylighting and LED Lighting**: Daylighting provides the opportunity to bring daylight into spaces not located adjacent to exterior walls. LED lighting uses less energy, lasts longer, and is mercury free. LED strip lighting could be used to significantly lower the lighting power density during unoccupied hours while still providing some illumination.
- **Occupancy Sensors**: The use of occupancy sensors to turn off lights in unoccupied areas would reduce the overall lighting energy use.
- **Metering**: Advanced utility metering would be installed to collect data for each energy supply entering the building and would communicate with the future base-wide energy management and control system.
- **High Volume Low Velocity Fans**: For warehouse cooling, significant energy savings are realized by lowering summer ventilation to 1 cubic feet per minute/square foot using high volume low velocity fans. The fans would be used to minimize heating season stratification and occupant comfort by keeping the air in the warehouse space well mixed.

2.2.2 Alternative 2 – No Action Alternative.

As required under NEPA and 32 CFR 989, the No Action Alternative (Alternative 2) is retained in this EA for comparative analysis. Under this alternative, JB MDL would not conduct the Proposed Action described under Alterative 1. For purposes of analysis in this EA, the impact discussions in Chapter 4 equate the No Action Alternative with a "no-build" scenario whereby the project site would remain in its current condition.

2.2.3 Best Management Practices

To minimize impacts on the environment, the Army would incorporate the following BMPs into the implementation of the Proposed Action:

- The building would be designed to meet LEED Silver criteria.

- The contractor would stage all necessary equipment and materials within the proposed project site as well as limit disturbance on site to the maximum extent practicable.
- All on-road vehicles and non-road construction equipment at the construction site shall comply with the three minute idling limit pursuant to New Jersey Administrative Code (NJAC) 7:27-14 and NJAC 7:27-15. All non-road diesel equipment shall comply with the 2004 Federal Clean Air Non-road Diesel Rule.
- All diesel non-road construction equipment operating at the construction site shall use ultra-low sulfur diesel fuel (<15ppm sulfur) in accordance with the Federal Non-road Diesel Rule.
- All non-road diesel construction equipment greater than 100 horsepower used on the proposed project site for more than 10 days shall have engines that meet the U.S. Environmental Protection Agency (USEPA) Tier 4 non-road emission standards, or the best available emission control technology that is technologically feasible for that application as verified by the USEPA.
- During construction the contractor would implement dust control measures such as installation of barriers to prevent dust from blowing off site, sprinkling bare areas with water, and establishing vegetation at the earliest possible opportunity.
- Standard operating procedures for safe operation of a construction site would be adhered to, including procedures for the safe operation and movement of vehicles, maintaining staging areas, and adherence to a Spill Prevention Control and Countermeasures Plan.
- A site specific construction and operation health and safety plan, a hazardous waste management plan, and material recycling plan would be provided by the contractor and approved by JB MDL, prior to initiation of work on JB MDL. The plans would meet the requirements in USACE EM385-1-1, Safety and Health Requirements Manual.
- Construction contractors would limit work hours to 7 am to 5 pm Monday through Friday, to minimize noise disturbance to nearby residents and employees; exceptions to these work hours must be preapproved by the Contracting Officer.
- The Contractor would work with the JB MDL Public Affairs Office and base safety office to ensure that the base population is made fully aware of any necessary road closures, detours, or other safety measures that would affect workers or residents.
- In the case of inadvertent discovery of human burials, prehistoric or historic artifacts or their remnants during the implementation of the Proposed Action, all land disturbing activities would cease, the site would be secured and the JB MDL Cultural Resource Manager would contact the NJ State Historic Preservation Office (SHPO) and Federally recognized tribes as applicable as outlined in the base Integrated Cultural Resource Management Plan (ICRMP).
- In the event of a hazardous material or petroleum spill, the system operator would immediately contact the base Dispatch Office at 911 in accordance with base spill response policy. To reduce the potential for spills during operation, the system operator would inspect equipment and vehicles for leaks daily and store hazardous materials and wastes in a manner that provides secondary containment in the event of a spill.
- During the design process a contractor would use ground penetrating radar to determine if subsurface obstructions such as underground storage tanks (USTs) are found. Should USTs be found, their locations would be recorded and then the USTs would be removed in accordance with applicable environmental and safety standards. Should contaminated soil be encountered and need to be removed, it would be characterized and disposed of under the watch of a professional to minimize potential cross-contamination and to ensure proper protocols are followed. The UST

would be removed and disposed of in accordance with the Resource Conservation and Recovery Act (RCRA), in coordination with the JB MDL installation restoration manager.

2.3 Permits and Approvals

Table 2-1 summarizes permits and agency approvals and potentially applicable regulations.

Table 2-1. Permits and Approvals Needed Prior to Project Implementation

Material, Use, or Resource	Type of Approval/Agency	Requirements
Threatened and Endangered Species	Determination of No Adverse Effect/US Fish and Wildlife Service (USFWS)	Section 7 of the Endangered Species Act (ESA) requires that a Federal agency consult with the USFWS on any action that may affect endangered, threatened, or candidate species, or that may result in adverse modifications of critical habitat. Implementing regulations that describe procedures for interagency cooperation and consultation with regards to effects on threatened, endangered, or proposed species are contained in 50 CFR 402. The Army at JB MDL submitted consultation letters to the NJ regional office of USFWS and to the NJ Department of Environmental Protection (NJDEP), Division of Fish and Wildlife. The consultation letters and responses received are presented in Appendix A.
Section 106, historical/archeological	SHPO	Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects that their Federally funded activities and programs have on significant historic properties. "Significant historic properties" are those properties that are included in, or eligible for, the National Register of Historic Places (NRHP). The Army at JB MDL submitted consultation letters to the NJ SHPO office as well as the Delaware Nation and Delaware Tribe of Indians, both of which are Federally-recognized Native American Tribes. The consultation letters and responses received are presented in Appendix A.
Stormwater	Construction NPDES Permit/NJDEP	For construction of the facility the contractor would file for authorization via NJDEP's construction General Permit to obtain stormwater management coverage and would adhere to NPDES regulations as required under this permit.
Soil Erosion and Sedimentation Control Plan	Burlington County Soil Conservation District	A site-specific Soil Erosion and Sedimentation Control Plan would be submitted to the Burlington County Soil Conservation District for review and approval. The plan would receive certification from the District prior to initiating construction.
Site Disturbance	Digging Permit/JB MDL	A digging permit from JB MDL would be required prior to any subsurface disturbance.

2.4 Alternatives Eliminated from Further Study

Additional site alternatives off the installation were considered but were eliminated from further study due to the mandatory security measures needed at the proposed central issue facility. The proposed site location was an obvious choice as it is adjacent to the current central issue facility storage areas and has a compatible land use. The Installation Development Plan (IDP) shows the current and future land use at the proposed site as "Industrial". The site is currently vacant and therefore extra costs associated with the demolition of existing facilities would be avoided. The site is also conveniently located in close proximity to the Dix Commercial Gate (Checkpoint 9) located off of Wrightstown Cookstown Road, thereby minimizing truck traffic and noise across the installation.

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3. AFFECTED ENVIRONMENT

3.1 General Overview

This section describes current baseline environmental, cultural, and socioeconomic conditions of the proposed project site located on the Dix portion of JB MDL. The potential direct, indirect, and cumulative effects of the Proposed Action components and alternatives on each of the resources are addressed in Section 4.

3.1.1 Project Location

The project study area is located on the Dix portion of JB MDL, located in Burlington County, NJ, in the central part of the State. The parcel is approximately 8.9 acres in size. JB MDL is located within the Pinelands National Reserve, also referred to as the Pinelands. This reserve consists of approximately 1.1 million acres in southern NJ, managed by the NJ Pinelands Commission. The Pinelands National Reserve includes portions of seven counties, including: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Ocean.

The proposed site is specifically located within the industrial portion of the Dix cantonment area. The site is considered a "greenfield site" which is an undeveloped site earmarked for commercial development or industrial projects. The site is bounded by Loop Street, Supply Road and Center Road. The northwestern portion of the site extends slightly past Ramp Street. A parking lot is located southeast of Supply Road, maintained lawn and tree covered areas are located north and northeast of Loop Street, warehouse and storage buildings are located southwest of Center Street (Buildings 3138, 3137, 3130 etc.), and maintained lawn and impervious areas are located north and northwest of Ramp Street (see Figure 2-1). The closest residential property is located approximately one mile south of the proposed project location.

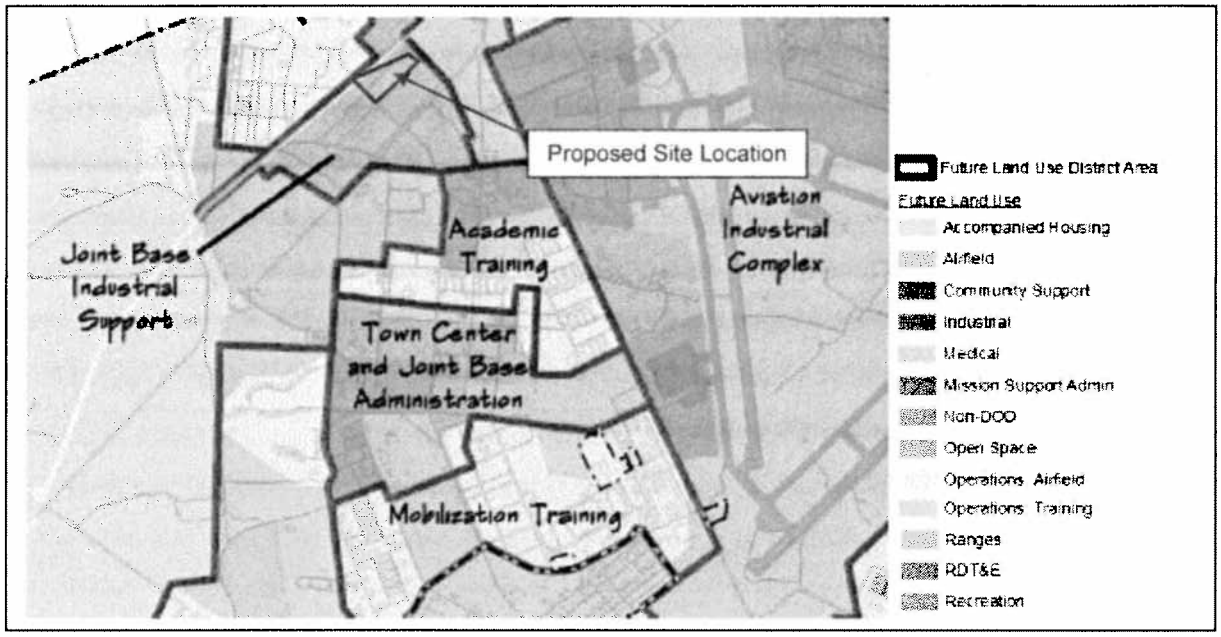
3.1.2 Scope of Affected Environment

This EA evaluates the individual and cumulative effects of the following alternatives with respect to land use, air quality, topography and soils, water resources, biological resources, cultural resources, hazardous materials and waste, socioeconomics and environmental justice, infrastructure, noise, transportation and traffic, and human health and safety.

3.2 Land Use

Fort Dix, McGuire Air Force Base (AFB), and the Naval Air Engineering Station Lakehurst were combined as a result of the Base Realignment and Closure (BRAC) process and became JB MDL in March 2009, becoming the first tri-service Joint Base. The Air Force 87th Air Base Wing took primary responsibility for base keeping functions across the entire Joint Base, including but not limited to, real estate management, facility maintenance and construction, environmental compliance, energy management, housing management, and base planning.

The first JB MDL IDP (e.g., base master plan) was completed and signed in December 2012. The IDP depicts the current and future land use of the proposed site as "Industrial". The IDP also identified planning districts and coordinated them with future land uses in a manner that maintains flexibility to adapt to evolving and changing mission requirements. The proposed project site is located within the future "Joint Base Industrial Support District" (see Figure 3-1 below). The district will provide an area for consolidated logistics (non-munitions), for operations that are functionally dependent on large commercial truck delivery systems. Uses of the district would include warehousing, recycling, individual equipment issue, office supply, and transportation and operations maintenance. Future land uses may also include permanent consolidated warehouse facilities and re-activation of the railhead (JB MDL, 2012).



Source: JB MDL, 2012

Figure 3-1. IDP Proposed Land Use and District of the Proposed Site Location

3.3 Air Quality

3.3.1 Ambient Air Quality

The principal framework for national, State, and local efforts to protect air quality in the U.S. is the Clean Air Act (CAA) (42 USC §§ 74017642). The CAA requires the USEPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. NAAQS are provided for six principal pollutants, called criteria pollutants (as listed under Section 108 of the CAA), including the following: carbon monoxide (CO), lead (Pb), nitrogen oxides (NOx), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2). Ambient air quality in an area can be characterized in terms of whether or not it complies with the primary and secondary NAAQS.

As delegated by the USEPA, the State of NJ is responsible for protecting the State's air quality. In turn, the NJDEP is responsible for interpreting and implementing those statutes pertaining to the control of air pollution. Pertinent regulations are found in NJAC Title 7, Chapter 27, Subchapter 13, Ambient Air Quality Standards. Ambient air quality standards for State and Federal NAAQS are shown in Table 3-1.

Table 3-1. New Jersey Air Quality Standards and Federal Air Quality Standards

Pollutant	Averaging Period	New Jersey State Standards		Federal Air Quality Standards (NAAQS)	
		Primary	Secondary	Primary	Secondary
Carbon Monoxide	1 hour	35ppm	35ppm	35ppm	--
	8 hour	9ppm	9ppm	9ppm	--
Ozone	1 hour	0.12ppm	0.08ppm	0.12ppm	0.08ppm
	8 hour	--	--	0.075ppm	0.075ppm

Pollutant	Averaging Period	New Jersey State Standards		Federal Air Quality Standards (NAAQS)	
		Primary	Secondary	Primary	Secondary
Nitrogen	1 year	0.05ppm	0.05ppm	0.053ppm	0.053ppm
Lead	3 months	1.5ug/m^3	1.5ug/m^3	1.5ug/m^3	1.5ug/m^3
	3 hour	--	0.50ppm	--	0.50ppm
Sulfur Dioxide	3 hour	--	0.50ppm	--	0.50ppm
	24 hour	0.14ppm	0.10ppm	0.14ppm	--
	1 year	0.03ppm	0.02ppm	0.03ppm	--
Particulate Matter (PM_{10})	24 hour	--	--	150ug/m^3	150ug/m^3
	1 year	--	--	--	--
Particulate Matter ($PM_{2.5}$)	24 hour	--	--	35ug/m^3	35ug/m^3
	1 year	--	--	12ug/m^3	15ug/m^3

Source: USEPA, 2011 and NJDEP, 1991
Notes: ppm=parts per million, ug/m3 = micrograms per cubic meter

In areas where the applicable NAAQS are not being met, a non-attainment status is designated (USEPA, 2007). Currently, the entire State of NJ does not meet the NAAQS for ozone and is classified as moderate non-attainment for ozone. Atmospheric ozone occurs when NOx, CO and Volatile Organic Compounds (VOCs) react in the atmosphere in the presence of sunlight (a photochemical reaction). NOx and VOCs are called ozone precursors and are regulated as a means of controlling ozone production. Motor vehicle exhaust, industrial emissions, and chemical solvents are the major anthropogenic sources of these chemicals.

The October 29, 2007 NJ State Implementation Plan (SIP) established general conformity budgets for McGuire AFB and Lakehurst for ozone precursors VOCs and NOx. These proposed budgets were approved by the USEPA under 40 CFR 93.158. The 2011 general conformity budget for Lakehurst is 129 tons per year (tpy) of VOC and 793 tpy of NOx. The 2011 budget for McGuire is 730 tpy of VOC and 1,534 tpy of NOx (NJDEP, 2013). There is no specific SIP budget for the Fort Dix area.

Air emissions on the Dix portion of JB MDL are primarily attributed to automobile and truck emissions, boilers, manufacturing operations, and painting. See Table 3-2 for a summary of the 2011 emissions data for criteria pollutants at Dix. The installation operates under a Title V Air Permit that covers most emission sources such as boilers, generators, underground storage tanks (USTs), and aboveground storage tanks (ASTs).

Table 3-2. 2011 Annual Air Emissions Data at Dix

Air Pollutant Emissions (tons/year)						
Facility Name	Carbon Monoxide	Nitrogen Oxides	Lead	Sulfur Dioxide	PM_{10}	$PM_{2.5}$
Fort Dix	14.97	17.58	2.32	2.57	7.18	1.34

Source: JB MDL, 2012a

3.3.2 General Conformity Rule

The General Conformity Provision of the CAA (42 USC 7401 *et seq.*; 40 CFR 50-87) Section 176(c), including the USEPA's implementation mechanism, Determining Conformity of Federal Actions to State or Federal Implementation Plans (40 CFR Part 93), requires Federal agencies to prepare written

Conformity Determinations for Federal actions in or affecting NAAQS non-attainment areas or maintenance areas. As Burlington County is currently in non-attainment status for ozone, annual $PM_{2.5}$ and 24 hour $PM_{2.5}$ the procedural requirements of the General Conformity Rule are in effect for the Proposed Action (USEPA, 2012). A Conformity Rule Compliance analysis for the Proposed Action is provided in Appendix B.

3.4 Topography and Soils

3.4.1 Topography

Initially charged by Congress with the "classification of the public lands," the United States Geological Survey (USGS) began topographic and geologic mapping in 1879. A review of historic topographic maps dating back to 1906 shows the proposed project site as consistently level from 1906 to present. Figure 3-2 is a 1948 Bordentown NJ Quadrangle, USGS 15 minute series topographic map of the proposed site location. As evidenced in the figure and discussed in Section 2.2.1.1, several rail lines once traversed the proposed project site.

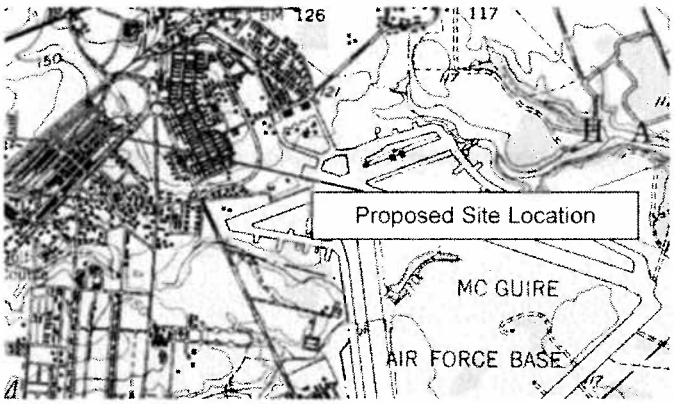


Figure 3-2. 1948 Topographic Map of the Project Area

3.4.2 Soils

The Federal Farmland Protection Policy Act (Public Law 97 98; 7 USC 4201 et seq.) has been enacted in an effort to document the potential impacts to agricultural land through the NEPA process and to preserve land with the potential to consistently produce food and raw materials. The supply of high quality farmlands is limited; therefore, the U.S. Department of Agriculture (USDA) encourages the preservation of soils classified as prime farmland, or soils used for agriculture unique to the State. Prime farmland soils are defined by the USDA as: "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses. It has the combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops in an economic manner if it is treated and managed according to acceptable farming methods (USDA, 2010)".

No land area on JB MDL is currently utilized for agricultural purposes. Table 3-3 below describes the predominant soils found on the proposed site location. Sassafras Sandy Loam is considered a "Prime Farmland" soil in NJ (USDA/NRCS, 2010).

Table 3-3. Soil Types Found at the Proposed Site Location

Percentage of Cover	Soil Type	Slope	Description
100	Sassafras Sandy Loam (SaA)	0-2 percent	Consists of well-drained, moderately coarse textured soils. The substratum is very sandy and contains large amounts of gravel in places. These soils are moderately permeable. The loamy sand has moderately low available water capacity and fertility and low organic content.

Source: USDA, 1971

For projects disturbing over an acre of soil, a site-specific Erosion and Sedimentation Control Plan must be submitted to the Burlington County Soil Conservation District Office for review and certification prior to initiation of construction.

3.5 Water Resources

3.5.1 Regulatory Framework

Surface Water and Groundwater

Water resources at JB MDL are regulated under the under the jurisdiction of the NJDEP, Bureau of Water Quality Standards and Assessment under NJAC 7:9B, surface water and NJAC 7:9C, groundwater, as well as the USEPA, under the Federal Safe Drinking Water Act (SDWA) and the Clean Water Act (CWA). NJDEP has the primary responsibility for protecting NJ's surface and groundwater from pollution caused by improperly treated wastewater and its residuals, as well as destruction of watersheds from development.

Stormwater and wastewater discharges are regulated by the USEPA and the NJDEP, under Sections 401 and 402 of the CWA (permitting requirements) through the NPDES. See Section 3.10 Infrastructure for detailed information pertaining to stormwater and wastewater discharges.

Drinking water supplies are monitored and protected under the National Primary Drinking Water Regulations, 40 CFR § 141; National Secondary Drinking Water Regulations, 40 CFR § 143; and the Bureau of Safe Drinking Water under the NJDEP. Through the SDWA, USEPA sets standards for public water systems to provide safe drinking water to its consumers by limiting high levels of contaminants in drinking water. In order to comply with provisions outlined in the SDWA and the Primary Drinking Water Regulations, JB MDL conducts sampling of all drinking water supply systems and each portion of JB MDL (i.e. McGuire, Dix, Lakehurst) employs a Wellhead Protection Plan.

Wetland and Floodplains

EO 11990, Protection of Wetlands 1977 directs Federal agencies to (1) minimize destruction, loss, or degradation of wetlands and (2) preserve and enhance the natural and beneficial values of wetlands when a practical alternative exists. In 1987 NJ adopted the NJ Freshwater Wetlands Protection Act (NJSA 13:9B, rules at NJAC 7:7A). Additional provisions governing transition areas were adopted in July of 1989. In 1994, the NJDEP assumed responsibility in most of NJ for the Federal wetlands permitting program, also known as the "Federal 404 program" because it stems from section 404 of the Federal CWA. The Federal 404 program had previously been administered in NJ by the USACE. The EPA oversees the NJDEP's wetlands program in accordance with the Federal CWA and a Memorandum of Agreement between the NJDEP and EPA. While NJ's freshwater wetlands program operates in place of the Federal 404 program throughout most of the State, the USACE has retained responsibility for the Federal 404 program in all interstate and navigable waters (including adjacent wetlands). Projects in these waters remain subject to USACE jurisdiction as well as to the NJDEP wetlands program and therefore may require both a Federal 404 permit from the USACE and a NJDEP permit from the State (NJDEP, 2012).

EO 11988, Floodplain Management 1977 states Federal agencies shall provide leadership and take action to reduce the risk of flood loss and minimize the impact of floods on human safety, and preserve the natural and beneficial values served by the floodplains. The EO directs Federal agencies to avoid floodplains unless the agency determines there is no practicable alternative. When the only practicable alternative is to site within a floodplain, a specific step by step process which is outlined by the Federal Emergency Management Agency must be followed.

3.5.2 Surface Water

The proposed project site is located within the Crosswicks Neshaminy watershed which ultimately drains into the Delaware River Basin. The majority of surface waters located within the Dix cantonment area have been engineered. There are no surface waters within the proposed project site. The closest surface water to the proposed project site is located approximately 570 feet northeast of the Loop Street site boundary (see Figure 3-3 below). It is an un-named intermittent tributary that flows south.

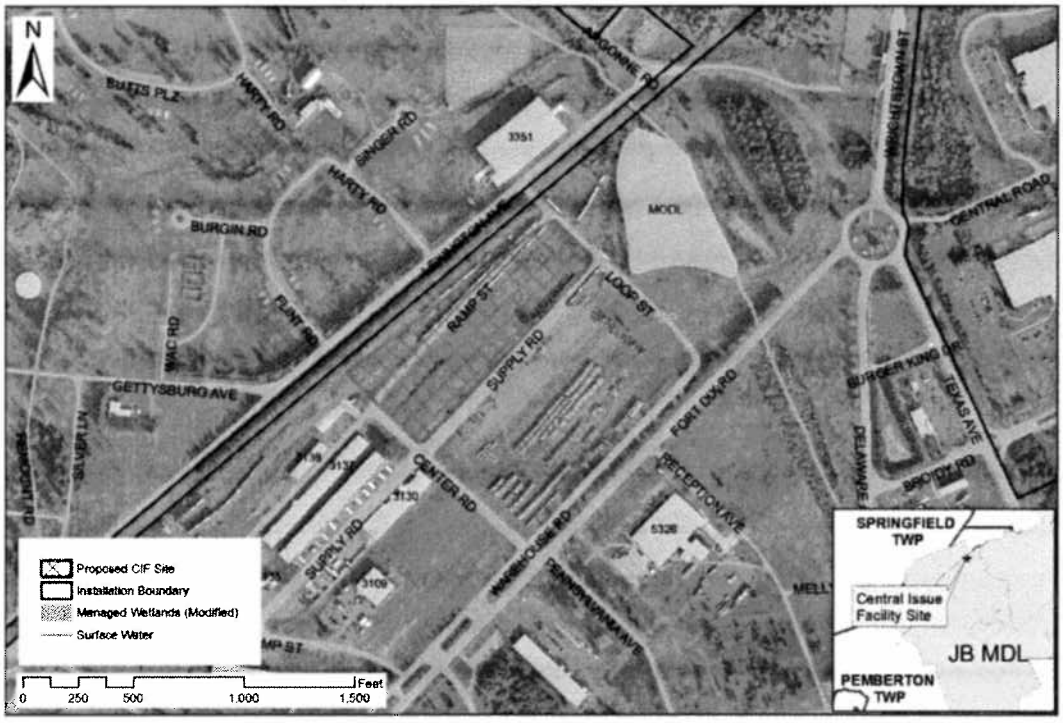


Figure 3-3. Existing Surface Waters and NJDEP Mapped Wetlands

3.5.3 Groundwater

The Dix portion of JB MDL is located within the Outer Coastal Plain aquifer system. Several major hydrogeologic units have been identified in the area including shallow units (the Cohansey Sand and the Kirkwood Formation) and one deep regional unit (the Potomac Raritan Magothy System). Together the two shallow aquifers are estimated to contain as much as 17 trillion gallons of water (Pinelands Preservation Alliance, 2012). Because of the high water table and permeable soils, the underlying groundwater resources are particularly sensitive to contamination making groundwater pollution prevention an important issue on the installation. Recharge to the underlying aquifer systems occurs primarily through the infiltration of precipitation. Burlington County receives an average annual precipitation of 46.82 inches.

The Dix portion of JB MDL obtains potable water from both surface and groundwater sources. The primary source of potable water on Dix is a surface water diversion on Greenwood Branch of the North Branch of Rancocas Creek. The New Lisbon Pumping Station pumps water from the Rancocas Creek to a water treatment plant on Dix where it is treated before being distributed. Dix also utilizes groundwater wells which tap into the Potomac Raritan Magothy aquifer. This water is filtered for the removal of iron and manganese before distribution. All water sources are tested and treated to ensure that State quality standards are met.

The entire Dix cantonment area is located within a classification exception area (CEA) that was implemented in February 1999 based on groundwater contamination resulting from several contaminated sites in the cantonment area. The CEA restriction depth is 100 feet and is in effect for an indeterminate number of years.

3.5.4 Wetlands and Floodplains

Based on National Wetland Inventory (NWI) mapping the proposed project site and adjacent areas do not contain any wetlands. According to State wetland data there is a five acre isolated wetland associated with the un-named tributary located on the east side of Loop Street however it is outside of the Proposed Action property boundary, see Figure 3-3 above.

There is a small ditch located in the northern portion of the site that runs parallel with Supply Road and Ramp Street. This ditch is not mapped by NWI or the State of NJ. It is believed to be a remnant from one of the rail lines that ran though the site in the 1940's as there are no records of this ditch being constructed for drainage purposes. As per NJDEP Wetland Regulations NJAC 7:7A it was concluded this ditch would be of ordinary resource value and consequently has no buffer. The Army decided that further analysis was not warranted.

3.6 Biological Resources

3.6.1 Regulatory Framework

Protection and management of biological resources at JB MDL is mandated by a number of laws, regulations, and guidance documents. The primary statutes, regulations, EOs, and guidance that direct, and apply to, the management of biological resources at the installation include the following:

- Endangered Species Act of 1973 (16 USC 1531 et seq.)
- Endangered Species Preservation Act of 1966 (16 USC 1531)
- Federal Noxious Weed Act of 1975 (7 USC 2801)
- Fresh Water Pollution Control Act, as amended by the Clean Water Act (33 USC 1251 et seq.)
- Fish and Wildlife Conservation Act of 1980 (16 USC 2901 et seq.)
- Fish and Wildlife Coordination Act of 1934 (16 USC 661 et seq.)
- Migratory Bird Conservation Act of 1966 (16 USC 715)
- Migratory Bird Treaty Act of 1918 (16 USC 703-711)
- Sikes Act of 1960 (16 USC 670 et seq.), and Sikes Act Improvement Act of 1997
- AFI 32-7064, Integrated Natural Resources Management
- EO 11991, Protection and Enhancement of Environmental Quality, 24 May 1977
- Pinelands Comprehensive Management Plan (N.J.S.A. 13:18A-1 et seq., N.J.A.C. 7:50 et seq.).

3.6.2 Integrated Natural Resource Management Plan

A Joint Base Integrated Natural Resource Management Plan (INRMP) is under development. Until the new INRMP is promulgated, natural resources for the study area are addressed by the previous INRMPs for Fort Dix (Fort Dix, 2007). The INRMPs provide detailed descriptions of the natural resources present, identifies management issues, and establishes specific natural resources management activities. Where available, more recent natural resources data and reports were used to characterize the natural environment.

3.6.3 Vegetation

The majority of the vegetation on the proposed project site consists of maintained lawn. Within the small ditch located in the northern portion of the site that runs parallel with Supply Road and Ramp Street there are several species of herbs and shrubs including yellow foxtail (*Setaria pumila*), milkweed (*Asclepias syriaca*), common mullein (*Verbascum Thapsus*), queen annes lace (*Daucus carota*), golden rod (*Solidago canadensis*), poison ivy (*Toxicodendron radicans*), and yellow starthistle (*Centaurea solstitialis*).

3.6.4 Mammals

Due to the proximity of the site to developed areas, wildlife within the project area is limited to those species that have adjusted to human activity. Wildlife species within the project area are primarily those associated with open spaces and forest edge habitats. Onsite vegetative habitat is generally poor in nature consisting mainly of maintained lawn and the site is surrounded by development including roadways and highly fragmented patches of wooded areas. Therefore, it is unlikely that the site is able to support much diversity of wildlife. Grassland mammal species (e.g., eastern gray squirrels [*Sciurus carolinensis*] and rodents [*Rodentia*]) are expected to be most common. Other mammals that may reside in the area are of the proposed project site are those typically found in suburban settings in NJ; including groundhogs (*Marmota monax*), eastern moles (*Scalopus aquaticus*), eastern cottontail rabbit (*Sylvilagus floridanus*), and possum (*Phalangeriformes*). White-tailed-deer (*Odocoileus virginianus*) are present throughout the majority of the Dix area and JB MDL and may graze in the project area in the evenings when human presence is lessened.

3.6.5 Avian Species

Most bird species require multiple habitats during their annual cycle. For many avian species forested areas provide roosting spots, and open spaces provide areas to catch rodents. The proposed project site may contain foraging habitat, as it is maintained lawn, for a variety of bird species that feed on seeds as well as raptors and scavengers that prey on small mammals. The site itself is unlikely to be used for roosting as the site does not contain trees however there is a five acre forested wetland area on the northeast side of Loop Street, outside of the proposed project site boundaries, which may be used by bird species for roosting.

3.6.6 Reptiles, Amphibians, and Aquatic Species

Because of their unique life cycles, amphibians often require both aquatic and terrestrial habitats. Depending on the species, they may require damp areas (creeks, streams, swamps, mud puddles, ponds, etc.), moist soil, and/or places to burrow in order to keep their skin moist. An isolated five acre wetland outside of the proposed project boundary, located northeast of Loop Street presents an area suitable for species adapted to aquatic breeding. Amphibians generally breed and lay eggs in wetlands and other aquatic habitats and then move to terrestrial areas to over winter. Amphibians use a wide range of terrestrial habitats adjacent to wetlands and streams, typically consisting of leaf litter, coarse woody material, boulders, small mammal burrows and cracks in rocks. Although the proposed project site is near an isolated wetland which may be ideal for breeding, none of the terrestrial habitat requirements exist on site therefore making it unlikely amphibians utilize the site. Amphibians likely use the northeast land adjacent the isolated wetland feature which contains leaf litter and woody material (see Figure 3-3).

Similar to amphibians, reptiles can live in terrestrial, aquatic, or riparian habitats. Reptiles also require suitable hibernation and aestivation habitats which may be present in the form of large woody material, brush piles, rock piles or outcroppings. Although the proposed project site is near an isolated wetland which may be ideal for reptiles to live and forage, none of the hibernation and aestivation habitat requirements exist on site therefore making it unlikely reptiles utilize the site.

Overall, it is most likely that any herptiles present would include species adapted to more upland or wide-ranging habitat conditions (e.g., black rat snake [*Elaphe obsolete*]) (USACE, 2006).

3.6.7 Special Status Species

The Federal Endangered Species Protection Act provides protection to threatened and endangered species listed at the National level. The NJ Landscape Project mapping (a mapping tool used by the State to map known occurrences of protected species and their likely habitats) addresses such species and none were identified in the general area of the site.

The NJ Endangered and Nongame Species Conservation Act of 1973 established a list of wildlife species designated by the State of NJ as threatened or endangered. The law prohibits taking, possessing, transporting, exporting, processing, selling, or shipping State-threatened or endangered species. "Take" is defined as harassing, hunting, capturing, or killing, or attempting to do so. According to the NJ Landscape Project, there are no threatened or endangered species identified on the proposed project site. There is however one NJ-species of special concern, the wood thrush (*Hylocichla mustelina*) noted as a 2002 breeding sighting on and around the proposed project site (NJDEP, 2013a). Special concern species are not necessarily afforded legal protections; however, they are noted as warranting special attention because of inherent vulnerability to environmental deterioration or habitat modification that would result in them becoming threatened. The wood thrush breeds in cool mature, lowland, mixed or more typically, deciduous forests, particularly mesic to damp woodlands with an abundance of saplings, often near swamps or water. It prefers a shrub sub-canopy layer, shade, and an intermediate soil moisture regime. Wood thrush nests are built in trees or shrubs; nests are made of herbaceous stems, leaves, grasses, and mud (Roth et al. 1996).

JB MDL sent informal consultation letters to the USFWS and the NJDEP Endangered and Nongame Species Program, NJ Division of Fish and Wildlife to verify that the project would have no effect on any Federal- or State-protected species or critical habitat within the vicinity of the proposed project. In a response dated January 31, 2013, the USFWS acknowledged concurrence with JB MDL's determination that no Federally listed or proposed threatened or endangered flora or fauna are known to occur within the proposed project's impact area and therefore the Proposed Action would not significantly affect any protected species or their critical habitat. In a response dated February 27, 2013 the NJDEP, Office of Permit Coordination and the Departments Division of Fish and Wildlife acknowledged the proposed site is indicated as valued habitat for species of concern great blue heron and the wood thrush. The Division of Fish and Wildlife does not foresee any impact to open waters and suggests a general timing restriction on the mechanical trimming or removal of trees to protect nesting birds covered under the Migratory Bird Treaty Act (see Appendix A). As the proposed site location contains a single tree which is not planned to be removed or trimmed the Proposed Action would not significantly affect any protected species or critical habitat.

3.7 Cultural Resources

The NHPA Sections 106 and 110 (16 USC 470 et seq.) and NEPA regulations require all construction receiving Federal funding to identify the potential prehistoric and historic cultural resources in an area. The regulations also state the need to determine what potential adverse impacts could occur if the Proposed Action was completed.

Cultural Resources are managed on JB MDL through the implementation of the draft ICRMP 2012-2017. It outlines specific procedures for consultation with the NJ Historic Preservation Office, the Advisory Council on Historic Preservation, the National Park Service, Federally recognized Native American tribes, and other potential partners in cultural resource management. The ICRMP is developed according

to Department of Defense (DoDI 4710.02, 4715.3) and Air Force (AFI 32-7065) requirements in order to protect resources significant to American history and prehistory (JB MDL, 2011).

3.7.1 Area of Potential Effect

The area of potential effect (APE) for archaeology includes the proposed project site bounded by Loop Street, Supply Road and Center Road and the northwestern portion of the site which extends slightly past Ramp Street (see Figure 2-1). Ground disturbance related to construction would include grading over the entire site, excavation of a dry detention basin, building foundation, footers, parking lot and utility connections to a maximum depth of 36 inches below the current surface. The APE for historic architecture was considered to be the same as the APE for archaeology.

3.7.2 National Register of Historic Places

Section 106 of the NHPA requires that Federal agencies identify whether any historic or cultural resources that are listed, or potentially eligible for listing, on the NRHP could potentially be affected by the Proposed Action. The NRHP is an index of America's historic places. It identifies districts, sites, buildings, structures, and objects that are significant in American history, architecture, engineering, and culture.

There are no historic resources within the project APE that are listed in the NRHP. There are also no known NRHP eligible historic resources within the project APE. See Section 3.7.4 for the closest NRHP eligible historic architecture.

3.7.3 Potential for Archeological Resources

There have been no historic or prehistoric archaeological sites identified within the project APE. As previously discussed, the proposed 8.9 acre site has been disturbed and is located in what was once a heavily developed portion of the former Fort Dix. In addition to the warehouses discussed in Section 3.7.4 below, several railroads were constructed at this location between 1940 and 1963. Figure 3-4 below is a 1948 Bordentown NJ Quadrangle, USGS 15 minute series topographic map of the proposed site location. As evidenced in the figure, several rail lines once traversed the proposed project site.

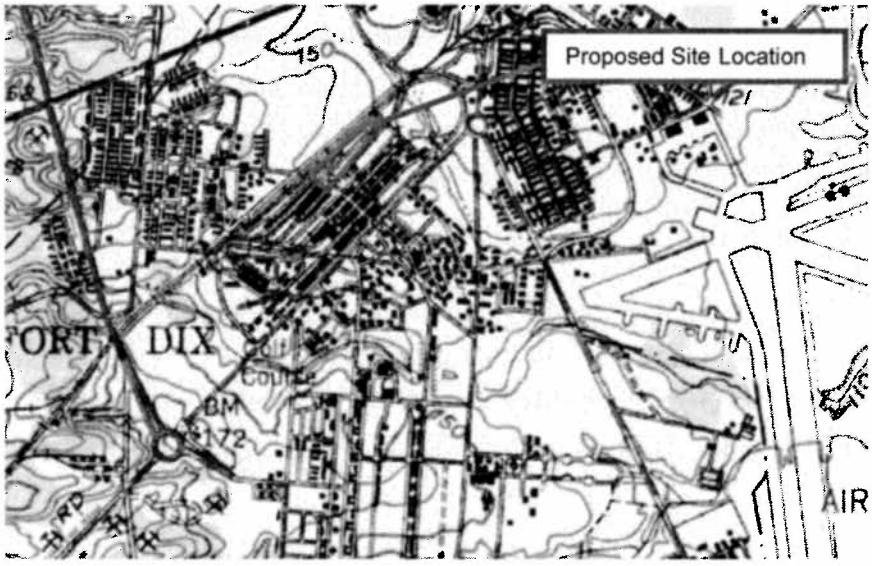


Figure 3-4. 1948 Topographic Map Showing Historic Rail Lines on the Proposed Site

The road beds and rails were removed in 1993 and the buildings demolished in 1996. Due to the degree of historic disturbance, the proposed project site is considered to have a low potential for containing either prehistoric or historic archaeological resources.

3.7.4 Potential for Historic Architectural Resources

The project site does not contain any historic structures listed or eligible for listing on the NRHP. The proposed project site is located within a former location of National Register (NR) eligible World War II temporary buildings (SHPO Opinion 6/7/1996; ID #853). The buildings were demolished after meeting the mitigation requirements described in the Letter of Opinion; therefore, the historic resource is no longer present. NR eligible building 3135 (SHPO Opinion 3/7/2003) is located approximately 0.17 miles southwest of the proposed project site (see Figure 3-5 below). Building 3135, a locomotive repair facility built in 1942, was found individually eligible for the NR under criterion A as the only railroad specific building extant on Fort Dix associated with the immense World War II mobilization on the installation. Building 3135 is not visible from the project site as warehouse buildings 3136 and 3137 stand in between (see Figure 2-1).

Figure 3-5. National Register Eligible Building 3135

3.7.5 Native American Consultation

As stipulated in Section 101 of the NHPA, the DoD Instruction 4710.02, and EO's 13007, 13084 and 13175, JB MDL is required to consult with Federally-recognized Native American tribes affiliated with the installation, through what is known as a government-to-government relationship (G2G). It is the responsibility of the installation to invite Federally-recognized Native American tribes with a historical, geographic, and/or linguistic association to the area that is now JB MDL into a G2G relationship. JB MDL invited three tribes to participate in a G2G relationship. Of the three, two tribes expressed interest: the Delaware Nation and the Delaware Tribe of Indians, both of which requested to be consulting parties.

JB MDL is in the process of establishing G2G relationships with both tribes. Until a formal relationship is established, all projects involving substantial subsurface disturbance, require consultation under the Section 106 process with both tribes. The proposed central issue facility site has not been surveyed for Native American, historic or prehistoric archeological sites. However, previous disturbance at the site makes it unlikely that intact archeological sites would be found. Nevertheless, G2G consultation with both tribes was conducted. Copies of the letters and responses can be found in Appendix A.

3.8 Hazardous Materials and Waste

Hazardous materials are defined by 49 CFR 171.8 as "hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions" in 49 CFR Part 173. Transportation of hazardous materials is regulated by the U.S. Department of Transportation regulations within 49 CFR Parts 105–180.

Hazardous wastes are defined by RCRA at 42 USC 6903(5), as amended by the Hazardous and Solid Waste Amendments, as "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

To prevent potential environmental hazard issues, JB MDL maintains a Pollution Prevention Plan. The objectives of this plan are to reduce or eliminate the impact any operation or activity might have on the environment, through the reduction or elimination of wastes, more efficient use of raw materials or energy, and reduced emissions of toxic materials.

3.8.1 Hazardous Materials and Petroleum Products and Wastes

Air Force Instruction (AFI) 32-7086, Hazardous Materials Management, establishes procedures and standards that govern management of hazardous materials throughout Air Force installations and outlines the requirements for a hazardous materials management program. The Dix portion of JB MDL has a Hazardous Waste Management Plan which is maintained under their Pollution Prevention Plan (JB MDL, 2008). The plan prescribe the roles and responsibilities of all members with respect to the waste stream inventory, waste analysis plan, hazardous waste management procedures, training, emergency response, and pollution prevention. The plan establishes procedures to comply with applicable Federal, State, and local standards.

There are no records indicating that hazardous materials, petroleum products or wastes were generated on, stored on, or disposed of at the proposed project site location.

3.8.2 Underground and Aboveground Storage Tanks

AFI 32-7044, Storage Tank Compliance, identifies compliance requirements for USTs, ASTs, and associated piping that store petroleum products and hazardous substances. USTs are subject to regulation under RCRA, 42 USC 6901, and 40 CFR 280.

As stated earlier, the site was previously developed. Several railroads and buildings were constructed at the proposed project site location between 1940 and 1963. The road beds and rails were removed in 1993 and the World War II temporary buildings were demolished in 1996.

There are no records indicating that there were USTs or ASTs associated with the old buildings. There are also no records indicating that USTs or ASTs were ever used on, stored on, or disposed of at the proposed project site.

3.8.3 Lead, Asbestos, and Polychlorinated Biphenyls

There are no records indicating that lead, asbestos, or polychlorinated biphenyls (PCBs) were generated on, stored on, or disposed of at the proposed project site however, it is known that World War II temporary buildings once housed the site. These buildings were removed in 1996. It is possible that

during demolition the materials were not hauled away in entirety and small pieces remained on site. Given the age of the buildings it is probable that the demolition debris could have included the following:

- Building materials in older buildings (pre-1980) are assumed to contain asbestos. Asbestos exists in a variety of forms and can include siding, ceiling tiles, floor tiles, floor tile mastic, roofing materials, joint compound, wallboard, thermal system insulation, boiler gaskets, paint, and other materials. Demolition debris could have included any of the items listed above.
- The Federal government banned the use of most lead based paint (LBP) in 1978. Therefore, it is assumed that all structures constructed prior to 1978 could contain LBP. Paint chips that fall from the exterior of buildings can contaminate the soil if the paint contains lead. Demolition debris could have contained lead based paint.
- Chemicals classified as PCBs were widely manufactured and used in the US throughout the 1950s and 1960s. The production of PCBs was banned in the US in 1979. PCBs are a group of organic compounds used as dielectric and coolant fluids in equipment such as transformers, capacitors, fluorescent light ballasts, electric motors, and hydraulic systems. Demolition debris might have had PCB containing equipment, particularly fluorescent light ballasts.

3.8.4 Environmental Restoration Program

The Defense Environmental Restoration Program (DERP) was formally established by Congress in 1986 to provide for the cleanup of DoD property. The two restoration programs under the DERP are the Installation Restoration Program (IRP) and Military Munitions Response Program (MMRP).

The Dix portion of JB MDL currently has 33 IRP sites and 3 MMRP sites. The closest DERP sites to the proposed project are IRP sites managed under CERCLA for groundwater and soil contamination (Site ID TUO19a) (see Figure 3-6).

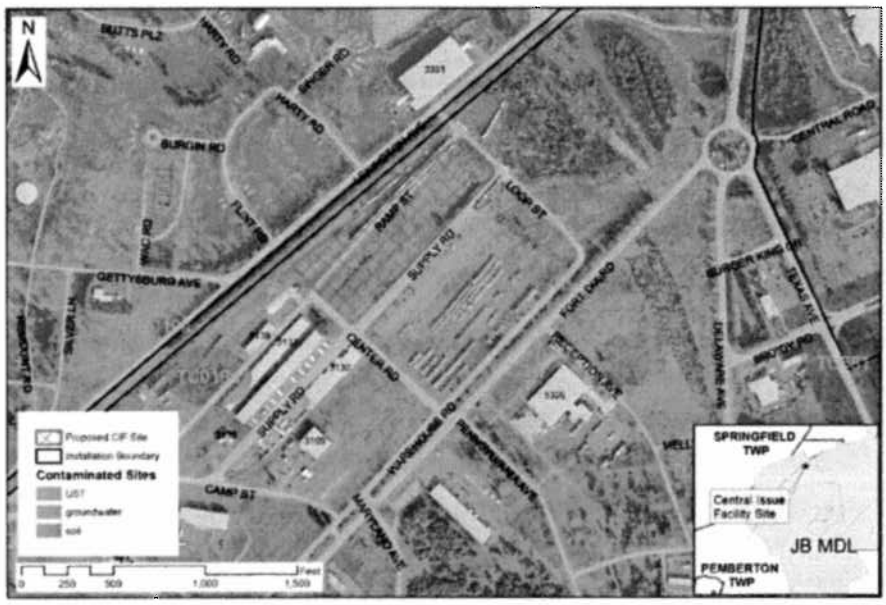


Figure 3-6. Existing Contaminated Sites Near the Proposed Project Site

The groundwater IRP is located approximately 550 feet southwest of the site and the soil IRP is located approximately 750 feet southwest of the proposed project site. There is also an IRP site (Site ID TU581)

located approximately 1,700 feet east of the site which is a former barracks area that contains subsurface soil contamination resulting from UST's associated with the former barracks. As discussed in Section 3.5.3, a CEA to a depth of 100 feet was designated site-wide for the Dix cantonment area in February 1999 based on contamination from several contaminated sites within the cantonment area.

3.9 Socioeconomics and Environmental Justice

The existing conditions for socioeconomics and environmental justice describe population, income, housing, and labor force characteristics in a comparative manner from the smallest geographic units in the immediate vicinity of the site (municipalities or counties depending on the parameter reported) to increasingly larger geographic areas (counties, States, and the United States depending on the parameter reported). The project site is located on the Dix portion of JB MDL in New Hanover Township, Burlington County, NJ.

3.9.1 JB MDL Economic Contribution

JB MDL spans more than 20 miles east to west with 42,037 contiguous acres. It is located within two of the largest counties in NJ, Ocean and Burlington, and bordered by 10 townships or boroughs.

JB MDL is one of the largest employers in NJ and accounts for 1.5 percent of total NJ gross domestic product (JB MDL, 2011a). JB MDL has approximately 40,000 assigned personnel that are a mix of about 31 percent military and 69 percent civilian. Service members and their family members living and working on and around JB MDL contribute to an overall economic impact of $6.9 billion to the State of NJ (JB MDL, 2011b). JB MDL's annual payroll is $3 billion, with base contract expenditures of approximately $2.2 billion (JB MDL, 2011a).

3.9.2 Regional Economy

The largest percentage of employees by industry across all spatial levels is the educational, health, and social services industry. The second largest industry for Burlington County and NJ is the professional, scientific, and management, and administrative and waste management services industry, in which approximately 11 percent of employees are employed (US Census Bureau, 2011 and US Census Bureau, 2011a). The second largest industry for New Hanover Township is public administration (US Census Bureau, 2006-2010).

The percentage of persons employed in the armed forces is 13.2 percent in New Hanover Township, 1.1 percent in Burlington County, and 0.1 percent in NJ (US Census Bureau, 2006-2010, US Census Bureau, 2011 and US Census Bureau, 2011a). For complete information regarding employment by industry see Table 3-4 below.

Table 3-4. Overview of Employment by Industry

Employment Types	New Hanover Township	Burlington County	New Jersey
Population 16 Years and Over in the Labor Force	2,385	241,331	4,596,702
Percent of population 16 years and over in labor force employed within the armed forces	13.2	1.1	0.1
Employed Persons 16 years old and over in Civilian Labor Force (by industry)			
Agriculture, forestry, fishing and hunting, and mining	52	1,626	14,702
Construction	107	11,778	259,043
Manufacturing	84	18,951	396,329

Employment Types	New Hanover Township	Burlington County	New Jersey
Wholesale Trade	11	8,601	160,966
Retail Trade	96	24,538	469,625
Transportation and warehousing, and utilities	66	12,447	242,906
Information	7	6,074	134,690
Finance, insurance, real estate, and rental and leasing	57	18,737	385,143
Professional, scientific, management, administrative, and waste management services	134	25,732	517,257
Educational, health, and social services	379	51,423	942,587
Arts, entertainment, recreation, accommodation, and food services	129	13,222	325,783
Other services (except public administration)	63	9,518	186,453
Public administration	205	17,560	195,076

Source: US Census Bureau, 2006-2010, US Census Bureau, 2011 and US Census Bureau, 2011a.

3.9.3 Local Economy

New Hanover Township encompasses approximately 22 square miles, of which 90 percent is Federally owned according to the 2007 Township Master Plan Land Use Element Update. New Hanover is bordered in Burlington County by North Hanover and Wrightstown Borough to the north, Springfield Township to the west, Pemberton Township to the south, and Plumsted Township, Ocean County, to the east. According to the Master Plan, of the 2.09 square miles of civil portion, 80 percent is agricultural, wooded or vacant. New Hanover Township is predominately rural in character, with a residential center located in the Village of Cookstown. The main commercial corridor runs along Wrightstown-Cookstown Road [County Route (CR) 616], offering commercial and retail services to the military personnel on the Joint Base and the civilian population.

The unemployment rate in New Hanover Township, NJ, is 8.6 percent which is slightly higher than the US 2012 average of 8.1 percent (NCSL, 2012). Job growth in New Hanover Township is 1.9 percent. Future job growth over the next ten years is predicted to be 35.3 percent. Recent and future job growths in New Hanover Township are both higher than the US percentages of 0.4 and 32.1, respectively (Best Places, 2010).

3.9.4 Housing

The home ownership rate in Burlington County from the 2010 census was 79.0 percent compared to the state-wide rate of 66.9 percent at that time. With the economic downturn and housing market decline that started in late 2008, it is estimated that the home ownership rate has declined in the last couple of years in Burlington County. According to the State Division of Banking and Insurance, the annual number of foreclosures in Burlington County increased steadily from 1,312 in 2005 to a high of 3,391 in 2009 (NJ Division of Banking, 2011). However, this annual figure represents only 1.9 percent of the total housing units in the County (US Census Bureau, 2012). The annual number of foreclosures in the State of NJ increased steadily from 20,253 in 2005 to a high of 66,717 in 2009 (NJ Division of Banking, 2011); this figure represents 1.8 percent of the total housing in the State of NJ (US Census Bureau, 2012).

According to the 2010 US Census there is a total of 613 housing units in New Hanover Township of which 551 are occupied and 219 are owner-occupied. The average household size of owner-occupied housing units is 3.02. There are 332 renter occupied housing units with an average household size of 3.13 (US Census Bureau, 2010).

3.9.5 Environmental Justice

3.9.5.1 Geographic Distribution of Low Income Populations

The Census Bureau's 2006-2010 American Community Survey showed that (in 2010 inflation-adjusted dollars) median household income in New Hanover Township was $63,796 (with a margin of error of +/- $9,062) which is less than both Burlington County and NJ. The per capita income for the Township was $15,387 (+/- $1,620) which again is less than Burlington County and NJ. About 0.7 percent of families and 0.7 percent of the population were below the poverty line which is significantly lower than Burlington County and NJ (see Table 3-5 below) (US Census Bureau 2006-2010).

Table 3-5. Income Statistics for the State, County and Local Township

Demographic and Social Indicators	Fort Dix CDP[1]	New Hanover Township	Burlington County	New Jersey
Total Population	7,716	7,385	449,567	8,834,773
Per Capita Income	$12,338	$15,387	$34,802	$34,858
Median Household Income	$81,292	$63,796	$76,258	$69,811
Total Number of Persons at or Below Poverty Level (ABPL)	316	52	23,827	830,468
Total Percent ABPL	4.1	0.7	5.3	9.4

Sources: US Census Bureau, 2012, US Census Bureau 2006-2010, US Census Bureau, 2010, and US Census Bureau 2010a
1: Census Designated Place (CDP)

3.9.5.2 Demographics

The 2010 census measured populations for the State of NJ, Burlington County, and New Hanover Township. As of the 2010 US Census, New Hanover Township's population was 7,385, reflecting a decline of 24.2 percent from the 9,744 counted in the 2000 Census, which had in turn increased by 2.1 percent from the 9,546 counted in the 1990 Census. The population of Burlington County increased 10 percent from 1990 to 2002 and increased 2 percent from 2002 to 2010. The estimated 2011 population in Burlington County is 449,567. The population of NJ increased 8.9 percent from 1990 to 2000, and 4.7 percent from 2000 to 2010. The US experienced large population growths of 13.2 percent from 1990 to 2000, and 9.7 percent from 2000 to 2010 (US Census Bureau 2012, US Census Bureau 2006-2010 and US Census Bureau, 2010).

Fort Dix CDP is located in portions of New Hanover Township, Pemberton Township and Springfield Township, which had a 2010 Census population of 7,716 (US Census Bureau, 2010a). The racial makeup of the Fort Dix CDP, New Hanover Township, Burlington County and NJ is shown in Table 3-6 below. The Fort Dix CDP and New Hanover Township both have a larger percentage of minorities when compared to the County and Statewide percentages.

Table 3-6. Population and Race

Demographic and Social Indicators	Fort Dix CDP	New Hanover Township	Burlington County	New Jersey
Total Population (2011 Estimate)	-[2]	-[2]	449,567	8,834,773
Total Population (2010)	7,716	7,385	448,734	8,791,898
Percent Change	-	-	0.2	0.5
Race[1] (values indicate percentage of population), 2010 U.S. Census Data				
Percent White	52.6	54.1	75.2	74.1

Demographic and Social Indicators	Fort Dix CDP	New Hanover Township	Burlington County	New Jersey
Percent Black or African American	34.5	33.6	17.3	14.6
Percent American Indian Alaska Native	0.7	0.6	0.3	0.6
Percent Asian	1.9	2.0	4.6	8.7
Percent Native Hawaiian and Other Pacific Islander	0.3	0.1	0.1	0.1
Percent Reporting 2 or More Races	4.0	3.4	2.5	1.9
Persons of Hispanic or Latino Origin[3]	21.5	21.0	6.7	18.1

Source: US Census Bureau, 2012, US Census Bureau, 2010, and US Census Bureau, 2010a
Notes:
1. The racial classifications used by the Census Bureau were issued by the Office of Management and Budget on October 30, 1997. The Office of Management and Budget requires five minimum category of race, including White, African American, American Indian and Alaska Native or Pacific Islander."
2. Information was not available.
3. Persons of Hispanic origin may be of any race.

3.10 Infrastructure

3.10.1 Potable Water Supply

The primary source of potable water on the Dix portion of JB MDL is a surface water diversion on Greenwood Branch on the North Branch of Rancocas Creek. The New Lisbon Pumping Station pumps water from the Rancocas Creek to a treatment plant on Dix where it is treated prior to distribution. After treatment, the water flows to a ground storage clear water reservoir and is then pumped to elevated tanks that provide storage and distribution. There are three elevated tanks with a combined capacity of 2 million gallons. The New Lisbon Pumping Station has a 4 million gallon per day (mgd) pumping capacity (Fort Dix, 2007) and the demand on the system is approximately 3.2 mgd in the summer months and 1.5 mgd in the winter months.

The Dix portion of JB MDL also has four potable groundwater wells which tap into the Potomac Raritan Magothy aquifer. The groundwater wells are secondary as the State of NJ mandates that primary sources be surface water. Each of the groundwater wells has a capacity of 1 mgd, but are limited by the Dix groundwater allocation permit issued by the State. The allocation permit allows for 155 million gallons per month (mgm) and the estimated monthly demand on Dix is 106 mgm (NJDEP, 2013b). Any of the four potable groundwater wells can be used for potable water at any given time as long as Dix does not exceed the water allocation permit limit. Dix currently utilizes one groundwater well for potable purposes and the remaining wells are used in emergency conditions for fire protection. The potable groundwater water is filtered for the removal of iron and manganese before distribution (Fort Dix, 2007). All water sources, surface and groundwater, are tested and treated to ensure that State quality standards are met.

The proposed project site does not currently contain any buildings and therefore does not utilize potable water resources. However, there are existing potable water lines along Supply Road, Center Road, and north of the proposed site along Lexington Avenue.

3.10.2 Sanitary Sewer Service

The sewer system at JB MDL consists of a collection system, a number of lift stations, and a tertiary wastewater treatment plant. The wastewater treatment plant is located on the Dix portion of JB MDL and

serves both Dix and McGuire. Domestic wastewater is discharged into the sanitary sewer system, which flows to the treatment plant through a system of gravity and forced mains. The design capacity of the wastewater treatment plant is 4.6 mgd. The total combined flow to the treatment plant averages 2.5 mgd and Dix contributes approximately 55 percent of that average daily flow (MAFB, 2005).

The proposed project site is not currently used and therefore does not currently utilize sanitary sewer services. However, there are two existing sanitary sewer lines that run through the site diagonally, one northwest and one northeast from Supply Road to Ramp Street. There are also existing lines along Supply Road and north of the proposed site along Lexington Avenue.

3.10.3 Electrical Service and Distribution

The electrical system on the Dix portion of JB MDL was privatized in 1996 and is now owned, operated, and maintained by General Public Utilities. The privatization agreement with General Public Utilities requires that electricity be provided on an uninterruptable basis. The electricity on Dix is supplied via a 34.5 kilovolt (kV) transmission loop that originates at a substation in Cookstown, approximately five miles east of the installation. Two circuits (26 kV each) and six substations (4.16 kV each) provide primary and back up capacity to Dix (Fort Dix, 2000).

The proposed project site is not currently used and therefore does not currently utilize electrical services. However, there are existing electrical service lines along Supply Road and north of the proposed project site along Lexington Avenue.

3.10.4 Stormwater System

The Public Complex Permit Stormwater Pollution Prevention Plan for Dix identifies a number of locations where stormwater is discharged into watersheds within the installation. Stormwater on Dix is directed by natural drainage patterns or modified drainage facilities. Stormwater in developed areas of Dix are collected by extensive stormwater drainage networks that discharge to detention ponds, Hanover Lake, or streams (Assiscunk, Crosswicks, and Rancocas creeks) all located within the Dix portion of JB MDL. The majority of Dix drains into the Rancocas Creek Watershed and the Crosswicks Neshaminy Watershed both of which drain into the Delaware River Basin. A small portion of Dix drains into streams, such as Hurricane Brook which ultimately drain into the Atlantic Ocean (Fort Dix, 2000 and Fort Dix 2006).

The Dix area of JB MDL has an active Stormwater Pollution Prevention plan (SWPPP) that was developed in accordance with the NPDES, 40 CFR Part 122; NJ Stormwater Management Regulations, NJAC 7:11; NJ Pollutant Discharge Elimination System Program; and several other Federal, State, and county water pollution control regulations. The purpose of the SWPPP is to compensate for the added stormwater runoff and the possible runoff of pollution caused by development and industrial activities.

The proposed project site is not currently used. The majority of the site is maintained lawn and stormwater is left to naturally percolate in these areas.

3.10.4.1 Stormwater Regulatory Requirements

Construction activities on JB MDL that disturb one or more acres of land are subject to Federal and State soil conservation and stormwater pollution regulations. The 1972 amendments to the CWA prohibit the discharge of any pollutants to waters of the U.S. from a point source unless the discharge is authorized by a NPDES permit. Recently, the USEPA issued a Final Rule for the CWA concerning technology based Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development point source category. All NPDES stormwater permits issued by the USEPA or States must incorporate requirements established in the Final Rule. This Rule was effective February 1, 2010 and will

be phased in over four years. All new construction sites are required to meet the non-numeric effluent limitations and to design, install, and maintain effective erosion and sedimentation controls, including the following:

- Control storm water volume and velocity to minimize erosion
- Minimize the amount of soil exposed during construction activities
- Minimize the disturbance of steep slopes
- Minimize sediment discharges from the site
- Provide and maintain natural buffers around surface waters
- Minimize soil compaction and preserve topsoil where feasible.

Section 438 of the Energy Independence and Security Act (42 USC Section 17094) establishes into law new stormwater design requirements for Federal construction projects that disturb a footprint greater than 5,000 square feet of land. Additional guidance is provided in the USEPA's Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act.

In 1975, the State Legislature passed Chapter 251, P.L. 1975, the Soil Erosion and Sediment Control Act of NJ. This legislation gave local conservation districts the power to control soil erosion and sedimentation by requiring the submission of a Soil Erosion and Sediment Control Plan. The contractor would submit a Soil Erosion and Sediment Control Plan for the Proposed Action to the Burlington County Soil Conservation District for their review and approval. Finally, the design of the proposed CIF would meet the stormwater requirements within Dix's existing Public Complex Permit Stormwater Pollution Prevention Plan.

3.10.5 Natural Gas

Natural gas is supplied to Dix by Public Service Electric and Gas (PSE&G) company. Under the privatization agreement, PSE&G is required to provide Dix with the gas it needs on demand therefore the chance of a service interruption is precluded (Fort Dix, 2000).

The proposed project site is not currently used and therefore does not currently utilize natural gas services. However, there are existing natural gas service lines along Supply Road and north of the proposed project site along Lexington Avenue.

3.10.6 Solid Waste

Wastes can generally be divided into three broad categories, including hazardous, nonhazardous, and universal wastes (see Section 3.8 for Hazardous Materials and Waste). Nonhazardous wastes are typically thought of as residential or municipal waste. Universal wastes are certain hazardous wastes, e.g. batteries, which, when managed or recycled properly, are not included as hazardous waste.

Disposal of solid waste at JB MDL is conducted through a facility support contract with a licensed waste hauler. The solid waste from Dix is transported to the Burlington County Landfill in Mansfield, NJ. The Burlington County Landfill was opened in 1989 and at the current rate of receiving wastes has a permitted capacity until 2016. The capacity of the Burlington County Landfill is 6,977,174 tons (Energy Justice, 2012). There is currently a plan for expansion so the landfill will have permitted capacity until 2027.

JB MDL is mandated by the Qualified Recycling Program to meet a 50 percent diversion goal for nonhazardous solid waste and a 60 percent diversion for construction and demolition debris, which is required by 2015 from the U.S. Defense Department sustainability performance plan. The Burlington

County Occupational Training Center is the contractor for recycling programs on the Dix and McGuire portions of JB MDL. In 2011, they recycled more than 2,000 tons of material. As the proposed project site does not house any buildings and is maintained lawn solid waste and recyclables are not currently generated or disposed of on site.

3.11 Noise

3.11.1 Regulatory Framework and Background

Noise regulations have been established at all levels of government, from local municipalities to Federal agencies. Although, there is great variation in the controls established by different municipalities, the Federal guidelines provide widely accepted standards, which are reasonably consistent among the various agencies. Congress passed the Noise Control Act in 1972, specifically authorizing USEPA to promulgate regulations establishing maximum permissible noise characteristics for products manufactured for interstate commerce. In addition, USEPA was directed to publish information about the kind and extent of effects of different qualities and quantities of noise, and to define acceptable levels under various conditions to protect public health and welfare. This information was then used by other Federal agencies in establishing criteria applicable to their programs.

Noise can have an adverse effect on humans and their activities, as well as on the natural environment. The impact of noise is highly dependent upon the characteristics of the noise (e.g., loudness, pitch, time of day, and duration) and the sensitivity (or perception) of the noise receptor. The standard unit of sound amplitude measurement is the decibel (dB); however, since the human ear is not equally sensitive to sound at all frequencies, the A-weighted scale (dBA) is typically used to measure noise as it relates human sensitivity. The USEPA has classified noise levels for several common sounds along with typical human responses or perceptions for these noises (Table 3-7).

Sound travel over distance is acted upon by many factors. Temperature, humidity, wind direction, barriers, and absorbent materials, such as soft ground and light snow, are all factors in how sound will be perceived at different distances. The most significant way that noise is attenuated is from the divergence of sound waves with distance (attenuation by divergence). In general, this mechanism results in a 6 dBA decrease in the sound level with every doubling of distance from a point source (i.e., rate of dBA decrease from the source is based on a logarithmic scale). For example, the 84 dBA average sound level at 50 feet – associated with clearing and grading during construction – would be attenuated to 78 dBA at 100 feet, 72 dBA at 200 feet, and to 66 dBA at 400 feet.

Table 3-7. Noise Levels for Common Sounds

Sources[1]	Noise Level (dBA)	Response
Carrier deck, jet operation	140	Painfully loud
Live rock music	130	Limits amplified speech
New York subway station	90	Hearing damage (8 hours)
Dishwasher	80	Annoying
Freeway traffic (50 ft)	70	Telephone use difficult
Air conditioning unit (20 ft)	60	Intrusive
Light auto traffic (100 ft)	50	Quiet
Breathing	10	Just audible
Silence	0	Threshold of hearing

[1]Noise levels decrease with distance from the source and are reduced by barriers, both man-made (e.g. sound walls) and natural (forested areas, hills, etc.).

3.11.2 Sensitive Receptors and Existing Noise Levels

Certain land uses, facilities, and the people associated with these noise levels are more sensitive to a given level of noise than other uses. Such "sensitive receptors" might include schools, churches, hospitals, retirement homes, campgrounds, wilderness areas, hiking trails, and some species of threatened or endangered wildlife. The closest sensitive receptor is family housing, located approximately one mile south of the proposed project site.

Existing land uses abutting the project site include "Industrial" (see also Section 3.2, Land Use). Regionally, the largest contributors to ambient noise levels in the proximity of the project site are vehicular traffic along Fort Dix Road as a result of workers commuting and delivery trucks traveling to/from the industrial and commercial businesses.

No noise data is available for the project area specifically; however, the area is relatively quiet with background levels assumed to be similar to a normal suburban residential area around 45 - 50 dBA. It is also assumed that surrounding noise levels are around 55 - 65 dBA from high traffic levels during the morning and early evening peak commute travel times and occasionally during times of heavy truck deliveries to the existing issue facilities and surrounding industrial facilities.

3.12 Transportation and Traffic

Commercial traffic (trucks) traveling to and from the Dix area of JB MDL use Checkpoint 9 off of Saylors Pond Road. Checkpoint 9 is available 24 hours a day, but is actively manned between 5am and 4:30 pm. Trucks arriving outside those times are instructed to call security for entrance. Based on data from the 2011 Joint Base Regional Transportation Mobility Study (T&M, 2011), Checkpoint 9 received 3,813 trucks (inbound) on one day in November 2010. The peak hours were between 6am and 8am where an average of 460 trucks entered per hour. Between 8 am and 5pm, the gate received 180 trucks per hour. Between 7am and 5pm (the work hours under the Proposed Action), the gate received 2,089 vehicles (see Appendix C).

The primary routes from this checkpoint include: Saylors Pond Road (Route 670), Route 68, CR 537, Route 206, CR 616, and CR 528. Several small towns are located within 5 miles of the gate along these routes, including Wrightstown, Pemberton, Cookstown, and New Egypt. Major highways in the area include the NJ Turnpike and I-295 to the west and Route 70 to the south (see Figure 3-7 below).

The existing cantonment road and street networks are generally adequate to serve transportation needs on Dix however, capacity may be exceeded during periods of infrequent mobilization (the population during peak mobilization is approximately 18,000 persons). As previously stated, the proposed project site is bounded by Center Road, Supply Road, Ramp Street and Loop Street. The area is industrial in nature and the roads bounding the site are not often traveled, with the exception of deliveries to existing Buildings 3138, 3137, 3130 etc. The most highly traveled road near the proposed project site is Fort Dix Road which intersects Center Road.

The average daily traffic on Fort Dix Road from 4 April 2011 and 6 April 2011 was 5,348 vehicles. Peak eastbound traffic (towards the Route 68 gate) occurs between 6am and 8am, with an average of 540 vehicles per hour and a peak of 598 vehicles per hour. Peak afternoon traffic (westbound) occurs between 3 pm and 5 pm, with an average of 489 vehicles per hour, with a peak of 707 vehicles per hour (NJDOT, 2011). See Appendix C for hourly traffic volumes on Fort Dix Road summarized above.

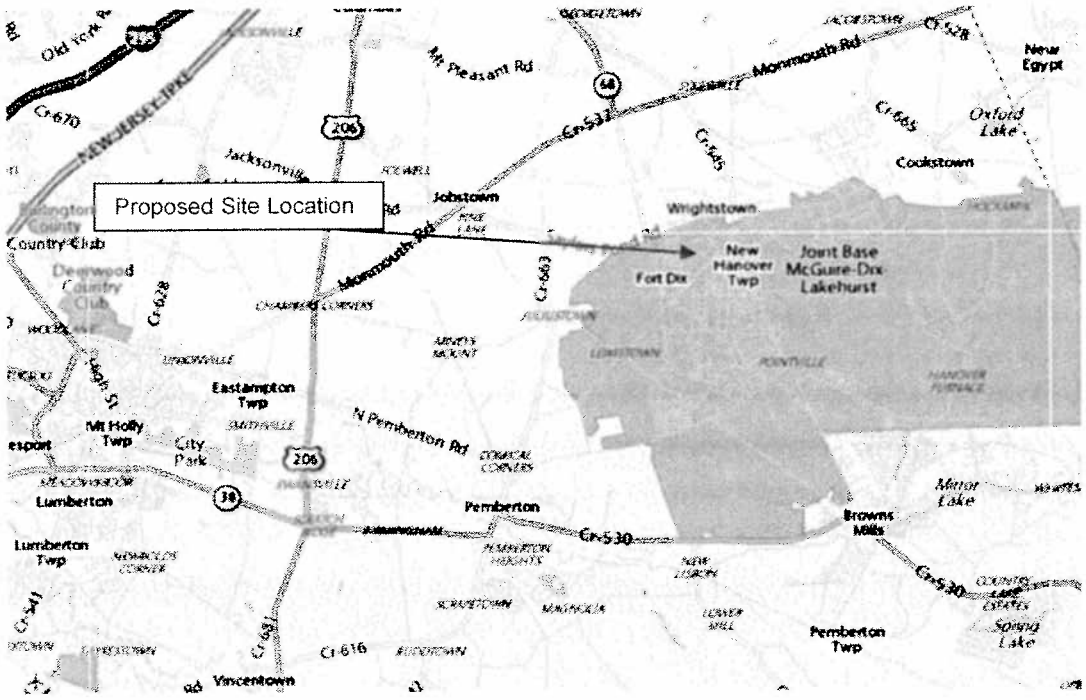


Figure 3-7. Road Network Surrounding Checkpoint 9

3.13 Human Health and Safety

3.13.1 Police and Fire Protection

JBMDL is connected to the 911 Emergency System should an emergency requiring police protection occur. The JB MDL Police force provides primary response to emergencies. The JB MDL Fire and Emergency Services Division provide fire suppression, crash, rescue, emergency medical, hazardous substances, and structural fire protection for all personnel at JB MDL. There are four fire stations located throughout JB MDL, two of which are on Dix. The closest fire station to the proposed project site is located north off of Delaware Avenue, opposite Snyder Lane approximately 0.5 miles away.

3.13.2 Medical

The 87th Medical Group is an outpatient medical treatment facility operating on JB MDL. There are also several medical clinics located throughout JB MDL for military use. The ambulatory care clinic is located less than a mile northeast of the proposed project site on Neely Road. Additional medical facilities include Buttonwood Hospital in Pemberton, Virtua Memorial Hospital in Mount Holly, and the Community Medical Center in Toms River.

3.13.3 Construction Safety

The health and safety of onsite military and civilian workers are safeguarded by numerous DoD and military-branch specific regulations designed to comply with standards issued by the Federal Occupational Safety and Health Administration (OSHA), USEPA, and State occupational safety and health agencies. These standards specify the amount and type of training required for industrial workers, the use of personal protective equipment, administrative controls, engineering controls, and maximum exposure limits for workplace stressors.

All contractors are required to conduct construction activities in a manner that does not pose any risk to workers or personnel and are responsible for following ground safety regulations, worker compensation programs, and industrial hygiene programs. Contractor responsibilities are to review potentially hazardous workplace operations; to monitor exposure to workplace chemical (e.g. asbestos, lead, hazardous materials), physical (e.g. noise, high exposure to heat or cold, working from heights, tripping hazards), and biological (e.g. infectious waste, insect bites) agents; and to recommend and evaluate controls (e.g. ventilation, respirators) to ensure personnel are properly protected or unexposed.

In NJ, the rate of injury cases per 100 full-time workers in the heavy and civil engineering construction sector is 3.7, which are down from 4.7 the previous year (BLS, 2012).

3.13.4 Ordnance, Explosives, and Munitions Safety

Unexploded ordnance (UXO) is any munitions, weapons delivery system, or ordnance item that contains explosives, propellants, and chemical agents. UXO consists of munitions that (1) are armed or otherwise prepared for action; (2) are launched, placed, fired, or released in a way that they cause hazards; or (3) remain unexploded either through malfunction or design. UXO presents an immediate safety danger (from explosion) and a long-term health threat (from toxic contamination). The proposed project site is not located within or adjacent to any UXO caution or UXO sweep areas.

Explosive safety quantity distance (QD) arcs are imaginary arcs surrounding facilities used for the storage, handling, and maintenance of munitions to provide a safety buffer in case of a detonation inside the bunker. Certain activities and personnel density limits are instituted within these arcs to protect people and facilities from explosion and fragmentation. On JB MDL, the Air Force Manual 91-201 establishes the size of the clearance zones based upon QD criteria or the category and weight of the explosives contained within the facility. The nearest QD arc to the proposed project site is located approximately one mile east on the McGuire airfield.

4. ENVIRONMENTAL CONSEQUENCES

4.1 General Overview

This section identifies potential direct and indirect effects of the alternatives for each resource area described in Section 3 and compares and contrasts the potential effects of those alternatives. The potential environmental, cultural, and socioeconomic effects of implementing each identified alternative, as well as any required mitigation associated with each alternative, are all presented.

4.2 Land Use

4.2.1 Effects of Alternative 1

No significant adverse land use impacts would be anticipated to result from the implementation of the Proposed Action. The current land use zoning of the proposed project site and surrounding areas is "Industrial" with the same designation for the future according to the IDP (see Figure 3-1) (JB MDL, 2012) and is therefore in-line with JB MDL master planning. Minor impacts are expected as the proposed project would change 1.9 acres of the 8.9 acre undeveloped land to developed land. Aside from minor adverse aesthetic impacts, construction and operation of the central issue facility would not be expected to cause any physical alterations to adjacent properties.

The Proposed Action requires development within the Pinelands Preservation Area. However, the construction of the central issue facility is consistent with the function of the military installation and is sanctioned by JB MDL. The development of the facility would, with the adherence to environmental BMPs in Section 2.2.3 and the sustainable design and construction described in Section 2.2.1.2, result in less than significant adverse impacts to the environmental resources of the Pinelands Area.

4.2.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. No construction activities or land development would occur at the site; therefore, there would be no impact to land use from the Proposed Action. The proposed site would not be developed as described in this EA and consequently, there would be no associated changes in the use of this land.

4.3 Air Quality

4.3.1 Effects of Alternative 1

Construction of the facility would produce short-term, low-level, intermittent, and transient emissions of CO, $PM_{2.5}$, and NOx from vehicles, and trucks and the operation of construction machinery, as well as $PM_{2.5}$ and PM_{10} associated with earth and material movements that would be associated with land clearing and other activities. Appreciable impacts on ambient air pollution concentrations from vehicle emissions are expected to be minor because traffic increase from construction and personal vehicles would be small and temporary and most of the construction equipment is expected to stay onsite until the construction phase is over. Thus, construction activities would not be expected to produce a significant degradation of ambient air quality.

For construction estimates, emissions factors for fugitive dust emissions were obtained from the US EPA's document "*AP42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*". As construction activities vary substantially day to day depending on the level of activity, the specific construction activities occurring at the time and the prevailing meteorological conditions the USEPA provides an emission factor for un-controlled total suspended particulate (TSP) matter of 1.2 tons/acre/month of activity to represent the overall construction activity on

the site (USEPA, 2005). Table 4-1 provides an estimate of fugitive dust emissions from construction activities. These fugitive dust emissions are expected to be below any applicable regulatory criteria.

Table 4-1. Total Suspended Particulate Emission Estimates Resulting from Construction

TSP Emissions						
					Uncontrolled	Controlled
Activity	Area of Activity (Acre)	Duration of Activity (Months)	Uncontrolled Emission Factor (ton/acre/month)	Controlled Emission Factor[1] (ton/acre/month)	Total Emissions (ton)	Total Emissions (ton)
Clearing	4	1	1.2	0.36	4.8	1.44
Excavation	3	2	1.2	0.36	7.2	2.16
Filling	3	2	1.2	0.36	7.2	2.16
Grading	4	1	1.2	0.36	4.8	1.44
Construction	4	6	1.2	0.36	28.8	8.64
Total					**52.8**	**15.84**

Source: USEPA, 2005

Notes: 1: Controlled emission factor depends on dust suppression measures to be used at the site. This value has assumed implementation of dust control measures discussed in Section 2.2.3

There would be no increase in the existing troop level or vehicle operations. Approximately 20 employees would be traveling to the central issue facility daily during operations. These employees would likely use the existing parking area located southeast of Supply road. There would also be 19 aggregate parking spaces and a bus lane to be used by military traveling to/from the facility for issue, exchange, and turn-in of designated OCIE items. These employees and soldiers do not represent new commuters. Therefore, no increases in mobile emissions are anticipated from government owned and privately owned vehicles. The purpose of the Proposed Action is to provide a modern warehouse facility specifically designed for central issue operations where soldiers can pick up and return their OCIE items in one stop. Central issue operations are currently conducted in several locations, thus, the Proposed Action would reduce mobile emissions resulting from car travel.

The Proposed Action would include new stationary sources of air emissions. The design of the facility is underway and the exact sizes and types of heating elements in the building are not finalized. However, it is likely that the facility would utilize a natural gas fired heating and ventilation unit for the warehouse and a variable refrigeration volume system with a DX cooled and gas fired dedicated outdoor air system for the office and issuing areas for most of its heating needs, as well as domestic hot water heaters. Based on preliminary hydraulic calculations, a diesel fire pump would be required to supply the sprinkler system demand of the proposed facility.

Table 4-2 below summarizes the total projected air emissions resulting from stationary (boilers and diesel fire pump) and mobile sources (construction equipment and vehicles) associated with the Proposed Action. These emissions were estimated based on typical boiler and diesel fire pump specifications, construction equipment and vehicle types. Actual specifications of construction equipment and vehicle miles have been estimated based on similar projects. The full discussion including calculations used to develop these estimates can be found in Appendix B.

Table 4-2. Summary of Proposed Action Emissions

Annual Emissions (tons per year)						
Activities	**VOC**	**CO**	**NOx**	**PM_{10}**	**SO_2**	**$PM_{2.5}$**
Operational Stationary Sources						
Natural Gas Boilers	0.007	--	0.12	--	--	--
Natural Gas Water Heaters	0.003	--	0.06	--	--	--
Diesel Fire Pump	0.003	0.008	0.03	--	<0.001	--
Construction Mobile Sources						
Construction Equipment Diesel	0.32	0.99	1.01	0.29	0.28	0.20
Road Vehicles	0.24	2.26	0.24	0.01	0.003	--
Total	**0.57**	**3.26**	**1.46**	**0.30**	**0.28**	**0.20**

Based on the estimated emissions in Table 4-2 above, the Proposed Action is not anticipated to significantly impact existing or future air quality. With the exception of General Conformity requirements (see Section 4.3.1.1 below) impacts to air quality are determined by the impact of stationary sources. As displayed in Table 4-2 above, significant impacts to air quality are not anticipated from the use of the proposed stationary sources. The air emissions from construction equipment and construction workers personal vehicles would be considered a minor local and temporary impact.

4.3.1.1 General Conformity Rule

Proposals for Federal actions must evaluate potential changes in direct and indirect air emissions caused by the proposed actions and must determine whether the proposed actions conform to applicable State and Federal implementation plans. The maximum increase in air emissions that is exempt from a detailed air quality analysis is called the "*de minimis*" level. If emissions of a criteria pollutant do not exceed the *de minimis* level, then the Federal action is considered to have minimal air quality impacts and the Federal action is determined to conform for the pollutant under study and no further analysis is necessary. If the total direct and indirect emissions of a pollutant are above the *de minimis* level then a formal general conformity determination is required for that pollutant.

As stated in Section 3.3, Burlington County is currently in moderate non-attainment status for ozone. Burlington County is also in non-attainment for annual $PM_{2.5}$ and 24 hour $PM_{2.5}$. The *de minimis* levels for each pollutant are defined in the Federal Conformity Rule and vary depending on the pollutant and the severity of nonattainment status. For a moderate ozone nonattainment area, the *de minimis* criterion is 100 tpy for the ozone precursor NOx and 50 tpy for the ozone precursor VOC. There is currently no *de minimis* level set for $PM_{2.5}$, therefore $PM_{2.5}$ was excluded from Table 4-3 below.

Based on the emissions in Table 4-2, the Proposed Action emissions are not expected to result in exceedance of the *de minimis* levels for NOx or VOC set forth in the General Conformity Rule. Thus, the Proposed Action is exempt from the CAA conformity requirements and does not require a detailed analysis of air quality. See Appendix B for a general conformity record of non-applicability for the Proposed Action.

Table 4-3. Proposed Action General Conformity Analysis

Pollutant	Project Emissions (tons per year)	Ozone *de minimis* Level (tons per year)
NOx	1.46	100
VOC	0.57	50

Source: USEPA, 2011a

4.3.2 Effects of Alternative 2 (No Action Alternative)

Under the No-Action Alternative, the Proposed Action would not be undertaken. Implementation of the No Action Alternative would not have an impact on existing air quality and current conditions would remain the same.

4.4 Topography and Soils

4.4.1 Effects of Alternative 1

The contractor would submit a site-specific Soil Erosion and Sedimentation Control Plan to the Burlington County Soil Conservation District for review and approval. This plan would need to receive certification from the District prior to initiating construction. Under the Proposed Action alterations to the topography of the area would be moderate. Grading would be required for the facility's foundation, swales, and dry detention basin (see Section 4.10 for more detail regarding stormwater). It is estimated that approximately five feet of fill would be needed to raise the proposed facility to the required elevation. Given the project site's limited topographic variation, the planned change in topography is considered to be moderate. Soil excavated for the creation of the dry detention basin would be used toward the additional five feet of fill needed for the facility's foundation thereby reducing the amount of offsite fill needed to be brought on site. The excavation and reapplication of surface soils could cause the mixing of shallow soil horizons, resulting in a blending of soil characteristics and types. This blending would modify the physical characteristics of the soils, including structure and texture that could lead to reduced permeability and increased runoff from these areas. Soil compaction and blending could also impact the viability of future vegetation. Thus, long-term minor impacts to soils may result from incorporating excavated and offsite soil into the site grading.

The soil type at the project site is considered by the Natural Resource Conservation Service as a prime farmland soil (USDA/NRCS, 2010); however, the project site is located in the Dix cantonment area, an area used for industrial activities, billeting, administrative support and training, therefore future farming practices at the site are not anticipated.

Construction of the facility would require the removal and relocation of an existing sewer line that runs northwest through the site as well as clearing and grading the existing lot to install the building foundation and detention basin. This disturbance would temporarily create dust from wind erosion. Soil disturbance could result in increased erosion potential from loss of ground cover and exposure of bare soils to precipitation and runoff. The total disturbed area would be kept to the minimum necessary to complete the work (up to 4 acres) and would be confined to the site boundaries. Minor short-term impacts to soils are expected as existing soils have already been disturbed throughout much of the proposed project site through previous land development and clearing activities. Furthermore, potential impacts would be controlled or avoided through the use of appropriate BMPs and soil stabilization/revegetation techniques during and after the construction phase. Appropriate BMPs would be required per the NPDES permit (discussed in detail in Section 4.5, Water Resources) and selected based on site specific conditions. With the adherence to the BMPs described in Section 2.2.3, there would be minimal impact to soils during construction.

No impact to soils and topography are expected during operation of the facility, once construction is completed and the site is revegetated and maintained lawn is once again established.

4.4.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. No construction, activities or land development would occur at the site; therefore, there would be no excavation of land. The land, in its current condition, would remain in place, and the topographic features and soils would remain undisturbed. Therefore no impacts from soil blending, increased soil erosion and associated sediment-laden runoff to adjacent waters would occur.

4.5 Water Resources

4.5.1 Effects of Alternative 1

Surface Water

There are no surface water features within the proposed project site; therefore, no potential exists for direct impacts to surface waters. Initial construction activities on the project site would require the removal and relocation of an existing sewer line that runs northwest through the site as well as clearing and grading the existing lot to install the building foundation and detention basin. All of these activities would create the disturbance and exposure of soils resulting in increased runoff. As there would be over one acre of disturbance, and construction activities could cause erosion of sediments into adjacent surface water features located offsite, an NPDES General Permit would be obtained to ensure compliance with the NJDEP, Division of Water Quality sediment and erosion controls. To minimize potential impacts to water resources a General Permit would require the preparation of a SWPPP. This plan includes BMPs for erosion control and pollution prevention requirements. Considering that the nearest natural surface water (an un-named tributary) is approximately 600 feet east of the site across Loop Street, it is unlikely that any natural water bodies would be affected during construction. BMPs would be implemented and maintained during land-disturbing activities to further prevent the potential of indirect impacts to surface waters. There is always the potential for surface water contamination from hazardous spills that could occur during construction activities; however, BMP's for minimizing the potential for spills would be outlined in the construction stage SWPPP as a condition of the General Permit. Ultimately, adherence to the SWPPP would minimize erosion and sediment impacts to water quality as well as minimize the potential for spills; therefore, impacts to surface water resources would be reduced to minor.

The proposed central issue facility would increase the amount of impervious surface at the project site by approximately 1.9 acres; therefore, increasing stormwater runoff. Approximately 0.6 acres of the impervious cover would consist of a dense graded aggregate parking lot consisting of 19 spaces and a bus lane. The dense graded aggregate is considered semi-permeable and typical surface infiltration rates range from 0.2 to 0.6 inches per hour. This aggregate would contribute to minimizing the amount of stormwater runoff resulting from the new impervious surfaces. Preliminary site designs for the proposed facility include a swale ultimately ending at an extended dry stormwater detention basin. It is anticipated that adequate stormwater management would be included in the design of the facility and runoff would be contained onsite to the maximum extent practicable thus minimizing potential impacts to surface waters located off site to negligible.

Construction activities would require water from JB MDL sources for concrete work and washing machinery and tools. Water for construction would be obtained from existing potable water sources on Dix. This water use would be short-term and minor relative to the amount of water available on the Dix portion of JB MDL (see Section 3.11, Infrastructure).

As discussed in Section 3.5.3, the Dix portion of JB MDL obtains potable water from both surface and groundwater sources. The primary source of potable water on Dix is a surface water diversion on Greenwood Branch of the North Branch of Rancocas Creek. The operation of the proposed facility would require potable water withdrawals for use. The proposed facility would not increase the number of employees from current levels. The potable water withdrawals under the Proposed Action would be offset by the non-operation of the World War II-era issue facility and support posts. In addition, the Proposed Action has been designed to achieve LEED Silver certification which would promote minimizing water consumption, thus, beneficial impacts are expected to result from operation of the new facility as it would use less water than the existing facilities. No impacts are expected to occur to potable water resources in the area and they are expected to continue to be a viable source within the region.

Groundwater

There would be no direct impacts to groundwater from construction of the project, as it is not expected that any drilling or extensive excavating would be required at the site. During construction, there would be a short-term minor potential for groundwater contamination to occur from the operation and maintenance of construction vehicles and equipment (e.g., accidental fuel spills). The potential for contamination to occur would be minimized through the implementation of the SWPPP. Any potential impacts associated with the leaking of substances (i.e., fuels, oils, and other lubricants) into soils and entering groundwater aquifers would be avoided through the use of BMPs to prevent spills or leaks. Therefore, no impact to groundwater is expected to result from the Proposed Action.

Wetlands and Floodplains

The Proposed Action site layout is concentrated on the southwestern portion of the site (Figure 2-2). The dry detention basin in the eastern portion of the site is to be located over 50 feet south of the existing ditch on site and approximately 230 feet northwest of the NJDEP mapped wetland located offsite on the east side of Loop Street. Therefore, no NJDEP wetland areas or their associated buffers would be disturbed during the construction or operation of the proposed facility.

The layout of the facility would not encroach on any surface waters or their existing buffers. Construction and operation of the facility would not occur within or adjacent to any designated 100 or 500-year floodplains and therefore, would have no impact on upstream floodplain elevations or downstream flood conveyance. Thus, the Proposed Action would have no impacts to floodplains.

4.5.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. No construction activities or land development would occur at the site, and there would be no impact to surface waters, groundwater, wetlands, or floodplains in the vicinity of the project area.

4.6 Biological Resources

4.6.1 Effects of Alternative 1

Impacts to biological resources generally occur because of habitat modification, land disturbance, disturbance to or taking of rare, threatened, or endangered species, or exposure to environmental contaminants. No impacts to State- or Federally-listed threatened or endangered species are anticipated to occur as the USFWS concurred with JB MDL's conclusion that the site does not currently support any listed species and would therefore have no impact. A special status species, the wood thrush, is noted as a 2002 breeding sighting on and around the proposed project site (NJDEP, 2013a). The NJDEP, Division of Fish and Wildlife also noted this and recommended a general timing restriction on the mechanical

trimming or removal of trees between March 15th and July 31st to protect nesting birds under the Migratory Bird Treaty Act. Currently a single tree exists on site along Supply Road which is not planned to be trimmed or removed for the proposed project. The wood thrush sighting was more than likely not on the proposed site itself as the wood thrush typically breeds in cool mature, lowland, mixed or more typically, deciduous forests, particularly mesic to damp woodlands with an abundance of saplings as opposed to maintained lawn. As the proposed project site does not contain typical wood thrush habitat the Proposed Action would have no effect on the wood thrush or its habitat.

Development of the facility would involve disturbing up to 4 acres of land that has a history of disturbance in the general area of ongoing human disturbances containing sparse vegetation and marginal wildlife habitat. During initial land clearing activities, wildlife would be displaced from the site due to human activities (e.g., equipment movement) causing them to avoid the area. Impacts from the loss of terrestrial wildlife habitat would be minor as the project site consists of low-quality vegetative habitat and exists in an area generally characterized as industrial. Development of the site would result in a loss of habitat for any species currently utilizing onsite resources or those in the area that could; however, large amounts of similar habitat exists directly north of the site, thus, minor impacts would be expected.

In addition, during operations, human activities onsite may cause avoidance of the area by some wildlife species; however, this effect would be negligible considering other industrial buildings operating in the area (e.g., Buildings 3138, 3137, 3130 etc.) already cause some degree of avoidance. No impacts to wetland habitat located northeast of the site on the opposite side of Loop Street are expected as erosion and sediment BMPs and appropriate stormwater management measures would be implemented during construction and operation to minimize adverse impacts to water quality (see Section 4.10 for stormwater management). Therefore, impacts to wildlife would not be considered significant as a result of the Proposed Action.

4.6.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. No construction or land development would occur at the site; thus, no impacts to wildlife or vegetation would occur. Additionally, the No Action Alternative would not result in any impacts to threatened or endangered species found in the vicinity of the area.

4.7 Cultural Resources

4.7.1 Effects of Alternative 1

National Register eligible building 3135 (SHPO Opinion 3/7/2003) is located approximately 0.17 miles southwest of the proposed project site (see Figure 1). Building 3135, a locomotive repair facility built in 1942, was found individually eligible for the NR under criterion A as the only railroad specific building extant on Fort Dix associated with the World War II mobilization on the installation. Building 3135 is not visible from the project site as warehouse buildings 3136 and 3137 stand in between, therefore the proposed project is expected to have no effect on Building 3135 or it's viewshed. Buildings 3136 and 3137 are both semi-permanent, concrete block military warehouses built in 1942. Although they were once part of the large group of railroad-related facilities, they were found to be substantially altered at the time of survey in 2002 and lacked the integrity to be considered for eligibility for NR inclusion under criterion A. Therefore, the proposed project is considered to have no effect on Buildings 3136 and 3137.

There have been no historic or prehistoric archaeological sites identified within the project APE. The proposed project site is located in what was once a heavily developed portion of the former Fort Dix. Due to the degree of historic disturbance, the proposed project site is considered to have a low potential for containing either prehistoric or historic archaeological resources. Should archeological sites be

inadvertently discovered during the construction phase of the project or in the course of normal operations, JB MDL would cease operations, contact SHPO, and ensure compliance with all applicable, statutory, regulatory, and policy requirements. Therefore, the proposed project is considered to have no potential to adversely affect archaeological resources.

In a letter received 22 February 2013 from the NJDEP, Historic Preservation Office (see Appendix A), the Office acknowledged concurrence with JB MDL's determination that the project would "have No Impact upon cultural resources on or eligible for inclusion in the 'State and National Register of Historic Places". In a letter dated February 14, 2013 the Delaware Tribe indicated that their review of the proposed project site indicated that there are no religious or culturally significant sites in the project area and therefore they defer comment to the SHPO (see Appendix A). As stated above SHPO determined the proposed project would result in "no effect" to historic properties. In an e mail dated May 21, 2013, The Delaware Nation responded that upon research of their database and files they found that the location of the project does not endanger known archaeological sites of interest to the Delaware Nation and to please continue with the work as planned (see Appendix E) (JB MDL, 2013a). Thus, the proposed project is considered to have no potential to adversely affect cultural resources.

4.7.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. Implementation of the No Action Alternative would not result in adverse impacts to cultural resources in the vicinity of the proposed project area.

4.8 Hazardous Materials and Wastes

4.8.1 Effects of Alternative 1

Construction activities would require the use of certain hazardous materials such as paints, welding gases, solvents, preservatives, and sealants. It is anticipated that the quantity of hazardous materials used during construction activities would be minimal and their use would be of short duration. Contractors would be responsible for the management of hazardous materials and petroleum products, which would be handled in accordance with Federal, State, and USAF regulations. Hazardous waste generated during construction would be properly managed and stored on site in accordance with RCRA. Preventative measures and BMPs, such as providing fencing around the construction site, establishing contained storage areas, responding immediately to spills, and controlling the flow of construction equipment and personnel would help reduce the potential for a release to occur. Thus, impacts from hazardous wastes are expected to be minor.

As there are no records indicating that USTs or ASTs were ever used on, stored on, or disposed of at the proposed project site, the Proposed Action is expected to have no impact. In late 2013, a ground penetrating radar survey is going to be conducted on the site that will identify any old building foundations, rail beds or other subsurface obstructions that would need to be removed prior to construction of the facility. Should a UST or AST be found it would be removed including any associated contaminated soil by a licensed contractor in accordance with applicable regulations under the supervision of JB MDL remediation staff.

There are no DERP sites located within or adjacent to the proposed project site. The proposed project is located within a CEA for groundwater. However, there would be no direct impacts to groundwater from construction of the project, as it is not expected that any drilling or extensive excavating would be required at the site. Thus, there would be no contact with or impacts from contaminated groundwater.

No hazardous materials or wastes are to be used or generated during operation of the central issue facility therefore no impact is expected to result from operation.

4.8.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. No construction activities or land development would take place at the site; therefore, no impacts associated with hazardous materials and waste management would occur.

4.9 Socioeconomics and Environmental Justice

4.9.1 Effects of Alternative 1

Construction of the proposed project would require approximately 45 workers at any given time to be onsite and construction is anticipated to take 18 months. It is expected that these construction workers would be hired from the available labor pool in the project area, which is sufficiently large enough to absorb this demand without negatively impacting labor availability. As it is assumed the majority of the workforce would be drawn from local candidates, no increase in population or need for housing is anticipated.

Short-term, moderate, beneficial effects on the local economy would be expected under the Proposed Action due to expenditures from the implementation of the construction of the facility. Short-term, minor increases in local business volume and employment would be expected under the Proposed Action as well. The use of local construction workers would produce increases in local sales volumes, payroll taxes, and the purchases of goods and services resulting in short-term, indirect, minor, and beneficial increases in the local economy.

The Proposed Action would not increase or decrease the number of persons employed or stationed at JB MDL; therefore, no significant effects on demographics or social services and conditions would be expected. The Proposed Action would occur entirely on JB MDL. Possible adverse effects from construction activities could include increased traffic and noise levels and decreased air quality, but these effects would be short-term, intermittent, and minimal, and would likely effect on-installation residents more than off-installation populations. Therefore, disproportionate impacts on minority or low-income populations would not be expected.

4.9.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. No construction activities or land development would take place at the site; therefore, no socioeconomic or environmental justice impacts would occur.

4.10 Infrastructure

4.10.1 Effects of Alternative 1

The proposed facility would connect to an existing natural gas line adjacent the site. The existing water lines immediately adjacent the site do not have the required pressure or flow for the proposed facility therefore they would connect to the existing 12 inch main that runs north of Lexington Avenue. The existing sanitary sewer line running northwest through the site would be relocated and laterals would be used to tie the proposed facility into the existing sanitary line. The electrical service to the facility would be derived from an existing 12,500/7,200V overhead line. The new electrical service would include primary underground service lines feeding to a new pad-mounted loop-feed transformer. No generator or electrical service back-up is required for the proposed facility

The Proposed Action would not result in significant effects on the installation's infrastructure. Long-term, beneficial effects would be realized from implementing improved infrastructure and the centralization of functions. In addition, the Proposed Action has been designed to achieve LEED Silver certification. This would promote minimizing the use of electricity/energy and water consumption as well as the optimization of construction waste management and storm water management techniques.

During construction the demand on existing utilities services to support construction of the facility would be minimal. Impacts to existing public utility systems are expected to be negligible during the construction period, as direct use of utilities would be limited to electrical lines. It is expected that temporary portable sanitary wastewater facilities would be provided and wastewater would be transported by commercial services for disposal. Potable water would be provided by temporary onsite water tanks. Electrical power would be provided by temporary connections to nearby power lines and use of portable generators to operate construction tools and machinery.

Operation of the facility would require connections to existing potable water, sewer, electrical, natural gas and communications lines. Connecting to these utilities would not require major upgrades to any existing JB MDL utility infrastructure. As discussed in Section 3.10, the necessary utilities needed for the facility currently exist along Supply Road, Center Road, and Lexington Avenue. The proposed facility would tie into these existing lines. Connection of new utility lines to existing lines would be coordinated with the appropriate JB MDL office to prevent potential disruption to users of the same services and, therefore, negligible impacts to existing utility lines are expected during construction. Accessing the utilities would also have a minor impact as the supply lines with the exception of the water line along Lexington Avenue, currently abut the project site along Supply and Center Road (see Figure 2-1).

The proposed LEED Silver construction design of the proposed facility would have long-term operational, beneficial effects as it would increase energy efficiency (reducing electricity demand), increase water use efficiency and reduce potable water usage.

4.10.1.1 Stormwater System

There are no surface water features within the proposed project site; therefore, no potential exists for direct impacts to surface waters during construction or operation. As there would be over one acre of disturbance, and construction activities could cause erosion of sediments into nearby water features (five acre wetland and associated un-named tributary on the east side of Loop Street) located offsite, a NPDES General Permit would be obtained prior to construction to ensure compliance with the NJDEP, Division of Water Quality sediment and erosion controls. To minimize potential impacts to water resources a General Permit would require the preparation of a SWPPP. This plan includes BMPs for erosion control and pollution prevention requirements. Typical BMPs include stabilizing exposed soils with straw and implementing sediment control measures such as fiber rolls and silt fencing, sediment ponds and so forth to remove sediment that has mixed with water.

The proposed central issue facility would increase the amount of impervious surface at the project site by approximately 1.9 acres; therefore, increasing stormwater runoff. Approximately 0.6 acres of the impervious cover would consist of a dense graded aggregate parking lot consisting of 19 spaces and a bus lane. The dense graded aggregate is considered semi-permeable and typical surface infiltration rates range from 0.2 to 0.6 inches per hour. This aggregate would contribute to minimizing the amount of stormwater runoff resulting from the new impervious surfaces. Preliminary site designs for the proposed facility have the building constructed on approximately five feet of fill to provide positive drainage away from the building. Drainage would then be conveyed to the northern portion of the site in a drainage swale ultimately ending in an extended dry stormwater detention basin.

Dry detention basins are stormwater basins that are designed to provide temporary storage of runoff and functions hydraulically to attenuate stormwater runoff peaks. Dry detention basins are designed to completely empty out between runoff events, typically within 48 hours, and therefore provide mainly runoff control as opposed to water quality control. They do however provide some water quality benefits by allowing the settling of particulate matter. Figures 4-1 and 4-2 below show a typical extended dry detention basin before and after a rain event.

Figure 4-1. Typical Extended Dry Detention Basin When Empty

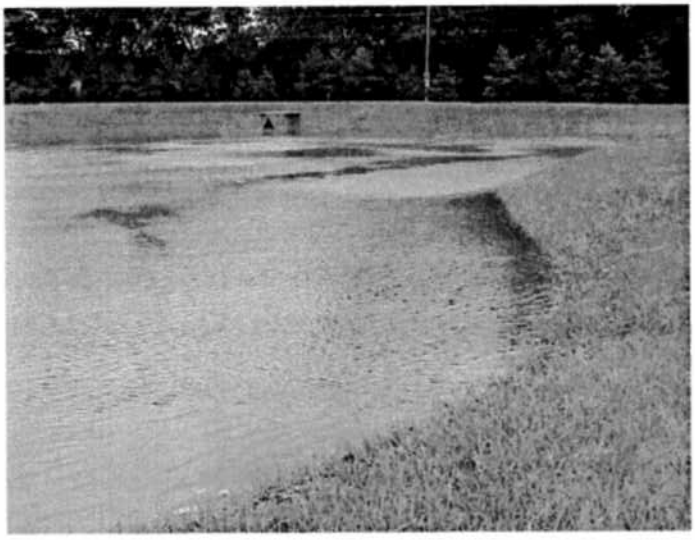


Figure 4-2. Typical Extended Dry Detention Basin When Full

It is anticipated that adequate stormwater management would be included in the design of the facility and runoff would be contained onsite to the maximum extent practicable, minimizing the amount of runoff to receiving waters. Thus, impacts to stormwater resources are expected to be minor.

4.10.1.2 Solid Waste

During construction, minor amounts of typical construction refuse and debris would be generated and would need to be disposed of properly. Areas of soil would need to be excavated in order to install the building's foundation and utilities. However it is assumed this soil would be used as fill to raise the proposed building footprint five feet therefore, no soil disposal would be needed. The Burlington County landfill currently accepts construction waste. The amount of municipal solid waste and construction waste generated during construction of the facility is anticipated to be minor and would not significantly affect the capacity of the Burlington County landfill.

During operations the long-term quantity of solid waste generated would be similar to existing levels as the number of personnel (approximately 20 employees) and types of activities would remain the same. Therefore no impact to solid waste levels is expected to result from operation of the proposed central issue facility.

4.10.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. No construction activities or land development would occur at the site, therefore, no additional facilities would be constructed and baseline conditions in terms of stormwater, usage rates of existing utilities and generation of solid waste would remain the same. Therefore, no impacts to infrastructure would occur.

4.11 Noise

4.11.1 Effects of Alternative 1

Construction noise would be localized, intermittent, and temporary. Increases in noise levels during construction would mainly result from the use of heavy construction equipment (e.g., bulldozers, scrapers, dump trucks, and concrete mixers). Given the equipment needs of the construction phase, the typical noise levels onsite would be expected to remain within the range of 75 to 90 dBA. Construction noise levels onsite would primarily be limited to the immediate vicinity of the project site and would primarily affect the health of the construction workers. However, adherence to appropriate OSHA standards, such as use of hearing protection would protect the workforce from excessive noise.

Construction would occur during daytime hours (i.e., between 7 a.m. and 5 p.m). Based on the noise levels listed in Table 4-4 below, the overall sound level during construction of the facility would be approximately 93 dBA at the source, which is a conservative estimate as it assumes all the equipment would be operating continuously and at the same time.

Table 4-4. Common Equipment Sources and Measured Noise Levels at 50 feet

Equipment	Typical Noise Level in dBA
Backhoe Excavator	85
Bulldozer	80
Grader	85
Dump Truck	91
Pump	76
Compressor	81

Source: Bolt et.al, 1971
dBA=A-weighted decibels

Considering the distance to the closest residential area is approximately one mile south, it is expected that any incremental noise increase from construction work would significantly attenuate. Noise levels would further be reduced by barriers such as vegetation and building structures located between the project site and the residences. Thus, incremental increases in sound levels would not be significantly discernable above and beyond existing noise conditions at any of the sensitive receptors.

Truck deliveries to and from the facility would be the principal contributor to increased noise levels during operation as noise would be generated during loading/unloading activities at the facility and from vehicle-related noise along the travel routes. These noise impacts are expected to be minor and intermittent (see Section 3.2.10 for transportation and traffic-related impacts) and would be distributed throughout a 10-hour work day (between 7 a.m. and 5 p.m., Monday through Friday) and would not significantly increase the noise levels above and beyond current noise levels characteristic of the area (i.e., industrial and storage activities).

Truck deliveries to and from the facility once operational would be the principal contributor to increased noise levels, as well as noise from loading/unloading activities. These noise impacts are expected to be minor, intermittent (between 7 a.m. and 5 p.m., Monday through Friday) and similar to the existing noise levels in this industrial area. Therefore, operation of the proposed facility would not significantly increase the noise levels above and beyond current noise levels characteristic of the area (i.e., industrial and storage activities).

4.11.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. No construction activities or land development would occur at the site; therefore, there would be no increase or adverse noise impacts in the vicinity of the project area.

4.12 Transportation and Traffic

4.12.1 Effects of Alternative 1

The same roads currently used to access the proposed site would also be used by construction vehicles to the project site (i.e., Center Road, Supply Road, and Loop Street). Fort Dix Road is the main road that contractors would use from Commercial Gate 9 to access the roads immediately surrounding the proposed project site. Project-generated traffic volumes during construction would be produced by construction workers commuting to and from the project site, as well as by material suppliers and heavy construction service vehicles. The total peak work force during construction would be approximately 45 workers, and these workers would most likely be phased in (e.g., initially with structural engineers, excavators and concrete workers). Commuter traffic from the construction workers are expected to be minor in comparison to existing traffic volumes as workers would be phased in and it is assumed that some workers would commute together reducing the total number of vehicles traveling to the project site. Because the project site is an open area, it is anticipated that adequate space would be available to stage equipment and vehicles; thus, impacts to the circulation of and access to the project area would be negligible. Generally, construction impacts to existing transportation resources would be temporary and localized (i.e., limited to proximity of project site).

To reduce the potential for traffic accidents, the contractor would provide all appropriate measures to allow project trucks to safely make turns onto and off Fort Dix Road from the proposed project site, and adequately warn other vehicles about the presence of slow-moving trucks entering and leaving the site. These measures would be coordinated with the Security Forces Squadron and could include, but would not be limited to: the presence of flag people, flashing lights, warning signs, and reducing the speed limit

on Fort Dix Road during the project. By implementing these traffic management strategies, the impacts to traffic safety and traffic flow would be minor.

No new employees would be required for the operation of the facility. Personnel at the existing facilities would be transferred over to work at the proposed central issue facility. These employees do not represent new commuters. Therefore, no increases in traffic are anticipated from government owned and privately owned vehicles during operation of the facility.

4.12.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. No construction activities or land development would occur at the site. Therefore baseline conditions of traffic levels would remain unchanged resulting in no impacts to transportation and traffic.

4.13 Human Health and Safety

4.13.1 Effects of Alternative 1

The potential for accidents and injuries to personnel during both construction and operation of the proposed facility would be comparable to that of a small industrial facility and would not exceed the capacity of available area healthcare services. It is important to note that the construction workers would not be able to use the JB MDL healthcare services unless it was an absolute emergency. The construction workers would utilize off site hospitals (e.g. Buttonwood in Pemberton etc.). The off-site healthcare facilities are well staffed and would not be impacted as the workforce would be drawn from the current labor pool in the area and would not represent an increase in local population. The JB MDL police and fire department is well staffed and would be available to assist in a fire emergency if needed. As stated in Section 3.13, the closest fire station is located approximately 0.5 miles from the proposed site location. Therefore, no impacts to medical, fire or police are expected to result from the Proposed Action.

Potential occupational health and safety risks during construction of the proposed facility are expected to be typical of risks for any other commercial construction site of comparable size. Health and safety concerns include: the movement of heavy objects, including construction equipment; slips, trips, and falls; the risk of fire or explosion from general construction activities (e.g., welding); and spills and exposures related to the storage and handling of chemicals and disposal of hazardous waste. The construction contractor would develop, implement, and maintain a Worker Protection Plan. This plan would implement OSHA (29 CFR 1910, and 29 CF 1926) and would define policies, procedures, and practices implemented during the construction process to ensure protection of the workforce, environment, and the public. During construction, safety measures such as providing fencing around the construction site, establishing contained storage areas, and controlling the movement of construction equipment and personnel would reduce the potential for an accident to occur. Hazardous materials that may be used during construction include paints, welding gases and solvents. BMPs would be employed to reduce any impact associated with the use of these materials (see Sections 2.2.3 and 4.8.1). Thus, it is expected that only minor adverse health and safety impacts would occur during construction.

Based on data compiled by the U.S. Bureau of Labor Statistics, in 2011 within the nonresidential building construction industry, the injury rate for construction workers was 3.6 percent and the fatality rate was 0.1 percent (USBLS, 2011; USBLS, 2011a). Although a specific construction plan has not yet been developed, for purposes of analysis, it is assumed that the number of construction personnel would peak at 45. Therefore, construction-related injuries would be expected to peak at two per year and fatalities would be well below one (0.05). Considering that the aforementioned safety planning would occur, no greater than the industry average for injuries and fatalities would be expected.

The proposed project site is not located within or adjacent to any UXO caution, UXO sweep areas, or QD Arc areas and therefore no impact is expected to result from implementation of the Proposed Action.

4.13.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. No construction activities or land development would occur at the site; therefore, there would be no change to existing safety conditions, safety rules or regulations and, thus no impact would be anticipated.

4.14 Cumulative Impacts

The CEQ regulations implementing NEPA require the consideration of cumulative impacts as part of the review process (40 CFR 1508.7):

"Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant actions, taking place over a period of time."

This section analyzes potential cumulative impacts to selected resource areas described in Section 3. The effects associated with the facility are analyzed in combination for their incremental contribution to cumulative effects when added to impacts from other planned and reasonably foreseeable actions. For an affected resource area, each reasonably foreseeable future action, including the Proposed Action, adds an increment to the total (cumulative) impact. For this analysis, the past and present effects are accounted for in the existing baseline of the affected environment section (Section 3) of this EA.

For future actions to be relevant to the cumulative effects analysis, the actions must affect resources (be the cause of some type of effect whether beneficial or adverse) within the region of influence for the analysis. The region of influence for this project is generally limited to the property boundaries of the project site, Dix cantonment area, Burlington County, or the Crosswicks Neshaminy Watershed, depending on the environmental resource.

4.14.1 Installation Development Plan

The 2012 IDP is the first master plan since the standup of the Joint Base in 2009 and aims to further the BRAC goals of reducing costs while furthering mission effectiveness. JB MDL proposes to implement the IDP and changes to future planning characteristics, including revised zoning boundaries and designations. The IDP will serve as a guide for land use changes, programming capital improvements, and establishing general policies to improve the built and social environment of the installation community. Planned projects in the IDP are derived from the Automated Civil Engineering System and are discussed within the capital improvements program (CIP) portion of the IDP. The CIP projects include construction, demolition, infrastructure, and renovation activities. A review of the IDP was conducted to identify any potential projects that could add and interact with the Proposed Action leading to cumulative impacts.

JB MDL has many projects planned for the near future. JB MDL spans over 42,000 acres, therefore projects that are planned to occur within the next two years near the Proposed Action, which is specifically located in the Dix cantonment area, were evaluated to determine potential cumulative impacts. These projects are described in Table 4-5 below. Projects planned to take place on portions of Lakehurst and McGuire portions of JB MDL were considered too far in distance to incur cumulative impacts and in most cases take place within a different County and Watershed than the Proposed Action.

Table 4-5. Potential Future Development Projects on the Dix Portion of JB MDL

Name of Project	Type of Project	Project Year	Description
Outdoor Recreation Issue and Storage Facility Building 6045	Demolition	2015	This project would demolish Building 6045 to include removal of concrete foundation and slab, hauling, disposal, excavation and backfill, and termination of utility services. The asphalt parking lot would be demolished. Site restoration would include general area cleanup, grading, placement of topsoil, and seeding.
Walson Hospital Complex	Demolition	2013	This project includes the complete demolition of the building and associated infrastructure and restoration of the site as maintained grassland.
Consolidated Dining Facility	Construction	2014	Construct a new, sustainable, energy efficient, 30,257 square foot Consolidated Dining Facility to eliminate deficiencies that exist in the current dining facilities in the 5400 area. The new Facility would provide one centralized building to include dining, food service, kitchen areas, offices, men's and women's restrooms, storage, mechanical, electrical and communications rooms, and fire alarm and suppression systems. Design also includes necessary physical security and antiterrorism measures, accessibility for the disabled, vehicle unloading areas, and parking areas.
Outdoor Recreation Equipment Rental and Storage Facility	Construction	2015	A 12,500 square foot outdoor recreation equipment and storage facility is to be constructed to provide functional floorspace for the secure storage and efficient issue of outdoor equipment, supplies, and merchandise. Site improvements would include parking with lighting and maintenance free landscaping. The proposed site for the facility is the current outdoor recreation issue and storage facility (Building 6045) described in line one above.
Repair Stormwater Systems	Infrastructure	2013	The repair of deteriorated/ineffective stormwater management infrastructure including replacing piping and catchbasins, cleaning lines to remove blockages, and also repaving New Jersey Avenue.

4.14.2 Cumulative Impacts Associated with Alternative 1 (Proposed Alternative)

All demolition, construction and infrastructure activities generally would be expected to result in minor short term increases in noise, air emissions, potential for erosion and transport of sediment into surface water bodies, generation of small amounts of hazardous materials and wastes, and generation of construction and demolition waste. All demolition and construction activities generally would be expected to result in short-term job creation and materials procurement.

The planned projects including the Proposed Action are likely to cause periods of traffic congestion or detours within the Dix cantonment area, most notably at Commercial Gate 9. Truck trips associated with

the construction and demolition of the Proposed Action and other projects listed in Table 4-5 would also likely contribute to occasional traffic congestion and delays within the cantonment area. However, these trucks would travel to and from Commercial Gate 9 on the north side of the base, and would not be likely to contribute to traffic delays in the areas of road improvement (New Jersey Avenue) described in Table 4-5. The largest project, the demolition of the Walson Hospital, would generate thousands of truck trips. JB MDL specified a short term dedicated truck route for that project to alleviate delays at Commercial Gate 9.

Approximately 4 acres of soils would be disturbed by development of the Proposed Action and 1.9 acres of this land area would be changed from maintained lawn to impervious surfaces. The Consolidated Dining Facility would increase impervious cover in the Dix cantonment area by less than 5 acres. The Outdoor Recreation Equipment Rental and Storage Facility would have a negligible impact on soils as the existing facility is to be demolished and then replaced with a new and improved facility. The Walson demolition project would convert 8.5 acres of land from impervious cover to maintained lawn reducing stormwater runoff and impervious cover. The stormwater system improvement projects would not increase impervious cover in the cantonment area. Thus, taken together, the Proposed Action and cumulative projects listed in Table 4-5 would decrease impervious cover on the Dix portion of JB MDL by approximately 2 acres. Overall long-term cumulative impacts to land use are expected to be beneficial as JB MDL reduces redundancies in support functions and facilities thereby reducing impervious cover and increasing operational efficiency.

Considered cumulatively, planned installation development projects have the potential for short-term, minor, adverse effects and long-term, minor, adverse effects on vegetation and wildlife. The majority of all planned installation development projects would occur within built-up areas of the cantonment area, which would primarily affect non-forested upland and urban upland communities that are modified, landscaped, and mowed regularly. The permanent removal of modified and landscaped areas would be a long-term, negligible, adverse, cumulative effect. Demolition of facilities would partially offset potentially long-term, adverse, cumulative effects from construction of facilities by providing previously developed areas that require less vegetation removal.

4.14.3 Cumulative Impacts Associated with Alternative 2 (No Action Alternative)

Under the No Action Alternative, the Proposed Action would not be undertaken. Therefore, no cumulative environmental, socioeconomic, or cultural resource impacts resulting from the Proposed Action would be anticipated.

4.15 Irreversible and Irretrievable Commitment of Resources

An irreversible commitment of resources is defined as the loss of future options. The term applies primarily to the effects of use of nonrenewable resources such as minerals or cultural resources, or to those factors such as soil productivity that are renewable only over long periods. It could also apply to the loss of an experience as an indirect effect of a "permanent" change in the nature or characters of the lands. An irretrievable commitment of resources is defined as the loss of production, harvest, or use of natural resources. The amount of production foregone is irretrievable, but the action is not irreversible. If the use changes, it is possible to resume production.

The Proposed Action would not have irreversible impacts in terms of land use because future options for using the 8.9 acre site would remain possible. A future decommissioning process could restore the site for alternative uses, ranging from open space to other installation development. The location of the proposed issue facility is consistent with the surrounding installation uses and would not affect surrounding land uses. Construction materials, except to the extent they can be reused or recycled should the issue facility be decommissioned in the future, would be irreversibly committed.

The primary irretrievable impacts of the Proposed Action would involve the use of energy, labor, and materials during construction and operation of the facility. However, the use of these resources would be negligible in terms of the overall availability of these resources in the region.

4.16 The Relationship Between Local Short-Term Uses of the Human Environment and the Maintenance and Enhancement of Long-Term Productivity

The CEQ regulations require consideration of "the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity" (40 CFR 1502.16). Short-term uses of the human environment are considered those occurring during the construction and initial implementation of the project. Long-term effects are those caused after the action has been completed and is in full and complete operation.

Construction and operation of the facility would require short-term uses of land and other resources. These pertain to the activities that have been described throughout Chapters 3 and include such effects as: aesthetic impacts from the conversion of vegetated, undeveloped land to a facility; impacts on air quality from fugitive dust emissions during construction; erosion and sedimentation impacts, which generally would be mitigated through the use of control measures; loss of vegetation and wildlife habitat caused by land-clearing activities; impacts on the capacity of utility services; impacts to water resources from the use of groundwater for potable needs; and traffic impacts attributable to the transport of personnel and materials to/from the site.

The commitment of resources (land, energy, labor, and materials) to construct the issue facility in the short-term would result in several long-term positive environmental benefits. The project would demonstrate innovation in green building technology, energy efficiency and renewable energy. The long-term productivity associated with the Proposed Action includes the ability of JB MDL to reduce its infrastructure costs that will in turn reduce Federal deficits or allow more funding to be directed to the primary mission.

4.17 Unavoidable Adverse Impacts

There would be no significant unavoidable adverse impacts from the construction and operation of the proposed issue facility. The project's impacts to the environment would be negligible given the LEED design of the facility. During construction, there would be a minor unavoidable, although temporary, increase in construction related noise at the site as well as minor soil erosion, which may occur due to natural elements (i.e., wind and rain). Construction activities would conform to all applicable soil erosion control regulations, which would minimize these impacts.

5. COMPARISON OF ALTERNATIVES AND CONCLUSIONS

Based on the analysis presented in this EA, Alternative 1 is the Preferred Alternative. The evaluation performed within the EA concludes that, with the adherence to sustainable operations and best management practices in Section 2.2.3, no significant impacts would occur as a result of implementation of the Preferred Alternative. This analysis determines that an Environmental Impact Statement (EIS) is not necessary for the implementation of Alternative 1 and that a FONSI is appropriate. A summary of impacts for both alternatives is provided in Table 5-1 below.

Table 5-1. Summary of Impacts

Resource Area	Alternative 1 – Proposed Action – Construct Central Issue Facility	Alternative 2 – No Action Alternative
Land Use	Minor impacts are expected as the proposed project would change 1.9 acres of the 8.9 acre undeveloped land to developed land.	No Impact
Air Quality	Fugitive dust emissions are expected to be below any applicable regulatory criteria and the Proposed Action is not anticipated to significantly impact existing or future air quality. The contractor would employ dust control strategies to minimize effects from construction equipment. These air emissions would be considered a minor local and temporary impact. The Proposed Action includes new stationary sources including natural gas boilers, water heaters and diesel fire pump. Significant impacts to air quality are not anticipated from the use of the proposed stationary sources. The Proposed Action emissions are not expected to result in exceedance of the de minimis levels for NOx or VOC set forth in the General Conformity Rule.	No Impact
Topography and Soils	Site work would have a minor, short-term effect on soil erosion. It is estimated that approximately five feet of fill would be needed to raise the proposed facility to the required elevation. Given the project site's limited topographic variation, the planned change in topography is considered to be moderate. Long-term minor impacts to soils may result from incorporating excavated and off-site soil into the site grading	No Impact
Water Resources	Water use during construction would be short-term and minor relative to the amount of water available on the Dix portion of JB MDL. Beneficial impacts are expected to result from operation of the new LEED Silver facility as it would use less water than the existing facility and support posts. No NJDEP wetland areas or their associated buffers would be disturbed during the construction or operation of the proposed facility.	No Impact

Resource Area	Alternative 1 – Proposed Action – Construct Central Issue Facility	Alternative 2 – No Action Alternative
Biological Resources	No Federally-listed or State-listed threatened or endangered species would be affected. On January 31, 2013 the USFWS acknowledged concurrence with JB MDL's determination that no Federally listed or proposed threatened or endangered flora or fauna are known to occur within the proposed project's impact area and therefore the Proposed Action would not significantly affect any protected species or their critical habitat.	No Impact
Cultural Resources	The site has low potential for archeological or historical sites based on past disturbance. SHPO concurred with a No Adverse Effect determination on February 22, 2013. In a letter dated February 14, 2013 the Delaware Tribe deferred comment to the SHPO (see Appendix A). In an e mail dated May 21, 2013, The Delaware Nation responded that upon research of their database and files they found that the location of the project does not endanger known archaeological sites of interest to the Delaware Nation and to please continue with the work as planned (see Appendix E) (JB MDL, 2013a).	No Impact
Hazardous Materials and Waste	It is anticipated that the quantity of hazardous materials used during construction activities would be minimal and their use would be of short duration.	No Impact
Socioeconomics and Environmental Justice	Approximately 45 construction jobs would be created for the construction project. There would be a positive short-term impact on the regional economy.	No Impact
Infrastructure	The proposed facility would increase the amount of impervious surface at the project site increasing stormwater runoff; however, it is anticipated that adequate stormwater management would be included in the design of the facility and runoff would be contained onsite to the maximum extent practicable, minimizing the amount of runoff to receiving waters. Thus, impacts to stormwater resources are expected to be minor. The Proposed Action would not result in significant effects on the installation's infrastructure. Long-term, beneficial effects would be realized from implementing improved infrastructure and the consolidation of functions.	No Impact
Noise	Construction noise would be localized, intermittent, and temporary. Truck deliveries to and from the facility once operational would be the principal contributor to increased noise levels, as well as noise from loading/unloading activities. These noise impacts are expected to be minor, intermittent (between 7 a.m. and 5 p.m., Monday through Friday) and similar to the existing noise levels in this industrial area.	No Impact
Transportation and Traffic	Construction impacts to existing transportation resources would be temporary and localized. Commuter traffic from the construction workers are expected to be minor in comparison to existing traffic volumes as workers would be phased in.	No Impact

Resource Area	Alternative 1 – Proposed Action – Construct Central Issue Facility	Alternative 2 – No Action Alternative
Human Health and Safety	With proper planning and safety protocols, the construction of the Proposed Action would not have significant adverse impacts on human health and safety. No greater than the industry average for injuries and fatalities would be expected.	No Impact

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