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Environmental Assessment of the Implementation of Base Realignment and Closure at Newport Chemical Depot, Indiana

Prepared for:

Newport Chemical Depot, Indiana

Prepared by:

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT

May 2010

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ENVIRONMENTAL ASSESSMENT ORGANIZATION

This environmental assessment (EA) considers the proposed implementation of the Base Closure and Realignment Commission (BRAC Commission) recommendations at Newport Chemical Depot, Indiana. The EA identifies, evaluates, and documents the environmental and socioeconomic effects of property disposal and future uses of Newport Chemical Depot. A No Action Alternative is also evaluated. Implementation of the proposed action is not expected to result in significant environmental impacts. The EA has been developed in accordance with the National Environmental Policy Act and implementing regulations issued by the Council on Environmental Quality (Title 40 of the *Code of Federal Regulations* [CFR] 1500–1508) and the Army (32 CFR Part 651). Its purpose is to inform decision makers and the public of the likely environmental and socioeconomic consequences of the proposed action and alternatives.

An ***EXECUTIVE SUMMARY*** briefly describes the proposed action, environmental and socioeconomic consequences, and mitigation measures.

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SECTION 1.0: ***PURPOSE, NEED, AND SCOPE*** summarizes the purpose of and need for the proposed action and describes the scope of the environmental impact analysis process.

SECTION 2.0: ***PROPOSED ACTION*** describes the proposed action to dispose of the surplus property generated by the BRAC Commission-mandated closure of Newport Chemical Depot.

SECTION 3.0: ***ALTERNATIVES*** examines alternatives to implementing the proposed action.

SECTION 4.0: ***AFFECTED ENVIRONMENT AND CONSEQUENCES*** describes the baseline (November 2005) environmental and socioeconomic setting at Newport Chemical Depot and identifies potential effects of implementing the proposed action.

SECTION 5.0: ***FINDINGS AND CONCLUSIONS*** summarizes the environmental and socioeconomic effects of implementing the proposed action.

SECTION 6.0: ***REFERENCES*** provides bibliographical information for cited sources.

SECTION 7.0: ***PERSONS CONSULTED*** provides a listing of persons and agencies consulted during preparation of this EA.

SECTION 8.0: ***LIST OF PREPARERS*** identifies the persons who prepared the document.

SECTION 9.0: ***DISTRIBUTION LIST*** indicates recipients of this EA.

APPENDICES

- ***A*** BRAC Commission Recommendations
- ***B*** Final Reuse Plan – Executive Summary
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An ***ACRONYMS AND ABBREVIATIONS*** list is provided at the end of the document.

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ENVIRONMENTAL ASSESSMENT OF THE IMPLEMENTATION OF BASE REALIGNMENT AND CLOSURE 2005 CLOSURE ACTIONS AT NEWPORT CHEMICAL DEPOT, INDIANA

Prepared by:

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NEWPORT CHEMICAL DEPOT, INDIANA

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Commanding

Date:

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ENVIRONMENTAL ASSESSMENT

LEAD AGENCY: Newport Chemical Depot, Indiana

TITLE OF PROPOSED ACTION: Environmental Assessment of the Implementation of Base Realignment and Closure at Newport Chemical Depot, Indiana

AFFECTED JURISDICTION: Vermillion County

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

APPROVED BY: William Hibner Lt. Colonel, U.S. Army, Commanding, Newport Chemical Depot

ABSTRACT: This environmental assessment (EA) considers the proposed implementation of the Base Realignment and Closure (BRAC) 2005 Commission recommendations at Newport Chemical Depot, Indiana. The EA identifies, evaluates, and documents the environmental and socioeconomic effects of property disposal and future uses of Newport Chemical Depot. A No Action Alternative is also evaluated. Implementing the proposed action is not expected to result in significant environmental effects. Therefore, preparation of an environmental impact statement is not required, and a finding of no significant impact (FNSI) will be published in accordance with the National Environmental Policy Act.

REVIEW COMMENT DEADLINE: The EA and draft FNSI are available for review and comment for 30 days from publication of a Notice of Availability in *The Daily Clintonian* and *The Tribune Star* newspapers. Copies of the EA and draft FNSI can be obtained by contacting Ms. Cathy Collins, Engineer, Newport Chemical Depot at 765-245-4391, or from the BRAC Division Web site at http://www.hqda.army.mil/acsim/brac/env_ea_review.htm . A copy of the EA and draft FNSI is available for review at the Clinton Public Library, 313 South 4th Street, Clinton, IN 47842. Comments on the EA and draft FNSI should be submitted to Ms. Collins no later than the end of the public comment period.

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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

On September 8, 2005, the Defense Base Closure and Realignment Commission (BRAC Commission) recommended numerous realignment and closure actions for domestic military installations. On November 9, 2005, the recommendations became law, and they must be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510, as amended).

In its report to the president, the BRAC Commission recommended closure of Newport Chemical Depot (NECD). Pursuant to that recommendation, all Army missions at the depot must cease. Following closure, the property will be excess to Army needs. Accordingly, the Army proposes to dispose of its real property interests. The purpose of the proposed action is to carry out the BRAC Commission's recommendations. The proposed action supports the Army's need to comply with the Base Closure Act and to transfer the excess property to new owners. This environmental assessment (EA) identifies, documents, and evaluates the potential environmental effects of property disposal and future use of NECD.

ES.2 PROPOSED ACTION AND ALTERNATIVES

The proposed action is to dispose of approximately 7,136 acres of land at NECD. The Army has identified two disposal alternatives (accelerated and traditional), a caretaker status alternative, and the No Action Alternative. Two reuse scenarios, based on medium-low-intensity and low-intensity uses, encompass the community's reuse plan and are evaluated as secondary actions. The Army's preference is the accelerated disposal alternative. The Army expresses no preference with respect to reuse scenarios because decisions implementing reuse will be made by other entities.

Inclusion of the No Action Alternative is prescribed by Council on Environmental Quality regulations and serves as the benchmark against which federal actions can be evaluated. No Action assumes that the Army would continue operations similar to those occurring before the BRAC Commission's recommendation for closure. That alternative cannot be implemented because the BRAC closure recommendations have the force of law. Nevertheless, the No Action Alternative is fully evaluated in this EA to establish a reasonable basis for comparison among the other alternatives.

ES.3 ENVIRONMENTAL CONSEQUENCES

Implementing the proposed action would be expected to result in a mixture of short- and long-term minor adverse effects and short- and long-term minor beneficial effects on the subject environmental resources and conditions. The proposed action would, in addition, not be expected to have an effect on many resources. The EA does not identify the need for any mitigation measures.

For each resource area, the predicted effects from the disposal alternatives, the reuse scenarios, and the No Action Alternative are summarized in Table ES-1.

ES.4 CONCLUSIONS

On the basis of the analyses performed in this EA, implementing the proposed action would have no significant adverse direct, indirect, or cumulative effects on the quality of the natural or human environment. Preparation of an environmental impact statement is not required. Issuance of a finding of no significant impact would be appropriate.

Table ES-1.
Summary of potential environmental and socioeconomic consequences

	Environmental and socioeconomic effects of alternatives					
	Alternatives				Reuse scenarios	
	Accelerated Disposal	**Traditional Disposal**	**Caretaker Status**	**No Action**	**Medium-Low-Intensity**	**Low-Intensity**
Land Use	Long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	Long-term minor adverse	No effect	Long-term minor beneficial	Long-term minor beneficial
Aesthetics/ Visual Environment	Short-term minor adverse	Short-term minor adverse	Long-term minor adverse	No effect	Long-term minor beneficial	Long-term minor beneficial
Air Quality	Short-term minor beneficial	Short-term minor beneficial	Short and Long-term minor beneficial	No effect	Long-term minor adverse	Long-term minor beneficial
Noise Environment	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse and long-term minor beneficial	No effect	Long-term minor beneficial	Long-term minor beneficial
Geology and Soils						
Geology	No effect	No effect	No effect	No effect	No effect	No effect
Soils	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	No effect	Short-term minor adverse	Short-term minor adverse
Topography	No effect	No effect	No effect	No effect	No effect	No effect
Prime farmland	No effect	No effect	No effect	No effect	No effect	No effect
Water Resources						
Surface waters	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	No effect	Short-term minor adverse	Short-term minor adverse and long-term minor beneficial
Groundwater	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	No effect	Short-term minor adverse	Short-term minor adverse and long-term minor beneficial
Floodplains	No effect	No effect	No effect	No effect	No effect	No effect
Biological Resources						
Vegetation	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse and long-term minor beneficial	No effect	Long-term minor adverse	Long-term minor adverse
Wildlife	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse and long-term minor beneficial	No effect	Long-term minor adverse	Long-term minor adverse
Protected species	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse and long-term minor beneficial	No effect	Long-term minor adverse	Long-term minor adverse
Wetlands	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse and long-term minor beneficial	No effect	Long-term minor adverse	Long-term minor adverse

Table ES-1.
Summary of potential environmental and socioeconomic consequences *(continued)*

	Environmental and socioeconomic effects of alternatives					
	Alternatives				Reuse scenarios	
	Accelerated Disposal	**Traditional Disposal**	**Caretaker Status**	**No Action**	**Medium-Low-Intensity**	**Low-Intensity**
Cultural Resources	No effect or long-term minor adverse	No effect or long-term minor adverse	No effect or long-term minor adverse	No effect	No effect or long-term minor adverse	No effect or long-term minor adverse
Socioeconomics						
Economic environment	Short-term minor adverse	Short- and long-term minor adverse	Long-term minor adverse	No effect	Short and Long-term minor beneficial	Short-term minor adverse
Sociological environment	Short-term minor adverse	Short- and long-term minor adverse	Long-term minor adverse	No effect	Short and long-term minor beneficial	Short-term minor adverse
Environmental justice	No effect	No effect	No effect	No effect	No effect	No effect
Protection of children	No effect	No effect	Long-term minor adverse	No effect	No effect	No effect
Transportation	Short-term minor beneficial	Short-term minor beneficial	Short and long-term minor beneficial	No effect	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial
Utilities	Short-term minor beneficial and long-term minor adverse	Short-term minor beneficial and long-term minor adverse	Long-term minor adverse and beneficial	No effect	Long-term minor adverse and beneficial	Long-term minor adverse and beneficial
Hazardous and Toxic Substances	Short-term minor beneficial	Short-term minor beneficial	Short-term minor beneficial	No effect	Long-term minor adverse	Long-term minor adverse

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APPENDICES

ACRONYMS AND ABBREVIATIONS

FIGURES

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SECTION 1.0
PURPOSE, NEED, AND SCOPE

1.1 PURPOSE AND NEED

The Department of the Army is realigning and closing installations to produce a more efficient and cost-effective base structure for achieving national military objectives. Recommendations of the Defense Base Closure and Realignment Commission (BRAC Commission) made in conformance with the provisions of the Defense Base Closure and Realignment Act of 1990 (Base Closure Act), Public Law 101-510, as amended, require the closure of Newport Chemical Depot (NECD), Indiana (Appendix A). The installation is excess to Army needs and will be disposed of according to applicable laws, regulations, and national policy. Pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations, the Army has prepared this environmental assessment (EA) to evaluate the environmental and socioeconomic impacts of disposing of the property and reasonable, foreseeable reuse alternatives.

In accordance with the Base Closure and Realignment Act amendments contained in Title XXX of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), the Secretary of Defense submitted a consolidated Department of Defense (DoD) list of recommended actions to an independent commission appointed by the President and confirmed by the Senate. The 2005 BRAC Commission evaluated the recommendations and on September 8, 2005, sent its findings to the President, who forwarded the recommendations to Congress on September 15, 2005. The Base Closure Act provides that, unless disapproved by Congress within a specified period, the recommendations are to be implemented. In the absence of congressional disapproval, the BRAC Commission's recommendations became binding on November 9, 2005. Action with respect to NECD is being implemented as required by the Base Closure Act.

The BRAC Commission, in its report to the President, recommended closure of NECD. Pursuant to that recommendation, all Army missions at NECD must cease or be relocated. Following closure, the property will be excess to Army needs. Accordingly, the Army proposes to dispose of its real property interests at NECD. The proposed action of disposal is more fully described in Section 2.0. The purpose of the proposed action is to carry out the BRAC Commission's recommendations. The proposed action supports the Army's need to comply with the Base Closure Act and to transfer the excess property to new owners.

1.2 SCOPE

This EA has been developed in accordance with NEPA and implementing regulations issued by the Council on Environmental Quality (Title 40 of the *Code of Federal Regulations* (CFR) Parts 1500–1508) and the Army (32 CFR Part 651). Its purpose is to inform decision makers and the public of the likely environmental consequences of the proposed action and alternatives. The EA identifies, documents, and evaluates the potential environmental effects of property disposal and future uses of NECD. The Base Closure Act specifies that NEPA does not apply to actions of the President, the BRAC Commission, or DoD except, "(i) during the process of property disposal, and (ii) during the process of relocating functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated" (Public Law 101-510, Sec. 2905(c)(2)(A)).

The Base Closure Act further specifies in section 2905(c)(2)(B) that in applying the provisions of NEPA to the process, the Secretary of Defense and the secretaries of the military departments concerned do not have to consider (i) the need for closing or realigning the military installation that has been recommended for closure or realignment by the BRAC Commission, (ii) the need for transferring functions to any military installation, or (iii) military installation alternatives to those recommended or selected.

The BRAC Commission's deliberations and decision and the need for closing or realigning a military installation are also exempt from NEPA (Public Law 101-510, section 2905(c)(2)). Accordingly, this EA does not address the need for closure or realignment. NEPA does, however, apply to disposal of excess property as a direct Army action and the reuse of such property as an indirect effect of disposal; therefore, those actions are addressed in this document.

Two disposal alternatives (accelerated and traditional) are identified in the EA, as well as a caretaker status alternative (which might arise before disposal) and the No Action Alternative. Two reuse scenarios, based on low- and medium-low intensity uses, encompass the community's reuse plan and are evaluated as secondary actions. The alternatives and scenarios, and the rationale for their selection, are further described in Section 3.0.

An interdisciplinary team of environmental scientists, biologists, planners, economists, engineers, archaeologists, historians, and military technicians performed the impact analysis. The team identified the affected resources and topical areas, analyzed the proposed action against the existing conditions, and determined the relevant beneficial and adverse effects associated with the action. Section 4.0, Environmental Conditions and Consequences, describes the baseline conditions of the affected resources and other areas of special interest at NECD as of November 2005. The environmental consequences of disposal and reuse are also described in Section 4.0. Conclusions regarding potential environmental and socioeconomic effects of the proposed action are presented in Section 5.0.

1.3 PUBLIC INVOLVEMENT

The Army invites full public participation in the NEPA process to promote open communication and better decision making. All persons and organizations that have a potential interest in the proposed action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the NEPA environmental analysis process.

Public participation opportunities with respect to the proposed action and this EA are guided by the provisions at 32 CFR Part 651, Environmental Analysis of Army Actions. The final EA and a draft Finding of No Significant Impact (FNSI), if appropriate, will be made available for a 30-day review period. During that time, the Army will consider any comments submitted by agencies, organizations, or members of the public on the proposed action, the EA, or the draft FNSI. At the conclusion of the comment period, the Army may, if appropriate, execute the FNSI and proceed with the proposed action. If it is determined that implementing the proposed action would result in significant impacts, the Army will publish in the *Federal Register* a notice of intent to prepare an environmental impact statement.

1.4 FRAMEWORK FOR DISPOSAL

Numerous factors contribute to Army decisions relating to disposal of installation property. The Base Closure Act triggers action under several other federal statutes and regulations. In addition, the Army must adhere to specific rules and procedures pertaining to transfer of federal property as well as executive branch policies. There are also practical concerns such as identifying base assets to allow for disposal in a manner most consistent with statutory and regulatory guidance. Those matters are further discussed below.

1.4.1 BRAC Procedural Requirements

Statutory Provisions. The two laws that govern real property disposal in BRAC are the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510, as amended) and the Federal Property and Administrative Services Act of 1949 (Title 40 of the *United States Code* [U.S.C.], sections 471 and following, as amended). The latter is implemented by the Federal Property Management Regulations at 41 CFR 101-47. The disposal process is also governed by 32 CFR Part 174 (Revitalizing Base Closure Communities and Addressing Impacts of Realignment) a regulation issued by DoD to implement BRAC law and matters known as the Pryor Amendment (see below) and the President's Program to Revitalize Base Closure Communities (see below).

Screening Process. Having been recommended for closure, the NECD property has been determined to be excess to Army needs and, therefore, subject to specific procedures to identify potential subsequent public sector users. That is, the property has been offered to a hierarchy of potential users through procedures called the screening process. That process and its results to date are discussed in Section 2.3.4.

The President's Program to Revitalize Base Closure Communities. On July 2, 1993, the President announced a major new program to speed the economic recovery of communities near closing military installations. The President pledged to give top priority to early use of each closing installation's most valuable assets. A principal goal of the initiative is to provide for rapid redevelopment and creation of new jobs. In announcing the program, the President outlined the five parts of his community revitalization plan:

- Job-centered property disposal that puts local economic redevelopment first
- Fast-track environmental cleanup that removes delays while protecting human health and the environment
- Appointment of transition coordinators at installations slated for closure
- Easy access to transition and redevelopment help for workers and communities
- Larger economic development planning grants to base closure communities

The Army is fully committed to the President's Program to Revitalize Base Closure Communities. A Base Transition Coordinator has been appointed for the NECD property, and the Army has taken an active role in providing assistance to local officials in the community.

The Pryor Amendment. Congress endorsed the President's plan by enacting the Base Closure Communities Assistance Act (in Title XXVIII, Public Law 103-160), known as the Pryor Amendment. That act, as amended, provides legal authority to carry out the President's plan by granting conveyances of real and personal property at or below fair market value to local redevelopment authorities (LRAs). Specifically, the act created a new federal property conveyance mechanism, the economic development conveyance (EDC). An EDC can help induce a market for the property and thereby enhance economic recovery and generate jobs. Flexibility is given to the military departments and the communities to negotiate the terms and conditions of the EDC. A detailed application, including the approved community redevelopment plan, serves as the basis for determining an LRA's eligibility for an EDC. DoD's regulations implementing the Pryor Amendment are at 32 CFR Part 174. The EDC is further described in Section 2.3.4.

1.4.2 Relevant Statutes and Executive Orders

The Army must decide whether to proceed with the proposed action, using numerous factors such as mission requirements, schedule, availability of funding, and environmental considerations. In addressing environmental considerations, the Army is guided by several relevant statutes (and their implementing regulations) and Executive Orders that establish standards and provide guidance on environmental and natural resources management and planning. These include, but are not limited to, the Clean Air Act, Clean Water Act, Noise Control Act, Endangered Species Act, National Historic Preservation Act, Archaeological Resources Protection Act, Native American Graves Protection and Repatriation Act, American Indian Religious Freedom Act, Resource Conservation and Recovery Act, Toxic Substances Control Act, Executive Order 11988 (*Floodplain Management*), Executive Order 11990 (*Protection of Wetlands*), Executive Order 12088 (*Federal Compliance with Pollution Control Standards*), Executive Order 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*), and Executive Order 13045 (*Protection of Children from Environmental Health Risks and Safety Risks*). Where useful to better understanding, key provisions of these statutes and Executive Orders are described in more detail in the text of the EA.

1.4.3 Other Reuse Regulations and Guidance

DoD's Office of Economic Adjustment published its *Base Redevelopment Planning for BRAC Sites* in May 2006. The guide describes the base closure and reuse processes that have been designed to help with local economic recovery and summarizes the many assistance programs administered by DoD and other agencies. DoD published its *Base Redevelopment and Realignment Manual* (March 2006) to serve as a handbook for the successful execution of reuse plans.

SECTION 2.0
DESCRIPTION OF THE PROPOSED ACTION

2.1 INTRODUCTION

The proposed action (Army primary action) is to dispose of the excess property generated by the BRAC-mandated closure of NECD,[1] including interim leases and cleanup of contaminated sites. Redevelopment of NECD by others is a secondary action resulting from disposal.

NECD is in Vermillion County, along Indiana State Road 63, 2 miles south of Newport, Indiana (Figures 2-1 and 2-2). The nearest major municipalities are Terre Haute, Indiana, 32 miles to the south and Danville, Illinois, 32 miles to the northwest. NECD is in a rural area of Vermillion County, where surrounding land use is almost exclusively cropland and forests. The population within a 4-mile radius of the installation is approximately 2,400 people. NECD is a Government Owned–Contractor Operated (GOCO) installation; the current operating contractor is Mason & Hanger Corporation. NECD was established on approximately 22,000 acres as the Wabash River Ordnance Works in 1941. Approximately 101 acres has been transferred to the U.S. Coast Guard LORAN-C station, and the facility now occupies an area of approximately 7,136 acres (including the Ranney® well and eastern railroad spur parcels) with easement rights in effect for an additional 1,400 acres. NECD leases about 2,900 acres of agricultural land for crop production and for grazing. Forest land, wildlife areas, prairie restoration, and wetlands constitute about 3,500 acres.

2.2 PROPOSAL IMPLEMENTATION

Army disposal action. The Army proposes to dispose of the approximately 7,136 acres and 1,400-acre easement held by NECD. Identification of recipients of the property being disposed of at NECD is governed by expressions of interest submitted by potential recipients in response to the Army's Declaration of Excess Property and Determination of Surplus Property. As a result of the screening process (see Section 2.3.4), the installation would be available for transfer or conveyance to and subsequent reuse by the Newport Chemical Depot Reuse Authority (NeCDRA), which is serving as the LRA, or to other entities.

Community reuse. On July 1, 2008, NeCDRA was established pursuant to the authority of Indiana Code 36-7-30-1, *et seq*. NeCDRA seeks the planning, rehabilitation, development, redevelopment, and other preparation for reuse of a military base and military base property. Pursuant to IC 36-7-30-2, the goals of NeCDRA are to benefit the public health, safety, morals, and welfare; increase the economic well-being of the unit and the state; and serve to protect and increase property values in the unit and the state. NeCDRA will, to the extent feasible under state law and consistent with the needs of the unit as a whole, provide a maximum opportunity for reuse by private enterprise or state and local government.

[1] The BRAC Commission recommended,"On completion of the chemical demilitarization mission in accordance with Treaty obligations [imposed by the International Chemical Weapons Convention Treaty], close Newport Chemical Depot, Indiana."

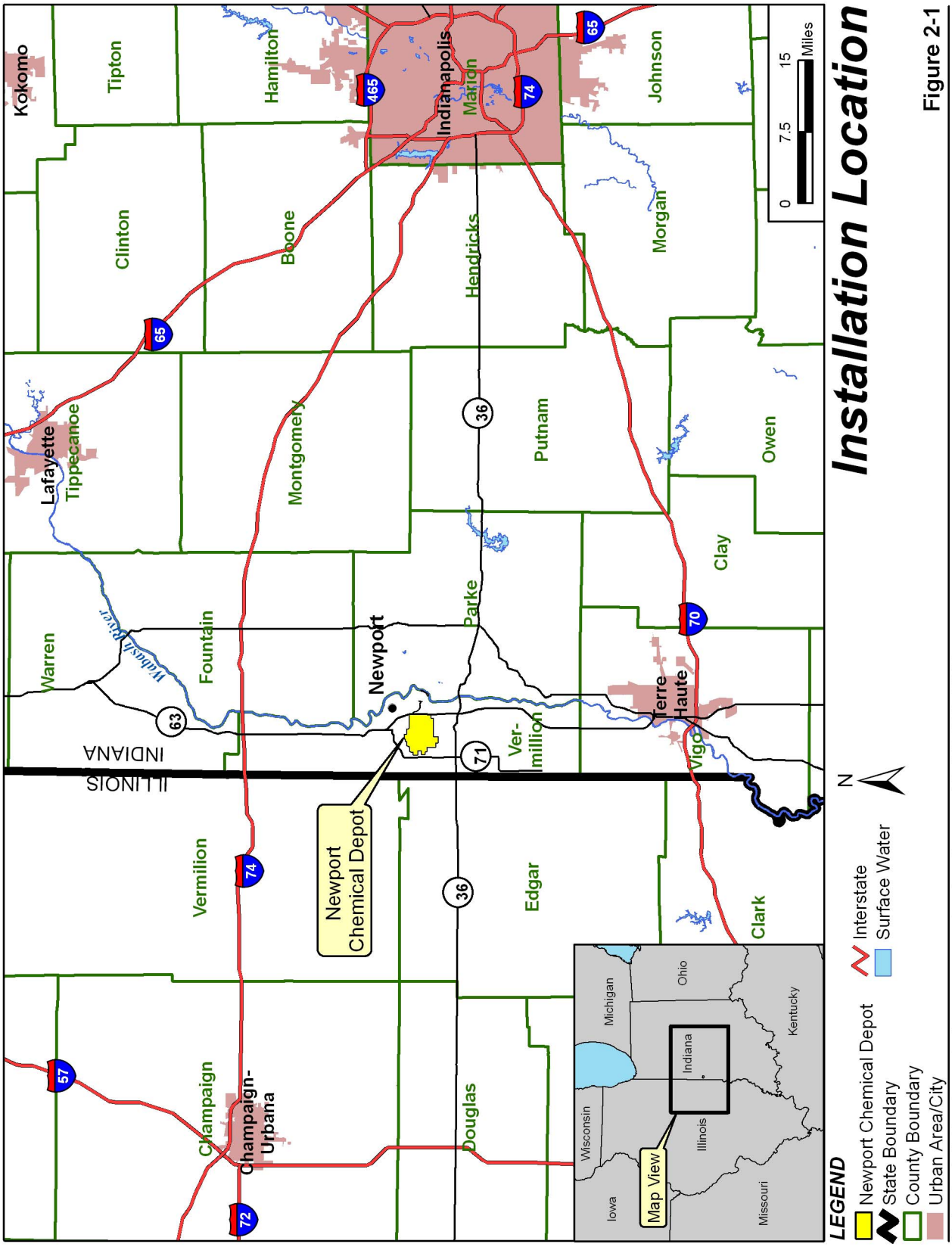
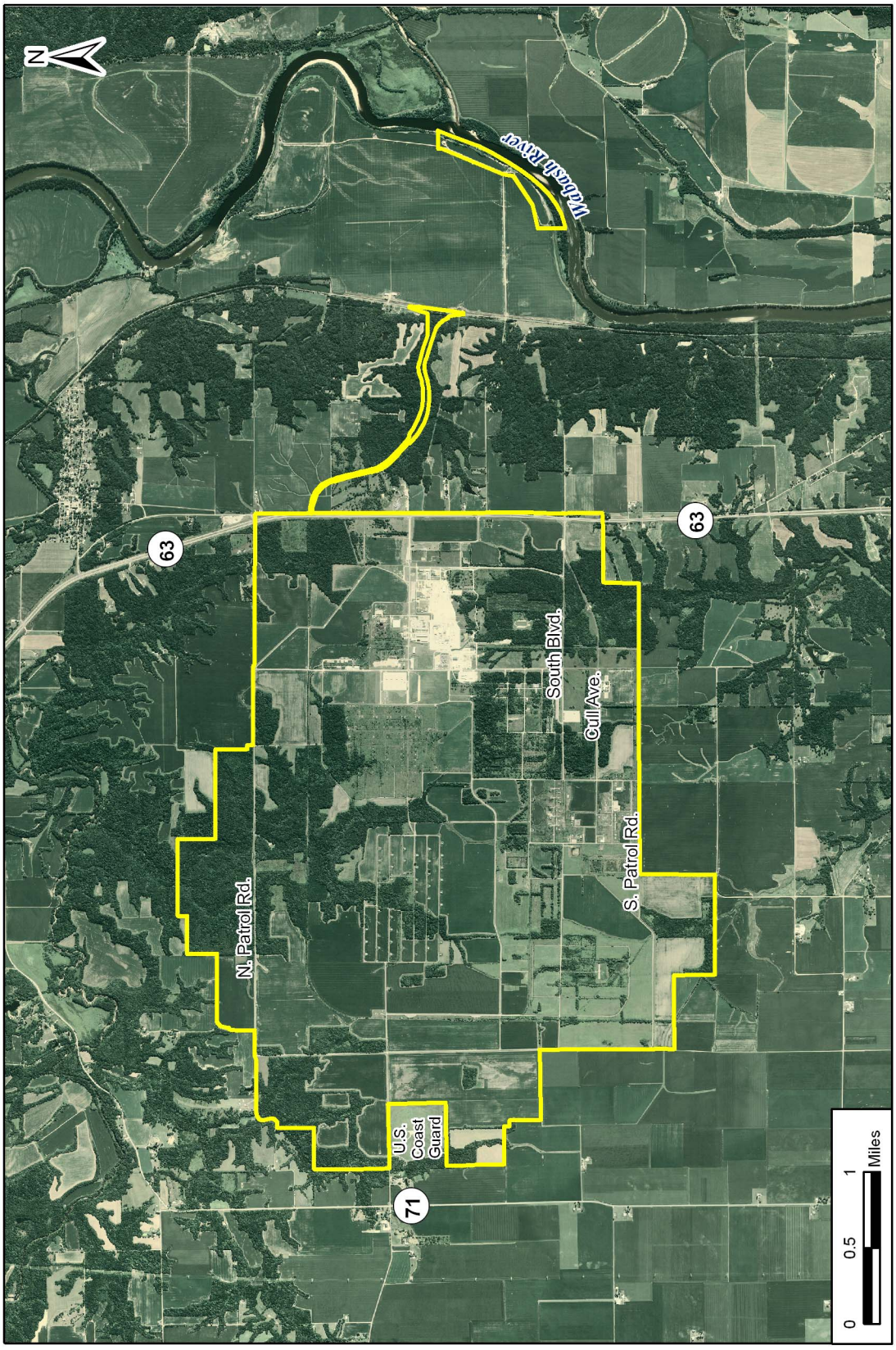

Installation Location
Kokomo
Tipton
Hamilton
Indianapolis
Marion
Johnson
Clinton
Boone
Hendricks
Morgan
Lafayette
Tippecanoe
Montgomery
Putnam
Owen
Warren
Fountain
Parke
Clay
Newport
Terre Haute
Vermillion
Ver-million
Vigo
Champaign
Champaign-Urbana
Douglas
Edgar
Clark
Newport Chemical Depot
INDIANA
ILLINOIS
Wabash River
Map View
Michigan
Ohio
Indiana
Kentucky
Wisconsin
Illinois
Iowa
Missouri
0 7.5 15 Miles
N
LEGEND
Newport Chemical Depot
State Boundary
County Boundary
Urban Area/City
Interstate
Surface Water
Note: Installation boundaries are approximate. Source: NECD GIS, 2009.

Figure 2-1



Site Map

Figure 2-2

Note: Installation boundaries are approximate. Source: NECD GIS, 2009.

NeCDRA is charged with the responsibility of preparing a reuse master plan for NECD. Accordingly, NeCDRA established the following guiding principles to provide a basic framework for evaluating proposed new uses of NECD:

- Acquire the property at no cost to NeCDRA or the community
- Develop a reuse plan for primarily industrial and agricultural uses
- Ensure the preservation of natural resources
- Maximize local jobs and investment for Vermillion County and the region

NeCDRA's plans for NECD envision industrial park development, potential reinstallation of railroad spur infrastructure, and conservation of forested lands. Efforts would also be made, in collaboration with the towns of Dana, Hillsdale, and St. Bernice, to use the Ranney wells water resources to develop a regional water district.

Implementation. Under the Base Closure Act, closure is required no later than the end of the 6-year period beginning September 15, 2005, the date on which the President transmitted his report to Congress containing the recommendations of the BRAC Commission.

The BRAC process of property disposal includes predisposal activities and real estate disposal, which in turn allow for subsequent reuse development. Predisposal activities include contaminated site cleanup and might include interim uses and caretaking of vacated facilities until disposal. In transferring or conveying property at NECD, the Army would identify encumbrances consistent with requirements of law, agency negotiation, and protection of environmental values. Section 3.2.3 provides details on the encumbrances expected to exist at the time of transfer.

2.3 DISPOSAL PROCESS

2.3.1 Caretaking of Property until Disposal

Before disposal, the Army might find it necessary to place NECD in caretaker status for an indefinite period. During such time, the Army would employ two levels of maintenance.

- *Initial maintenance.* From the time of operational closure until conveyance of the property, the Army would provide for maintenance procedures to preserve and protect those facilities and items of equipment needed for reuse in an economical manner that facilitates redevelopment. In consultation with the LRA and consistent with available funding, the Army would determine required levels of maintenance of facilities and equipment for an initial period following operational closure. The levels of maintenance during this initial period would not exceed maintenance standards in effect before approval of the closure decision. Maintenance would not include any property improvements such as construction, alteration, or demolition. In an appropriate case, however, demolition could occur if required for health, safety, or environmental reasons or if it were economically justified in lieu of continued maintenance.

- *Long-term maintenance.* If property were not transferred within an agreed-to period of time and the LRA were not actively seeking reuse opportunities for available facilities,

the Army would reduce maintenance levels to the minimum level for surplus government property, as required at 41 CFR 101-47.402, 41 CFR 101-47-4913, and 32 CFR Part 174. Long-term maintenance would not be focused on keeping the facilities in a state of repair to permit rapid reuse. Rather, maintenance during this period would consist of minimal activities intended primarily to ensure security and to avoid deterioration. This reduced level of maintenance would continue indefinitely until disposal. Activities that would occur during this maintenance period are identified in Section 3.3.

2.3.2 Cleanup of Contaminated Sites

Past operations at NECD have resulted in the release of various types of contaminants. The primary contaminants of concern at NECD are explosives, chlorinated solvents, and heavy metals. The media of concern include groundwater, soils, and surface water. These are more specifically addressed in Section 4.0.

In preparing to dispose of NECD property, the Army will follow the provisions of Section 120(h)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which requires a covenant warranting that all remedial action necessary to protect human health and the environment with respect to any such substances remaining on the property has been taken before the date of transfer. All such remedial action is considered to have been taken if the construction and installation of an approved remedial design has been completed and the remedy has been demonstrated to the Administrator of EPA to be operating properly and successfully.[2] Alternatively, NECD may proceed with corrective action pursuant to the provisions of the Resource Conservation and Recovery Act (RCRA). This has been the course selected by NECD and the Indiana Department of Environmental Management. In this case, the effectiveness of remedies must be demonstrated to IDEM.

Under the Community Environmental Response Facilitation Act (CERFA), federal agencies are required to identify expeditiously real property that offers the greatest opportunity for immediate reuse and redevelopment. CERFA does not mandate that the Army transfer real property identified as available; rather, it is the first step in satisfying the objective of identifying real property where no CERCLA-regulated hazardous substances or petroleum products were disposed of or released. To these ends, the Army's final Environmental Condition of Property (ECP) report identifies areas at NECD where release or disposal of hazardous substances or petroleum products or their derivatives has occurred. The ECP report also identifies non-CERCLA-related environmental or safety issues (i.e., asbestos, lead-based paint [LBP], radon, polychlorinated biphenyls [PCBs], radionuclides, and unexploded ordnance [UXO]) that would potentially limit or preclude the transfer of property for unrestricted use; completed or ongoing removal or remedial actions taken at the installation; and possible sources of contamination on adjacent properties that could migrate to NECD real property. The ECP report further serves as a

[2] Section 334 of the National Defense Authorization Act for Fiscal Year 1997 enlarges authority for transfer of property before completion of all remedial action. To make such an earlier transfer, a federal agency must give public notice and provide the public the opportunity to submit written comments. Moreover, an agency must provide assurances that the deed or other agreement used to govern property transfer will provide that restrictions will be placed on use necessary to ensure required remedial investigations, actions, or oversight activities will not be disrupted; provide that all remedial action will be taken and will identify schedules for investigation and completion; and provide that the federal agency responsible for the property subject to transfer will submit a budget request to the Director of the Office of Management and Budget that adequately addresses schedules, subject to congressional authorizations and appropriations. The Governor of the State must approve the Covenant Deferral Request package, which includes the draft deed and FOSET.

database describing environmental conditions related to remediation issues and is a major source for information in developing a Finding of Suitability to Lease (FOSL) for interim leases and a Finding of Suitability for Transfer (FOST).

2.3.3 Interim Uses

Before disposal, the Army may execute interim leases to facilitate state and local economic adjustment efforts and to encourage economic redevelopment. Pending issuance of a FNSI regarding the NEPA analysis for disposal and reuse of NECD, the Army will not make commitments that would significantly affect the quality of the human environment or irreversibly alter the environment in a way that precludes any reasonable alternative for disposal of the property. Hence, leases in furtherance of conveyance before completion of the NEPA analysis of disposal and reuse and issuance of a FNSI will not be considered. The Army may, however, enter into an interim lease extending beyond the expected completion date of the NEPA analysis of disposal and reuse of the installation. In such a case, the Army will consult with NeCDRA before entering into the lease. Such interim leases allow limited use of the property and facilities such that no reasonable reuse options would be foreclosed before the publication of the conclusions of the basewide disposal NEPA analysis.

2.3.4 Real Estate Disposal Process

Disposal as a Package or in Parcels. Army policy provides that, upon completion of all required hazardous substance cleanup activities and cleanup that might be required for other environmental conditions such as asbestos, fuel, or other substances, property subject to disposal under BRAC should generally be disposed of as a single entity. Alternatively, the Army may dispose of NECD property in parcels. After identifying parcels upon completion of cleanup, disposal may occur to meet objectives related to reuse goals, tax revenue generation, and job creation.

Disposal Process. Methods available to the Army for property disposal include public benefit discount conveyance, EDC, negotiated sale, and competitive sale.

- *Public benefit discount conveyance.* State or local government entities may obtain property at less than fair market value when sponsored by a federal agency for uses that would benefit the public, such as education, parks and recreation, wildlife conservation, or public health.

- *Economic development conveyance.* An EDC is designed to promote economic development and job creation in the local community. An EDC is not intended to supplant other federal property disposal authorities and may not be used if the proposed reuse can be accomplished through another authority. To qualify for an EDC, the LRA must submit a request to the Department of the Army describing its proposed economic development and job creation program. In disposing of property through an EDC, the Army must seek to obtain fair market value.

- *Negotiated sale.* The Army would negotiate the sale of the property to state or local governmental entities, including tribal governments, or private parties at fair market value.

- *Competitive sale.* Sale to the public would occur through either an invitation for bids or an auction.

DoD and Federal Agency Screening. The Army began the screening process by offering its excess property to other DoD agencies and federal agencies for their potential use. The screening process resulted in a request by the U.S. Coast Guard for 101 acres for continued use as a LORAN-C station.

LRA Screening. Pursuant to the Base Closure Community Redevelopment and Homeless Assistance Act of 1994, property that is surplus to the federal government's needs is to be screened through an LRA's soliciting notices of interest from state and local governments, representatives of the homeless, and other interested parties. An LRA's outreach efforts to potential users or recipients of the property include working with the Department of Housing and Urban Development and other federal agencies that sponsor public benefit transfers under the Federal Property and Administrative Services Act. The LRA's reuse plan considers the notices of interest submitted to the LRA and reflects an overall reuse strategy for the installation.

Public Agency Screening. Consistent with the Federal Property and Administrative Services Act, screening notices have been sent to federal agencies that approve or sponsor public benefit conveyances and appropriate state and local agencies in the vicinity of the property. The Army initiated this screening after coordination with the LRA.

The Homeless Outreach process began on November 28, 2008, with a publication in the local newspaper and letters sent in the mail. The process ended on March 23, 2009, with the deadline for submitting a *notice of interest* (NOI). No notices were received from any providers of services for the homeless. The following NOIs were received regarding public benefit conveyances: Indiana Department of Natural Resources, Wabash River Heritage Corridor Commission, Sycamore Trails RC & D, and Vermillion County Parks and Recreation Board. These NOIs are considered during the process of developing the reuse plan.

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SECTION 3.0
ALTERNATIVES

3.1 INTRODUCTION

This section addresses alternatives to the Army's primary action of property disposal and to the secondary action of property reuse by other entities.

The Army has identified two disposal alternatives (accelerated and traditional), a caretaker status alternative, and the No Action Alternative. Two reuse scenarios, based on low, and medium-low intensity uses, encompass the community's reuse plan and are evaluated as secondary actions. Future reuse of surplus NECD property is analyzed in the context of land use intensity categories, as described in Section 3.5.2. The land use intensity-based scenarios are used to inform Army decisionmakers and the public of environmental impacts expected to occur given the reasonable range of reuses that future property owners might implement. NeCDRA's reuse plan is the primary factor in development of the proposed action, reuse alternatives, and effects analysis in the Army's NEPA process for the disposal action. Consideration of the reuse plan as part of the proposed federal action aids both the community and the Army in achieving informed decision making and consensus on redevelopment at NECD.

The Army's preference is the accelerated disposal alternative. The Army expresses no preference with respect to reuse scenarios because other entities will make decisions implementing reuse.

3.2 DISPOSAL ALTERNATIVES

Pursuant to the Base Closure Act and the 2005 BRAC Commission's recommendation pertaining to NECD, continuation of operations at NECD is not feasible. There is no alternative to closure without further legislative action. As discussed in Section 2.0, the Army is acting to implement BRAC 2005 by disposing of surplus property. Interim actions include cleaning up hazardous substance contamination; caring for vacated facilities; and, as circumstances arise, making interim leasing arrangements. Disposal alternatives available for analysis in this EA are accelerated disposal and traditional disposal. This subsection describes these alternatives.

3.2.1 Accelerated Disposal Alternative

Under this alternative, the Army would take advantage of various property transfer and disposal methods that allow the reuse of the property to occur before environmental remedial action has been taken. One of these methods would be to lease the property to a non-Army entity. For this, a FOSL would be prepared (see Section 2.3.2). Another method would be to transfer the property to another federal agency and arrange for it to be responsible for all environmental response. Another possibility would be to defer the requirement to complete environmental cleanup and allow an early transfer of the property. Such deferral would require the concurrence of environmental authorities and the governor of Indiana. The property must be suitable for the new owner's intended use, and that use must be consistent with protection of human health and the environment. Another method would be to transfer the property to a new owner who agrees to perform all environmental remediation, waste management, and environmental compliance activities that are required for the property under federal and state requirements.

3.2.2 Traditional Disposal Alternative

Under the BRAC law, the Army is required to close all military installations recommended for closure by the BRAC Commission. The Army is also given broad authority to transfer the property to other government agencies or to dispose of it to nongovernment organizations. Under this alternative, the Army would transfer or dispose of property once environmental remediation and other environmental clearance is complete for individual parcels of the installation. The Army is required under CERCLA to speedily identify uncontaminated property. Uncontaminated property is defined as property on which no hazardous substances and no petroleum products or their derivatives were known to have been released or disposed of. Such property would be available for transfer or disposal fairly quickly. For property on which hazardous substances were stored for one year or more or are known to have been released or disposed of, other provisions apply. The Army must be able to certify that all required environmental action necessary to protect human health or the environment has been taken before the transfer or disposal. Transfer of property is allowed if a long-term environmental remedy is shown to be operating properly and successfully. Some environmental remedial actions may take a long time to be selected, approved, and implemented. Because of that, there may be a prolonged period under this alternative during which parcels are not available for transfer or disposal.

3.2.3 Encumbrances Applicable to Either Disposal Alternative

The Army's methodology to ensure environmentally sustainable redevelopment of BRAC disposal property identifies natural and man-made resources that must be used wisely or protected after ownership transfers out of federal control. The Army develops this information from the environmental baseline information early in the NEPA process and provides it to the LRA with the recommendation that the reuse plan consider protecting these resources. This methodology describes these valuable resources plus any other conditions that might influence reuse. Using this methodology, the LRA develops a reuse plan that satisfies community redevelopment goals and objectives while achieving a high environmental standard.

Consistent with this methodology and as part of the disposal process, the Army might find it necessary to impose legal constraints, as part of disposal, to protect environmental values, to meet requirements of federal law, to carry out agreements reached in negotiations with regulatory agencies, or to address specific Army needs. Typical encumbrances that the Army might place on disposal include the protection and preservation of threatened and endangered species, jurisdictional wetlands, critical habitat, historic properties and sites, archaeological sites, legacy resources, access to remediation sites, and retention of easements and utility/infrastructure rights-of-way. Conditions of special hazardous materials, such as asbestos-containing material (ACM), LBP, radon, PCBs, and radiological material, require specific handling. Such conditions may result in encumbrances, but usually can be handled without limiting redevelopment. Other types of conditions that might be identified to the LRA as potentially limiting use—but are not identified as legal encumbrances—include such matters as excessive slope areas, poor construction soil conditions, a high water table, overflow easements, and heavy rock outcrops. Either of the preceding disposal alternatives would be accompanied by identification of encumbrances.

Types of Encumbrances. Five major categories of encumbrances can be identified:

- *Easements and rights-of-way*. Real estate may be burdened with utility system, other infrastructure-related, roadway, or access easements and rights-of-way.

- *Use restrictions.* Activities on property may be limited by existing conditions or in recognition of adjacent land uses. For example, use of a former landfill site would preclude ground disturbance of a clay cap but could otherwise permit passive uses such as recreation. The presence of UXO would preclude many uses of a parcel because of the potential safety hazards. In other instances, restrictive covenants could impose or maintain buffer zones between incompatible uses. Use restrictions may also require that transferees of property take certain actions (e.g., remediate asbestos-containing materials or LBP before using buildings for residential purposes) or refrain from certain actions (e.g., prohibit use of on-site groundwater pending completion of cleanup activities).

- *Habitat and wetlands protection.* The presence of federally listed threatened or endangered species of wildlife, plants, or wetlands may constrain unlimited use of property.

- *Historic building or archaeological site protection.* Negotiated terms of transfer or conveyance may result in requirements for new owners to maintain the status quo of historic buildings or archaeological sites or may impose a requirement for consultation with the State Historic Preservation Office (SHPO) before any actions affecting such resources.

- *Water rights.* Protective covenants may be required to protect existing well fields or aquifers.

The Army's identification and imposition of encumbrances takes into consideration opportunities for the protection and preservation of environmental values, as well as the requirements of federal law and specific Army requirements. Consistent with the stewardship principles by which it operates its installations, the Army has a vital interest in perpetuating important resource protections, which in some cases the Army is able to do by using encumbrances. Identification of encumbrances reflects the Army's objective of returning property to public and private sector use as soon as possible in a manner that will result in continued stewardship of environmental resources, protection of public health and safety, and promotion of Army and reuse interests.

Encumbrances Identified at NECD. The following specific encumbrances would be expected to apply at the time of transfer or conveyance of the NECD property:

Asbestos-containing material. Surveys at NECD have revealed the use of ACM in facilities. Before transfer or conveyance, the Army would remove or encapsulate all friable asbestos posing a risk to human health. Transfer or conveyance documents would notify new owners or lessees of the property that they would be responsible for any future remediation of asbestos found to be necessary.

Easements and rights-of-way. Existing easements and rights-of-way benefiting or burdening NECD property would continue after transfer or conveyance. Easements on NECD property are held by the Board of Commissioners, Vermillion County (right-of-way for underground water pipeline) and Vermillion County (right-of-way for road); Panhandle Eastern Pipe Line Company (right-of-way for gas transmission line); Indiana Department of Transportation (right-of-way for roadway); Indiana Gas Company (right-of-way for gas pipeline); Indiana Department of Homeland Security (license for microwave communication tower, pending); and U.S. Coast Guard (right-of-way for road).

Groundwater use prohibition. Groundwater contamination has been found below several parcels of NECD main post. Transfer or conveyance of the NECD property would include a prohibition on use of the main post's groundwater in impacted areas. This encumbrance on the property would extend until such time as appropriate regulatory agencies certified the completion of remedial action pertaining to the groundwater. No groundwater use restrictions apply to the Ranney well parcel east of the main post.

Historic resources. Twenty-one archaeological surveys have been conducted on the depot and 391 archaeological sites have been recorded. No archaeological resources have been nominated to the National Register of Historic Places (NRHP). Inventory and evaluation of archaeological sites under Sections 106 and 110 of the National Historic Preservation Act (NHPA) are ongoing. All structures at NECD have been evaluated under the NHPA. NECD currently has no buildings or structures eligible or potentially eligible for inclusion in the NRHP.

Land use restrictions. As noted at Section 2.3.2, the Army's environmental restoration efforts for NECD will attempt to facilitate the land use and redevelopment needs stated by the community's reuse plan. The Army may restrict certain types of future land use (e.g., residential use), impose institutional controls, or take other actions affecting land use to protect human health and the environment. Such restrictions would be included in conveyance documents as restrictions on future land use. In October 2005, NECD published a Land Use Control Implementation Plan identifying several types of land use restrictions that will continue after transfer or conveyance of the property.

Lead-based paint. Paints used at NECD between 1941 and 1970 contained lead. LBP is assumed to be present in buildings constructed before 1978. Consistent with the Residential Lead-Based Paint Hazard Reduction Act of 1992 (Public Law 102-550), the Army would provide notice in transfer and conveyance documents that buildings containing LBP would be restricted from residential use unless the recipient of the property abated any LBP hazards.

Remedial activities. Operations at NECD over several decades have resulted in localized hazardous waste contamination. As indicated in Section 4, several sites at NECD may be subject to some level of continuing cleanup activity. In conjunction with remedial activities that might be required during an interim lease or upon conveyance, the Army would retain a right to conduct investigations and surveys; to have government personnel and contractors conduct field activities; and to construct, operate, maintain, or undertake any other response or remedial action as required.

Wetlands. NECD contains about 295 acres of wetland habitat. A 1999 survey of NECD identified approximately 12.5 acres of jurisdictional wetlands or other waters of the United States. Eight distinct sections of wetlands or wetland complexes were delineated during the survey. Both the east and west branches of Little Vermillion Creek were identified as waters of the United States that provide important buffers for water quality and valuable riparian habitat. Areas classified as wetlands are regulated under the Clean Water Act and Indiana law. To assist future transferees in understanding their obligations under Section 404 of the Clean Water Act with respect to activities that might affect wetlands, the Army would notify prospective transferees of their requirement to adhere to Section 404 permitting requirements for activities in or related to wetlands. Section 4 of Executive Order 11990 authorizes the Army to impose other appropriate restrictions on the uses of property to protect wetland areas.

3.3 CARETAKER STATUS ALTERNATIVE

The caretaker status alternative would arise if the Army is unable to dispose of all or portions of the available BRAC property within the period of time defined for initial caretaking of the property (see Section 2.3.1). Once the time period for the initial level of maintenance elapses, and if the Army had not yet disposed of the property, the Army would reduce maintenance to levels consistent with federal government standards for excess and surplus properties (i.e., 41 CFR 101–47.402 and 101–47.4913) and with 32 CFR 174.14 (Maintenance and Repair). This latter stage of caretaker status would not be focused on keeping the facilities in a state of repair to facilitate rapid reuse. Rather, maintenance during this period would consist of minimal activities intended primarily to ensure security, health, and safety and to avoid physical deterioration. Maintenance activities, under contract with the private sector, would occur on those portions of the BRAC property not yet transferred or conveyed, and they would include the following:

- Inspection, maintenance, and use of utility systems, telecommunications, and roads to the extent necessary to avoid their irreparable deterioration
- Periodic maintenance of landscaping around unoccupied structures, as necessary, to protect them from fires or nuisance conditions
- Allowance of access to permit servicing of publicly owned or privately owned utility or infrastructure systems
- Maintenance of security patrols, security systems, fire prevention, and protection services
- Reduction in the level of natural resources management programs including land management, pest control, and erosion control

3.4 NO ACTION ALTERNATIVE

Under the No Action Alternative, the Army would continue operations at NECD at levels similar to those occurring before the BRAC Commission's recommendation for closure. This alternative cannot be implemented because the BRAC closure recommendations have the force of law. Inclusion of the No Action Alternative is prescribed by the Council on Environmental Quality (CEQ) regulations and serves as a benchmark against which federal actions can be evaluated. Accordingly, the No Action Alternative is evaluated in detail in this EA.

3.5 REUSE ALTERNATIVES

Consistent with Congress' mandate, the Army must cease performance of its active missions at NECD no later than September 15, 2011. Depending on numerous factors, including information presented in this EA, disposal might occur as a single event involving transfer of the entire facility to one or more subsequent owners or might occur over time with multiple transactions involving the same or several new owners. Regardless of the method of disposal, timing, or identity of new owners, reuse of NECD is reasonably foreseeable. Consistent with statutory requirements, this EA treats the NeCDRA Reuse Plan as the primary factor in developing the proposed action and alternatives.

This EA analyzes reuse of NECD, which is expected to occur. CEQ regulations require evaluation of reasonably foreseeable actions, without limitation on the party conducting them,

and evaluation of consequent environmental impacts. Accordingly, reuse of the property is evaluated as an action secondary in time, following the Army's primary action of disposal. The following subsections discuss the methodology used to define the reuse scenarios to be considered. Because of the often speculative and changeable nature of reuse planning, specific activities cannot be precisely identified at this time. The Army considers the NeCDRA Reuse Plan the primary factor in defining the reuse scenarios to be considered and evaluates that reuse plan for potential environmental effects.

3.5.1 Development of Reuse Alternatives

Reuse planning for NECD consists of establishing reuse objectives, planning for compatible land uses that support environmentally sustainable reuse and the community's needs, and marketing among potential public and private sector entities to obtain interest in use of the property. The reuse planning process is dynamic and often dependent on market and general economic conditions beyond the control of the reuse planning authority.

In recognition of the dynamics attending reuse planning, the Army uses intensity-based probable reuse scenarios to identify the range of reasonable reuse alternatives required by NEPA and by DoD implementing directives. That is, instead of speculatively predicting exactly what will occur at a site, the Army establishes ranges or levels of activity that reasonably might occur. These levels of activity, referred to as intensities, provide a flexible framework capable of reflecting the different kinds of uses that could result at a location. Reuse intensity levels also take into account the effects that encumbrances exert on reuse.

3.5.2 Land Use Intensity Categories Described

Five intensity-based levels of redevelopment can be evaluated for their potential environmental and socioeconomic impacts. These are low-intensity reuse (LIR), medium-low intensity reuse (MLIR), medium-intensity reuse (MIR), medium-high intensity reuse (MHIR), and high-intensity reuse (HIR). At any given installation, however, analysis of all five levels of intensity might not be appropriate because of historical usage, physical limitations, or other cogent reasons.

Levels of reuse intensity can be viewed as a continuum. At NECD, LIR could represent a level of activity that might be found in uses requiring only minimal numbers of buildings, with agricultural, park, or recreation functions occurring over substantial portions of the installation. An MLIR in the context of NECD would represent the next greater level of use intensity. For example, use of existing facilities similar to present levels could represent a MLIR. An MIR represents the approximate midpoint of reuse intensity that could occur at a site. In the context of NECD, an MIR would be represented by use of existing facilities more intensely than they have been used in the recent past. At a site such as NECD, an MHIR and HIR might be achievable by increases in facilities and population and reduction in the amount of lands used for passive purposes (e.g., agriculture or conservation). At NECD, these levels of intensity might involve conversion or replacement of existing structures and construction of additional buildings for housing, commercial, institutional, or industrial uses on greater amounts of acreage at the installation. However, MIR, MHIR, and HIR would be impractical because such intensity of use would be essentially incompatible with the character of the adjoining areas.

Indicators of levels of intensity can be quantified by counting the number of people at a location (employees or residents), the potential number of vehicle trips generated as a result of the nature of the activity, or the number of dwelling units. Other indicators of the intensity of use are the

rates of resource consumption (electricity, natural gas, water) and the amount of building floor space per acre (identified as the floor area ratio [FAR], expressed as the amount of square feet of built space per acre).

Development of intensity parameters is based on several sources, including existing land use plans for various types of projects and planning jurisdictions, land use planning reference materials, and prior Army BRAC land use planning experience. Private sector redevelopment of property subject to BRAC action, on the other hand, seeks different objectives and uses somewhat different planning concepts in that it focuses on creation of jobs and capital investment costs, and it typically uses traditional community zoning categories (e.g., residential, industrial). Upon evaluation of various types of indicators in light of their applicability to Army lands subject to BRAC action, the Army has selected three representative, illustrative intensity parameters. These are residential density, employee density (general spaces), and FAR. These intensity parameters aid in evaluation of environmental effects at various levels of redevelopment (see Table 3-1). The following discusses these parameters.

- *Residential density*. This parameter identifies the number of dwelling units per acre. It indicates the number of people who might reside or work in an area.

- *Square feet per employee (general space).* This parameter indicates the number of square feet available per employee in all types of facilities at an installation except housing.

- *Square feet per employee (warehouse, storage, and industrial space).* This parameter indicates the number of square feet available per employee engaged in warehouse or industrial activities at an installation. Only built, fully-enclosed and covered storage space is calculated; shed or open storage areas are excluded from the computation. In describing Army use of facilities, estimates of the number of employees engaged in warehouse, storage, or industrial operations are used to determine the portion of the installation workforce in this employee density category

- *Floor area ratio.* This ratio reflects how much building development occurs at a site or across an area. For example, a three-story building having a 7,500-square foot footprint on a 4-acre site would represent an FAR of 0.13 (22,500 square feet of floor space over 4 acres [174,240 square feet]).

Residential density, employee density, and FAR considerations shown in Table 3-1 are appropriate to describe intensity levels for reuse planning at NECD. The intensity parameters shown in Table 3-1 reflect generalized values or ranges appropriate to describe the variety of installations subject to Army management, as well as the variety of redevelopment situations. The intensity parameters should be considered together in evaluating the intensity of reuse of a site so as to provide full context. Use of any single parameter in isolation might unduly emphasize certain aspects of a site or preclude broader consideration. As applied to any parcel or area, or the whole of the installation, the values given might require some adjustment to account for the context in which an activity is located. For example, the size of a redevelopment project might result in distorting effects on the generalized values for the parameters provided.

Table 3-1.
Land-use intensity parameters

Intensity level	Residential intensity (dwelling units per acre)	Square feet per employee (General space)	Square feet per employee (Warehouse, Storage, Industrial space)	Floor area ratio
Low	< 2	> 800	> 15,000	< 0.2
Medium-low	2–6	601–800	8,001–15,000	0.2–0.4
Medium	6–12	401–600	4,001–8,000	0.4–0.6
Medium-high	12–20	200–400	1,000–4,000	0.6–0.8
High	> 20	< 200	< 1,000	0.8–1.0

3.5.3 Baseline Land Use Intensity

Taken together, the land use intensity factors indicate that the present use of NECD is characterized, over-all, as medium-low intensity.

- There is no residential use.
- The use intensity of general space is low. An estimated 90 employees occupy approximately 84,000 square feet of administrative space (consisting principally of the depot headquarters, the security training and procurement facility, security headquarters, and the chemical operations facility). This results in there being 935 square feet of general space per employee, a low level of intensity.
- The use intensity of warehouse, storage, and industrial space is medium, with an estimated 216 employees occupying or using 889,000 square feet of space, resulting in 4,115 square feet per employee.
- The floor area ratio is low. There is a total of 973,000 square feet of built space on 7,136 acres, resulting in a FAR of 0.003.

3.5.4 Local Reuse Plan

NeCDRA has prepared a Reuse Plan for the conversion of the installation to civilian use. The NeCDRA board approved the plan in November 2009. The development of the plan included an open and transparent planning process that included stakeholder interviews, public meetings, workshops and focus groups. Public feedback was instrumental in the development of the plan.

During the development of the plan NeCDRA completed a development suitability analysis and created several reuse plan concepts. The development suitability analysis involved the categorization of all land at NECD into three broad categories: Most Suitable, Moderately Suitable, and limited Suitability or Not Suitable. Two separate suitability analysis were prepared; one for agriculture and forestry and the other for business and industrial development. The final reuse plan was created from three reuse plan concepts that were prepared by NeCDRA. Each concept provided for a variety of themes, locations, and configurations. The three reuse concepts were reviewed and commented on by NeCDRA, real estate developers, economic development experts, members of the farming and natural resource communities, and the public. This review

process, guiding principles established by NeCDRA, public visioning results, and existing conditions formed the basis for the creation of the Preferred Reuse Plan.

Among other things, the Preferred Reuse Plan focuses on employment, commerce, economic development, and the public welfare to promote the economic use of NECD's facilities. It also preserves existing agricultural uses and seeks to protect natural and cultural resources at NECD. In light of NECD's facilities resources, consisting primarily of administrative and industrial facilities, plans for redevelopment of the post involve mixed uses. Some facilities, deemed inappropriate for redevelopment due to age, location, or configuration, would be removed, and other types of facilities such as commercial space could be built. While such changes might alter the variety of facilities, it is unlikely that the post in the future would be of only one or two principal uses (e.g., entirely administrative). For further information please see the Executive Summary from the Final Reuse Plan dated December 2009 in Appendix B of this assessment.

Intensity-based probable reuse scenarios based on the Reuse Plan can be described. Realization of these scenarios might require several years because of impediments such as encumbrances, fluctuation in the availability of capital and general market conditions, and competition among regional development authorities to attract businesses and jobs to their locations. There would likely be a preference for adaptive reuse, instead of immediate demolition of the site to make way for new construction, resulting in the possibility of a lengthy redevelopment transition. Consistent with the Reuse Plan, it is assumed that redevelopment would occur over a 20-year period.

The reuse plan's concepts are based on key principles important to NeCDRA and the community. Specifically, the reuse plan concentrates on conservation of natural and cultural resources, continuation of agricultural-related uses, long-term market flexibility, and creation of jobs and economic development for the region. The largest blocks of unfragmented forests would be maintained as natural conservation areas, and major natural drainage corridors would be maintained as natural conservation areas. Noncontiguous natural areas would be connected through *green corridors* where necessary. A right-of-way for a Highway 63/Highway 71 east-west connection would be provided or preserved. Agricultural uses would be concentrated in the areas with the best soils, while opportunities for *mega-site* development would be created.

Figure 3-1 shows the approximate distribution of land uses of NeCDRA's preferred reuse plan. Allocation of land to various purposes would be as follows:

- Business and technology: 3,375 acres – this area is intentionally broad and flexible. Proposed uses include offices, office/industrial flex buildings, research and development facilities, manufacturing, warehousing, energy production, educational uses, institutional uses, training facilities, and distribution centers.

- Natural areas and open space: 2,305 acres – includes wooded areas, tall grass prairie, natural drainage area, green connectors linking larger natural areas and open spaces to each other, and the railroad right-of-way and wells area.

- Agriculture and forestry: 1,250 acres – most of this land is already being farmed and tree plantations/forestry would be an allowable use.

- Parks: 90 acres – two areas have be designated for parks.

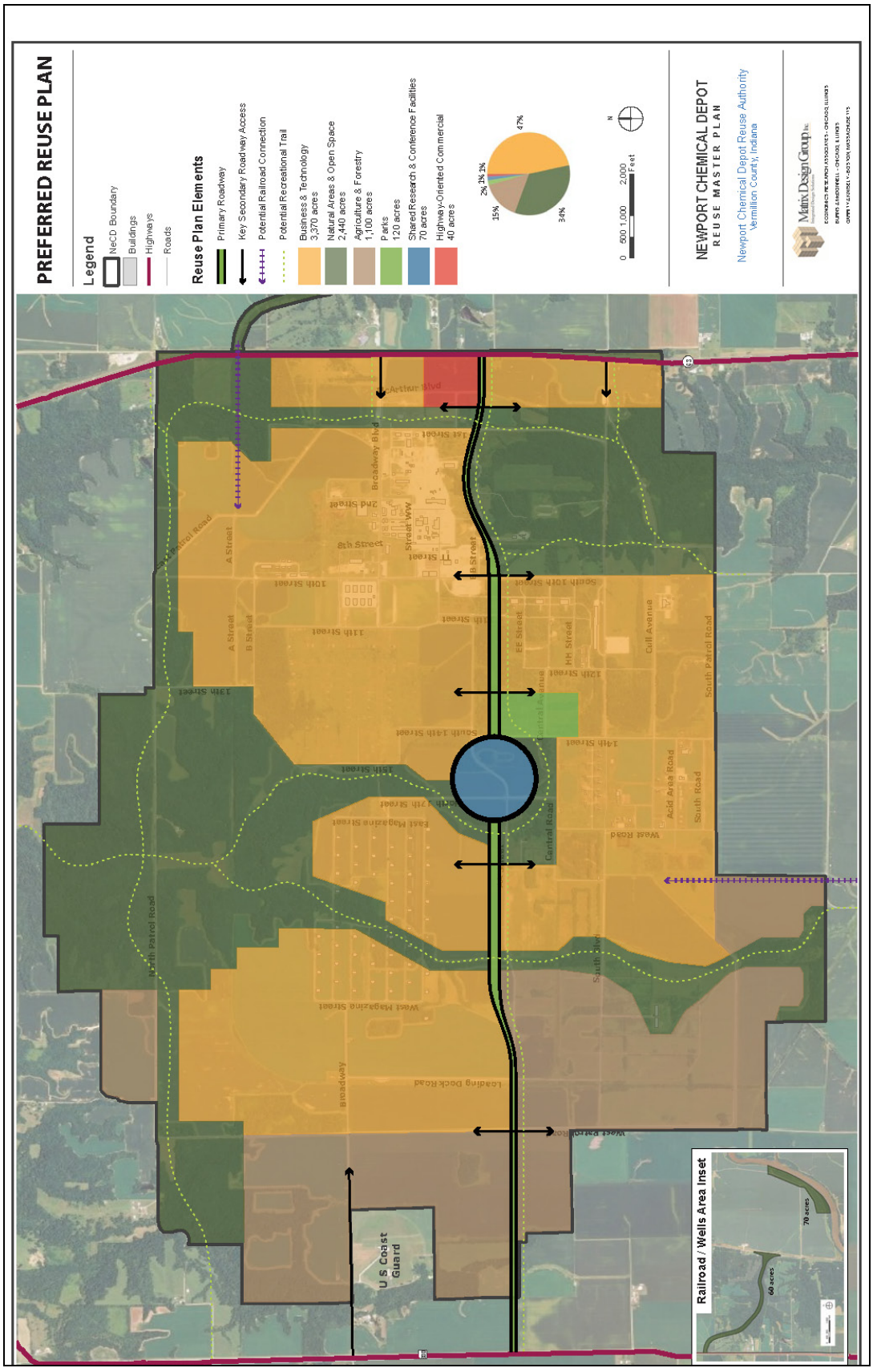

Figure 3-1

Preferred Reuse Plan

- Shared research and conference facilities: 70 acres – this area is planned as a gathering place for future users and the community.

- Highway-oriented and commercial: 40 acres – this area could include a hotel, auto/truck service plaza, restaurant, and convenience stores to serve motorist and future users of NECD.

Achieving conversion and redevelopment goals would, at build-out, most closely resemble an Medium-Low (ML) scenario. Table 3-2 identifies major indicators associated with reuse of NECD at the Low-Intensity Reuse (LIR) and Medium-Low-Intensity Reuse (MLIR) levels that could occur as a result of NECD redevelopment. Depending on the types and numbers of activities that might occupy the site during reuse and the growth patterns associated with redevelopment, it is probable that reuse would reflect each of the LIR and MLIR intensities as NeCDRA progresses from initialization of reuse (adaptive reuse) to achieving complete redevelopment objectives, the later stages of which would likely involve broader scale demolition and new construction. All RCRA permitted units will be closed and the permit terminated; RCRA corrective action (monitoring) will still be ongoing. The anticipated transfer date to DA BRAC is July 2010.

Table 3-2.
Reuse attributes

Reuse intensity	FAR	General space in use	General space employees	Warehouse space in use	Warehouse employees	Total employees
LIR	0.025	152,460	190	609,840	40	230
MLIR	0.075	457,380	653	1,829,520	159	812

Computations are based on a redevelopment area of approximately 700 acres, with 20 percent of acreage being used for development or redevelopment of general space and 80 percent of acreage being used for development or redevelopment or warehouse, storage, and industrial uses. This is consistent with NeCDRA's intent to continue agricultural and forested area uses (covering 6,441 acres), which would not be redeveloped.

3.6 ALTERNATIVES NOT TO BE EVALUATED IN DETAIL

Assuming a midpoint FAR of 0.5, allocation of 20 percent of acreage to general space, and allocation of 80 percent of acreage to warehouse or industrial space, redevelopment of 700 acres of NECD to an MIR intensity level would result in there being 3,049,200 square feet of general space (supporting 6,098 employees) and 12,196,800 square feet of warehouse, storage, and industrial space (supporting 2,033 employees). This would create a total workforce of more than 8,100 personnel. From a historical perspective, such an employee center would be unlikely and would be out of character for the rural area in which NECD is located. Similarly, MHIR and HIR levels would produce unrealistic amounts of facility space and employment figures. Such outcomes are unrealistic and, therefore, are not further evaluated.

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SECTION 4.0
AFFECTED ENVIRONMENT AND CONSEQUENCES

4.1 INTRODUCTION

This section describes the environmental and socioeconomic consequences of implementing the primary, Army-proposed action (disposal of excess property) and the secondary action to be taken by other parties (property reuse). The actions are evaluated in the context of the disposal alternatives and reuse scenarios presented in Section 3.0.

The discussions of consequences consider separately the consequences of each of the alternatives and reuse scenarios for each resource area. Cumulative effects and mitigation are separate discussions.

- *Disposal alternatives*—the analysis of effects on resource areas associated with implementing the accelerated disposal alternative, the traditional disposal alternative, and the caretaker status alternative. Because how the property would be parceled for disposal and when the separate parcels would be disposed of is speculative, it is not possible to analyze the environmental effects of the disposal alternatives separately without making some assumptions about how each disposal alternative would unfold. For the sake of analysis, therefore, and to cover the possible range of effects that might occur as a result of disposal of NECD, the following assumptions are made with respect to the three disposal alternatives. No reuse activities—including facility demolition, infrastructure changes or improvements, or preparation of land or facilities for reuse—are included in the analysis of any of the disposal alternatives.

- *Accelerated disposal*—analyzed as if all NECD property is disposed of soon after closure, such as through the use of the early transfer provisions under CERCLA 120(h)(3)(c), which defers the requirement to complete all necessary environmental cleanup before the transfer of the property. Under this approach, remediation activities would be completed expeditiously.

- *Traditional disposal*—analyzed as if all non-contaminated land at NECD is disposed of soon after closure and all parcels on which environmental remediation activities are necessary are retained by the Army for 1 year or longer while those activities are completed. In the context of the EA, 1 year or longer is considered to be *long term*.

- *Caretaker status*—analyzed as if all property at NECD is retained by the Army for longer than 1 year. No reuse development would occur while the property is in caretaker status. The Army would perform environmental remediation activities on all affected installation property under caretaker status.

- *No Action Alternative*—the analysis of effects on resource areas associated with maintaining the installation in an active status as a continuation of baseline (November 2005) conditions.

- *Reuse scenarios*—the analysis of effects on resource areas associated with reuse scenarios of various levels of reuse intensity. NeCDRA's reuse plan (available on the Internet at http://www.necdra.com/index.htm), considered by the Army as a guiding

document in the development of reuse scenarios, envisions several uses of the property, including commercial, research, conference, business and technology, recreational/open space, natural area, agriculture and forestry uses. MLIR and LIR (see Section 3.5) scenarios are evaluated to account for variations in reuse that might occur.

- *Cumulative effects*—the analysis of effects on all resource areas to evaluate cumulative effects likely to occur given the disposal and reuse of installation property along with other reasonably foreseeable actions within the affected environment (Section 4.14). Cumulative effects take into consideration the past, present, and reasonably foreseeable near-future activities.

- *Mitigation*—a summary of actions or management practices to be taken or recommended to avoid, reduce, or compensate for any predicted significant adverse effects on resource areas (Section 4.15).

Army disposal of NECD would result in management of the property by other federal agencies or ownership by public- and private-sector entities. Except as encumbrances might affect reuse, upon transfer or conveyance, the Army would no longer manage or control activities that would occur on the property. Elimination of the Army from land use decision making would have several ramifications.

4.1.1 Proponency

The Army would not be the proponent for future activities on NECD lands. Proponency responsibilities and obligations would transfer to NeCDRA. The range of possible outcomes that could follow, including land use planning, economic development, managing facilities, capital improvements, and further transfer or conveyance, would be at the discretion of future managers and owners working with applicable federal, state, and local authorities.

4.1.2 Applicable Controls

Transfer or conveyance of NECD lands to nonfederal entities would result in losing applicability of some federal policies and adding the applicability of state laws and regulations for managing lands and facilities under the ownership of successor entities.

4.1.3 Magnitude of Redevelopment

Upon transfer or conveyance, NeCDRA would be solely responsible for planning the redevelopment of the NECD property. The magnitude of redevelopment would be a function of several factors, all of which (with the exception of appropriate encumbrances) would be beyond the Army's control.

4.1.4 Mitigation

Examining the potential effects resulting from disposal and reuse of NECD includes identifying mitigation actions that could avoid, reduce, or compensate for any predicted significant adverse effects. Upon disposal, and except as restricted by encumbrances, responsibility for implementing mitigation actions would rest with the agencies or entities receiving the property. Where appropriate, this EA identifies mitigation actions that subsequent managers or owners could implement to ameliorate adverse effects. Whether such mitigation would be implemented, however, rests in the discretion of those future managers and owners. The Army's listing of

mitigation actions that could be taken represents a beginning point for future managers and owners to consider as they assume stewardship of the property.

4.2 LAND USE

4.2.1 Affected Environment

4.2.1.1 Regional Setting

NECD is in the west-central portion of Indiana near the state's western boundary with Illinois, about 30 miles north of Terre Haute, Indiana, and 75 miles west of Indianapolis (Figure 2-1). It occupies approximately 7,136 acres in Vermillion County, Indiana, and is bounded by Indiana State Route (SR) 63 to the east and SR 71 to the west. The main entrances to NECD are off SR 63.

Land use surrounding NECD is primarily agricultural (72 percent of Vermillion County land is in farms), with the exception of a mix of agriculture and forested riparian areas to the north and east. Typical of an agricultural area, the population of Vermillion County has been relatively steady overall in the past 100 years, increasing from about 15,250 in 1900 to 16,788 in 2000. Projected population growth in the county has been estimated to be 17,760 persons by 2020. The population density in 1990 was 65.3 persons per square mile. Nearly 75 percent of the county's population is south of Route 63, which is just south of NECD (VCAPC 2002). Agricultural areas in the county are now used primarily for intensive production of corn, soybeans, and livestock. The Little Raccoon and Little Vermillion creeks extend beyond the installation boundary to the south and north, respectively. The Wabash River Valley, about 2 miles east of NECD, also supports a mix of agricultural land use and riparian forests. The town of Newport, Indiana, is 2 miles northwest of NECD (NECD 2001).

4.2.1.2 Installation Land Use

NECD includes the main post, an abandoned railroad spur that originates about 2 miles east of the installation from the Louisville and Nashville Railroad line and enters NECD at the northeastern corner of the installation, and the 75-acre Ranney Wellfield east of the main installation along the Wabash River. NECD is approximately 7,136 acres and has easement rights for an additional 1,400 acres. Approximately 101 acres have been transferred to the U.S. Coast Guard Long Range Navigation-Revision C (LORAN-C) Station. NECD leases approximately 40 percent of its agricultural land for crop production and for grazing (2,991 acres were leased in 2009). The revenue from those annual agricultural leases helps to pay for various natural resource projects at Army installations worldwide (VCAPC 2002). Vermillion County receives 40 percent of the revenue generated from timber sales that occur on NECD. Facilities and grounds at NECD occupy about 260 acres. Forest land, wildlife areas, prairie restoration and wetlands comprise about 3,500 acres (ORNL 2002).

Developed features on the installation include active and inactive buildings, and roads. Inactive buildings used between NECD's establishment in 1941 and the present include facilities associated with former production of conventional munitions and facilities used to support past production of the chemical nerve agents. Sensitive facilities related to production activities were destroyed before 2006 (CMA 2008). The Manhattan Project's nuclear fission research included production of heavy water at what is now NECD. Active buildings include facilities that, until August 2008, were used to store and destroy the on-site inventory of the nerve agent as well as administrative, security, storage, maintenance, and shop buildings used to support the military

mission (CMA 2008). NECD is a GOCO facility under the Army Materiel Command (AMC), and the U.S. Army Chemical Materials Agency (CMA) mission is supported at NECD (DA, Program Manager for Chemical Demilitarization 1998; NECD 2001; NECD 2007).

NECD's mission was to safely store and eliminate the installation's VX stockpile and related materials and other non-stockpile chemical materials, while protecting the workforce, the public, and the environment. Activities associated with the former Newport Chemical Agent Disposal Facility (NECDF) mission were constructed west of the site of the former VX production plant in the east-central portion of NECD (NECD 2007). The chemical demilitarization process was completed in August 2008, and the VX demilitarization facility has been demolished.

Apart from agricultural leases, seven outgrants of NECD property exist for other uses. Three are for utility pipelines crossing NECD, two of which are for gas transmission lines for the Indiana Gas Company and Panhandle Eastern, and one for an 8-inch underground untreated water pipeline owned by the Vermillion County board of commissioners. The other four outgrants are for road and railroad rights-of-way, two of which are road corridors, and one railroad crossing for the Indiana Department of Transportation, and one 40-by 4,800-foot road right-of-way for a road owned by Vermillion County (Cox, personal communication, 2008).

4.2.1.3 Land Use Compatibility

NECD does not present land use incompatibilities off-post. The forested and agricultural lands on-post are compatible with off-post land uses because they are similar to the predominant off-post agricultural and riparian land uses. On-post compatibility issues might be present on the installation because of soil and groundwater contamination and remediation activities. These incompatibilities are remedied through the use of land use controls (LUCs).

4.2.1.4 Local Land Use Policies and Guidelines

Land use planning in Vermillion County is governed by the *2002 Vermillion County, Indiana Comprehensive Plan* (VCAPC 2002), which provides a framework for determining consistent land use planning and zoning practices and evaluating development proposals. That plan recognizes that the U.S. government is in the process of demilitarizing NECD and is one of the focal areas for economic development in the county. The plan identifies that NECD

- Is in the center of the county and offers opportunities for mixed-use developments and conservation of wildlife habitat areas
- Presents the opportunity to use the existing infrastructure serving the depot, in particular sanitary sewer collection and treatment, to also serve surrounding communities
- Is a priority economic development site for the Vermillion County Economic Development Council and the county
- Contains structures that can be considered public property once the installation is closed, and determination of the feasibility to use those public structures in the reuse of the depot is the responsibility of the Vermillion County Economic Development Council

4.2.2 Environmental Consequences

4.2.2.1 Accelerated Disposal Alternative

Long-term minor beneficial effects on land use would be expected from implementing the Accelerated Disposal Alternative. The existing cleanup programs would continue after disposal, the transfer from federal to nonfederal ownership could result in the availability of additional resources that could expedite cleanup under the accelerated disposal alternative. On those parcels of the property where remediation would occur, the environmental cleanup would have a beneficial effect for land use of the remediated parcel and on surrounding land uses.

4.2.2.2 Traditional Disposal Alternative

Short-term minor adverse and long-term minor beneficial effects on land use would be expected from implementing the Traditional Disposal Alternative. Approximately 90 percent of the land on NECD is available for immediate disposal or transfer with no requirement for environmental remediation (NECD 2007). The remaining acreage could be disposed of only after DoD completes all required environmental remediation activities. Thus, some land at NECD would be expected to remain in DoD ownership for an undetermined amount of time while redevelopment occurred on surrounding parcels. The land remaining in DoD ownership would result in a short-term minor adverse effect on landuse. Areas of NECD where remediation must still occur are in areas where business and technology development is proposed (Matrix Design Group 2009). Remediation activities would not be expected to create land use incompatibilities with the surrounding uses where the land had already been redeveloped. Similar to the Accelerated Disposal Alternative, the remediation of impacted sites under the Traditional Disposal Alternative would result in long-term minor beneficial effects. Property transferred to non-Army ownership would be limited by any applicable natural and man-made encumbrances as discussed in Section 3.2.3.

4.2.2.3 Caretaker Status Alternative

Long-term minor adverse effects on land use would be expected from implementing the Caretaker Status Alternative. The alternative assumes that NECD would not transfer within the first year after closure and that the level of maintenance that the Army would perform on the property would be reduced a year after closure. Maintenance would be reduced to levels consistent with federal government standards for excess and surplus properties (i.e., 41 CFR 101–47.402 and 101–47.4913) and with 32 CFR 174.14 (Maintenance and Repair). Necessary environmental remediation activities would continue, and a reduced staff consisting of Department of the Army civilian employees and/or contractors would be involved in managing the property to prepare it for transfer out of DoD's property inventory.

The longer the period of inactivity, the more the grounds and facilities would deteriorate. Assuming some period of time at a lowered level of maintenance, a long-term minor adverse effect on the property would result from the presence of vacant, unmaintained property.

4.2.2.4 No Action Alternative

No effect on land use would occur under the No Action Alternative. Land use would continue as it was in November 2005. There would be no change in land use, and the property would continue as an active military installation. Implementation of the No Action Alternative is not possible without congressional action.

4.2.2.5 Reuse Scenarios

4.2.2.5.1 Medium-Low Intensity Reuse

Long-term minor beneficial effects on land use would be expected from MLIR of the NECD property. The NeCDRA's reuse plan envisions several uses of the property including commercial, research, conference, business and technology, recreational/open space, natural areas, agriculture, and forestry uses. Much of the proposed development is within areas that have been previously developed or disturbed. The MLIR would be most similar to the NECD baseline condition of medium-low intensity land use and, therefore, would create the least amount of change in land use conditions on the property. Additionally, the reuse plan accounts for the environmental contamination remaining on portions of the property and the types of land uses for which the property would be suitable after remediation activities have been completed. Over time the construction of new facilities, renovation of existing facilities and infrastructure on NECD would be expected to result in long-term beneficial effects by increasing property values and raising tax revenues.

The land uses set forth in the NeCDRA reuse plan would be internally compatible and would be expected to be compatible with adjacent agricultural and low-density residential areas. No land use conflicts would be expected from implementing the reuse plan.

4.2.2.5.2 Low-Intensity Reuse

Similar to the MLIR, long-term minor beneficial effects on land use would be expected from LIR of the NECD property. The assumption of development under LIR is that the same NeCDRA reuse plan would be implemented but less development would occur on the NECD property than under MLIR. Because the same reuse plan would guide development on the property, no land use conflicts would be created (because they would not be created under MLIR).

4.3 AESTHETICS AND VISUAL RESOURCES

4.3.1 Affected Environment

NECD is in rural Vermillion County, 2 miles southeast of Newport, Indiana. The character of the installation is defined by developed areas and the use of agricultural leases. The agricultural leases are throughout the installation and support grazing, hay, and row crops. Forested riparian areas are also present on the installation. The installation is nearly entirely flat, with the exception of small relief in riparian areas.

The developed areas of NECD are characterized by both facilities constructed or upgraded during the past decade for chemical demilitarization activities and former facilities that served former military missions. The chemical demilitarization mission at NECD has been accomplished and the chemical demilitarization facility is being demolished. Because the installation does not have any housing areas or serve a military population other than workers, most of the military activities take place during the work week. Apart from the agricultural lease areas and riparian areas, features on the installation include inactive military and post infrastructure, including former ranges and ammunition storage areas. Those areas are generally no longer in use, overgrown, and some structures are deteriorating. Inactive buildings are on the installation and have been vacant and unused for at least several years and have deteriorated to a dilapidated state. The lack of maintenance is evident from decaying and collapsing buildings, overgrown vegetation, and peeling paint. Overall, outside the former industrial areas, the installation and its immediate

surroundings have a rural character. The Wabash River valley to the east of NECD offers sweeping views of the floodplain and adjacent low rolling hills in open areas (NECD 2007).

4.3.2 Environmental Consequences

4.3.2.1 Accelerated Disposal Alternative

Short-term minor adverse effects would be expected on visual resources. Upon disposal, NECD would be closed and activity would decrease to a minimal level while property maintenance occurs, demolition, ongoing cleanup actions are continued, and additional cleanup actions occur on parcels recommended for further investigation to determine their environmental status. During that time, unused facilities, which would be expected to increase in number, would continue to deteriorate as maintenance activities would decrease or end altogether, and previously maintained areas on NECD would become overgrown with vegetation.

4.3.2.2 Traditional Disposal Alternative

Effects would be similar to those discussed in Section 4.3.2.1 but would be spread out over a longer period because of a longer disposal process.

4.3.2.3 Caretaker Status Alternative

Long-term minor adverse effects would be expected. Although NECD has been in a *modified caretaker status* since 1993 (apart from construction and operation of the former NECDF) when chemical agent production ceased (Vermillion County Area Plan Commission 2002), long-term adverse effects on aesthetics and visual resources would be expected under Caretaker Status. The NECD property would be inaccessible and likely not used productively. Maintenance and site cleanup activities would occur. Security would include fencing and gate closure, but facilities and landscaping would likely deteriorate after non-use, and there would be the potential for vandalism. Over time, the property would take on the appearance of abandoned property.

4.3.2.4 No Action Alternative

No effect would occur under the No Action Alternative. NECD would continue as an active military installation. Implementation of the No Action Alternative is not possible without congressional action.

4.3.2.5 Reuse Scenarios

4.3.2.5.1 Medium-Low-Intensity Reuse

Long-term minor beneficial effects would be expected from implementing the NeCDRA's reuse plan to maintain existing natural and agricultural resource areas and focus business and technology development on areas of NECD that are already developed. The reuse plan incorporates conservation of natural areas, continuation of agricultural uses, maintaining large blocks of unfragmented forest as natural conservation areas, maintaining natural drainage corridors as natural conservation areas, and using green corridors to connect noncontiguous natural areas. An important aspect of the reuse plan is to have a single contiguous system of natural areas and open spaces within the NECD property by creating, where necessary, green "connectors" to bridge the gaps between major wooded areas and to provide space for recreational trails and wildlife corridors (NeCDRA 2009). NECD's Ranney Wells subarea along

the Wabash River would also be reused as a natural area, providing recreational access to the river. Such efforts would maintain or improve the aesthetics of the natural resource areas, keeping the existing visual quality of the landscapes and viewsheds on the NECD property.

Business and technology development is proposed in the developed and previously disturbed areas. The disposal and the change in ownership would ultimately result in the demolition and removal or renovation of unsightly deteriorating structures that would be replaced by more modern facilities. That could lead to the enhancement of the built landscape with newer buildings that would be designed in accordance with applicable design, construction, and maintenance guidelines and requirements and would be more attractive than current structures. That would result in beneficial effects on aesthetics and visual resources from the removal of unsightly deteriorating buildings and their replacement with more attractive structures. A shared conference and support area is proposed to be centrally located on the NECD property, creating a focal point for the business and technology development. The conference center would be landscaped, and a portion of the NECD's *Bookends*, which are adjacent to proposed conference center, would be revitalized as a community park (NeCDRA 2009).

Immediate disposal and reuse of existing facilities and replacement of dilapidated buildings would be expected to have long-term beneficial effects on the visual character or quality of the proposed site and its surroundings. No effect on nighttime light and glare would be expected because the intensity of reuse before and after BRAC would likely remain the same.

4.3.2.5.2 Low-Intensity Reuse

Long-term minor beneficial effects would be expected with the LIR scenario. Effects similar to those discussed under the MLIR scenario would be expected to occur, but to a lesser degree.

4.4 AIR QUALITY

4.4.1 Affected Environment

4.4.1.1 National Ambient Air Quality Standards and Ambient Air Quality

The U.S. Environmental Protection Agency (EPA), Region 5 and the Indiana Department of Environmental Management (IDEM) regulate air quality in Indiana. The Clean Air Act (CAA) (42 *United States Code* (U.S.C.) 7401-7671q), as amended, gives EPA the responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that set acceptable concentration levels for seven criteria pollutants: particles matter (PM_{10}), fine particles ($PM_{2.5}$), sulfur dioxide (SO_2), carbon monoxide (CO), nitrous oxides (NO_x), ozone (O_3), and lead. Short-term standards (1-, 8-, and 24-hour periods) have been established for pollutants that contribute to acute health effects, while long-term standards (annual averages) have been established for pollutants that contribute to chronic health effects. Each state has the authority to adopt standards stricter than those established under the federal program; however, Indiana accepts the federal standards. Federal regulations designate Air-Quality Control Regions (AQCRs) that are in violation of the NAAQS as nonattainment areas and those in accordance with the NAAQS as attainment areas. Vermillion County (and therefore NECD) is in the Wabash Valley Intrastate AQCR (AQCR 084) (40 CFR 81.218). EPA has designated Vermillion County as in attainment for all criteria pollutants (40 CFR 81.315). Notably, Vermillion County was previously a nonattainment area for PM_{10}, and has implemented a control plan for PM_{10} to help ensure it maintains its attainment status.

IDEM monitors levels of criteria pollutants at representative sites in each region throughout Indiana. It has several monitoring stations in the NECD area. Table 4.4-1 tabulates the highest monitored concentrations of criteria pollutants in the region. They are a conservative estimate of the air-quality conditions at NECD.

Table 4.4-1.
NAAQSs and monitored air quality concentrations

Pollutant and averaging time	Primary NAAQS[a]	Secondary NAAQS[a]	Monitored data[b]	Monitoring station location
CO				
8-hour maximum[c] (ppm)	9	(None)	N/A	
1-hour maximum[c] (ppm)	35	(None)		
NO_2				
Annual arithmetic mean (ppm)	0.053	0.053	N/A	
Ozone				
8-hour maximum[d] (ppm)	0.08	0.12	0.077	Carroll County
$PM_{2.5}$				
Annual arithmetic mean[e] ($\mu g/m^3$)	15	15	14.11	Tippecanoe County
24-hour maximum[f] ($\mu g/m^3$)	65	65	42.1	Vigo County
PM_{10}				
Annual arithmetic mean[g] ($\mu g/m^3$)	50	50	23	Vigo County
24-hour maximum[c] ($\mu g/m^3$)	150	150	60	
SO_2				
Annual arithmetic mean (ppm)	0.03	(None)	0.006	
24-hour maximum[c] (ppm)	0.14	(None)	0.109	Fountain County
3-hour maximum[c] (ppm)		0.5	0.208	

Notes:
ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
NO_2 = Nitrogen dioxide
N/A = Not Applicable/Not monitored in this region
a. Source: 40 CFR 50.1-50.12.
b. Source: USEPA 2008
c. Not to be exceeded more than once per year.
d. The 3-year average of the fourth highest daily maximum 8-hour average ozone concentrations over each year must not exceed 0.08 ppm.
e. The 3-year average of the weighted annual mean $PM_{2.5}$ concentrations from must not exceed 15.0 $\mu g/m^3$.
f .The 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor must not exceed 65 $\mu g/m^3$.
g. The 3-year average of the weighted annual mean PM_{10} concentration at each monitor within an area must not exceed 50 $\mu g/m^3$

4.4.1.2 Permitting and Installation-Wide Emissions

IDEM oversees programs for permitting the construction and operation of new or modified stationary source air emissions in Indiana. IDEM air permitting is required for many industries and facilities that emit regulated pollutants. On the basis of the size of the emission units and type of pollutants emitted (criteria pollutants or HAPs), IDEM sets permit rules and standards for emission sources. Under IDEM's Title V permitting regulations, a Title V Permit is required for facilities whose emissions exceed major source thresholds of 100 tons per year. NECD has accepted federally enforceable limitations on its emission sources, has reduced its potential to emit below the major source thresholds, and operates under a Synthetic Minor Operating Permit (# F165-23739-00003) (IDEM 2008).

Permitted stationary sources on the installation include primarily heating units and diesel-powered emergency generators. The installation is not required to conduct comprehensive annual air emission inventories. The latest comprehensive emissions inventory was conducted in 1995. NECD 1995 facility-wide air emissions are tabulated below (Table 4.4-2).

Table 4.4-2.
Annual emission at NECD

Pollutant	Emissions (tons/year)
Volatile organic compounds (VOCs)	6.7
Nitrogen oxides (NO_X)	5.4
Carbon monoxide (CO)	2.9
Sulfur dioxide (SO_2)	0.3
PM_{10} ($PM_{2.5}$)	5.0
Hazardous Air Pollutants (HAP)	1.1

Source: NECD 1995

4.4.1.3 General Conformity

The general conformity rules require federal agencies to determine whether their action(s) would increase emissions of criteria pollutants above preset threshold levels (40 CFR 93.153(b)). Such *de minimis* (of minimal importance) rates vary depending on the severity of the nonattainment and geographic location. The general conformity rules outline activities that would result in no emissions increase or an increase in emissions that is clearly *de minimis* (of minimal importance), including the following:

- Transfers of ownership, interests, and titles in land, facilities, and real and personal properties, regardless of the form or method of the transfer (40 CFR 93.153(c)(2)(xiv))

- Actions (or portions thereof) associated with transfers of land, facilities, title, and real properties through an enforceable contract or lease agreement where the delivery of the deed is required to occur promptly after a specific, reasonable condition is met, such as promptly after the land is certified as meeting the requirements of CERCLA, and where the federal agency does not retain continuing authority to control emissions associated with the lands, facilities, title, or real properties (40 CFR 93.153(c)(2)(xix))

- Transfers of real property, including land, facilities, and related personal property from a federal entity to another federal entity and assignments of real property, including land, facilities, and related personal property from a federal entity to another federal entity for subsequent deeding to eligible applicants (40 CFR 93.153(c)(2)(xx))

- Routine maintenance and repair activities, including repair and maintenance of administrative sites, roads, trails, and facilities (40 CFR 93.153(c)(2)(iv))

- Direct emissions from remedial and removal actions carried out under CERCLA and associated regulations to the extent such emissions either comply with the substantive requirements of the PSD/NSR permitting program or are exempted from other environmental regulation under the provisions of CERCLA and applicable regulations issued under CERCLA (40 CFR 93.153(c)(5))

Notably, reuse activities and all stationary, mobile, and area sources of emissions associated with the property after it is transfer would not be under an ongoing program of control from the Army. Therefore, they are not accounted for in this EA. Because all activities are specifically exempt from the rule, supporting documentation and emission estimates not necessary. This determination would not change regardless of the changes in the attainment status of the region.

4.4.2 Environmental Consequences

4.4.2.1 Accelerated Disposal Alternative

Implementing the Accelerated Disposal Alternative would have short-term minor beneficial effects on air quality. The conveyance of the property away from the Army would not generate any air emissions, and would have no effect on air quality. The short-term effects would be primarily because of decreases of stationary, area, and mobile emissions at the installation. This alternative would not be expected to contribute to the violation of any federal, state, or local air regulations. An evaluation of the long-term effects based on the ultimate reuse of the installation is presented in Section 4.4.2.5.

All direct and indirect emissions generated by Army activities would dramatically decrease from implementing this alternative. These would include the use of non-road equipment (e.g., bulldozers, backhoes), worker vehicles, volatile organic compound (VOC) paints, paving off-gasses, and fugitive particles from surface disturbances, emissions from emergency generators and heating boilers, and private motor vehicles. The installation's air operating permit would likely be dissolved, and all existing stationary sources of air emissions would likely be decommissioned under the alternative. The air-operating permit may be directly transferred to the new owners and operators of any stationary sources of air emissions that are not decommissioned. In addition, the requirements of the General Conformity Rules do not apply to any actions associated with the Accelerated Disposal Alternative. The alternative would result in no emissions increase or an increase in emissions that is clearly *de minimis*, including transfers of ownership, interests, and titles in land, facilities, and real and personal properties (40 CFR 93.153(c)(2)(xiv)). A Record of Non-Applicability to the general conformity rule is in Appendix C.

4.4.2.2 Traditional Disposal Alternative

Implementing the Traditional Disposal Alternative would have short-term minor beneficial effects on air quality. Although the timing of the transfer of the property could vary, the short-term effects would be primarily from decreases of stationary, area, and mobile emissions at the installation and would be similar in both type and level as those outlined under the Accelerated Disposal Alternative. An evaluation of the long-term effects based on the ultimate reuse of the installation is presented in Section 4.4.2.5.

As with the Accelerated Disposal Alternative, the installation's air operating permit would be dissolved, and all existing stationary sources of air emissions would be decommissioned under the alternative. The requirements of the General Conformity Rules do not apply to any actions associated with the Traditional Disposal Alternative. The alternative would result in no emissions increase or an increase in emissions that is clearly *de minimis*, including transfers of ownership, interests, and titles in land, facilities, and real and personal properties (40 CFR 93.153(c)(2)(xiv)); routine maintenance and repair activities (40 CFR 93.153(c)(2)(iv)), and direct emissions from remedial and removal actions carried out under CERCLA (40 CFR 93.153(c)(5)).

4.4.2.3 Caretaker Status Alternative

Short-term and long-term minor beneficial effects on the air quality would be expected from implementing the Caretaker Status Alternative. Short-term effects would be primarily from decreases of stationary, area, and mobile emissions at the installation and would be similar in level as that outlined under the Accelerated Disposal Alternative. An evaluation of the long-term effects based on the ultimate reuse of the installation is presented in Section 4.4.2.5.

In addition to the initial maintenance activities, some long-term maintenance activities would occur. Under this alternative, property maintenance activities are expected to be ongoing and similar in intensity to those now being performed. However, most other existing sources of air emissions would be curtailed including vehicular traffic, use of emergency generators, and operating heating ventilation and air conditioning (HVAC). As with the Accelerated Disposal Alternative, the installation's air operating permit would likely be dissolved, and all existing stationary sources of air emissions would likely be decommissioned under the alternative. The air-operating permit may be directly transferred to the new owners and operators of any stationary sources of air emissions that are not decommissioned. In addition, the requirements of the General Conformity Rules do not apply to any actions associated with the Caretaker Status Alternative. The alternative would result in no emissions increase or an increase in emissions that is clearly *de minimis*, including the routine maintenance and repair activities, including repair and maintenance of administrative sites, roads, trails, and facilities (40 CFR 93.153(c)(2)(iv)).

4.4.2.4 No Action Alternative

Under the No Action Alternative, NECD would not be closed, and no changes in operations or maintenance would take place. Therefore, the changes in ambient air quality conditions from such activities would not occur. Air quality would remain as described in Section 4.4.1.

4.4.2.5 Reuse Scenarios

4.4.2.5.1 Medium-Low-Intensity Reuse

Long-term minor adverse effects on air quality would be expected from implementing the MLIR scenario. The level of use would be comparable to those outlined under the existing conditions and the overall amount of air emissions would be approximately the same (Table 4.4-2). No direct or indirect emissions would be associated with this scenario for which the Army would maintain an ongoing program of control; therefore, the requirements of the General Conformity Rules do not apply.

Under this scenario, future sources of air emissions would likely include construction equipment, vehicular traffic, HVAC systems, and use of lawn maintenance equipment and consumer products. The total number of these stationary, mobile, and area sources would decrease from implementing this scenario. Direct and indirect emission would include both (1) demolition and construction activities including the use of non-road equipment (e.g., bulldozers, backhoes), worker vehicles, the use of VOC paints, paving off-gasses, and fugitive particles from surface disturbances, and (2) operational activities including emergency generators and heating boilers, and use of private motor vehicles.

New facilities would be owned, operated, and maintained by public or private entities and would no longer be under the direct control of the Army. New owners and operators of new stationary sources of air emissions would need to perform a regulatory analysis to determine if any

permitting were required for their operation. Future permitting can vary on the basis of the size and types of emission units, timing of the projects, and the types of controls ultimately selected. However, during the final design stage of any facilities associated with the reuse of the property and the permitting process either (1) the actual equipment, controls, or operating limitations would be selected to reduce emissions below the major source thresholds, or (2) additional controls would be required to ensure that new emissions would not threaten the attainment status of the region. This cap-and-trade-type system is inherent to federal and state air regulations and leads to a forced reduction in regional emissions. Therefore, regardless of the ultimate permitting under any reuse scenario, these effects would be considered minor under NEPA.

4.4.2.5.2 Low-Intensity Reuse

Long-term minor beneficial effects on air quality would be expected with the LIR scenario. Such effects would be from the general decrease in the intensity of use at the installation. No direct or indirect emissions would be associated with this scenario for which the Army would maintain an ongoing program of control; therefore, the requirements of the General Conformity Rules do not apply.

Under this scenario, future sources of air emissions would be similar to those outlined under the MLIR scenario but somewhat less prevalent. Specific air emission sources and their locations might vary when compared to existing conditions. Permitting requirements would be similar to those outlined in the MLIR scenario.

4.5 NOISE

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

Sound varies by both intensity and frequency. Sound pressure level, described in decibels (dB), is used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Hertz (Hz) are use to quantify sound frequency. The human ear responds differently to different frequencies. *A-weighing,* measured in A-weighted decibels (dBA), approximates a frequency response expressing the perception of sound by humans. Sounds encountered in daily life and their dBA levels are provided in Table 4.5-1.

The dBA noise metric describes steady noise levels, although very few noises are, in fact, constant. Therefore, A-weighted Day-Night Sound Level (ADNL) has been developed. Day-night Sound Level (DNL) is defined as the average sound energy in a 24-hour period with a 10-dB penalty added to the nighttime levels (10 p.m. to 7 a.m.). DNL is a useful descriptor for noise because (1) it averages ongoing yet intermittent noise, and (2) it measures total sound energy over a 24-hour period. In addition, Equivalent Sound Level (L_{eq}) is often used to describe the overall noise environment. L_{eq} is the average sound level in dB.

The Noise Control Act of 1972 (PL 92-574) directs federal agencies to comply with applicable federal, state, interstate, and local noise control regulations. In 1974 EPA provided information suggesting continuous and long-term noise levels in excess of DNL 65 dBA are normally

Table 4.5-1.
Common sound levels

Outdoor	Sound level (dBa)	Indoor
Snowmobile	100	Subway train
Tractor	90	Garbage disposal
Noisy restaurant	85	Blender
Downtown (large city)	80	Ringing telephone
Freeway traffic	70	TV audio
Normal conversation	60	Sewing machine
Rainfall	50	Refrigerator
Quiet residential area	40	Library

Source: Harris 1998.
dBA = A-weighted decibel. The sound level provided is as generally perceived by an operator or a close observer of the equipment or situation listed.

unacceptable for noise-sensitive land uses such as residences, schools, churches, and hospitals. However, Indiana provides immunity to military installations for noise pollution. Military installations are not liable for civil damages relating to noise or noise pollution that (1) is from the normal operation, including destruction of ordnance; and (2) can be heard within 2 miles of the perimeter of the installation (IC 34-30-21-2). NECD is bordered by the towns of Dana and Newport, in Vermillion County—none of which set specific, not-to-be exceeded sound levels in their local nuisance noise ordinances.

4.5.1 Affected Environment

Because NECD's mission was storage and demilitarization of chemical agent, traditional noise sources found on Army installations are not present. NECD is a rural post with noise resulting primarily from automobile use and general activities associated with administrative and industrial areas. Noise generated by NECD as a whole is comparable to a typical semi-industrial environment and is considered compatible with existing noise receptors.

Average day-night sound pressure levels fall in a range between 50 dB in quiet suburban areas to 70 dB in urban areas (USEPA 1974). All areas surrounded by the post fall within this range. Anywhere from 3 to 14 percent of the population is highly annoyed with the in situ noise conditions. NECD is not within any incompatible use zones or in the flight paths of any nearby airports or air installations. NECD is more than a mile away from any railway or major interstate. Existing noise levels (L_{eq} and ADNL) were estimated for the alternative sites and surrounding areas using the techniques specified in the *American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present* (Table 4.5-2) (ANSI, 2003).

Table 4.5-2.
Estimated existing noise levels at NECD

Intensity level	DNL (dBA)	L_{eq} (dBA)	
		Daytime	Nighttime
Medium Low	52	53	47

Source: ANSI 2003

4.5.2 Environmental Consequences

4.5.2.1 Accelerated Disposal Alternative

Short-term minor adverse effects on the noise environment would be expected from implementing the Accelerated Disposal Alternative. The short-term effects would be primarily from heavy equipment noise during remediation activities. An overview of these effects is presented below. An evaluation of the long-term effects based on the ultimate reuse of the installation is presented in Section 4.5.2.5.

Individual pieces of heavy equipment typically generate noise levels of 80 to 90 dBA at a distance of 50 feet. With multiple items of equipment operating concurrently, noise levels can be relatively high during daytime periods at locations within several hundred feet of active remediation sites. The zone of relatively high noise typically extends to distances of 400 to 800 feet from the site of major equipment operations. Locations more than 1,000 feet from sites seldom experience noteworthy levels of noise. Noise from the remediation activities would have short-term minor adverse effects on all sensitive receptors, including residences, within 1,000 feet of the site. Table 4.5-3 presents typical noise levels (dBA at 50 feet) that EPA has estimated for the main phases of outdoor construction. Remediation activities would be comparable in level to the ground-clearing and excavation phases. Given the temporary nature of proposed remediation activities, the amount of noise that equipment would generate, and the distance to the nearest noise sensitive area, this effect would be expected to be minor.

Noise is expected to dominate the soundscape for all on-site personnel. Construction personnel, and particularly equipment operators, would don adequate personal hearing protection to limit exposure and ensure compliance with federal health and safety regulations. In addition, because remediation noise is the only expected source of noise associated with this alternative and there are no schools, churches, or hospitals adjacent to the site, no violation of the local noise ordinances would be expected.

Table 4.5-3.
Noise levels associated with outdoor construction

Construction phase	L_{eq} (dBA)
Ground clearing	84
Excavation, grading	89

Source: USEPA 1971

In addition to the remediation activities, some short-term maintenance activities would occur during the transition to the final reuse of the property. Under this alternative, such activities would be expected to be temporary and similar to those being performed under existing conditions. The activities would likely have negligible effects on the noise environment.

4.5.2.2 Traditional Disposal Alternative

Short-term minor adverse effects on the noise environment would be expected from implementing the Traditional Disposal Alternative. Although the timing of the transfer of property could vary, the short-term effects would be primarily from heavy equipment noise during remediation activities and would be similar in both type and level as that outlined under

the Accelerated Disposal Alternative. An evaluation of the long-term effects based on the ultimate reuse of the installation is presented in Section 4.5.2.5.

4.5.2.3 Caretaker Status Alternative

Short-term minor adverse and long-term minor beneficial effects on the noise environment would be expected from implementing the Caretaker Status Alternative. Although the timing of the transfer of property could vary, the short-term effects would be primarily from heavy equipment noise during initial maintenance and would be the similar in level as that outlined under the Accelerated Disposal Alternative. An evaluation of the long-term effects based on the ultimate reuse of the installation is presented in Section 4.5.2.5.

In addition to the initial maintenance activities, some long-term maintenance activities would occur. Under this alternative, such activities are expected to be ongoing and similar to those being performed under existing conditions. However, most other existing source of noise would be curtailed including vehicular traffic, use of emergency generators, and operation of HVAC. This beneficial change in the noise environment would likely be minor.

4.5.2.4 No Action Alternative

The No Action Alternative would result in no effects on the noise environment. No remediation, maintenance, changes in traffic, or changes in use would occur. Noise conditions would remain as described in Section 4.5.1.

4.5.2.5 Reuse Scenarios

4.5.2.5.1 Medium-Low-Intensity Reuse

Long-term minor beneficial effects on the noise environment would be expected from implementing the MLIR scenario. The effects would be from the general incremental decrease in the intensity of use at the installation. Notably, the Army would not generate any noise at the installation after implementing this scenario.

Under this scenario, future sources of noise would likely include high-altitude aircraft overflights, vehicular traffic, and natural noises such as leaves rustling, and bird vocalizations. The soundscape of the area would likely change to be consistent with the activities outlined in the reuse plan. There would be noises associated with construction, small increases in traffic, industrial, and commercial activities from businesses located on NECD. Although sources of noise and individual acoustic events would be both more frequent and closer to individuals because of the general increase in land use density, the area would still be categorized as quiet. Although the level of use would be slightly less than those outlined under the existing conditions, the overall sound environment (DNL) would be approximately the same (Table 4.5-4). In addition, specific noise sources and their locations could vary when compared to existing conditions. Such a change in the noise environment would not be readily perceptible and can be considered negligible.

4.5.2.5.2 Low-Intensity Reuse

Long-term minor beneficial effects on the noise environment would also be expected from implementing the LIR scenario. These effects would be from the general decrease in the intensity

of use at the installation. Notably, the Army would not generate any noise at the installation after implementing this scenario.

Under the scenario, future sources of noise would be similar to those outlined under the MLIR scenario. The area would be categorized as quiet and would be isolated from significant sources of sound and in shielded areas. Noise levels under this scenario were estimated using the techniques specified in the *American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present* (Table 4.5-4) (ANSI, 2003). The overall sound environment (DNL) would be approximately 3 dBA lower than those under the existing conditions. This is a readily perceptible decrease in noise.

Table 4.5-4.
Estimated noise levels at NECD for varying reuse intensities

Intensity level	Example land use category	Average population intensity (people per acre)	L_{eq} (dBA)		
			DNL	Daytime	Nighttime
Low	Quiet Suburban Residential	2	49	48	42
Medium-low (Existing)		4	52	53	47
Medium	Quiet Urban Residential	9	55	56	50
Medium-high	Quiet Commercial, Industrial, and Normal Urban Residential	16	58	58	52
High		20	59	60	54

Source: ANSI 2003

4.6 GEOLOGY AND SOILS

4.6.1 Affected Environment

4.6.1.1 Geologic and Topographic Conditions

NECD is in the Central Lowland Plains physiographic division of the central United States. The facility is underlain by approximately 70 to 100 feet of unconsolidated glacial till (primarily a stratified ground moraine), capped by thin loess (wind deposited silt) that grades into morainal deposits along the escarpment formed by the Wabash River, approximately 2 miles to the east. The till is composed of poorly sorted clay, silt, sand, and minor gravel, and displays both vertical and lateral variability (U.S. Army 2008).

The glacial till was deposited by at least two Pleistocene ice sheets, during the Kansan and Wisconsinan stages, and comprises the major part of the Trafalgar Formation in Indiana. The Trafalgar Formation is composed of three members separated by thin (1 to 3 feet), frequently truncated sand and gravel deposits. From youngest to oldest, these members are the Snider Till, the Batestown Till, and the Glenburn Till. The younger till members are thinner and finer grained than the underlying older till members (U.S. Army 2008).

The bedrock in Vermillion County is near the edge of the Indiana Basin, and dips slightly toward the southwest. The uppermost consolidated bedrock unit below the glacial deposits is the

Carbondale Group, composed of shale and sandstone of Pennsylvanian age, and ranging in thickness from approximately 10 to 100 feet. The Carbondale Group is part of the larger Allegheny Series; other groups of the series outcrop along the Big Vermillion and Wabash Rivers. Underlying the Carbondale Group is the Raccoon Creek Group. Comprising the basal Pennsylvanian unit, the Raccoon Creek Group varies in thickness from 145 to more than 200 feet and is composed primarily of shale and sandstone, with thinner beds of limestone, clay, and coal. These Pennsylvanian units lie unconformably above Mississippian-age sedimentary rocks that, in turn, overlie a series of very thick Paleozoic formations, which extend more than 1 mile down to pre-Cambrian granites and metamorphic rocks. The Pennsylvanian bedrock units form part of the western limb of a vast anticline, the axis of which strikes in a north-south direction, thus causing bedrock to dip slightly to the southwest. No evidence of significant faulting in the NECD area exists (U.S. Army 2008).

Topographically, NECD is flat and ranges from approximately 650 feet above mean sea level (msl) near the main entrance of the installation to 530 feet above msl in the drainage basin on the northwestern portion of the installation. The Ranney Wells area is approximately 480 feet above msl. Most of the land surface is characterized by slightly undulating to nearly level upland lying at elevations between 620 and 640 feet (U.S. Army 2008).

4.6.1.2 Soils

Soils on NECD developed mainly from a Wisconsinan age ground moraine of medium texture with a loess cover of variable thickness (USDA 1978). Glacial outwash and bottomland soils are at the Ranney Wells area in the floodplain of the Wabash River. Soils that developed on alluvial and colluvial parent materials are present in ravines and valleys of tributary streams.

Soil drainage characteristics for NECD soils vary from very poorly drained to well-drained. Flat uplands and headwater areas of streams in particular may have poor drainage because of soil texture and the low permeability of loess and till parent materials. Many soils on the uplands were originally wet prairies and required extensive ditching or installing drainage tiles to facilitate conversion to agricultural uses (EarthSource 1999; Hedge and Bacone 1994). The variability of soil types at NECD requires that attention be given to the management needs of individual areas and limitations for land uses.

Three primary soil associations (or groups of soil series) are present at NECD (EarthSource 1999; USDA 1978). The Sable-Flanagan association is in the southwestern portions of NECD and occupies approximately 30 percent of the installation. The Reesville-Ragsdale-Fincastle association is throughout the central and southeastern portions of NECD and composes about 60 percent of the soil types at NECD. The Xenia-Russell-Fincastle association is primarily in the northeastern portions of the installation and composes approximately 10 percent of the soils at NECD. Other minor soil associations present include the Hennepin-Miami association and the Genesee-Armiesburg association, both of which are in the southern portions of the installation. The Genessee-Armiesburg association is also in the Wabash River bottoms at the Ranney Wells area.

A brief description of each primary soil association is presented below.

Genesee-Armiesburg. These deep, nearly level, well-drained soils formed in loamy alluvial deposits. Scattered areas of these nearly level soils are dispersed throughout the installation along major streams valleys and on the bottomlands along the Wabash River. Surface runoff is slow, and flooding is a major hazard. The presettlement vegetation of these soils was probably wet-

mesic floodplain forests (Hedge and Bacone 1994). However, this soil association is primarily used for cultivated crops, small grain, and forage crops, with limited areas of riparian forests. Flooding hazards generally restrict the potential of these soils for residential and other urban uses.

Hennepin-Miami. These deep, moderately sloping to very steep, well-drained soils formed in loamy glacial till and are found throughout the installation in long, irregularly shaped areas parallel to major streams. Slopes are generally short and very steep, forming ravines and sideslopes above streams and drainages. This association would have originally supported mesic forest on northerly slopes and dry mesic forest communities on southern exposures. Slope limitations restrict the use of these soils for agricultural, residential, and other urban uses; current uses at NECD include forestry and wildlife habitat.

Reesville-Ragsdale-Fincastle. These deep, nearly level, somewhat poorly drained and very poorly drained soils formed in loess and loamy glacial till on uplands. The somewhat poorly drained Reesville and Fincastle soils are generally found on broad swells at slightly higher elevation than the very poorly drained Ragsdale soils, which are mainly present in slight depressions. All the soils have a seasonal high water table and a silt loam surface layer. These soils originally supported a diverse matrix of community types (EarthSource 1999). Fincastle and Reesville soils were able to support both upland flatwoods forests and grassland communities, while grammonoid-dominated marshes and forested wetlands would have been found in the more poorly drained Ragsdale soils. Extensive drainage systems have permitted these soils to be used mainly for cultivated crops, small grain, and forage throughout Vermillion County. However, in the winter and spring, flooding and ponding remain common even on drained sites, and a few undrained areas are swampy. Wetness is the main limitation for farming and for most other uses of these soils.

Sable-Flanagan. Soils in this association are deep, nearly level, somewhat poorly drained (Flanagan) to very poorly drained (Sable) and were formed in loess deposits and loamy glacial till parent materials. Areas of these nearly level soils are almost entirely in the southwestern part of the installation on broad uplands. Flanagan soils have a silt loam surface layer, and Sable soils have a silty-clay loam surface layer. Both soils have a seasonal high water table. The presence of these two soil types confirms the presence of the Grand Prairie Natural Region at NECD because both the Sable and Flannagan soils formed under grassland conditions (EarthSource 1999). Presettlement vegetation on this association most likely would have been scattered patches of wet prairies and marshes on Sable soils, surrounded by mesic tall grass prairies and savanna woodland on better-drained Flanagan soils.

Xenia-Russell-Fincastle. These soils are deep, nearly level to moderately sloping, well-drained, moderately well drained, and somewhat poorly drained soils that formed in loess and loamy glacial till. They are found primarily on uplands paralleling minor streams and drainages in the northeastern portions of the installations. All the soils have a silt loam surface layer. Fincastle soils have a seasonal high water table. Presettlement vegetation might have been a mosaic of wet flatwoods, wet prairies, and mesic upland forest communities. However, most of these soils in Vermillion County have been cleared or drained for agricultural purposes. Current uses of these soils at NECD include both agricultural crop production and forestry.

4.6.1.3 Prime Farmland

Agriculture is the dominant land use both at NECD and in surrounding communities. Approximately 2,900 acres of the installation land is leased for agricultural production of hay, soybeans, and corn and for grazing (Cox, personal communication, 2008). Approximately 3,500

acres of NECD will continue to be used for agriculture, forestry or become open space (NeCDRA 2009).

Congress enacted the Farmland Protection Policy Act as a subtitle of the 1981 Farm Bill. The purpose of the law is to, "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses" (Public Law 97–98, Sec. 1539–1549; 7 U.S.C. 4201 *et seq*.). However, land withdrawn from farmland inventory for military or national defense purposes, such as NECD is not subject to the Farmland Protection Policy Act. Although the act does not apply to military lands, the potential conversion from agricultural uses at NECD is considered in the consequences section below.

4.6.2 Environmental Consequences

4.6.2.1 Accelerated Disposal Alternative

No effects on geology and topography would be expected. No effects on prime farmland or agriculture would be expected. Short-term minor adverse and long-term minor beneficial effects on soils would be expected from accelerated disposal. Soils would be disturbed during remediation activities and could be eroded by wind and stormwater, resulting in a short-term minor adverse effect. The remediation of sites with contaminated soil, however, would have a long-term beneficial effect on soils. The effects on soils from reuse development are discussed below in Section 4.6.2.5.

4.6.2.2 Traditional Disposal Alternative

The effects would be similar to those discussed in Section 4.6.2.1.

4.6.2.3 Caretaker Status Alternative

The effects would be similar to those discussed in Section 4.6.2.1. Under Caretaker Status Alternative, the Army would continue with required environmental remediation activities, with short-term soil disturbance and soil erosion and long-term benefits reasonably expected to result from such activities.

4.6.2.4 No Action Alternative

No effects on geology, topography, soils, or prime farmland would be expected under the No Action Alternative. No changes to the property would occur under the alternative.

4.6.2.5 Reuse Scenarios

4.6.2.5.1 Medium-Low-Intensity Reuse

Short-term minor adverse effects on soils would be expected from implementing the MLIR scenario. The NECD reuse plan envisions a balance between natural and built areas with the built areas focusing on business and technology, commercial, and institutional use of the installation's existing assets. Any construction or demolition resulting from implementing NeCDRA's reuse plan would result in land disturbances. Such disturbances (excavation, grading, and soil removal) would result in short-term adverse effects on soils. Clearing vegetation for construction would expose soils to potential erosion.

Soils would be stabilized and revegetated as construction activities ended, so the adverse effects on soils would be expected to be short term. Regulatory agencies responsible for overseeing construction and renovation projects would require the use of best management practices (BMPs) to help alleviate short-term and long-term problems associated with soil erosion. All construction activities and stormwater management would be required to adhere to Indiana sediment and stormwater control regulations and permitting. Coordination with IDEM would be required to ensure coverage under applicable permits for proposed reuse projects. Implementing stormwater management and sedimentation and erosion control measures would ensure that only minimal effects would occur from reuse of the property. No effects on geology or topography would be expected under MLIR. No effects on prime farmland would be expected. The region is heavily developed for agricultural uses, and losses of prime farmland at NECD would not likely rise to the level of significance.

4.6.2.5.2 Low-Intensity Reuse

Short-term minor adverse effects on soils would be expected with the LIR scenario. Effects similar to those discussed under the MLIR scenario would be expected to occur, but to a lesser degree.

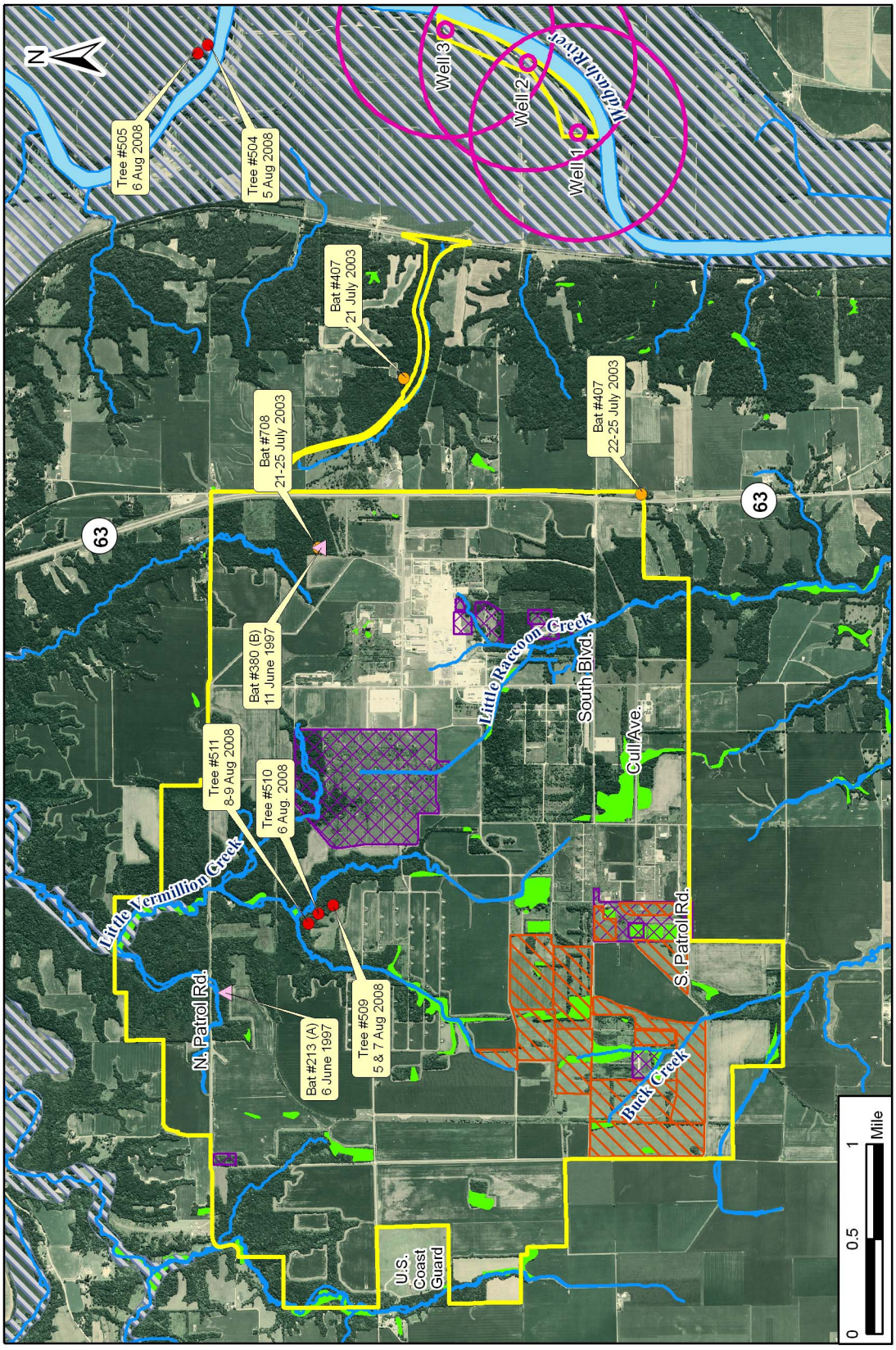
4.7 WATER RESOURCES

4.7.1 Affected Environment

4.7.1.1 Surface Water

NECD is in the watershed of the Wabash River, whose channel passes about 2 miles east of the installation as the river flows south. Major tributaries to the Wabash River that drain Vermillion County are Spring Creek and the Big Vermillion River in the north; the Little Vermillion River in the central part of the county; and Little Raccoon, Norton, Feather, and Brouilletts creeks in southern Vermillion County (NECD 2008b). NECD is in drainage basins of the Little Vermillion River and Little Raccoon Creek tributaries to the Wabash River.

The terrain in the immediate vicinity of NECD is generally level to gently rolling. Surface water resources consist of low-order, low-gradient, intermittent and perennial drainage ditches and streams that convey surface water runoff from NECD ultimately to the Wabash River. Watersheds of four perennial streams occur on NECD: the Little Vermillion River and its tributary Jonathan Creek, and Little Raccoon Creek and its tributary Buck Creek (DAPMCD 1998). A small area along the eastern side of the NECD's main post, along with the railroad spur and the Ranney Wells area, drains directly to the Wabash River as part of its Wabash-Montezuma watershed (NeCDRA 2009). Surface water features of NECD are presented in Figure 4-1. Jonathan Creek and its tributaries collect runoff from the far-western portion of NECD. Jonathan Creek flows northeast outside the western border of NECD to the Little Vermillion River (IGIC 2009). The central, northern, and northeastern portions of NECD drain to creeks and swales that also convey intermittent and perennial streams north toward the Little Vermillion River. NECD's north-central tributary to the Little Vermillion River is Little Vermillion Creek and its feeder creeks, one of which is known as Blake's Brook (DAPMCD 1998). Both the east and west branches of Little Vermillion Creek have been identified as waters of the United States that provide important buffers for water quality and valuable riparian habitat (NECD 2008b) (see Section 3.2.3's subsection, *Encumbrances Identified at NECD,* and Section 4.8.1.6, *Wetlands*). The Little Vermillion River meanders east outside the northern border of NECD and joins the Wabash River about 1 mile east of the town of Newport.



Natural Resources

Figure 4-1

Note: Installation boundaries are approximate. Source: NECD GIS, 2009.

The southeastern portion of NECD is drained by Little Raccoon Creek, which arises in the eastern portion of NECD, near the former NECDF, and flows south off the installation. One of its small headwater feeder streams is known as Lazy Creek (DAPMCD 1998). A small earthen dam occurs in a headwater tributary to Little Raccoon Creek near the former NECDF, constructed to form a holding basin to contain any spills or inadvertent releases from the plant and prevent them from being discharged directly into the creek (NECD 2008b). The southwestern portion of NECD drains to Buck Creek, which flows southeast and joins Little Raccoon Creek south of NECD near the intersection of State Road 63 and State Road 36. Near its headwaters, Buck Creek also is known as Pheasant Creek (DAPMCD 1998). From the mouth of Buck Creek, Little Raccoon Creek continues southeast about 2 miles to its confluence with the Wabash River. The Wabash River continues flowing south through western Indiana, forming the boundary between Vermillion and Parke counties, then enters Vigo County, Indiana, where its course turns southwest to become the boundary between Indiana and Illinois. The Wabash River then continues south until it joins the Ohio River at the junction of Indiana, Illinois, and Kentucky, about 150 miles south of NECD.

Water quality of the creeks that drain NECD has been described as very hard and slightly polluted (DAPMCD 1998). In the past, agricultural and operational activities have contributed to wastewaters entering Little Vermillion, Buck, and Little Raccoon creeks. Water quality degradation in Jonathan Creek attributable to NECD industrial activities has been minimal, although agricultural runoff has affected the creek (ORNL 2002; DAPMCD 1998). Little Raccoon Creek received waste effluent generated from a variety of activities conducted at NECD throughout its history and has been identified in the NECD RCRA Part B permit as AOC-N (Area of Concern N) (NECD 2008b). No streams on NECD or in its immediate vicinity are listed on Indiana's 2008 Clean Water Act section 303(d) list of impaired waters (IDEM 2009; IGIC 2009). In preparation for closure of the NECD, the Army is conducting a rigorous environmental program, focusing on soil and water remediation, in addition to maintaining and protecting natural resources for future uses of the depot's land (Zimmerman and Saulsbury 2008).

Stormwater runoff at NECD is controlled by both manmade and natural surface drainage channels (NECD 2008b; NeCDRA 2009). Manmade structures include open drainage ditches, grassed waterways, drop inlets, drop spillways, and pipe culverts. Open drainage ditches are generally planted in tall fescue. Stormwater discharges into Little Raccoon Creek and Little Vermillion Creek are regulated under the installation's NPDES permit, #IN0003506 (NECD 2008b). Stormwater is managed on-post in accordance with NECD's Stormwater Pollution Prevention Plan (SWPPP) dated March 9, 2005. Under the SWPPP, stormwater runoff and Little Raccoon Creek are monitored, and results are reported to IDEM (NECD 2008b). There is no discharge of process wastewater (NECD 2008b). Many existing and former agricultural tracts at NECD have field drain tile systems to improve soil drainage. NECD has maintained those systems and has installed new tile when necessary to support the agricultural outleasing program. Records of known drain/tile systems are maintained by the Natural Resources Administrator. Some locations of drain tile systems dating from before 1941, however, have not been identified, particularly in old field areas no longer in active agricultural production (NECD 2008b).

4.7.1.2 Groundwater and Hydrogeology

Groundwater resources are plentiful in the NECD vicinity (Mason and Hanger 1994; DAPMCD 1998; NeCDRA 2009) and consist of both unconsolidated and bedrock aquifers (IGIC 2009). Surficial and shallow groundwater occurs in discontinuous sand and gravel lenses and sandy zones in the glacial till at NECD and the surrounding county. Water-bearing zones exist under

confined conditions surrounded by impermeable glacial till and could be poorly connected to other localized surficial or shallow groundwater (NECD 2008b). Those disconnected and low-yielding sand and gravel lenses are not viable municipal or industrial groundwater sources but do supply a relatively large number of privately owned wells in the county surrounding NECD (DAPMCD 1998). The bedrock aquifer beneath the glacial till is a second source of groundwater in the NECD region (Mason and Hanger 1994; DAPMCD 1998). The third and most significant source of groundwater consists of the glaciofluvial deposits along the bottomlands of the Wabash River, from which NECD's water supply has been obtained since the early 1940s. Groundwater recharge and flow in this unconfined aquifer is strongly associated with water levels in the Wabash River (DAPMCD 1998). Groundwater flow in the shallow groundwater aquifers underlying the NECD main post is mostly horizontal and generally follows surface topography either north toward the Little Vermillion River drainages or south toward the Little Raccoon Creek drainages (NECD 2008b).

In contrast to Vermillion County, where overall water consumption is based on about 90 percent surface water withdrawal and 10 percent groundwater use, no surface waters that flow across the NECD reservation are used as industrial, sanitary, or drinking water (ORNL 2002). Groundwater accounted for 100 percent of water consumption at the former NECDF (ORNL 2002), which obtained its water from the installation's Ranney Wells installed in the bottom lands along the Wabash River east of the main post (Zimmerman and Saulsbury 2008). Potable groundwater from this glaciofluvial aquifer along the Wabash River is generally of very good quality, though very hard, and requires minimal treatment other than precautionary chlorination before use (ORNL 2002).

As stated in Section 3.2.3, groundwater contamination has been found in some areas of the NECD main post. On the basis of groundwater monitoring results, the Army has implemented land use controls (LUCs) to prevent groundwater and residential use (NECD 2008b; NeCDRA 2009; SAIC 2005b). Groundwater LUC areas at NECD are shown on Figure 4-1. These groundwater restrictions apply to use of the upper aquifer, which is found 10 to 20 feet below ground surface, and not to the lower aquifer, which is 100 feet below surface and separated from the upper aquifer by a confining layer sufficient to prevent infiltration of contaminants. Land use restrictions prohibiting localized use of the main post's groundwater will continue after transfer or conveyance of the property to assure protection of human health and the environment (Collins, personal communication, 2010). No groundwater restrictions apply to the Ranney Wells parcel east of the main post.

4.7.1.3 Floodplains

Portions of FEMA-designated 100-year floodplains along tributaries to the Little Vermillion River and Jonathan Creek are on- and off-post in the vicinity of the main post's northern and northwest boundaries (Figure 4-1). The separate Ranney Wells parcel of NECD to the east of the main post is entirely within the floodplain of the Wabash River (FEMA 1995; IGIC 2009; USGS 1978).

4.7.1.4 Coastal Zone

No coastal zone exists at NECD. Indiana's coastal zone occupies the northern portions of Lake, Porter, and LaPorte counties in northwestern Indiana along the shore of Lake Michigan (NOAA 2004, 2008). NECD is outside any areas controlled under Indiana's Lake Michigan Coastal Program or the federal Coastal Zone Management Act (Indiana DNR 2009). Furthermore, waterbodies that receive surface drainage from NECD flow generally south as part of drainage

that eventually reaches the Gulf of Mexico, rather than the Great Lakes. The post's operations and activities are not managed or controlled by programs or requirements under the Indiana Lake Michigan Coastal Program.

4.7.2 Environmental Consequences

4.7.2.1 Accelerated Disposal Alternative

4.7.2.1.1 Surface Water

Short-term minor adverse and long-term minor beneficial effects on surface water would be expected. In the short term, ground disturbance associated with remedial activities in preparation for disposal, including the potential for minor spills, could result in soil erosion and runoff of waterborne pollutants into surface waters. Such potential adverse effects would be expected to be minor because of NECD's relatively flat terrain, and such effects would be minimized further by the use of BMPs to control soil erosion and stormwater runoff to surface waters and by conducting all work in compliance with an approved spill-prevention plan. All activities would comply with the latest local and Indiana regulations governing stormwater management, sediment and erosion control, and water quality protection. Long-term beneficial effects would be expected from remediation that would reduce the effect of contaminated surface runoff and groundwater recharge reaching streams.

4.7.2.1.2 Groundwater and Hydrogeology

Short-term minor adverse and long term minor beneficial effects on groundwater would be expected. In the short term, ground disturbance associated with remedial activities in preparation for disposal, including the potential for minor spills, could result in infiltration of waterborne pollutants into the groundwater system. Such effects would be minimized as described in Section 4.7.2.1.1. As stated in Section 3.2.3, transfer or conveyance of NECD property would include a prohibition on use of the main post's groundwater in localized areas.

4.7.2.1.3 Floodplains

No effects would be expected on floodplain areas in preparation for accelerated disposal.

4.7.2.1.4 Coastal Zone

No effects on coastal resources would be expected.

4.7.2.2 Traditional Disposal Alternative

Effects would be similar to those discussed in Section 4.7.2.1.

4.7.2.3 Caretaker Status Alternative

Effects would be similar to those discussed in Section 4.7.2.1. As under other disposal alternatives, remedial activities would occur under caretaker status.

4.7.2.4 No Action Alternative

No effects on surface water, groundwater, floodplains, or the coastal zone would be expected under the No Action Alternative.

4.7.2.5 Reuse Scenarios

4.7.2.5.1 Medium-Low-Intensity Reuse

Short-term minor adverse effects would be expected on surface water and groundwater resources with the MLIR scenario. The NeCDRA reuse plan envisions continuing and conserving existing natural resources areas and agricultural areas of the depot, while providing for economic development over about 50 percent of the NECD's area. The MLIR scenario is consistent with the assessment of NECD's existing use as medium-low intensity (Section 3.5.3). Any construction associated with reuse development activities would involve some land disturbance that would be expected to have associated short-term adverse effects on water resources. Those effects could include increased erosion, the potential for minor spills, and runoff of waterborne sediment and other pollutants that could reach surface waters and infiltrate into groundwater. Such effects would be minimized as described in Section 4.7.2.1.1, including compliance with Indiana's requirements for stormwater control and water quality protection for construction activities. Because the MLIR scenario is similar to baseline land use intensity at NECD, overall impervious surface intensity would be expected to be similar to existing conditions.

The NeCDRA reuse plan preserves the sensitive water resources areas illustrated in Figure 4-1 under a Natural Areas and Open Space land use designation. Important buffers for water quality and valuable riparian habitat along both the east and west branches of Little Vermillion Creek, in the northern half of NECD, are part of a large tract of such land use designation that is continuous from the northern to southern boundaries of NECD and connects with the Buck Creek drainageways to the south. Sensitive surface water resources are similarly preserved as Natural Areas and Open Space in the northwest corner of NECD in the Jonathan Creek drainage, in the southeast part of the installation in the Little Raccoon Creek drainage, and in the eastern and northeast areas of NECD as well. The Ranney Wells area along the Wabash River, and the railroad spur extending east from the main installation, are designated entirely as Natural Areas and Open Space. Except for the Ranney Wells parcel, all of the Natural Areas and Open Space designated land in the reuse plan and is connected and contiguous to avoid fragmentation of natural areas and to allow for continuity of natural processes as much as possible as well as connectedness of natural areas for recreation and wildlife. Such buffering provides for ongoing protection of surface water and groundwater resources and water quality.

No effects on floodplains would be expected. Floodplain areas are within the reuse plan's Natural Areas and Open Space areas along the installation's northern border and the Ranney Wells area along the Wabash River. No effects on coastal zone resources would be expected.

4.7.2.5.2 Low-Intensity Reuse

Short-term minor adverse effects and long-term minor beneficial effects on surface waters and groundwater would be expected with the LIR scenario. In the short term, minor adverse effects similar to those discussed under the MLIR scenario above would be expected but to a lesser degree. In the longer term, an LIR scenario would be expected to result in an overall reduction in impervious surface land cover at NECD as compared with its baseline medium-low intensity use (Section 3.5.3). Any reduction in impervious surfaces would provide potential for beneficial effects on water resources by facilitating long-term reduced erosion, reduced velocity and volume of stormwater runoff, and reduced runoff of waterborne pollutants from impervious surfaces into surface water and groundwater. The long term minor beneficial effects under an LIR scenario would be similar to those discussed in section 4.7.2.5.1 resulting from the reuse plan's preservation of sensitive water resource areas as Natural Areas and Open Space.

4.8 BIOLOGICAL RESOURCES

4.8.1 Affected Environment

NECD is within a transitional zone between the eastern deciduous forest to the north and the tallgrass prairie to the south (NECD 2001). Within the boundaries of NECD are eight types of terrestrial habitats, or community types, that span the two ecotypes. Details of the dominant species and typical locations of each community type are presented in Table 4-8.1.

Table 4.8-1.
Terrestrial community types and characteristics on NECD

Community type	Dominant overstory species	Dominant understory species	Locations on NECD
Dry mesic upland forest	White oak, black oak, northern red oak, shagbark hickory, pignut hickory	Fibrousroot sedge	North-central portion on upper slopes and dry ridgetops
Mesic upland forest	Sugar maple, American beech	Sugar maple, snakeroot, stoneroot, maidenhair fern	Northwest and north-central portions on northerly sideslopes and in protected ravines
Mesic floodplain forest	Sugar maple, white ash, black walnut	Flowering dogwood, ironwood	North-central part on terraces and flat bottom slopes of floodplain of Little Vermillion Creek; southeastern corner along Little Raccoon Creek
Wet mesic floodplain forest	Sycamore, cottonwood, American elm, red elm, sugar maple	Pin oak, swamp white oak, green ash, burr oak, red maple	North-central part within lower reaches of Little Vermillion Creek
Circumneutral seep	Black ash, sycamore	Skunk cabbage, marsh ferns	North- and west-facing slopes of heavily forested north-central portion
Flatwoods	Swamp white oak, pin oak, burr oak, red maple, black ash		Uplands in the northeast, east-central, and southeastern portions
Mesic prairie	Big and little bluestem, prairie dropseed, Indian grass, switchgrass, side-oats gramma	N/A	Former agricultural fields
Old field	Pin oak, Empress tree	Thistle, St. John's wort, witch grass, knotweed, tall cinquefoil, black-eyed susan, goldenrod, clover, burdock, yarrow, ragweed,	Abandoned agricultural lands, semi-improved grounds that are no longer maintained

4.8.1.1 Vegetation

Occupying a transitional area between the eastern deciduous forest and the tallgrass prairie, NECD supports flora typical of both habitat types and has a high diversity of plants. A total of 528 species of vascular plants have been recorded in Vermillion County. A complete list of flora species documented to occur on NECD are listed in Appendix B of the installation's Integrated Natural Resources Management Plan (INRMP) (NECD 2001). Invasive, nonnative, and noxious plant species known from the county and NECD include Canada thistle, shattercane, bur cucumber, Johnsongrass, multifora rose, bush honeysuckles, Russian olive, and garlic mustard. (Scientific names of species mentioned in the EA are provided in Appendix D.) Many of these pose a serious threat to the ecological health of NECD plant communities.

4.8.1.2 Wildlife

The fauna of NECD includes mammals, birds, reptiles, amphibians, fish, insects, and aquatic invertebrates. Species documented as occurring or using the installation have been observed during various surveys and assessments. Comprehensive lists of fauna confirmed on NECD are provided in Appendix B of the INRMP (NECD 2001). Table 4-8.2 provides details on the fauna of the installation. Federal and state-listed endangered, threatened, or rare species are discussed in Section 4.8.1.3.

Table 4.8-2.
Summary of fauna at NECD

	Number of species recorded	Common species	Notes
Mammals	33+	White-tailed deer, coyotes, raccoons, striped skunks, eastern cottontail rabbits, opossums, small rodents	Likely to occur: southeastern shrew, least shrew, Norway rat, southern flying squirrel, pine vole, least weasel, mink
Birds	About 150 on a permanent, transient, or migratory basis	American kestrel, blue jay, northern bobwhite, downy woodpecker, northern flicker, horned lark, American crow, European starling, American goldfinch, song sparrow	Common species listed are those that occur year-round
Reptiles	15 (turtle-3, lizard-2, snake-10)	Eastern painted pond turtle, eastern box turtle, black rat snake, northern water snake	No federal- or state-listed species; no venomous or poisonous snakes
Amphibians	15	Spring peepers, chorus frogs, American toads, and small-mouth salamander	No federal- or state-listed species
Fish	32	Minnows and darters	No federal- or state-listed species; no species of live mussels
Aquatic invertebrates	30	Caddisflies, flies, nematodes, riffle beetle, crayfish, gastropods	Streambank vegetation dominated by damselflies, dragonflies, diving beetles

Source: NECD 2001

4.8.1.3 Threatened and Endangered Species

NECD is known to or likely to support 13 federal and state-listed protected species (Cox, personal communication, 2010; NECD 2001). Listed species include the Indiana bat (FE, SE)[1], bald eagle (FP, SSC), peregrine falcon (SE), northern harrier (SE), osprey (SE), Henslow's sparrow (SE), sedge wren (SE), upland sandpiper (SE), least bittern (SE), and Virginia rail (SE). An additional 15 species of birds, mammals, and herptiles that have been documented at NECD are state-listed species of concern, and five species of vascular plants are on the state watchlist. Finally, the installation has areas that support five vegetative community types that are rare, imperiled, or critically imperiled in Indiana.

No federal- or state-listed endangered or threatened plant species have been found at NECD. Table 4-8.3 provides information on the occurrences of endangered, threatened, and rare species at NECD.

Table 4.8-3.
Endangered, threatened, and rare species at NECD

Species	Federal and state status	Species notes
Indiana bat	FE, SE	The species requires two types of habitat: (1) winter hibernation sites and (2) summer roosting sites and foraging areas. NECD supports summer roosting sites and foraging areas. Documented along Little Vermillion Creek and Little Raccoon Creek. Important foraging habitat at NECD likely includes forest stream corridors. The species likely uses upland forests, forest and crop edges, cropland, and old field areas for foraging.
Bald eagle	FP, SE	Have nested on NECD in the past in mature trees along the Wabash River adjacent to the Ranney Wells area, but no current active nests. Nearest active nest is on Sugar Creek, about 0.5 mile from NECD.
Henslow's sparrow	FSC, SE	Inhabits grasslands. An uncommon summer resident in Indiana. Breeds in low-lying weedy and grassy meadows, grassy areas bordering wetlands, old pastures, and agricultural grasslands. Observed at NECD in 1997 adjacent to the MAPS station in the north-central portion of NECD, and confirmed breeding at the installation during the 2007 field season.
Sedge wren	SE	Breeding habitat typically consists of tall, mixed grasses and sedges in wet meadows and the damp edges of marshes. Indiana is near the southern edge of the species summer range. Detected at NECD during the 1993 to 1994 and 1999 breeding bird surveys.
Virginia rail	SE	A wetland bird. Considered a rare species at NECD. Observed only at the gypsum sludge basins.
Least bittern	SE	A small wading bird, the smallest heron found in the Americas. Nest in large marshes with dense vegetation. The numbers of these birds have declined in some areas due to loss of habitat.
Ospery	SE	A diurnal, fish-eating bird of prey. Tolerates a wide variety of habitats, nesting in any location near a body of water providing an adequate food supply. Osprey populations declined drastically apparently from insecticides such as DDT. Since DDT was banned, the Osprey has made significant recoveries.
Northern harrier	SE	A medium-sized raptor that prefers open country, like grasslands, wetlands, meadows, and cultivated areas. They nest on the ground in thick grass, shrubbery, or other vegetation. It a large, global range and a population estimated at 1.3 million.

[1] F = federal, S = state; E = endangered, P = protected (under the Bald and Golden Eagle Protection Act), T = threatened; SSC = state species of concern

Table 4.8-3.
Endangered, threatened, and rare species at NECD (continued)

Species	Federal and state status	Species notes
Upland sandpiper	SE	A shorebird of grasslands, not shores. It inhabits native prairie and other open grassy areas in North America. Once abundant in the Great Plains, it has undergone steady population declines since the mid-19th century, because of hunting and loss of habitat.
Peregrine falcon	SE	The peregrine falcon was virtually exterminated from eastern North America by pesticide poisoning in the mid-20th century. Restoration efforts have succeeded in population recovery. Spotted at NECD during the 2009 Christmas bird count.
Large yellow lady's slipper	SWL	Inhabits mesic to dry-mesic upland forests. One population has been documented at NECD.
Goldenseal	SWL	Inhabits mesic upland deciduous forests Two populations have been identified at NECD.
American pinesap	SWL	Typically occurs in association with pine or oak-hickory forests on mesic to dry sites. One population has been found on NECD.
American ginseng	SWL	Inhabits dry-mesic to mesic woods. Eight population sites have been discovered on NECD. One site appeared to be an older population that has not been subject to collection pressures or major disturbances; therefore, it represents an ecologically significant native community.
Wood's hellebore	SWL	Inhabits mesic to moist woods. Three populations have been found at NECD.

Note: FE = federal endangered, FT = federal threatened, FSC = federal species of concern, SE = state endangered, SSC = state species of concern, SWL = state watch list

The Indiana bat is a species at NECD that is of particular concern to the U.S. Fish and Wildlife Service (USFWS). In 1999 the USFWS issued a biological opinion concerning agricultural pesticide application practices at NECD and the potential for effects on the Indiana bat (USFWS 1999). The USFWS noted in its opinion that there is a potential for *take* of Indiana bats through exposure to contaminated water and prey.[2] Contaminated water in stream corridors and waterways where the species forages on NECD has the potential to harm the species. (Contamination in surface waters is discussed in Section 4.7, *Water Resources*.) The USFWS further noted that the use of pesticides with the potential to affect Indiana bats would require consultation with the USFWS (Pesticide use on NECD is discussed in Section 4.13, *Hazardous and Toxic Materials*.) The USFWS provided a list of recommended management practices to be incorporated into agricultural lease agreements that would reduce the potential for take of the species. The following are the measures recommended by the USFWS.

- Maintain a 10-meter buffer for herbicide applications between agriculture outlease fields and forest vegetation
- Maintain a 20-meter buffer for insecticide applications between agriculture outlease fields and forest vegetation
- Eliminate the use of aerial applications of pesticides

[2] *Take* is defined in the Endangered Species Act (16 U.S.C. 1531–1544) as, "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

- Avoid pesticide applications in gusty winds or winds greater than 5 miles per hour
- Avoid ultra-low volume and mist pesticide applications

Recommended management measures for other protected species on NECD are provided in Appendix D. Historical Indiana bat roost tree locations are shown on Figure 4-1.

Biological surveys conducted at NECD have revealed that the Indiana bat forages and roosts at the installation (NECD 2009). Specifically, the Indiana bat was observed to forage along Little Vermillion Creek east of Miller Cemetery, along the unnamed creek at the railroad spur east of the fenced installation property, and along Little Raccoon Creek east-southeast of the NECD sewage treatment plant. Indiana bats were tracked via radio telemetry to eight maternity roost trees on NECD property during surveys conducted in 1998, 2003, and 2008. Although roosting and foraging habitat at NECD composes a small fraction of the Indiana bat's total summer range, the habitat is important to the local population and potentially to the long-term survival of the species. Therefore, NECD prepared an Endangered Species Management Plan (ESMP) for the species' management on the installation (NECD 2009).

4.8.1.4 Forest Management

Forested land on NECD amounts to 2,083 acres (NECD 2008). The installation has divided timber areas into 55 timber stands, and 18 of those stands are subdivided into two or more substands. Most of the timber stands are near Little Vermillion Creek, Little Raccoon Creek, and Buck Creek (a tributary of Little Raccoon in the southwest portion of the installation). In spring 2000, the total volume of sawtimber on NECD was 4,878,260 board feet. The annual timber growth rate at NECD was 3.7 percent, providing an estimated 180,000 board feet of sawtimber per year. The annual allowable harvest at NECD is based on one-half of the annual growth, or about 90,000 board feet annually.

Commenting on NECD's INRMP (NECD 2001), the Indiana Department of Natural Resources (INDNR) noted that the forest resource of NECD was threatened by an unregulated deer population and recommended that instituting a deer harvest should be a priority at the installation's natural resources management (Reiter 2001). Aerial surveys of NECD by INDNR's Division of Fish and Wildlife in March 1989 indicated a deer population on NECD of as many as 55 deer per square mile, while an optimum winter herd density was estimated to be about 20 deer per square mile. INDNR noted the high potential for damage to forest resources and crops and for personal injury from deer/vehicle collisions with such a high deer population. A hunting program was implemented at NECD in 1989 and 13 deer hunting areas were established. Through the program, the deer population was significantly reduced during the 1989 through 1991 deer hunting seasons (NECD 2001). Hunting programs on NECD also include small game and turkey.

4.8.1.5 Agriculture Outlease Program

An agricultural outlease program has been in effect at NECD since 1945. Leasees provide the installation with valuable grounds maintenance services (roadside, ditch, and conservation buffer mowing; waterway maintenance; drain tile repair; weed control; soil fertility management; fence construction and repair; and planting and maintaining ground cover and other vegetation that supplements wildlife habitat). Agriculture is the dominant land use both at the installation and in surrounding communities. Approximately 40 percent (2,800–2,900 acres) of the installation land is leased for agricultural production of hay, soybeans, and corn and for grazing (Cox, personal communication, 2008). In 2009, 2,991 acres were leased for agricultural purposes (Cox, personal

communication, 2009). Each lease is for 1 year with a maximum of four 1-year renewals (5 years total).The following management measures have been implemented for the agricultural outlease program to ensure sustainable management and conservation of soil, water, and wildlife resources at NECD.

- Implement mandatory soil conservation measures for all agricultural outleases. Conservation measures include the following:
  - No-till and conservation tillage practices
  - Crop rotations
  - Planting cover crops after tillage of a soybean rotation
  - Planting grasses or clovers for field borders and grassed waterways
  - Planting windbreaks where deemed necessary to reduce wind erosion
  - Construction and maintenance of structures to manage stormwater flows
- Eliminate cattle from riparian areas
- Implement integrated pest management practices for all agricultural outleases
- Implement provisions contained in the ESMP for the Indiana bat regarding the general application of pesticides on all agricultural outleases

4.8.1.6 Wetlands

Eight distinct wetland complexes and a total of approximately 295 acres have been delineated at the installation (NECD 2001; NECD GIS 2009). Wetlands are concentrated along creeks on the installation (both the east and west branches of Little Vermillion Creek, Buck Creek, and Little Raccoon Creek, and their on-post tributaries).

Soil types at NECD suggest that the flat upland portions of the installation once supported substantial areas of depressional, slough-swale wet prairie wetlands, within a matrix of tallgrass prairie (NECD 2001). The soils have been extensively manipulated through surface ditches and subsurface drain tiles to improve soil drainage and support row crop production. Consequently, many of the fragmented wetlands that remain on NECD are remnants of much larger systems, and the current vegetation cover types reflect an alteration of the natural hydrology that is more favorable to developing drier, forested, and scrub-shrub wetland communities (NECD 2001). Despite their fragmentation, wetland areas at NECD still perform important water quality functions and provide valuable habitat for wildlife and avifauna.

4.8.2 Environmental Consequences

4.8.2.1 Accelerated Disposal Alternative

Long-term minor adverse effects on biological resources would be expected under the Accelerated Disposal Alternative. Property disposal, lease, or transfer of ownership would not have an adverse effect on biological resources. Such activities normally do not require

environmental analysis (32 CFR 651, Appendix B: Categorical Exclusions).[3] However, the Army has an active INRMP at NECD through which the protection of sensitive natural resources (such as endangered and threatened species and prairie restoration areas) are coordinated with other installation activities. Therefore, after the property was disposed of, leased, or transferred to a few or many separate entities, it is reasonable to expect that a less active, coordinated, and effective effort to protect the natural resources that are found on the property would result. Legal protections for listed species and wetlands would remain in effect, and management prescriptions in the ESMP for the Indiana bat would continue to be implemented after the property is transferred (NECD 2009). In accordance with the ESMP, all future proposed transfers would be coordinated with the USFWS Bloomington Ecological Services Office (NECD 2009). It is expected that the land under agricultural lease would be transferred and the lease program would remain in effect.

4.8.2.2 Traditional Disposal Alternative

Long-term minor adverse effects on biological resources would be expected under the Traditional Disposal Alternative. The effects discussion for the Accelerated Disposal Alternative applies equally to the Traditional Disposal Alternative.

4.8.2.3 Caretaker Status Alternative

Long-term minor adverse and beneficial effects on biological resources would be expected under Caretaker Status Alternative. Though the Army would still own and manage the land under Caretaker Status, a minimal security staff would likely attend the installation. Active natural resources management would not occur under the alternative, and though legal protections for sensitive resources would remain in effect, no active management of the resources would occur. Conversely, without an active military mission on the property, some areas would be expected to revert to a natural state to a degree that would depend on the amount of time that the property remained in Caretaker Status. It is anticipated that the agricultural lease program would continue under Caretaker Status.

4.8.2.4 No Action Alternative

No adverse effects on biological resources would result from implementing the No Action Alternative. Active Army management of the natural resources at NECD would continue under the alternative.

4.8.2.5 Reuse Scenarios

4.8.2.5.1 Medium-Low-Intensity Reuse

Long-term minor adverse effects on biological resources would be expected under the MLIR scenario. No adverse effects on federal listed species would be expected. Short-term minor adverse effects on wetlands would be expected. The NeCDRA final reuse plan states (Section 5, page 93) *The Reuse Plan for the Newport Chemical Depot is rooted in two fundamental*

[3] 32 CFR 651, Appendix B (Categorical Exclusions), Section 1, (f) Real estate activities: (1) Grants or acquisitions of leases, licenses, easements, and permits for use of real property or facilities in which there is no significant change in land or facility use. … (3) Transfer of real property administrative control within the Army, to another military department, or to other federal agency… (6) Disposal of real property (including facilities) by the Army where the reasonably foreseeable use will not change significantly.

principles: the continuation and conservation of agricultural and natural resource uses at the Depot, and economic development and the creation of jobs for the region. The Reuse Plan embraces both of these principles to a significant degree (NeCDRA 2009). The plan is geared toward business and technology development while also protecting thousands of acres of natural and agricultural areas. Agriculture, natural areas and open space, and parkland land uses account for roughly one-half of the site's approximate 7,130 acres in the reuse plan.

Natural and Open Space areas account for approximately 2,305 acres (32 percent) of the NECD land area, and are comprised of Wooded areas, Natural Drainageways, Green Connectors, and Agriculture & Forestry land areas. All existing natural areas and drainageways on NECD are to be preserved under the reuse plan.

Wooded areas: Four major wooded areas are located on the Depot. The largest (approximately 900 acres) is in the north central part of the Depot and contains several branches of Little Vermillion Creek, two of the six historic cemeteries, and the Army's small arms range. The second largest wooded area (approximately 400 acres) is in the southeast corner of the Depot and contains one historic cemetery, portions of Little Raccoon Creek, the Depot's sewage treatment plant, and several areas with "no excavation" environmental land use controls that are maintained within a natural conservation area. Two other smaller wooded areas (approximately 100 acres each) are in the far northwest and northeast corners of the Depot. Each of these two areas contain an historic cemetery as well.

Natural drainageways: The reuse plan protects two natural drainageways that branch south from the largest wooded area in the north central part of the Depot. Portions of the Army's Prairie Restoration Area, several wetlands, and one of the historic cemeteries are within these natural drainageways.

Green connectors: The reuse plan provides a contiguous system of natural areas and open spaces by creating green "connectors" to bridge the gaps between the four major wooded areas described above.

Agriculture and forestry: The areas designated for Agriculture and Forestry uses account for approximately 1,250 acres (18 percent) of Depot land, and are where some of the best of the agricultural soils are found. There are four major agriculture and forestry areas in the reuse plan. The two largest (approximately 500 and 600 acres) are at the far western and southwestern ends of the Depot. The two smaller sites (each about 75 acres) are in the northwestern and south central parts of the Depot. Most of the land designated for agriculture and forestry is being farmed, with the exception of a portion of the land immediately north of the US Coast Guard facility. In addition to row crops and forestry, other types of agricultural uses would be suitable for these areas, including tree plantations/forestry, tallgrass prairie, prairie grass hay production, specialty and greenhouse crops, dairy production, and livestock grazing and production.

Parkland: Parkland accounts for approximately 90 acres (approximately 1 percent) of the Depot property under the reuse plan. Bookends Park is a proposed public park that would cover approximately 40 acres near the center of the Depot. Central Parkway Linear Park comprises approximately 50 acres along the main arterial roadway of the Depot in the reuse plan.

Riparian areas important to the Indiana bat occur in forested areas protected as natural areas in the reuse plan, and the bats would remain protected under the Endangered Species Act. The MLIR scenario, therefore, would not be expected to adversely affect the species. The management practices recommended by the USFWS for protection of the Indiana bat on NECD (see Section

4.8.1.3) would largely remain in effect after transfer of ownership of the property. USFWS and NeCDRA would negotiate the terms of an agreement regarding protection of the Indiana bat on the property during the property transfer process, though ultimate responsibility for protection of the bat on the property would rest with the owner(s) of the property on which the species occurs and owners of adjacent areas where activities (such as agriculture) could affect the species.

Prairie restoration areas are designated under the reuse plan to be partly in business and technology areas, so eventually (as business development occurs) some loss of the restored prairie areas would be expected. Business development on the property would result in the conversion of some open space to developed areas, so minor adverse effects on common species found on the property would be expected.

Wetlands on the Depot occur primarily along water courses, and under the reuse plan these areas occur within natural areas and open space areas. No direct effects on wetlands, therefore, would be expected under the MLIR scenario. If any development encroached on an area that potentially contained wetlands, a jurisdictional determination of the extent of the wetlands would be required before the development could proceed. Wetlands could be indirectly affected by runoff from nearby development. Any development that would result in a discharge to or filling of wetlands would have a short-term adverse effect on the affected wetland and would have to be permitted by the U.S. Army Corps of Engineers. The U.S. Army Corps of Engineers would decide on any mitigation required for direct or indirect impacts on wetlands, which the developer would be required to implement.

4.8.2.5.2 Low-Intensity Reuse

Long-term minor adverse effects on biological resources would be expected under the LIR scenario. Effects similar to those discussed for the MLIR scenario (Section 4.8.2.5.1) would be expected, though the effects on common species, state-listed species, and wetlands would be expected to be less than under the MLIR scenario. No effects on federal listed species would be expected under the LIR scenario.

4.9 CULTURAL RESOURCES

Cultural resources are composed of historic properties (buildings, structures, districts, landscapes, and such, as defined by Army Regulation 200-1 [AR 200-1] and the National Historic Preservation Act [NHPA]), archaeological sites (as defined and governed by the Archaeological Resources Protection Act, AR 200-1, and the NHPA), Native American sacred sites (as identified in EO 13007 and the American Indians Religious Freedom Act), traditional cultural properties (as defined in the NHPA and as described in National Register Bulletin 38), and sites and artifacts associated with Native American graves (as defined and governed by the Native American Graves Protection and Repatriation Act).

The resources described below have been identified within the boundaries of NECD. Additional information on cultural and historic resources on NECD refer to the Installation Cultural Resources Management Plan (ICRMP) or other studies referenced below.

4.9.1 Affected Environment

4.9.1.1 Archaeological Resources

Of the acreage occupied by NECD, approximately 2,700 acres have been systematically examined for the presence of archaeological sites. A summary of data on all previous archaeological investigations is presented in the 2002–2006 NECD ICRMP. A more recent investigation of an additional 1,200 acres was completed in 2009. The investigation of approximately 1,600 additional acres at NECD is in the planning stages.

Between 1976 and 2007, archaeologists had completed 21 archaeological investigations on NECD. A review of materials provided by NECD, archaeological records using the State Historic Architectural and Archaeological Research Database online, and a records check at the Indiana Department of Natural Resources - Division of Historic Preservation and Archeology (IDNR - DHPA) in January 2009 found a total of 281 sites recorded as a result of previous archaeological investigations up to 2007. Post-2000 studies are summarized below. All the investigations are considered to be relevant to the 2008–2009 archaeological survey.

To date, no archaeological sites recorded at NECD have been determined eligible for the National Register of Historic Places (NRHP). However, 23 sites were recognized as significant and appear to exhibit potential eligibility. Over the past few decades, archaeologists have identified hundreds of sites in the region representing almost all phases of occupation throughout prehistory and history. Although mortuary sites, food processing sites, and habitation areas are among the site types identified, many prehistoric sites are categorized as small, ephemeral, lithic scatters. Later in time, the historic period is generally represented by nineteenth and twentieth century farmsteads (Cantin 2007a).

Before developing the 2002–2006 NECD ICRMP, a total of 262 sites had been identified on NECD. Of those sites, 32 are historic, 194 are prehistoric, and 36 are multi-component prehistoric/historic sites. Of those sites, 238 sites have been evaluated and determined ineligible for listing in the NRHP; no formal evaluations have been conducted on the remaining 24 sites. In addition, approximately 66 pre-1942 Euro-American potential sites have been identified from archival information but have not been archaeologically recorded. Investigations from 2000 through 2007 resulted in documenting 19 additional sites (16 prehistoric, two historic, and one multi-component) on the installation.

A Phase I archaeological resources survey of 1,200 acres of land designated as exhibiting *high probability* for archaeological resources was conducted between September 15, 2008, and January 16, 2009. The Phase I survey resulted in documenting 110 previously unknown and two previously recorded archaeological resources, including 82 prehistoric sites, 20 historic sites, and 10 mixed prehistoric/historic sites. Six of the sites are recommended potentially eligible to the NRHP, and Phase II Testing was recommended. No further investigation for the remaining 107 sites was recommended. On the basis of the earlier studies and the Phase I described above 391 archeological sites have been identified, of which only 23 are potentially eligible for the NRHP.

In response to this BRAC action, NECD has coordinated with the Indiana SHPO, potentially affected Native American tribes and other agencies. Coordination letters and responses are provided in Appendix E.

4.9.1.2 Historic Buildings and Structures

In 1984, a report prepared on behalf of the National Park Service for the U.S. Army Materiel Development and Readiness Command (DARCOM) documented 42 of 339 standing structures at NECD. The report categorized properties into Categories I, II, III, or IV. Category I represents properties of major importance, Category II properties of importance, Category III properties of minor importance, and Category IV properties of little of no importance. The report, which focused on the installation's historical associations with World War II, concluded that no Category I, II, or III properties were present at NECD (ICRMP 2002). Since that time, no formal NRHP evaluation has been conducted of the installation's built environment. To complete the Section 106 process for NECD, those buildings on the installation not covered by Army Program Comments will undergo evaluation for the NRHP (Morgan, Personal Communication, 2010).

Program Comments fulfill National Historic Preservation Act (NHPA) compliance requirements for an entire category of undertakings including renovation, demolition, or transfer, sale or lease from Federal ownership for a particular building type. In 2007, the Advisory Council on Historic Preservation (ACHP) issued Program Comments for three World War II and Cold War Era military property types. At NECD, the Program Comments apply to Army-owned ammunition production facilities (Army Real Property category group 226XX) built between 1939 and 1974 and all Army-owned buildings and structures designed and built as ammunition storage facilities (Army Real Property category group 42XXX) between the years 1939-1974. Buildings at NECD falling under those two category codes require no further Section 106 action.

4.9.1.3 Historic Districts

No previously recorded historic districts or historic landmark districts within NECD have been identified.

4.9.1.4 Historic Markers, Monuments, and Memorials

No previously recorded historic markers, monuments, or memorials have been identified within NECD.

4.9.1.5 Cemeteries

The ICRMP indicates that six Historic Period cemeteries are known to exist within NECD. The cemeteries are the Memorial Chapel Cemetery, Miller Cemetery, Walnut Hill Cemetery, Juliet Cemetery, Carmack Cemetery and the Burson Cemetery. Generally, cemeteries are not assigned archaeological or historic site numbers in the state system because they are protected by other laws; however, the Carmack Cemetery is one exception. It has been recommended as potentially eligible for listing in the NRHP. The cemetery dates range in the early to late nineteenth century and it has the potential for contributing knowledge regarding the demography, mortuary practices, nutrition, or cause of death of a particular cultural group.

4.9.1.6 Traditional Cultural Properties, National Historic Landmarks, and World Heritage Sites

The National Register Bulletin 38 (National Park Service 1991b), states that a Traditional Cultural Property (TCP) is a place that represents, "those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally, or through practice." Examples of TCPs include the following:

- A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world

- A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice

- A location where a community has traditionally carried out economic, artistic or other cultural practices important in maintaining its historical identity

According to the ICRMP, no focused studies have been undertaken at NECD for identifying and evaluating TCPs. However, because of the longstanding and varied Native American history associated with NECD, it is possible that TCPs are present.

Additionally, as defined in Executive Order 13007 (May 24, 1996), a Native American sacred site is any specific, discrete, narrowly delineated location on federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion, provided that the tribe or appropriately authorized representative of an Indian religion has informed the agency of the existence of such a site. NECD has no known sacred sites (ICRMP 2002).

4.9.2 Environmental Consequences

4.9.2.1 Accelerated Disposal Alternative

No effects or long-term minor adverse effects on cultural resources would be expected under the Accelerated Disposal Alternative. Archaeological sites that are deemed potentially eligible for inclusion in the NRHP are still being addressed under the section 106 compliance requirements. Under this alternative, attention to cultural resources under the state and federal requirements falls to the responsibility of the new owner. Transferring such resources from federal to private or local government ownership could reduce the quality of care that the resources receive. To eliminate adverse effects caused by the transfer of the historic properties out of federal ownership, the Army will prepare a Memorandum or Programmatic Agreement that will be signed by the INDNR - DHPA and Army. The agreement will contain a preservation covenant that will afford protection for all historic properties that have been determined eligible or potentially eligible for the NRHP.

4.9.2.2 Traditional Disposal Alternative

Effects on cultural resources under the Traditional Disposal Alternative would be similar to those discussed in section 4.9.2.1.

4.9.2.3 Caretaker Status Alternative

No effects or long-term minor adverse effects on cultural resources would be expected under the Caretaker Status Alternative. As long as the property is under care of the U.S. government, eligible cultural resources would be maintained and protected in accordance with the NHPA. If properties remain in caretaker status for an extended period, it is possible that archaeological resources would deteriorate. Reduction of management activities for longer than one year could affect archaeological sites and historic resources. Completing the federal section 106 compliance

and review process is recommended for the sites on NECD deemed potentially eligible for inclusion in the NRHP before caretaker status to reduce the potential deterioration that would occur under a reduced maintenance and oversight management plan.

4.9.2.4 No Action Alternative

No adverse effects on cultural resources would be expected under the No Action Alternative.

4.9.2.5 Reuse Scenarios

4.9.2.5.1 Medium-Low-Intensity Reuse

No adverse effects or long-term minor adverse effects on cultural resources would be expected under the MLIR scenario. As stated above, no archaeological sites recorded at NECD have been determined eligible for the NRHP. For sites determined not eligible for inclusion to the NRHP, no adverse effects from any reuse scenario would be expected to occur. However, 23 sites on NECD are recognized as significant and appear to exhibit potential eligibility for the NRHP. Additional sites may be identified once the cultural resources survey of the additional 1,600 acres at NECD is complete. Once the federal section 106 compliance and review process is complete for those sites, adverse effects on significant sites can be determined. If any of the sites are recommended for inclusion on the NRHP, the MLIR scenario could be a viable scenario with no adverse effects on a case-by-case basis. To eliminate adverse effects caused by the transfer of the historic properties out of federal ownership, the Army will prepare a Memorandum or Programmatic Agreement that will be signed by the INDNR - DHPA and Army. The agreement will contain a preservation covenant that will afford protection for all historic properties that have been determined eligible or potentially eligible for the NRHP.

4.9.2.5.2 Low-Intensity Reuse

No effects or long-term minor adverse effects on cultural resources would be expected under the LIR scenario. Effects similar to those discussed for MLIR (Section 4.9.2.5.1) would be expected, though to a lesser degree under LIR.

4.10 SOCIOECONOMICS

4.10.1 Affected Environment

The socioeconomic indicators used for this study include employment and industry, income, population, housing, public services, and recreation. Environmental justice and protection of children also are addressed. These indicators characterize the region of influence (ROI).

The ROI is a geographic area selected as a basis on which social and economic impacts of project alternatives are analyzed. The criteria used to determine the ROI are the geographic location of NECD; the residency distribution of NECD personnel; commuting distances and times; and the location of businesses providing goods and services to NECD. On the basis on those criteria, the ROI for the social and economic environment is the Terre Haute, Indiana Metropolitan Statistical Area (MSA). The Terre Haute MSA includes Clay, Sullivan, Vermillion, and Vigo counties in Indiana. NECD is in Vermillion County. The ROI covers an area of 1,465 square miles. The region is very rural. The closest metropolitan area to NECD is the city of Terre Haute, 32 miles to the south.

The baseline year for socioeconomic data is 2005, the date of the BRAC Commission's announcement of the NECD closure. Where 2005 data are not available, the most recent data available are presented.

4.10.1.1 Economic Environment

Employment and industry. The ROI has a civilian labor force of about 80,500, a decrease of 1 percent from the 2000 labor force of about 81,400. The ROI average annual unemployment rate was almost 7 percent, higher than the national unemployment rate of 5 percent (BLS 2006).

The primary sources of ROI employment were government and government enterprises; retail trade; manufacturing; and health care and social assistance. Together, those industry sectors accounted for more than 50 percent of regional employment. The largest employer in the ROI was the government sector, which accounted for 15 percent of regional employment. Within the government sector, the majority of the jobs (85 percent) were in the state and local government, 11 percent were federal civilian jobs, and 4 percent were federal military jobs. About 300 government contractor personnel work at NECD. The next two largest employers in the ROI were the retail trade and manufacturing sectors, each accounting for about 14 percent of total employment. The health care and social assistance sector accounted for 11 percent of regional employment (BEA 2008a).

Income. ROI income levels are lower than state and national averages. The per capita personal income (PCPI) of the ROI was about $20,700. That PCPI was 92 percent of the state average of $22,519 and 83 percent of the national average of $25,035. ROI median household income is about $36,300, which is 83 percent of the state median household income of $43,993 and 78 percent of the national income of $46,242 (U.S. Census Bureau 2006a).

Population. The ROI's population was almost 159,000. The ROI population decreased about 1.5 percent between 2000 and 2005. During the same period, the nation's population increased by 5 percent (U.S. Census Bureau 2006a, 2006b).

4.10.1.2 Sociological Environment

Housing. No residential family housing units or barracks are on NECD.

About 75,600 housing units were in the ROI, of which 90 percent (about 68,000 units) were occupied and 10 percent (about 7,600 units) were vacant. Of the occupied units, 70 percent were owner occupied, and 30 percent were renter occupied. The median value of ROI owner-occupied housing was $80,700, which is 48 percent of the national median value of $167,500. ROI median gross rent was $511 a month, or 70 percent of the national median gross rent of $728 a month. The ROI housing stock increased 4 percent (3,000 units) between 2000 and 2005 (U.S. Census Bureau 2000, 2006a).

Law enforcement, fire protection, medical services. NECD is patrolled by security personnel 24 hours a day, 7 days a week. Patrols are scheduled on a greater frequency than might be expected in a municipality (NECD 2008). Off-post law enforcement is provided by county sheriff's offices and municipal and state law enforcement.

The NECD Fire Department maintains a 24-hour staff in Building 709A. The Fire Department is responsible for fighting fire; providing emergency medical care and ambulance service; providing

fire, fire extinguisher, first aid, and CPR training; and conducting fire extinguisher and fires safety building inspections (Mason & Hanger–Silas Mason, Co., Inc. 1994).

The NECD medical department consists of two full-time nurses, one full-time medical technologist, and two part-time doctors on contract. The medical department performs physicals, blood and workups, x-rays, and emergency care (Mason & Hanger–Silas Mason, Co., Inc. 1994).

Five hospitals are in the ROI that provide short-term acute care and critical access care (American Hospital Directory 2008).

Schools. No primary or secondary schools are on NECD. The ROI has 8 public school districts with 73 schools and a total enrollment of more than 27,400 students. Also, about a dozen private schools are in the ROI with a student enrollment of about 2,000 (NCES 2007).

Colleges or universities in the ROI include Indiana State University, Ivy Tech College, St. Mary of the Woods College, and Indiana Business College.

Support services, shops, and recreation. No support services, shopping, or recreation facilities are on NECD. Services such as gas stations, restaurants, and convenience and grocery stores are available within a 10-mile radius of NECD. The nearest major municipalities to NECD are Terre Haute, Indiana, and Danville, Illinois, which are both about 30 miles from NECD. Typical service, retail, and recreation facilities are available in those cities.

4.10.1.3 Environmental Justice

On February 11, 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. The Executive Order is designed to focus the attention of federal agencies on the human health and environmental conditions in minority communities and low-income communities. Environmental justice analyses are performed to identify the disproportionate placement of high and adverse environmental or health impacts from proposed federal actions on minority or low-income populations, and to identify alternatives that could mitigate these impacts.

Minority populations are identified as Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and other Pacific Islander; persons of two or more races; and persons of Hispanic origin. Minority populations should be identified where either the minority population of the affected area exceeds 50 percent or the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (CEQ 1997). As of 2005, 94 percent of the ROI population was white and 6 percent was of a minority population. Less than 1 percent of the ROI population was of Hispanic or Latino origin (note that persons of Hispanic origin can be of any race, and so are already included in applicable race categories). The ROI had a lower percentage of minority populations compared to Indiana and the United States, which had 14 percent and 25 percent minority populations, respectively (U.S. Census Bureau 2006a).

Poverty thresholds established by the Census Bureau are used to identify low-income populations (CEQ 1997). Poverty status is reported as the number of persons or families with income below a defined threshold level. As of 2005, about 16 percent of ROI residents were classified as living in poverty, higher than Indiana's 12 percent poverty rate and the national poverty rate of 13 percent (U.S. Census Bureau 2006a).

4.10.1.4 Protection of Children

Executive Order 13045, *Protection of Children from Environmental Health and Safety Risks*, requires federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children.

Children can be present on NECD as visitors (e.g., with a parent that works at NECD), but that is infrequent. NECD has taken precautions for children's safety by a number of means, including required adult supervision, fencing, controlled access gates, and limiting access to certain areas.

4.10.2 Environmental Consequences

4.10.2.1 Accelerated Disposal Alternative

Short-term minor adverse effects on economic activity would be expected from implementing the Accelerated Disposal Alternative. Upon closure and transfer or disposal of the property, the local economy would be adversely affected by the loss of jobs provided by NECD and by the property being mostly idle (economically) until the new property owners could begin activities related to reuse. No disproportionate effects on environmental justice or the protection of children would be expected.

4.10.2.2 Traditional Disposal Alternative

Short- and long-term minor adverse effects on economic activity would be expected from implementing the Accelerated Disposal Alternative. The socioeconomic effects under the alternative would be similar to those under the Accelerated Disposal Alternative, but the retention of some of the property by the U.S. government would slow the transition of that property to economic activity. Those parcels therefore, would remain economically idle for longer than they would under accelerated disposal. No disproportionate effects on environmental justice or the protection of children would be expected.

4.10.2.3 Caretaker Status Alternative

Long-term minor adverse effects on economic activity would be expected. Similar to the Accelerated and Traditional Disposal Alternatives, NECD would cease operations, but the property would remain in caretaker status for an indefinite period (assumed to be 1 year or more). Minimal spending for a caretaker labor force, equipment, and supplies would occur to prevent the property from physical deterioration. The amount of spending and procurement as a result of the caretaker labor force would be a function of demand for maintenance supplies, number of people employed, and salary levels, which would be well below baseline levels. No effects on environmental justice would be expected; however, the empty facilities could present an attractive nuisance to children and a potential safety hazard and therefore an adverse effect on the protection of children.

4.10.2.4 No Action Alternative

No effects would be expected on the economic or sociological environment with the No Action Alternative. NECD would continue to be operated at levels similar to those occurring before the BRAC Commission's recommendation for closure.

4.10.2.5 Reuse Scenarios

4.10.2.5.1 Medium-Low-Intensity Reuse

Economic Environment

The economic effects of implementing the proposed action are estimated using the Economic Impact Forecast System (EIFS) model, a computer-based, economic tool that calculates multipliers to estimate the direct and indirect effects resulting from a given action. Changes in spending and employment caused by the redevelopment and reuse of the site represent the direct effects of the action. Using the input data and calculated multipliers, the model estimates ROI changes in sales volume, income, employment, and population, accounting for the direct and indirect effects of the action.

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

Table 4.10-1 lists the EIFS model input parameters for the two reuse scenarios. EIFS model output data for the reuse scenarios are shown in Tables 4.10-2 and 4.10-3 and in Appendix F.

Table 4.10-1.
EIFS model input parameters for reuse scenarios

Reuse Intensity	Reuse employee population[a]	Change in employee population[b]	Average expenditure per employee[c]	Change in total expenditure[d]
LIR	230	-70	$38,039	-$2,662,730
MLIR	812	512	$38,039	$19,475,968

a. For derivation of employee populations for reuse scenarios, see Table 3-2.
b. Change in employee population equals projected reuse employee population minus NECD baseline employee population. NECD baseline employee population is 300 (see Section 3.5.3).
c. Average expenditure per employee is from Bureau of Economic Analysis (BEA 2008b).
d. Change in total expenditures equals average expenditure per employee multiplied by the change in employee population.

Short- and long-term minor beneficial effects would be expected from reuse. About 800 employees would work on the reused site under the MLIR scenario, as shown in Table 4.10-1. Almost 900 new jobs would be created as a result of expenditures associated with reuse activities, generating increases in local income and spending (Table 4.10-2). ROI income would increase by about $22 million as a result of jobs generated by reuse activities. Sales volume increases attributable to reuse would total about $82 million. Such increases would fall within historical fluctuations and be considered minor (Table 4.10-2 and Appendix F). According to the *Reuse Plan Newport Chemical Depot*, two key objectives of redevelopment would be to generate jobs and attract new business development. Reuse of the NECD property would include business and technology, conference and support facilities, highway-oriented commercial businesses, natural areas and open space, agriculture and forestry, and parkland (recreation). The reuse plan capitalizes on NECD's large land mass and natural features, water resources, and proximity to

highway and rail transportation networks to position the site as a location for large-scale business and technology development, while protecting NECD's natural and agricultural areas. The natural areas and open space, agriculture and forestry, and parkland reuse would account for about one-half of the NECD property, with business and technology, conference and support facilities, and highway-oriented commercial reuse accounting for the other half (NeCDRA 2009).

Table 4.10-2.
EIFS model output—MLIR

Indicator	Projected change	Percentage change	RTV range
Direct sales volume	$27,997,080		
Induced sales volume	$54,874,280		
Total sales volume	$82,871,370	1.43%	-8.16% to 9.51%
Direct income	$13,652,000		
Induced income	$8,603,635		
Total income	$22,255,640	0.66%	-7.60% to 8.09%
Direct employment	643		
Induced employment	257		
Total employment	899	0.99%	-3.33% to 2.67%
Local population	0		
Local off-post population	0	0.00%	-0.75% to 1.22%

Table 4.10-3.
EIFS model output—LIR

Indicator	Projected change	Percentage change	RTV range
Direct sales volume	-$3,827,726		
Induced sales volume	-$7,502,344		
Total sales volume	-$11,330,070	-0.20%	-8.16% to 9.51%
Direct income	-$1,866,484		
Induced income	-$1,176,278		
Total income	-$3,042,763	-0.09%	-7.60% to 8.09%
Direct employment	-88		
Induced employment	-35		
Total employment	-123	-0.14%	-3.33% to 2.67%
Local population	0		
Local off-post population	0	0.00%	-0.75% to 1.22%

It is primarily through the business and technology areas that the reuse plan would accomplish economic development and job creation for the region. Proposed business and technology reuse could include office or office/industrial buildings; research and development/testing facilities; manufacturing; warehousing; multi-modal transportation and logistics facilities; energy production, research, or distribution; educational, institutional, or training facilities; and business-

to-business services and suppliers. Key business targets include major energy producers, advanced manufacturers, and possibly a state correctional facility. The 60-acre Railroad Right-of-Way area located east of the main NECD facility could potentially accommodate a recreational trail or a railroad spur into the NECD property. For business and technology users that would not need large land areas or would prefer a more visible location, two additional business and technology areas would be located along Highway 63 (which provides primary access to NECD). Uses envisioned for the highway-oriented commercial areas include hotel, auto/truck service plaza, restaurants (both sit-down and fast food), and convenience stores. These uses would be oriented not only to motorists traveling along Highway 63, but also to future employees and patrons of businesses on the former NECD property (NeCDRA 2009).

Most of the land designated in the reuse plan for agriculture and forestry is currently being farmed, with the exception of a portion of the land immediately north of the U.S. Coast Guard facility on NECD property, which has some wooded areas. While timber harvesting is not as prevalent as row crops in the region, the reuse plan proposes that tree plantations/forestry would be an allowable reuse in these areas. In addition to row crops and forestry, other types of agricultural uses would be suitable for these areas, including tallgrass prairie, prairie grass hay production, specialty and greenhouse crops, dairy production, and livestock grazing and production, which would generate regional jobs in the agriculture and forestry industry (NeCDRA 2009).

Expenditures associated with redevelopment such as renovation of buildings, construction of new buildings, refurbishing or expanding utility infrastructure, and roads also would result in job creation and increased income and sales volume during redevelopment. Redevelopment is projected to occur over a 20-year period. The preliminary cost data, build out schedules, and facility specific information are not yet available. Such data is subject to change on the basis of market conditions and as plans and architectural designs evolve, making preliminary data very speculative. However, those components would require capital and human resources to build and maintain over their lifetime, and therefore would generate beneficial socioeconomic impacts on the region during periods of construction and renovation.

Sociological Environment

Housing. No effects would be expected. No housing units are on NECD, and residential development is not part of the MLIR plan. No change in housing demand would be anticipated.

Law enforcement, fire protection, medical services. No effects would be expected. Economic development and job creation would generate tax revenues for public services such as law enforcement and fire protection. Redevelopment of NECD is projected to occur over a 20-year period (NeCDRA 2009). Over this time period, the provision of law enforcement, fire-fighting, and medical services (i.e., increasing staff or acquiring new facilities or equipment) as needed would maintain service levels and emergency response times as NECD is built-out during the 20-year development period. The NECD fire department, fire training center, and medical center facilities could be reused for like use.

Schools. No effects would be expected. There are no primary or secondary schools on NECD and schools are not part of the reuse plan.

Services, shops, and recreation. Short- and long-term minor beneficial effects would be expected. Reuse and redevelopment would add some commercial businesses, community, and recreation areas to the ROI. Areas of NECD land along Highway 63 would be designated for commercial

development such as hotels, restaurants, and auto/truck service plazas. Natural areas on NECD would provide for recreational activities such as hiking, camping, fishing, hunting, and access to the Wabash River in the NECD Ranney Wells Area. Two parks are proposed: a centrally located community park is planned around the NECD *Bookends* next to a proposed conference center, and a linear park which also would be connected to the proposed conference center and could be used as a recreation trail. The reuse plan proposes a conference and support facilities area near the geographic center of the NECD property. The proposed uses for this area include a conference center capable of hosting meetings, conferences, demonstrations and exhibits, and other functions consistent with the future uses of the NECD, as well as a variety of public and private community events. Additional uses could include shared research, education, or training facilities, offices for non-profit or public entities, and other facilities to provide support functions. The conference and support facilities area could also accommodate a community facility such as a NECD museum, Tallgrass Prairie Research & Education Center, an amphitheater, health and recreation center, or other similar cultural or community uses (NeCDRA 2009).

Environmental Justice

No effects would be expected. Implementing the proposed action would not result in disproportionate adverse environmental or health effects on low-income or minority populations. Revitalization and reuse of NECD facilities and construction of new facilities would not adversely affect such populations and could benefit persons by providing jobs.

Protection of Children

No effects would be expected. The proposed reuse action would not involve activities that would pose disproportionate adverse environmental or health or safety risks to children. The Reuse Authority's intention is a mixed-use redevelopment of the property for business, technology, commercial, agricultural, and recreational purposes.

4.10.2.5.2 Low-Intensity Reuse

Economic Environment

Short-term minor adverse effects would be expected with implementing the LIR scenario. About 230 employees would work on the reused site under the scenario, about 70 fewer jobs than the NECD baseline employment of 300 (Table 4.10-1). ROI income would decrease by about $3 million from loss of jobs and sales volume decreases would total about $11 million (Table 4.10-3 and Appendix F). The decreases in sales volume, employment, and income would fall within historical fluctuations (i.e., within the RTV range). Reuse of NECD under the LIR scenario would be similar to that of the MLIR scenario (e.g., business and technology, commercial businesses, natural areas and open space, agriculture and forestry, and parkland) but on a smaller scale.

However, note that revitalization and renovation or new construction of facilities, utility infrastructure, and roads might also be needed under the LIR scenario. As with the MLIR scenario, cost expenditures for construction and redevelopment is subject to change on the basis of market conditions and as plans and designs evolve, making preliminary data very speculative. However, these components would require capital and human resources to build and maintain over their lifetime, and therefore would generate beneficial socioeconomic impacts on the region.

Sociological Environment

Housing. Short-term minor adverse effects would be expected. Reuse of NECD facilities under the LIR scenario would result in a net loss of jobs. That could affect housing demand. In the short term, there would be a decrease in demand for housing. In time, the housing market would adjust and stabilize, and no long-term adverse effects would be anticipated.

Law enforcement, fire protection, medical services. Similar effects to those stated above in Section 4.10.2.5.1 would be expected.

Schools. Similar effects to those stated above in Section 4.10.2.5.1 would be expected.

Services, shops, and recreation. Short-term minor adverse effects would be expected. Adverse effects would be expected because of the loss of jobs in the ROI. The demand for public support services, such as unemployment assistance, would be expected to increase.

Environmental Justice

No effects would be expected. Implementing the proposed reuse scenario would not result in disproportionate adverse environmental or health effects on low-income or minority populations.

Protection of Children

No effects would be expected. The proposed reuse action would not involve activities that would pose disproportionate adverse environmental or health or safety risks to children.

4.11 TRANSPORTATION

4.11.1 Affected Environment

4.11.1.1 On-Post Roadways and Transportation

NECD is situated between SR 63 and SR 71. SR 63 is a four-lane divided highway that runs north-south along the eastern perimeter of NECD and provides access to the installation. SR 71 runs north-south to the west of NECD (Figure 2-1). SR 63 and SR 71 merge to the north of NECD. U.S. Route 36 runs east-west to the south of the installation.

The internal roadway network serving NECD includes Patrol Road, South Boulevard, Broadway Boulevard, and 10th Street. Those roadways serve as the primary network for traffic circulation and access to installation activities. Patrol Road circles the entire perimeter of the installation. Main gate access is from SR 63 in the southeastern portion of NECD. The main entrance splits into South Boulevard and Cull Avenue. Primary roads at NECD are generally two-lane paved and vary in condition. Secondary roads are generally gravel or unpaved with many in poor condition.

Two CSX freight rail lines are in the vicinity of NECD. One runs north-south to the east of the NECD boundary, paralleling SR 63, and another runs east-west to the south of the NECD boundary, paralleling U.S. Route 36. NECD has a right-of-way connecting the installation to the CSX freight rail line that runs along the eastern boundary.

A helicopter pad is adjacent to Building 7700. No established airfield exists at NECD.

4.11.1.2 Existing Traffic Conditions

Level of service (LOS) is a qualitative measure of the operating conditions of an intersection or other transportation facility. LOS is measured in terms of the average stopped delay per vehicle entering a signalized intersection, or the average amount of time it takes for vehicles to travel through an intersection. LOS A through LOS D are acceptable. Traffic patterns would be congested, unstable, and normally unacceptable to individuals attempting to use roadways and intersections with LOS E or F.

LOS on SR 63 adjacent to the installation was determined on the basis of traffic count data taken by the Indiana Department of Transportation in 1993 and 1998. All traffic segments and intersections reviewed operated with a LOS A. Therefore. traffic on these roadways (LOS A) and intersections is uncongested, stable, and completely acceptable (ORNL 2002).

4.11.1.3 Public Transportation

No public transit access or bus service is available at NECD. The closest major commercial airport to NECD is Terre Haute International Airport, which is 30 miles to the south. Indianapolis International Airport is approximately 70 miles to the east.

4.11.2 Environmental Consequences

4.11.2.1 Accelerated Disposal Alternative

Short-term minor beneficial effects on transportation and traffic would be expected from implementing the Accelerated Disposal Alternative. The short-term effects would be primarily from a short-term decrease in traffic at the installation. An overview of the effects is presented below. An evaluation of the long-term effects based on the ultimate reuse of the installation is presented in Section 4.11.2.5.

All present active uses on the installation would end, and maintenance activities would begin. Vehicle trips associated with the uses would be eliminated from (*credited to*) the traffic network. That would amount to an immediate dramatic decrease in traffic volume and a subsequent improvement in the LOS at intersections within and adjacent to the installation.

4.11.2.2 Traditional Disposal Alternative

Short-term minor beneficial effects on transportation and traffic would be expected from implementing the Traditional Disposal Alternative. Such effects would be similar to those outlined under the Accelerated Disposal Alternative. An evaluation of the long-term effects based on the ultimate reuse of the installation is presented in Section 4.11.2.5.

4.11.2.3 Caretaker Status Alternative

Short- and long-term minor beneficial effects on transportation and traffic would be expected from implementing the Caretaker Status Alternative. Such effects would be similar to those outlined under the Accelerated Disposal Alternative. However, in addition to the initial maintenance activities, some long-term maintenance activities would occur. Those conditions would remain in place indefinitely. An evaluation of the long-term effects based on the ultimate reuse of the installation is presented in Section 4.11.2.5.

4.11.2.4 No Action Alternative

No effects would be expected under the No Action Alternative. Existing conditions would remain as described in Section 4.11.1.

4.11.2.5 Reuse Scenarios

4.11.2.5.1 Medium-Low-Intensity Reuse

Short-term minor adverse and long-term minor beneficial effects would be expected from implementing the MLIR scenario.

Short-term increases in traffic would occur during construction phases. Traffic would include demolition and construction vehicles during the reuse and redevelopment of the area. The effects would be temporary and would end with the construction phase.

With planned business/technology, commercial, and industrial development the intensity of the use, and the associated traffic, would be approximately the same as under current conditions. The total number of employees would increase from 306 to 812 under the MLIR scenario. These employees would be for warehouse, industrial, and commercial uses outlined in the reuse plan. Although this is a doubling in total employees, the intensity of the use of the roadway network would be limited, and the LOS would likely remain comparable to existing conditions. In addition, beneficial effects offsetting any increases in traffic would result from creating a new east-west parkway connecting SR 63 and SR 71 as outlined in the reuse plan. The new parkway would improve traffic flow in the area and provide greater accessibility to new development on the installation. Secondary roads would be constructed along the parkway to provide access to the areas outlined in the reuse plan. The new roads would be an improvement over the deteriorating condition of some existing roads on NECD. In addition, the roads would provide greater access to the CSX freight rail lines.

4.11.2.5.2 Low-Intensity Reuse

Short-term minor adverse and long-term minor beneficial effects would be expected from implementing the LIR scenario.

Short-term increases in traffic would occur during construction phases. Traffic would include demolition and construction vehicles during the reuse and redevelopment of the area. Those effects would be temporary and would end with the construction phase.

With planned development, the intensity of the use, and the associated traffic, would be less than current conditions. The total number of employees would decrease under LIR scenario. The decrease in traffic would result in a net benefit to the local roadways. As with the MLIR scenario, any infrastructure upgrades would additionally improve those already beneficial effects.

4.12 UTILITIES

4.12.1 Affected Environment

4.12.1.1 Potable Water Supply

Sources and treatment. NECD potable water source is groundwater from the glaciofluvial deposits along the Wabash River. Such deposits are capable of sustaining groundwater yields sufficient for large industrial and municipal supplies, and groundwater is readily available from the glaciofluvial aquifer to meet the demand of NECD. The water supply is obtained from Ranney Well #3 near the Wabash River. Indiana considers this water a groundwater supply that is not under the influence of surface water, meaning the groundwater from the aquifer is of very high quality and does not require filtration before use (Mason & Hanger–Silas Mason, Co., Inc. 1994). Although very hard, the potable water requires minimal treatment other than precautionary chlorination before use (ORNL 2002; DAPMCD 1998). The NECD water system is classified as a Community Water System and completes the water sampling and reporting required for a Community Water System (NECD 2008a).

Distribution and storage. The NECD water distribution system consists of a covered reservoir, tanks, pumps, piping, and controls necessary to provide water for processes, utilities, and fire protection. NECD owns three wells in the Ranney well field, but only one well is used. One of two pumps is used periodically to pump water to the reservoir. The recommended groundwater withdrawal rate from the glaciofluvial deposits along the Wabash River range from about 7.2 to 8.6 million gallons per day, with one pump operating (DAPMCD 1998).

The water is pumped from the well and transported via a new 18-inch plastic line into a 1942-era, 48-inch coated steel line that ascends about 200 feet in elevation before entering the NECD reservoir. Just before entering the reservoir, the 48-inch line splits into two 36-inch lines that pour into NECD's 7 million gallon, aboveground, covered, concrete reservoir. The reservoir was recently inspected and has cracks in need of repair (NECD 2008a).

NECD has two drinking water streams from the reservoir: one for the former industrial areas and one for Administration Building 7700. The stream for former industrial areas is pumped via a 60-horsepower, 300-gallon–per–minute-pump from the reservoir into the drinking water supply system or into the 100,000-gallon 510 Water Tower. The line to the water tower was replaced in 2005. The water for Building 7700 is pumped from the reservoir into a 20-inch-diameter service water line and is chlorinated by injection at Building 7700 (NECD 2008a).

NECD consumes about 10,000 gallons per day. The available water supply at NECD is largely unused because production facilities are no longer active (ORNL 2002; DAPMCD 1998). NECD also provides water to the Vermillion County Jail and Sheriff's Office (NECD 2008a).

4.12.1.2 Wastewater System

The NECD sewage treatment plant has the capability to treat the sanitary waste produced by 2,000 people (ORNL 2002). NECD's sewage treatment plant is a Class B Industrial Wastewater Treatment Facility that uses an activated sludge process. The effluent is discharged into the Wabash River and must meet the limits established in NECD's NPDES permit (Mason & Hanger–Silas Mason, Co., Inc. 1994; NECD 2008a). The sewage treatment plant has a backup generator in case of power outage. Recent maintenance on the sanitary sewer system includes several slip-lining projects to reduce the infiltration and groundwater or rainwater into the system;

manhole rehabilitation; force main replacements; and shutting off portions of the force main no longer in use (NECD 2008a). Mason & Hanger is the contractor responsible for operation and maintenance of the system.

4.12.1.3 Stormwater System

Stormwater runoff at NECD is controlled by both manmade and natural surface drainage channels. Manmade structures include open drainage ditches, grassed waterways, drop inlets, drop spillways, and pipe culverts. Drainage ditches in areas of improved grounds at NECD are generally 4 feet wide and 3 feet deep with a 3 to 1 grade on side slopes and an average 1 percent rate of fall. All open drainage ditches are planted in tall fescue and mowed annually (NECD 2008a).

Stormwater discharges into Little Raccoon Creek are regulated under the NPDES permit (IN 0003506). NECD has also prepared an SWPPP in accordance with the requirements of the NPDES permit. Samples of Little Raccoon Creek have been taken in accordance with the NPDES permit and requirements of the SWPPP. The NPDES permit and SWPPP also require monitoring and inspection of stormwater runoff and reporting to IDEM. No violations were noted (NECD 2008a).

4.12.1.4 Energy Sources

4.12.1.4.1 Electricity

NECD's electrical transmission and distribution system is owned by the U.S. government and is operated and maintained by the government contractor Mason & Hanger. NECD receives electricity from PSI Energy, a wholly owned subsidiary of Duke Energy, at two voltages. Incoming 69 kilovolt (kV) power is protected by an oil circuit breaker and limited by the 2,500 kilovolt-ampere (kVA) transformer at the NECD main substation. A new 3,500 kVA transformer is being installed, and the 2,500 kVA will be retained as a spare. At the NECD main substation, electrical power is converted to 13.8-kV, three-phase delta and distributed through three feeders listed as North Plant, South Plant, and P2 feeders. Each feeder is protected by an air circuit breaker and interconnections are possible. The North Plant normally feeds Chemical Storage Area (300), Central Shops Area (700); the South Plant normally feeds the reservoir, Vehicle Gate 1, and the Ranney well area; and the P2 feeder normally supplied the former NECDF administration area and warehouses, NECD administration area, building 7700, sewage treatment plant, Vehicle Gate 4, and the former TNT plant (NECD 2008a).

Incoming 69 kV power at a substation that served the former NECDF is protected by two circuit breakers and limited by two 7,500 kVA transformers. Electrical power is converted to 4,160-volt, three-phase delta and distributed (NECD 2008a).

Buildings and areas are provided with pad-mounted or pole-mounted transformers. Essential loads are backed up with emergency generators powered by diesel or natural gas. Some of the essential loads include the reservoir, Central Shops Area, Surety Headquarters Building 723A, Building 733K, Storage Magazine Area, 3300 area including magazines and Entry Control Facility, sewage treatment plant, Administration Building 7700 (NECD 2008a).

NECD consumed 23.6 million kilowatt hours (kWh) in 2005. Electricity consumption is projected to decrease to 3.5 million kWh by 2010, after the chemical plant is closed and NECDF is

demolished (Table 4.11-1). In the past 35 years, NECD's highest recorded annual electricity use occurred in 1974, at 27 million kWh (NECD 2008a).

Table 4.11-1.
NECD electricity consumption

Year	kWh
2005	26,307,000
2006	25,732,000
2007	25,235,000
2008 (projected)	24,000,000
2009 (projected)	8,000,000
2010 (projected)	3,500,000

Source: NECD 2008a

4.12.1.4.2 Natural Gas

Mason & Hanger is the operating and maintenance contractor for the NECD, government-owned natural gas distribution system. The natural gas broker Proliance supplies and injects the natural gas into lines owned by Panhandle Eastern, the natural gas transmission company. The incoming natural gas arrives at NECD in a 4-inch-diameter, 600-psi Panhandle Eastern pipeline. Panhandle Eastern reduces the pressure and meters the gas just ahead of the demarcation point. The NECD gas distribution system consists of cathodically protected steel and plastic pipe at 30 psi pressure. A backup system using propane diluted with air can be used when purchased natural gas is curtailed or interrupted. Natural gas is distributed via a plastic pipe to the Central Shops Area and a metal pipe to Building 7700. The gas line to the former TNT plant that now ends at Building 7700 is cathodically protected. NECD's natural gas distribution system primarily serves Mason & Hanger (NECD 2008a).

NECD consumed about 13,800 million British Thermal Units (MBTU) in 2005. Electricity consumption is projected to decrease to 10,000 MBTU by 2010, after plant closure (Table 4.11-2). In the past 35 years, NECD's highest recorded annual natural gas use occurred in 1981, at about 90,800 MBTU (NECD 2008a).

Table 4.11-2.
NECD gas consumption

Year	MBTU
2005	13,788
2006	12,964
2007	14,075
2008 (projected)	14,500
2009 (projected)	10,000
2010 (projected)	10,000

Source: NECD 2008a

4.12.1.4.3 Propane Gas

Mason & Hanger is the operating and maintenance contractor for the NECD, government-owned propane use locations. Propane is used as a backup heating source at Ranney Well #3. Four 100-gallon propane tanks are connected in parallel to a unit heater and tethered to prevent floodwater displacement (NECD 2008a).

4.12.1.4.4 Diesel Storage

Mason & Hanger oversees the diesel storage at NECD. The diesel fuel storage system at NECD is an important backup to the electrical system. During a prolonged electric power outage, most generators would require daily refueling of diesel fuel. Table 4.11-3 lists the NECD diesel storage capacity.

Table 4.11-3.
NECD diesel storage capacity

Location	Capacity (gallons)	Type
Building 733K Emergency Generator	240	AST
Building 412A Firewater Pump	225	AST
Sewage Treatment Plant (Emergency Generator) 6178	550	UST
Building 7700 (Emergency Generator)	550	UST
Building A3200 (Emergency Generator)	1,000	AST
Building 716A (Fuel Dispensing Facility - two USTs)	10,000	UST
NECDF CLA	10,120	AST
NECDF Entry Control Facility	550	UST

Source: NECD 2008a

4.12.1.5 Communications

Mason & Hanger provides oversight of the NECD telephone distribution system and contracts telephone system repairs with the telephone company. NECD has trunk lines and local lines entering the installation in underground cable. Government-owned, above- and below-ground telephone lines are throughout the installation. Copper and fiber optic lines have been installed throughout NECD. AT&T provides telephone service on the lines. Cell phone service is available on NECD, but coverage is incomplete. The U.S. Army's Chemical Materials Agency headquarters in Aberdeen Proving Ground, Edgewood, Maryland, provides Internet service on NECD.

NECD had three public address systems that were used to make informational announcements or warnings in regards to weather events, physical security breaches, or other emergencies (NECD 2008a).

4.12.1.6 Solid Waste

NECD municipal solid waste is collected from NECD by a private contractor (Phelps Brothers) and disposed of at the Sycamore Ridge landfill in Vigo County, Indiana. Sycamore Ridge Landfill has a projected lifespan of 17–20 years and accepts municipal sanitary waste and construction and demolition (C&D) debris.

NECD had a sanitary landfill in the southeast area of the installation (Mason & Hanger–Silas Mason, Co., Inc. 1994). Facility operation records indicate that between 1970 and 1977, the landfill was used to dispose of nonhazardous construction debris from the TNT plant and office and shop waste with no salvage value. The sanitary landfill was closed in 1977 (SAIC 2003). NECD also had a C&D debris landfill on about 4.2 acres east of Little Raccoon Creek about 500 feet south of the sanitary landfill (SAIC 2005a). That landfill is also closed.

NECD has a recycling program in place to recycle white and colored paper, newspaper, plastic, and aluminum. Phelps Brothers also collects the recycling.

4.12.2 Environmental Consequences

The Mason & Hanger is the operating and maintenance contractor for the NECD, government-owned utility systems at NECD. Upon disposal, property ownership is likely to be among different end users such as private landowners, commercial interests, and institutional entities. The utility systems (potable water, wastewater, stormwater, electricity, natural gas, and communications), would likely transfer ownership to Vermillion County or regional centralized utility service providers—such as the Clinton Water Utility (potable water and wastewater); Duke Energy (electricity); and Vectren Energy (natural gas). The ownership of on-site utility infrastructure (such as potable water piping inside privately owned structures) would be the property and responsibility of the new owners.

It is anticipated that both on-site and off-site utility system improvements could be required, especially for those systems that have reached or are near the end of their useful design life. On the basis of the anticipated demand on individual utility systems, the current providers might need to augment the existing utility infrastructure to accommodate the needs of future property owners.

4.12.2.1 Accelerated Disposal Alternative

Short-term minor beneficial and long-term minor adverse effects on utility systems would be expected from implementing the Accelerated Disposal Alternative. Closing NECD would reduce demands on all utility systems in the short term (a beneficial effect), but the reduction in system use could have adverse effect on those systems which rely on a minimum flow for proper operation and maintenance (such as the potable water and sanitary sewer systems). Existing encumbrances (easements, rights-of-way, and groundwater use prohibition) burdening NECD property would continue to be in effect and would be binding on the new owner after transfer or conveyance.

4.12.2.2 Traditional Disposal Alternative

Effects on utilities with the Traditional Disposal Alternative would be similar to those under Accelerated Disposal for the reasons explained in Section 4.11.2.1. Although the Army would continue to own some property under the Traditional Disposal Alternative, it is reasonable to assume that the Army—in anticipation of transferring the parcels of land that it would retain until remediation activities had been completed and to facilitate the redevelopment process—would allow full transfer of all utility systems to occur in much the same manner as would occur under the Accelerated Disposal Alternative and that the Army would become a client of the new utility system owners for the duration of the time that it still owned parcels of NECD property. Existing encumbrances (easements, rights-of-way, and groundwater use prohibition) burdening NECD property would continue to be in effect and would be binding on the new owner after transfer or conveyance.

4.12.2.3 Caretaker Status Alternative

Long-term minor beneficial and adverse effects would occur under the Caretaker Status Alternative. Closing NECD would reduce demands on all utility systems (a beneficial effect). In addition, the amount of municipal solid waste generated at NECD would be reduced significantly. The reduction in municipal solid waste generated at NECD would result in the potential increase

in the lifespan of local area landfill sites. However, the prolonged caretaker status of the site would result in the Army reducing the level of facility maintenance, focusing on the health and safety of personnel involved and ensuring the security of the assets. That would result in long-term adverse effects because of the deterioration of the utility systems and associated infrastructure. The Army would continue inspection, maintenance, and use of utility systems to the extent necessary to avoid their irreparable deterioration.

4.12.2.4 No Action Alternative

No effects would be expected under the No Action Alternative. The Army would continue operations and maintenance at NECD at levels similar to those occurring before the BRAC Commission's recommendation for closure.

4.12.2.5 Reuse Scenarios

4.12.2.5.1 Medium-Low-Intensity Reuse

Long-term minor beneficial and adverse effects would occur under the MLIR scenario. The development of the NECD property at an MLIR level would result in an employee population of approximately 800 (see Table 3-2). That total is higher than the current workforce of about 300; however, the NECD workforce has decreased since the BRAC 2005 announcement to close the depot, and many employees have already left. Before the NECD closure was announced, employment at NECD was about 1,000. All utility systems would have sufficient capacity to cater for the needs of the projected 800 employees under the MLIR scenario and would be able to handle current and future demands for all utility systems. The existing on-site infrastructure for all utility systems would need to be evaluated and any necessary upgrades implemented to improve energy efficiency and to consistently provide reliable service for the individual utility systems under the MLIR.

According the *Reuse Plan Newport Chemical Depot*, utility infrastructure improvements or new construction would include water and sewer systems, storm drainage, electrical transmission and distribution, and telecommunications. The time frames necessary for implementation of utility and transportation infrastructure improvements would be dictated to a large extent by the rate at which new businesses would occupy NECD; phasing could also be driven by the logistics of transfer of ownership and operations responsibility of any utility systems (NeCDRA 2009).

Per the reuse plan, while several options remain relative to the logistics associated with future operation of existing utility systems on NECD, rehabilitation of the existing systems and construction of new system components would be required. While, ideally, the market would allow the reuse of facilities which could receive improved utility service based on limited "up front" capital investment first, it is likely that infrastructure improvements would be necessary, particularly in the areas of water and sewer system rehabilitation and communications infrastructure. At this stage of the planning effort, it is assumed that the capital investment in utility and transportation infrastructure would be spread over a 20 year period with weighting on the initial five years (NeCDRA 2009).

New and renovated buildings should use energy-efficient appliances and lighting and should have water-efficient plumbing fixtures, such as low-flow showerheads, faucets, and toilets, as well as tankless water heaters, installed to reduce per capita water and energy consumption. Such conservation measures and efficient management methods for renovated utility infrastructure and

utility systems in new or renovated buildings would have a long-term beneficial effect on the utility systems.

The construction of new building space and the renovation and demolition of existing building space would create additional C&D debris. That would have a long-term minor adverse effect in reducing the lifespan of local area landfill sites. The MLIR scenario is expected to generate approximately 24,710 tons of C&D debris. That would result in 1,236 tons of C&D debris per year during the projected 20-year development period, or 103 tons per month. A detailed breakdown of the C&D debris generated by construction, renovation, and demolition activities is presented in Appendix G. The additional C&D debris would increase the fill rate of the existing local area landfills.

4.12.2.5.2 Low-Intensity Reuse

Long-term minor beneficial and adverse effects would occur under the LIR scenario. The development of the NECD property at an LIR level would result in an employee population of approximately 230 (see Table 3-2). That total is lower than population stated in the MLIR plan discussed in the previous section. As such, the beneficial effects would be similar, and all utility systems would have redundant capacity. As with the MLIR scenario, LIR scenario utility infrastructure improvements or new construction would be expected to include water and sewer systems, storm drainage, electrical transmission and distribution, and telecommunications.

Long-term minor adverse effects would be expected because of additional C&D debris generated under the LIR scenario. However, less square footage would be constructed, renovated, and demolished under the LIR scenario (see Table 3-2); therefore, this adverse effect would be less in comparison to the adverse effect under the MLIR scenario.

4.13 HAZARDOUS AND TOXIC MATERIALS

4.13.1 Affected Environment

The information in this section is largely based on information in the *U.S. Army BRAC 2005 Environmental Condition of Property Report Newport Chemical Depot – Indiana* (NECD 2008b).

4.13.1.1 CERFA Designation

The Community Environmental Response Facilitation Act (CERFA) directs federal agencies to evaluate all base closure property to identify uncontaminated parcels and allows for the transfer of parcels requiring remediation once an approved remedy has been demonstrated. The ECP report documents the assessments and studies that support the assignment of the CERFA categories to installation parcels. Of the approximately 7,136 acres, 6,715 acres are designated as Categories 1–4 and the remaining 421 acres are categorized as 5–7 (Army 2008—this is the CERFA report). Table 4.13-1 shows the acreage, category definition and classification.

Areas designated as Categories 1–4 are considered suitable for transfer or lease, subject to other property transfer requirements. Areas designated as Categories 5–7 might not be suitable for transfer by deed until further evaluation or remedial action has occurred. Under some circumstances, some of those parcels might be eligible for transfer before completing environmental studies or remediation.

Table 4.13-1.
NECD CERFA designations

Category	Acreage	Definition
1	6,427.7	Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas). However, the area might have been used to store hazardous substances or petroleum products.
2	0.3	Areas where only a release or disposal of petroleum products or their derivatives has occurred (including migration of petroleum products from adjacent areas).
3	197	Areas where a release, disposal, or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action.
4	90	Areas where a release, disposal, or migration of hazardous substances has occurred and all remedial actions necessary to protect human health and the environment have been taken.
5	300	Areas where a release, disposal, or migration of hazardous substances has occurred and removal or remedial actions are under way, but all required remedial actions have not yet taken place.
6	0	Areas where a release, disposal, or migration of hazardous substances has occurred, but required actions have not yet been implemented.
7	121	Areas that are not evaluated or require additional evaluation.
Total Acres	**7,136**	

Source: NECD 2008b

4.13.1.2 Environmental Permits and Licenses

Environmental permits held by NECD include a RCRA Hazardous Waste permit (IN1210022272), Underground Storage Tank permits, NPDES permit (IN0003506 and INR230020 for NECDF), Drinking Water permit (PWSID 5283014), and Air Emissions (F165-5470-00003).

Solid waste generated at NECD is handled off post by Brickyard Landfill in Danville, Illinois. Medical waste is collected by a private contractor for appropriate disposal off-post. None of NECD's current Aboveground Storage Tanks are regulated by IDEM. NECD does not hold any Nuclear Regulatory Commission licenses.

4.13.1.3 Storage and Handling Areas

NECD operates under IDEM Hazardous Waste Management Permit (EPA ID#IN1210022272), which was issued in 2006. Hazardous waste is being generated from general maintenance operations, agent support operations, and decommissioning activities at the former production facility and former NECDF neutralization facility. The RCRA permit included two Former Production Facility waste storage units designated for storage of items generated during the dismantling and demolition of the former VX production plant and storage area.

Hazardous materials and wastes are stored in Buildings 729A and 729B. Hazardous wastes stored in those buildings are managed by Parsons and Manson & Hanger. Buildings 1401A and B are permitted hazardous waste storage areas. Hazardous materials and waste have also been stored in Buildings A3301 through A3308. Former NECDF operations included less than 90-day hazardous waste storage and treatment units for the neutralization of nerve agent VX and greater than 90-day hazardous waste container storage

4.13.1.4 Environmental Cleanup—Installation Restoration Program

Several sites are in active and inactive phases of investigation and remediation at NECD. The sites have been or are being investigated or remediated (or both) by the Army under the supervision and guidance of IDEM. Many sites have been investigated by the Army under the DoD's Installation Restoration Program (IRP) in accordance with CERCLA requirements. The DoD developed the IRP to comply with federal guidelines for managing and controlling past hazardous waste disposal actions. The IRP focuses on cleaning up contamination from past hazardous waste operations and past hazardous material spills (NeCDRA 2009). The IRP sites are also referred to as Solid Waste Management Units (SWMUs).

The RCRA permit identifies 72 SWMUs and 10 areas of concern, for which IDEM issued 64 No Further Action (NFA) letters, indicating that no further investigation or remedial action is required. Many of the sites also have LUCs specifying any restrictions in place to protect human health and the environment. LUCs associated with 12 of the known contaminated areas are outlined in the *Final Newport Chemical Depot Land Use Control Implementation Plan* dated October 2005. That document provides information on the location of hazardous waste and disposal sites and enacts land use restrictions in the form of administrative controls including prohibiting one or more of the following: excavation, groundwater use, agricultural use, and residential use (NeCDRA 2009).

More specific information concerning the IRP sites at NECD are in the *U.S. Army BRAC 2005 Environmental Condition of Property Report Newport Chemical Depot – Indiana*, dated October 2008 (NECD 2008b).

4.13.1.5 Military Munitions Response Program

DOD established the MMRP under the Defense Environmental Restoration Program (DERP) to address unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC) on current and former military installations. MMRP eligible sites include sites other than operational ranges where UXO, DMM, or MC are known or suspected and the release occurred before September 30, 2002 (NECD 2008b).

The 2009 Installation Action Plan identified two sites being investigated under the MMRP. They are the operation Small Arms Range and the Decontaminated Waste Burial Grounds.

4.13.1.6 Petroleum and Petroleum Products

There are 24 known petroleum USTs, ranging from 300 to 12,000 gallons at NECD. The USTs were used to contain gasoline, diesel, or fuel oil and are used for emergency generators and vehicles. Currently there are six active USTs that are regulated by IDEM. A total of 17 USTs have been closed.

There are 17 current and former ASTs used onsite by Mason & Hanger. The ASTs range in capacity from 225 to 500,000 gallons. The ASTs were used to store fuel oil, propane, used oil, ethylene glycol, and diesel fuel. There are currently three active ASTs at NECD that contain diesel and support building operations. A propane station also is present at NECD. None of the current ASTs are regulated by IDEM. A total of 13 ASTs have been closed. There were four ASTs at the former NECDF.

4.13.1.7 Special Hazards

4.13.1.7.1 Asbestos

A visual asbestos survey was completed in 1992. Many of the buildings were found to contain asbestos-containing materials (ACMs) during an asbestos survey that was completed in 1992. A substantial amount of asbestos was removed and a subsequent visual survey was conducted in 2003. There has not been a predemolition inspection on any buildings included in the survey. Due to the age of most buildings at NECD asbestos is likely to be present. Asbestos burial areas are also on the installation. More specific information concerning asbestos at NECD is presented in *U.S. Army BRAC 2005 Environmental Condition of Property Report Newport Chemical Depot – Indiana*, dated October 2008 (NECD 2008b).

4.13.1.7.2 Polychlorinated Biphenyls

Polychlorinated biphenyl (PCB) contamination has occurred at Building 401A (Power House) and the Cooling Tower Sump. PCBs historically were stored in Building 729A (PCB/Hazardous Waste Storage Building). As of 2004, no PCB fluids were in storage, and no PCB-contaminated equipment was in service or storage at NECD.

4.13.1.7.3 Lead-based Paint

The majority of facilities, water towers, and buildings at NECD were constructed before the DoD ban on the use of lead-based paint (LBP) in 1978. In addition, some facilities constructed immediately after the ban also could contain LBP because inventories of such paints that were in the supply network were likely to have been used. No comprehensive sampling and analysis has been conducted for LBP at NECD.

4.13.1.7.4 Pesticides

A 1977 survey indicates that insecticides, rodenticides, and fungicides were stored in the maintenance shop area in Building 726C, and herbicides were stored in Building 723A. The storage rooms also were used for pesticide formulation and equipment storage. The survey reports that rinse water from pesticide containers and portable pesticide dispersal equipment was washed down the drain or poured on the ground at the site where the rinsing occurred in both buildings. Pesticide formulation is known to have occurred outside Building 726C, and a possibility of pesticide/herbicide contamination exists outside both buildings. Pesticides were eventually stored in Building 722A.

A 1988 Installation Pest Management Program Review indicates that no environmental concerns were noted regarding the application of pesticides by installation personnel; however, it was recommended that operations on agriculturally leased lands be closely monitored.

EPA-registered pesticides have been used on leased agricultural land in accordance with Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) label directions. Use of EPA-registered pesticides has been the normal practice throughout the Midwest agricultural region, and the Vermillion County agricultural region specifically.

4.13.1.7.5 Radon

EPA's Radon Zone for Vermillion County is 1, which indicates an average indoor radon level greater than 4 pCi/L. NECD conducted a radon survey and radon was not found to be a concern in any of the buildings tested (NECD 2004).

4.13.1.7.6 Radioactive Material

Radioactive materials at NECD include sealed sources containing cesium 137, nickel-63, and americium-241. No record exists to indicate that any such sealed sources exhibited leakage exceeding the regulatory threshold that could reasonably contribute to the potential for radiological contamination of the facility. No records have been found to indicate that unsealed radioactive materials existed at NECD. X-radiography devices used at NECD would not be expected to result in residual radioactivity.

4.13.2 Environmental Consequences

4.13.2.1 Accelerated Disposal Alternative

Short-term minor beneficial effects on hazardous waste use, storage, or disposal would be expected with implementing the Accelerated Disposal Alternative. Upon closure of the installation, hazardous and toxic substances that had been used in the course of installation operations would no longer be used or stored. All hazardous materials on the installation during the time leading up to the closure would be disposed of in accordance with applicable laws and regulations. Regarding remediation activities, the provisions of CERCLA section 120(h) would apply. Those provisions require that necessary remedial actions be completed or in place and proven to be operating properly and successfully. Per CERCLA section 120(h)(3)(C), property may be transferred before all necessary remedial actions have been completed. The CERCLA covenant deferral request must be approved by the state governor for sites not listed on the National Priorities List.

Regardless of the type of disposal—accelerated, traditional, or caretaker—the Army is under a mandate to characterize contamination, define the appropriate remediation in coordination with regulatory agencies, and conduct the required remediation. The new use must be consistent with the remedial constraints, land use restrictions, and the protection of human health and the environment. The new owner could agree to perform all environmental remediation and monitoring, waste management, and environmental compliance activities required, or the Army could choose to continue to conduct or contract remedial and other activities. The Army would provide notification regarding hazardous substances that were stored, released, or disposed of on the property in excess of the 40 CFR Part 373 reportable quantities. If additional remedial actions are needed beyond the transfer date, the U.S. government is responsible for those actions that are attributable to activities before transfer.

DoD policy with regard to LBP and ACM is to manage the substances in a manner protective of human health and the environment and in compliance with all applicable laws. No housing exists on NECD, and no housing is included in the proposed reuse.

4.13.2.2 Traditional Disposal Alternative

The effects would be expected to be the same as those discussed in Section 4.13.2.1. Hazardous and toxic materials would no longer be used or stored on NECD, and remediation activities would

be completed in compliance with CERCLA, though under the Traditional Disposal Alternative, the Army would perform all necessary environmental remediation.

4.13.2.3 Caretaker Status Alternative

The effects would be expected to be the same as those discussed in Section 4.13.2.1. Hazardous and toxic materials would no longer be used or stored on NECD, and remediation activities would be completed in compliance with CERCLA.

4.13.2.4 No Action Alternative

No effects would be expected under the No Action Alternative. Environmental management procedures would continue to be implemented in accordance with applicable laws.

4.13.2.5 Reuse Scenarios

4.13.2.5.1 Medium-Low-Intensity Reuse

Long-term minor adverse effects would be expected under the MLIR scenario. Reuse activities would include demolition, renovation, and construction, and these activities could increase the use, storage, transport, and generation of hazardous and toxic materials. However, hazardous materials use, storage, generation, and disposal associated with proposed commercial or industrial operations as presented in the reuse plan would be regulated under local, state, and federal programs, thereby reducing effects on the environment.

4.13.2.5.2 Low-Intensity Reuse

The effects from implementing the LIR scenario would be expected to be of the same nature as those discussed under the MLIR scenario in Section 4.13.2.5.1; but they could be of lesser magnitude. Given the lower intensity of reuse development under LIR than under MLIR, smaller quantities of hazardous materials would be expected to be used, stored, and disposed of under this scenario than under MLIR.

4.14 CUMULATIVE EFFECTS

Land use trends in Vermillion County reflect a predominantly rural population and agricultural uses. Redevelopment of the NECD property would not be expected to adversely affect land uses in the region because of the property's remoteness within an otherwise rural portion of Vermillion County. The Vermillion County Economic Development Council markets the county's positive attributes—plentiful land, affordable housing, plentiful water sources, central location in the Midwest, proximity to major roads and interstates, and rail service (Vermillion County Economic Development Council 2008). Even with those attributes, current and proposed development activities are limited because of its agricultural character and rural location. No specific projects or development that would result in a significant adverse cumulative effect on any of the area's resources have been identified.

4.15 MITIGATION

Mitigation actions are used to reduce, avoid, or compensate for significant adverse effects. The EA does not identify the need for mitigation measures for any of the affected resource areas.

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SECTION 5.0
FINDINGS AND CONCLUSIONS

5.1 FINDINGS

The following subsections summarize the potential effects on the human and natural environment that would result from implementing each alternative: Accelerated Disposal, Traditional Disposal, Caretaker Status, and the No Action Alternative. The MLIR and LIR scenarios are also included. For each alternative and reuse scenario, the predicted effects are summarized in Table 5-1. Detailed analysis of each alternative and reuse scenario for each resource area is provided in Section 4 of this EA. Note that section 106 consultations are ongoing, and the terms and conditions of a Programmatic Agreement will be determined through consultation with the Indiana SHPO, the Advisory Council on Historic Preservation, federally recognized American Indian Tribes and interested parties in accordance with NHPA section 106.

5.1.1 Consequences of the Accelerated Disposal Alternative

Under the Accelerated Disposal Alternative, aesthetics, noise, soils, surface water, ground water, vegetation, wildlife, protected species, wetlands, the economic and sociological environment and utilities would be expected to be adversely affected in the short term or long term or both. After environmental remediation and other ground-disturbing activities are completed, long-term minor beneficial effects on land use, soils, surface water and groundwater would be expected. Short-term minor beneficial effects would be expected on transportation, utilities, hazardous and toxic substances, and air quality. Either no effect on cultural resources or a long-term minor adverse effect would be expected from the change from federal to nonfederal ownership and oversight.

The Accelerated Disposal Alternative would not be expected to have an effect on other resource areas (geology, topography, prime farmland, floodplains, environmental justice, and protection of children).

5.1.2 Consequences of the Traditional Disposal Alternative

The Traditional Disposal Alternative would be expected to have largely the same effects on resource areas as under the Accelerated Disposal Alternative. The only difference between the two alternatives would be the expected longer time that some of the property would remain under Army ownership while environmental remediation activities are conducted. The longer period between closure and reuse would be expected to result in a protraction of adverse and beneficial effects, but the type and magnitude of the effects on the resource areas would be very similar to those discussed above for the Accelerated Disposal Alternative. Notably, the adverse effect on the local economy would be expected to last longer under the Traditional Disposal Alternative because of the time lapse between closure and full reuse.

5.1.3 Consequences of the Caretaker Status Alternative

The Caretaker Status Alternative—which assumes that the property would remain unoccupied and unused for a year or more—would be expected to affect resource areas much the same as the other disposal alternatives but with the effects lasting longer in many cases.

Table 5-1.
Summary of potential environmental and socioeconomic consequences

	Environmental and socioeconomic effects of alternatives					
	Alternatives				Reuse scenarios	
	Accelerated Disposal	**Traditional Disposal**	**Caretaker Status**	**No Action**	**MLIR**	**LIR**
Land Use	Long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	Long-term minor adverse	No effect	Long-term minor beneficial	Long-term minor beneficial
Aesthetics/ Visual Environment	Short-term minor adverse	Short-term minor adverse	Long-term minor adverse	No effect	Long-term minor beneficial	Long-term minor beneficial
Air Quality	Short-term minor beneficial	Short-term minor beneficial	Short and Long-term minor beneficial	No effect	Long-term minor adverse	Long-term minor beneficial
Noise Environment	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse and long-term minor beneficial	No effect	Long-term minor beneficial	Long-term minor beneficial
Geology and Soils						
Geology	No effect	No effect	No effect	No effect	No effect	No effect
Soils	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	No effect	Short-term minor adverse	Short-term minor adverse
Topography	No effect	No effect	No effect	No effect	No effect	No effect
Prime farmland	No effect	No effect	No effect	No effect	No effect	No effect
Water Resources						
Surface waters	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	No effect	Short-term minor adverse	Short-term minor adverse and long-term minor beneficial
Groundwater	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial	No effect	Short-term minor adverse	Short-term minor adverse and long-term minor beneficial
Floodplains	No effect	No effect	No effect	No effect	No effect	No effect
Biological Resources						
Vegetation	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse and long-term minor beneficial	No effect	Long-term minor adverse	Long-term minor adverse
Wildlife	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse and long-term minor beneficial	No effect	Long-term minor adverse	Long-term minor adverse
Protected species	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse and long-term minor beneficial	No effect	Long-term minor adverse	Long-term minor adverse
Wetlands	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse and long-term minor beneficial	No effect	Long-term minor adverse	Long-term minor adverse
Cultural Resources	No effect or long-term minor adverse	No effect or long-term minor adverse	No effect or long-term minor adverse	No effect	No effect or long-term minor adverse	No effect or long-term minor adverse

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Table 5-1.
Summary of potential environmental and socioeconomic consequences *(continued)*

	Environmental and socioeconomic effects of alternatives					
	Alternatives				Reuse scenarios	
	Accelerated Disposal	Traditional Disposal	Caretaker Status	No Action	MLIR	LIR
Socioeconomics						
Economic environment	Short-term minor adverse	Short- and long-term minor adverse	Long-term minor adverse	No effect	Short and Long-term minor beneficial	Short-term minor adverse
Sociological environment	Short-term minor adverse	Short- and long-term minor adverse	Long-term minor adverse	No effect	Short- and long-term minor beneficial	Short-term minor adverse
Environmental justice	No effect	No effect	No effect	No effect	No effect	No effect
Protection of children	No effect	No effect	Long-term minor adverse	No effect	No effect	No effect
Transportation	Short-term minor beneficial	Short-term minor beneficial	Short and long-term minor beneficial	No effect	Short-term minor adverse and long-term minor beneficial	Short-term minor adverse and long-term minor beneficial
Utilities	Short-term minor beneficial and long-term minor adverse	Short-term minor beneficial and long-term minor adverse	Long-term minor adverse and beneficial	No effect	Long-term minor adverse and beneficial	Long-term minor adverse and beneficial
Hazardous and Toxic Substances	Short-term minor beneficial	Short-term minor beneficial	Short-term minor beneficial	No effect	Long-term minor adverse	Long-term minor adverse

Land use and the aesthetic and visual environment would likely be adversely affected under the Caretaker Status Alternative because providing only minimal long-term maintenance would be expected to eventually lead to facility and grounds deterioration. Vegetation, wildlife, protected species, and wetlands, however, could benefit from lowered maintenance and the property not being occupied, and without reuse for a year or longer, air emissions and noise would remain reduced for longer. The adverse effect on the economy would be expected to last longer with the property under caretaker status. Vacant property could be attractive to children, resulting in an adverse effect on their protection.

The beneficial and adverse effects on utility systems would be long term under the Caretaker Status Alternative, and traffic would remain somewhat reduced for longer under this alternative.

Effects on other resource areas (soils, surface waters, groundwater, cultural resources, and hazardous and toxic substances) under the caretaker status would be the same as under the other disposal alternatives. There would also still be no effect on geology, topography, prime farmland, floodplains, and environmental justice.

5.1.4 Consequences of the No Action Alternative

No effects would result on any resource areas under the No Action Alternative. NECD would remain in the military's inventory as an active installation. Without congressional action, implementation of the No Action Alternative is not possible.

5.1.5 Consequences of the Intensity-based Probable Use Scenarios

As stated in Section 3.5.2, levels of reuse intensity represent a continuum of land use and associated activities for a site. The range of expected effects under the two reuse scenarios (MLIR and LIR) analyzed in the EA also represent a continuum of adverse and beneficial effects on resource areas that would be expected to result from implementing the reuse intensities. Though NeCDRA has a reuse plan (NeCDRA 2009), the actual reuses of the individual parcels on NECD remain speculative, and it is the overall intensity of reuse, rather than the actual reuse of the parcels, that is analyzed in the EA. For each of the resource areas analyzed in the EA, the range of effects under the reuse intensities is summarized below. Many of the effects would be considered long term, because it is assumed that reuse of the property would continue in perpetuity.

Land use. Long-term minor beneficial effects on land use would be expected under either reuse scenario. While use of the land would be converted from an active military installation to a combination of commercial, research and technology related businesses and agriculture and conservation areas, it is assumed that NeCDRA would implement a reuse plan that would not result in land use incompatibilities, either within the boundaries of NECD or between the property and surrounding areas. The conversion from an active military installation to the proposed reuses would likely result in long-term beneficial effects by increasing property values and raising tax revenues.

Aesthetic and visual environment. Long-term minor beneficial effects would be expected under both reuse scenarios. NeCDRA would be expected to implement a reuse plan that provides a well-designed, attractive, and inviting new business, and community areas.

Air quality. Effects on air quality would be expected to vary from a minor adverse effect under MLIR, under which the greatest amount of air emissions from facilities and mobile sources would be expected to result, to a minor beneficial effect under the LIR, under which emissions would be less than they are with the property as an active military installation. It is emphasized, however, that trying to predict outcomes for something as variable as air emissions is extremely speculative. When a reuse plan moves toward implementation, state and federal regulators responsible for monitoring air emissions should provide the necessary oversight to ensure that they are in compliance with all applicable laws and regulations.

Noise. Beneficial effects on the noise environment would be expected under the MLIR and LIR scenarios. Such effects would be from the general incremental decrease in the intensity of use at the installation. These benefits would be greater for the LIR scenario.

Geology and soils. Short-term minor adverse effects on soils would be expected under both reuse scenarios because of disturbing the soil during construction and demolition. It is reasonable to expect that regulatory agencies responsible for oversight of construction or renovation projects would require the use of BMPs to help alleviate problems associated with soil erosion. The long-term improvements in soil quality from the remediation activities considered under the disposal alternatives would remain under reuse.

Water resources. Effects on surface and ground waters would be expected to include a minor adverse effect under both reuse scenarios. The amount of impervious area—which can lead to storm water runoff effects on surface waters—under MLIR would be similar to that under baseline conditions, and it would be expected to decrease as the intensity of reuse decreases. Surface water quality and the health of surface water systems, therefore, might be expected to

improve slightly under LIR. As with soil quality, the long-term improvements in water quality from the remediation activities considered under the disposal alternatives would continue under reuse.

Biological resources. A long-term minor adverse effect on biological resources would be expected from construction and demolition activities associated with reuse, coupled with long-term minor beneficial effects of installing new landscaping and creating permanent green spaces. The benefit to biological resources would be expected increase with decreasing reuse intensity. No effects on listed species would be expected, and no long-term effects on wetlands would be expected.

Cultural resources. Effects on cultural resources would be expected to be the same under either of the reuse scenarios as under the disposal alternatives. Long-term minor adverse effects on resources could result from their no longer being protected by a federal agency. To eliminate adverse effects caused by the transfer of the historic properties out of federal ownership, the Army will prepare a Memorandum or Programmatic Agreement that will be signed by the INDNR - DHPA and Army. The agreement will contain a preservation covenant that will afford protection for all historic properties that have been determined eligible or potentially eligible for the NRHP.

Socioeconomics. The effect on economic activity and public services would likely vary from a beneficial effect under MLIR because of the level of employment and economic activity that the reuse would create to an adverse effect on these resources under LIR from job losses and decreased economic activity. No effect on environmental justice or children would be expected to result under any reuse scenario.

Transportation. A short-term adverse effect on the transportation system would be expected under both reuse scenarios from construction-related activity, but transportation system upgrades made in anticipation of the reuse would likely result in a long-term beneficial effect on the system under MLIR and LIR.

Utilities. The intensity of use of the property under the MLIR scenario would be similar to baseline conditions and would, therefore, be expected to result in little net effect on utility system demand. Demand on all systems would be less under the LIR. Under both reuse scenarios, however, it is expected that with transfer of the systems owned by the Army to private and municipal entities, those entities would make improvements to the systems, resulting in long-term beneficial effects. Long-term minor adverse effects would be expected because of additional C&D debris generated under the MLIR and LIR scenarios.

Hazardous and toxic substances. Long-term minor adverse effects on hazardous and toxic substances would be expected while reuse construction is occurring because those substances would be used and stored on the property during construction activities; however, they would be regulated under local, state, and federal programs, thereby reducing effects on the environment. Overall, hazardous and toxic substances on the property would be expected to be of less concern under reuse because of implementing LUCs and completing remedial activities under property disposal.

5.2 CUMULATIVE EFFECTS

Cumulative effects are defined by CEQ in 40 CFR 1508.7 as the "impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions."

Other than reuse of NECD, which is not the Army's primary action and the effects of which are analyzed in this EA, no specific foreseeable future projects have been identified that would result in cumulative effects.

5.3 MITIGATION

Mitigation actions are used to reduce, avoid, or compensate for significant adverse effects. The EA does not identify the need for mitigation measures for any of the affected resource areas.

5.4 CONCLUSIONS

This EA considers the proposed implementation of the BRAC Commission recommendations at NECD, Indiana. The EA identifies, evaluates, and documents the environmental and socioeconomic effects of property disposal and future uses. A No Action Alternative is also evaluated. Implementing the proposed action is not expected to result in significant adverse environmental effects. Therefore, preparation of an environmental impact statement is not required, and a FNSI will be published in accordance with NEPA.

SECTION 6.0
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SECTION 7.0
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ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
ADNL	A-weighted Day-night Average Sound Level
a.m.	*ante meridiem* – before noon
AMC	Army Materiel Command
ANSI	American National Standard Institute
AQCR	Air Quality Control Region
AQCR 084	Wabash Valley Intrastate AQCR
AR	Army Regulation
AST	aboveground storage tank
BMP	best management practice
BRAC	Base Realignment and Closure
CAA	Clean Air Act
C&D	construction and demolition
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	*Code of Federal Regulations*
CLA	Chemical Limited Area
CMA	U.S. Army Chemical Materials Agency
CO	carbon monoxide
dB	decibel
dBA	A-weighted decibels
DNL	Day-night Average Sound Level
DNR	Department of Natural Resources (Indiana)
DoD	Department of Defense
EIFS	Economic Impact Forecast System
EPA	U.S. Environmental Protection Agency
ESMP	Endangered Species Management Plan
FEMA	Federal Emergency Management Agency
GCR	General Conformity Rule
GOCO	government-owned/contractor-operated
HAP	Hazardous Air Pollutant
HVAC	heating ventilation and air conditioning
Hz	hertz
IDEM	Indiana Department of Environmental Management
IGIC	Indiana Geographic Information Council
INDNR	Indiana Department of Natural Resources
INDNR – DHPA	Indiana Department of Natural Resources – Division of Historic Preservation and Archaeology
INRMP	Integrated Natural Resource Management Plan
kV	kilovolt
kVA	kilovolt-amperes
kWh	kilowatt hours
L_{eq}	equivalent sound pressure level
LIR	Low Intensity Reuse
LOS	Level of Service
LUC	land use control
MBTU	million British Thermal Units
MLIR	Medium-Low Intensity Reuse

MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NECD	Newport Chemical Depot
NECDF	Newport Chemical Agent Demilitarization Facility
NeCDRA	Newport Chemical Depot Reuse Authority
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NO_x	oxides of nitrogen
NSPS	New Source Performance Standards
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
PCPI	per capita personal income
P.M.	*post meridiem* – afternoon
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
RCRA	Resource Conservation and Recovery Act
RDX	1,3,5-trinitro-1,3,5-triazine
ROI	region of influence
RTV	rational threshold value
SF	square feet
SO_2	sulfur dioxide
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
TNT	2,4,6-trinitrotoluene
U.S.C.	United States Code
USGS	U.S. Geological Survey
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound
VX	O-ethyl-S-(2-diisopropylaminoethyl) methyl phosphonothiolate

Appendix A

BRAC Commission Recommendations

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projections might vary, they did not vary sufficiently to call into question the logic and financial soundness of the proposal, nor did potential cost variances rise to the level of a substantial deviation from the final selection criteria.

Commission Recommendations

The Commission found the Secretary's recommendation consistent with the final selection criteria and the Force Structure Plan. Therefore, the Commission approves the recommendation of the Secretary.

Newport Chemical Depot, IN

Recommendation # 154 (Ind 8)

One-time Cost:	$2.3M
Annual Recurring Costs/(Savings):	($10.9M)
20-Year Net Present Value:	($132.6M)
Payback Period:	Immediate

Secretary of Defense Recommendation

Close Newport Chemical Depot, IN.

Secretary of Defense Justification

There is no additional chemical demilitarization workload slated to go to Newport Chemical Depot. The projected date for completion of existing workload is 2nd quarter of 2008. There is no further use for Newport Chemical Depot.

Community Concerns

There were no formal expressions from the community.

Commission Findings

The Commission found that the International Chemical Weapons Convention Treaty requires completion of the chemical demilitarization mission prior to closure of this depot. An examination of status information for this depot's mission completion and subsequent closure revealed that dates may slip beyond the six-year statutory period for completion of BRAC actions. Furthermore, mission completion and closure dates beyond 2011 exceed the BRAC implementation period.

Commission Recommendations

The Commission found that the Secretary of Defense deviated substantially from final selection criteria 1 and 4, as well as from the Force Structure Plan. Therefore, the Commission recommends the following:

On completion of the chemical demilitarization mission in accordance with Treaty obligations, close Newport Chemical Depot, IN.

The Commission found that this change and the recommendation as amended are consistent with the final selection criteria and the Force Structure Plan. The full text of this and all Commission recommendations can be found in Appendix Q.

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Appendix B

Final Reuse Plan Executive Summary

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ES Executive Summary

Project Background

After initial recommendations were issued by the Secretary of Defense, the 2005 Base Realignment and Closure (BRAC) Commission prepared a list of recommended base closures for the President on September 8, 2005. On September 15, the President approved a final list, which included Newport Chemical Depot, and transmitted it to Congress. By law, the Depot must close before September 15, 2011, but it could potentially close ahead of schedule in 2010.

The Newport Chemical Depot is a facility of approximately 7,130 acres located in west-central Indiana, in Vermillion County, near the town of Newport. In a regional context, the Depot is about 65 miles west of Indianapolis, and about 140 miles south of Chicago. The Indiana/Illinois state line is only two miles from the western boundary of the base.

The Newport Chemical Depot Reuse Authority

In preparation for the closure of the Depot, the Newport Chemical Depot Reuse Authority (NeCDRA) was created to oversee and facilitate the creation of a reuse plan. Over the course of 2009, the NeCDRA and its planning team worked with the local community to create a plan and implementation strategy for conversion of the Depot to civilian use.

The Planning team

To assist with the redevelopment planning for the Newport Chemical Depot, the NeCDRA selected **Matrix Design Group** as the lead planning consultant. Matrix Design Group is a Denver, Colorado-based planning, engineering, and environmental consulting firm with extensive military base realignment and closure planning experience.

Public Engagement

Understanding and considering community issues related to the reuse of the Newport Chemical Depot was a critical step in the planning process. From the beginning, the Newport Chemical Depot Reuse Authority committed to an open and transparent planning process in which citizen comments and ideas were actively solicited at every stage.

Through a variety of interactive public engagement elements, the planning team listened and learned from citizens, business and property owners, and other stakeholders from throughout west-central Indiana about the variety of issues, ideas, and concerns that affected the reuse planning for the Depot. Public feedback was instrumental in the development of the Newport Chemical Depot Reuse Plan.

Elements of the public engagement program included:

- **Stakeholder Interviews**
  Early in the planning process, primarily in February and March, 2009, the planning team conducted one-on-one interviews with a wide variety of stakeholders interested in the Depot's redevelopment.
- **Public Meetings**
  Three major general public meetings were conducted during the Newport Chemical Depot reuse planning effort. The first was focused on the introduction of the project, the second on existing conditions and visioning, and the third on the preferred reuse plan. The visioning exercise in Public Meeting #2 involved distributing a survey to participants to gauge attitudes towards different levels and types of development at the Depot.
- **Teen Workshop**
  As part of the public outreach effort, the planning team held a special Teen Workshop to engage some of the local youth in Vermillion County in the Newport Chemical Depot reuse planning process and, more importantly, to learn from them their thoughts, ideas, and vision for the Depot site.
- **Focus Groups and Workshops**
  Throughout the planning process, several workshops and focus group meetings were held to gather information and/or discuss reuse options relating to specific topics, including land use, infrastructure, economic development, and development.

Existing Conditions

Newport Chemical Depot, as with most military installations, is surrounded by a broad mix of public-sector and private-sector uses and properties, communities of various sizes and characteristics, and a diverse natural landscape. As a federal property, compliance with local land use, zoning, and other regulations do not generally apply, and as a military property, the built environment on base often takes very unique forms, both horizontally and vertically, to accomplish a specific military mission. To help understand the similarities and differences between on-base and off-base environments, how they affect each other, and to lay the groundwork for the development of the Reuse Plan, a thorough existing conditions assessment was conducted.

Economic and Market Analysis

Based upon site characteristics, economic base, and broader market and policy trends, Economics Research Associates, retained to analyze market conditions pertaining to the Depot, has identified five redevelopment opportunities in manufacturing, energy production, R&D and institutional uses:

- **Manufacturing**
  Manufacturing growth potential at the Depot is likely to be dominated by smaller to mid-size users such as businesses that can capitalize on the region's agricultural base and access to water (e.g. manufacturers of chemicals, biofuels and foods); advanced manufacturing sectors that require proximity to end-users; and manufacturing sectors requiring a skilled labor force that can maximize regional university resources, including manufacturers of chemicals or medical devices.
- **Agriculture**
  Agricultural use at the Depot is another land use opportunity that can provide cash flow while functioning as a critical buffer between more intensive industrial uses and the community. Agricultural land leases are already in place at the Depot and their potential for growth is tied to expansion in the regional agricultural base.
- **Energy**
  Energy uses at the Depot are an opportunity to both serve future Depot tenants with electricity, while responding to broader nationwide trends and growing demand for alternative energy sources. There are two distinct opportunities for energy and fuel production at the Depot: ethanol or

biodiesel production, and coal gasification. The region's strong agricultural base can provide the raw materials for biofuels production and the Depot is located near other coal gasification and alternative energy production facilities within the Wabash River energy corridor.

- **State Correctional Facility**
  The Depot's rural setting makes a correctional facility a logical reuse option. While there is no guarantee the state would choose the Depot for a correctional facility, the state is presently at 100% capacity in terms of prison space, the healthcare and educational resources of the surrounding counties would be regarded as key assets when evaluating the Depot for prison development, and funding increases and bonding capacity for prison expansion is available.
- **Research and Development**
  R&D in conjunction with a university or institute is another opportunity for reuse at the Depot. Based upon state-level initiatives in conjunction with program expertise at surrounding universities, biofuels (ethanol and biodiesel) and clean coal technology; agriculture; and advanced automotive technologies are the leading R&D candidates. The Depot is likely to be most marketable for R&D activities that require a significant amount of space or a degree of seclusion or security.

Community Planning Issues and Influences

Land Use and Zoning

Vermillion County is primarily agricultural in nature, with farmland dominating its rural landscape. Located several miles from the closest communities, the Depot is surrounded on all sides by agricultural fields or, in a few areas, wooded areas. All properties adjacent to and surrounding the Depot are located in unincorporated Vermillion County and have been zoned by the County as "A" (Agricultural), with the exception of the two County-owned properties, both of which are zoned "B2" (Business).

Transportation and Utilities

The Depot has good access to Indiana's state highway system and the federal interstate system, located approximately half way between two major east-west Interstate highways, Interstate 70 and Interstate 74. The Depot is also located in proximity to two CSX freight rail lines.

All major trunk utilities (natural gas, electric, telephone, etc.) are provided adjacent to or near the Depot property.

Natural Resources

The natural environment within and surrounding the Depot supports a variety of ecosystems and habitats that thrive in rivers, deciduous and evergreen wooded areas, open prairie, flatlands, and in areas that interface between croplands and forest. The Depot enjoys abundant water resources, due to the proximity of the Wabash River and the presence of a substantial aquifer located beneath the Depot to the east. The region also enjoys a wide variety of wildlife species, including white-tailed deer, prairie vole, opossum, short-tailed shrew, bog lemming, raccoon, coyote, cottontail rabbit, and bluegill, as well as the endangered Indiana bat. Also of interest is the approximately 461 acres set aside by the Army as a Prairie Restoration Area. The western edge of the Depot was originally covered by tallgrass prairie, representing the extreme eastern extent of a prairie ecosystem that once spanned west to the Rocky Mountains. Finally, six small cemeteries—most consisting of just a few graves—are located on Depot property, usually within or adjacent to wooded areas.

On-Base Conditions and Characteristics

Land Use

The Newport Chemical Depot is approximately 7,130 acres in area. In addition to the main facility, the Depot property also includes a 60-acre curved "Railroad Right-of-Way" subarea, as well as the 70-acre arc-shaped "Ranney Wells" subarea along the western bank of the Wabash River.

The following major sub-areas exist on the base:

- **Former VX and Shops Subarea**
  The largest concentration of buildings is located in the east central portion of the Depot. This area contains the former VX production facilities which, as of

2009, are in the final stages of demolition. North of the former VX area along Broadway is the Shops area, which contains several smaller buildings that house a variety of maintenance, operations, and support functions. North of Broadway is the Depot's water reservoir and treatment facility, as well as eight concrete storage igloos, among the newer structures at the Depot. The northeastern and southeastern corners of the Depot are dominated by agricultural fields and wooded areas, and just south of the former VX area is the Depot's sewage treatment facility and recycling storage yard.

- **Former RDX Subarea**
  The area that once housed numerous structures relating to the production of RDX is located from 11th Street to 15th Street, BB Street to B Street. All former RDX structures have been demolished, however, their foundations and a variety of above and below ground process sewers remain. Surrounding these industrial remnants is a mix of woods and open fields.

- **Headquarters Building / Bookends Subarea**
  South of BB Street, just east of 14th Street are the "Bookends"—the nickname for a grouping of 44 large concrete forms. Built decades ago by the Army for blast-protection purposes, these wall-like structures, while never used and without function today, remain a unique feature of the Depot landscape. East of the Bookends is a generally wooded area containing a few warehouse and storage buildings. The final notable structure in this subarea is the Depot's Headquarters building, located south along Cull Avenue just west of 10th Street.

- **Former TNT Subarea**
  The area south of AA Street and west of 14th Street to the southwestern corner of the Depot is the area where TNT and associated components were once produced. The largest concentration of these structures is located between West Road and 14th Street, south of Central Road. These structures have been abandoned for several decades and exist in varying states of deterioration. Surrounding these abandoned facilities is a mix of trees and open fields. Farther west, the area is dominated by agricultural fields.

- **Richmond Magazines / Northwest Subarea**
  The west central section of the Depot is the location of the former Richmond Magazines. Spread across the terrain in a checkerboard manner, the small earth-mounded bunkers are surrounded by agricultural fields and small wooded areas. The remainder of the Depot to the west, northwest, and

north of the Richmond Magazines is almost entirely undeveloped from an industrial perspective and dominated by agricultural fields, natural drainage corridors, and several large wooded areas.

An overview of the base:

- **Transportation**
  Primary roads within the Depot can be generally described as two-lane paved roads. The quality of the pavement ranges from excellent to substantially deteriorated. Secondary roads generally provide access to individual buildings or sites. In many cases, these secondary roads consist of gravel or an unpaved (dirt) condition, and many are barely passable by motor vehicle.
- **Agricultural Resources**
  As mentioned previously, the lands surrounding the Depot are heavily developed for agricultural production, given the fertile soils, plentiful rainfall, and good drainage found throughout this part of Indiana.
- **Natural Systems**
  As a voluntary effort, the Army set aside approximately 461 acres of land from agricultural development for the purpose of allowing that land to thrive in its original native tallgrass prairie state.
- **Water Resources**
  Not only does the area receive sufficient rainfall for dry-land farming, but also the Depot is located near a massive underground aquifer. The need for high-quality fresh water to produce "heavy water" as part of the Manhattan Project during World War II is one of the primary reason for the Depot's location.

Utilities

Natural gas to the Depot is available for most types of industrial development. New service lines, possibly from the central metering station to areas being developed, may be necessary based on the condition of the steel lines and ability to provide the quantity of gas required by the development. It is anticipated that individual gas meters will need to be provided for new development.

Electrical power to the Depot is available for most types of industrial development. New service lines, possibly from main substation to areas being developed, may be necessary based on the type of development. It is recommended that the Depot develop costs

and consider converting the existing DELTA system to a WYE system, which is the current industry standard. It is anticipated that individual electric meters will be required for the development.

Telecommunications systems are available at the Depot. It is anticipated that telecommunications requirements will be dependent on the specific developer needs and that modifications or upgrades to the existing telecommunications systems will be required.

The existing **water treatment and distribution system** at the Depot has sufficient capacity to serve the developed areas of the site. The Depot has the potential to supply water to meet the needs of most industries and to potentially serve as a regional water supplier in Vermillion County and the surrounding region. Significant maintenance and repairs are required to bring the system back to a operating level where it can supply 15 to 30 million gallons a day of water.

The existing **wastewater treatment and collection** at the Depot has sufficient capacity to serve the current developed area of the site. Excess capacity of approximately 150,000 gallons exists at the plant. This should be sufficient to treat domestic wastewater from approximately 2,000 additional people at the site. The existing plant was not designed to treat industrial wastewater. An industrial pre-treatment program acceptable to the Indiana Department of Environmental Management (IDEM) will be required to accept industrial wastewater at the plant. Pre-treatment of industrial wastes by the associated industry will be required. Larger industrial process operations will likely need to treat their own water prior to discharge or participate in upgrading the existing plant to meet their needs.

The Depot has a significant amount of undeveloped property that can be used for **stormwater management**. While state, county and local stormwater management requirements will need to be met, it is not expected that stormwater management requirements will limit development of the site.

Buildings and Facilities

A comprehensive assessment of 28 buildings on the Depot was conducted during the Existing Conditions phase of the project. The buildings assessed include the Depot's headquarters building, several warehouses, the Depot's water reservoir, various storage buildings and garages, maintenance shops, the Depot's fire house and water tower, several administrative office buildings, and various utility and support buildings. For

the more important buildings, a Property Condition Assessment form was completed which details the building's site layout, structure and envelope, architectural and spatial qualities, and mechanical, electrical, and plumbing systems. The facilities assessment allows the NeCDRA and the planning team to understand the reutilization or adaptive reuse potential for the Depot's major structures.

A complete list of buildings assessed can be found in the **Existing Conditions** section of this report, and copies of the assessment forms can be found in **Appendix D**.

Environmental Conditions

Throughout its history beginning in 1941, the Newport Chemical Depot was used for the production of various chemicals and nerve agents, including the following:

- **Royal Demolitions Explosive** (RDX), 1942-1946
- **Heavy water** for the Manhattan Project, 1943, 1952-1957
- **VX** Nerve Agent, 1958-1968
- **TNT**, 1970-1975

In 1999, through a contract with the US Army, Parsons Infrastructure and Technology was hired to build the Newport Chemical Agent Disposal Facility (NeCDF), destruct chemical weapons, and demolish the NeCDF after demilitarization. Construction of the NeCDF was completed in 2003, and the last container of VX was destroyed in 2008.

The chemical production activities conducted at the Depot have resulted in known and potential contamination of soils, groundwater, surface water, and structures, and numerous landfills and dumps are present at the site. Contaminants at the Depot include explosives, chemical agent components, volatile and semivolatile organic compounds, metals, petroleum hydrocarbons, and asbestos.

Planning Framework

With the completion of the Existing Conditions assessment phase of the project, which evaluated the current status of a variety of physical, market/economic, and environmental factors at the Depot, the next phase—crafting the Reuse Plan—could begin. To assist in developing the final reuse plan, the planning team completed two interim steps: a Development Suitability Analysis and the creation of several Reuse Plan Concepts.

Development Suitability Analysis

The development suitability analysis involved the categorization of all land at the Depot into three broad categories: Most Suitable, Moderately Suitable, and Limited Suitability or Not Suitable. Given the importance and preponderance of farming in the region, two separate analyses were performed; one analysis for the suitability of agriculture and forestry, and the other for business and industrial development. The distinction between these two broad land use categories was made in recognition of the fact that agricultural uses could be treated as a separate, equal use to business and industrial development rather than an intermediate "stepping stone" on the path to business or industrial development.

Land at the Depot was evaluated for agricultural suitability based on soils, natural systems, and environmental constraints. To determine suitability for business and industrial development, natural systems and environmental constraints were considered.

Reuse Plan Concepts

The planning team created three Reuse Plan Concepts from which the final Reuse Plan evolved. The Reuse Plan Concepts were not intended to stand as independent, competing alternative solutions for reuse of the Depot. Instead, they were created to present a variety of plan themes and elements in different combinations, locations, and configurations—intentionally varied across the three concepts—to illuminate multiple reuse opportunities.

Guiding principles employed in the creation of the Reuse Plan Concepts included:

- Conservation of natural and cultural resources
- Continuation of agricultural-related uses
- Long-term market flexibility

- Creation of jobs and economic development for the region
- Conservation of largest blocks of unfragmented forests & drainage corridors
- Connection of separated natural areas with "green corridors"
- Preservation of right-of-way for a Highway 63 / Highway 71 east-west connection
- Agricultural uses concentrated in areas with best soils
- Opportunities for "mega-site" development are created

A detailed description of the Reuse Plan Concepts is provided in **Chapter 4**.

Preferred Reuse Plan

The three Reuse Plan Concepts were reviewed and commented on by the NeCDRA, real estate developers, economic development experts, members of the farming and natural resource communities, and the public in general. This feedback, as well as the NeCDRA's guiding principles, public visioning results, and existing conditions, formed the basis for the creation of the Preferred Reuse Plan, which would evolve into the Reuse Plan itself.

Final Reuse Plan

The Reuse Plan for the Newport Chemical Depot is rooted in two fundamental principles: the continuation and conservation of agricultural and natural resource uses at the Depot, and economic development and the creation of jobs for the region. The Reuse Plan embraces both of these principles to a significant degree.

The Newport Chemical Depot Reuse Plan capitalizes on the Depot's large land mass and natural features, water resources, and proximity to highway and rail transportation networks to position the site as one of the nation's premier locations for large-scale business and technology development, while protecting thousands of acres of natural and agricultural areas at the same time. ***Flexibility is a key component of the Reuse Plan.*** Changes in energy usage and production, technology and industry, transportation and logistics, and a focus on sustainability of the natural and built environments will shape the Depot's redevelopment over the course of the next few decades. The Reuse Plan provides the flexibility to allow the Depot to respond to these changes and maintain its competitive advantage while remaining a good neighbor to local communities.

Land Use Program

The location and configuration of the various land use districts identified on the Reuse Plan were shaped by several factors, including the Depot's topography and natural systems, sites with environmental conditions, and the Depot's proposed Transportation Framework. Overall, the allocated land uses for the Depot achieve a balanced 50/50 split between uses oriented toward the natural and built environments. Agriculture, Natural Areas & Open Space, and Parkland uses account for roughly one-half of the site's approximate 7,130 acres, with Business & Technology, Highway-Oriented Commercial, and Conference & Support Facilities accounting for the other half.

Natural Areas & Open Space

Approximately one-third (32%) of the Depot is designated as Natural Areas & Open Space, determined by topography, natural conditions, and environmental conditions. Areas that fall under this land use category include wooded areas, tallgrass prairie, natural drainageways, green connectors linking larger natural areas and open spaces to each other, and the railroad right-of-way and wells area.

Agriculture & Forestry

Most of the land on and surrounding the Depot has a long history of agricultural production. The rich prairie soil results in some of the most productive farmland in the country due to the Depot's location at the eastern edge of the native tallgrass prairie that once stretched to the Great Plains. Most of the land designated for Agriculture & Forestry is currently being farmed, with the exception of a portion of the land immediately north of the US Coast Guard facility, which contains some wooded areas. While timber harvesting is not as prevalent as row crops in the region, this plan proposes that tree plantations/forestry would be an allowable use in these areas. Tallgrass prairie would also be an allowed use within the Agriculture & Forestry areas.

Parkland

While over two thousand acres have been allocated on the Reuse Plan map for Natural Areas & Open Space, additional territory has been designated for a more designed landscape setting. Shown in light green on the Reuse Plan map, Parkland uses account for approximately 90 acres, or a little more than 1% of Depot land, and consist of two main elements:

- Bookends Park, which is 40 acres surrounding the monolithic concrete blast-protection structures in the south-central section of the Depot
- Central Parkway Linear Park, which makes up the generous median of the main arterial roadway envisioned to serve the Depot

Business & Technology

It is primarily through the Business & Technology areas, shown in the gold color on the Reuse Plan map, that the plan will accomplish significant economic development and job creation for the region over the coming years. The Business & Technology areas account for approximately 3,375 acres or about 47% of Depot land.

The activities proposed for the Business & Technology areas are intentionally broad and flexible. Uses envisioned for these areas include offices, office/industrial flex buildings, research and development facilities, manufacturing, warehousing, energy production, educational uses, institutional uses, training facilities, and distribution centers.

An important aspect of the Business & Technology use is the "mega-site" concept. Many users that fall under the categories listed above need sites that have ample acreage. Consequently, the Reuse Plan identifies three mega-sites: one in the northeastern part of

the Depot at approximately 1,220 acres, one in the south-central part at approximately 930 acres, and a 750-acre site located in the northwestern part of the Depot that could accommodate users bringing hundreds or thousands of jobs to the region. Located in the center of these three sites is a 250-acre area that could accommodate a mix of larger or smaller Business & Technology users. For Business & Technology users that do not need such large land areas or that prefer a more visible location, two additional Business & Technology areas, at approximately 105 and 120 acres each, are located along Highway 63. It is envisioned that these two areas would be developed in an office/light industrial park manner.

Conference & Support Facilities

The proposed Conference & Support Facilities area is planned as a gathering place for both future Depot users and the community at large. This approximately 70-acre site, identified on the Reuse Plan map in blue, is located mid-way along Central Parkway near the geographic center of the Depot.

The concept behind this small but important area is to provide a centralized place that would host various functions that are shared or in support to users at the Depot and that promote collaboration among Depot users and the community. The size and nature of these shared/support uses will likely be determined by the manner in which the Business & Technology areas on the Depot develop and the number and type of jobs created.

Highway-Oriented Commercial

Uses envisioned for the Highway-Oriented Commercial area could include a hotel, auto/truck service plaza, restaurants (both sit-down and fast food), and convenience stores. These uses are oriented not only to motorists traveling along Highway 63, but also to future Depot users as well.

Transportation Framework

The transportation framework for the Reuse Plan is anchored around a single east/west arterial roadway that bisects the Depot roughly midway between its northern and southern borders. The roadway will provide not only primary transportation access across the depot, but will feature a gateway aesthetic unifying the property.

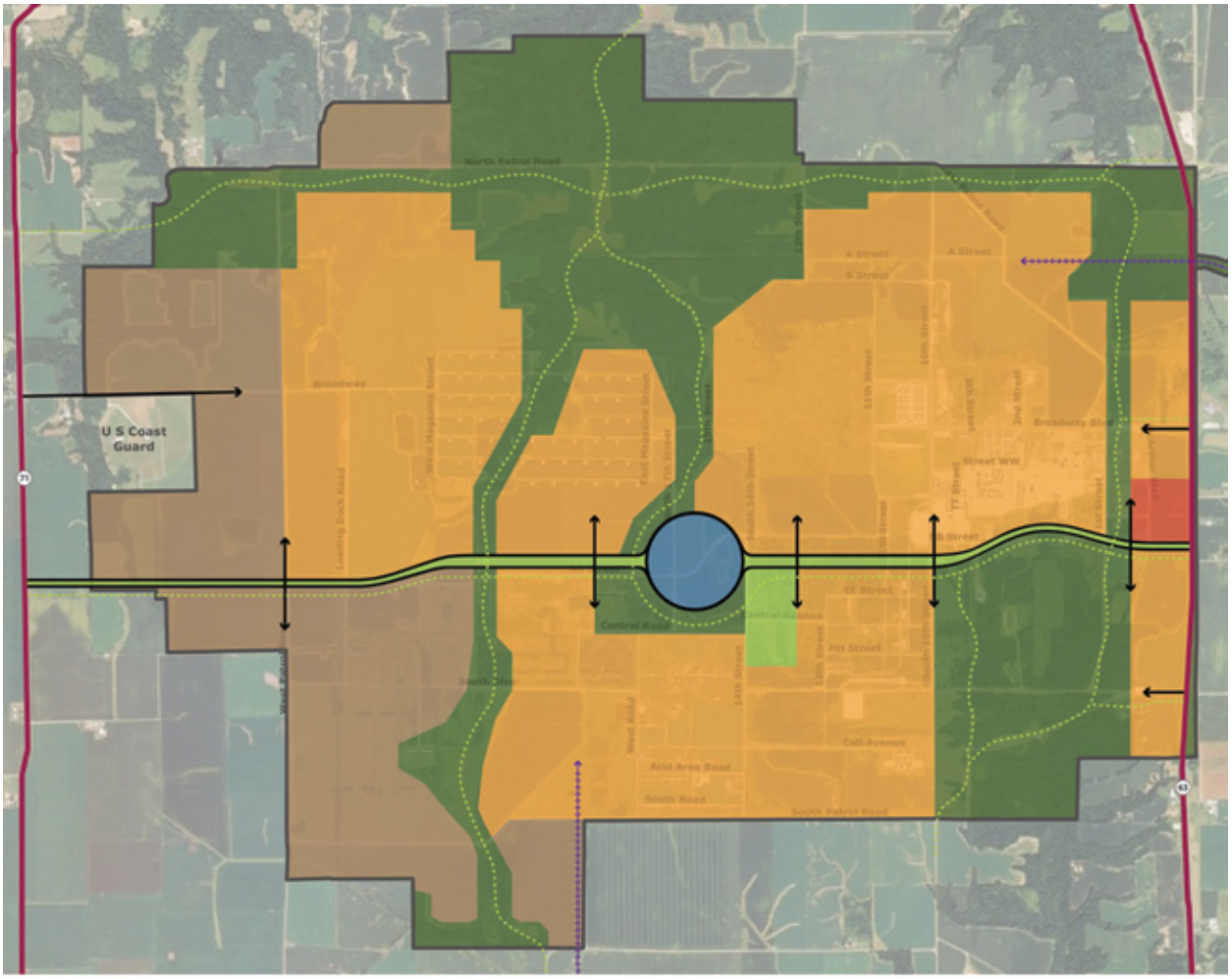
The current central entrance along BB Street has been chosen as the axis for the arterial roadway rather than Broadway, despite Broadway's easy access to numerous buildings suitable for reuse. This is due to the more central alignment that BB Street offers for

future development along with its more attractive setting along the northern edge of a large natural area. The central portion of the parkway splits into a circular configuration designed to convey a special focus to the Conference & Support Facilities area.

There are no active railroads currently on the Depot property, although two major CSX lines are located nearby, and potential rail access points exist at the northeast and southern borders of the Depot.

Environmental Considerations

Environmental conditions existing at the Depot influenced the Reuse Plan and implementation strategy in various ways. Potential MEC areas, landfill sites, and other potential areas of contamination have been designated as open space; land use controls that prevented excavation were not included in future redevelopment areas; and, new development areas are limited to like uses, such as maintaining older industrial areas as the same use in order to minimize remediation requirements.



Railroad / Wells Area

Legend

0 500 1,000 2,000 Feet

N

NeCD Boundary

State Highway

Reuse Plan Elements

Central Parkway

Key Secondary Roadway Access

Potential Railroad Connection

Potential Recreational Trail

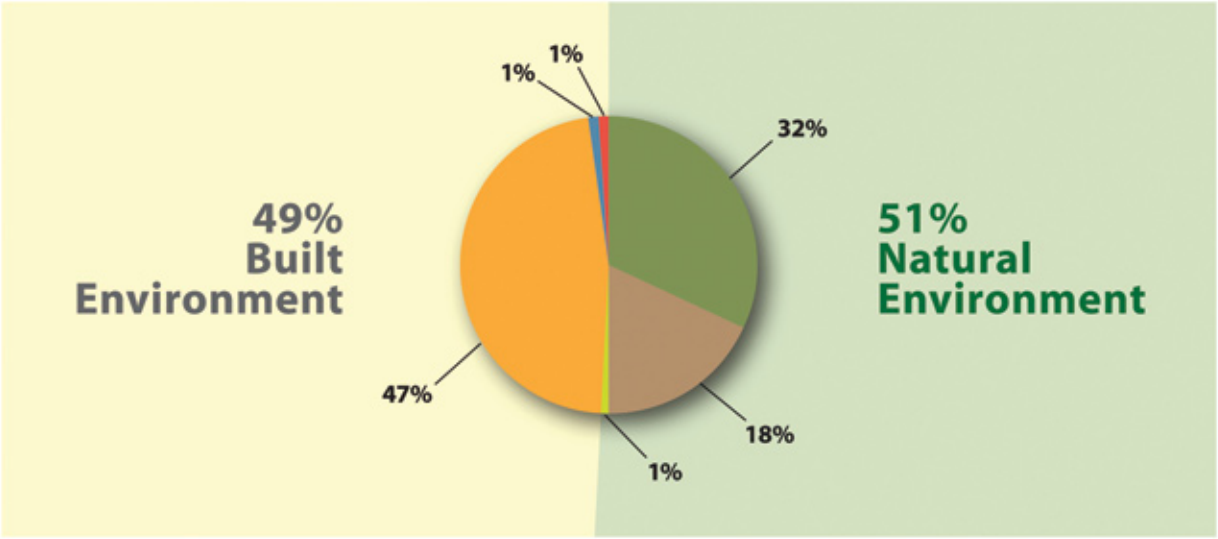
NEWPORT CHEMICAL DEPOT
REUSE MASTER PLAN

Newport Chemical Depot Reuse Authority
Vermillion County, Indiana

Matrix Design Group Inc.
Integrated Design Solutions

ECONOMICS RESEARCH ASSOCIATES - CHICAGO, ILLINOIS
BURNS & McDONNELL - CHICAGO, ILLINOIS
GARRITY & HINSELY - BOSTON, MASSACHUSETTS

A BALANCED PERSPECTIVE



	LAND USE AREAS	ACRES	% TOTAL
NATURAL ENVIRONMENT	Natural Areas & Open Space	2,305	32%
	Agriculture & Forestry	1,250	18%
	Parkland	90	1%
	SUBTOTAL	3,645	51%
BUILT ENVIRONMENT	Business & Technology	3,375	47%
	Conference & Support Facilities	70	1%
	Highway-Oriented Commercial	40	1%
	SUBTOTAL	3,485	49%
	GRAND TOTAL	7,130	100%

Plan Implementation Considerations

While additional planning work, environmental investigations, market assessments, and engineering studies will be required before the Reuse Plan can be fully implemented, this chapter provides a discussion of some of the issues that the NeCDRA will have to consider in implementing the Reuse Plan as well as some of the impacts of the property transfer and the Plan's implementation.

Economic and Development Impacts

Economic Impact

Realignment of the Newport Chemical Depot will have major implications for jobs, wages, purchases and taxes in the local and statewide economy. Currently, jobs supported by base contractors Parsons and Mason & Hanger generate wages that are funneled into the regional economy through spending on goods and services. By mid 2010, however, base remediation will have finished, and the economy will experience the impact from the loss of employment and regional spending. The loss of 690 jobs at the Newport Chemical Depot and transfer out of state in 2009 and 2010 will generate a series of ripple effects in the county and statewide economies. This impact is estimated as follows:

- The direct change in output from this employment shift is estimated at $61.2 million statewide.
- When business-to-business interactions and household spending are taken into consideration, the value across all industry sectors statewide from this employment loss is estimated at over $101.6 million.
- In addition to the loss of 690 direct jobs at the Newport Chemical Depot, an additional 110 indirect and 220 induced job loss is also predicted statewide.
- At the county level, the indirect and induced effects resulting from this employment loss is estimated at $14.5 million, with $4.7 million in lost wages.

Redevelopment Impacts

Redevelopment of the Newport Chemical Depot will be critical to replacing lost consumer and business spending associated with Depot operations, while also retaining county employment. The Newport Chemical Depot reuse plan targets a mix of business and technology, agriculture, and highway-oriented commercial uses. Key business

targets include major energy producers, advanced manufacturers, and possibly, a state correctional facility. The impact of redevelopment on Vermillion County been quantified over two phases:

- Construction: Major capital investments at the Newport Chemical Depot will support temporary jobs and wages for area workers. Impacts from construction of major uses are reflected in current dollars.
- Operations: Business investment at the Newport Chemical Depot will generate new employment opportunities for area workers, as well as generate base income in the form of lease payments. Projected lease revenues have been generated assuming annual gross per square foot lease rates of $2.00 to $2.50 for manufacturing and office uses; and $1.25 to $1.75 for warehousing uses.

Implementation

The implementation plan provides the Reuse Authority with a strategic project approach that identifies potential strategies and tools to be considered as development advances at the Newport Chemical Depot. Based upon needs of the regional economy and select advantages of the Newport Chemical Depot, the following objectives have been identified to guide Base redevelopment:

Generate jobs: The surrounding area, and Vermillion County in particular, is in need of additional employment. The Newport Chemical Depot is a prime opportunity to attract investment in emerging business sectors to generate high quality jobs, helping to attract new workers to the ten counties. Over the long-term, this will help to favorably position the region for additional economic growth.

Attract new business investment: Through a strategic branding, marketing and business outreach strategy, the Newport Chemical Depot has the opportunity to enhance the reputation of West Central Indiana for business investment. Attracting new businesses to the Newport Chemical Depot will ultimately generate spin-off development in the form of supporting businesses and services, and enhance the region for prospective residents.

Strategies

Redevelopment strategies have been broken into two categories: 1) organizational strategies that address the evolving responsibilities and management of the Reuse Authority, and 2) operational strategies which seek to establish regularity and efficiency in their functioning and decision making. Under each strategy, a series of actions have been identified to implement the particular strategy.

Short Term Steps and Considerations

Key to redevelopment in the short-term will be building the operational capacity necessary to implementing redevelopment, as well as generating developer interest in the site:

- Build economic development capacity
- Promote organizational efficiency

Operational strategies seek to establish regularity and efficiency in the functioning of the Reuse Authority. Three operational strategies have been identified to support redevelopment at the Newport Chemical Depot:

- Establish procedural regularity for making critical business decisions
- Prioritize financial sustainability
- Provide an effective Depot land management and marketing strategy:

Longer Term Steps and Considerations

Important over the long-term will be forging strategic relationships with area brokers and businesses, and taking steps to ensure targeted site investment is accurately reflected in the rent. Recommended key operational and tactical moves are:

- Collaboration with local and regional planning officials and prospective companies and developer(s) to obtain the local approvals necessary to implement redevelopment.
- Partnerships with Midwestern brokers and realtors to ensure maximum visibility of available sites.
- Periodic property revaluation and rent adjustment.

Transportation and Infrastructure Impacts

As a part of future planning efforts, detailed "order of magnitude" estimates will be developed relative to the degree of public sector capital investment that will be necessary for implementation of the 20-year redevelopment plan. The majority of implementation costs relate to rehabilitation of existing facilities and construction of new transportation and utility infrastructure. Primary cost components will include:

- Arterial, collector and local streets
- Water and sewer systems
- Storm drainage
- Electrical transmission and distribution
- Telecommunications

The actual cost for implementation will be determined through additional information acquired during completion of the infrastructure studies, including an infrastructure master plan; water supply and distribution study; rail feasibility study; and other detailed studies that will help determine long-term costs and revenue to implement the Reuse Plan. These costs will include total projections through build out and a contingency allowance.

The time frames necessary for implementation of utility and transportation infrastructure improvements will be dictated to a large extent by the rate at which new businesses occupy the facility; phasing may also be driven by the logistics of transfer of ownership and operations responsibility of any utility systems. The need for capacity-related improvements to the transportation network in the vicinity of the base will be dictated primarily by the rate at which existing facilities are reused, and new facilities are constructed.

Due to the extremely long lead-time associated with major transportation improvements (driven in large part by the funding process), it is essential that any proposed transportation improvements be given a high priority.

While several options remain relative to the logistics associated with future operation of existing utility systems on the base, it is clear that extensive rehabilitation of the existing systems and construction of new system components will be required. While, ideally, the market will allow the reuse of facilities which can receive improved utility service based on limited "up front" capital investment first, it is likely that significant infrastructure improvements will be necessary, particularly in the areas of water and sewer system rehabilitation, streets and roadways, and communications infrastructure. At this stage of the planning effort, it is assumed that the capital investment in utility and transportation infrastructure will be spread over a 20 year period with weighting on the initial five years.

Environmental Considerations

There are numerous environmental issues that must be considered prior to, and during, implementation of the Plan. Environmentally-impacted sites on the property are at various stages of investigation, remediation, and closure; some potential areas of environmental concern have not been assessed at all. A number of known environmentally-impacted areas have not been adequately remediated to fully implement the Reuse Plan. Environmental investigation and site characterization for known and potential environmentally-impacted sites are critical elements to redevelopment because the nature and extent of contamination must be defined prior to being able to adequately estimate costs for remediation to be protective of human health and the environment for the land uses described in the plan, and to adequately estimate and consider long-term obligations (e.g., long term monitoring or land use controls). The environmental strategy for proceeding with cleanup and redevelopment in accordance with the Reuse Plan should include filling identified data gaps while coordinating further site investigation, remediation, and closure of contaminated sites consistent with the redevelopment schedule and priorities.

Environmental Phasing

During the development of the Reuse Plan, certain areas have been identified as priorities in the redevelopment phasing for the NeCDRA. The priority areas are the agricultural lands that will likely transfer first, and the large sections of industrial development property. At this planning stage, the following priorities related to environmental investigation and cleanup have been identified, along with the reasoning associated with the priorities:

- Property in the large blocks of land slated for Business & Technology development
- The Chemical Demilitarization Area, where remediation, and investigations continue
- The potential for unexploded ordnance and MEC exists at several sites, including the National Guard Training Area, the Small Arms Range, and the Old Chemical Munitions Open Detonation Area
- The potential for radiological contamination
- Existing utilities
- The Power Plant

Environmental cleanup of the Depot is necessary to support redevelopment. Care has been taken to propose a Reuse Plan that considers "like use" of the property. However, even with "like use" as industrial and agricultural property, environmental issues remain and may impact development opportunities and costs. Discussion of potential issues and data gaps identified herein should occur with the Army and IDEM as soon as possible so that environmental investigation and cleanup as appropriate for implementation of this Reuse Plan can occur in advance of property transfer, and/or appropriate Business Planning and cost estimating can occur to value the property and assess redevelopment costs appropriately.

Property Transfer Considerations

After the final property disposition strategies have been agreed upon by the NeCDRA and the Army, a parcel by parcel implementation occurs until all the property has been conveyed. As part of this process, the DoD, NeCDRA and the State of Indiana reach consensus on responsibility for completing remaining environmental restoration activities for each parcel, and environmental cleanup or remediation is implemented by either the DoD or the property recipient. If the property recipient accepts responsibility for environmental restoration activities, a covenant deferral request and a Finding of Suitability for Early Transfer (FOSET) is signed by the Governor, and other legal and regulatory documents identifying the responsible party, the terms of the transfer, and scope of work for environmental restoration must be prepared and finalized.

Public Benefit Conveyances

A Public Benefit Conveyance (PBC) is "the transfer of surplus military property for a specified public purpose at up to a 100 percent discount" (Department of Defense Base Redevelopment and Realignment Manual, 2006). Surplus military property may be conveyed to public agencies and not-for-profit organizations to provide public goods and services. PBC categories include: parks and recreation, historic monuments, airports, health, education, correctional facilities, highways, self-help housing, wildlife conservation and emergency management. For each of these public purposes, there is a sponsoring federal agency with regulations that determine applicant eligibility and need. Through the State and Local Screening process, the NeCDRA reviewed proposed uses to see how well they fit with the overall guiding principles and direction of the Reuse Plan.

Notice of Interest (NOI) Applications

On or before March 23, 2009, four NOIs were received from state, local and non-profit entities:

- Indiana Department of Natural Resources
- Sycamore Trails Resource Conservation and Development Council
- Vermillion County Parks and Recreation Board
- Wabash River Heritage Corridor Commission

All four applicants share a common interest in and commitment to natural resource conservation, education, and compatible recreational activities. Several of the applicants even acknowledged in their NOI requests the commonality of purpose with the other PBC applicants and a desire to work together to accomplish their common goals. Consequently, in the spirit of providing a collaborative foundation for implementing the Reuse Plan, the NeCDRA recommends that none of the four PBC requests be approved and, instead, commits to establish a working relationship with the applicants and other interested parties to protect, manage, and promote the Depot's planned Natural Area & Open Space districts.

Homeless Assistance Provisions

The NeCDRA conducted an outreach process to solicit Notices of Interest from state and local agencies, representatives of the homeless and other persons as provided by the Defense Base Closure and Realignment Act of 1990 (Public Law no. 101-510; the "Act"), as amended.

On January 20, 2009, a Public Outreach Workshop was conducted at 2250 North Main Street, Clinton, Indiana to provide information to state and local government entities, representatives of the homeless, and other eligible persons or entities in the vicinity of the Depot who may have an interest in buildings or property at the Depot for homeless assistance or other public benefit purposes.

No homeless assistance Notices of Interest were received.

Appendix C

Record of Non-Applicability

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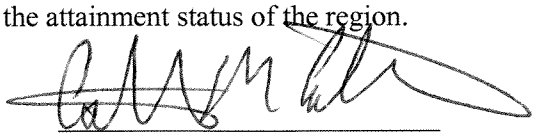
RECORD OF NON-APPLICABILITY
In Accordance with the Clean Air Act - General Conformity Rule For
The Proposed Disposal and Reuse of Newport Chemical Depot (NECD), Indiana

29 April 2010

The Army proposes to close the Newport Chemical Depot (NECD), Indiana. General Conformity under the Clean Air Act, Section 176 has been evaluated according to the requirements of 40 CFR Part 93, Subpart B. Regardless of the disposal scenario ultimately implemented or changes in the attainment status of the region, the requirements of this rule are not applicable because all activities associated with the action would result in no emissions increase or an increase in emissions that is clearly *de minimis* (of minimal importance), including:

- Transfers of ownership, interests, and titles in land, facilities, and real and personal properties, regardless of the form or method of the transfer (40 CFR 93.153(c)(2)(xiv)).
- Actions (or portions thereof) associated with transfers of land, facilities, title, and real properties through an enforceable contract or lease agreement where the delivery of the deed is required to occur promptly after a specific, reasonable condition is met, such as promptly after the land is certified as meeting the requirements of CERCLA, and where the Federal agency does not retain continuing authority to control emissions associated with the lands, facilities, title, or real properties (40 CFR 93.153(c)(2)(xix)) .
- Transfers of real property, including land, facilities, and related personal property from a Federal entity to another Federal entity and assignments of real property, including land, facilities, and related personal property from a Federal entity to another Federal entity for subsequent deeding to eligible applicants (40 CFR 93.153(c)(2)(xx)) .
- Routine maintenance and repair activities, including repair and maintenance of administrative sites, roads, trails, and facilities (40 CFR 93.153(c)(2)(iv)) .
- Direct emissions from remedial and removal actions carried out under the Comprehensive Environmental Response, Compensation and Liability Act and associated regulations to the extent such emissions either comply with the substantive requirements of the PSD/NSR permitting program or are exempted from other environmental regulation under the provisions of CERCLA and applicable regulations issued under CERCLA (40 CFR 93.153(c)(5)) .

Notably, reuse activities and all stationary, mobile, and area sources of emissions associated with the property after it is transfer would not be under an ongoing program of control from the Army. Therefore, are not accounted for herein. Because the action is within an attainment area, and all activities are specifically exempt from the rule, supporting documentation and emission estimates not necessary. This determination would not change regardless of the changes in the attainment status of the region.



Signature

BRAC Environmental Coordinator

29 April 2010
Date

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Appendix D

List of Scientific and Common Names

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Scientific names of species mentioned in the text	
Trees and bushes	
Black ash	*Fraxinus nigra*
Green ash	F. *pennsylvanica*
White ash	*Fraxinus americana*
American beech	*Fagus grandifolia*
Cottonwood	*Populus deltoides*
Flowering dogwood	*Cornus florida*
American elm	*Ulmus americana*
Red elm	*Ulmus rubra*
Empress tree	*Paulownia tomentosa*
Pignut hickory	*C. glabra*
Shagbark hickory	*Carya ovata*
Shellbark hickory	*Carya laciniosa*
Ironwood	*Olneya tesota*
Red Maple	*A. rubrum*
Sugar maple	*Acer saccharum*
Multifora rose	*Rosa multiflora*
Burr oak	*Q. macrocarpa*
Black oak	*Q. velutina*
Northern red oak	*Q. rubra*
Pin oak	*Q. palustris*
Swamp white oak	*Quercus bicolor*
White oak	*Quercus alba*
Russian olive	*Eleagnus angustifolia*
Sycamore	*Platanus occidentalis*
Black walnut	*Juglans nigra*
Herbaceous plants	
Big bluestem	*Andropogon geradii*
Little bluestem	*Schizachyrium scoparium*
Black-eyed susan	*Rudbeckia hirta*
Common burdock	*Arctium minus*
Skunk cabbage	*Symplocarpus foetidus*
Tall cinquefoil	*Potentilla recta*
Clover	*Trifolium* sp.
Common yarrow	*Achillea millefolium*
Bur cucumber	*Sicyos angulatus*
Prairie dropseed	*Sporobolus heterolepis*
Maidenhair fern	*Adiantum pedatum*
Marsh fern	*Thelypteris* sp.
Goldenrod	*Solidago* sp.
Side-oats gramma	*Bouteloua curtipendula*
Bush honeysuckle	*Diervilla lonicera*
Indian grass	*Solidago nutans*
Johnsongrass	*Sorghum halepense*
Witch grass	*Panicium capillare*
Knotweed	*Polygonum* sp.
Garlic mustard	*Alliaria petiolata*
Common ragweed	*Ambrosia artemisiifolia*
Fibrousroot sedge	*Carex communis*

Scientific names of species mentioned in the text	
Shattercane	*Sorghum bicolor*
St. John's wort	*Hypericum* sp.
Switchgrass	*Panicum virgatum*
Thistle	*Cirsium* sp.
Mammals	
Coyote	*Canis latrans*
White-tailed deer	*Odocoileus virginianus*
Mink	*Mustela vison*
Opossum	*Didelphis virginiana*
Eastern cottontail rabbit	*Sylvilagus floridanus*
Raccoon	*Procyon lotor*
Norway rat	*Rattus norvegicus*
Least shrew	*Cryptotis parva*
Southeastern shrew	*Sorex longirostris*
Striped skunk	*Mephitis mephitis*
Southern flying squirrel	*Glaucomys volans*
Pine vole	*Microtus pinetorum*
Birds	
Northern bobwhite	*Colinus virginianus*
American crow	*Corvus brachyrhynchos*
Northern flicker	*Aptes auratus*
American goldfinch	*Carduelis tristis*
Blue jay	*Cyanocitta cristata*
American kestrel	*Falco sparverius*
Horned lark	*Eremophila alpestris*
Song sparrow	*Melospiza melodia*
European starling	*Sturnus vulgaris*
Downy woodpecker	*Picoides pubescens*
Reptiles and amphibians	
Black rat snake	*Elaphe obsolete*
Northern water snake	*Nerodia sipedon*
Small-mouth salamander	*Ambystoma texanum*
Eastern box turtle	*Terrapene carolina*
Eastern painted pond turtle	*Chrysemys picta*
Western chorus frog	*Pseudacris triseriata*
Spring peeper	*Pseudacris crucifer*
American toad	*Bufo americanus*
Protected Species and Species of Concern	
American badger	*Taxidea taxus*
Indiana bat	*Myotis sodalis*
Western harvest mouse	*Reithrodontomys megalotis*
Least weasel	*Mustela nivalis*
Bald eagle	*Haliaeetus leucocephalus*
Virginia rail	*Rallus limicola*
Henslow's sparrow	*Ammodramus henslowii*
Sedge wren	*Cistothorus platensis*
Goldenseal	*Hyrastis canadensis*
American ginseng	*Panax quinquefolius*
Wood's hellebore	*Veratum woodii*

Scientific names of species mentioned in the text	
Large yellow lady's slipper	*Cypripedium calceolus* var. *pubescens*
American pinesap	*Monotropa hypopithys*

Newport Chemical Depot Integrated Natural Resources Management Plan (2001)

Recommended Management Measures

Endangered Species Management Measures:

Indiana Bat:

- Implement the ESMP, which prescribes specific management prescriptions for the effective management of the Indiana bat's summer foraging and roosting habitat, including the following:
  - Conduct no tree cutting at NECD during the Indiana bat maternity roosting season (April 1 through September 30) unless it is necessary to maintain forest health or safety conditions (for example, control of a disease or insect outbreak or removal of storm damage).
  - Manage forests to promote a diversity of age and size classes with emphasis on retention of adequate stocks of large mature and overmature trees in each stand.
  - Do not harvest or manipulate shagbark and shellbark hickory trees during timber stand improvement activities unless the densities of the two species combined exceeds 16 trees per acre. If present, at least 16 live shagbark and shellbark hickory (combined) larger than 11 inches diameter at breast height must be maintained per acre.
  - Maintain or exceed 60 percent canopy cover in each forest stand after forest management activities.
  - Do not remove snags except where they pose a threat to safety or forest health (for example, a threat of disease or insect outbreak).
  - Limit tree cutting within 100 feet on both sides of perennial streams and within 50 feet on both sides of intermittent streams to activities that maintain or improve the quality of Indiana bat habitat and are in accordance with other forest management prescriptions described in this ESMP.
  - Protect active maternity roost trees as they are identified at NECD, and continue their protection until they no longer serve as maternity roosts (for example, because of loss of exfoliating bark or cavities, blow-down, or decay).
  - Apply pesticides in accordance with the prescriptions outlined in the USFWS biological opinion report on agricultural pesticide application practices at NECD during the Indiana bat maternity roosting season.
  - Do not conduct controlled burning of woodlands during the Indiana bat maternity roosting season.
  - Protect known maternity roost sites from human disturbances and monitor the conditions of known roost trees.

Integrated Natural Resources Management Plan

Newport Chemical Depot, Indiana 5-23 August 2001

- Maintaining summer foraging and roosting habitat at NECD, including following guidelines for the adequate stocking of potential maternity roost trees and the retention of snags in forest stands (see in Section 5.8). Potential Indiana bat roost trees are listed in Table 16.
- Limiting habitat disturbances during the maternity roost season (April 15 to September 15) and restricting certain natural resources management activities.
- Restricting pesticide use on agricultural tracts and forested areas in accordance with terms of the ESMP. The use of any pesticides at NECD with the potential to affect the Indiana bat will require ESA Section 7 consultation with the FWS (see Section 5.10).
- Monitoring trends in the Indiana bat population at NECD.
- Educating individuals who may have an impact on the Indiana bat regarding the species and its presence at NECD.
- Communicating with FWS regarding the status of the Indiana bat at NECD. NECD will also engage in ESA Section 7 consultation with the FWS Bloomington Field Office for projects or programs that the Army determines may have an impact on the Indiana bat. ESMP guidelines for communicating and consulting will be followed to implement this management measure.

Henslow's sparrow:

The following management measures will be implemented at NECD to conserve the Henslow's sparrow:

- Continue native prairie restoration efforts (see Section 5.5.4.2) to provide additional Henslow's sparrow habitat.
- Control the encroachment of woody vegetation and brush in prairie restorations by using a rotational program of prescribed burning to maintain high quality Henslow's sparrow habitat. No more than 20 to 30 percent of the total native prairie habitat will be burned in any given season to maintain adequate undisturbed nesting cover. Burns will be conducted on a 3- to 4-year cycle or longer, depending on the degree of woody vegetation control required. Burns will be conducted in early spring (March to April) or late fall (October to November) to avoid disturbing nesting birds. Mowing may also be conducted, preferably in the fall, as an alternative to burning if weather conditions or other mission concerns preclude prescribed burning of a particular grassland plot.
- Reduce the fragmentation of grasslands and the potential for predation and nest parasitism by eliminating wooded fencerows, brush, and other nongrassland habitat between prairie habitat blocks, when feasible.
- Maintain existing grazing and other agricultural outleases at NECD to provide supplemental habitat for the Henslow's sparrow. Mowing or haying of cool-season grassland plots will be delayed until July 15 or later of each year to minimize potential effects on nesting birds.
- Continue to monitor the population of Henslow's sparrows and other grassland birds at NECD by performing periodic bird counts and censuses.

Sedge wren and other grassland species:

To improve habitat conditions for the sedge wren and other grassland species, the following management measures will be implemented:

- Continue native prairie restoration efforts (see Section 5.5.4.2) to provide additional grassland habitat. To enhance sedge wren habitat, evaluate soil types and drainage conditions within planned restoration projects to identify opportunities to rehabilitate or create wet-sedge meadows within a mesic tallgrass prairie matrix.
- Implement the rotational burn program discussed under management measures for the Henslow's sparrow to maintain prairie restoration areas and provide high quality grasslands habitat. Burning only a portion of each prairie area on a 3- to 4-year rotation will create a mosaic of successional grassland stages and maintain landscape diversity, helping meet a broader range of habitat requirements.
- Continue efforts to reduce habitat fragmentation of grasslands and the potential for predation and nest parasitism by eliminating wooded fencerows, brush, and other nongrassland habitat between and within grassland blocks, when feasible.
- Continue monitoring populations of grassland birds by performing periodic bird counts and censuses.

Integrated Natural Resources Management Plan

Newport Chemical Depot, Indiana 5-27 August 2001

- Continue the grazing and agricultural outlease program to provide supple mental habitat for grassland birds. This "scatter-pattern" approach of mixed agricultural and grasslands land uses will provide adequate habitat for edge-sensitive species with wider home range requirements (Walk and Warner 1999).

Virginia rail:

Recommended actions are presented below.

- Prevent encroachment of excessive woody vegetation within the sludge basins to maintain suitable marsh habitat and the current hydrology of the ponds.
- Continue to monitor the population of Virginia rails at NECD through periodic bird counts and population censuses.
- Following completion of the NWI mapping project by FWS, investigate opportunities to restore other open-water marshes on NECD to provide additional Virginia rail habitat.

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Appendix E

Agency Coordination Letters

[Note: Each initial coordination letter included the figures that follow the first letter in this appendix. The figures, however, are not duplicated in this appendix for the other coordination letters.]

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DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Absentee-Shawnee Tribe of Indians of Oklahoma
Scott Miller, Governor
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

Dear Governor Miller:

The Defense Base Closure and Realignment Act of 1990 (Pub. L. 101-510, 10 U.S.C. § 2687 note), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana.

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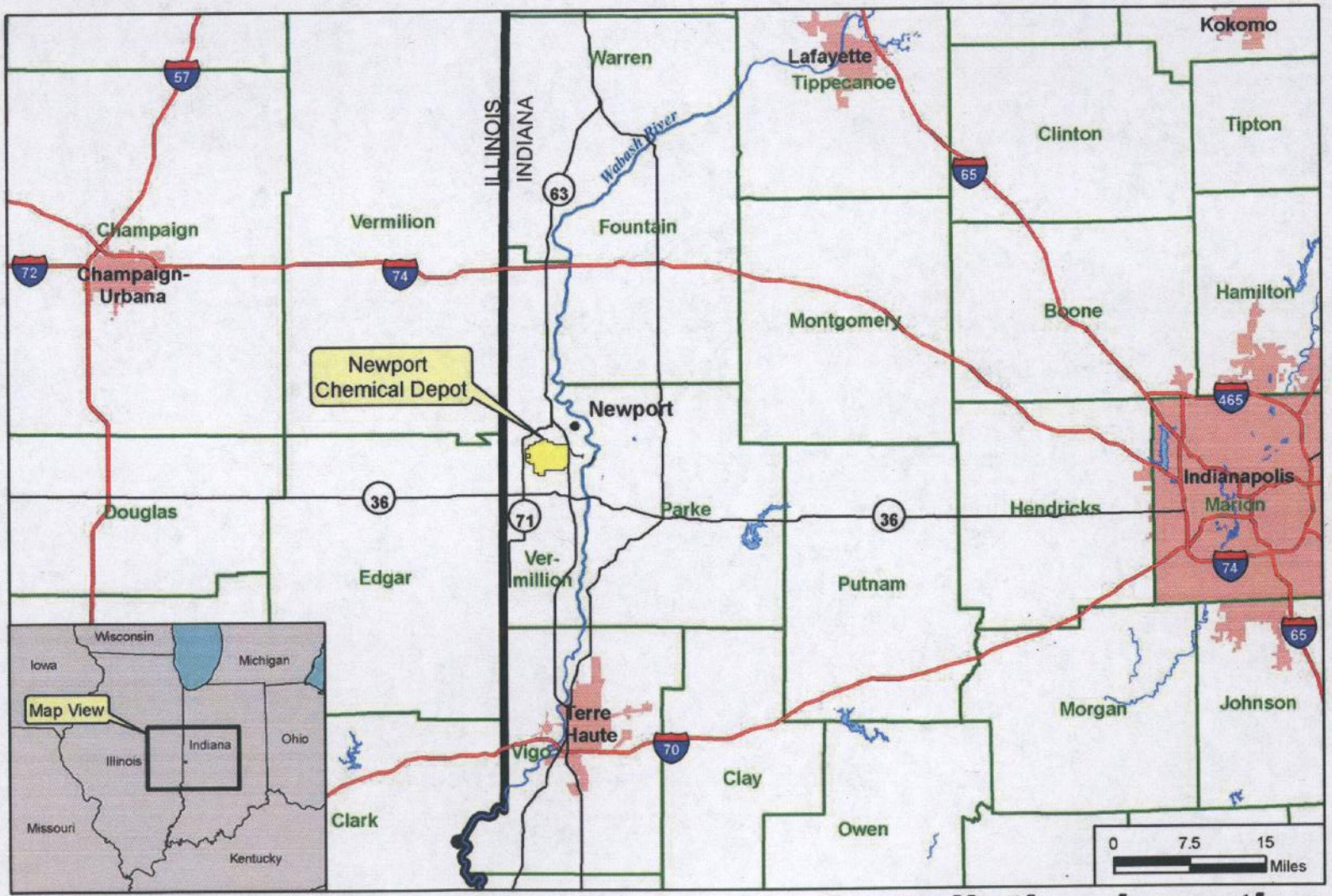
Sincerely,

William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosure



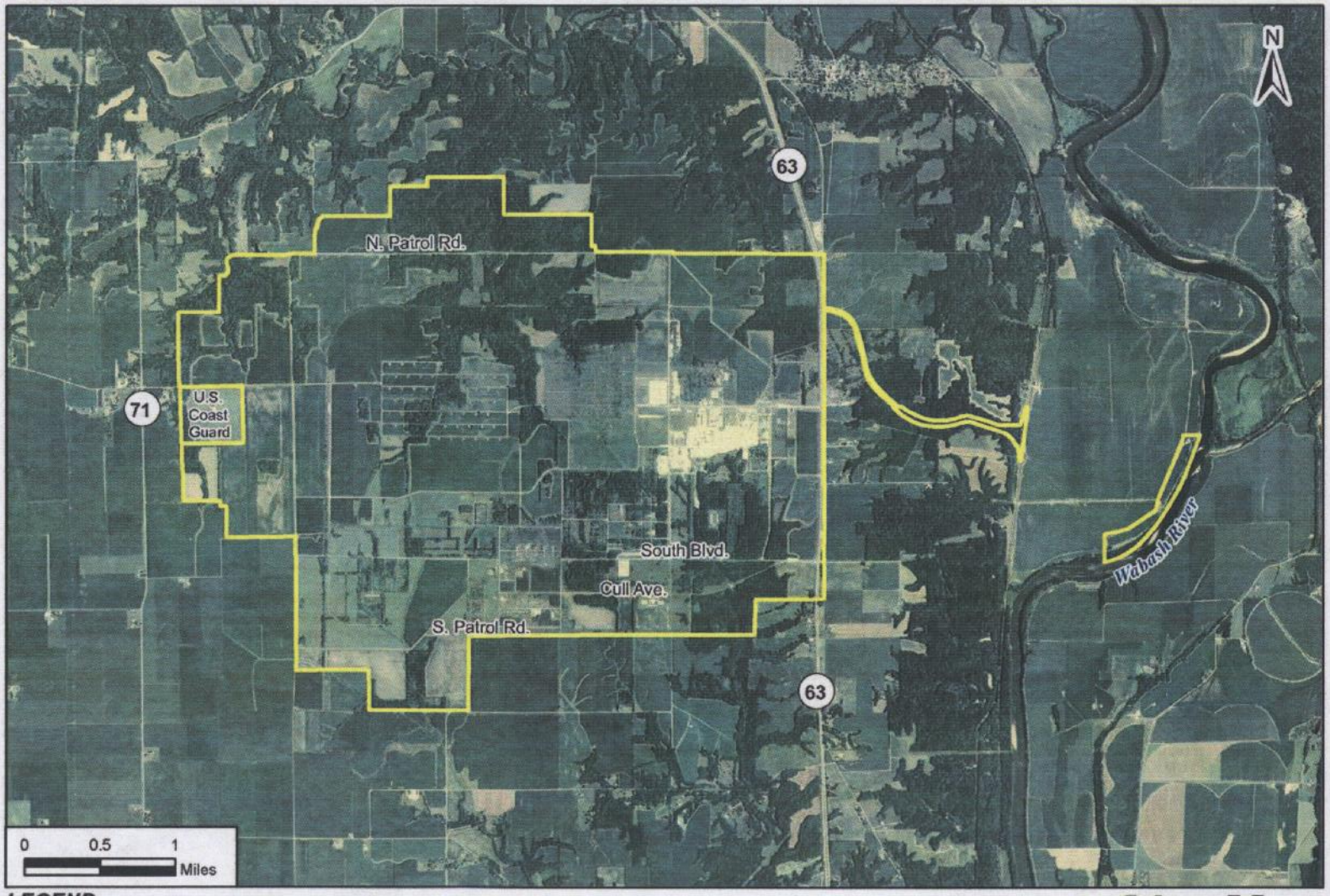
LEGEND

- Newport Chemical Depot
- State Boundary
- County Boundary
- Urban Area/City
- Interstate
- Surface Water

Installation Location

Figure 1

Note: Installation boundaries are approximate. Source: NECD GIS, 2009.



LEGEND

Newport Chemical Depot

Site Map

Figure 2

Note: Installation boundaries are approximate. Source: NECD GIS, 2009.

DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Stockbridge-Munsee Community Band of Mohican Indians
Robert Chicks, President
P.O. Box 70
Bowler, Wisconsin 54416-0070

Dear President Chicks:

The Defense Base Closure and Realignment Act of 1990 (Pub. L. 101-510, 10 U.S.C. § 2687 note), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana.

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Sincerely,

William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosure

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US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Prairie Band of Potawatomi Nation
Steve Ortiz, Chairperson
16281 Q Road
Mayetta, Kansas 66509-8970

Dear Chairperson Ortiz:

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William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosure

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US ARMY CHEMICAL MATERIALS AGENCY
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REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Pokagon Band of Potawatomi Indians
Matt Wesaw, Chairperson
Potawatomi Indian Nation (Pokagon Band)
P.O. Box 180
Dowagiac, Michigan 49047

Dear Chairperson Wesaw:

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Sincerely,

William D. Hibner
Lieutenant Colonel, US Army
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REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Peoria Tribe of Oklahoma
John P. Froman, Chief
PO Box 1527
Miami Oklahoma 74355-1527

Dear Chief Froman:

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Lieutenant Colonel, US Army
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REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Miami Tribe of Oklahoma
Tom Gamble, Chief
PO Box 1326
Miami Oklahoma 74355-1326

Dear Chief Gamble:

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Lieutenant Colonel, US Army
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REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Kickapoo Traditional Tribe of Texas
Juan Garza, Jr., Chairperson
HCR1 Box 9700
Eagle Pass, Texas 78852

Dear Chairperson Garza:

The Defense Base Closure and Realignment Act of 1990 (Pub. L. 101-510, 10 U.S.C. § 2687 note), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana.

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Lieutenant Colonel, US Army
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REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Kickapoo Tribe of Oklahoma
Marlon Frye, Chairperson
PO Box 70
McCloud, Oklahoma 74851-0070

Dear Chairperson Frye:

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December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Kickapoo Tribe of Indians in Kansas
Arlan Whitebird, Chairperson
Kickapoo of Kansas Tribal Council
1107 Goldfinch Road
Horton, Kansas 66439

Dear Chairperson Whitebird:

The Defense Base Closure and Realignment Act of 1990 (Pub. L. 101-510, 10 U.S.C. § 2687 note), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana.

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Sincerely,

William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosure

DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Nottawaseppi Huron Band of the Potawatomi
Laura Spurr, Chairperson
2221 1½ Mile Road
Fulton, Michigan 49052

Dear Chairperson Spurr:

The Defense Base Closure and Realignment Act of 1990 (Pub. L. 101-510, 10 U.S.C. § 2687 note), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana.

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William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosure

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US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
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NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Hannahville Indian Community
Kenneth Meshigaud, Tribal Chairperson
N14911 Hannahville B-1 Road
Wilson, Michigan 49896

Dear Chairperson Meshigaud:

The Defense Base Closure and Realignment Act of 1990 (Pub. L. 101-510, 10 U.S.C. § 2687 note), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana.

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William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosure

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US ARMY CHEMICAL MATERIALS AGENCY
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NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Forest County Potawatomi Community
Philip Shopodock, Chairperson
P.O. Box 340
Crandon, Wisconsin 54520

Dear Chairperson Shopodock:

The Defense Base Closure and Realignment Act of 1990 (Pub. L. 101-510, 10 U.S.C. § 2687 note), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana.

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William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosure

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US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
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NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Eastern Shawnee Tribe of Oklahoma
Glenna J. Wallace, Chief
P.O. Box 350
Seneca, Missouri 64865

Dear Chief Wallace:

The Defense Base Closure and Realignment Act of 1990 (Pub. L. 101-510, 10 U.S.C. § 2687 note), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana.

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Lieutenant Colonel, US Army
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REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Delaware Nation
Kerry Holton, President
P.O. Box 825
Anadarko, Oklahoma 73005-0825

Dear President Holton:

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Lieutenant Colonel, US Army
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REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Citizen Potawatomi Nation
John A. Barrett, Chairperson
1601 S. Gordon Cooper Drive
Shawnee, Oklahoma 74801

Dear Chairperson Barrett:

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REPLY TO
ATTENTION OF

December 15, 2009

Chief Engineer

SUBJECT: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

Cherokee Nation of Oklahoma
Chadwick Smith, Principal Chief
P.O. Box 948
Tahlequah, Oklahoma 74465-0948

Dear Principal Chief Smith:

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William D. Hibner
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US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

November 12, 2009

Commanding Officer

SUBJECT: Notice of Adverse Effect on Historic Properties, Newport Chemical Depot (NECD), Vermillion County, Indiana

Mr. Don Klima, Director
Office of Federal Agency Programs
Advisory Council on Historic Preservation
1100 Pennsylvania Avenue, NW, Suite 809
Washington, D.C. 20004

Dear Mr. Klima:

The United States Army (Army) is planning to close the Newport Chemical Depot (NECD) as mandated by the Defense Base Realignment and Closure (BRAC) Commission pursuant to the Defense Base Realignment and Closure Act (Public Law 101-510). Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended and the National Environmental Policy Act (NEPA) of 1969, the Army has been working with the Indiana State Historic Preservation Office to ensure all compliance requirements are met. This letter concerns the final determination of effect for the disposal action as per requirements of NHPA and its implementing regulations at 36 CFR 800.

The NECD is required by law to close by 2011. The depot is a 7,000-acre facility, located approximately 70-miles west of Indianapolis, in Vermillion County, Indiana (Enclosure 1). The entire NECD area is considered to be the Area of Potential Effect (APE) of the closure action. A reuse authority has been created to develop a master plan for the conversion of the depot to civilian use. Goals of the authority are to develop a reuse plan for primarily industrial and agricultural uses, ensure preservation of natural resources, and to maximize local jobs and investment for the county and the region.

The depot, originally named the Wabash River Ordnance Works, was established in February 1942 on a tract of nearly 22,000 acres. Its primary purpose was to produce the explosive material RDX and its compounds. Heavy water production was added to the plant's capabilities in 1952 and continued until 1957 when both RDX and heavy water manufacturing ceased. Chemical Agent VX, a liquid nerve agent, was produced from 1961-1968. During the 1960s, the facility changed names to Newport Army Chemical Plant and again to Newport Army Ammunition Plant as excess lands were sold until the facility was down-sized to approximately 7,000 acres. After Chemical Agent VX

production halted, the plant prepared for a brief period of TNT production, and all but the TNT-producing facilities were demolished. Production ended in 1974. Since that time, the depot's functions have centered on maintenance of the inactive TNT facilities rather than production. The plant was officially named Newport Chemical Depot in 1996, but it has been largely inactive since1997 other than to destroy the VX stockpile from 2005-2008.

A historic architectural inventory conducted in 1984 found no structures at the facility to be potentially eligible or eligible for listing on the National Register of Historic Places (NRHP). All structures on the installation were included in the survey regardless of age. Level IV HABS/HAER cards were completed for 42 individual resources and copies of the cards with photographs were filed with the Library of Congress.

A total of 23 cultural resources surveys have been conducted on NECD to date, resulting in the identification of 391 archaeological sites. Of the sites identified, 23 have been determined potentially eligible for the NRHP or require additional investigation to determine NRHP eligibility. No archaeological sites have been determined eligible for the NRHP. Many of the prehistoric sites at NECD are small, ephemeral, lithic scatters or isolated finds. The historic period is represented by nineteenth and twentieth century farmsteads. Approximately 1600 acres remain to be surveyed. The Army plans to survey those areas prior to closure of the depot.

Based on the existence of historic properties within the APE, the Army has determined that the disposal action will have an adverse effect on historic properties as per 36 CFR 800.5(d)(2). To resolve the adverse effects caused by the closure of the NECD, the Army proposes to prepare a Programmatic Agreement to conclude its Section 106 obligations.

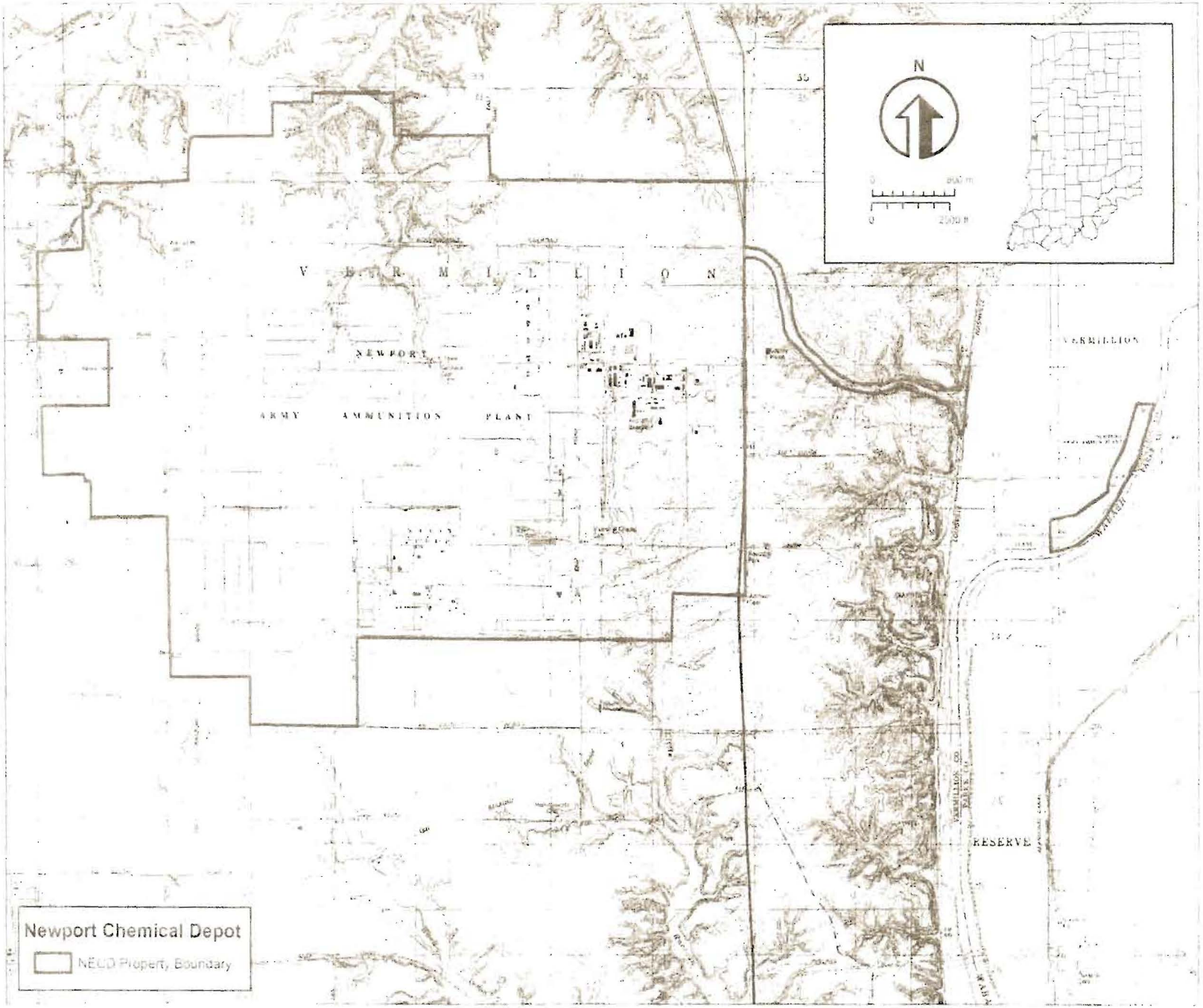
In accordance with 36 CFR 800.6(a)(1) this letter is official notification of the adverse effect finding and an invitation to participate in the review and consultation process.

The Army appreciates your cooperation and guidance concerning this BRAC action. Please contact the NECD Cultural Resources point of contact, Cathy Collins, cathy.m.collins@us.army.mil, 765/245-4550 with your response to our invitation to participate and with any questions or requests for information you may have. Your response will be greatly appreciated.

Sincerely,

William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosure


N
0
800 m
0
2500 ft
V E R M I L L I O N
NEWPORT
ARMY AMMUNITION PLANT
VERMILLION
RESERVE
Newport Chemical Depot
NECD Property Boundary

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DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

March 29, 2010

Chief Engineer

Subject: Notification of Closure of Newport Chemical Depot, Section 106 Consultation with Indiana State Historic Preservation Office

State Historic Preservation Officer
Attn: Cathy Draeger-Williams
Indiana Department of Natural Resources
Division of Historic Preservation and
Archaeology
Indiana Government Center South, Room W274
402 West Washington Street
Indianapolis, Indiana 46204

Dear Ms. Draeger-Williams:

On September 8, 2005, the Defense Base Closure and Realignment Commission ("BRAC Commission") recommended a set of domestic realignment and closure actions to meet the needs of a more efficient and effective fighting force. The BRAC Commission recommended closure of 15 Active-duty installations, 17 leased facilities, 176 Army Reserve installations, and 211 Army National Guard facilities while creating Training Centers of Excellence and Joint Technical and Research Facilities. The recommendations became law on November 9, 2005 and must now be implemented as provided for in the BRAC Act of 1990, Public Law (PL) 101-510. To implement one of the recommended actions, the Army is proposing the closure of Newport Chemical Depot (NECD), Newport, Indiana and transfer of this property from Federal government ownership to a non-federal entity for local reuse and development after closure.

NECD is a 7,000-acre facility, located approximately 70-miles west of Indianapolis in Vermillion County, Indiana. The entire facility is considered to be the Area of Potential Effects (APE) for the proposed undertaking. Several cultural resources investigations have been conducted on NECD to identify and evaluate historic properties. To date, no significant architectural resources have been identified; however, the facility does contain 23 potentially eligible archaeological sites. Based on the existence of historic properties within the APE, the Army has determined that the undertaking (transfer to non-federal entity) will have an adverse effect on the identified historic properties as per 36 CFR 800.5(d)(2). To resolve the adverse effects caused by the BRAC action, the Army proposes to prepare a Programmatic Agreement to meet its Section 106 of the National Historic Preservation Act obligations.

Enclosed please find additional information about the NECD and cultural resources. We ask that you review enclosed information and concur with the determination of adverse effect. Please provide comments back to this office within 30 calendar days of receipt of this letter. Should you desire to meet and discuss the agreement, we would be more than happy to make arrangements for a meeting at the installation. Please direct any questions you may have to Cathy Collins, 765/245-4550, cathy.m.collins@us.army.mil. Thank you in advance for your efforts.

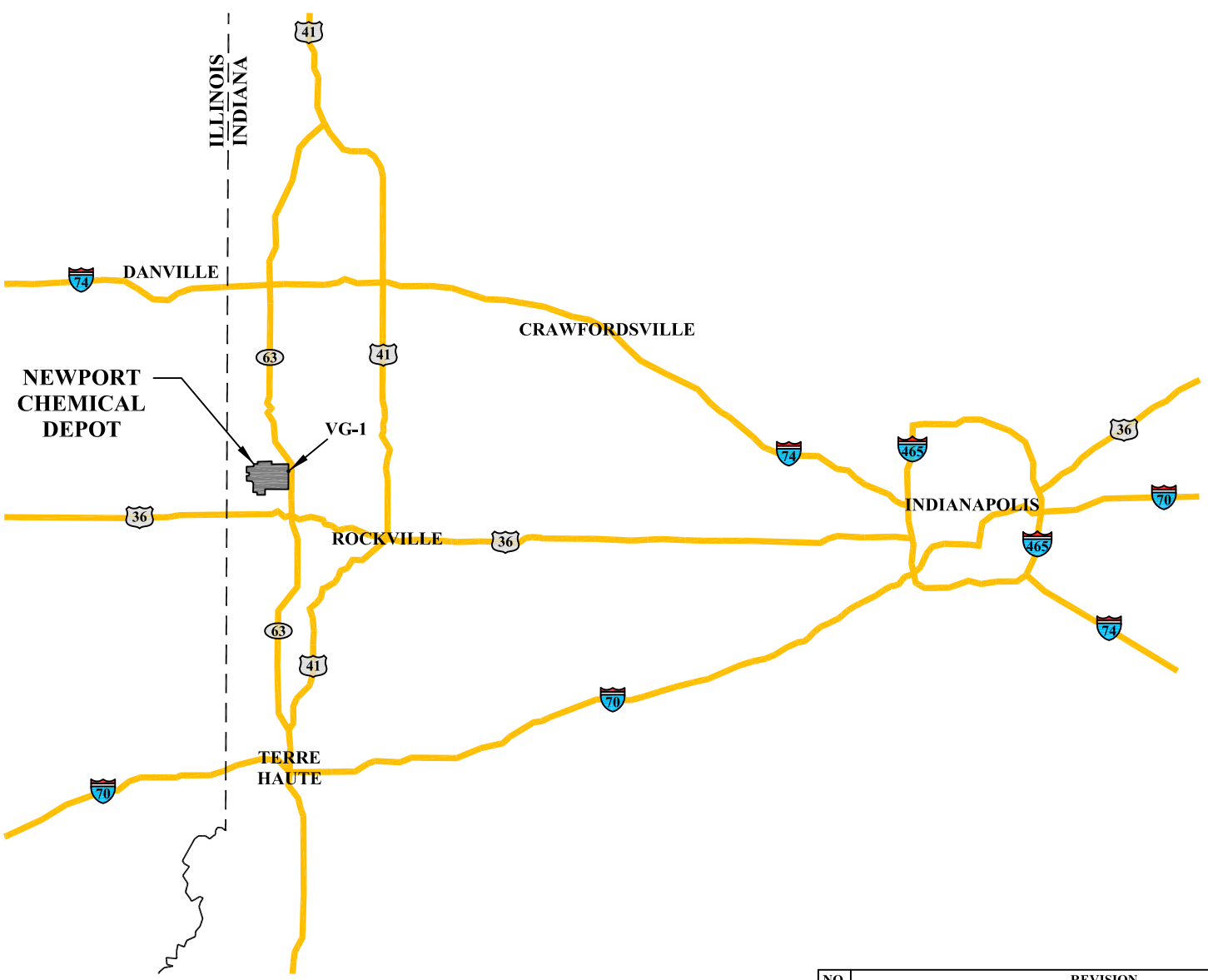
Sincerely,

William D. Hibner
Lieutenant Colonel, Commanding

Enclosures

CF:

Mason & Hanger, Phil Cox



NO.	REVISION	DATE	BY:
2	REMOVED VG-4	10/7/08	WCH
1	REVISED TO SHOW VG-1	9/25/07	WCH

Mason&Hanger
A Day & Zimmermann Company

REFERENCE DRAWINGS		PROJECT	D. A. NO.	
		SCALE	N/A	DATE
		DWN BY		7/7/92
		CURRENT DATE:		
		APPROVED BY		
		SAFETY		
		PROD.		
		PROJ. ENG.		
		DFT. MNGR.		
		ENG. SUP.		

MASON & HANGER CORPORATION
NEWPORT CHEMICAL DEPOT
NEWPORT, INDIANA

NECD
VICINITY AND TRAVEL MAP

SIZE	DRAWING NO.	REVISION
A	MN-30748	2

Description of Undertaking

In accordance with the BRAC Commission recommendations of 2005, which are now law, Army will close Newport Chemical Depot and transfer the property to a non-federal entity for reuse after the closure. The entire approximately 7,000 acre facility will be transferred (Figure 1). In preparation for closure, a non-federal entity, the Newport Chemical Depot Reuse Authority (NeCDRA), was created to complete a reuse master plan for the depot. A preliminary reuse plan has been selected by the NeCDRA that is a balance between agricultural and natural areas, and business and technology development (NeCDRA 2009).

Background Information

The depot, originally named the Wabash River Ordnance Works, was established in February 1942 on a tract of nearly 22,000 acres. Its primary purpose was to produce the explosive material RDX and its compounds. Heavy water production was added to the plant's capabilities shortly after the facility opened and continued until 1957 when both RDX and heavy water manufacturing ceased. Chemical Agent VX, a nerve agent, was produced from 1961-1968. During the 1960s, the facility changed names to Newport Army Chemical Plant and again to Newport Army Ammunition Plant as excess lands were sold until the facility was down-sized to approximately 7,000 acres. After Chemical Agent VX production halted, the plant prepared for a brief period of TNT production which ended in 1974. Since that time the depot's functions have centered on maintenance of the inactive TNT facilities rather than production, until the TNT mobilization mission was removed in 1993. The plant was officially named Newport Chemical Depot in 1996, but it has been largely inactive since1997 other than to destroy the VX stockpile from 2005-2008.

Status of Cultural Resources

Archaeology

To date approximately 3,900 acres have been systematically examined for archaeological resources (Figure 2). The most recent survey was completed in 2009 and included1200 acres of high probability areas (Whitley et al 2009). The previous surveys have resulted in the recordation of 391 archaeological sites; 23 sites have been recommended potentially eligible for the National Register (Table 1). A copy of the NeCDRA reuse plan map with potentially eligible sites is included (Figure 3). Note that the reuse plan is subject to change.

Architecture

A historic architecture assessment was conducted in 1984 by MacDonald and Mark Partnership for Building Technology, Inc. The report was prepared for the US Army Materiel Development and Readiness Command (DARCOM) to assist the Army with its National Historic Preservation Act compliance requirements. The survey resulted in completed HABS/HAER documentation that is on file at the Library of Congress, Prints and Photographs Division under the designation HAER No. IN-53. Inventory cards for 42 individual properties were completed. At the time of the survey 339 buildings, 175 of which dated from the original construction of NECD were inventoried. The assessment included WWII as well as post-WWII era resources. It was noted during the survey that most of the RDX facilities had been demolished in the 1970s as a result of a switch to TNT and other chemical manufacture. No buildings or structures were considered

historically or architecturally significant as a result of the assessment. In 1991, the IN SHPO concurred that no buildings or structures are eligible. NECD has been exempted by the SHPO from any further Section 106 consultation requirements regarding buildings and structures through 2014 (Letter to Thomas J. Kutz, Newport Chemical Depot, from James A. Glass, Ph.D., Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology, dated February 2, 2010).

Archivally Documented Historic Sites
When NECD was first conceptualized, the government acquired 21, 986 acres from 72 landowners; most of the property was farmland. Sixty-six (66) clusters of buildings, six cemeteries and one church were documented as being on the property at the time of land acquisition in 1941. At the time of the Building Technology assessment in 1984, only three of the 66 buildings and the cemeteries were documented as remaining on the property. None were determined to be historically or architecturally significant. NECD has a property map dated April 16, 1942 that shows the locations of the 66 documented sites. Additional research has determined that some of the locations were roads, gates or something other than a homestead, and the number of archivally documented historic sites has been reduced to 52. Sixteen of the documented sites have been correlated with recorded archaeological sites.

Program Comments

The Advisory Council on Historic Preservation (ACHP) issued three Program Comments for World War II and Cold War Era properties that addressed NHPA compliance requirements for 45,000 Department of Defense (DoD) buildings, including 35,000 in the Army. These Comments cover Cold War Era (1946-1974) Unaccompanied Personnel Housing, World War II and Cold War (1939-1974) Ammunition Storage Facilities, and World War II and Cold War (1939-1974) Army Ammunition Production Facilities and Plants. The Program Comments were officially adopted in May 2007.

Management actions covered by the Program Comments are ongoing operations, maintenance and repair; rehabilitation; renovation; mothballing; cessation of maintenance, new construction, demolition; deconstruction and salvage; remediation activities; and transfer, sale, lease, and closure of such facilities. Installations have no further requirements to identify, evaluate, treat, mitigate or consult with their State Historic Preservation Offices (SHPO) regarding any Cold War Era (1946-74) UPH, World War II and Cold War Era (1939-74) ammunition storage facilities, and World War II and Cold War Era (1939-74) Army ammunition production facilities and Plants.

Program Comment for World War II and Cold War Era (1939-1974) Ammunition Storage Facilities. The term Ammunition Storage Facilities means all buildings and structures, listed in or eligible for listing in the NRHP, that were designed and built as ammunition storage facilities within the years 1939-974, regardless of current use, and are identified by a DoD Category Group code of 42, Ammunition Storage (category code 42XXXX), in the real property inventory. There are 54 structures on NECD that fall under this program comment. See attached list (Attachment 1).

Program Comment for World War II and Cold War Era (1939-1974) Ammunition Production Facilities. This Program Comment pertains to all Army-owned facilities designed and built as Ammunition Production Facilities, which includes all properties with Army Real Property Category Codes of 226XX. In addition, all Army-owned properties, regardless of category code, built between 1939 and 1974 on current Army Ammunition Plants are covered. There are 38 structures on NECD that fall under this program comment. See attached list (Attachment 1).

Historic Properties Affected

The proposed undertaking will have an adverse effect on the 23 identified historic properties. When the property is transferred out of federal ownership, the historic properties will no longer be protected under federal laws and statutes.

The undertaking also has the potential to adversely impact the archivally documented historic sites.

Efforts to Resolve Adverse Effects

To complete its Section 106 of the NHPA compliance requirement, Army would like execute a programmatic agreement with your agency. Army would like to discuss stipulations of the agreement with your agency after receipt of a response to this letter of determination.

Figures and Tables

Figure 1 – location map of NECD
Figure 2 – Survey map showing hi/mod/low and surveyed areas
Figure 3 – Reuse plan map showing archaeological site locations
Table 1 – Recorded Archaeological Sites

Attachments

Attachment 1 – Facilities covered under Program Comments for Ammunition Production and Storage, Newport Chemical Depot, IN

References

MacDonald and Mack Partnership
1984 *Historic Properties Report, Newport Army Ammunition Plan, Newport Indiana.* Final Report. Prepared for Building Technology Incorporated and National Park Service under contract CX-0001-2-0033. August.

Newport Chemical Depot Reuse Authority
2009 *Reuse Plan Newport Chemical Depot*. December. Plan available online at: http://www.necdra.com/images/documents/NeCD_Reuse_Plan_Final_Report.pdf.

Whitley, Thomas G., Jeff Gardner, Dawn Alexander, and Jim Pritchard
2009 *Phase I Archaeological Survey of 1200 Acres in Support of BRAC 2005: Newport Chemical Depot, Vermillion County, Indiana*. Final Report. Prepared by Brockington and Associates for US Army Corps of Engineers, Mobile District. Contract No. W91278-07-D-011, Delivery Order: 0012. December.

Table 1. Recorded Archaeological Sites

State Site Number	Site Type	Primary Report	NRHP Rec.
12Ve107	Historic, PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve108	Historic, PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve109	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve110	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve111	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve112	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve113	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve114	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve115	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve116	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve117	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve118	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve119	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve120	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve121	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve122	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve123	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve124	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve125	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve126	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve127	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve129	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve130	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve131	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve132	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve133	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve135	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve136	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve137	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve138	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve139	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve140	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve141	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve142	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve143	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve144	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve146	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve147	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve148	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve149	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve150	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve151	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve152	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve153	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve154	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve155	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve156	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve158	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve159	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve160	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve161	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve162	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve163	PreHistoric	Reseigh et al. 1982	Not Eligible

State Site Number	Site Type	Primary Report	NRHP Rec.
12Ve164	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve165	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve166	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve167	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve168	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve169	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve170	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve171	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve172	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve173	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve174	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve175	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve177	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve178	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve179	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve180	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve181	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve182	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve183	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve184	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve185	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve186	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve187	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve188	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve189	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve190	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve191	PreHistoric	Reseigh et al. 1982	Not Eligible

State Site Number	Site Type	Primary Report	NRHP Rec.
12Ve192	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve193	Historic	Reseigh et al. 1982	Not Eligible
12Ve194	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve195	Historic	Reseigh et al. 1982	Not Eligible
12Ve196	Historic	Reseigh et al. 1982	Not Eligible
12Ve197	Historic	Reseigh et al. 1982	Not Eligible
12Ve198	**Historic, PreHistoric**	**Reseigh et al. 1982**	**Potentially Eligible**
12Ve199	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve200	**PreHistoric, Historic**	**Reseigh et al. 1982**	**Potentially Eligible**
12Ve201	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve202	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve203	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve204	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve205	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve206	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve207	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve215	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve216	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve217	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve218	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve219	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve220	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve221	PreHistoric, Historic	Reseigh et al. 1982	Not Eligible
12Ve222	PreHistoric, Historic	Reseigh et al. 1982	Not Eligible
12Ve223	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve224	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve225	PreHistoric	Reseigh et al. 1982	Not Eligible

State Site Number	Site Type	Primary Report	NRHP Rec.
12Ve226	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve227	PreHistoric, Historic	Reseigh et al. 1982	Not Eligible
12Ve228	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve229	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve230	PreHistoric, Historic	Reseigh et al. 1982	Not Eligible
12Ve231	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve232	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve233	PreHistoric, Historic	Reseigh et al. 1982	Not Eligible
12Ve234	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve235	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve236	PreHistoric, Historic	Reseigh et al. 1982	Not Eligible
12Ve237	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve238	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve239	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve240	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve241	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve242	Historic	Reseigh et al. 1982	Not Eligible
12Ve244	Historic	Reseigh et al. 1982	Not Eligible
12Ve245	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve246	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve247	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve248	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve249	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve250	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve251	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve252	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve253	PreHistoric	Reseigh et al. 1982	Not Eligible

State Site Number	Site Type	Primary Report	NRHP Rec.
12Ve254	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve255	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve256	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve257	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve258	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve259	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve260	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve261	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve262	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve263	PreHistoric	Reseigh et al. 1982	Not Eligible
12Ve342	PreHistoric	Ball 1990	Not Eligible
12Ve343	PreHistoric	Ball 1990	Not Eligible
12Ve344	Historic	Ball 1990	Not Eligible
12Ve394	PreHistoric, Historic	Cantin 1993	Not Eligible
12Ve395	PreHistoric	Cantin 1993	Not Eligible
12Ve396	PreHistoric	Cantin 1993	Not Eligible
12Ve397	PreHistoric, Historic	Cantin 1993	Not Eligible
12Ve398	PreHistoric	Cantin 1993	Not Eligible
12Ve399	PreHistoric	Cantin 1993	Not Eligible
12Ve400	PreHistoric	Cantin 1993	Not Eligible
12Ve401	PreHistoric, Historic	Cantin 1993	Not Eligible
12Ve402	PreHistoric	Cantin 1993	Not Eligible
12Ve403	PreHistoric	Cantin 1993	Not Eligible
12Ve404	PreHistoric	Cantin 1993	Not Eligible
12Ve405	PreHistoric	Cantin 1993	Not Eligible
12Ve406	PreHistoric	Cantin 1993	Not Eligible
12Ve407	PreHistoric	Cantin 1993	Not Eligible

State Site Number	Site Type	Primary Report	NRHP Rec.
12Ve408	PreHistoric, Historic	Cantin 1993	Not Eligible
12Ve409	PreHistoric, Historic	Cantin 1993	Not Eligible
12Ve410	PreHistoric, Historic	Cantin 1993	Not Eligible
12Ve411	PreHistoric	Cantin 1993	Not Eligible
12Ve412	PreHistoric	Cantin 1993	Not Eligible
12Ve413	Historic	Cantin 1993	Not Eligible
12Ve414	PreHistoric	Cantin 1993	Not Eligible
12Ve415	PreHistoric	Cantin 1993	Not Eligible
12Ve416	PreHistoric	Cantin 1993	Not Eligible
12Ve417	PreHistoric	Cantin 1993	Not Eligible
12Ve418	PreHistoric	Cantin 1993	Not Eligible
12Ve419	PreHistoric	Cantin 1993	Not Eligible
12Ve420	PreHistoric, Historic	Cantin 1993	Not Eligible
12Ve421	PreHistoric, Historic	Cantin 1993	Not Eligible
12Ve422	PreHistoric	Cantin 1993	Not Eligible
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12Ve424	PreHistoric	Cantin 1993	Not Eligible
12Ve425	PreHistoric	Cantin 1993	Not Eligible
12Ve426	PreHistoric	Cantin 1993	Not Eligible
12Ve427	PreHistoric	Cantin 1993	Not Eligible
12Ve428	PreHistoric	Cantin 1993	Not Eligible
12Ve429	PreHistoric	Cantin 1993	Not Eligible
12Ve430	PreHistoric	Cantin 1993	Not Eligible
12Ve431	PreHistoric	Cantin 1993	Not Eligible
12Ve442	PreHistoric	Cantin 1994	Not Eligible
12Ve443	**PreHistoric, Historic**	**Cantin 1994**	**Potentially Eligible**
12Ve444	PreHistoric	Cantin 1994	Not Eligible
12Ve445	PreHistoric	Cantin 1994	Not Eligible
12Ve446	Historic	Cantin 1994	Not Eligible
12Ve447	PreHistoric	Cantin 1994	Not Eligible
12Ve448	PreHistoric	Cantin 1994	Not Eligible
12Ve449	Historic	Cantin 1994	Not Eligible
12Ve450	PreHistoric	Cantin 1994	Not Eligible
12Ve451	PreHistoric	Cantin 1994	Not Eligible
12Ve452	Historic	Cantin 1994	Not Eligible
12Ve453	Historic	Cantin 1994	Not Eligible
12Ve454	PreHistoric	Cantin 1994	Not Eligible
12Ve455	Historic	Cantin 1994	Not Eligible
12Ve456	PreHistoric	Cantin 1994	Not Eligible
12Ve457	PreHistoric	Cantin 1994	Not Eligible
12Ve458	Historic	Cantin 1994	Not Eligible
12Ve459	PreHistoric	Cantin 1994	Not Eligible
12Ve469	PreHistoric, Historic	Kearney, Sipes 1996	Not Eligible
12Ve470	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve471	PreHistoric, Historic	Kearney, Sipes 1996; Whitely et al 2009	Not Eligible
12Ve472	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve473	PreHistoric, Historic	Kearney, Sipes 1996	Not Eligible
12Ve474	PreHistoric, Historic	Kearney, Sipes 1996; Whitely et al 2009	Not Eligible
12Ve475	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve476	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve477	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve478	PreHistoric	Kearney, Sipes 1996	Not Eligible

State Site Number	Site Type	Primary Report	NRHP Rec.
12Ve479	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve480	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve481	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve482	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve483	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve484	PreHistoric, Historic	Kearney, Sipes 1996	Not Eligible
12Ve485	PreHistoric, Historic	Kearney, Sipes 1996	Not Eligible
12Ve486	PreHistoric, Historic	Kearney, Sipes 1996	Not Eligible
12Ve487	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve488	PreHistoric, Historic	Kearney, Sipes 1996	Not Eligible
12Ve489	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve490	PreHistoric	Kearney, Sipes 1996	Not Eligible
12Ve491	PreHistoric, Historic	Kearney, Sipes 1996	Not Eligible
12Ve492	PreHistoric	Barr 1996	Not Eligible
12Ve493	PreHistoric	Barr 1996	Not Eligible
12Ve494	PreHistoric	Barr 1996	Not Eligible
12Ve495	**Historic**	**Barr 1996**	**Potentially Eligible**
12Ve496	**Historic**	**Barr 1996**	**Potentially Eligible**
12Ve497	PreHistoric	Barr 1996	Not Eligible
12Ve498	**Historic**	**Barr 1996**	**Potentially Eligible**
12Ve499	**PreHistoric**	**Barr 1996**	**Potentially Eligible**
12Ve500	**Historic**	**Barr 1996**	**Potentially Eligible**
12Ve501	Historic	Barr 1996	Not Eligible
12Ve502	Historic	Barr 1996	Not Eligible
12Ve503	Historic	Barr 1996	Not Eligible
12Ve504	**Historic**	**Barr 1996**	**Potentially Eligible**
12Ve505	**Historic**	**Barr 1996**	**Potentially Eligible**

State Site Number	Site Type	Primary Report	NRHP Rec.
12Ve506	Historic	Barr 1996	Not Eligible
12Ve507	**Historic Cemetery**	**Barr 1996**	**Potentially Eligible**
12Ve508	**Historic**	**Barr 1996**	**Potentially Eligible**
12Ve509	**PreHistoric**	**Barr 1996**	**Potentially Eligible**
12Ve510	PreHistoric	Barr 1996	Not Eligible
12Ve511	Historic	Barr 1996	Not Eligible
12Ve512	PreHistoric	Barr 1996	Not Eligible
12Ve513	PreHistoric	Barr 1996	Not Eligible
12Ve514	PreHistoric	Barr 1996	Not Eligible
12Ve515	PreHistoric	Barr 1996	Not Eligible
12Ve516	PreHistoric	Barr 1996	Not Eligible
12Ve517	**Historic**	**Barr 1996**	**Potentially Eligible**
12Ve518	PreHistoric	Barr 1996	Not Eligible
12Ve519	PreHistoric	Barr 1996	Not Eligible
12Ve520	PreHistoric	Barr 1996	Not Eligible
12Ve521	**Historic**	**Barr 1996**	**Potentially Eligible**
12Ve522	**Historic**	**Barr 1996**	**Potentially Eligible**
12Ve526	Historic	White et al. 1998	Not Eligible
12Ve527	PreHistoric	White et al. 1998	Not Eligible
12Ve528	PreHistoric	White et al. 1998	Not Eligible
12Ve529	PreHistoric	White et al. 1998	Not Eligible
12Ve534	PreHistoric	Gibson, Plunkett 1999	Not Eligible
12Ve547	**PreHistoric**	**Pope et al. 2005**	**Potentially Eligible**
12Ve548	PreHistoric	Pope et al. 2005	Not Eligible
12Ve549	PreHistoric	Pope et al. 2005	Not Eligible
12Ve550	Historic	Pope et al. 2005	Not Eligible
12Ve551	PreHistoric	Pope et al.	Not

State Site Number	Site Type	Primary Report	NRHP Rec.
		2005	Eligible
12Ve552	Historic	Pope et al. 2005	Not Eligible
12Ve553	PreHistoric	Pope et al. 2005	Not Eligible
12Ve554	PreHistoric	Pope et al. 2005	Not Eligible
12Ve555	PreHistoric	Holycross 2005	Not Eligible
12Ve556	PreHistoric	Holycross 2005	Not Eligible
12Ve557	Historic, PreHistoric	Holycross 2005	Not Eligible
12Ve558	PreHistoric	Holycross 2005	Not Eligible
12Ve559	PreHistoric	Holycross 2005	Not Eligible
12Ve568	PreHistoric	Cantin 2007	Not Eligible
12Ve569	PreHistoric	Cantin 2007	Not Eligible
12Ve570	PreHistoric	Cantin 2007	Not Eligible
12Ve571	PreHistoric	Cantin 2007	Not Eligible
12Ve572	PreHistoric	Cantin 2007	Not Eligible
12Ve573	PreHistoric	Cantin 2007	Not Eligible
12Ve595	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve596	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve597	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve598	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve599	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve600	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve601	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve602	**Prehistoric, Historic**	**Whitley et al. 2009**	**Potentially Eligible**
12Ve603	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve604	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve605	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve606	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve607	Prehistoric	Whitley et	Not

State Site Number	Site Type	Primary Report	NRHP Rec.
		al. 2009	Eligible
12Ve608	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve609	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve610	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve611	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve612	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve613	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve614	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve615	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve616	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve617	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve618	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve619	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve620	Historic	Whitley et al. 2009	Not Eligible
12Ve621	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve622	**Historic**	**Whitley et al. 2009**	**Potentially Eligible**
12Ve623	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve624	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve625	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve626	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve627	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve628	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve629	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve630	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve631	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve632	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve633	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve634	Prehistoric	Whitley et	Not

State Site Number	Site Type	Primary Report	NRHP Rec.
		al. 2009	Eligible
12Ve635	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve636	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve637	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve638	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve639	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve640	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve641	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve642	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve643	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve644	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve645	Historic	Whitley et al. 2009	Not Eligible
12Ve646	**Historic**	**Whitley et al. 2009**	**Potentially Eligible**
12Ve647	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve648	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve649	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve650	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve651	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve652	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve653	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve654	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve655	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve656	Historic	Whitley et al. 2009	Not Eligible
12Ve657	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve658	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve659	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve660	**Prehistoric, Historic**	**Whitley et al. 2009**	**Potentially Eligible**
12Ve661	Prehistoric	Whitley et	Not

State Site Number	Site Type	Primary Report	NRHP Rec.
		al. 2009	Eligible
12Ve662	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve663	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve664	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve665	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve666	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve667	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve668	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve669	**Historic**	**Whitley et al. 2009**	**Potentially Eligible**
12Ve670	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve671	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve672	Historic	Whitley et al. 2009	Not Eligible
12Ve673	**Prehistoric, Historic**	**Whitley et al. 2009**	**Potentially Eligible**
12Ve674	Historic	Whitley et al. 2009	Not Eligible
12Ve675	Historic	Whitley et al. 2009	Not Eligible
12Ve676	Historic	Whitley et al. 2009	Not Eligible
12Ve677	Prehistoric, Historic	Whitley et al. 2009	Not Eligible
12Ve678	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve679	Historic	Whitley et al. 2009	Not Eligible
12Ve680	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve681	Historic	Whitley et al. 2009	Not Eligible
12Ve682	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve683	Historic	Whitley et al. 2009	Not Eligible
12Ve684	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve685	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve686	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve687	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve688	Prehistoric	Whitley et	Not

State Site Number	Site Type	Primary Report	NRHP Rec.
		al. 2009	Eligible
12Ve689	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve690	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve691	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve692	Historic	Whitley et al. 2009	Not Eligible
12Ve693	Historic	Whitley et al. 2009	Not Eligible
12Ve694	Historic	Whitley et al. 2009	Not Eligible
12Ve695	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve696	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve697	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve698	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve699	Prehistoric	Whitley et	Not

State Site Number	Site Type	Primary Report	NRHP Rec.
		al. 2009	Eligible
12Ve700	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve701	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve702	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve703	Prehistoric	Whitley et al. 2009	Not Eligible
12Ve704	Prehistoric	Whitley et al. 2009	Not Eligible

Attachment 1

Facilities covered under Program Comments for Ammunition Production and Storage
Newport Chemical Depot, IN

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Ammo Production

Facility #	Cat Code Descr.	Year Built
3001	ACID MFG PLANT	1972
3022	ACID MFG PLANT	1973
3025	AMMO PROD STRUC	1973
3063	ACID MFG PLANT	1972
5092	AMMO PROD STRUC	1973
5093	AMMO PROD STRUC	1973
5112	AMMO PROD STRUC	1973
6192	ACID MFG PLANT	1971
6196	AMMO PROD STRUC	1972
6198	AMMO PROD STRUC	1971
6199	AMMO PROD STRUC	1971
9531	EXPLOS MFG PT	1973
9532	EXPLOS MFG PT	1973
9533	EXPLOS MFG PT	1973
9534	EXPLOS MFG PT	1973
9535	EXPLOS MFG PT	1973
9611	EXPLOS MFG PT	1972
9612	EXPLOS MFG PT	1973
9613	EXPLOS MFG PT	1973
9614	EXPLOS MFG PT	1973
9615	EXPLOS MFG PT	1973
9763	AMMO PROD STRUC	1973
9764	AMMO PROD STRUC	1973
9765	AMMO PROD STRUC	1973
9771	AMMO PROD STRUC	1972
9772	AMMO PROD STRUC	1973
9773	AMMO PROD STRUC	1973
9774	AMMO PROD STRUC	1973
9775	AMMO PROD STRUC	1973
32790	AMMO PROD STRUC	1973

Facility #	Cat Code Descr.	Year Built
96111	AMMO PROD STRUC	1972
96121	AMMO PROD STRUC	1973
96131	AMMO PROD STRUC	1973
96141	AMMO PROD STRUC	1973
96151	AMMO PROD STRUC	1973
301A1	ACID MFG PLANT	1942
301A2	ACID MFG PLANT	1942
301A3	ACID MFG PLANT	1942

Category Abbreviation	Cat. Code	Category Description
BAG CHG FIL PT	22610	Bag Charge Filling Plant
ACID MFG PLANT	22612	Acid Manufacturing Plant
LD AZIDE MFG PT	22614	Lead Azide Manufacturing Plant
EXPLOS MFG PT	22616	Explosive Manufacturing Plant
CASE OHAUL & TK	22620	Case Overhaul and Tank Facility
PYRO PRODUCTIO N	22622	Pyrotechnic Production
MTL PARTS PROD	22624	Metal Parts Production
SM CAL LD < 40MM	22625	Small Caliber Loading Plant (Under 40MM)
BOMB HE FIL PT	22626	Bomb High Explosives Filling Plant
MTL PARTS LD PT	22627	Metal Parts Loading Plant
LD PT 40-75 MM	22630	Minor Caliber Loading Plant (40-75MM)
LD PT 76-120 MM	22635	Medium Caliber Loading Plant (76-120MM)

Category Abbreviation	Cat. Code	Category Description
AMMO QA/CAL PRO	22638	Ammunition Quality Assurance/Calibration Facility, Production
LD PT > 120 MM	22640	Major Caliber Loading Plant (Over 120MM)
LG RKT MTR LD	22645	Large Caliber Rocket Motor Loading Plant
MED RKT MTR LD	22650	Medium Caliber Rocket Motor Loading Plant
CAST HE FIL PT	22655	Cast High Explosive Filling Plant
SP WEAP PLANT	22660	Special Weapons Plant
AMMO WASHOUT	22665	Ammunition Washout Facility
CASE FIL PLANT	22670	Case Filling Plant
PROPELLANT PT	22680	Propellant Plant
AMMO PROD STRUC	22685	Ammunition Production Structure

Ammo Storage

Facility #	Cat Code Descr.	Year Built
146	IGLOO STR INST	1961
147	IGLOO STR INST	1961
41701	HE MAG INST	1942
41702	HE MAG INST	1942
41703	HE MAG INST	1942
41704	HE MAG INST	1942
41705	HE MAG INST	1942
41706	HE MAG INST	1942
41707	HE MAG INST	1942
41708	HE MAG INST	1942
41709	HE MAG INST	1942
41710	HE MAG INST	1942
41711	HE MAG INST	1942
41712	HE MAG INST	1942
41713	HE MAG INST	1942
41714	HE MAG INST	1942
41715	HE MAG INST	1942
41716	HE MAG INST	1942
41717	HE MAG INST	1942
41718	HE MAG INST	1942
41719	HE MAG INST	1942
41720	HE MAG INST	1942
41721	HE MAG INST	1942
41722	HE MAG INST	1942
41723	HE MAG INST	1942
41724	HE MAG INST	1942
41725	HE MAG INST	1942
41726	HE MAG INST	1942
41727	HE MAG INST	1942
41728	HE MAG INST	1942
41729	HE MAG INST	1942
41730	HE MAG INST	1942
41731	HE MAG INST	1942
41732	HE MAG INST	1942
41733	HE MAG INST	1942
41734	HE MAG INST	1942
41735	HE MAG INST	1942
41736	HE MAG INST	1942
41737	HE MAG INST	1942
41738	HE MAG INST	1942
41739	HE MAG INST	1942
41740	HE MAG INST	1942
41741	HE MAG INST	1942
41742	HE MAG INST	1942
41743	HE MAG INST	1942
41744	HE MAG INST	1942
41745	HE MAG INST	1942
41746	HE MAG INST	1942
41747	HE MAG INST	1942
41748	HE MAG INST	1942
41749	HE MAG INST	1942
41750	HE MAG INST	1942
41751	HE MAG INST	1942
41752	HE MAG INST	1942

Category Abbreviation	Cat. Code	Category Description
EXP TRANS DEPOT	42104	Explosive Transfer Building, Depot Level
STRAD NONATOM D	42107	Stradley, Nonatomic Blast Resistant, Depot Level
FUSE/DET MAG D	42110	Fuse and Detonator Magazine, Depot Level
HE MAG DEPOT	42120	High Explosive Magazine, Depot Level
SMKLESS PDR DEP	42150	Smokeless Powder Magazine, Depot Level
SP WEAP MAG DEP	42160	Special Weapons Magazine, Depot Level
GM MAG DEPOT	42170	Guided Missile Magazine, Depot Level
IGLOO STR DEPOT	42180	Igloo Storage, Depot Level
AMMO STRHS DEP	42181	Ammunition Storehouse, Depot Level

Category Abbreviation	Cat. Code	Category Description
SM ARM AMMO MAG	42182	Small Arms Ammunition Magazine, Depot Level
GP MAGAZINE DEP	42183	General Purpose Magazine, Depot Level
AMMO HUT DEPOT	42184	Ammunition Hut, Depot Level
FUSE/DET MAG IN	42210	Fuse and Detonator Magazine, Installation
HE MAG INST	42215	High Explosive Magazine, Installation
SMKDRUM STRHOUS	42225	Smokedrum Storehouse, Installation
SM ARM AMMO MAG	42230	Small Arms Ammunition and Pyrotechnics Magazine, Installation
AMMO STRHS INST	42231	Ammunition Storehouse, Installation
READY MAG INST	42235	Ready Magazine, Installation
FIX AMMO MAG IN	42240	Fixed Ammunition Magazine, Installation
SP WEAP MAG INS	42250	Special Weapons Magazine, Installation
GM MAG INST	42260	Guided Missile Magazine, Installation
IGLOO STR INST	42280	Igloo Storage, Installation
AMMO HUT INST	42281	Ammunition Hut, Installation
MAG GP INST	42283	General Purpose Magazine, Installation
UNIT AMMO STR	42285	Unit Small Arms Ammunition Storage, Installation
AMMO STR OTHER	42288	Ammo Storage Other than Depot or Unit

Category Abbreviation	Cat. Code	Category Description
LIQ PROP STR BD	42310	Liquid Propellant Storage, Ammunition, Building
LIQ PROP FAC	42311	Liquid Propellant Storage, Ammunition, Facility
LIQ PROP STRUC	42312	Liquid Propellant Storage, Ammunition, Structure
BATT COLD STR	42410	Battery Cold Storage Building
AMMO STR PAD	42510	Ammunition Storage Pad

File

DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

February 8, 2010

Commanding Officer

SUBJECT: Preparation of an Environmental Assessment for the Implementation of the BRAC Recommendations at Newport Chemical Depot, Vermillion County, Indiana

Mr. Scott Pruitt
US Fish and Wildlife Service
Bloomington Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121

Dear Mr. Pruitt:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana. In accordance with the National Environmental Policy Act, the Army is assessing the potential effects of implementation of the proposed BRAC action. The Environmental Assessment will consider the effects of disposal and reuse of the property. Specific plans for reuse are currently being developed by a Local Redevelopment Authority (LRA), the Newport Chemical Depot Reuse Authority (NeCDRA).

The NECD is located in central Vermillion County, Indiana (see attached figures), two miles southwest of Newport and thirty miles north of Terre Haute. It is situated west of the Wabash River and north of U.S. Route 36. Previously known as the Newport Army Ammunition Plant, the NECD is a former chemical storage and destruction facility. The facility covers approximately 7,136 acres and has easement rights over an additional 1,400 acres. Although all chemical agents at the site have been neutralized, the completion of base closure will require dismantling of structures and other activities.

The following are the Endangered and Threatened species and communities that have been documented at NECD:

BIRDS
Least Bittern, State Endangered (SE)
Osprey, SE
Northern Harrier, SE
Virginia Rail, SE
Upland Sandpiper, SE
Sedge Wren, SE
Henslow's Sparrow, SE
Peregrine falcon, SE
Great Egret, State Special Concern (SSC)
Bald Eagle, SSC
Sharp-shinned Hawk, SSC
Sandhill Crane, SSC
Whip-poor-will, SSC
Black-and-white Warbler, SSC
Western Meadowlark, SSC

MAMMALS
Indiana bat, Federally Endangered (FE) & SE
Little Brown Myotis, SSC
Northern Myotis, SSC
Silver-haired Bat, SSC
Eastern Pipistrelle, SSC
Red Bat, SSC
Hoary Bat, SSC
Bobcat, SSC

HERPTILES
Northern Cricket Frog, SSC
Eastern Box Turtle, SSC

VASCULAR PLANTS
Golden Seal, State Watch List (WL)
American Ginseng (WL)
Wood's Hellebore (WL)
American Pinesap (WL)
Large Yellow Lady's Slipper (WL)

Conservation and enhancement of many of the above mentioned species and communities are discussed in Section 5 of the NECD Integrated Natural Resources Management Plan. The **Endangered Species Management Plan for the Indiana Bat, *Myotis sodalist,* Newport Chemical Depot, Vermillion County, Indiana** was revised September 2009, and its continued implementation provides conservation of the Indiana bat.

We are requesting your input regarding the potential impacts of the proposed action on the human and natural resources of concern to your agency. It is requested that your input be provided within 30 calendar days of receipt of this letter. If you have any questions concerning the BRAC action, please contact Ms. Cathy Collins, Engineer, Newport Chemical Depot at (765) 245-4550.

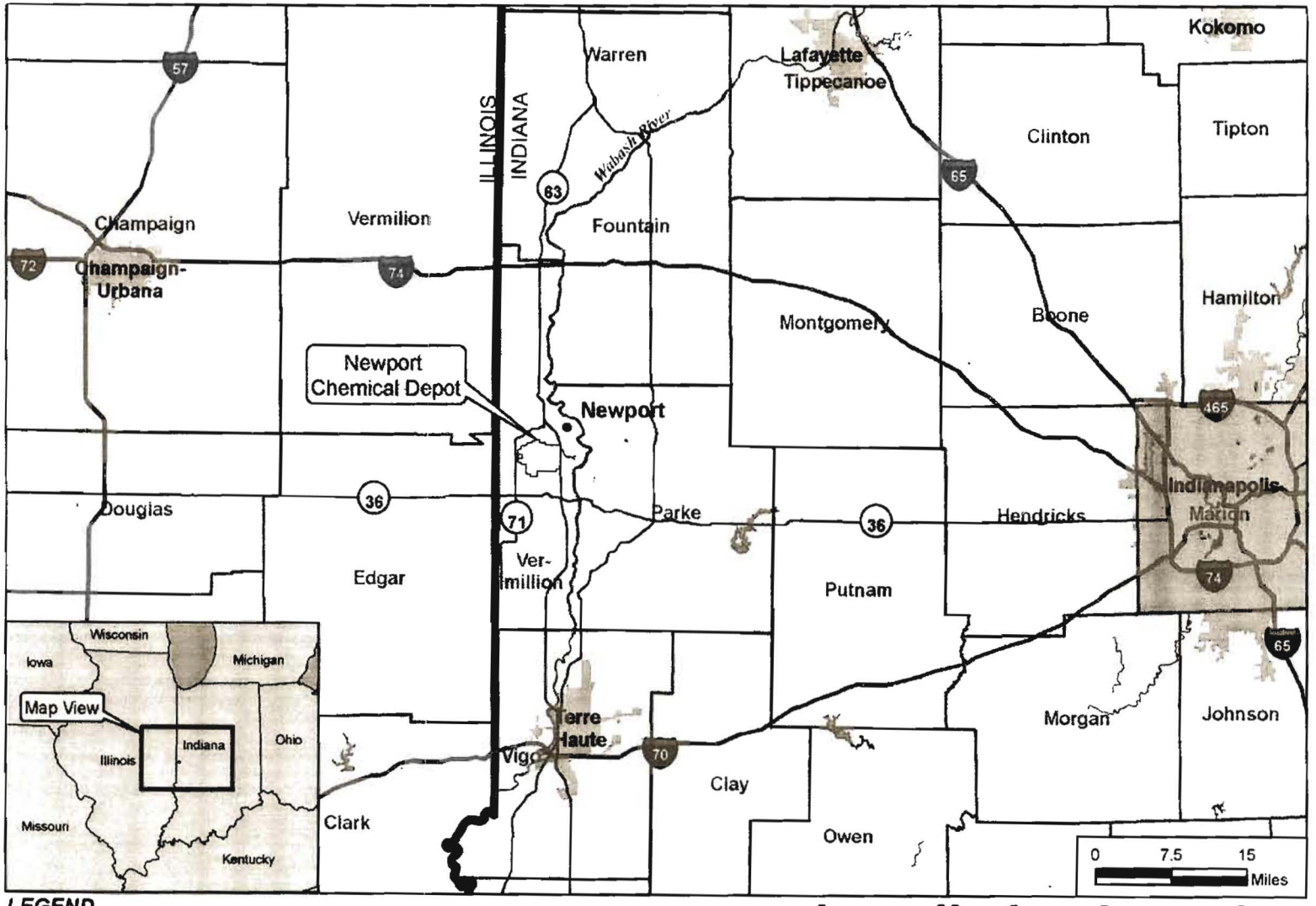
Sincerely,

W D Hibner

William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosures

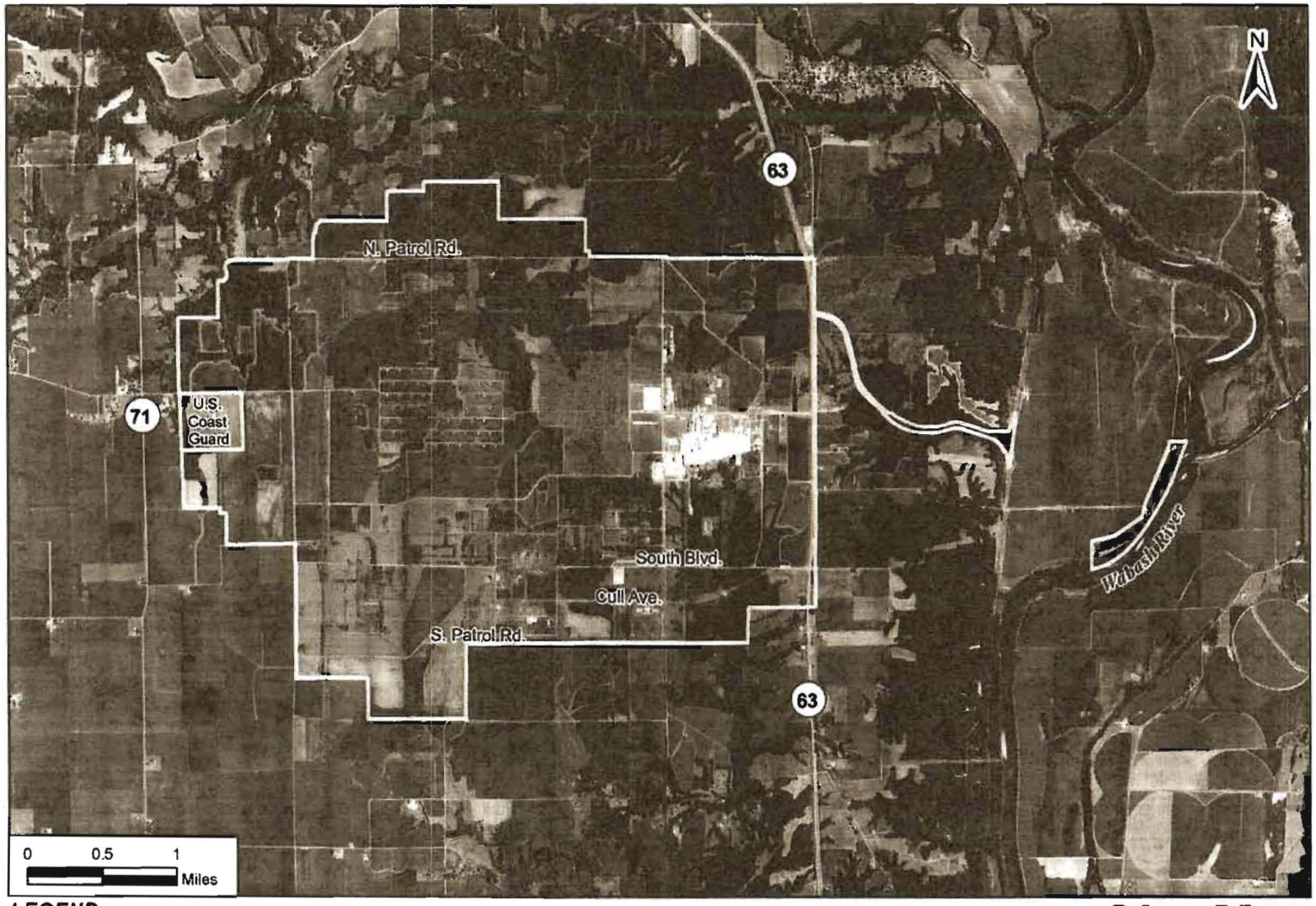
CF: Mason & Hanger



Installation Location

Figure 1

Note: Installation boundaries are approximate. Source: NECD GIS, 2009.



LEGEND

Newport Chemical Depot

Site Map

Figure 2

Note: Installation boundaries are approximate. Source: NECD GIS, 2009.

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DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

April 28, 2010

Chief Engineer

SUBJECT: Preparation of an Environmental Assessment for the closure and proposed reuse of Newport Chemical Depot, Vermillion County, Indiana

Mr. Scott Pruitt
US Fish and Wildlife Service
Bloomington Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121

Dear Mr. Pruitt:

I sent a letter of informal consultation regarding the closure of the Newport Chemical Depot (NECD) to you on February 8, 2010 (see Enclosure 1), though that letter did not contain much detail about the closure and subsequent reuse of the property because that information was not available. Ms. Robin McWilliams-Munson of your office responded via e-mail on March 2, 2010. Because there seems to be some confusion over the nature of the reuse, and because NECD is now in possession of the Final Reuse Plan prepared by the Local Reuse Authority (LRA) for the property, I am sending this letter to provide additional information on the property closure and reuse. Hopefully it will clear up any confusion and permit your office to form an informed opinion about the potential impact of the proposed closure and reuse on the resources at NECD of concern to your agency. Please be advised that the Final Environmental Assessment for the proposed action is not yet complete, and when it is, your office will receive a full copy for review.

The primary resource of concern to the USFWS is the presence of the federally endangered Indiana bat (*Myotis sodalis*) at the installation. As of the last survey (2008), three roost trees were located in the north-central portion of the installation and another two trees were found east of the installation (Figure 1). The findings of surveys conducted through 2008 show conclusively that the Indiana bat forages and roosts on NECD property.

The Final Reuse Plan (see Enclosure 2, pp.96-101), provides for a mixture of natural areas and open space (32% of the property acreage), agricultural uses (18%), business and technology uses (47%), and other uses (3%). Of particular note is that all of the endangered Indiana bat roost tree sites identified on NECD property through 2008 are within the Natural and Open Space Areas designated on the Reuse Plan map.

The most recent Integrated Natural Resources Management Plan (INRMP) for NECD incorporates the recommendations of the USFWS as part of the Endangered Species

Management Plan (ESMP) for the Indiana bat on the installation. The recommendations, as incorporated into the ESMP for the bat, include prescriptions for forest management, agricultural management, construction and demolition activities, training activities, and hunting and other outdoor recreation. As described in Section 3 of the EA for the NECD disposal, the Army's methodology to ensure environmentally sustainable redevelopment of BRAC disposal property identifies natural and man-made resources that must be used wisely or protected after ownership transfers out of federal control. Once identified, the Army will include any necessary notices and land use controls in the deed to protect environmental values, to meet requirements of federal law, to carry out agreements reached in negotiations with regulatory agencies, or to address specific Army needs. Typical encumbrances that the Army might place on disposal include the protection and preservation of threatened and endangered species, jurisdictional wetlands, critical habitat, historic properties and sites, archaeological sites, legacy resources, access to remediation sites, and retention of easements and utility/infrastructure rights-of-way.

The Army will not have control over the reuse of the property after transfer of ownership of the property, and the designation of uses of specific parcels of property as identified in the Final Reuse Plan is subject to change over time as economic conditions and local needs change. However, the deed with the LRA will include restrictions to ensure continued protection of the Indiana bat. After transfer, if the LRA changes its reuse, it will have to consult with USFWS to ensure continued protection. I am writing to you to request your concurrence on the "no effect" determination based on the additional information enclosed in this letter.

It is requested that your input be provided within 30 calendar days of receipt of this letter. If you have any questions concerning the BRAC action, please contact Ms. Cathy Collins, Engineer, Newport Chemical Depot at (765) 245-4550.

Sincerely,

Cathy M. Collins
BRAC Environmental Coordinator

Enclosures

CF: Mason & Hanger

Enclosure 1

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File

DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

February 8, 2010

Commanding Officer

SUBJECT: Preparation of an Environmental Assessment for the Implementation of the BRAC Recommendations at Newport Chemical Depot, Vermillion County, Indiana

Mr. Scott Pruitt
US Fish and Wildlife Service
Bloomington Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121

Dear Mr. Pruitt:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana. In accordance with the National Environmental Policy Act, the Army is assessing the potential effects of implementation of the proposed BRAC action. The Environmental Assessment will consider the effects of disposal and reuse of the property. Specific plans for reuse are currently being developed by a Local Redevelopment Authority (LRA), the Newport Chemical Depot Reuse Authority (NeCDRA).

The NECD is located in central Vermillion County, Indiana (see attached figures), two miles southwest of Newport and thirty miles north of Terre Haute. It is situated west of the Wabash River and north of U.S. Route 36. Previously known as the Newport Army Ammunition Plant, the NECD is a former chemical storage and destruction facility. The facility covers approximately 7,136 acres and has easement rights over an additional 1,400 acres. Although all chemical agents at the site have been neutralized, the completion of base closure will require dismantling of structures and other activities.

The following are the Endangered and Threatened species and communities that have been documented at NECD:

BIRDS
Least Bittern, State Endangered (SE)
Osprey, SE
Northern Harrier, SE
Virginia Rail, SE
Upland Sandpiper, SE
Sedge Wren, SE
Henslow's Sparrow, SE
Peregrine falcon, SE
Great Egret, State Special Concern (SSC)
Bald Eagle, SSC
Sharp-shinned Hawk, SSC
Sandhill Crane, SSC
Whip-poor-will, SSC
Black-and-white Warbler, SSC
Western Meadowlark, SSC

MAMMALS
Indiana bat, Federally Endangered (FE) & SE
Little Brown Myotis, SSC
Northern Myotis, SSC
Silver-haired Bat, SSC
Eastern Pipistrelle, SSC
Red Bat, SSC
Hoary Bat, SSC
Bobcat, SSC

HERPTILES
Northern Cricket Frog, SSC
Eastern Box Turtle, SSC

VASCULAR PLANTS
Golden Seal, State Watch List (WL)
American Ginseng (WL)
Wood's Hellebore (WL)
American Pinesap (WL)
Large Yellow Lady's Slipper (WL)

Conservation and enhancement of many of the above mentioned species and communities are discussed in Section 5 of the NECD Integrated Natural Resources Management Plan. The **Endangered Species Management Plan for the Indiana Bat, *Myotis sodalist,* Newport Chemical Depot, Vermillion County, Indiana** was revised September 2009, and its continued implementation provides conservation of the Indiana bat.

We are requesting your input regarding the potential impacts of the proposed action on the human and natural resources of concern to your agency. It is requested that your input be provided within 30 calendar days of receipt of this letter. If you have any questions concerning the BRAC action, please contact Ms. Cathy Collins, Engineer, Newport Chemical Depot at (765) 245-4550.

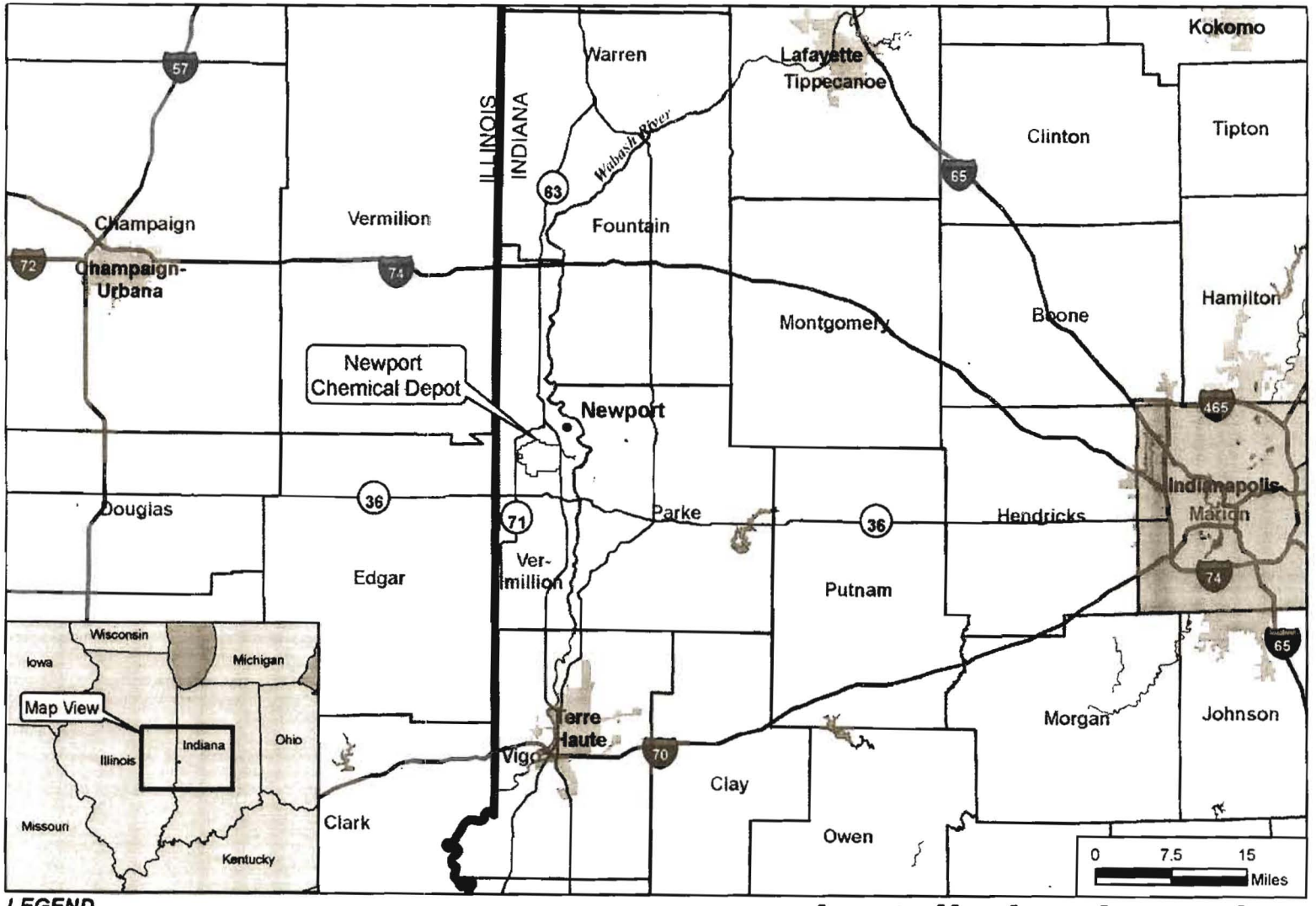
Sincerely,

W D Hibner

William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosures

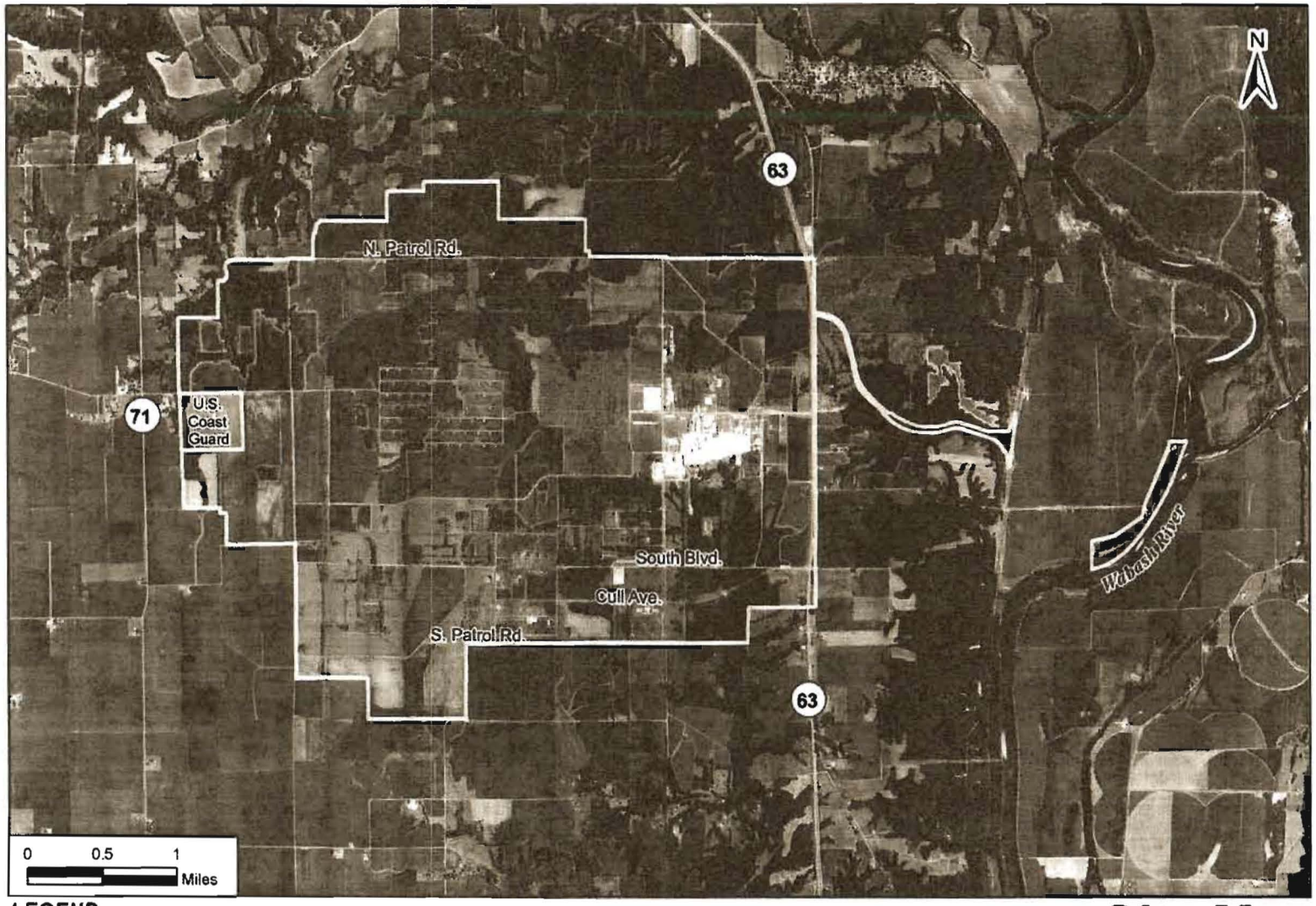
CF: Mason & Hanger



Installation Location

Figure 1

Note: Installation boundaries are approximate. Source: NECD GIS, 2009.



LEGEND

Newport Chemical Depot

Site Map

Figure 2

Note: Installation boundaries are approximate. Source: NECD GIS, 2009.

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Hippert, Greg

From: Collins, Cathy Miss CIV USA AMC [cathy.m.collins@us.army.mil]
Sent: Thursday, March 18, 2010 2:25 PM
To: Hippert, Greg
Subject: FW: Newport Closure/EA preparation

Comments so far from FWS.

Cathy M. Collins
Engineer, Newport Chemical Depot
comm phone (765) 245-4550 DSN 369-1550
Fax (765) 245-4500 DSN 369-1500
cathy.m.collins@us.army.mil
-----Original Message-----
From: Robin_McWilliams@fws.gov [mailto:Robin_McWilliams@fws.gov]
Sent: Monday, March 15, 2010 9:17 AM
To: Collins, Cathy Miss CIV USA AMC
Subject: RE: Newport Closure/EA preparation

Thanks, Cathy. We will look forward to reviewing the EA. Can you explain what an Economic Development Conveyance is? Also, do you know what the timing might be for release of the draft EA?

Thanks, again.

Sincerely,

Robin

Robin McWilliams-Munson

Work Schedule: M,T,W 7:45- 4:15
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, Indiana 47403
812-334-4261 x. 1207
812-334-4273 fax

"Collins, Cathy Miss CIV USA AMC"
<cathy.m.collins@us.army.mil>

03/10/2010 05:17 PM

To <Robin_McWilliams@fws.gov>
cc
Subject RE: Newport Closure/EA preparation

Robin- The Endangered Species Requirements will be incorporated in the deed upon transfer of the Newport Chemical Depot. The Local Reuse Authority is submitting an Economic Development Conveyance request.

The USFWS will be provided an opportunity to comment on the draft EA when it is available.

Please feel free to contact me with any additional questions. I will be out of town on business 15 to 17 March.

Cathy M. Collins
Engineer, Newport Chemical Depot
comm phone (765) 245-4550 DSN 369-1550
Fax (765) 245-4500 DSN 369-1500
cathy.m.collins@us.army.mil
-----Original Message-----
From: Robin_McWilliams@fws.gov [mailto:Robin_McWilliams@fws.gov]
Sent: Tuesday, March 02, 2010 4:13 PM
To: Collins, Cathy Miss CIV USA AMC
Subject: Newport Closure/EA preparation

Dear Ms. Collins:

Our office recently received notice regarding the preparation of an Environmental Assessment of the Implementation of the BRAC Recommendations at Newport. I wanted to touch base with you regarding where in the closure process you are and what type of comments you are looking for from our agency at this point and in the future. I am in the office Monday-Wednesday, 7:45 to 4:15. I look forward to speaking with you.

Sincerely,
Robin M. Munson

Robin McWilliams-Munson

Work Schedule: M,T,W 7:45- 4:15
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, Indiana 47403
812-334-4261 x. 1207
812-334-4273 fax

Figure 1

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INDIANA BAT HABITAT

Legend

- NeCD Boundary
- Buildings
- Highways
- Roads
- Roost Tree Location 2003
- Roost Tree Location 2008

Tree #511
8-9 Aug 2008

Tree #510
6 Aug 2008

Tree #509
5 & 7 Aug 2008

Bat #708
21-25 July 2003

Tree #505
6 Aug 2008

Tree #504
5 Aug 2008

Bat #407
21 July 2003

Bat #407
22-25 July 2003

North Patrol Road
East Patrol Road
Broadway
U S Coast Guard
West Magazine Street
Loading Dock Road
West Patrol Road
13th Street
15th Street
11th Street
10th Street
8th Street
A Street
B Street
Broadway Blvd
Street WW
Street UU
BB Street
McArthur Blvd
1st Street
North 17th Street
South 14th Street
AA Street
EE Street
Central Road
Central Avenue
HH Street
South Blvd
West Road
Cull Avenue
South Road
South Patrol Road
South 10th Street
63

Source: Redwing Ecological Services, INC

0 750 1,500 3,000 Feet

N

NEWPORT CHEMICAL DEPOT
REUSE MASTER PLAN

Newport Chemical Depot Reuse Authority
Vermillion County, Indiana

Matrix Design Group, Inc.
Integrated Design Solutions

ECONOMICS RESEARCH ASSOCIATES - CHICAGO, ILLINOIS
BURNS & McDONNELL - CHICAGO, ILLINOIS
GARRITY & KNISELY - BOSTON, MASSACHUSETTS

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Enclosure 2

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Natural Areas & Open Space

The Depot's topography and natural systems created the framework for the overall land use program, in that all natural areas and drainageways to be preserved were identified first before the location for any other land uses were considered. Overall, the Natural and Open Space Areas, colored dark green on the map, account for approximately 2,305 acres or 32% of the Depot land area, and are comprised of the following four elements:

Wooded Areas

Four major wooded areas are located on the Depot. The largest, at approximately 900 acres in size, is located in the north central part of the Depot and contains several branches of Little Vermillion Creek, two of the six historic cemeteries, and the Army's small arms range. The second largest wooded area, at about 400 acres in size, is located in the southeast corner of the Depot. This area contains one historic cemetery, portions of Little Raccoon Creek, the Depot's sewage treatment plant, and several areas with "no excavation" environmental land use controls that are appropriately maintained within a natural conservation area. Two other smaller wooded areas, at approximately 100 acres each, are located in the far northwest and northeast corners of the Depot. Each of these two areas contain an historic cemetery as well.

Natural Drainageways

Branching south from the largest wooded area in the north central part of the Depot are two natural drainageways. The westernmost of these two extends to the Depot's southern boundary and beyond, while the other extends south and tapers off near the center of the Depot. Portions of the Army's Prairie Restoration Area, several wetlands, and one of the historic cemeteries are located within these natural drainageway areas.

Green Connectors

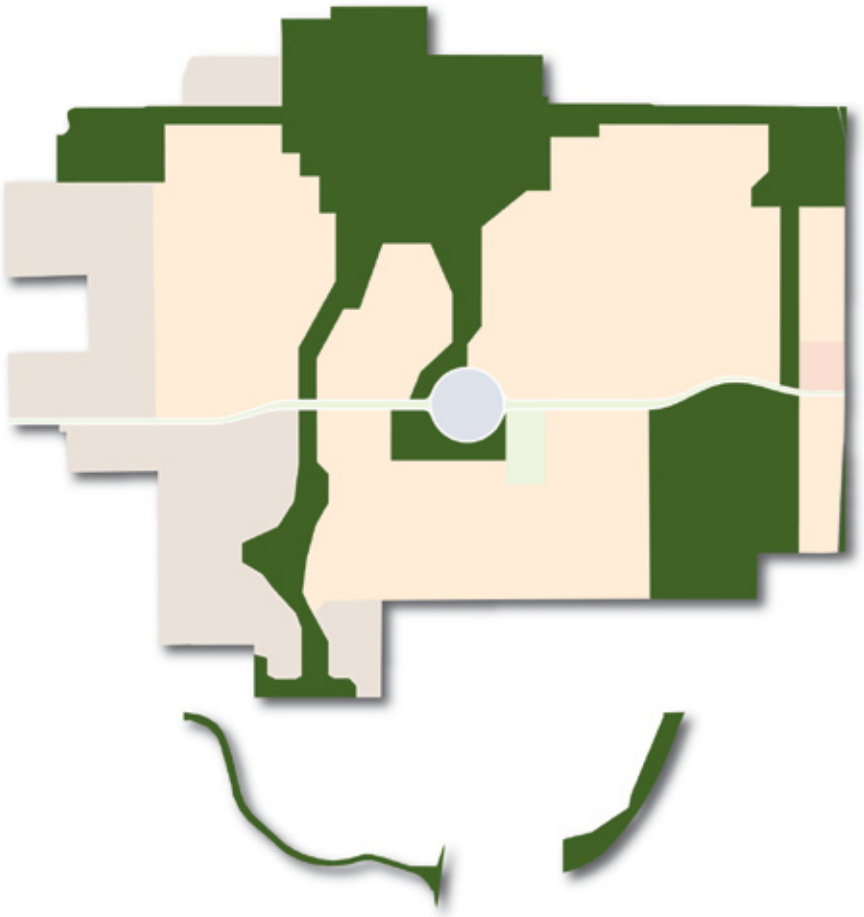
An important aspect of the Reuse Plan is to have a single contiguous system of natural areas and open spaces within the Depot by creating, where necessary, green "connectors" to bridge the gaps between major wooded areas and to provide space for recreational trails and wildlife corridors. These green connectors are evident on the Reuse Plan map in between the four major wooded areas described above.

Railroad Right-of-Way / Ranney Wells Area

Both the Railroad Right-of-Way and Ranney Wells areas located east of the main Depot facility are designated on the Reuse Plan map as Natural Areas & Open Space. In the case of the 70-acre Ranney Wells area, its location along the bank of the Wabash River creates an opportunity to provide public access to the river and its ecosystem for recreational and educational purposes. The 60-acre Railroad Right-of-Way area could potentially accommodate a recreational trail and/or a future railroad spur into the Depot.

Within the Depot's planned Natural and Open Space Areas, recreational activities such as hunting, fishing, camping, and hiking, educational field research and observation sites, and other compatible uses are potentially viable for these areas. The dashed light green lines on the Reuse Plan map show conceptually how a recreational trail network could be integrated throughout the Depot. Also, all of the endangered Indiana Bat habitat sites identified on Depot property (through 2008) are located within Natural and Open Space Areas on the Reuse Plan map.

Exhibit 5-03: Natural Areas & Open Space Location Map



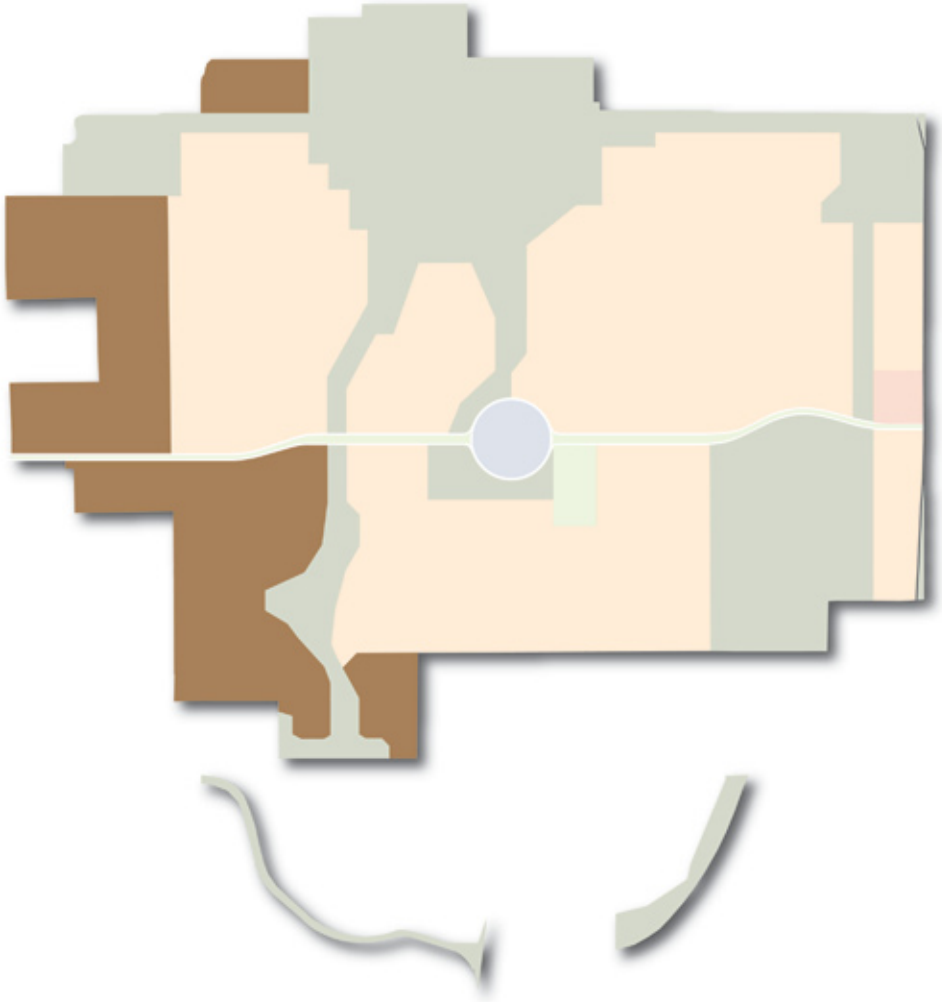
Agriculture & Forestry

Most of the land on and surrounding the Depot has a long history of agricultural production. The western edge of the Depot was the far eastern extent of the native tallgrass prairie that once stretched west to the Great Plains. The rich prairie soil results in some of the most productive farmland in the country, with row crops—mostly corn and soybeans—being major agricultural commodities for the region. The areas designated for Agriculture & Forestry uses, shown in brown on the Reuse Plan map, account for approximately 1,250 acres or 18% of Depot land, and are located where some of the best of the agricultural soils are found.

Four major Agriculture & Forestry areas are identified on the Reuse Plan map. The two largest, at approximately 500 and 600 acres in size, are located at the far western and southwestern ends of the Depot. The two smaller sites, each about 75 acres in size, are located in the northwestern and south central parts of the Depot. Most of the land designated for Agriculture and Forestry is currently being farmed, with the exception of a portion of the land immediately north of the US Coast Guard facility, which contains some wooded areas. While timber harvesting is not as prevalent as row crops in the region, this plan proposes that tree plantations/forestry would be an allowable use in these areas. In addition to row crops and forestry, other types of agricultural uses would be suitable for these areas, including tallgrass prairie, prairie grass hay production, specialty and greenhouse crops, dairy production, and livestock grazing and production.

Finally, while approximately 1,250 acres have been designated in this plan for Agriculture & Forestry uses on a permanent basis, several thousand additional acres on the Depot are currently being used for agricultural production. Most of this additional farmland is located in areas designated on the Reuse Plan Map for Business & Technology. However, it is important to recognize that until market demand supports the development of those areas for business and technology uses, it is very likely that those areas will continue to be used for agricultural purposes, including prairie grass preservation and hay production.

Exhibit 5-04: Agriculture and Forestry Location Map



Parkland

While over two thousand acres have been allocated on the Reuse Plan map for Natural Areas & Open Space, additional territory has been designated for a more designed landscape setting. Shown in light green on the Reuse Plan map, Parkland uses account for approximately 90 acres, or a little more than 1% of Depot land, and consist of two main elements:

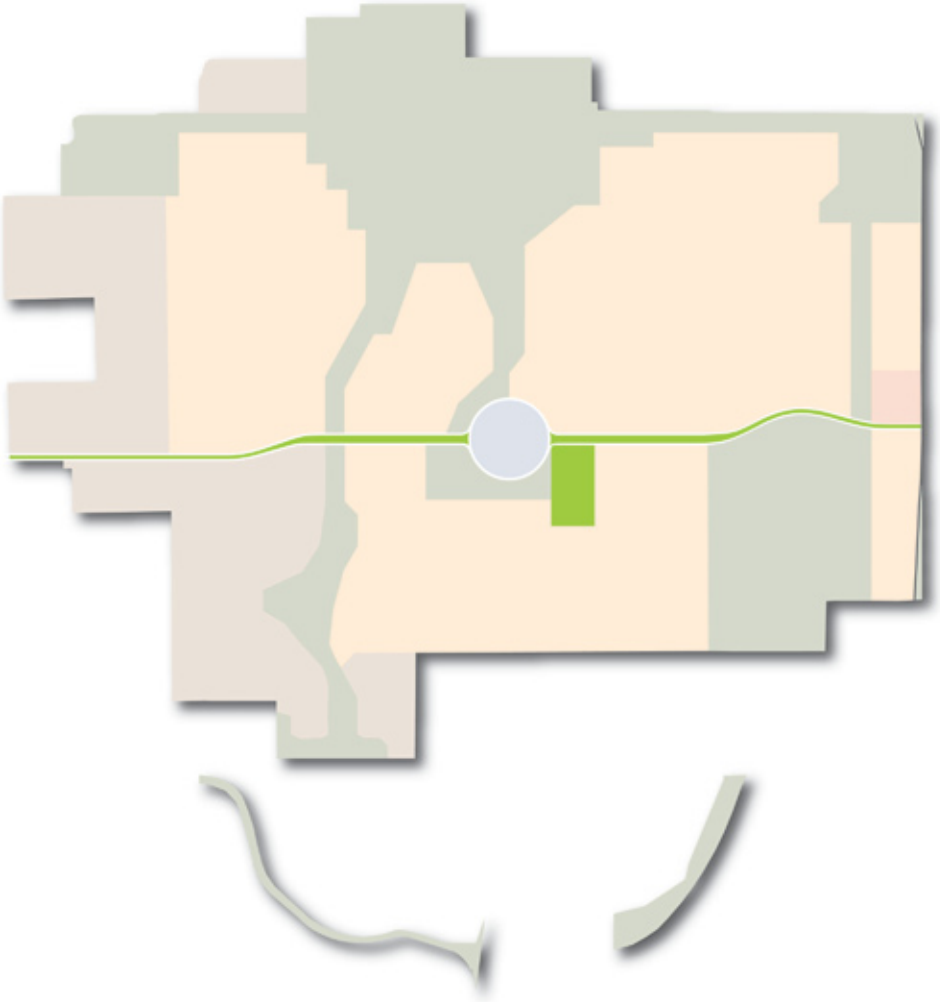
Bookends Park

One of the main features of the Reuse Plan is Bookends Park. This proposed public park is envisioned to cover approximately 40 acres and is located at the southeastern corner of the Central Parkway and the Conference & Support Facilities hub in the center of the Depot. The term "Bookends" comes from the nickname given to the monolithic concrete blast-protection structures built by the Army decades ago that remain intact today in this area. These 44 iconic structures are not only fascinating remnants of the World War II era that would aptly serve as a permanent monument to the Depot's military legacy, but as architectural forms, they are unique in Indiana—and perhaps in the world—and should be preserved in a park-like setting for future generations. Typical park uses such as landscaped lawns and gardens, picnic areas, walking trails and perhaps smaller-scale active recreational uses such as tennis courts, in addition to historical markers about the Depot, could be incorporated as part of Bookends Park.

Central Parkway Linear Park

Central Parkway is envisioned as not just the main arterial roadway within the Depot, but as the signature infrastructure feature that provides a unifying design and high-quality gateway aesthetic to the expansive Depot site. Key to the Central Parkway concept is its function as a linear park, with a substantial right-of-way that can accommodate a generous median width and outside-curb setbacks suitable for prairie grass restoration, recreational trails, and/or prominent natural and formal landscaping. Additionally, Central Parkway has been aligned on the Reuse Plan map so that, as it runs along the northern edge of Bookends Park in its approach to the Conference & Support Facilities area, the northernmost row of Bookend structures would be located within the parkway median, providing a dramatic visual impact and welcoming feature to the center of the Depot. The remaining approximately 50 acres of Parkland shown on the Reuse Plan map is accounted for within the Central Parkway Linear Park.

Exhibit 5-05: Parkland Location Map



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DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

February 8, 2010

Commanding Officer

SUBJECT: Preparation of an Environmental Assessment for the Implementation of the BRAC Recommendations at Newport Chemical Depot, Vermillion County, Indiana

Mr. Dean Zimmerman
Division of Fish and Wildlife
Indiana Department of Natural Resources
Prophetstown State Park
4112 E. SR 225
West Lafayette, Indiana 47906

Dear Mr. Zimmerman:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana. In accordance with the National Environmental Policy Act, the Army is assessing the potential effects of implementation of the proposed BRAC action. The Environmental Assessment will consider the effects of disposal and reuse of the property. Specific plans for reuse are currently being developed by a Local Redevelopment Authority (LRA), the Newport Chemical Depot Reuse Authority (NeCDRA).

The NECD is located in central Vermillion County, Indiana (see attached figures), two miles southwest of Newport and thirty miles north of Terre Haute. It is situated west of the Wabash River and north of U.S. Route 36. Previously known as the Newport Army Ammunition Plant, the NECD is a former chemical storage and destruction facility. The facility covers approximately 7,136 acres and has easement rights over an additional 1,400 acres. Although all chemical agents at the site have been neutralized, the completion of base closure will require dismantling of structures and other activities.

The following are the Endangered and Threatened species and communities that have been documented at NECD:

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Henslow's Sparrow, SE
Peregrine falcon, SE
Great Egret, State Special Concern (SSC)
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Sharp-shinned Hawk, SSC
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Indiana bat, Federally Endangered (FE) & SE
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Northern Myotis, SSC
Silver-haired Bat, SSC
Eastern Pipistrelle, SSC
Red Bat, SSC
Hoary Bat, SSC
Bobcat, SSC

HERPTILES
Northern Cricket Frog, SSC
Eastern Box Turtle, SSC

VASCULAR PLANTS (state watch list)
Golden Seal, State Watch List (WL)
American Ginseng (WL)
Wood's Hellebore (WL)
American Pinesap (WL)
Large Yellow Lady's Slipper (WL)

Conservation and enhancement of many of the above mentioned species and communities are discussed in Section 5 of the NECD Integrated Natural Resources Management Plan. The **Endangered Species Management Plan for the Indiana Bat, *Myotis sodalist,* Newport Chemical Depot, Vermillion County, Indiana** was revised September 2009, and its continued implementation provides conservation of the Indiana bat.

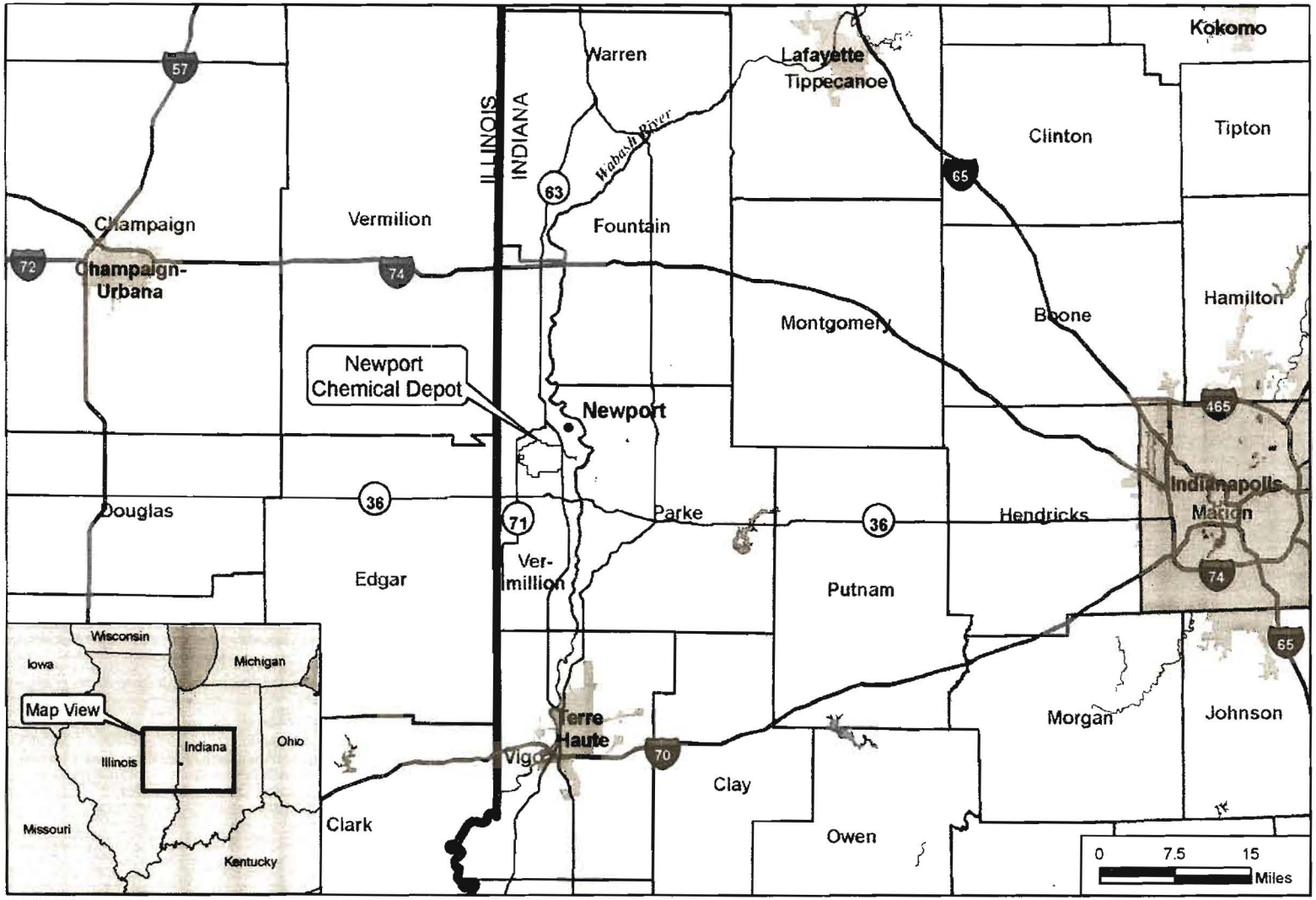
We are requesting your input regarding the potential impacts of the proposed action on the human and natural resources of concern to your agency. It is requested that your input be provided within 30 calendar days of receipt of this letter. If you have any questions concerning the BRAC action, please contact Ms. Cathy Collins, Engineer, Newport Chemical Depot at (765) 245-4550.

Sincerely

William D. Hibner
Lieutenant Colonel, US Army
Commanding

Enclosures

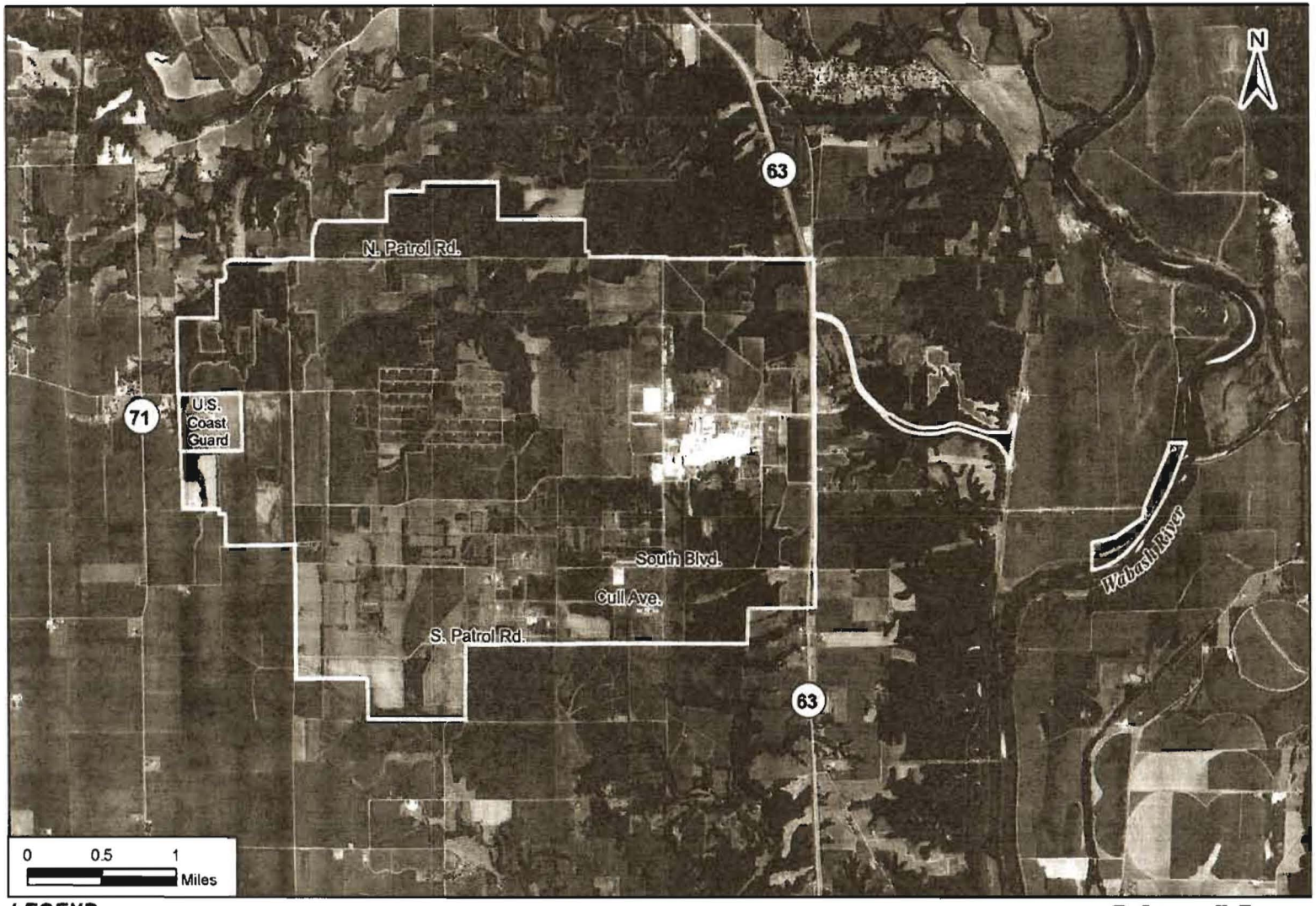
CF: Mason & Hanger



Installation Location

Figure 1

Note: Installation boundaries are approximate. Source: NECD GIS, 2009.



LEGEND

Newport Chemical Depot

Site Map

Figure 2

Note: Installation boundaries are approximate. Source: NECD GIS, 2009.

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DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS AGENCY
NEWPORT CHEMICAL DEPOT
BUILDING 7700
P.O. BOX 160
NEWPORT INDIANA 47966-0160

REPLY TO
ATTENTION OF

April 27, 2010

Chief Engineer

Subject: Preparation of an Environmental Assessment for the Implementation of the BRAC Recommendations at Newport Chemical Depot, Vermillion County, Indiana.

Mr. Tom Linson
IDEM – RCRA Permitting
Indiana Government Center North
100 N. Senate Ave., Room 1101
Indianapolis, IN 46204

Dear Mr. Linson:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is closure of the Newport Chemical Depot (NECD), Vermillion County, Indiana. In accordance with the National Environmental Policy Act, the Army is assessing the potential effects of implementation of the proposed BRAC action. The Environmental Assessment (EA) will consider the effects of disposal and reuse of the property. Specific plans for reuse are currently being developed by a Local Redevelopment Authority (LRA); the Newport Chemical Depot Reuse Authority (NeCDRA).

The NECD is located in central Vermillion County, Indiana, two miles southwest of Newport and thirty miles north of Terre Haute. It is situated west of the Wabash River and north of U.S. Route 36. Previously known as the Newport Army Ammunition Plant, the NECD is a former chemical storage and destruction facility. The facility covers approximately 7,136, and has easement rights over an additional 1,400 acres. Although all chemical agents at the site have been neutralized, the completion of base closure will require dismantling of structures and other activities.

We are requesting your input regarding the potential impacts of the proposed action on the human and natural resources of concern to your agency. It is requested that your input be provided within 30 calendar days of receipt of this letter. If you have any questions concerning the BRAC action, please contact Ms. Cathy Collins, Engineer, Newport Chemical Depot at (765) 245-4550.

Sincerely,

Cathy M. Collins
BRAC Environmental Coordinator

AGENCY RESPONSES

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Miami Tribe of Oklahoma

P.O. Box 1326–Miami, Oklahoma 74355
Ph: 918-542-1445 Fax: 918-542-7260

April 22, 2010

Department of the Army
US Army Chemical Materials Agency
Newport Chemical Depot
Building 7700
PO Box 160
Newport, Indiana 47966-0160

RE: Invitation to Initiate Government to Government Consultation for the Closure of Newport Chemical Depot, Vermillion County, Indiana

To Whom It May Concern:

Aya, kikwesitoole. My name is George Strack and I am the Tribal Historic Preservation Officer for the federally Recognized Miami Tribe of Oklahoma. In the capacity I am the Miami Nation's point of contact for all Section 106 issues.

The above mentioned project is located with the homelands of the Miami Nation. Therefore, it is possible that Miami human remains and/or cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) could be discovered during this project. Should such items be discovered the Miami Nation requests immediate notification and consultation with the entity of jurisdiction specific to the location of discovery.

The Miami Nation objects to projects which will disturb or destroy archaeological sites that may be eligible for the National Register of Historic Places and requests copies of any archaeological surveys that are performed on these sites. I may be contacted at 918-541-1399 or by mail at the address listed above to initiate consultation.

Sincerely,

George J. Strack
Tribal Historic Preservation Officer
Miami Tribe of Oklahoma

DNR Indiana Department of Natural Resources

Mitchell E. Daniels, Jr., Governor
Robert E. Carter, Jr., Director

Division of Historic Preservation & Archaeology•402 W. Washington Street, W274 · Indianapolis, IN 46204-2739
Phone 317-232-1646•Fax 317-232-0693 · dhpa@dnr.IN.gov

HISTORIC PRESERVATION AND ARCHAEOLOGY

February 2, 2010

Thomas J. Kutz
Civilian Executive Assistant
Department of the Army
US Army Chemical Materials Agency
Newport Chemical Depot
Post Office Box 160
Newport, Indiana 47966-0160

Federal Agency: U.S. Department of the Army

Re: Request for the extension of the exemption for submitting projects by the Newport Chemical Depot for Section 106 review for the disposal, rehabilitation and modification of existing buildings and structures

Dear Mr. Kutz:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated November 24, 2009, and received on February 1, 2010, for the above indicated project at the Newport Chemical Depot, Vermillion County, Indiana.

Based upon the information provided, we agree that the buildings and structures of the Newport Chemical Depot will not likely gain historical or architectural significance between now and 2014. Furthermore, we do not believe that the kinds of projects likely to be undertaken between now and 2014, even including demolition, will not affect any properties that are eligible for or are included in the National Register of Historic Places. However, we have noted that an exemption of the original document has been granted since 1998. We recommend that before 2014, the original document be updated rather than requesting an exemption.

A copy of the revised 36 C.F.R. Part 800 that went into effect on August 5, 2004, may be found on the Internet at www.achp.gov for your reference. If you have questions about our comments, please call Karie A. Brudis of our office at (317) 232-1646.

Very truly yours,

James A. Glass, PhD
Deputy State Historic Preservation Officer

JAG:KAB:kab

-----Original Message-----
From: Robin_McWilliams@fws.gov [mailto:Robin_McWilliams@fws.gov]
Sent: Monday, May 03, 2010 1:55 PM
To: Collins, Cathy Miss CIV USA AMC
Subject: RE: Newport Closure/EA preparation

Hi Cathy,

Thank you for the letter and information. In speaking with another biologist in our office, I think that before we can concur with anything, we will need to review the Draft EA. Once we review that and work out the appropriate covenants/deed restrictions for the Indiana bat, then we could concur with a "not likely to adversely affect" determination (we do not typically concur with "no effect" determinations). Does the current EA specifically state the type of restrictions for Indiana bats that will be included on the deeds, or will a separate document be developed for those?

Also, I think it would be valuable if, in addition to the 2003 and 2008 roost trees, you include the 1997 roost trees, along with all of the Indiana bat capture locations on the map you forwarded to me. That way we get a picture of both roosting habitat as well as foraging areas. One thing I noticed from the maps you sent is that one forested area with a 2003 (and also 1997) roost tree in the north east corner of the base does not look to be within one of the designated natural areas on the reuse map. The trees appear to be just south of the natural area, more in the business and technology parcel. Could you double check that and let me know about those trees?

Thanks for your help. I will be discussing these items with my supervisor as well so I have a handle on how to proceed.

Sincerely,

Robin

Robin McWilliams-Munson

Work Schedule: M,T,W 7:45- 4:15
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, Indiana 47403
812-334-4261 x. 1207
812-334-4273 fax

"Collins, Cathy Miss CIV USA AMC"

<cathy.m.collins@us.army.mil>
04/28/2010 04:45 PM
To
<Robin_McWilliams@fws.gov>
cc

Subject
RE: Newport Closure/EA preparation

Robin- I will be forwarding a letter to you discussing measures on the Indiana Bat along with an excerpt of the final reuse plan.

I can forward electronically also.

Cathy M. Collins
Engineer, Newport Chemical Depot
comm phone (765) 245-4550 DSN 369-1550
Fax (765) 245-4500 DSN 369-1500
cathy.m.collins@us.army.mil

Sincerely,
Robin M. Munson

Robin McWilliams-Munson

Work Schedule: M,T,W 7:45- 4:15
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Appendix F

Economic Impact Forecast System Model Results

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APPENDIX F

Economic Impact Forecast System (EIFS) Model Analysis for NECD, INDIANA

Socioeconomic Impact Assessment

Socioeconomic impacts are linked through cause-and-effect relationships. Payrolls and local procurement contribute to the economic base for the ROI. In this regard, the reuse of the NECD parcel would have a multiplier effect on the local and regional economy. With reuse, direct jobs would be created, generating new income and increasing personal spending. This spending generally creates secondary jobs, business sales, and revenues for schools and other social services.

The Economic Impact Forecast System

The U.S. Army, with the assistance of academic and professional economists and regional scientists, developed EIFS to address the economic impacts of NEPA-requiring actions and to measure their significance. As a result of its designed applicability, and in the interest of uniformity, EIFS should be used in NEPA assessments for BRAC. The entire system is designed for the scrutiny of a populace affected by the actions being studied. The algorithms in EIFS are simple and easy to understand but still have firm, defensible bases in regional economic theory.

EIFS was developed under a joint project of the U.S. Army Corps of Engineers, the U.S. Army Environmental Policy Institute, and the Computer and Information Science Department of Clark Atlanta University. EIFS is implemented as an online system supported by the U.S. Army Corps of Engineers, Mobile District. The system is available to anyone with an approved user-ID and password. U.S. Army Corps of Engineers staff are available to assist with the use of EIFS.

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

The EIFS Model

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

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

The user inputs into the EIFS model the data elements that describe the Army action: definition of the ROI; the change in local procurement, contracting, and purchases; number of affected civilian personnel and their salaries; number of affected military employees and their salaries; and the percent of affected military living on-post.

For the NECD BRAC action, change in employment is calculated by subtracting the baseline worker population of the installation as of the time of the BRAC 2005 announcement (i.e., 300 employees) from the number of workers anticipated under each reuse scenario identified in Section 3.0, Table 3-2. The average expenditure per employee is from Bureau of Economic Analysis industry expenditures per employee for the Terre Haute MSA. The change in total expenditures for services and supplies is calculated for each reuse scenario by multiplying the expected change in employee population by the average expenditure per employee for that reuse scenario (Table 1). The per capita personal income for the ROI in which the installation is located was used as the average income of workers ($20,700) (US Census Bureau 2006a). For each reuse intensity the percent expected to relocate from outside the ROI would be zero. It was assumed that new jobs created by the reuse scenarios would more than likely be filled by persons already in the area.

Table 1.
EIFS model input parameters for reuse scenarios

Reuse Intensity	Reuse Employee Population[1]	Change in Employee Population[2]	Average Expenditure per Employee[3]	Change in Total Expenditure[4]
LIR	230	-70	$38,039	-$2,662,730
MLIR	812	512	$38,039	$19,475,968

[1] See Table 3-2 for derivation of employee populations for reuse scenarios.
[2] Change in employee population equals projected reuse employee population minus NECD baseline employee population. NECD baseline employee population is 300 (see Section 3.5.3).
[3] The average expenditure per employee is from Bureau of Economic Analysis (BEA 2008b).
[4] Change in total expenditures equals average expenditure per employee multiplied by the change in employee population.

The MLIR and LIR scenarios also would involve new construction and renovation of buildings, utility infrastructure, and roads. Redevelopment is projected to occur over a 20-year period. There is no current working estimate available for the MLIR or LIR expenditures for construction and redevelopment. The preliminary cost data, build out schedules, and facility specific information are not available. Such data is subject to change on the basis of market conditions and as architectural designs evolve, making preliminary data very speculative.

Once the input variables are entered into the EIFS model, the model is run and it projects changes to the local economy's business sales volume, income, employment, and population. These four indicator variables are used to measure and evaluate socioeconomic impacts. Sales volume is the direct and indirect change in local business activity and sales (total retail and wholesale trade sales, total selected service receipts, and value-added by manufacturing). Employment is the total change in local employment due to the proposed reuse action, including the direct and secondary changes in local employment. Income is the total change in local wages and salaries due to the proposed action, which includes the sum of the direct and indirect wages and salaries, plus the income of the civilian and military personnel affected by the proposed action. Population is the increase or decrease in the local population as a result of the proposed action.

The Significance of Socioeconomic Impacts

Once model projections are obtained, the RTV profile allows the user to evaluate the significance of the impacts. This analytical tool reviews the historical trends for the defined region and develops measures of local historical fluctuations in sales volume, income, employment, and population. These evaluations identify the positive and negative changes within which a project can affect the local economy without creating a significant impact. The greatest historical changes define the boundaries that provide a basis for comparing an action's impact on the historical fluctuation in an area. Specifically, EIFS sets the boundaries by multiplying the maximum historical deviation of the following variables:

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

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

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

The following are the EIFS inputs and output data and the RTV values for the ROI. These data form the basis for the reuse impact analysis presented in Section 4.10.2.5 and 4.10.2.6.

EIFS REPORT

PROJECT NAME

NECD BRAC EA – *MLIR Reuse Alternative*

STUDY AREA

18021	Clay County, IN
18153	Sullivan County, IN
18165	Vermillion County, IN
18167	Vigo County, IN

FORECAST INPUT

Change In Local Expenditures	$19,475,970
Change In Civilian Employment	512
Average Income of Affected Civilian	$20,700
Percent Expected to Relocate	0
Change In Military Employment	0
Average Income of Affected Military	$0
Percent of Military Living On-post	0

FORECAST OUTPUT

Employment Multiplier	2.96	
Income Multiplier	2.96	
Sales Volume – Direct	$22,997,080	
Sales Volume – Induced	$54,874,280	
Sales Volume – Total	$82,871,370	1.43%
Income – Direct	$13,652,000	
Income - Induced	$8,603,635	
Income – Total (place of work)	$22,255,640	0.66%
Employment – Direct	643	
Employment – Induced	257	
Employment – Total	899	0.99%
Local Population	0	
Local Off-base Population	0	0.00%

RTV SUMMARY

	Sales Volume	Income	Employment	Population
Positive RTV	9.51%	8.09%	2.67%	1.22%
Negative RTV	-8.16%	-7.60%	-3.33%	-0.75%

PROJECT NAME

NECD BRAC EA – *LIR Reuse Alternative*

STUDY AREA

18021	Clay County, IN
18153	Sullivan County, IN
18165	Vermillion County, IN
18167	Vigo County, IN

FORECAST INPUT

Change In Local Expenditures	-$2,662,730
Change In Civilian Employment	-70
Average Income of Affected Civilian	$20,700
Percent Expected to Relocate	0
Change In Military Employment	0
Average Income of Affected Military	$0
Percent of Military Living On-post	0

FORECAST OUTPUT

Employment Multiplier	2.96	
Income Multiplier	2.96	
Sales Volume – Direct	-$3,827,726	
Sales Volume – Induced	-$7,502,344	
Sales Volume – Total	-$11,330,070	-0.20%
Income – Direct	-$1,866,484	
Income - Induced	-$1,176,278	
Income – Total (place of work)	-$3,042,763	-0.09%
Employment – Direct	-88	
Employment – Induced	-35	
Employment – Total	-123	-0.14%
Local Population	0	
Local Off-base Population	0	0.00%

RTV SUMMARY

	Sales Volume	Income	Employment	Population
Positive RTV	9.51%	8.09%	2.67%	1.22%
Negative RTV	-8.16%	-7.60%	-3.33%	-0.75%

RTV DETAILED

SALES VOLUME

Year	Value	Adj_Value	Change	Deviation	%Deviation
1969	426364	1863211	0	0	0
1970	469358	1938449	75238	60840	3.14
1971	481734	1907667	-30782	-45180	-2.37
1972	509702	1952159	44492	30094	1.54
1973	562848	2031881	79723	65325	3.21
1974	611487	1987333	-44548	-58946	-2.97
1975	653897	1948613	-38720	-53118	-2.73
1976	733533	2068563	119950	105552	5.1
1977	821196	2167958	99395	84997	3.92
1978	927787	2282356	114399	100001	4.38
1979	1040527	2299565	17209	2811	0.12
1980	1115336	2163752	-135813	-150211	-6.94
1981	1155455	2033601	-130151	-144549	-7.11
1982	1162885	1930389	-103212	-117610	-6.09
1983	1183589	1905578	-24811	-39209	-2.06
1984	1267698	1952255	46677	32279	1.65
1985	1322127	1969969	17714	3316	0.17
1986	1374854	2007287	37318	22920	1.14
1987	1441343	2234082	226795	212397	9.51
1988	1491074	2027861	-206221	-220619	-10.88
1989	1576104	2033174	5313	-9085	-0.45
1990	1679947	2066335	33161	18763	0.91
1991	1790222	2112462	46127	31729	1.5
1992	1932047	2202534	90072	75674	3.44
1993	2011905	2233215	30681	16283	0.73
1994	2078564	2244849	11635	-2763	-0.12
1995	2147177	2254536	9687	-4711	-0.21
1996	2155744	2198859	-55677	-70075	-3.19
1997	2192912	2192912	-5947	-20345	-0.93
1998	2311418	2265190	72278	57880	2.56
1999	2423305	2326373	61183	46785	2.01
2000	2498874	2323953	-2420	-16818	-0.72

INCOME

Year	Value	Adj_Value	Change	Deviation	%Deviation
1969	558521	2440737	0	0	0
1970	598885	2473395	32658	-3373	-0.14
1971	640765	2537429	64034	28003	1.1
1972	681784	2611233	73803	37772	1.45
1973	785384	2835236	224003	187972	6.63
1974	842414	2737846	-97391	-133422	-4.87
1975	930620	2773248	35402	-629	-0.02
1976	1029973	2904524	131276	95245	3.28
1977	1132393	2989518	84994	48963	1.64
1978	1262806	3106503	116985	80954	2.61
1979	1407049	3109578	3076	-32955	-1.06
1980	1543782	2994937	-114641	-150672	-5.03
1981	1654553	2912013	-82924	-118955	-4.08
1982	1721496	2857683	-54330	-90361	-3.16
1983	1764766	2841273	-16410	-52441	-1.85
1984	1917452	2952876	111603	75572	2.56
1985	2000707	2981053	28177	-7854	-0.26
1986	2083109	3041339	60286	24255	0.8
1987	2160231	3348358	307019	270988	8.09
1988	2234840	3039382	-308976	-345007	-11.35
1989	2417478	3118547	79164	43133	1.38
1990	2538831	3122762	4216	-31815	-1.02
1991	2669932	3150520	27757	-8274	-0.26
1992	2866491	3267800	117280	81249	2.49
1993	2983398	3311572	43772	7741	0.23
1994	3099478	3347436	35865	-166	0
1995	3202595	3362725	15288	-20743	-0.62
1996	3290133	3355936	-6789	-42820	-1.28
1997	3379826	3379826	23890	-12141	-0.36
1998	3578141	3506578	126752	90721	2.59
1999	3677411	3530314	23736	-12295	-0.35
2000	3864217	3593722	63407	27376	0.76

EMPLOYMENT

Year	Value	Change	Deviation	%Deviation
1969	70489	0	0	0
1970	72023	1534	834	1.16
1971	71460	-563	-1263	-1.77
1972	71699	239	-461	-0.64
1973	73710	2011	1311	1.78
1974	74911	1201	501	0.67
1975	73607	-1304	-2004	-2.72
1976	74745	1138	438	0.59
1977	76934	2189	1489	1.94
1978	79704	2770	2070	2.6
1979	82606	2902	2202	2.67
1980	81790	-816	-1516	-1.85
1981	78587	-3203	-3903	-4.97
1982	75744	-2843	-3543	-4.68
1983	74533	-1211	-1911	-2.56
1984	75850	1317	617	0.81
1985	76390	540	-160	-0.21
1986	76799	409	-291	-0.38
1987	77704	905	205	0.26
1988	78831	1127	427	0.54
1989	81041	2210	1510	1.86
1990	83195	2154	1454	1.75
1991	84549	1354	654	0.77
1992	86715	2166	1466	1.69
1993	88704	1989	1289	1.45
1994	90593	1889	1189	1.31
1995	92674	2081	1381	1.49
1996	91624	-1050	-1750	-1.91
1997	90499	-1125	-1825	-2.02
1998	90439	-60	-760	-0.84
1999	91752	1313	613	0.67
2000	92892	1140	440	0.47

POPULATION

Year	Value	Change	Deviation	%Deviation
1969	175824	0	0	0
1970	175500	-324	-165	-0.09
1971	177082	1582	1741	0.98
1972	176637	-445	-286	-0.16
1973	175537	-1100	-941	-0.54
1974	172796	-2741	-2582	-1.49
1975	172939	143	302	0.17
1976	173680	741	900	0.52
1977	174548	868	1027	0.59
1978	174590	42	201	0.12
1979	174406	-184	-25	-0.01
1980	176395	1989	2148	1.22
1981	175255	-1140	-981	-0.56
1982	174781	-474	-315	-0.18
1983	173625	-1156	-997	-0.57
1984	172695	-930	-771	-0.45
1985	172000	-695	-536	-0.31
1986	170581	-1419	-1260	-0.74
1987	169209	-1372	-1213	-0.72
1988	168190	-1019	-860	-0.51
1989	167248	-942	-783	-0.47
1990	166606	-642	-483	-0.29
1991	166943	337	496	0.3
1992	168127	1184	1343	0.8
1993	169575	1448	1607	0.95
1994	169975	400	559	0.33
1995	170921	946	1105	0.65
1996	171682	761	920	0.54
1997	171665	-17	142	0.08
1998	171237	-428	-269	-0.16
1999	171235	-2	157	0.09
2000	170746	-489	-330	-0.19

****** End of Report ******

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Appendix G

Construction and Demolition Table

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Appendix G

Construction and Demolition Debris Estimates

Square footage calculations are based on data in Sections 3.5.3 and 3.5.4 (Table 3-2) of this EA. NECD has a total of 973,000 square feet (SF) of built space. For this analysis it was assumed 75 percent of this existing square footage would be renovated (729,750 SF) and 25 percent would be demolished (243,250 SF). The end-state square footage under the MLIR scenario is estimated at 2,286,900 SF. This less the existing square footage that would be renovated would be equal to the new construction: 2,286,900 – 729,750 = 1,557,150 SF (see Table 1 below).

Table 1
Square footage calculations

Construction type	Current space (SF)	MLIR end-state space (SF)	Less existing square footage that would be renovated	Difference (new construction) (SF)
Total existing space (SF)	973,000	2,286,900	729,750	1,557,150
Assume 75% SF renovated	729,750			
Assume 25% SF demolished	243,250			

Note: SF = square feet.

Estimates of construction and demolition (C&D) debris presented in Table 2 below are calculated on the basis of the data presented in Sections 3.5.3 and 3.5.4 (Table 3-2) of this EA and calculations shown above in Table 1.

Table 2
Estimates of C&D debris generated as a result of implementing the MLIR Plan at NECD

Construction type	Debris (lbs/SF)	Subtotal (SF)	Subtotal pounds C&D debris	Subtotal tons C&D debris
Renovation	20.0	729,750	14,595,000	7,298
Construction	4.4	1,557,150	6,851,460	3,426
Sub Total	N/A	2,286,900	21,446,460	10,723
Demolition	115.0	243,250	27,973,750	13,987
Gross Total	N/A	2,530,150	49,420,210	24,710

Note: SF = square feet.

Assuming 20-year redevelopment period (as listed in Section 3.5.4):
Tons C&D per year: 24,710 tons/20 years = 1,236 tons per year
Tons C&D per month: 1,236 tons/12 months = 103 tons per month

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