FINAL
ENVIRONMENTAL ASSESSMENT

FOR THE PROPOSED

LAND ACQUISITION FOR THE FUTURE EXPANSION OF CAMP NELSON NATIONAL CEMETERY

6980 DANVILLE ROAD
JESSAMINE COUNTY, KENTUCKY

U.S. DEPARTMENT OF VETERANS AFFAIRS

OFFICE OF CONSTRUCTION AND FACILITIES MANAGEMENT
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October 11, 2023

EXECUTIVE SUMMARY

This Environmental Assessment (EA) has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with the U.S. Department of Veterans Affairs (VA's) proposed acquisition of approximately 18.7 acres of vacant, unimproved land (Site) adjacent to the existing Camp Nelson National Cemetery (CNNC), located at 6980 Danville Road in Jessamine County, Kentucky, for the future expansion of the cemetery. This EA has been prepared as required in accordance with the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code 4321 *et seq*.), the President's Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and *Environmental Effects of the Department of Veterans Affairs Actions* (38 CFR Part 26), and in accordance with *VA NEPA Interim Guidance for Projects* (2010).

The current Site owner, Jessamine County, has offered to sell the approximately 18.7-acre property to VA for future cemetery expansion. VA would acquire the Site in 2023, while available for purchase, and would leave it undeveloped until needed for the expanded cemetery (approximately 25 to 30 years). At that time, and as part of the cemetery design process, VA will perform a supplemental NEPA analysis to reanalyze and reevaluate the potential effects of the construction and operation of the expanded cemetery at the Site.

This approach is fully consistent with the NEPA and CEQ Regulations. In cases such as this, the CEQ Regulations establish and recommend a "tiered" approach to the environmental impact analysis process: "Agencies are encouraged to tier their environmental (documents)…to focus on the actual issues ripe for decision at each level of environmental review….Tiering may also be appropriate for different stages of actions" (40 CFR Part 1502.20). These regulations specify that such potentialities (i.e., the ultimate construction and operation of the expanded cemetery) should be introduced, but can be deferred to future analyses and documentation when they have "ripened," or when more complete information becomes available.

As such, this EA assesses the potential effects of acquiring the Site for the ultimate expansion of the CNNC, and preliminarily assesses the effects of the future proposed construction and operation of the cemetery on the Site. Potential effects of the construction and operation of the proposed expanded cemetery on the Site will be reanalyzed and reevaluated in a supplemental NEPA analysis concurrent with site design when the expansion of the CNNC becomes necessary. VA will incorporate the management, minimization, and avoidance measures identified in this EA into that future design process and supplemental NEPA analysis to minimize potential adverse environmental effects.

Proposed Action

The Proposed Action is to acquire approximately 18.7 acres of vacant, unimproved land (Site) located northerly adjacent to the current CNNC for the future expansion of the cemetery. VA intends to acquire the Site in 2023, while available, and would leave it undeveloped until needed for the expanded cemetery.

VA estimates that the current CNNC properties, totaling approximately 52 acres, contain adequate space for burials for approximately 30 years. It is anticipated that cemetery expansion construction at the Site would begin in approximately 2050. Design details of the proposed cemetery expansion at the Site do not exist at this time; however future gravesite expansion onto the Site would be designed to be similar in appearance to the existing grounds of the CNNC.

Purpose and Need

The purpose of the Proposed Action is to acquire land for CNNC use, including future burial and facility expansions, to serve the interment needs of Veterans and their eligible family members in central Kentucky after the current burial space at CNNC is depleted.

A larger, expanded CNNC is needed to continue providing national cemetery burial benefits to the regional Veteran community. VA estimates that the 2021/2 CNNC cemetery expansion area will provide adequate space for burials until approximately 2035 and the remainder of the existing CNNC properties will provide adequate burial space for approximately 15 additional years. However, additional land would be needed in the future once the current CNNC properties reach their maximum capacity.

One of the primary objectives of the VA burial program is to ensure that the burial needs of Veterans and eligible family members are met. NCA further defines this objective on the assumption that the burial needs of a Veteran are met if they have reasonable access to a burial option (whether for caskets, remains, or cremated remains, either in-ground or in a columbarium) in a national or state Veterans cemetery within 75 miles of the Veteran's place of residence. The Proposed Action would provide VA additional capacity needed to meet its burial objectives for eligible Veterans in central Kentucky.

Alternatives

This EA examines in-depth two alternatives, the Proposed Action and the No Action Alternative which are defined as follows:

- **Proposed Action:** VA would acquire approximately 18.7 acres of vacant, unimproved land contiguous to the north of the CNNC for the future expansion of CNNC. After the acquisition, the Site would remain unimproved land until such date when the expansion of the CNNC becomes necessary. It is anticipated that cemetery expansion construction at the Site would begin in approximately 2050. Future gravesite expansion onto the Site would be designed to be similar in appearance to the existing grounds of the CNNC. The majority of the Site would be developed with the expanded cemetery except for the 2.5-acre wooded sinkhole area in the southern portion of the Site. VA estimates the cemetery expansion at the Site would provide 20 to 30 years of additional burial capacity, through approximately 2070 to 2080.
- **No Action Alternative:** Under the No Action Alternative, the Proposed Action would not be implemented. Veterans and their families residing in central Kentucky would continue to use the CNNC until burial space is no longer available. In the future, VA would likely seek additional land to expand the CNNC, but may not be able to acquire land contiguous with the existing CNNC. If no adjacent land were to be available, VA would be required to create a discontiguous cemetery annex or a new national cemetery in the region to serve area Veterans and their families. The Site would likely remain vacant, unimproved land for the foreseeable future.

The No Action Alternative would not ensure VA has sufficient capacity at CNNC to meet the long-term interment needs of Veterans and their families in central Kentucky, and thus, would not meet the purpose of or need for the Proposed Action. However, the No Action Alternative was retained to provide a benchmark for comparing potential impacts of the Proposed Action, as required under the CEQ regulations.

Affected Environment and Environmental Consequences

The affected environment of the Site and its immediate surroundings, or the region of influence of the Proposed Action, is discussed in Section 3 of this EA.

The two considered alternatives, the Proposed Action and the No Action Alternative, are evaluated in this EA to determine their potential direct or indirect impact(s) on the physical, environmental, cultural, and socioeconomic aspects of the Proposed Action's region of influence.

Technical areas evaluated in this EA include:

- *Aesthetics*
- *Air Quality*
- *Cultural Resources*
- *Geology, Topography, and Soils*
- *Socioeconomics*
- *Community Services*
- *Solid Waste and Hazardous Materials*
- *Transportation and Parking*

- *Hydrology and Water Quality*
- *Wildlife and Habitat*
- *Noise*
- *Land Use*
- *Floodplains, Wetlands, and Coastal Zone Management*
- *Utilities*
- *Environmental Justice*
- *Cumulative Impacts*
- *Potential for Generating Substantial Controversy*

Potential Effects of the Proposed Action

The Proposed Action would result in the impacts identified throughout Section 3 and summarized in the table below. These include potential short-term and/or long-term adverse impacts to aesthetics, air quality, geology and soils, hydrology and water quality, wildlife and habitat, noise, solid waste and hazardous materials, transportation, and utilities. All of these potential impacts are less than significant and would be further reduced through careful implementation of the general best management practices (BMPs); management, minimization, and avoidance measures; and compliance with regulatory requirements, as identified in Section 4.

The Proposed Action would enable VA to provide national cemetery burial benefits to the regional Veteran community after the existing CNNC interment space is depleted, a significant beneficial socioeconomic effect.

Potential Effects of the No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented. No beneficial impacts attributable to the Proposed Action would occur. Veterans and their families residing in central Kentucky would continue to use the CNNC until space is no longer available. Once CNNC reaches capacity, Veterans and their families in the region would be required to travel much longer distances to the nearest national cemetery for burial and subsequent visits, at increased cost and time.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Aesthetics	**No impact from Site acquisition and holding of the Site as undeveloped land. Minor short-term direct adverse impacts and no/negligible long-term impacts from future cemetery development**. Minor short-term direct adverse visual impacts during cemetery construction (heavy machinery, land disturbance, and dust). No/negligible long-term aesthetic impacts. Cemetery would be designed in harmony with the natural topography and features and would have low visual impact, consistent with the current CNNC and compatible with other surrounding land uses.	No impact.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Air Quality	**No impact from Site acquisition and holding of the Site as undeveloped land. Minor short-term and long-term, direct adverse impacts from future cemetery development.** Minor short-term direct adverse impact due to construction (dust, particulate matter, and equipment emissions) managed through BMPs. Very minor local long-term direct adverse impacts due to vehicle emissions from visitors to the cemetery.	No impact.
Cultural Resources	**No impact.** VA completed NHPA Section 106 consultation with a finding of no adverse effect to historic properties.	No impact.
Geology and Soils	**No impact from Site acquisition and holding of the Site as undeveloped land. Minor short-term and negligible long-term, direct adverse impacts from future cemetery development.** Minor short-term direct adverse soil erosion and sediment impacts during cemetery construction managed through BMPs. Negligible long-term direct adverse impacts to prime farmland soils being permanently converted to non-agricultural uses.	No impact.
Hydrology and Water Quality	**No impact from Site acquisition and holding of the Site as undeveloped land. Minor short-term direct adverse impacts from future cemetery development.** Minor short-term direct adverse stormwater runoff impacts during cemetery construction managed through BMPs. Cemetery would be designed in harmony with the current drainage patterns and would include on-site stormwater retention with no/negligible long-term water quality impact.	No impact.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Wildlife and Habitat	**No impact from Site acquisition and holding of the Site as undeveloped land. Minor short-term direct adverse impacts from future cemetery development.** Minor potential short-term adverse impact during construction. Site provides potential summer/fall roosting habitat for federally-listed Indiana and northern long-eared bats. It is anticipated that tree clearing would be conducted between October 1 and March 31, outside of the bat roosting season. If tree clearing cannot be conducted outside of the bat roosting season, a summer presence/absence survey would be conducted to confirm protected bats are not present prior to tree clearing. VA would re-evaluate the potential for protected species at the Site during the future cemetery expansion design and would coordinate and consult with USFWS and KDFR prior to cemetery construction, as necessary.	No impact.
Noise	**No impact from Site acquisition and holding of the Site as undeveloped land. Minor short-term and long-term, direct adverse impacts from future cemetery development.** Minor short-term direct adverse heavy equipment noise impacts and materials transportation noise impacts during cemetery development controlled through construction BMPs. Negligible to minor long-term operational direct adverse noise impacts associated with occasional heavy equipment use and ceremonial rifle fire (approximately 4 to 5 times per day) during weekday business hours, similar to existing CNNC operational noise.	No impact.
Land Use	**No impact from Site acquisition and holding of the Site as undeveloped land. Negligible long-term, direct adverse impacts from future cemetery development.** Negligible long-term direct adverse impact as a result of the Site's conversion from undeveloped land into a cemetery. Cemetery would be consistent with adjacent CNNC development and compatible with surrounding land use.	No impact.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Floodplains, Wetlands, and Coastal Zone Management	**No impact.** No wetlands or floodplains are located on the Site or adjacent properties. Kentucky does not have any designated coastal zones.	No impact.
Socioeconomics	**No impact from Site acquisition and holding of the Site as undeveloped land. Minor short-term beneficial and significant long-term beneficial impacts from future cemetery development.** Minor short-term indirect beneficial impacts to the local economy as a result of temporary construction jobs. Significant long-term direct beneficial impact by providing a regionally proximate national cemetery for central Kentucky area Veterans and their families once the existing CNNC reaches its burial capacity.	Inadequate VA cemetery options – long-term direct adverse impact to local Veterans and their families.
Community Services	**No/negligible impact.** Proposed cemetery would put minimal additional load on the local police department and other community services.	No impact.
Solid and Hazardous Materials	**No impact from Site acquisition and holding of the Site as undeveloped land. Minor short-term and long-term, direct adverse impact from future cemetery development.** Potential minor short-term and long-term direct adverse impacts from petroleum/hazardous substance storage and handling during cemetery construction and operation managed through standard BMPs.	No impact.
Transportation and Parking	**No impact from Site acquisition and holding of the Site as undeveloped land. Minor short-term and long-term, direct adverse transportation impacts from future cemetery development.** Minor short-term direct adverse impacts associated with cemetery construction traffic on local roads. Minor long-term traffic impacts associated with cemetery operation. Burial traffic would remain at current levels as the rate of burials is anticipated to remain the same. The expanded cemetery could result in a minor increase in visitors. No parking impact; the proposed cemetery would include adequate on-site parking.	No impact.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Utilities	**No impact from Site acquisition and holding of the Site as undeveloped land. Minor short-term and long-term, direct adverse impacts from future cemetery development.** Negligible short-term local utility impacts; utilities needed by the expanded cemetery are already located on the adjacent CNNC. No additional connections to distant lines are required. Minor potential long-term direct adverse utility impact associated with the potential use of municipal water for expanded cemetery irrigation. VA would coordinate with the City of Nicholasville during the cemetery design to determine if the municipal water system has sufficient capacity to provide irrigation water for the cemetery. The cemetery may also use an irrigation well and/or water collected in storm water retention ponds for irrigation. Utility availability and connections would be determined during the cemetery design.	No impact.
Environmental Justice	**No/negligible impact.** The Site is not located in an area with a larger than average low-income or high minority population.	Regional low-income Veterans and their families would have to travel to a more distant national cemetery at increased cost, a minor long-term adverse impact.

Cumulative Impacts

This EA also examines the potential cumulative effects of implementing each of the considered alternatives. This analysis finds that the Proposed Action, with the implementation of the BMPs; management, minimization, and avoidance measures; and regulatory compliance measures specified in this EA, would not result in significant adverse cumulative impacts to onsite or regional, natural, or cultural resources, and would maintain or enhance the socioeconomic environment of the area through the long-term provision of required national cemetery facilities for regional Veterans and their families. The No Action Alternative would not produce these potential beneficial socioeconomic gains.

Agency and Public Involvement

Agencies and organizations consulted for this EA include:

- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers

- U.S. Department of Agriculture Natural Resource Conservation Service
- Kentucky Energy and Environment Cabinet (various divisions/departments)
- Kentucky Department of Fish & Wildlife Resources
- Kentucky Heritage Council (State Historic Preservation Office (KY SHPO))
- Kentucky Transportation Cabinet
- Jessamine County Planning and Zoning Department
- Jessamine County Road Department
- Nicholasville/Jessamine County Parks and Recreation
- Jessamine County Historical Society
- Camp Nelson National Monument (National Park Service (NPS))
- The Camp Nelson Restoration and Preservation Foundation

VA initiated the NEPA scoping process with these agencies and organizations in February 2022, which included emailing the agencies/organizations scoping letters with a request for information and comment based on the available information regarding the Site and the Proposed Action. VA did not receive any responses to the NEPA scoping requests.

In March 2022, VA initiated National Historic Preservation Act (NHPA) Section 106 consultation with the Advisory Council on Historic Preservation (ACHP), KY SHPO, Camp Nelson National Monument (NPS), Jessamine County Historical Society, Jessamine County Planning and Zoning Department, The Camp Nelson Restoration and Preservation Foundation, and two federally recognized Indian tribes with possible geographic or cultural affiliation with the Site area (The Cherokee Nation and The Eastern Band of Cherokee Indians). The Section 106 consultation letters included a description of VA's proposed undertaking (Proposed Action), the definition of the area of potential effects (APE), identification of historic properties (i.e., the results of the 2021 Initial Cultural Resource Impact Prediction), and VA's finding of effects on historic properties (no historic properties affected). VA invited the agencies, organizations, and Indian tribes to provide input regarding the Proposed Action.

In April 2022, KY SHPO responded that while most of the Site had been previously surveyed for archaeological sites, the southern portion of the project area had not been surveyed. KY SHPO recommended an archaeological survey be conducted on the portion of the Site that had not been previously surveyed (approximately four acres). KY SHPO also requested a more in-depth report that evaluates the possible effects on above ground resources. In May 2022, NPS responded they were interested in consulting on the undertaking during the development of conceptual plans for the expansion, including the identification of how oversized equipment would access the Site during construction. No other agencies, organizations, or Indian tribes have responded or elected to participate in the Section 106 consultation process.

In November 2022, a Phase I Archaeological Survey was conducted for the southern portion of the Site that had not previously been surveyed. No archaeological sites were found. In May 2023, an Architectural Resources Report was prepared that documents the above ground resources in the Site area and the potential effects of the undertaking on these resources. The report found that the undertaking would have no adverse effect on historic properties.

In June 2023, VA provided the requested archaeological survey and architectural resources report to KY SHPO and NPS and again requested concurrence on a finding of no adverse effect to historic properties. On June 28, 2023, NPS concurred with VA's finding of no adverse effect to historic properties. On June 29, 2023, the KY SHPO requested copies of any other consulting parties' comments regarding the undertaking received by VA and requested that VA resubmit the architectural resources report with archaeological information and mapping removed. KY SHPO stated that they would provide a single letter with combined architectural and archaeological comments upon receipt of the requested information. VA

submitted the requested information and revised report to KY SHPO on July 17, 2023. VA did not receive a response to its July 17, 2023 submission to KY SHPO before the close of the 30-day review period. As the KY SHPO did not provide a response and no consulting party objected within the 30-day review period, VA is opting to proceed with implementation of the undertaking in accordance with the finding as documented, pursuant to 36 CFR 800.5(c)(1). On August 22, 2023, after the close of the 30-day review period, KY SHPO provided a response to VA via email concurring with VA's finding of no adverse effect on the condition that impacts to the stone fence will be avoided and consultation on design will occur at multiple stages during the design phase. As proposed in the revised reports submitted on July 17, 2023, NCA will share plans for the cemetery at approximately the 30%, 60%, and 90% design stages with the KY SHPO and any other consulting parties that request to see them, for review and comment, to ensure that the fence is not adversely affected and to avoid temporary adverse effects to historic properties during construction (e.g., finding a route for construction vehicles to access the property when implementing the undertaking that will avoid impacts to the monument and national cemetery). NCA will take any timely comments received into consideration in finalizing the plans.

Section 106 agency and tribal information and comments have been incorporated in this EA (Section 3.4) and are summarized in Section 6. Section 106 correspondence is provided in Appendix C.

VA published and distributed the Draft EA for a 30-day public comment period, as announced by a Notice of Availability (NOA) published in the Lexington Herald-Leader, a local newspaper of general circulation, on September 6 and 10, 2023. Copies of the Draft EA were made available for public review at the Jessamine County Public Library located at 600 S. Main Street in Nicholasville, Kentucky, the CNNC Administrative Building, and on the VA Office of Construction and Facilities Management Environmental Program website: (https://www.cfm.va.gov/environmental/index.asp). VA also emailed notification of the Draft EA for review and comment, with a link to the Draft EA on VA's website, to each of the government agencies, organizations, and Indian tribes that were contacted during the NEPA scoping and Section 106 consultation. The Kentucky Heritage Council responded that they had no comments on the Draft EA. VA did not receive other government agency, Indian tribe, or public comments regarding the Draft EA.

Conclusions

This EA concludes there would be no significant adverse impact, either individually or cumulatively, to the human environment associated with the Proposed Action, provided the management, minimization, avoidance, and regulatory compliance measures described in this EA are implemented.

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ACRONYMS AND ABBREVIATIONS

AADT	annual average daily traffic
ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
BGEPA	Bald and Golden Eagle Protection Act
BGCAP	Blue Grass Community Partnership
bgs	below ground surface
BMPs	best management practices
CAA	Clean Air Act
CFR	Code of Federal Regulations
CNNC	Camp Nelson National Cemetery
CRS	Cultural Resources Survey
CWA	Clean Water Act
CZMP	Coastal Zone Management Program
dBA	decibels, A-weighted scale
DAQ	Division for Air Quality
DOW	Division of Water
E&S	Erosion and Sedimentation
EA	Environmental Assessment
EISA	Energy Independence and Security Act
EJSCREEN	Environmental Justice Screening and Mapping Tool
EO	Executive Order
ERG	Environmental Research Group, LLC
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
GHG	greenhouse gas
ICRIP	Initial Cultural Resources Impact Prediction
IPaC	Information for Planning and Consultation
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
JCCP	Joint County Comprehensive Plan
KDEP	Kentucky Department for Environmental Protection
KDFWR	Kentucky Department of Fish & Wildlife Resources
KEEC	Kentucky Energy and Environment Cabinet
KYTC	Kentucky Transportation Cabinet
LOS	level of service
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NCA	National Cemetery Administration
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service

NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
OKNP	Office of Kentucky Nature Preserves
OSHA	Occupational Safety and Health Administration
Phase I ESA	Phase I Environmental Site Assessment
RCRA	Resource Conservation and Recovery Act
RECs	recognized environmental conditions
ROW10	Row 10 Historic Preservation Solutions
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SWPPP	Storm Water Pollution Prevention Plan
TMDLs	total maximum daily loads
TTL	TTL Associates, Inc.
U.S.	United States
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VA	Department of Veterans Affairs
WQSs	Water Quality Standards

1.0 INTRODUCTION, INCLUDING PURPOSE OF AND NEED FOR THE ACTION

1.1 Introduction

This Environmental Assessment (EA) has been prepared as required in accordance with the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code 4321 et seq.), the President's Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), *Environmental Effects of the Department of Veterans Affairs Actions* (38 CFR Part 26), and VA's *NEPA Interim Guidance for Projects* (U.S. Department of Veterans Affairs 2010). Federal agencies are required to consider the environmental and related social and economic effects of their proposed actions. This EA is required to determine if VA's Proposed Action would have significant environmental impacts.

This EA has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic effects associated with VA's proposed acquisition of approximately 18.7 acres of vacant, unimproved land (Site) adjacent to the existing Camp Nelson National Cemetery (CNNC), located at 6980 Danville Road (US Route 27) near Nicholasville in Jessamine County, Kentucky, for the future expansion of the cemetery. The VA National Cemetery Administration (NCA) operates CNNC. Jessamine County currently owns the Site and has offered to sell the property to VA for the expansion of the cemetery.

VA intends to acquire the Site in 2023, while available, and would leave it undeveloped until needed for the expanded cemetery (approximately 25 to 30 years). At that time, and as part of the cemetery design process, VA will perform a supplemental NEPA analysis to reanalyze and reevaluate the potential effects of the construction and operation of the expanded cemetery at the Site.

This approach is fully consistent with the NEPA and CEQ Regulations. In cases such as these, the CEQ Regulations establish and recommend a "tiered" approach to the environmental impact analysis process: "Agencies are encouraged to tier their environmental (documents)…to focus on the actual issues ripe for decision at each level of environmental review. Tiering may also be appropriate for different stages of actions" (40 CFR Part 1502.20). These regulations specify that such potentialities (i.e., the ultimate construction and operation of the expanded cemetery) should be introduced, but can be deferred to future analyses and documentation when they have "ripened," or when more complete information becomes available.

As such, this EA assesses the potential effects of acquiring the Site for the ultimate expansion of the CNNC, and preliminarily assesses the effects of the future proposed construction and operation of the cemetery on the Site. Potential effects of the construction and operation of the proposed expanded cemetery on the Site will be reanalyzed and reevaluated in a supplemental NEPA analysis concurrent with site design, when the expansion of the CNNC becomes necessary. VA will incorporate the management, minimization, and avoidance measures identified in this EA into that future design process and supplemental NEPA analysis to minimize potential adverse environmental effects.

In accordance with the cited regulations, this EA allows for public input into the federal decision-making process; provides federal decision-makers with an understanding of potential environmental effects of their decisions, before making these decisions; identifies measures the federal decision-maker could implement to reduce potential environmental effects; and documents the NEPA process.

1.2 Background

CNNC is located approximately 18 miles south of the center of the City of Lexington in an unincorporated area of Jessamine County, Kentucky.

Camp Nelson was established in 1863 and had an important role in supplying the U.S. Army, caring for the sick and wounded, and acting as an enlistment station for black American soldiers during the Civil War. The post contained numerous shops for blacksmith work and the construction of wagons and ambulances, as well as buildings for storing supplies and artillery equipment. Camp Nelson included barracks, headquarters buildings, and a 700-bed hospital. At its peak (1865), Camp Nelson encompassed approximately 4,000 acres organized around an approximately 800-acre core.

CNNC was constructed in the southern portion of Camp Nelson in 1863 and was designated as a national cemetery in 1866. According the cemetery records, approximately 1,180 men were buried at the cemetery by February 1866. By the early 2000s, CNNC had been expanded to approximately 30 acres. The original section of the cemetery is enclosed by a stone wall and features a fully restored superintendent's lodge built in 1870. CNNC was placed on the National Register of Historic Places (NRHP) in 1998.

The grounds of Camp Nelson were formerly part of Camp Nelson Civil War Heritage Park, controlled by Jessamine County. In 2013, the grounds of Camp Nelson were declared a National Landmark and were listed on the NRHP. In 2018, Camp Nelson National Monument was created, transferring ownership and management of the grounds to the National Park Service. However, some of the land associated with the former heritage park, including the 18.7-acre Site, remains owned by Jessamine County.

In 2010, VA completed an EA for the acquisition of an approximately 21.6-acre, L-shaped parcel of land, located adjacent to the north of the 30-acre CNNC from Jessamine County for the expansion of the cemetery. The Finding of No Significant Impact (FONSI) was signed in July 2010. VA acquired the 21.6-acre parcel in 2011 and began construction of the cemetery expansion on the southern approximately 11 acres of the 21.6-acre parcel in 2021. NCA anticipates the current expansion will provide approximately 15 years of additional burial capacity (first interment burial capacity through approximately 2035). The cemetery master plan has not been completed for the northern portion of the 21.6-acre parcel; however, VA anticipates it would be developed after the current expansion phase and would provide burial space through approximately 2050.

Although the current CNNC properties provide adequate space for burials until approximately 2050, additional land will be needed in the future to continue to provide national cemetery burial benefits to Veterans and their families in the central Kentucky area once the current CNNC properties have reached their maximum capacity. Jessamine County has offered to transfer the approximately 18.7-acre Site to VA for future cemetery expansion. VA would acquire the Site in 2023, while available.

The Site consists of one parcel of vacant, unimproved land. The northern portion of the Site has been fenced agricultural/pasture land since at least 1950. The southern portion of the Site has been unimproved grassy land with a wooded area surrounding an approximately 2.5-acre sinkhole since at least 1950.

Figures 1-1 through 1-4 depict the locations of the CNNC, the 2011 cemetery addition, the 2021/2 cemetery expansion area, and the proposed 18.7-acre cemetery expansion Site.

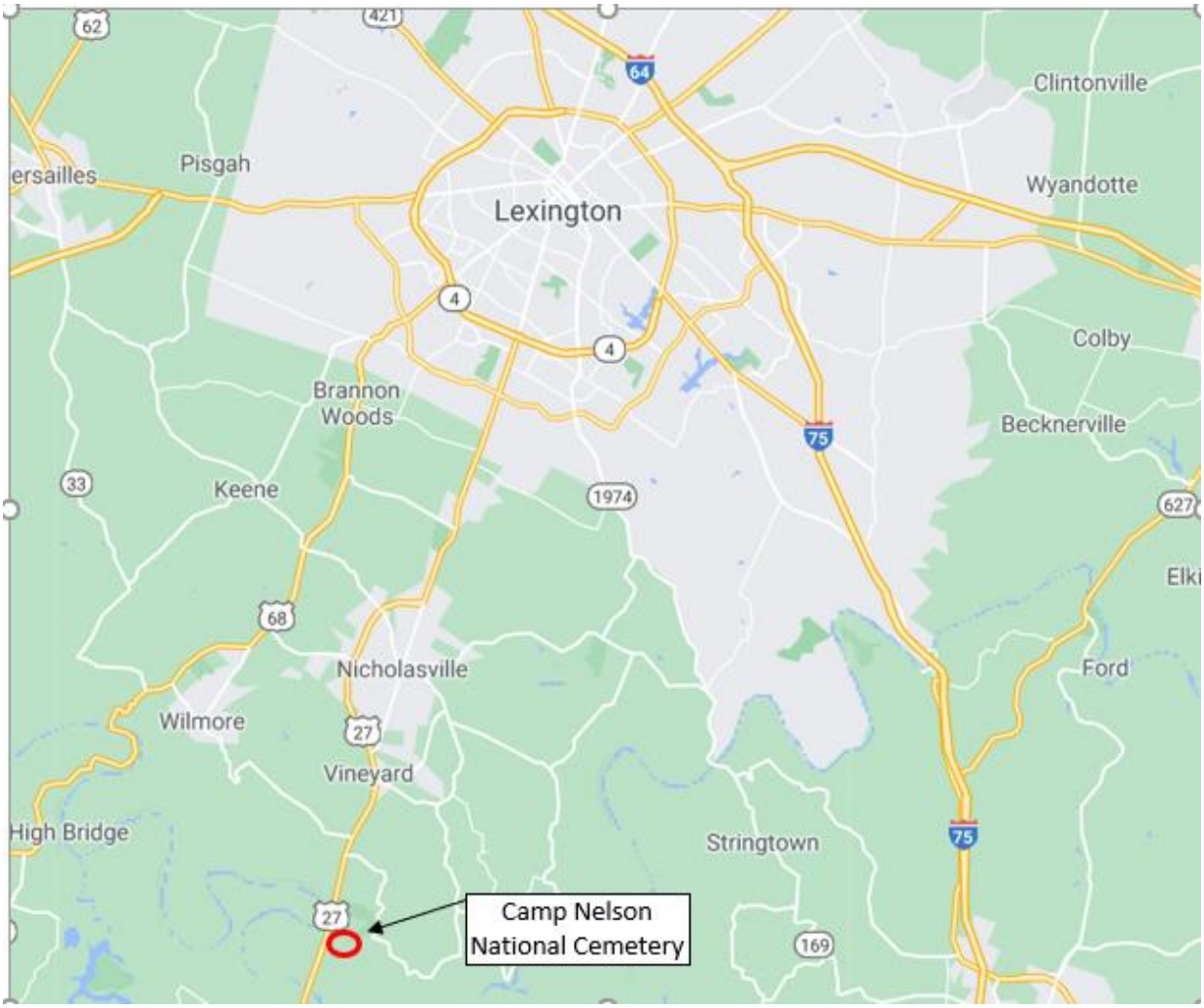

Figure 1-1 Vicinity Location Map

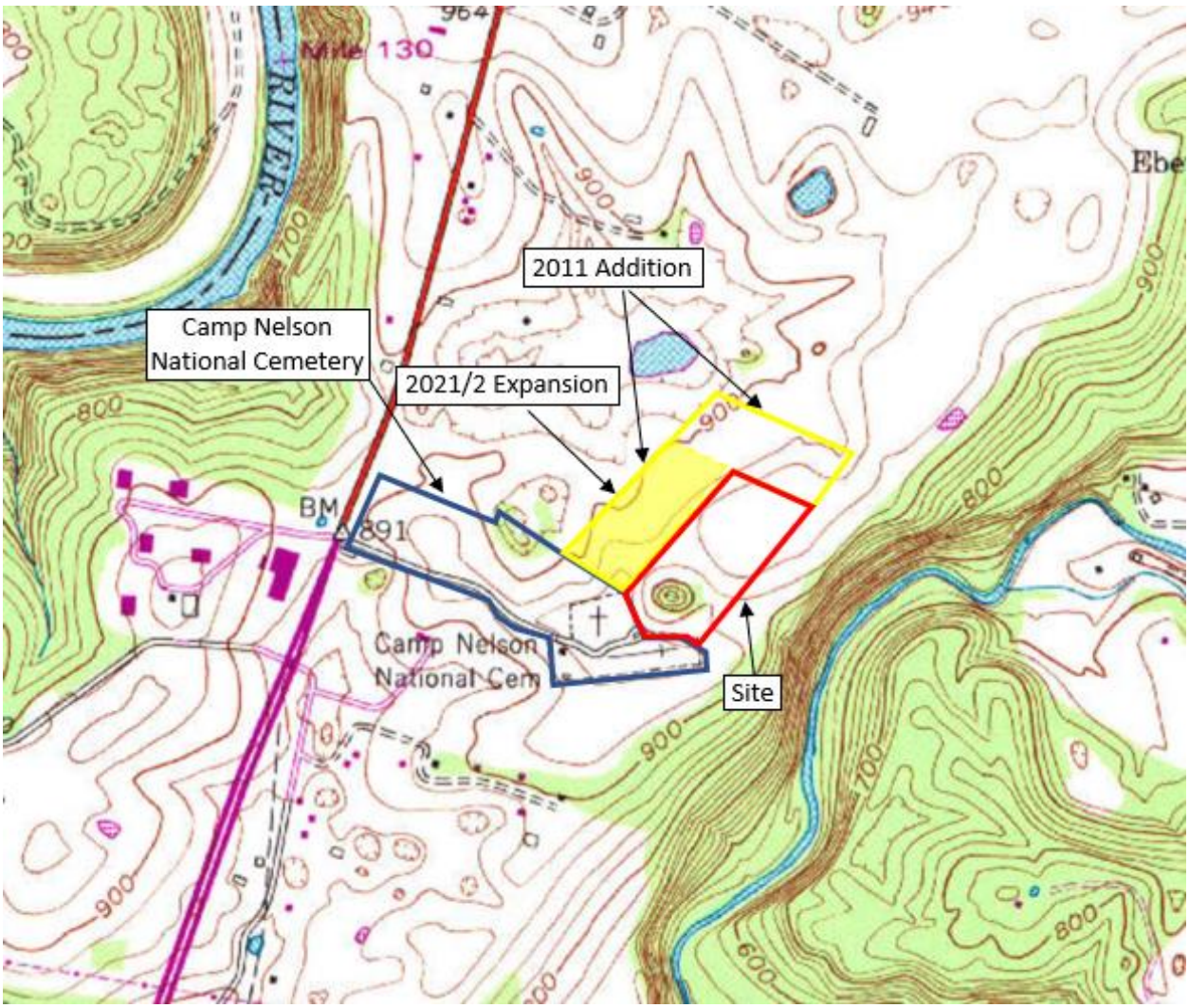

Figure 1-2 Topographic Location Map

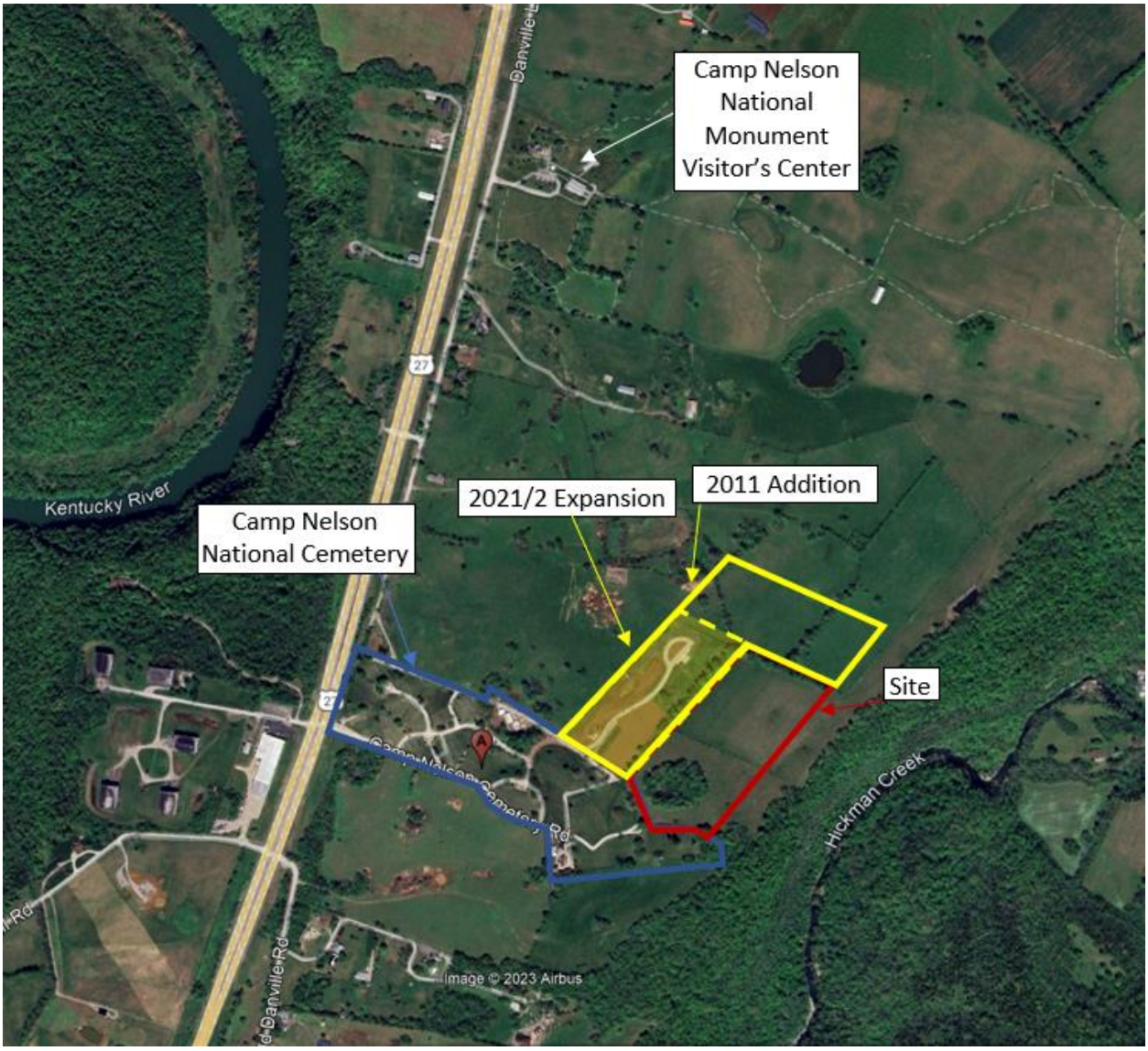

Figure 1-3 Aerial Vicinity Map

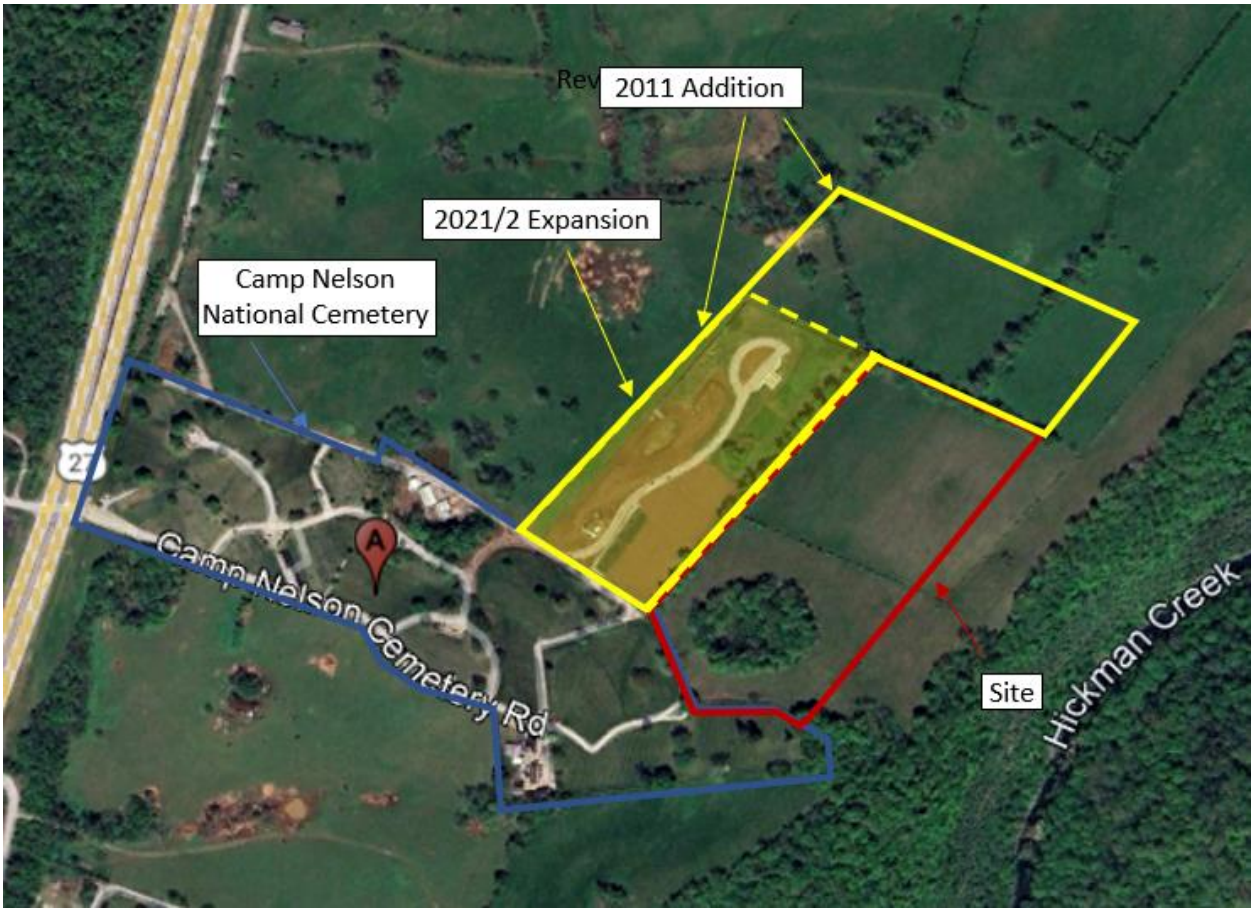

Figure 1-4 Aerial Location Map

1.3 Purpose and Need

The purpose of the Proposed Action is to acquire land for CNNC use, including future burial and facility expansions, to serve the interment needs of Veterans and their eligible family members in central Kentucky after the current burial space at CNNC is depleted.

A larger, expanded CNNC is needed to continue providing national cemetery burial benefits to the regional Veteran community. VA estimates that the 2021/2 CNNC cemetery expansion area will provide adequate space for burials until approximately 2035 and the remainder of the existing CNNC properties will provide adequate burial space for approximately 15 additional years. However, additional land would be needed in the future once the current CNNC properties reach their maximum capacity.

One of the primary objectives of the VA burial program is to ensure that the burial needs of Veterans and eligible family members are met. NCA further defines this objective on the assumption that the burial needs of a Veteran are met if they have reasonable access to a burial option (whether for caskets, remains, or cremated remains, either in-ground or in a columbarium) in a national or state Veterans cemetery within 75 miles of the Veteran's place of residence.

The Proposed Action would provide VA additional capacity needed to meet its burial objectives for eligible Veterans in central Kentucky. CNNC is located approximately 18 miles south of the center of the City of Lexington, the primary population center in central Kentucky. The nearest other national cemeteries that are open for burials are Lebanon National Cemetery in Lebanon, Kentucky (approximately 40 miles

southwest of CNNC) and Mills Springs National Cemetery in Nancy, Kentucky (approximately 50 miles south of CNNC).

1.4 Decision-Making

This EA has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic effects associated with VA's proposed acquisition of approximately 18.7 acres of land for the future expansion of CNNC. This EA evaluates the potential effects of acquiring the Site for the ultimate expansion of CNNC, and preliminarily assesses the effects of the future construction and operation of the expanded cemetery on the Site. In the future, supplemental NEPA analyses will be conducted for the construction and operation of the expanded cemetery at the Site, concurrent with cemetery design.

Under NEPA, VA is required to incorporate environmental considerations into their decision-making process for the actions they propose to undertake. This is done in accordance with the regulations identified in Section 1.1.

The analysis presented in this EA regarding the potential physical, environmental, cultural, and socioeconomic effects is part of the VA decision making process for consideration of the Proposed Action, and, as appropriate, implementation of any management and mitigation measures to reduce potential effects to the environment.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction

This Section provides information regarding the Proposed Action and its alternatives, including those that VA initially considered, but eliminated, and the reasons for eliminating them. The screening criteria and the process developed and applied by VA to refine the number of reasonable alternatives is described to provide an understanding of VA's rationale in analyzing the Proposed Action and the No Action Alternative in this EA.

2.2 Proposed Action

The Proposed Action is to acquire approximately 18.7 acres of vacant, unimproved land located northerly adjacent to the current CNNC for the future expansion of the cemetery. VA intends to acquire the Site in 2023, while available, and would leave it undeveloped until needed for the expanded cemetery.

VA estimates that the current CNNC properties, totaling approximately 52 acres, contain adequate space for burials for approximately 30 years. It is anticipated that cemetery expansion construction at the Site would begin in approximately 2050. Design details of the proposed cemetery expansion at the Site do not exist at this time; however future gravesite expansion onto the Site would be designed to be similar in appearance to the existing grounds of the CNNC.

VA would follow the NCA *Facilities Design Guide* for the CNNC expansion design. The proposed CNNC expansion would generally include the following components:

- Extension of a road from the developed portion of the CNNC into the future expansion area. The road would be approximately 28 feet wide and would wind throughout the cemetery in harmony with the natural grade and environmental features of the land. Roadways would loop back around the property to maintain a complete, simple traffic pattern around the cemetery. All of the roads would have a posted speed limit of 15 miles per hour.
- Existing committal shelters at the CNNC would continue to be utilized for ceremonies (there are no grave-side ceremonies at national cemeteries). However, an additional committal structure may be constructed on the Site. The shelter would be located where there are scenic views, maximum weather protection, and minimal potential for noise disruption.
- The acquired land would likely be developed in two phases. Each phase would develop with enough gravesites and columbarium niches as needed to accommodate approximately 10 to 15 years of burial demand. Cremation sites, casket gravesites, and columbaria would be developed in each phase.
- Environmentally constrained areas and areas that are difficult to develop (i.e., the wooded sinkhole area in the southern portion of the Site) would be left undeveloped and remain as scenic locations at the cemetery. The utilized portions of the Site would be developed to within 20 feet of the Site boundaries.
- The standard for NCA design is to achieve on-site cut-and-fill soil balance as much as practical. The proposed development would primarily be located in relatively level areas, following natural contours to the extent possible. Areas may be minimally leveled to develop a consistent grade with each phase. The development would include the installation of gravesites, which would consist of a gravel base, drainage piping, and a pre-placed concrete vault/crypt system. Approximately 20-22 inches of soil would be placed on top of each vault/crypt. This design would provide the most space-efficient option. Each gravesite would be marked with a small, upright marble headstone.

- Utilities, including irrigation water and electricity, and other supporting infrastructure would be extended throughout the Site, as required.

Prior to construction, VA would obtain all applicable, required federal, state, and local permits for the proposed cemetery development from appropriate government authorities. VA would avoid significant on-site environmental resources through sensitive site design, including avoidance of cultural and sensitive natural resources.

2.3 Alternatives Development

NEPA, CEQ Regulations, and 38 CFR Part 26 require reasonable alternatives to be explored and objectively evaluated. Alternatives that are eliminated from the detailed study must be identified along with a brief discussion of the reasons for eliminating them. For purposes of analysis, an alternative was considered "reasonable" only if it would enable VA to accomplish the primary mission of providing a suitable expanded cemetery site that meets the purpose of and need for the Proposed Action, including availability at a price consistent with the fair market value based on an independent appraisal, or donation. "Unreasonable" alternatives would not enable VA to meet the purpose of and need for the Proposed Action.

Although VA estimates the current CNNC properties contain adequate space for burials for approximately 30 years, additional land, preferably adjacent to the existing CNNC, will be needed to meet the interment needs of regional Veterans and their families in the future. NCA considers adjacent/contiguous property to be the first and best option for cemetery expansion. National cemetery expansion onto adjacent land is the most cost-effective and operationally efficient manner to expand an existing national cemetery. Doing so promotes efficiencies and allows the new gravesite areas to be operated by the same staff that operates the existing grounds, with no need for remote staff, remote buildings, and remote equipment. It also eliminates potential visitor directional and wayfinding confusion that can occur with a remotely located property. Additionally, the regional Veteran community typically strongly prefers and supports the expansion of existing national cemeteries onto adjacent/contiguous property rather than developing a new national cemetery elsewhere on remote "annex" land.

The current Site owner, Jessamine County, has offered to sell the property to VA. After evaluating the opportunity to acquire additional land adjacent to CNNC for future expansion, VA concluded that acquiring the Site in the short-term, while available, would secure the land necessary for its long-term cemetery needs. No other sites adjacent to CNNC were offered to VA or identified as available for acquisition. Therefore, no other sites were considered.

2.4 Alternatives Evaluated in this EA

This EA examines in-depth two alternatives, the Proposed Action and the No Action Alternative.

2.4.1 Proposed Action

VA would acquire approximately 18.7 acres of vacant, unimproved land contiguous to the north of the CNNC for the future expansion of CNNC. After the acquisition, the Site would remain unimproved land until such date when the expansion of the CNNC becomes necessary. It is anticipated that cemetery expansion construction at the Site would begin in approximately 2050. The Proposed Action would be implemented as described in Section 2.2. The majority of the Site would be developed with the expanded cemetery except for the 2.5-acre wooded sinkhole area in the southern portion of the Site. VA estimates the cemetery expansion at the Site would provide 20 to 30 years of additional burial capacity, through approximately 2070 to 2080.

2.4.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented. Veterans and their families residing in central Kentucky would continue to use the existing CNNC until burial space is no longer available. In the future, VA would likely seek additional land to expand the CNNC, but may not be able to acquire land contiguous with the existing CNNC. If no adjacent land were to be available, VA would be required to create a discontiguous cemetery annex or a new national cemetery in the region to serve area Veterans and their families. The Site would likely remain vacant, unimproved land.

The No Action Alternative would not ensure VA has sufficient capacity at CNNC to meet the long-term interment needs of Veterans and their families in central Kentucky, and thus, would not meet the purpose of or need for the Proposed Action. However, the No Action Alternative was retained to provide a benchmark for comparing potential impacts of the Proposed Action, as required under the CEQ regulations.

2.5 Alternatives Eliminated from Further Consideration

As described in Section 2.3, VA was presented with the opportunity to acquire the approximately 18.7-acre Site located adjacent to the north of CNNC for future expansion of the cemetery. VA concluded that acquiring the Site in the short-term, while available, would secure the land necessary to meet its long-term cemetery needs. No other land adjacent to the CNNC was offered to VA or identified as available for acquisition.

3.0 AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This Section describes the baseline (existing) physical, environmental, cultural, and socioeconomic conditions of the proposed 18.7-acre CNNC expansion Site and its general vicinity (i.e., the Proposed Action's region of influence), with emphasis on those resources potentially affected by the Proposed Action. Appendix D contains photographs of the Site and the surrounding area. Under each resource area (Sections 3.3 through 3.17), the potential direct and indirect effects of the Proposed Action and the No Action Alternative are identified. Potential cumulative impacts are discussed in Section 3.18.

Resource areas considered in this EA are as follows:

- *Aesthetics*
- *Air Quality*
- *Cultural and Historic Resources*
- *Geology and Soils*
- *Hydrology and Water Quality*
- *Wildlife and Habitat*
- *Noise*
- *Land Use*
- *Floodplains, Wetlands, and Coastal Zone Management*
- *Socioeconomics*
- *Community Services*
- *Solid Waste and Hazardous Materials*
- *Traffic, Transportation, and Parking*
- *Utilities*
- *Environmental Justice*
- *Cumulative Impacts*
- *Potential for Generating Substantial Controversy*

3.2 Criteria for Analysis of Impacts

Each alternative was evaluated for its potential impacts on physical, biological, and socioeconomic resources in accordance with the CEQ regulations at 40 CFR 1508.8. The specific criteria for evaluating the potential environmental impacts of the Proposed Action and the No Action Alternative are described in the following sections. The significance of an action is also measured in terms of its context and intensity. The potential environmental impacts are described in terms of duration, whether they are direct or indirect, the magnitude of the impact, and whether they are adverse or beneficial, as summarized in the following paragraphs:

Short-term or long-term: In general, **short-term** impacts are those that would occur only with respect to a particular time-lined activity, for a finite period, or only during the time required for construction or installation activities. **Long-term** impacts are those that are more likely to be persistent and chronic.

Direct or indirect: A **direct** impact is caused by an action and occurs around the same time at or near the location of the action. An **indirect** impact is caused by an action and might occur later in time or be farther removed in distance but still be a reasonably foreseeable outcome of the action.

Less than significant (negligible, minor, moderate), or significant: These relative terms are used to characterize the magnitude or intensity of an impact. **Negligible** impacts are generally those that might be perceptible but are at the lower level of detection. A **minor** impact is slight but detectable. A **moderate** impact is readily apparent. **Significant** impacts are those that, in their context and due to their magnitude (severity), have the potential to meet the thresholds for significance outlined in the CEQ regulations (40 CFR 1508.27) and, thus, warrant heightened attention and examination for potential means for mitigation to fulfill the policies set forth in NEPA.

Adverse or beneficial: An **adverse** impact is one having unfavorable or undesirable outcomes on the man-made or natural environment. A **beneficial** impact is one having positive outcomes on the man-made or natural environment.

3.3 Aesthetics

The Site is situated in a rural area of open mostly unimproved agricultural/pastureland, residential land, and National Park Service (NPS) land located approximately seven miles south of the center of the City of Nicholasville in an unincorporated area of Jessamine County, Kentucky. The CNNC is accessed from U.S. Route 27/ Danville Road along the western portion of the cemetery, approximately 1,900 feet west of the Site.

The northern portion of the Site is fenced agricultural land. The southern portion of the Site is unimproved, mostly grassy land with an approximately 2.5-acre, up to 50 feet deep, wooded sinkhole. The Site generally slopes from a high area in the north-central portion of the property down to the west, south and southeast. The Site area has a general slope to the southeast towards Hickman Creek, which is located within a steeply sloping valley approximately 700 feet east of the Site. The Site and surrounding area features are depicted on Figures 1-2 through 1-4.

The existing developed portions of the CNNC are located directly south and southwest of the Site. The 21.6 acres of land acquired by VA in 2011 for the expansion of the CNNC are located directly west and north of the Site. The 2021/2 CNNC expansion area is located west of the Site; the CNNC land north of the Site remains undeveloped, mostly grassy land. The area east of the Site is unimproved grassy land. The top of the steep valley to Hickman Creek is located approximately 200 feet east of the Site. Areas west and north of current CNNC properties are mostly improved, grassy land that is part of Camp Nelson National Monument, managed by the NPS. The area south of the CNNC is mostly unimproved, grassy/agricultural land with a barn.

3.3.1 Effects of the Proposed Action

After VA's acquisition, the Site would remain in its current configuration, although current agricultural fields may become fallow, for approximately 25 to 30 years, when the land is needed for the future cemetery expansion. No new development or substantial change in land use are anticipated during this period. VA's acquisition of the Site and initial holding of the property Site prior to cemetery development would result in negligible aesthetic impacts.

Future development and operation of the expanded cemetery on the Site would produce visual changes, including the installation of the cemetery road, perimeter fencing, parking areas, maintained grassy burial areas, columbarium walls, and possibly a committal shelter. VA would design and develop the Site in concert with the Site's topography and natural features, with no major grading. It is anticipated that the majority of the Site would be developed for the cemetery, but the wooded sinkhole area would remain mostly undisturbed.

Given the low visual impact of the cemetery development, which would be designed in concert with the existing topography and landscape and would be largely consistent with the use of the surrounding lands, only minor impacts to aesthetics would occur.

3.3.2 Effects of the No Action Alternative

Under the No Action Alternative, no development or changes to the Site by VA would occur. The Site would likely remain unimproved, mostly agricultural and grassy land for the foreseeable future with no aesthetic impacts.

3.4 Air Quality

3.4.1 Ambient Air Quality

The ambient air quality in an area can be characterized in terms of whether or not it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act, as amended (CAA and CAAA) requires the U.S. Environmental Protection Agency (USEPA) to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS are provided for the principal pollutants, called “criteria pollutants”, which include carbon monoxide, lead, nitrogen oxides, ozone, particulate matter, and sulfur dioxide.

Areas are designated by the USEPA as “attainment”, “non-attainment”, “maintenance”, or “unclassified” with respect to the NAAQS. Regions in compliance with the standards are designated as “attainment” areas. In areas where the applicable NAAQS are not being met, a “non-attainment” status is designated. Areas that have been classified as "non-attainment," but are now in compliance can be re-designated "maintenance" status if the state completes an air quality planning process for the area.

The General Conformity Provision of the CAA, including the USEPA’s implementation mechanism, the General Conformity Rule, prohibits the federal government from conducting, supporting, or approving any actions that do not conform to a USEPA-approved State Implementation Plan (SIP). A SIP is a state's self-authored blueprint for achieving and maintaining compliance with the goals of the CAA. Federal actions with emissions clearly at or below de minimis levels listed in 40 CFR 93.153(b) are exempt from the General Conformity Regulations.

According to the USEPA Green Book website (June 2023), Jessamine County is designated as an area of full attainment that meets the national air quality standards for the NAAQS pollutants. Consequently, VA would not be subject to the General Conformity Provision of the CAA for the Proposed Action.

3.4.2 State and Local Regulations

The Kentucky Energy and Environment Cabinet (KEEC), Division for Air Quality (DAQ) coordinates air compliance and enforcement activities through Kentucky Administrative Regulations Title 401 Chapters 50 to 65. KEEC DAQ issues air quality construction and operating permits, enforces air quality regulations and permit conditions, and has jurisdiction over all of Kentucky except for Jefferson County which falls under the Louisville Metro Air Pollution Control District.

Jessamine County does not maintain an air quality ordinance.

3.4.3 Greenhouse Gases and Climate Change

In January 2023, CEQ released revised interim guidance for federal agencies on consideration of greenhouse gas (GHG) emissions and the effects of climate change in NEPA reviews, which describes how federal agencies should consider the effects of GHG emissions and climate change in their NEPA decision-making documents. The guidance indicates that federal agencies should consider both the potential effect of a proposed action on climate change, as indicated by its estimated GHG emissions, and the implications of climate change for the environmental effects of a proposed action. The guidance indicates that the agency analysis should be commensurate with the projected GHG emissions and climate impacts of the proposed action. The 2023 interim guidance does not include a threshold or screening level for GHG emission evaluations. CEQ’s December 2014 guidance recommended that agencies consider 25,000 metric tons of carbon dioxide equivalent emissions on an annual basis as a threshold for GHG emissions, below which quantitative analysis of GHG is not recommended.

3.4.4 Sensitive Receptors

CEQ's NEPA regulations require evaluation of the degree to which the proposed action affects public health. Sensitive receptors for air quality impacts include hospitals, schools, daycare facilities, elderly housing, convalescent facilities, and residences.

Sensitive air quality receptors within the vicinity of the Site include residences located approximately 1,500 feet south and approximately 1,700 feet east of the Site. No other sensitive air quality receptors are located within 2,000 feet of the Site. The primary use area of Camp Nelson National Monument (visitor center area) is located approximately 3,000 feet northwest of the Site.

3.4.5 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would have no air quality impacts.

Air emissions generated from the future cemetery development would be expected to have direct and indirect short-term and long-term minor adverse impacts to the existing air quality environment. Short-term direct increased air emission levels would occur during each phase of cemetery construction. Long-term direct and indirect emissions would occur during the operation of the cemetery as a result of cemetery operations and visitor vehicle emissions.

Construction activities would be performed in accordance with federal and state air quality requirements. Construction-related emissions are generally short-term, but may still have adverse impacts on air quality, primarily due to the production of dust. Dust can result from a variety of activities, including excavation, grading, and vehicle travel on paved and unpaved surfaces. Dust from construction can lead to adverse health effects and nuisance concerns, such as reduced visibility on nearby roadways. The amount of dust is dependent on the intensity of the activity, soil type and conditions, wind speed, and dust suppression activities used. Implementing dust control measures (BMPs) greatly reduces dust emissions from construction. Construction-related emissions also include the exhaust from the operation of construction equipment, including diesel particulate matter (DPM). The use of newer construction equipment with emissions controls and minimizing the time that the equipment is idling (BMPs) reduce construction equipment exhaust emissions. Construction workers daily commuting in their personal vehicles would also result in negligible increased criteria pollutant emissions. Implementation of BMPs, discussed in Section 4, would minimize these anticipated minor, short-term, construction-related, air quality impacts.

During future operation of the cemetery at the Site, there would be vehicular emissions associated with Site visits by Veterans and their families. However, burial traffic and cemetery visitors are already drawn to the Site area by the existing CNNC. VA does not expect an increase in the rate of interments and anticipates only a minor increase in cemetery visitors as a result of the cemetery expansion. Therefore, new vehicle traffic and vehicular air emissions associated with the operation of the expanded cemetery at the Site would be minor. Cemetery operational air emissions, associated with interments and grounds maintenance, would be negligible.

The Proposed Action would have a negligible contribution to long-term global climate change. Direct GHG emissions from the short-term use of vehicles and mechanical equipment during construction activities would cease after the construction has been completed. Indirect GHG emissions from the vehicle traffic to and from the cemetery are anticipated to be minor. GHG emissions as a result of Proposed Action construction and operational activities are anticipated to be well below the threshold of 25,000 metric tons of carbon dioxide annually.

3.4.6 Effects of the No Action Alternative

Under the No Action Alternative, no air quality impacts associated with VA's Proposed Action would result. The Site would likely remain unimproved land with no air quality impacts.

3.5 Cultural and Historic Resources

Cultural resources include both pre-contact and post-contact archaeological resources, as well as historic buildings and structures in the built environment. This impact analysis focuses on sites, districts, objects, buildings, and structures listed in, or eligible for nomination to, the National Register of Historic Places (NRHP), the regulations (36 CFR Part 800) for implementing Section 106 of the National Historic Preservation Act (NHPA) of 1966, and cultural items as defined in the Native American Graves Protection and Repatriation Act (NAGPRA).

The Site has been unimproved, vacant land since at least 1905. Since at least 1950, the northern portion of the Site has been fenced agricultural/pasture land and the southern portion of the Site has been grassy land with a wooded sinkhole.

Row 10 Historic Preservation Solutions (Row 10) completed an Initial Cultural Resources Impact Prediction (ICRIP) study for the Site on behalf of VA in 2021. The ICRIP study included records and literature search of the Kentucky Heritage Council (Kentucky State Historic Preservation Office or KY SHPO), National Historic Landmarks, and NRHP data, and a pedestrian survey of the Site by an architectural historian. The ICRIP report indicated no buildings are present at the Site, but the NRHP-listed Camp Nelson National Monument Historic District is located within the area of potential effects (APE) of the undertaking (Proposed Action). Camp Nelson National Monument is also a National Historic Landmark. The ICRIP report found that none of the contributing resources to the Camp Nelson National Monument Historic District, other than the CNNC, are located within the Site or APE; however, the Site was located within the boundaries of Camp Nelson during the Period of Significance (1853-1866). The NRHP-listed CNNC, also considered a contributing element to the Camp Nelson National Monument Historic District, is also located within the APE.

In March 2022, VA initiated NHPA Section 106 consultation with the Advisory Council on Historic Preservation (ACHP), KY SHPO, Camp Nelson National Monument (NPS), Jessamine County Historical Society, Jessamine County Planning and Zoning Department, The Camp Nelson Restoration and Preservation Foundation, and two federally recognized Indian tribes with possible geographic or cultural affiliation with the Site area (The Cherokee Nation and The Eastern Band of Cherokee Indians). The Section 106 consultation letters included a description of VA's proposed undertaking (Proposed Action), the definition of the APE, identification of historic properties (i.e., the results of the 2021 ICRIP study), and VA's finding of effects on historic properties (no historic properties affected).

In April 2022, KY SHPO responded that while most of the Site had been previously surveyed for archaeological sites, the southern portion of the project area had not been surveyed. KY SHPO recommended an archaeological survey be conducted on the portion of the Site that had not been previously surveyed (approximately four acres). KY SHPO also requested a more in-depth report that evaluates the possible effects on above ground resources. In May 2022, NPS responded they were interested in consulting on the undertaking during the development of conceptual plans for the expansion, including the identification of how oversized equipment would access the Site during construction. No other agencies, organizations, or Indian tribes have responded or elected to participate in the Section 106 consultation process.

In November 2022, Environmental Research Group, LLC (ERG) conducted a Phase I Archaeological Survey was for the southern portion of the Site that had not previously been surveyed. ERG investigated

the survey area by visual inspection, metal detection and ground truthing of metal detection targets, and judgmental shovel testing. No archaeological sites were found.

In May 2023, Row 10 prepared an Architectural Resources Report that documents the above ground resources in the Site area and the potential effects of the undertaking on these resources. The report found that the undertaking would have no adverse effect on historic properties.

In June 2023, VA provided the archaeological survey and architectural resources report to KY SHPO and NPS and again requested concurrence on a finding of no adverse effect to historic properties. In the documentation, VA also indicated that VA intends to avoid temporary adverse effects during future cemetery construction. VA plans to identify and utilize a route for construction vehicles to access the property that would avoid impacts to Camp Nelson National Monument and the CNNC. VA also plans to share future cemetery design information with KY SHPO, NPS and other interested consulting parties at the approximately 30%, 60% and 90% design stages for review and comment.

On June 28, 2023, NPS concurred with VA's finding of no adverse effect to historic properties. In their response, NPS reiterated its concern regarding construction vehicles crossing Camp Nelson National Monument grounds and requested that VA take practical efforts during design to minimize visual impacts of elements that can be easily seen from Camp Nelson National Monument.

On June 29, 2023, the KY SHPO requested copies of any other consulting parties' comments regarding the undertaking received by VA and requested that VA resubmit the architectural resources report with archaeological information and mapping removed. KY SHPO stated that they would provide a single letter with combined architectural and archaeological comments upon receipt of the requested information. VA submitted the requested information and revised report to KY SHPO on July 17, 2023. VA did not receive a response to its July 17, 2023 submission to KY SHPO before the close of the 30-day review period. As the KY SHPO did not provide a response and no consulting party objected within the 30-day review period, VA is opting to proceed with implementation of the undertaking in accordance with the finding as documented, pursuant to 36 CFR 800.5(c)(1). On August 22, 2023, after the close of the 30-day review period, KY SHPO provided a response to VA via email concurring with VA's finding of no adverse effect on the condition that impacts to the stone fence will be avoided and consultation on design will occur at multiple stages during the design phase. As proposed in the revised reports submitted on July 17, 2023, NCA will share plans for the cemetery at approximately the 30%, 60%, and 90% design stages with the KY SHPO and any other consulting parties that request to see them, for review and comment, to ensure that the fence is not adversely affected and to avoid temporary adverse effects to historic properties during construction (e.g., finding a route for construction vehicles to access the property when implementing the undertaking that will avoid impacts to the monument and national cemetery). NCA will take any timely comments received into consideration in finalizing the plans.

3.5.1 Effects of the Proposed Action

Based on the findings of the 2021 ICRIP, the November 2022 Phase I Archaeological Survey, and May 2023 Architectural Resources Report, no impacts to NRHP-listed or eligible historic properties would occur as a result of the Proposed Action. Section 106 consultation concluded with a finding of no adverse effect to historic properties.

VA would avoid temporary adverse effects during future cemetery construction by using a route for construction vehicles to access the Site that would avoid impacts to Camp Nelson National Monument and the CNNC. VA would also share future cemetery design information with KY SHPO, NPS and other interested consulting parties at the approximately 30%, 60% and 90% design stages for review and comment to minimize potential visual effects to Camp Nelson National Monument.

3.5.2 Effects of the No Action Alternative

Under the No Action Alternative, no cultural resources impact by VA would occur. The Site would likely remain unimproved land and no cultural resources impacts would occur.

3.6 Geology and Soils

The Site lies within the Inner Bluegrass Physiographic Region of central Kentucky, which is characterized by its gently rolling, moderately dissected, low plateau ranges (McGrain and Currens 1978). The bedrock is broadly mapped on the Kentucky Geological Survey as Ordovician-age Tyrone Limestone and Oregon Formation. Characteristics of the Tyrone Limestone include persistent greenish-gray argillaceous limestone. The surface soils of the Site are mapped on the *Quaternary Geologic Atlas of the United States* as clay loam solution residuum of the Quaternary and Tertiary period. These soils contain partly dissolved fragments of limestone, and extend downwards along solution-enlarged fractures into the underlying limestone bedrock.

The Site is located approximately 10 miles southwest of the Kentucky River Fault System and is located within a low seismic hazard zone. No faults are known to be present in the Site area, but a known geological fault line generally runs along Hickman Creek (JCCP 2017).

The Little Hickman, Kentucky United States Geological Survey (USGS) Topographic Quadrangle (dated 1952, revised 1993) indicates that the Site area is located on top of a ridge between valleys associated with Hickman Creek (east of the Site) and the Kentucky River (west of the Site). The Site generally slopes from a high area in the north-central portion of the Site ((elevation of approximately 940 feet above mean sea level (msl)) down to the west, south, and southeast. The bottom of the approximately 300 feet diameter sinkhole in the southern portion of the Site (865 feet above msl) is approximately 50 feet below the surrounding land elevation. The Site area has a general slope to the southeast towards Hickman Creek (elevation approximately 550 feet above msl), located approximately 700 feet east of the Site.

TTL Associates, Inc. (TTL) completed a geotechnical subsurface investigation of the Site in 2022. Sixteen soil borings were spaced throughout the Site that ranged in depths from approximately 4 to 24 feet below ground surface (bgs). Soils were found to generally consist of clay with varying amounts of sand and silt, and rock fragments to depths of approximately 3.5 to 20 feet bgs, underlain by weathered limestone bedrock. Intact limestone bedrock (based on auger refusal) occurred at depths of approximately 4 to 24 feet bgs.

Kentucky Geological Survey mapping indicates that the Site is underlain by limestone bedrock with a high potential for karst development (the creation of cavities due to water dissolving carbonate rock). Several sinkholes have been mapped in the general Site area, including the approximately 2.5-acre sinkhole located in the southern portion of the Site. However, the 2022 geotechnical investigation did not identify evidence of significant karst features (other than the mapped sinkhole) or active karstification at the Site.

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA NRCS 2021) indicated that the Site contains five soil types which are listed in Table 3-1 and shown on Figure 3-1.

Table 3-1 Soil Map Units and Metrics for the Site

Map Unit Symbol	Map Unit Name	Farmland Soil Type	Acres in Site	Percent of Site
EvB	Elk variant silt loam, 2 to 6 percent slopes, well-drained	Prime	9.7	52.4%
FdC	Faywood silt loam, 6 to 12 percent slopes, well-drained	Statewide Importance	0.1	0.1%
FdE	Faywood silt loam, 12 to 30 percent slopes, well-drained	Non-Farmland	0.1	0.1%
MnC	McAfee silt loam, 6 to 12 percent slopes, well-drained	Statewide Importance	7.7	41.6%
uBlmB	Bluegrass-Maury silt loams, 2 to 6 percent slopes, well-drained	Prime	1.1	5.8%
Data from USDA NRCS Web Soil Survey (2021).				

Figure 3-1 Soil Map Units for the Site

3.6.1 Prime and Unique Farmland Soils

Prime and Unique farmland soils are protected under the Farmland Protection Policy Act (FPPA). The intent of the FPPA is to minimize the extent to which federal programs contribute to the unnecessary or irreversible conversion of farmland soils to non-agricultural uses. The Act also ensures that federal programs are administered in a manner that, to the extent practicable, will be compatible with private, state, and local government programs and policies to protect farmland. The USDA NRCS is responsible for overseeing compliance with the FPPA and has developed the rules and regulations for implementing the Act.

The USDA NRCS Web Soil Survey indicated that the majority of the Site soils are considered prime farmland (58 percent) or farmland of statewide importance (42 percent) with a small area of non-prime farmland (see Table 3-1 and Figure 3-1).

3.6.2 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would have no geology and soils impacts.

The proposed future cemetery development at the Site would have minor impacts on geology. No major changes to topography or drainage are expected at the Site due to the development of the cemetery. The proposed cemetery expansion would be designed in concert with the natural topography and current drainage patterns. No significant cutting or filling is anticipated. The approximate 2.5-acre sinkhole area in the southern portion of the Site would remain undisturbed wooded land.

No known, active fault lines are located in the vicinity of the Site. Therefore, no impacts associated with seismic hazards have been identified. Additionally, no impacts to mineral resources are anticipated, as the proposed cemetery would not involve the commercial extraction of mineral resources, nor affect mineral resources considered important on a local, state, national, or global basis.

The Site is located in an area where karst conditions and associated sinkholes are common. Although the 2022 geotechnical investigation did not identify evidence of significant karst features (other than the mapped sinkhole) or active karstification at the Site, subsurface voids could be encountered during cemetery construction that would require geotechnical management measures. Geotechnical recommendations would be incorporated into the cemetery design to ensure the stability of the development and appropriate stabilization of grave site areas. In addition, the site design would include management measures to reduce any potential sinkhole development.

During construction of the cemetery at the Site, less-than-significant, direct and indirect, short-term soil erosion and sedimentation (E&S) impacts could occur as roads, grave sites, buildings, and other cemetery improvements are constructed. Cemetery construction activities would remove the current vegetative cover, disturb the soil surface, and compact the soil. The soil would then be susceptible to erosion by wind and surface runoff. Exposure of the soils during construction has an increased potential to result in offsite discharges of sediment-laden runoff due to the erosion susceptibility of the soils and slope of the Site. However, such potential adverse E&S effects would be minimized through the utilization of appropriate BMPs as described in Section 4 and adherence to the terms of an approved Kentucky Pollutant Discharge Elimination System (KPDES) KYR10 Stormwater Construction General Permit, including the development and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP), and the prevention of increased pre and post-construction sediment yield and flow velocity. Permit standards would be adhered to during all construction activities.

No long-term E&S impacts would be anticipated due to the nature of the Proposed Action. There would be limited impervious surfaces associated with the cemetery expansion and long-term soil erosion impacts

would be managed by maintaining appropriately designed stormwater management features associated with the proposed cemetery expansion.

The Proposed Action would irreversibly convert prime and statewide important farmland into non-agricultural uses. As a result, the Proposed Action is subject to the FPPA requirements. VA would complete, in conjunction with the USDA NRCS, a Farmland Conversion Impact Rating Form (Form AD-1006) for the Site. This process evaluates the relative value of the Site compared to other farmland in the locale. There are approximately 83,600 acres of land that are in agricultural production in Jessamine County (JCCP 2020). Based on the small size and characteristics of the Site and abundant farmland in the surrounding area, the Proposed Action is anticipated to have a negligible adverse impact on farmland soils.

3.6.3 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to soils or geology by VA would occur. The Site would likely remain unimproved land with no soils or geology impacts.

3.7 Hydrology and Water Quality

This section describes the affected environment, regulatory setting, and potential Proposed Action impacts for hydrology and water quality (surface water and groundwater). Wetlands, floodplains and coastal zones are discussed in Section 3.11.

The Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA), governs the control of water pollution in the U.S. The CWA authorizes the USEPA to regulate point sources that discharge pollutants into waters of the U.S. (WOTUS). USEPA has authorized the Kentucky Department for Environmental Protection (KDEP) Division of Water (DOW) to implement the NPDES stormwater permitting program in Kentucky.

Under section 303(d) of the CWA, states are required to develop and update, every two years, a list of waters that are impaired by one or more pollutants. Impaired waters are those that do not meet Water Quality Standards (WQSs) for their designated use. After identification as impaired, the state creates and prioritizes Total Maximum Daily Loads (TMDLs) to target and implement pollution reduction strategies and watershed plans to improve water quality. The KDEPC DOW oversees the Water Quality Assessment Program for the 303(d) listed waterbodies.

Section 438 of the Energy Independence and Security Act of 2007 (EISA) requires federal agencies to reduce stormwater runoff from federal development projects to protect water resources. Section 438 requires any development or redevelopment of a federal facility with a footprint exceeding 5,000 square feet to maintain or restore, to the extent technically feasible, the predevelopment hydrology of a property with regard to the temperature, rate, volume, and duration of flow.

3.7.1 Surface Waters

No surface waters are located on or adjacent to the Site. The Site area is located on top of a ridge between deep valleys associated with Hickman Creek (approximately 700 east feet of the Site) and the Kentucky River (approximately 3,000 feet west of the Site). Hickman Creek flows southwest and drains into the Kentucky River approximately 1.5 miles south-southwest of the Site. The Kentucky River generally flows to the northwest and discharges to the Ohio River approximately 70 miles northwest of the Site. Figure 1-2 depicts the Site on the USGS topographic map and illustrates the locations of area surface waters.

Hickman Creek and the Kentucky River are listed on the 303(d) list due to various pollutants.

3.7.2 Groundwater

According to the *Groundwater Atlas of the United States*, the Site is located within the Interior Low Plateaus physiographic province. The province includes surficial sand and gravel aquifers in proximity to the Ohio River and some of its tributaries and bedrock aquifers. The Site area is mapped with limestone and dolomite aquifers of Ordovician age.

Municipal water service is provided to the Site area by the City of Nicholasville, which uses surface water from the Kentucky River as it main source of water. In addition, some private water wells (installed in bedrock) are used in the area. According to the Kentucky Geological Society Geologic Map Service, the closest active water wells are located in approximately 3,100 feet northwest, 3,400 feet southeast, and 2,600 feet east-northeast of the Site (See Figure 3-2). A former water well (plugged) was located on the CNNC property, located approximately 520 feet southwest of the Site.

The Site is not located within an USEPA-designated sole source aquifer area, per the USEPA Sole Source Aquifers internet mapping application.

Groundwater was observed in 6 of the 16 geotechnical boreholes that were left open for more than 24 hours at depths ranging from 3 to 6.5 feet bgs. The geotechnical report indicated that shallow "perched" groundwater may occur, in places, at the soil-bedrock interface.

Figure 3-2 Domestic Water Well Locations

3.7.3 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would have no surface water or groundwater impacts.

Surface water impacts associated with the future cemetery development at the Site (associated with soil erosion and sedimentation) would be minor. The cemetery expansion would be designed in concert with the natural topography and drainage patterns. It is anticipated the cemetery design would include a natural buffer of undeveloped land around the sink hole in the southern portion of the Site. VA would implement BMPs as described in Section 4 to control construction-related impacts of soil erosion and sedimentation and would provide onsite stormwater management consistent with the EISA Section 438 requirements following the development of the cemetery.

Based on the geotechnical investigation, groundwater at the Site is generally greater than 12 feet bgs and would not likely be encountered or adversely impacted during cemetery construction activities. However, shallow perched groundwater may be encountered, in places, at or near the soil-bedrock interface. If excessive water is encountered during construction, VA would evaluate dewatering methods and follow applicable KPDES KYR10 Stormwater Construction General Permit requirements.

No significant long-term groundwater impacts are anticipated as a result of the Proposed Action. Based on standard modern burial practices, it is unlikely that toxic embalming fluid or other decomposition byproducts would be released into the soil and/or groundwater. The standard NCA design incorporates (for full casket burials) sub-surface concrete crypts, an entire section of which would be installed during site construction, above the water table. Using this technique, the caskets are not buried directly in the soil but are rather set in a pre-placed concrete crypt (established turf and soil temporarily removed, crypt lid removed, casket placed, followed by the reverse process to complete). In addition, modern embalming fluids are markedly less toxic as the primary active ingredients are no longer arsenic-based. Modern embalming fluids are commonly biodegradable. In addition, as selection of either cremains interment or columbaria placement increase, and green burials increase, the potential for soil or groundwater contamination commensurately decreases as no embalming fluids are used. Therefore, burial practices would have negligible impacts on groundwater resources.

The CNNC is currently irrigated using potable water supplied by the City of Nicholasville. During the cemetery design, VA would coordinate with the City of Nicholasville to determine if the municipal water system has sufficient capacity to meet the irrigation needs of the expanded cemetery at the Site. If the municipal water system does not have the capacity, VA would likely install an irrigation well and/or use water collected in stormwater retention ponds for irrigation. NCA's modern cemetery development practices include the use of native grasses and low-moisture tolerant vegetation species, to the extent possible, thereby reducing the need for irrigation. Operation of the proposed cemetery expansion would have a less-than-significant impact on water resources in the Site area.

3.7.4 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to hydrology or water quality by VA would occur. The Site would likely remain unimproved, vacant mostly agricultural land with no hydrology or water quality impacts.

3.8 Wildlife and Habitat

The Site is located on top of a ridge between steep valleys associated with Hickman Creek and the Kentucky River. The northern portion of the Site is a fenced agricultural field/pasture land and the southern portion of the Site is mostly grassy landed with wooded sinkhole area. A fencerow of trees is present along the northern and western Site boundaries. The agricultural field has remnants of clover and other typical plant

species occurring in agricultural fields/pasture land. Trees and shrubs including sycamore, black locust, hackberry, and mulberry occur in the approximate 2.5-acre wooded sinkhole and along the northern and western margins of the Site. Surrounding lands are mostly grassy with scattered trees. The valleys associated with Hickman Creek and the Kentucky River are heavily wooded. Vegetation on the Site and the surrounding area support wildlife species associated with rural Jessamine County.

3.8.1 Threatened and Endangered Species

As part of the preparation of this EA, the United States Fish and Wildlife Service (USFWS) and Kentucky natural resource agencies were contacted to identify the potential for the presence of state or federally listed species on or in the vicinity of the Site.

The USFWS Information for Planning and Conservation (IPaC) official species list was generated for the Sites to assess for the potential presence of federally listed protected species in the Site vicinity. No critical habitat was identified on or adjacent to the Site. The IPaC report for the Site is provided in Appendix E.

Table 3-2 provides a summary of the federally protected species listed in the IPaC report, their habitat requirements, and the potential presence of their required habitat at the Site.

Table 3-2 Federally Listed Species in the Vicinity of the Site

Species	Status	Habitat	Potential Habitat Present at the Site
Mammals			
Gray Bat *Myotis grisescens*	Endangered	Year-round cave dwellers in limestone karst areas of the southeastern United States (USFWS 2019).	No
Indiana Bat *Myotis sodalis*	Endangered	Restricted to underground hibernacula (caves and mines) in winter. In summer, roosts under exfoliating bark of dead trees that retain large, thick slabs of peeling bark. Roost trees are typically within canopy gaps in a forest, in a fenceline, or along a wooded edge (USFWS 2007).	Yes, potential summer roosting habitat in wooded areas
Northern Long-eared Bat *Myotis septentrionalis*	Threatened	Found in a variety of forested habitats. During summer, roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. In winter, hibernates in caves and mines (USFWS 2022).	Yes, potential summer roosting habitat in wooded areas
Mollusks			
Clubshell *Pluerobema clava*	Endangered	Small to medium-sized rivers and streams with coarse sand and gravel conducive to burying in the substate (NatureServe 2022).	No
Fanshell *Cyprogenia stegaria*	Endangered	Medium to large rivers with sand or gravel in deep water of moderate current (NatureServe 2022).	No
Longsolid *Fusconaia subrotunda*	Threatened	Medium to large rivers in gravel with a strong current often in sand and gravel (NatureServe 2023).	No
Rabbitsfoot *Quadrula cylindrica cylindrica*	Threatened	Small to medium rivers with moderate to swift currents and in smaller streams inhabits bars or gravel and cobble close to fat currents (NatureServe 2022).	No

Species	Status	Habitat	Potential Habitat Present at the Site
Sheepnose Mussel *Plethobasus cyphyus*	Endangered	Large rivers with swift currents over mud, sand, or gravel bottoms and less often medium rivers with gravel/cobble substrates and reservoirs (NatureServe 2022).	No
Insect			
Monarch Butterfly *Danaus plexippus*	Candidate	In summer, adults occur in a variety of habitats feeding on nectar of flowering plants. During breeding season, lay eggs on obligate milkweed host plants. Migrate to Mexico in fall to overwinter and return in late spring/early summer. (USFWS 2022).	Yes, potential summer habitat in open areas that are not mowed
Flowering Plant			
Short's Bladderpod *Physaria globosa*	Endangered	Grows on steep, rocky, wooded slopes and talus areas associated with calcareous outcrops near waterways (NatureServe 2022, USFWS 2021a).	No
Data provided by USFWS ECOS and NatureServe Explorer online databases.			

According to the IPaC official species list, three mammals (gray bat, Indiana bat, and northern long-eared bat), five mollusks (clubshell, fanshell, longsolid, rabbitsfoot, and sheepnose mussel), one flowering plant (short's bladderpod), and one insect (monarch butterfly) were identified as having the potential to occur in the general Site area. Based on the habitat requirements for the mollusks (rivers) and the flowering plant (rocky and wooded slopes near waterways), these species do not occur on Site. The lack of caves at the Site precludes the gray bat from occurring on the Site due to a lack of roosting habitat. The lack of on-site caves also precludes the Indiana bat and the northern long-eared bat during the wintertime since these species require caves for hibernation. However, both species roost during the summer (and through the fall for the northern long-eared bat) in wooded areas, which are found along the Site boundaries and within the wooded sinkhole area. Therefore, potential summer/fall roosting habitat is present at the Site for both the Indiana bat and the northern long-eared bat.

In summer, monarch butterflies occur in a variety of habitats feeding on nectar of flowering plants. Monarch butterflies lay eggs exclusively on milkweed plant species. The Site is periodically disturbed by mowing in the southern portion and crop production/grazing in the fenced northern portion, which generally prevents the establishment of milkweed plants. No milkweed plants were observed at the Site during the December 2021 Site reconnaissance. However, the undisturbed, open margins of the Site provide potential habitat for milkweed species, and consequently, potential breeding habitat for monarch butterflies.

The Kentucky Department of Fish & Wildlife Resources (KDFWR) protects threatened and endangered animal species in Kentucky. The Wildlife Diversity Program is responsible for the oversight and management of Kentucky's species of greatest conservation need, threatened, and endangered animals, which are tracked through the KDFWR Species Information database. Site-specific information was not available from the KDFWR Species Information database; instead, sensitive wildlife species with potential to occur within the USGS topographic quadrangle (Little Hickman) for the Site was evaluated (Appendix E). Ten animal species were listed for the Little Hickman quadrangle area, including two federally listed species (gray bat and northern long-eared bat) that were identified on the USFWS IPaC report. The other eight species are state listed species and designated as endangered, threatened, or special concern species. Of the eight species, three are birds, four are mammals (bats), and one is an amphibian. Based on the habitat requirements for the amphibian (open water), this species is unlikely to occur onsite. There is potential habitat for foraging and/or nesting at the Site for the rest of the state-listed animal species (birds and bats).

The KEEC Office of Kentucky Nature Preserves (OKNP) conserves rare and listed plant species. The OKNP is responsible for monitoring and management of Kentucky's rare and listed plant species, which are tracked through the Kentucky Rare Plant Database. Site-specific information was not available from the OKNP Kentucky Rare Plant Database; instead, sensitive plant species with potential to occur within Jessamine County were evaluate for the Site (Appendix E). Sixteen special status plant species may occur within Jessamine County. Ten of the listed plant species habitats are associated with wet environments and /or ledges, bluffs, and cliffs, which are not present onsite. Marginal habitat for two listed plant species (downy arrowwood and softleaf arrowwood) may be present with within the wooded sinkhole area. Four of the listed plant species (eastern yampah, Eggleston's violet, hairy false gromwell, and running buffalo clover) may have habitat present within the grassy areas of the Site. However, recurrent mowing and/or disturbance at the Site likely precludes these plant species from occurring.

Migratory Birds and Eagles

Certain birds are protected under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act. The IPaC report identified bald eagles have the potential to occur in the area of the Site. The IPaC report also identified the black-billed cuckoo, bobolink, cerulean warbler, chimney swift, field sparrow, Henslow's sparrow, Kentucky warbler, prairie warbler, red-headed woodpecker, and wood thrush as a migratory Birds of Conservation Concern protected under the MBTA that have the potential to occur at the Site during their breeding seasons.

3.8.2 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would have no wildlife and habitat impacts.

Future cemetery development would include clearing some of the existing Site trees and other Site vegetation and could result in direct and indirect, short-term and long-term impacts to wildlife at the Site. Habitat associated with common wildlife at the Site would be impacted from the permanent conversion of Site land into the cemetery grounds. However, much of the Site is occasionally mowed grassland and agricultural/pasture land, which provides limited wildlife habitat. The wooded sinkhole area, which provides higher quality wildlife habitat, would remain undisturbed by the cemetery development.

Wooded area/trees at the Site provide potential summer/fall roosting habitat for federally protected Indiana and northern long-eared bats. The Site may also provide suitable habitat for state-listed protected species and migratory birds. Concurrent with the future cemetery expansion design, VA would re-evaluate the potential for protected species at the Site, including coordination with the USFWS and KDFWR, and the completion of pre-development biological surveys, as necessary. VA anticipates that through environmentally sensitive site design, potential impacts to protected species would be minimized or avoided. Protected wildlife and habitat would be avoided to the extent possible, with undeveloped buffers. It is anticipated that VA would conduct seasonal tree clearing, between October 1 and March 31, to avoid impacts to protected bats. If seasonal tree clearing is not possible, a summer presence/absence survey by an approved surveyor would be conducted to confirm protected bats are not present before tree clearing. VA would consult with USFWS to develop and implement appropriate measures to minimize potential impacts to protected species.

With the implementation of these management and avoidance measures, wildlife and habitat impacts associated with the Proposed Action would be less than significant.

3.8.3 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to vegetation or wildlife habitat by VA would occur. The Site would likely remain unimproved with no biological resource impacts.

3.9 Noise

The existing noise environment at and around the Site is relatively quiet with minor noise associated with traffic along US 27/ Danville Road, operation and maintenance activities at the CNNC, and seasonal agriculture noise from nearby farms. In addition, ceremonial rifle salutes associated with Veteran interments at CNNC are audible at the Site and surrounding area. The short bursts of noise from the salutes are intermittent and only occur during weekday business hours, approximately 4 to 5 times per day. No other notable noise-generating sources are present in the immediate vicinity of the Site. The overall noise environment can be characterized as that typical of a quiet rural area, consistent with a cemetery setting.

3.9.1 Sensitive Receptors

Sensitive noise receptors within the vicinity of the Site include residences located approximately 1,500 feet south and approximately 1,700 feet east of the Site. The existing CNNC is also a sensitive noise receptor. No other sensitive noise receptors such as schools, daycare facilities, libraries, or parks are located within 2,000 feet of the Site. The primary use area of Camp Nelson National Monument (visitor center area) is located approximately 3,000 feet northwest of the Site. However, some walking trails associated with the National Monument are located within 1,000 feet northeast of the Site.

3.9.2 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would result in no noise impacts.

The future cemetery expansion at the Site would have short-term adverse impacts to the existing noise environment during the construction activities. Noise generating sources during construction activities would be associated primarily with standard construction equipment and construction equipment transportation. These increased noise levels could directly affect the neighboring areas.

Construction activities generate noise by their very nature and are highly variable, depending on the type, number, and operating schedules of equipment. Construction projects are usually executed in stages, each having its own combination of equipment and noise characteristics and magnitudes. Construction activities are expected to be typical of other similar construction projects and would include mobilization, site preparation, excavation, placing foundations, pre-placed crypt installation, utility development, heavy equipment movement, and paving roadways and parking areas.

The most prevalent noise source at typical construction sites is the internal combustion engine. General construction equipment using engines includes, but is not limited to, heavy, medium, and light equipment such as excavators, roller compactors, front-end loaders, bulldozers, graders, backhoes, dump trucks, water trucks, concrete trucks, pump trucks, utility trucks, and lube, oil, and fuel trucks.

Peak noise levels vary at a given location based on the line of sight, topography, vegetation, and atmospheric conditions. In addition, peak noise levels would be variable and intermittent because each piece of equipment would only be operated when needed. However, peak construction noise levels would be considerably higher than existing noise levels. Relatively high peak noise levels in the range of 93 to 108 dBA (decibels, A-weighted scale) would occur on the active construction site, decreasing with distance from the construction areas. Table 3-3 presents peak noise levels that could be expected from a range of construction equipment during proposed construction activities.

Generally speaking, peak noise levels within 50 feet of active construction areas and material transportation routes would most likely be considered "striking" or "very loud", comparable to peak crowd noise at an indoor sports arena. At approximately 200 feet, peak noise levels would be loud - approximately comparable to a garbage disposal or vacuum cleaner at 10 feet. At 0.25-mile, construction noise levels

would generally be quiet enough so as to be considered insignificant, although transient noise levels may be noticeable at times.

Combined peak noise levels, or worst-case noise levels when several loud pieces of equipment are used in a small area at the same time as described in Table 3-3, are expected to occur rarely, if ever, during the project. However, under these circumstances, peak noise levels could exceed 90 dBA within 200 feet of the construction area, depending on equipment being used.

Table 3-3 Peak Noise Levels Expected from Typical Construction Equipment

Source	Peak Noise Level (dBA, attenuated)							
	Distance from Source (feet)							
	0	50	100	200	400	1,000	1,700	2,500
Heavy truck	95	84-89	78-93	72-77	66-71	58-63	54-59	50-55
Dump truck	108	88	82	76	70	62	58	54
Concrete mixer	108	85	79	73	67	59	55	51
Jack-hammer	108	88	82	76	70	62	58	54
Scraper	93	80-89	74-82	68-77	60-71	54-63	50-59	46-55
Bulldozer	107	87-102	81-96	75-90	69-84	61-76	57-72	53-68
Generator	96	76	70	64	58	50	46	42
Crane	104	75-88	69-82	63-76	55-70	49-62	45-48	41-54
Loader	104	73-86	67-80	61-74	55-68	47-60	43-56	39-52
Grader	108	88-91	82-85	76-79	70-73	62-65	58-61	54-57
Pile driver	105	95	89	83	77	69	65	61
Forklift	100	95	89	83	77	69	65	61
Combined Peak Noise Level (Bulldozer, Jackhammer, Scraper)								
Combined Peak Noise Level	**Distance from Source (feet)**							
	50	**100**	**200**	**¼ mile**	**½ mile**			
	103	97	91	74	68			
Source: (Tipler 1976)								

Although noise levels would be quite loud in the immediate area, the intermittent nature of peak construction noise levels would not create the steady noise level conditions for an extended duration that could lead to hearing damage. Construction workers would follow standard Federal Occupational Safety and Health Administration (OSHA) requirements to prevent hearing damage.

Areas that could be most affected by noise from construction include those closest to the construction footprint, including nearby residences, visitors to CNNC, and visitors to the outdoor recreation areas of Camp Nelson National Monument. Indoor noise levels would be expected to be 15-25 decibels lower than

outdoor levels. In addition, construction noise impacts would be temporary and would be minimized through BMPs outlined in Section 4.

Indirect impacts include noise from workers commuting and material transport. Area traffic volumes and noise levels would increase slightly as construction employees commute to and from work at the project area, and delivery and service vehicles (including trucks of various sizes) transit to and from the Site. Because trucks are present during most phases of construction and leave and enter the Site via local thoroughfares, truck noises tend to impact more people over a wider area. For this Proposed Action, persons in the area near the Site would experience temporary increases in traffic noise during day-time hours. These effects are not considered significant because they would be temporary and similar to existing traffic noise levels in the area.

Future cemetery operational activities at the Site would be similar to the current CNNC operations and would include vehicle traffic to and from the Site; the use of powered equipment for grave site preparation, maintenance, and upkeep; and periodic (during weekday, day-time hours) ceremonial rifle discharges from committal shelters (if a committal shelter is constructed at the Site). Estimated ceremonial rifle salute noise levels at varying distances based on U.S. Army estimates are provided in Table 3-4. The expanded cemetery operational activities would not produce excessive noise and would not produce a significant adverse noise impact on surrounding land uses. The facility would be a relatively quiet cemetery, consistent with the existing CNNC.

Table 3-4 Estimated M-16 Rifle Blank Noise Levels at Varying Distances

Distance (meters)	A-Weighted Exposure Level (dBA)	A-Weighted Maximum Level (dBA)
50	67	76
100	61	70
200	54	63
400	40	49
800	32	41
1,600	22	31

3.9.3 Effects of the No Action Alternative

Under the No Action Alternative, the noise environment surrounding the Site would not be altered by activities from the Proposed Action. The Site would likely remain mostly unimproved, agricultural land with periodic noise from agricultural equipment.

3.10 Land Use

The Site is situated in a rural area of open mostly unimproved agricultural/pasture land, residential land, and NPS land, with heavily wooded areas along the steep valleys associated with Hickman Creek and the Kentucky River. The northern portion of the Site is fenced agricultural/pasture land. The southern portion of the Site is unimproved, mostly grassy land with an approximately 2.5-acre, up to 50 feet deep, wooded sinkhole.

Existing CNNC properties are located directly north, south and west of the Site. The original developed cemetery areas are located south and southwest of the Site. The recently developed cemetery expansion area is located west of the Site; the area north of the Site, a future cemetery expansion area, is currently mostly unimproved grassy land. The area east of the Site is unimproved grassy land. Areas west and north of current CNNC properties are mostly improved, grassy land that is part of Camp Nelson National Monument, managed by the NPS. The area south of the CNNC is mostly unimproved, grassy/agricultural land with a barn.

The Jessamine County – City of Wilmore Planning Department provides planning and zoning, code enforcement, and building inspection services to unincorporated areas of Jessamine County, such as the Site. The Jessamine County Zoning Map indicates that the Site and all of the surrounding properties are zoned agricultural, Zone A-1. The Jessamine County Zoning Ordinance states that cemeteries are permitted as conditional uses within A-1 zoning districts, if approved by the Jessamine County Board of Adjustments.

3.10.1 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would result in no land use impacts. The Site would remain fallow agricultural/pasture land and mostly grassy land.

The future cemetery expansion would have very minor long-term land use effects. The Site would be transformed from vacant, undeveloped land to a portion of a national cemetery. However, the proposed cemetery development would be consistent with the adjacent, existing CNNC development, consistent with the low impact development of the area, and compatible with the surrounding land uses.

As a federal agency, VA is not subject to local zoning regulations; however, the future cemetery development would be consistent with local zoning. In addition, Jessamine County, the current Site owner, is offering the Site to VA for future cemetery development.

3.10.2 Effects of the No Action Alternative

Under the No Action Alternative, no land use impacts due to VA's Proposed Action would occur. The Site would likely remain unimproved, mostly agricultural and grassy land with no land use impacts.

3.11 Wetlands, Floodplains, and Coastal Zone Management

3.11.1 Wetlands

This section discusses wetlands at or near the Site and surface waters (streams) as they pertain to wetlands. Additional information regarding surface waters is provided in Section 3.7.

The USFWS National Wetland Inventory (NWI) map for the Site area (Figure 3-3) did not identify any surface waters or wetlands located on or adjacent to the Site. In addition, no wetlands were observed at the Site during the site reconnaissance. The wooded sinkhole located in the southern portion of the Site does not contain any surface water. The NWI map identified three freshwater ponds located approximately 750 feet northwest of the Site, approximately 900 feet northeast of the Site, and approximately 1,300 feet southwest of the Site. In addition, the NWI map depicts Hickman Creek approximately 700 feet east of the Site.

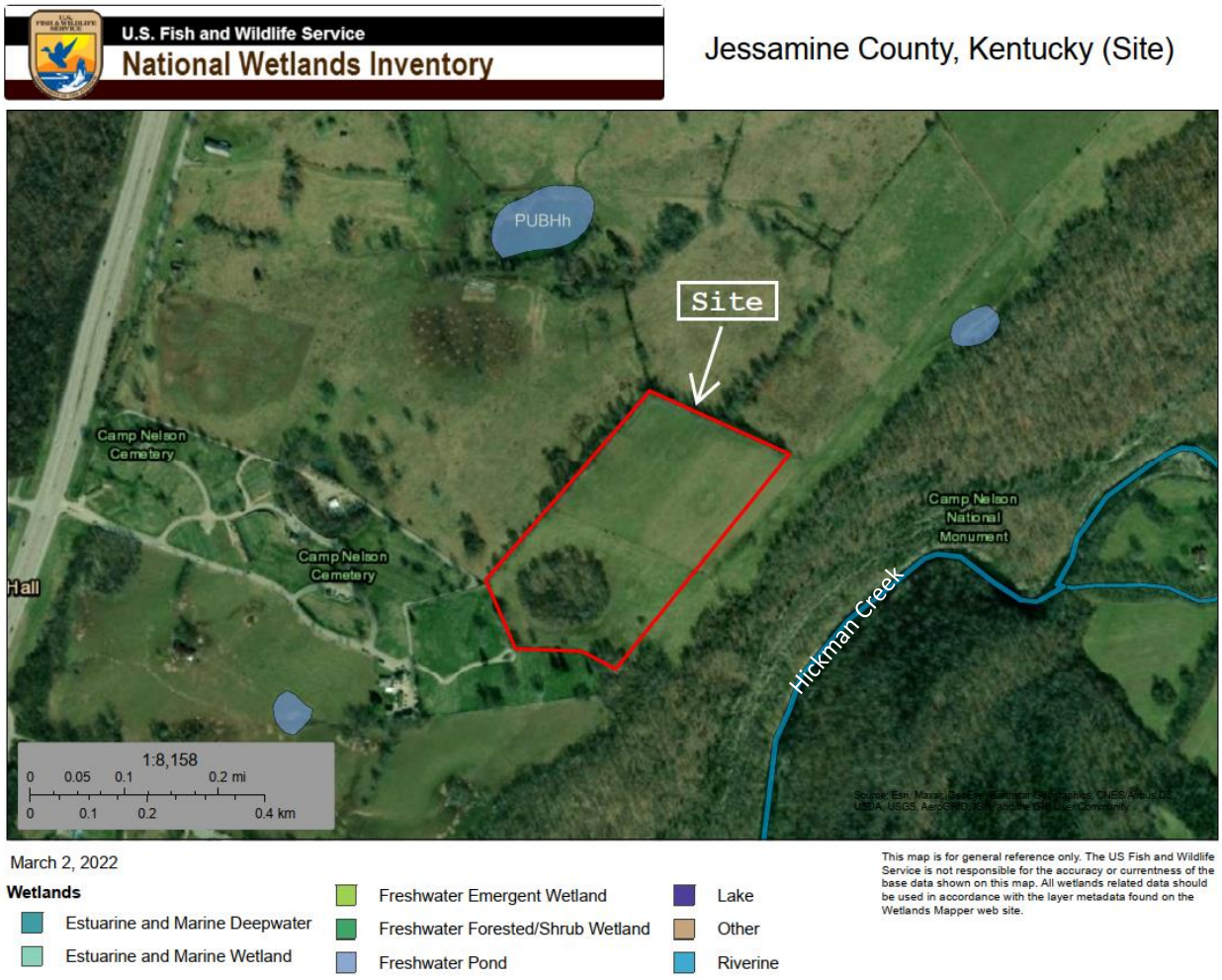

Figure 3-3 USFWS National Wetland Inventory Map

3.11.2 Floodplains

Available Federal Emergency Management Agency (FEMA) floodplain mapping (Flood Insurance Rate Map Number 21113C0140D, dated December 21, 2017) indicates that the Site is not located in the 100-year or 500-year floodplain (Figure 3-4). The nearest mapped floodplains are depicted approximately 500 feet northwest of the Site (associated with a freshwater pond area) and approximately 600 feet east of the Site (associated with Hickman Creek).

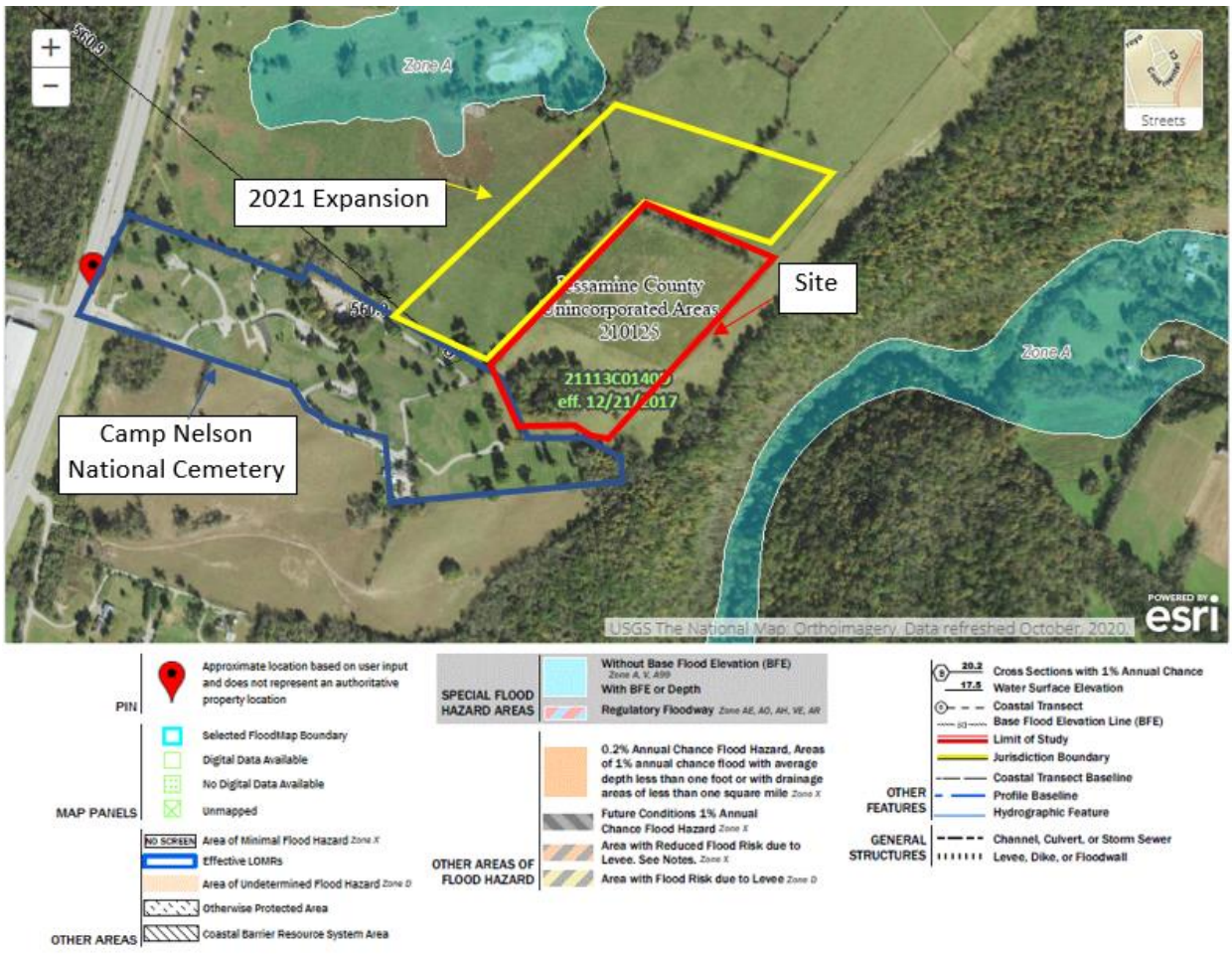

Figure 3-4 FEMA Floodplain Map

3.11.3 Coastal Zone

The Coastal Zone Management Act (CZMA) was promulgated to control nonpoint pollution sources that affect coastal water quality. The CZMA of 1990, as amended (16 USC 1451 *et seq.*) encourages states to preserve, protect, develop, and where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. The CZMA requires that federal actions within and outside the coastal zone that could have reasonably foreseeable impacts on land, water, and natural resources of the coastal zone be consistent with the state's federally approved Coastal Management Program (CMP). Kentucky does not have any designated coastal zones or a CMP.

3.11.4 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would result in no impacts to wetlands, floodplains or coastal zones.

The future cemetery development would not impact wetlands, floodplains or coastal zones. No construction would occur within or near wetlands or floodplains. VA would manage stormwater at the Site so as not to affect the hydrology of off-site areas.

3.11.5 Effects of the No Action Alternative

The No Action Alternative would result in no wetlands, floodplains, or coastal zones impacts.

3.12 Socioeconomics

The following subsections identify and describe the socioeconomic environment of Jessamine County and the State of Kentucky. Presented data provide an understanding of the socioeconomic factors that have developed the area. Socioeconomic areas of discussion include the local demographics of the area, regional and local economy, and local housing. Data used in preparing this section were collected from the 2020 Census of Population and Housing, subsequent US Census Bureau data, and the US Department of Commerce Bureau of Economic Analysis.

3.12.1 Demographics

Jessamine County's estimated population in 2021 was 53,609 residents. The estimated population total for the State of Kentucky in 2021 was 4,506,589 residents (Table 3-5). Age distributions and high school graduation rates are generally similar for Jessamine County and the State of Kentucky. Minority rates in Jessamine County are lower than the State of Kentucky as a whole. Minority population rates specific to the Site area are discussed in Section 3.17 (Environmental Justice).

Table 3-5 Demographic Data for Jessamine County and Kentucky

Area	All Individuals (2021 Estimate)	Population Under 18 Years (2022 Estimate)	Population Over 65 Years (2022 Estimate)	Minority (2022 Estimate)	High School Graduates (2021 Estimate)	Veterans (2021 Estimate)
Kentucky	4,506,589	22.5%	17.1%	12.9%	87.7%	250,427
Jessamine County	53,609	23.6%	16.2%	8.7%	89.7%	3,109
Source: US Census Bureau, QuickFacts v2022 (U.S Census Bureau 2023).						

3.12.2 Income

Table 3-6 lists the regional income, poverty levels, and unemployment rates for Jessamine County and the State of Kentucky as a whole. Jessamine County has a higher median household income and lower population below the poverty line than the State of Kentucky as a whole. Household incomes specific to the Site area are discussed in Section 3.17. The unemployment rates are similar.

Table 3-6 Regional Income for Jessamine County and Kentucky

Area	Number of Households (2021)	Median Household Income (2021)	Population Below Poverty Level	Unemployment Rate (March 2023)
Kentucky	1,748,475	$55,454	16.5%	3.8%
Jessamine County	19,054	$65,196	13.8%	3.1%
Source: US Census Bureau, QuickFacts v2022 (U.S. Census Bureau 2023).and U.S. Bureau of Labor Statistics, Unemployment rate in States and Local Areas (U.S. Bureau of Labor Statistics 2023)				

3.12.3 Commuting Patterns

Residents of Jessamine County are largely dependent on personal automobiles for transportation to and from work. The average commuting time in Jessamine County was approximately 24 minutes in 2020. Public transportation is not currently available in the Site area.

3.12.4 Protection of Children

Because children may suffer disproportionately from environmental health risks and safety risks, EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, was introduced in 1997 to prioritize the identification and assessment of environmental health risks and safety risks that may affect children and to ensure that federal agencies' policies, programs, activities, and standards address environmental risks and safety risks to children. This section identifies the distribution of children and locations where numbers of children may be proportionately high (for example, schools, childcare centers, and family housing) in areas potentially affected by the Proposed Action.

Children are not present at the Site, which is vacant, unimproved mostly agricultural and grassy land that contains no formal recreation areas. Children may be present in the low-density residential houses located 1,500 feet and farther from the Site. Children may also be occasionally present on the walking trails associated with Camp Nelson National Monument that are located within 1,000 feet northeast of the Site. No schools, childcare centers, or other developed recreational areas are located within 0.50-mile of the Site.

3.12.5 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would have no socioeconomic impact.

The proposed future cemetery development at the Site is anticipated to result in minor short-term, beneficial socioeconomic impacts to local employment and personal income by providing temporary construction jobs. However, due to the short-term, finite nature of this construction project, no long-term impacts to the construction labor force are anticipated.

The Proposed Action would result in long-term significant beneficial socioeconomic impacts by providing NCA additional land to continue providing national cemetery burial benefits to regional Veterans and their families once the existing CNNC reaches its burial capacity.

No adverse health or safety risks to children are anticipated to result from expansion of the cemetery at the Site. Children would only be present at the cemetery as visitors. Construction areas would be secured to prevent unauthorized access by children from nearby areas. The construction contractor would limit and control construction dust and noise as discussed in Section 4, thereby minimizing adverse effects to children in the area.

3.12.6 Effects of the No Action Alternative

Under the No Action Alternative, the Site would likely continue to be unimproved agricultural and grassy land, with no socioeconomic change to the Site area. No short-term or long-term socioeconomic benefit to the Site area due to VA's action would occur.

Most importantly, the No Action Alternative would not enable NCA to continue to provide adequate regional burial sites commensurate with the long-term need for these services once the CNNC reaches its capacity, resulting in a potential significant adverse, long-term, impact to U.S. Veterans and their families. U.S. Veterans and their families residing in central Kentucky would have to travel longer distances the nearest national or state Veterans cemetery for interment and subsequent visits, at increased cost and time.

In addition, interment in a distance cemetery would reduce the ability for subsequent visits by Veteran families.

3.13 Community Services

The Site is located within the Jessamine County School District. The closest school to the Site is East Jessamine High School, which is located approximately eight miles north of the Site.

The Jessamine County Fire District provides fire protection services to the Site area. The nearest fire station is located approximately six miles north of the Site. Jessamine County also offers emergency medical services to the Site area. The Jessamine County Sheriff's Office provides police protection to the Site vicinity.

The nearest major medical facility, CHI Saint Joseph Health - Saint Joseph Jessamine Hospital, is located approximately nine miles north of the Site.

Public transportation is not currently provided to the Site vicinity.

Jessamine County Road Department and the Kentucky Transportation Cabinet (KYTC) provide road and bridge maintenance services in the Site vicinity.

Camp Nelson National Monument offers a regional and historic venue including the restored "White House" officers' quarters, annual Living History Weekend re-enactment event, educational/recreational trail, museum and interpretive center. The main facilities (visitor center area) are located approximately 3,000 feet northwest of the Site. Some walking trails associated with the National Monument are located within 1,000 feet northeast of the Site. There are no developed outdoor recreational facilities in the immediate vicinity of the Site. The closest facility is Memorial Softball Park, located approximately four miles north of the Site.

3.13.1 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would not result in impacts to community services.

The future expansion of the cemetery on the Site would have minimal community service impacts. No significant additional load is expected to be placed on the local fire or police departments as the result of the Proposed Action. Use of other public or community services as a result of the proposed cemetery expansion would be minor and consistent with the existing CNNC. The Proposed Action is expected to have a negligible impact on local public services.

3.13.2 Effects of the No Action Alternative

Under the No Action Alternative, the Site would likely remain vacant, unimproved land with no community services impacts.

3.14 Solid Waste and Hazardous Materials

Hazardous and toxic materials or substances are generally defined as materials or substances that pose a risk (through either physical or chemical reactions) to human health or the environment.

TTL conducted a Phase I Environmental Site Assessment (Phase I ESA) of the Site on behalf of VA in 2021. The Phase I ESA included a site visit, interviews with persons knowledgeable about the Site, a review of historic information, and review of local, state, and federal regulatory information for the Site and surrounding area. The Site has been unimproved agricultural and grassy land since at least 1905. The Phase I ESA identified no significant hazardous substance or petroleum handling or storage at the Site. In addition,

the Phase I ESA did not identify any evidence of petroleum or hazardous materials releases in the vicinity of the site that were considered likely to impact the Site. The Phase I ESA did not identify any recognized environmental conditions (RECs) associated with the Site.

3.14.1 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would not result in solid waste and hazardous materials impacts.

The future cemetery development could result in short-term impacts due to the increased presence and use of petroleum products and hazardous materials during construction of the cemetery. In addition, an increase in construction vehicle traffic would increase the possibility of a release of vehicle operating fluids (such as oil, diesel, gasoline, and antifreeze) and maintenance materials. As such, a minor, short-term adverse impact is possible. Implementation of standard construction BMPs (Section 4) would serve to ensure this impact is further minimized.

Future cemetery operations would include the storage and use of petroleum products and hazardous materials (such as diesel, oil, and gasoline) for the cemetery excavators and landscape maintenance equipment. In addition, following cemetery development, lawn fertilizers and lawn maintenance chemicals would be used in areas with turf grass. These chemicals would be stored, handled, and used in accordance with NCA policies and manufacturer application recommendations. No significant adverse long-term impacts during operation of the cemetery are anticipated; long-term operational solid wastes and hazardous materials would be managed in accordance with applicable federal and state laws and NCA procedures.

The development and operation of the expanded cemetery would not result in a substantial increase in the generation of solid or hazardous substances or wastes, increase the exposure of persons to hazardous or toxic substances, increase the presence of hazardous or toxic materials in the environment, or place substantial restrictions on property use due to hazardous waste, materials, or site remediation. As noted in Section 3.7.3, based on standard modern burial practices and VA's cemetery design guidance, it is unlikely that embalming fluid would be released into the soil or groundwater.

3.14.2 Effects of the No Action Alternative

Under the No Action Alternative, no development or changes to the Site by VA would occur. The Site would likely remain unimproved, mostly agricultural and grassy land for the foreseeable future with negligible solid waste and hazardous materials impacts.

3.15 Transportation and Parking

Access to CNNC is provided by US 27/ Danville Road, a north-south oriented, four-lane, divided highway located along the western boundary of the cemetery. US 27/ Danville Road has dedicated left and right turn lanes at the main entrance to the cemetery (Camp Nelson Cemetery Road). The main cemetery entrance intersection is unsignalized. During the 2021/2 expansion of CNNC, a secondary construction/maintenance access road to the cemetery was constructed. Access to the secondary entrance is provided by Danville Loop 2 Road, a two-lane, asphalt-paved road that runs parallel to the eastern side of US 27/ Danville Road north of CNNC. Access to Danville Loop 2 Road from US 27/Danville Road is provided by an unsignalized intersection located approximately 0.75-mile north of the main cemetery entrance.

On average, approximately 4 to 5 interments occur per each weekday at CNNC, with approximately 10 to 20 vehicles for each burial service. Burial services are scheduled throughout the day and typically do not coincide with peak morning and evening travel times. Traffic impacts associated with the funeral processions are minor, intermittent, and of short duration. VA estimates the cemetery receives approximately 300 visitors per week, on average.

Traffic in the Site area is regulated by the Jessamine County Road Department and KYTC, which also provide road maintenance services in the Site vicinity. The annual average daily traffic (AADT) volume along US 27/Danville Road in the vicinity of CNNC was reported to be 19,670 vehicles in 2021 (KYTC 2023). US 27/ Danville Road is estimated to operate at a Level of Service[1] (LOS) rating of C or better in the area of CNNC. Local roadway characteristics are shown in Table 3-7.

Table 3-7 Area Roadways

Type	Route	Direction	Road Width (feet)	Lanes	Average Daily Traffic (vehicles)	Estimated Level of Service
Principal Arterial - Other	Danville Road (US 27)	North-South	110 with turn lanes	4, plus turn lanes	19,670 (2021)	C or better
Traffic Volume Data: KYTC, 2021 Other Data Source: TTL Site Reconnaissance, December 2021						

3.15.1 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would not result in traffic, transportation, or parking impacts.

Construction traffic associated with the future cemetery expansion, consisting of trucks, workers' personal vehicles, and construction equipment, would temporarily increase traffic volumes in the local area, but would not likely cause long delays. It is expected that the secondary access drive used for the 2021/2 cemetery expansion area would be used by construction traffic to prevent disruption of cemetery operations. Only minor, future short-term adverse transportation impacts are anticipated.

It is anticipated that the expanded cemetery at the Site would be accessed via the current main CNNC entrance from US 27/ Danville Road through a new internal cemetery road that extends to the Site. No modifications to US 27/ Danville Road or the overall cemetery traffic patterns are anticipated with the future cemetery expansion.

The future cemetery expansion at the Site would increase the burial capacity and, consequently, the length of time (years) that interments are conducted at the cemetery, but would not increase the rate of burials, burial vehicle trips, or burial parking demand. VA anticipates the burial rate at the expanded cemetery will remain approximately 4 to 5 interments per each weekday, with approximately 10 to 20 vehicles for each burial service. As the cemetery is enlarged and the total number of interments increases, the number of cemetery visitors could increase. However, VA anticipates the future number of cemetery visitors will remain similar to current levels. Consequently, the future cemetery expansion would have only minor traffic impacts.

No parking impacts are anticipated. The expanded cemetery would be designed and constructed to accommodate all cemetery parking within the cemetery grounds.

[1] **Level of Service** – LOS represents a set of qualitative descriptions of a transportation system's performance. The Federal Highway Administration Highway Capacity Manual defines levels of service for intersections and highway segments, with ratings that range from A (best) to F (worst). Generally, a LOS of D or higher is considered acceptable by transportation planning agencies.

3.15.2 Effects of the No Action Alternative

Under the No Action Alternative, the Site would remain unimproved, mostly agricultural and grassy land with no traffic or parking impacts.

3.16 Utilities

The Site area is serviced by potable water (City of Nicholasville), electric (Blue Grass Energy), natural gas (Delta Natural Gas), and telecommunication utilities, with service lines for each located along US 27/ Danville Road. The CNNC is connected to these utilities. No utilities currently service the Site. Municipal sanitary sewerage service is not available in the Site area; CNNC currently uses an on-site septic system.

3.16.1 Effects of the Proposed Action

VA's acquisition of the Site and initial holding of the property prior to cemetery development would not result in utility impacts.

As part of the future development of the expanded cemetery at the Site, new utility lines (electric and water) would likely be extended onto the Site from the existing cemetery. Utility use and connections for the expanded cemetery would be determined during the cemetery design. The primary utility need would be irrigation water to maintain the landscaped areas of the cemetery. CNNC is currently irrigated using potable water supplied by the City of Nicholasville. During the cemetery design, VA would coordinate with the City of Nicholasville to determine if the municipal water system has sufficient capacity to meet the irrigation needs of the expanded cemetery at the Site. If the municipal water system does not have the capacity, VA would likely install an irrigation well and/or use water collected in stormwater retention ponds for irrigation. NCA's modern cemetery development practices include the use of native grasses and low-moisture tolerant vegetation species, to the extent possible, thereby reducing the need for irrigation.

Utility impacts would be less than significant.

3.16.2 Effects of the No Action Alternative

Under the No Action Alternative, no utility impacts by VA would occur. The Site would likely remain unimproved land with no utility use.

3.17 Environmental Justice

In 1994, EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued to focus attention of federal agencies on human health and environmental conditions in minority and low-income communities and to ensure that disproportionately high and adverse human health or environmental effects on these communities are identified and addressed. The USEPA-developed EJSCREEN, an environmental justice mapping and screening internet application, was used to obtain information regarding minority and low-income populations in the Site area. A two-mile buffer boundary was used because of the low population density in the Site area.

The EJSCREEN results indicate the Site vicinity includes a lower minority population (13 percent) than the State of Kentucky as a whole (16 percent) and a much lower low-income population (20 percent) than the State of Kentucky (36 percent).

3.17.1 Effects of the Proposed Action

The Proposed Action would have negligible environmental justice effects. The Site is not located in an area with elevated low-income or minority populations and the Proposed Action would have only minor impacts

on the residents in the area. During future cemetery construction, effects on nearby residential land uses, such as through noise and dust, would be limited and controlled through BMPs described in Section 4

3.17.2 Effects of the No Action Alternative

Under the No Action Alternative, no development by VA would occur at the Site. The Site would likely remain unimproved mostly agricultural and grassy land and there would be no direct environmental justice effects. However, VA would not secure land necessary to meet its long-term cemetery needs for the region. The absence of a national cemetery in central Kentucky after the CNNC reaches its capacity would have a disproportionate effect on low-income Veterans and their families in the region, who are less able to afford travel to a more distant national cemetery.

3.18 Cumulative Impacts

The CEQ Regulations define cumulative impacts as those which "result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions," (40 CFR 1508.7). Cumulative impact analysis captures the effects that result from the Proposed Action in combination with the effects of other actions taken before, during, or after the Proposed Action in the same geographic area.

The Site is situated in a rural area of mostly unimproved and agricultural land and scattered residential properties located approximately seven miles south of center of Nicholasville. Existing CNNC properties are located directly north, south and west of the Site. The area east of the Site is unimproved grassy land. Areas west and north of current CNNC properties are mostly improved, grassy land that is part of Camp Nelson National Monument, managed by the NPS. The area south of the CNNC is mostly unimproved, grassy/agricultural land with a barn. The area surrounding the Site has been largely unchanged for the past 50 years. Between 1952 and 1979, the section of US 27/ Danville Road located south of the cemetery entrance was re-routed and expanded. An industrial warehouse building and six warehouses used for aging bourbon were also constructed on the western side of US 27/ Danville Road across from the cemetery entrance during this time period. Since that time, a few additional residences have been constructed along US 27/ Danville Road. Camp Nelson National Monument was declared a National Monument and transferred to the control of NPS in 2018. In the 2000s, prior to the transfer to the NPS, the current National Monument visitor center and barracks buildings were constructed. Other than the recent expansion of CNNC west of the Site in 2021/2, no other notable new development has occurred in the Site area.

Considerable mostly undeveloped, grassy or agricultural land is present in the Site area that could be developed in the future; however, development is likely to continue at a slow pace, based on the rural character of the area. No development plans for off-site properties in the immediate vicinity of the Site were identified, other than the continued phased development of CNNC.

3.18.1 Effects of the Proposed Action

The Proposed Action would result in the impacts to the Site area identified in Sections 3.3 through 3.17. These include potential adverse impacts to aesthetics, air quality, geology and soils, hydrology and water quality, wildlife and habitat, noise, solid waste and hazardous materials, transportation, and utilities. All of these potential impacts are less than significant and would be further reduced through careful coordination and implementation of general BMPs; management, minimization, and avoidance measures; and compliance with regulatory requirements, as identified in Section 4. Given the nature of the Proposed Action, the limited recent development in the Site area, and the unlikely future large-scale development in the area surrounding the Site, no significant cumulative adverse effects to any of these resource areas are anticipated. Other potential development in the Site area would be subject to zoning requirements and site

plan approval by Jessamine County, which would serve to maintain and control regional potentially cumulative impacts.

The cumulative impacts of the Proposed Action in combination with the CNNC and its phased expansion would be less than significant. The Proposed Action would provide NCA additional land to increase the number of CNNC development phases and extend the longevity of the cemetery for new interments, but would not increase the rate of interments or the rate of cemetery development. Supplemental NEPA analysis will be conducted for each phase of cemetery expansion, resulting in the identification and implementation of phase-specific management, minimization and avoidance measures to reduce potential adverse effects. This process would minimize potential cumulative impacts.

No significant adverse cumulative impacts to the environment, induced by the Proposed Action, are anticipated within the region. Coordination between VA, federal and state agencies, Jessamine County, and community representatives would serve to manage and control cumulative effects within the region, including managing regional transportation increases with adequate infrastructure. Implementation of local land use and resource management plans would serve to control the extent of environmental impacts, and continued planning would ensure future socioeconomic conditions maintain the quality of life the area's residents currently enjoy. Implementation of effective resource management plans and programs should minimize or eliminate any potential cumulative degradation of the natural ecosystem, cultural or human environment within the region of influence of the Proposed Action.

3.18.2 Effects of the No Action Alternative

Under the No Action Alternative, no cumulative impacts are anticipated, as the Site would likely remain vacant, unimproved mostly agricultural land.

3.19 Potential for Generating Substantial Public Controversy

As discussed in Sections 5 and 6, VA has solicited input from the pubic and various federal, state, and local government agencies regarding the Proposed Action. No input was received from the public or government agencies in response to the scoping notices. VA published and distributed the Draft EA for a 30-day public comment period. No comments of opposition or controversy related to the Proposed Action were received.

4.0 MANAGEMENT, MINIMIZATION, AND MITIGATION MEASURES

This section summarizes the management, minimization, and avoidance measures, and mitigation measures (if necessary), that are proposed to minimize and maintain potential adverse effects of the Proposed Action at acceptable, less-than-significant levels. A supplemental NEPA analysis will be conducted for the construction and operation of the expanded cemetery at the Site, during the site design. The management, minimization, and avoidance measures in this section would be included into the future process and analysis.

Per established protocols, procedures, and requirements, VA and its contractors would implement BMPs and would satisfy all applicable regulatory requirements in association with the design, construction, and operation of the proposed expanded national cemetery at the Site. These "management measures" are described in this EA and are included as components of the Proposed Action. "Management measures" are defined as routine BMPs and/or regulatory compliance measures that are regularly implemented as part of proposed activities, as appropriate, across Kentucky. In general, implementation of such management measures would maintain impacts at acceptable levels for all resource areas analyzed. These are different from "mitigation measures," which are defined as project-specific requirements, not routinely implemented as part of development projects, necessary to reduce identified potentially significant adverse environmental impacts to less-than-significant levels.

The routine BMPs, and management, minimization, and avoidance measures summarized in Table 4-1 would be included by VA in the Proposed Action to minimize and maintain adverse effects at less-than-significant levels.

Table 4-1. Management, Minimization, and Avoidance Measures Incorporated into the Proposed Action

Technical Resource Area	Measure
Aesthetics	Develop the cemetery in concert with the Site's natural topography. Maintain some natural areas.
	Comply, to the extent practicable, with the development standards of Jessamine County Ordinances during the cemetery design.
Air Quality	Use appropriate dust suppression methods (such as the use of water, dust palliative, covers, suspension of earth moving in high wind conditions) during onsite construction activities.
	Stabilize disturbed areas through re-vegetation or mulching if the areas would be inactive for several weeks or longer. Specific requirements would be identified with the Stormwater Pollution Prevention Plan.
	Implement measures to reduce diesel particulate matter emissions from construction equipment, such as reducing idling time and using newer equipment with emissions controls.

Technical Resource Area	Measure
Cultural and Historic Resources	Design and utilize a construction equipment access route that avoids potential impacts to Camp Nelson National Monument.
	Share cemetery design information with the Kentucky State Historic Preservation Office (KY SHPO), National Park Service – Camp Nelson National Monument and other interested consulting parties at the approximately 30%, 60% and 90% design stages for review and comment.
	Should potentially historic or culturally significant items be discovered during project construction, the construction contractor would immediately cease work until VA, appropriate Secretary of the Interior (SOI)-qualified professional(s), (KY SHPO), Indian tribes and other consulting parties are contacted to properly identify, evaluate, and appropriately treat discovered items in accordance with applicable state and federal laws (e.g., 36 CFR § 800.13).
Geology, Topography, and Soils	Control soil erosion and sedimentation impacts during construction by implementing erosion prevention measures and complying with the Kentucky Pollutant Discharge Elimination System (KPDES) KYR10 Stormwater Construction General Permit permitting process. Implement effective controls per a site-specific Stormwater Pollution Prevention Plan (SWPPP). The KPDES permit would require stormwater runoff and erosion management using BMPs, such as earth berms, vegetative buffers and filter strips, and spill prevention and management techniques. The construction contractor would implement the sedimentation and erosion control measures specified in the KPDES permit and the SWPPP to protect surface water quality.
	Complete a Farmland Conversion Impact Rating (Form AD-1006) in conjunction with United States Department of Agriculture – Natural Resources Conservation Service (USDA NRCS) for the Site.
	Design the cemetery to avoid disturbance or development within the wooded sinkhole area in the southern portion of the Site. Maintain a buffer of undeveloped land around the sinkhole.
	Complete a geotechnical evaluation of potential karst conditions and sinkholes at the Site during the cemetery expansion design and development. Incorporate geotechnical recommendations into the cemetery design, as necessary, to stabilize cemetery development areas and reduce potential future sinkhole development. Geotechnically remediate subsurface voids encountered during cemetery construction, as necessary.

Technical Resource Area	Measure
Hydrology and Water Quality	Control soil erosion and sedimentation impacts during construction by complying with the NPDES permit and the SWPPP.
	Design cemetery to prevent stormwater runoff from entering the sinkhole located in the southern portion of the Site.
	Design improvements in accordance with the requirements of Energy Independence and Security Act Section 438 with respect to stormwater runoff quantity and characteristics.
	Ensure the cemetery design includes sufficient on-site stormwater management so as not to adversely affect the water quantity/quality in receiving waters and/or offsite areas.
	Use native, low-moisture tolerant species to the extent practicable to reduce the need for irrigation.
Wildlife and Habitat	Design the cemetery to avoid disturbance or development within the wooded sinkhole area in the southern portion of the Site. Maintain a buffer of undeveloped land around the sinkhole.
	Re-evaluate the potential for protected species at the Site during the future cemetery expansion design. Coordinate and consult with USFWS and KDFWR, and conduct pre-development biological surveys, as necessary.
	Conduct tree clearing between October 1 and through March 31, outside the Indiana bat and northern-long eared bat roosting season. If tree clearing/removal activities cannot be conducted outside of bat roosting season, conduct a summer presence/absence survey to confirm protected bats are not present before tree clearing. Consult with USFWS to prior to tree clearing.
	Use native species to the extent practicable when re-vegetating land disturbed by construction to avoid the potential introduction of non-native or invasive species.

Technical Resource Area	Measure
Noise	Limit, to the extent possible, construction and associated heavy truck traffic to occur between 7:00 a.m. and 6:00 p.m. on Monday through Friday, or during normal, weekday, work hours.
	Locate stationary operating equipment as far away from sensitive receptors as possible.
	Shut down noise-generating heavy equipment when it is not needed.
	Maintain equipment per manufacturer's recommendations to minimize noise generation.
	Encourage construction personnel to operate equipment in the quietest manner practicable (such as speed restrictions, retarder brake restrictions, and engine speed restrictions).
Land Use	None required.
Wetlands, Floodplains, and Coastal Zone Management	None required.
Socioeconomics	Secure construction areas to prevent unauthorized access by children from nearby residential areas.
Community Services	None required.
Solid Waste and Hazardous Materials	Comply with applicable federal and state laws governing the use, generation, storage, transportation, and disposal of solid waste and hazardous materials.

Technical Resource Area	Measure
Transportation and Parking	Coordinate with Jessamine County Road Department and KYTC, as applicable, during the cemetery design to identify and implement roadway improvements in the vicinity of the Site, if necessary.
	Ensure cemetery construction activities do not adversely affect traffic flow on local roadways; construction would be timed to avoid peak travel hours.
	Ensure debris and/or soil is not deposited on local roadways during the construction activities.
Utilities	Consult with the Jessamine County to determine if the municipal water system has sufficient capacity for the expanded cemetery irrigation.
	Plant low moisture tolerant species suited to Kentucky to the extent possible to minimize irrigation needs.
Environmental Justice	None required.

5.0 PUBLIC PARTICIPATION

VA invites public participation in decision-making on new proposals through the NEPA process. Public participation with respect to decision-making on the Proposed Action is guided by 38 CFR Part 26, VA's regulations for implementing NEPA. Additional guidance is provided in VA's *NEPA Interim Guidance for Projects* (VA 2010). Consideration of the views and information of all interested persons promotes open communication and enables better decision-making. Members of the public with a potential interest in the Proposed Action are encouraged to participate. A record of the public involvement associated with this EA is provided in Appendix F.

5.1 Scoping

VA initiated the NEPA public scoping process for the Proposed Action in February 2022, which included a public notice published in the Lexington Herald-Leader, a local newspaper of general circulation, on February 13 and 14, 2022. No public comments or input were received in response to the scoping notice.

5.2 Public Review

VA published and distributed the Draft EA for a 30-day public comment period, as announced by a Notice of Availability (NOA) published in the Lexington Herald-Leader, a local newspaper of general circulation, on September 6 and 10, 2023. Copies of the Draft EA were made available for public review at the Jessamine County Public Library located at 600 S. Main Street in Nicholasville, Kentucky, the CNNC Administrative Building, and on the VA Office of Construction and Facilities Management Environmental Program website: (https://www.cfm.va.gov/environmental/index.asp). VA also emailed notification of the Draft EA for review and comment, with a link to the Draft EA on VA's website, to each of the government agencies, organizations, and Indian tribes that were contacted during the NEPA scoping and Section 106 consultation. The Kentucky Heritage Council responded that they had no comments on the Draft EA (Appendix F). VA did not receive other government agency, Indian tribe, or public comments regarding the Draft EA.

6.0 AGENCIES AND PERSONS CONSULTED

6.1 Agency Coordination

Agencies and organization consulted for this EA include:

- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture Natural Resource Conservation Service
- Kentucky Energy and Environment Cabinet (various divisions/departments)
- Kentucky Department of Fish & Wildlife Resources
- Kentucky Heritage Council (State Historic Preservation Office (KY SHPO))
- Kentucky Transportation Cabinet
- Jessamine County Planning and Zoning Department
- Jessamine County Road Department
- Nicholasville/Jessamine County Parks and Recreation
- Jessamine County Historical Society
- Camp Nelson National Monument (National Park Service (NPS))
- The Camp Nelson Restoration and Preservation Foundation

VA initiated the NEPA scoping process for the Proposed Action in February 2022, which included emailing the agencies/organizations scoping letters with a request for information and comment based on the available information regarding the Site and the Proposed Action. VA did not receive any responses to the NEPA scoping requests.

6.2 National Historic Preservation Act Section 106 Consultation

In March 2022, VA initiated NHPA Section 106 consultation with the ACHP, KY SHPO, Camp Nelson National Monument (NPS), Jessamine County Historical Society, Jessamine County Planning and Zoning Department, The Camp Nelson Restoration and Preservation Foundation, and two federally recognized Indian tribes with possible geographic or cultural affiliation with the Site area. The Section 106 consultation letters included a description of VA's proposed undertaking (Proposed Action), the definition of the APE, identification of historic properties (the results of the ICRIP), and VA's finding of effects on historic properties (no historic properties affected).

In April 2022, KY SHPO responded that while most of the Site had been previously surveyed for archaeological sites, the southern portion of the project area had not been surveyed. KY SHPO recommended an archaeological survey be conducted on the portion of the Site that had not been previously surveyed (approximately four acres). KY SHPO also requested a more in-depth report that evaluates the possible effects on above ground resources. In May 2022, NPS responded they were interested in consulting on the undertaking during the development of conceptual plans for the expansion, including the identification of how oversized equipment would access the Site during construction. No other agencies or Tribes have responded or elected to participate in the Section 106 consultation process.

In November 2022, a Phase I Archaeological Survey was conducted for the southern portion of the Site that had not previously been surveyed. No archaeological sites were found. In May 2023, an Architectural Resources Report was prepared that documents the above ground resources in the Site area and the potential effects of the undertaking on these resources. The report found that the undertaking would have no adverse effect on historic properties.

In June 2023, VA provided the requested archaeological survey and architectural resources report to KY SHPO and NPS and again requested concurrence on a finding of no adverse effect to historic properties. On June 28, 2023, NPS concurred with VA's finding of no adverse effect to historic properties. On June 29, 2023, the KY SHPO requested copies of any other consulting parties' comments regarding the undertaking received by VA and requested that VA resubmit the architectural resources report with archaeological information and mapping removed. KY SHPO stated that they would provide a single letter with combined architectural and archaeological comments upon receipt of the requested information. VA submitted the requested information and revised report to KY SHPO on July 17, 2023. VA did not receive a response to its July 17, 2023 submission to KY SHPO before the close of the 30-day review period. As the KY SHPO did not provide a response and no consulting party objected within the 30-day review period, VA is opting to proceed with implementation of the undertaking in accordance with the finding as documented, pursuant to 36 CFR 800.5(c)(1). On August 22, 2023, after the close of the 30-day review period, KY SHPO provided a response to VA via email concurring with VA's finding of no adverse effect on the condition that impacts to the stone fence will be avoided and consultation on design will occur at multiple stages during the design phase. As proposed in the revised reports submitted on July 17, 2023, NCA will share plans for the cemetery at approximately the 30%, 60%, and 90% design stages with the KY SHPO and any other consulting parties that request to see them, for review and comment, to ensure that the fence is not adversely affected and to avoid temporary adverse effects to historic properties during construction (e.g., finding a route for construction vehicles to access the property when implementing the undertaking that will avoid impacts to the monument and national cemetery). NCA will take any timely comments received into consideration in finalizing the plans.

Written Section 106 correspondence with KY SHPO, NPS, and other consulting parties is provided in Appendix C.

6.3 Native American Consultation

VA initiated consultation with two federally recognized Indian tribes as part of this NEPA process, in accordance with 36 CFR 800.2 and EO 13175, *Consultation and Coordination with Indian Tribal Governments*. These tribes, identified as having possible geographic or cultural affiliation with the Site area, were invited by VA to participate in the Section 106 process in March 2022. Tribes consulted include:

- The Cherokee Nation
- The Eastern Band of Cherokee Indians

No tribes responded or elected to participated in the Section 106 consultation process. Written Section 106 correspondence with the Indian tribes is provided in Appendix C.

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National Oceanic and Atmospheric Administration Coastal Zones: https://coast.noaa.gov/czm/mystate/

National Wetlands Inventory: https://www.fws.gov/wetlands/Data/mapper.html

Kentucky Department of Fish & Wildlife Resources: http://app.fw.ky.gov/speciesinfo/speciesinfo.asp

Office of Kentucky Nature Preserve Rare Plant Database: http://eppcapp.ky.gov/nprareplants/index.aspx

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US Environmental Protection Agency: https://www.epa.gov

US Fish and Wildlife Service: https://www.fws.gov

US Geological Survey: https://store.usgs.gov/map-locator

Various mapping tools: www.maps.google.com, www.google.earth.com, etc.

9.0 GLOSSARY

100-Year Flood – A flood event of such magnitude that it occurs, on average, every 100 years; this equates to a one percent chance of it occurring in a given year.

Aesthetics – Pertaining to the quality of human perception of natural beauty.

Ambient - The environment as it exists around people, plants, and structures.

Ambient Air Quality Standards - Those standards established under the Clean Air Act to protect health and welfare.

Aquifer - An underground geological formation containing usable amounts of groundwater which can supply wells and springs.

Asbestos - Incombustible, chemical-resistant, fibrous mineral forms of impure magnesium silicate used for fireproofing, electrical insulation, building materials, brake linings, and chemical filters. Asbestos is a carcinogenic substance.

Attainment Area - Region that meets the National Ambient Air Quality Standard (NAAQS) for a criteria pollutant under the Clean Air Act.

Bedrock - The solid rock that underlies all soil, sand, clay, gravel and loose material on the earth's surface.

Best Management Practices (BMPs) - Methods, measures, or practices to prevent or reduce the contributions of pollutants to U.S. waters. Best management practices may be imposed in addition to, or in the absence of, effluent limitations, standards, or prohibitions (AR 200-1).

Commercial land use – Land use that includes private and public businesses (retail, wholesale, etc.), institutions (schools, churches, etc.), health services (hospitals, clinics, etc.), and military buildings and installations.

Contaminants - Any physical, chemical, biological, or radiological substances that have an adverse effect on air, water, or soil.

Council on Environmental Quality (CEQ) - An Executive Office of the President composed of three members appointed by the President, subject to approval by the Senate. Each member shall be exceptionally qualified to analyze and interpret environmental trends, and to appraise programs and activities of the federal government. Members are to be conscious of and responsive to the scientific, economic, social, aesthetic, and cultural needs of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

Criteria Pollutants - The Clean Air Act of 1970 required the USEPA to set air quality standards for common and widespread pollutants in order to protect human health and welfare. There are six "criteria pollutants": ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), lead (Pb), nitrogen dioxide (NO_2), and particulate matter.

Cultural Resources - The physical evidence of our Nation's heritage. Included are: archaeological sites; historic buildings, structures, and districts; and localities with social significance to the human community.

Cumulative Impact - The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Decibel (dB) - A unit of measurement of sound pressure level.

Direct Impact - A direct impact is caused by a Proposed Action and occurs at the same time and place.

Emission - A release of a pollutant.

Endangered Species - Any species which is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment (EA) - An EA is a publication that provides sufficient evidence and analyses to show whether a proposed system will adversely affect the environment or be environmentally controversial.

Erosion - The wearing away of the land surface by detachment and movement of soil and rock fragments through the action of moving water and other geological agents.

Agricultural land - Cropland, pastures, meadows, and planted woodland.

Fauna - Animal life, especially the animal characteristics of a region, period, or special environment.

Flora - Vegetation; plant life characteristic of a region, period, or special environment.

Floodplain - The relatively flat area or lowlands adjoining a river, stream, ocean, lake, or other body of water that is susceptible to being inundated by floodwaters.

Fugitive Dust - Particles light enough to be suspended in air, but not captured by a filtering system. For this document, this refers to particles put in the air by moving vehicles and air movement over disturbed soils at construction sites.

Geology - Science which deals with the physical history of the earth, the rocks of which it is composed, and physical changes in the earth.

Groundwater - Water found below the ground surface. Groundwater may be geologic in origin and as pristine as it was when it was entrapped by the surrounding rock or it may be subject to daily or seasonal effects depending on the local hydrologic cycle. Groundwater may be pumped from wells and used for drinking water, irrigation, and other purposes. It is recharged by precipitation or irrigation water soaking into the ground. Thus, any contaminant in precipitation or irrigation water may be carried into groundwater.

Hazardous Substance - Hazardous materials are defined within several laws and regulations to have certain meanings. For this document, a hazardous material is any one of the following:

- Any substance designated pursuant to section 311 (b)(2)(A) of the Clean Water Act.
- Any element, compound, mixture, solution, or substance designated pursuant to Section 102 of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).
- Any hazardous substance as defined under the Resource Conservation and Recovery Act (RCRA).
- Any toxic pollutant listed under TSCA.
- Any hazardous air pollutant listed under Section 112 of the Clean Air Act.
- Any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to Subsection 7 of TSCA.

The term does not include: 1) Petroleum, including crude oil or any thereof, which is not otherwise specifically listed or designated as a hazardous substance in a above. 2) Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). A list of hazardous substances is found in 40 CFR 302.4.

Hazardous Waste - A solid waste which, when improperly treated, stored, transported, or disposed of, poses a substantial hazard to human health or the environment. Hazardous wastes are identified in 40 CFR 261.3 or applicable foreign law, rule, or regulation.

Hazardous Waste Storage - As defined in 40 CFR 260.10, ". . . the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere".

Hydric Soil - A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen-lacking) conditions that favor the growth and regeneration of hydrophytic vegetation. A wetland indicator.

Indirect Impact - An indirect impact is caused by a Proposed Action that occurs later in time or farther removed in distance but is still reasonably foreseeable. Indirect impacts may include induced changes in the pattern of land use, population density or growth rate, and related effects on air, water, and other natural and social systems. For example, referring to the possible direct impacts described above, the clearing of trees for new development may have an indirect impact on area wildlife by decreasing available habitat.

Industrial Land Use – Land uses of a relatively higher intensity that are generally not compatible with residential development. Examples include light and heavy manufacturing, mining, and chemical refining.

Isolated Wetland – Areas that meet the wetland hydrology, vegetation, and hydric soil characteristics, but do not have a direct connection to the Waters of the U.S.

Jurisdictional Wetland – Areas that meet the wetland hydrology, vegetation, and hydric soil characteristics, and have a direct connection to the Waters of the U.S. These wetlands are regulated by the USACE.

Listed Species - Any plant or animal designated by a state or the federal government as threatened, endangered, special concern, or candidate species.

Mitigation - Measures taken to reduce adverse impacts on the environment.

Mobile Sources - Vehicles, aircraft, watercraft, construction equipment, and other equipment that use internal combustion engines for energy sources.

Monitoring - A process of inspecting and recording the progress of mitigation measures implemented.

National Ambient Air Quality Standards (NAAQS) - Nationwide standards set up by the USEPA for widespread air pollutants, as required by Section 109 of the Clean Air Act. Currently, six pollutants are regulated by primary and secondary NAAQS: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide.

National Environmental Policy Act (NEPA) - U.S. statute that requires all federal agencies to consider the potential effects of major federal actions on the human and natural environment.

Non-attainment Area - An area that has been designated by the EPA or the appropriate State air quality agency as exceeding one or more national or state ambient air quality standards.

Parcel - A plot of land, usually a division of a larger area.

Particulates or Particulate Matter - Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog found in air.

Physiographic Region - A portion of the Earth's surface with a basically common topography and common morphology.

Pollutant - A substance introduced into the environment that adversely affects the usefulness of a resource.

Potable Water - Water which is suitable for drinking.

Prime Agricultural land - A special category of highly productive cropland that is recognized and described by the U.S. Department of Agriculture's Natural Resource Conservation Service and receives special protection under the Surface Mining Law.

Remediation - A long-term action that reduces or eliminates a threat to the environment.

Riparian Areas - Areas adjacent to rivers and streams that have a high density, diversity, and productivity of plant and animal species relative to nearby uplands.

Sensitive Receptors - Include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers.

Significant Impact - According to 40 CFR 1508.27, "significance" as used in NEPA requires consideration of both context and intensity.

Context. The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the Proposed Action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.

Soil - The mixture of altered mineral and organic material at the earth's surface that supports plant life.

Solid Waste - Any discarded material that is not excluded by section 261.4(a) or that is not excluded by variance granted under sections 260.30 and 260.31.

Threatened species - Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Topography - The relief features or surface configuration of an area.

Toxic Substance - A harmful substance which includes elements, compounds, mixtures, and materials of complex composition.

Waters of the United States - Include the following: Territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters.

Watershed - The region draining into a particular stream, river, or entire river system.

Wetlands - Areas that are regularly saturated by surface or groundwater and, thus, are characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include swamps, bogs, fens, marshes, and estuaries.

Wildlife Habitat - Set of living communities in which a wildlife population lives.