

**FINAL**  
**Supplemental Environmental Assessment**  
**Proposed Construction and Operation of the**  
**Phase 5 Expansion at the**  
**Indiantown Gap National Cemetery**  
**Annville, Lebanon County, Pennsylvania**



**US Department of Veterans Affairs**  
**425 I Street, NW**  
**Washington, DC 20001**

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## EXECUTIVE SUMMARY

In this Supplemental Environmental Assessment (SEA), the U.S. Department of Veterans Affairs (VA), National Cemetery Administration (NCA) identifies, analyzes, and documents the potential physical, environmental, cultural, and socioeconomic impacts associated with the Proposed Action to construct and operate the Phase 5 Expansion at the Indiantown Gap National Cemetery (IGNC) located in Annville, Lebanon County, Pennsylvania.

IGNC covers approximately 677 acres, of which approximately 245 acres were developed for cemetery phases 1, 2, 3, and 4, between 1979 and 2017, providing a total of 57,000 interred sites as of 2020, as well as memorial areas, a public information center/administration building, a maintenance facility, roadways, irrigation systems, and other supporting infrastructure.

Due to depletion of the existing gravesite capacity, VA determined that new burial capacity is required to extend the longevity of IGNC and to provide future generations of eligible Veterans and their families with long-term, reasonable access to burial benefits at a National Cemetery in the east central Pennsylvania region.

### Purpose and Need

The *purpose* of the Proposed Action is to enable NCA to extend by approximately 15 years the longevity of interment benefits to eligible Veterans and their families by increasing interment capacity at IGNC.

The Proposed Action is *needed* to address gravesite depletion of the existing interment capacity at IGNC.

### Alternatives

VA prepared this SEA to evaluate the potential impacts of implementing the Proposed Action. This SEA also evaluates the potential impact of a “No Action” alternative, defined as not implementing the Proposed Action and maintaining conditions at IGNC as they currently exist. The No Action alternative also provides a baseline for comparison of potential impacts against which the Proposed Action can be evaluated. The two alternatives are summarized below:

- The *Proposed Action* is to construct and operate the Phase 5 expansion at IGNC. Under the Proposed Action, Phase 5 would be constructed over a period of approximately 30 months. The Phase 5 expansion would provide new burial sections, new roadways, a new groundwater supply well, a new honor guard building, and associated improvements to existing physical infrastructure including the satellite maintenance facility, roadways, landscaping, and site furnishings. The Phase 5 expansion would provide approximately 15 years of additional interment capacity at IGNC. Thus, the Proposed Action meets the purpose and need for action. The need for subsequent, potential future expansion phases would be evaluated by VA every 8-10 years, with separate NEPA analyses completed prior to implementing any future phase.
- The *No Action* alternative is to maintain IGNC as it presently exists and not implement the Proposed Action. Under the No Action alternative, VA would not add new burial capacity at IGNC or complete infrastructure improvements described for the Phase 5 expansion. The longevity of IGNC would not be extended, and future generations of eligible Veterans and their families increasingly would not have long-term, reasonable access to burial benefits at a National Cemetery in the east central Pennsylvania region. In many cases, this

would require Veterans and their families to travel more than 75 miles to another National Cemetery with available capacity or to use a private cemetery. Veterans and their families who must resort to private burials are deprived of the honor and privilege bestowed upon them by a grateful nation for their service to their country. Thus, once capacity at IGNC is reached, VA would no longer comply with the requirements of the *Service Members Civil Relief Act*. Thus, the No Action alternative does not meet the purpose and need for action.

**Affected Environment and Environmental Consequences**

The following table summarizes the potential environmental impacts associated with implementing the Proposed Action or the No Action alternative.

Resource / Issue	Proposed Action	No Action
Aesthetics	Short-term, direct, less-than-significant adverse impact during construction due to the use and presence of heavy construction equipment for land clearing, grading, road and building construction, and other improvements. Direct, long-term, moderately beneficial aesthetic impact from the expansion of the park-like setting in the Phase 5 expansion area.	None.
Air Quality	Short-term, direct, negligible, adverse impact from construction equipment and construction vehicle emissions, as well as fugitive dust generation. Long-term, direct, negligible adverse impact from increased visitors and maintenance activities during operation.	None.
Cultural and Historical Resources	Potential for less-than-significant adverse impacts from inadvertently encountering previously unknown cultural resources. Implementation of an inadvertent discovery plan and protocols would maintain potential impacts at less-than-significant adverse levels.	None.
Geology, Topography, and Soils	Short-term, direct, negligible adverse impact on geology due to the potential to encounter and remove shallow bedrock in construction areas. Long-term, direct, less-than-significant adverse impact on topography due to grading for burial areas and roads. Short-term, direct, less-than-significant adverse impact on soil due to potential erosion during construction; short-term, direct, negligible adverse impact during operation due to soil erosion. Soil impacts would be minimized through NPDES-permit-required BMPs.	None.
Hydrology and Water Quality	Long-term, direct, less-than-significant adverse impact on surface water during construction from the installation of a 50-foot long and 7-foot-wide culvert to bridge one stream within the Phase 5 expansion area. Long-term, direct, negligible adverse impact during operation from potential sedimentation of run-off.	None.
Wetlands, Floodplains, and Coastal Zone Management	Long-term, direct, less-than-significant adverse impacts to wetlands from filling in the 0.02-acre wetland for the proposed culvert to bridge stream. Implement USACE 404 permit requirements and obtain PADEP 401 permit to prior to construction. The Proposed Action is outside of 100- and 500-year floodplains and not within the PA-defined coastal zone or coastal nonpoint boundary and thus would have no impact on these resources.	None.

<b>Resource / Issue</b>	<b>Proposed Action</b>	<b>No Action</b>
Habitat and Wildlife	Short- and long-term, direct, less-than-significant adverse impacts on terrestrial wildlife species and habitat due to disturbance during construction and long-term conversion of habitat to landscaped grounds. No impact to Northern long-eared bat and Indian bat species due to implementing USFWS-specified avoidance measures including time-of-year-restrictions on tree clearing. No impact to bog turtle due to confirmed absence from Phase 5 expansion area and implementing USFWS-specified avoidance measures when working near potential bog turtle habitat in other developed areas of IGNC.	None.
Utilities	Long-term, direct, less-than-significant adverse impact due to new well and increased groundwater withdrawal to supply irrigation water for newly landscaped grounds.	None.
Noise	Short-term, direct, less-than-significant adverse impact from construction noise on visitors and off-site receptors. Short-term, direct, negligible adverse impacts to receptors from routine operational maintenance activities within the Phase 5 expansion area.	None.
Transportation and Parking	Short-term, direct, negligible adverse impact on transportation and parking due to construction vehicles on area roadways during the construction phase. Long-term, direct, moderate beneficial impact by constructing a new Honor Guard building and parking area to improve vehicle and pedestrian circulation issues.	None.
Socioeconomics	Short-term, direct, less-than-significant beneficial impact on the local economy from construction employment and material purchases. Long-term, direct and indirect, negligible beneficial impact during operations from increased visitors, potential increase in spending on area services, and avoiding visitors' costs to travel to another National Cemetery outside of east central PA.	Negligible adverse impact due to increased costs for families and visitors once existing burial capacity is reached at IGNC, requiring burial at a private cemetery or travel to a National Cemetery outside of east central PA.
Community Services	Long-term, direct, significant beneficial impact due to increased burial capacity at and longevity of IGNC.	Long-term, direct, significant adverse impact due to lack of burial opportunities at IGNC or another National Cemetery with available interment capacity within 75 miles of east central PA
Solid Waste and Hazardous Materials	Short-term, direct, negligible adverse impacts from generation of construction debris. Long-term, direct, negligible adverse impact from continued generation of operational solid wastes, excess soils, and pesticide/herbicide/ice melt applications during routine operational maintenance activities. Manage regulated building materials according to federal and state regulation.	None.
Environmental Justice	No impact; no environmental justice communities within area.	None.

<b>Resource / Issue</b>	<b>Proposed Action</b>	<b>No Action</b>
Land Use	No impact. The Phase 5 expansion area is within IGNC property, owned by the federal government, and designated for use as a National Cemetery. Activities within IGNC would not induce land use changes beyond the IGNC property.	None.
Potential for Generating Substantial Controversy	The Proposed Action is anticipated to be widely accepted in the community, because it would extend the longevity of IGNC for approximately 15 years, allowing IGNC to continue providing burial benefits to eligible Veterans and their families in the east central Pennsylvania region.	Not expanding IGNC conflicts with anticipated community expectations and therefore could generate substantial controversy.

The impacts from the Proposed Action, when considered on a cumulative basis with impacts from past projects and probable future projects at and in vicinity of IGNC, remain at less-than-significant adverse levels for all of the environmental resources analyzed in this SEA. Impacts from the No Action alternative would reach a significant adverse due to the cumulative effects of the unmitigated impact on Community Services associated with a decrease in the longevity of IGNC and a lack of burial opportunities at a National Cemetery in the east central Pennsylvania region.

### **Agency and Public Involvement**

During development of the Draft SEA, VA notified stakeholders, including elected officials, relevant federal, state, and local agencies, and Native American Tribes, about the Proposed Action and requested stakeholder’s input on environmental concerns specific to this Proposed Action. No comments were received.

VA then completed the Draft SEA and published a Notice of Availability (NOA) in the Lebanon *Daily News* on September 17 and 19, 2021, to announce the opportunity to review the Draft SEA and provide comments during a 30-day review period. The Draft SEA was available for review in print at the IGNC Public Information Center/Administration building; the Lebanon Community Library at 125 N 7th St, Lebanon, PA 17046; and in electronic format from VA’s website at <https://www.cfm.va.gov/environmental/index.asp>. VA also mailed letters to stakeholders about the opportunity to review the Draft SEA and provide comments during the 30-day review period. No comments about the Draft SEA were received from the public or stakeholders during the review period.

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## Acronyms and Abbreviations

Acronyms and Abbreviations	Definition
AADT	Annual Average Daily Traffic
ACHP	Advisory Council on Historic Preservation
APE	Area of potential effect
AQCR	Air Quality Control Region
BMP	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon monoxide
CRGIS	Cultural Resources Geographic Information System
CWA	Clean Water Act
DEP	Department of Environmental Protection
DSA	Designated survey area
EA	Environmental Assessment
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
EPA	Environmental Protection Agency
EPH	Ephemeral
ESA	Endangered Species Act
FAC	Facultative
FACU	Facultative upland
FACW	Facultative wet
FEMA	Federal Emergency Management Agency
FONSI	Finding of no significant impact
FPPA	Farmland Protection Policy Act
GCR	The General Conformity Rule
HDDV	Heavy Duty Diesel Vehicle
HUD	Housing and Urban Development
ID	Identification
IGNC	Indiantown Gap National Cemetery
INT	Intermittent
IPaC	Information for Planning and Consultation
KVA	1,000-volt amps
LCCD	Lebanon County Conservation District
LDGV	Light-duty gasoline vehicle
LEED	Leadership in Energy and Environmental Design
MBTA	Migratory Bird Treaty Act
MF	Migratory Fishery
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act

<b>Acronyms and Abbreviations</b>	<b>Definition</b>
NCA	National Cemetery Administration
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NI	Not indicated
NIOSH	The National Institute for Occupational Safety and Health
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	Federal National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NS	No status
NW	Northwest
OBL	Obligate
OCFM	VA Office of Construction and Facility Management
OSHA	Occupational Safety and Health Administration
PA	Pennsylvania
PADCNR	The Pennsylvania Department of Conservation and Natural Resources
PADEP	Pennsylvania Department of Environmental Protection
PBTH	Potential Bog Turtle Habitat
PEM	Palustrine emergent
PER	Perennial
PFBC	Pennsylvania Fish and Boat Commission
PFO	Palustrine forested
PGC	Pennsylvania Game Commission
PHMC	Pennsylvania Historical & Museum Commission
PIC	Public Information Center
PM <sub>2.5, 10</sub>	Particulate matter
PMHC	Pennsylvania Natural Diversity Inventory
PNDI	Pennsylvania Natural Diversity Inventory
PNHP	Pennsylvania Natural Heritage Program
PSS	Palustrine scrub-shrub
PUB	Palustrine unconsolidated bottom
REM	Registered Environmental Manager
ROG	Reactive Organic Gases
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SDA	Soil Data Access
SEA	Supplemental Environmental Assessment
SESC	Soil erosion and sedimentation control
SF	Square feet
SHPO	State Historic Preservation Office

<b>Acronyms and Abbreviations</b>	<b>Definition</b>
SIP	State implementation plan
TDAT	Tribal Directory Assessment Tool
UPL	Upland
USACE	U.S. Army Corps of Engineers
USAF	United States Air Force
USC	United States Code
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VA	The U.S. Department of Veterans Affairs
VOC	Volatile organic compound
WWF	Warm Water Fishery

# **1 INTRODUCTION**

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) honors Veterans and their families with final resting places in National Shrines and with lasting tributes that commemorate their service and sacrifice to the nation. One of the strategic goals of NCA is to ensure that the burial needs of Veterans are met. NCA maintains approximately 4 million gravesites at 151 National Cemeteries and 34 soldiers' lots and monument sites in 42 states and Puerto Rico (VA, 2019a). VA's Office of Construction and Facility Management's (OCFM) mission is to advance VA's pursuit in support of the nation's Veterans by planning, designing, constructing, and acquiring major facilities, and setting design and construction standards. NCA maintains the Indiantown Gap National Cemetery (IGNC), located along Fisher Avenue in Annville, Lebanon County, Pennsylvania. IGNC serves Veterans in central eastern Pennsylvania. This Supplemental Environmental Assessment (SEA) evaluates the potential impacts associated with VA's Proposed Action to construct and operate the Phase 5 expansion within IGNC.

## **1.1 Background and Existing Site Details**

IGNC is approximately 20 miles northeast of Harrisburg and 96 miles northwest of downtown Philadelphia, PA (Figure 1). Situated on 677 acres, the property that is now IGNC was donated to NCA from the Commonwealth of Pennsylvania in 1976 (Figure 2). In 1979, VA completed an Environmental Impact Statement (EIS) that analyzed the initial site selection and the reasonably foreseeable impacts associated with the development of the property as a National Cemetery designed to serve Veterans residing in Pennsylvania and surrounding states, including Delaware, New Jersey, Maryland, Virginia and West Virginia (VA, 1979). The EIS concluded that by incorporating mitigation and management measures, development of would have no significant adverse impacts on the environment.

Subsequently, in 1980 VA began constructing the Phase 1 portion of IGNC. The Phase 1 development included burial sections and supporting infrastructure, including a main entrance, Public Information Center/Administration (PIC/Admin) building, and roadways. This development occurred throughout 20 acres of the property and provided the initial burial capacity. The first interments at IGNC occurred in 1982. Additional burial capacity was added during the Phase 2 expansion in 1987 and the Phase 3 expansion in 1998. VA relied on the findings of the 1979 EIS to evaluate environmental impacts associated with the development of Phases 1, 2, and 3. In 2012, VA completed a separate Environmental Assessment (EA) to evaluate the impacts to the environment associated with a proposed Phase 4 expansion (VA, 2012). The EA concluded with a Finding of No Significant Impact (FONSI); subsequently, VA completed construction of the Phase 4 expansion by 2017; this expansion provided burial capacity, a new irrigation pond, a new memorial wall/scattering garden area, and a new committal service shelter and honor guard facility.

As of October 2020, approximately 245 acres of the 677-acre property have been developed. Additionally, IGNC has approximately 57,000 interred sites, with approximately 14,500 burial spaces remaining (Plummer, 2020). Currently, on average, ten burials are performed per day, equaling approximately 2,400 burials annually. Currently, approximately 427 acres of undeveloped grounds remain at the IGNC property.

Figure 1. Indiantown Gap National Cemetery Site Location Map

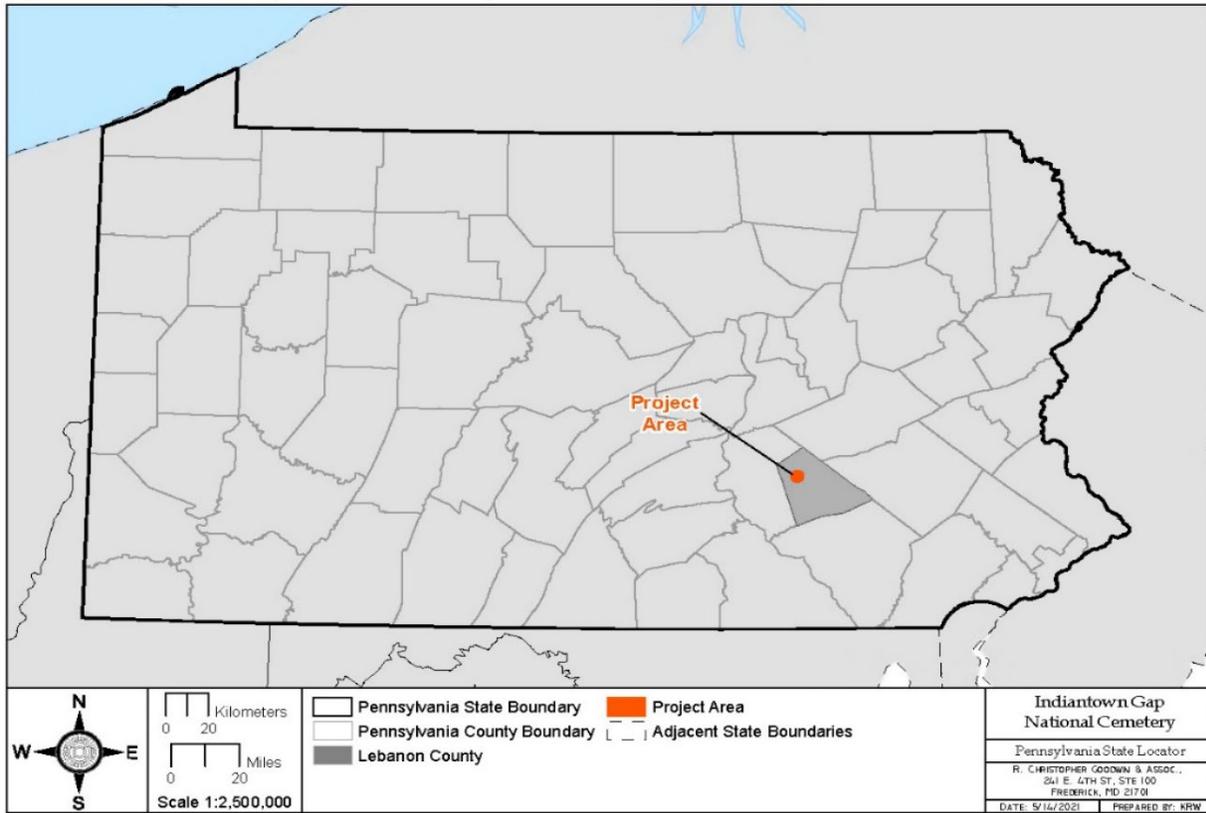
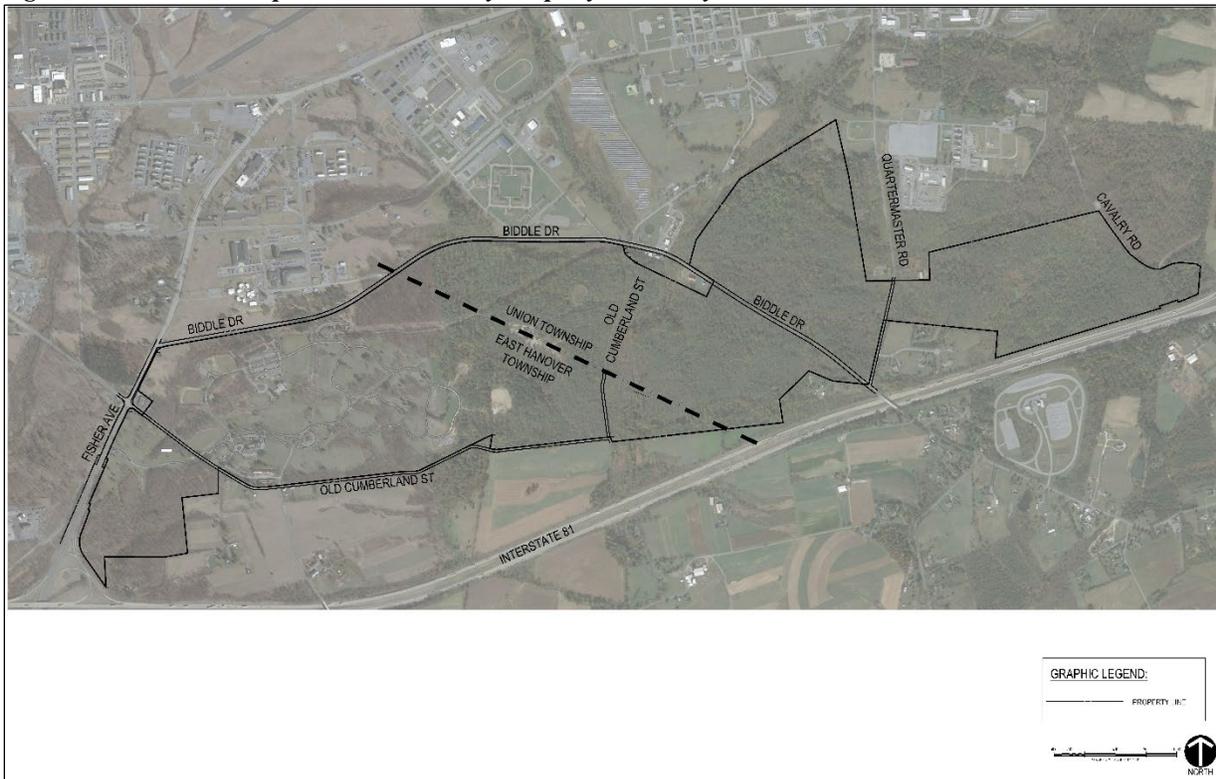


Figure 2. Indiantown Gap National Cemetery Property Boundary



## 1.2 Problem Statement

Veteran deaths have been increasing as the very large population of World War II and Korean War-era veterans continue to advance in age. This progressive increase in veteran deaths results in a corresponding increase in the demand for burial services in National Cemeteries. There are approximately 32,000 Veterans residing in east central Pennsylvania (USCB, 2021).

Due to continuing gravesite depletion and limited remaining gravesite capacity within existing developed grounds, NCA anticipates that IGNC would reach full capacity and close to new interments within the next 5-10 years (Plummer, 2020). Burial data demonstrates that more than 80% of those interred in National Cemeteries lived within 75 miles of the cemetery at the time of death (VA, 2019a). Apart from IGNC, Washington Crossing National Cemetery in Newtown, PA, is the next nearest at approximately 115-miles southeast of IGNC.

To address the problem of gravesite depletion, VA has developed a Proposed Action to provide additional burial capacity at IGNC. Under the Proposed Action, VA would construct and operate the Phase 5 cemetery expansion within an approximately 45-acre portion of currently undeveloped grounds at IGNC. The Phase 5 expansion would provide 15,700 new burial sites and associated supporting infrastructure, thereby extending the longevity of IGNC for at least 15 years and providing for future generations of eligible Veterans and their families long-term, reasonable access to burial benefits at a National Cemetery in east central Pennsylvania.

## 1.3 Purpose and Need for the Proposed Action

The **purpose** of the Proposed Action is to enable IGNC to continue to provide burial services for eligible Veterans and their family members in east central Pennsylvania.

The Proposed Action is **needed** to allow NCA to continue meeting its goal of providing eligible Veterans and their family members with reasonable access to VA burial options in east central Pennsylvania.

## 1.4 Regulatory Requirements

NCA is responsible for providing burial services to eligible Veterans and family members pursuant to the provisions of the *National Cemeteries Act* of 1973. It is the policy of NCA to provide a burial facility within 75 miles of a Veteran population of at least 80,000 (CRS, 2016). Thus, once burial capacity is reached at IGNC within the next 5-10 years, there would not be a readily accessible National Cemetery that can accommodate the burial needs Veterans residing in east central Pennsylvania, leaving this population underserved. As a result, VA would not comply with the requirements of the *Service Members Civil Relief Act*. If Veterans and their families must resort to private burials, they are deprived of the honor and privilege bestowed upon them by a grateful nation for their service to their country. Likewise, when Veterans from east central Pennsylvania are interred in other National Cemeteries outside this region, it places an undue burden and hardship on residents who are also from east central Pennsylvania, but who have to travel outside of this region to attend funerals and gravesite visitations of their loved ones.

The *National Environmental Policy Act* (NEPA) of 1969 established the national policy for the environment and for the Council on Environmental Quality (CEQ) and provides for the consideration of environmental issues in federal agency planning and decision-making. To implement the NEPA policies, CEQ promulgated the *Regulations for Implementing the Procedural Provisions of the NEPA* (40 CFR Parts 1500-1508, referred to as the CEQ Regulations).

VA's procedures to comply with NEPA are set forth in 38 CFR Part 26, *Environmental Effects of the Department of Veterans Affairs Actions*. These regulations establish VA policies and responsibilities to integrate environmental considerations early in the decision-making process. Instructions on preparing NEPA documentation and carrying out public and agency coordination are provided in VA's *NEPA Interim Guidance for Projects* (VA, 2010).

NEPA requires by law that VA evaluate any effect its actions might have on the environment. This SEA serves the purpose of meeting that requirement. These requirements specify that prior to taking action, VA must evaluate the potential environmental impacts of VA facilities, operations, and related funding decisions. The evaluation of the potential environmental impacts of the Proposed Action and alternative includes direct, indirect, and cumulative effects, as well as a qualitative and quantitative (where possible) assessment of the level of significance of these effects. Additionally, as required by NEPA and the implementing regulations from CEQ and VA, the alternative of taking no action is also evaluated, providing a baseline for comparison of potential impacts from the action alternative(s).

An EA (or Supplemental EA) provides a sufficient level of analysis to evaluate whether or not an action would cause a significant environmental impact (40 CFR Part 1508.9). When the EA concludes there is no significant impact associated with implementing the Proposed Action, VA may issue a Finding of No Significant Impact (FONSI) (40 CFR Part 1508.13). A FONSI is a decision document that briefly presents the reasons why an action would not have a significant effect on the human environment. Conversely, when an action may have a significant adverse impact on the environment, VA may consider issuing a Notice of Intent (NOI) to prepare an EIS.

### **1.5 Scope of the Analysis**

This SEA has been prepared to analyze and evaluate the potential effects from construction and operation of the Proposed Action, which is to construct and operate the Phase 5 expansion at IGNC. Further details of the Proposed Action are provided in Section 2.0. It is noted that separate NEPA analyses would be performed prior to development of other future expansion phases at IGNC.

This SEA supplements the analyses and findings presented in VA's 1979 EIS for site selection and operation of IGNC (VA, 1979). This approach is in full compliance with CEQ Regulations that state that NEPA documents should be "analytic rather than encyclopedic" (40 CFR Part 1502.2a) and that scoping should be used to "identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review, narrowing the discussion of these issues in the statement [EA] to a brief presentation of why they would not have a significant effect on the human environment or providing a reference to their coverage elsewhere" (40 CFR Part 1501.7(a)(3)). Accordingly, VA is using "Incorporation by Reference" per 40 CFR Part 1501.12 and "Tiering" per 40 CFR Part 1508.28 to reduce the volume of this SEA.

Resource areas that are evaluated in further detail in this SEA include: aesthetics; air quality; cultural resources; geology, topography, and soils; hydrology and water quality; wildlife and habitat; noise; floodplains and wetlands; socioeconomics; community services; solid waste and hazardous materials; transportation and parking; utilities; environmental justice; protection of children, and cumulative effects. The resource area "land use/zoning" was eliminated from in-depth analysis because potential impacts were considered nonexistent and/or sufficiently addressed in the 1979 EIS and therefore does not require further analysis in this SEA.

## **1.6 Decision Making**

VA, as a federal agency, is required to incorporate environmental considerations into its decision-making process for the actions it proposes to undertake. This is done according to the regulations and guidance identified in Section 1.4. As such, this SEA provides VA with the necessary analysis to address and support decision making for the Proposed Action and serves to:

- Inform the public of the possible environmental impacts of the Proposed Action and its considered alternatives, as well as methods to reduce these impacts,
- Provide for public, state, inter-agency, and tribal input into VA’s planning and evaluation,
- Document the NEPA process, and
- Support informed decision-making by the federal government.

As the decision document for this proposed federal undertaking, this SEA also identifies the actions to which VA would commit to minimize environmental effects, as required under NEPA, its implementing regulations from CEQ (40 CFR Part 1500-1508) and VA (38 CFR Part 26), and VA’s NEPA guidance (VA, 2010). The decision to be made is whether—having considered the potential physical, environmental, cultural, and socioeconomic effects—VA should implement the Proposed Action, including associated measures to reduce adverse effects.

## **2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

NEPA, and the regulations of CEQ and VA for implementing NEPA, require that an EA include a brief discussion of all reasonable alternatives, to include at least the Proposed Action and the No Action alternative. Accordingly, this section summarizes the process used to develop alternatives and provides a description of those subsequently selected, as well as alternatives considered but ultimately eliminated from further analysis and reasons for elimination.

### **2.1 Site Selection Process**

#### **2.1.1 Selection of the Phase 5 Expansion Area**

VA gives preference to selected expansion areas that are located within the existing boundaries of existing National Cemeteries. Where this is not possible, expansions should be located within or as close as possible to the existing cemetery property. Alternative sites, when available, are evaluated according to size, shape, accessibility, utilities and water, and surrounding land use.

The selected site should be readily accessible via highways and major public roadways. If public utilities (electricity, water, sewer) are immediately available to the site, that is ideal. However, on-site septic systems and on-site water wells may be acceptable. An adequate water supply, whatever the source, is also very important. Sites adjacent to visually objectionable, noisy, high traffic or other nuisance elements are avoided to maintain the desired decorum for memorial ceremonies.

To address gravesite depletion at IGNC, VA determined that the undeveloped portion of IGNC provided suitable area for the Phase 5 expansion. This approach is consistent with the 1979 EIS, the original conceptual master planning for adjacent phased developments within the property and aligns with VA's original purpose for acquiring the property.

#### **2.1.2 Site Characteristics**

The inherent qualities of a site, including soils, topography and aesthetics, should be such that it is conducive to potential cemetery development. Soils should be of a quality which would provide adequate topsoil for growing turf as well as adequate stability for constructing roads and buildings. Shallow depth to groundwater may require additional site preparation. An ideal site would be free of subsurface obstructions and hazardous waste. Comparatively level to rolling terrain is desirable for areas to be developed. The grade of burial areas should be in the 2-to-15% range (NCA, 2016). There should be sufficient slope to enable proper drainage of the site. Ravines, wetlands, and sinkholes are avoided wherever feasible. Existing site amenities, such as pleasant views and quality vegetative cover, are sought. The presence of man-made elements, such as cultural/historic/archaeological sites, utility easements, rights-of-way, or mineral rights, can hamper or legally prevent potential development.

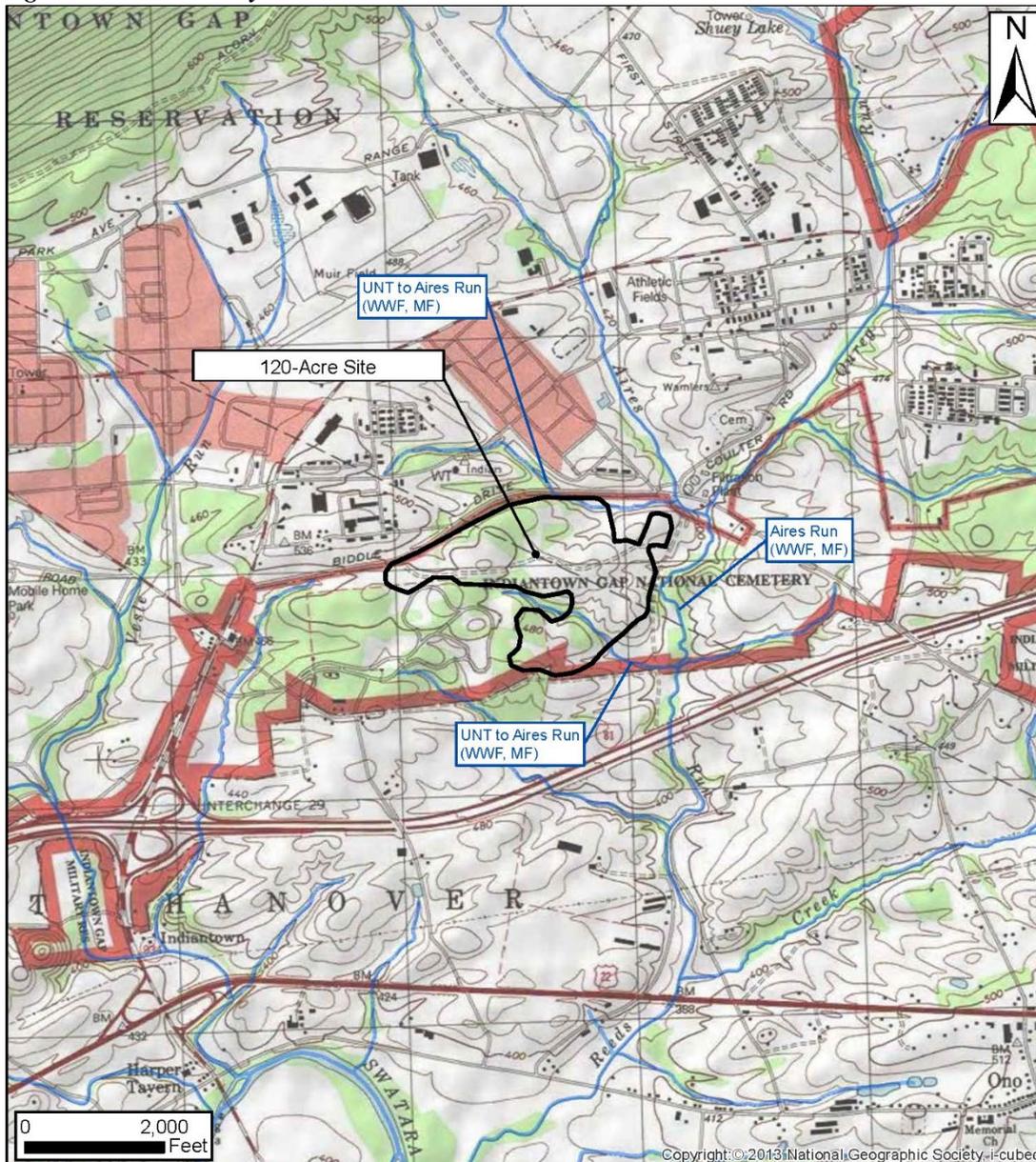
During master planning for the design of the proposed Phase 5 expansion, an approximately 120-acre area located immediately east of the existing cemetery development was considered for the location within which the Phase 5 expansion would be located (Figure 3). Thus, many of the baseline environmental studies and assessments described in this SEA were conducted within the 120-acre area, allowing VA to understand the locations of sensitive environmental resources and how to design the Phase 5 expansion to best avoid impacts to those resources. Thus, several different conceptual design alternatives within the 120-acre area were considered for the proposed Phase 5 expansion. These alternatives included various alignments and phasing for burial areas, roadways, stormwater management basins, and irrigation systems. Ultimately, VA selected the

Phase 5 expansion design that best met NCA Design Guidelines and balanced environmental sustainability, cost, functionality, and minimized environmental impacts.

## 2.2 Development of Alternatives

No reasonable alternatives that would adequately meet the purpose and need for action have been identified by VA. Therefore, the alternatives evaluated in this SEA are the Proposed Action and No Action. The Proposed Action is described in detail in the following Section 2.3. The No Action alternative serves as the baseline for determining the significance of potential effects of the Proposed Action in relation to existing conditions. A description of the No Action alternative is provided in Section 2.4.

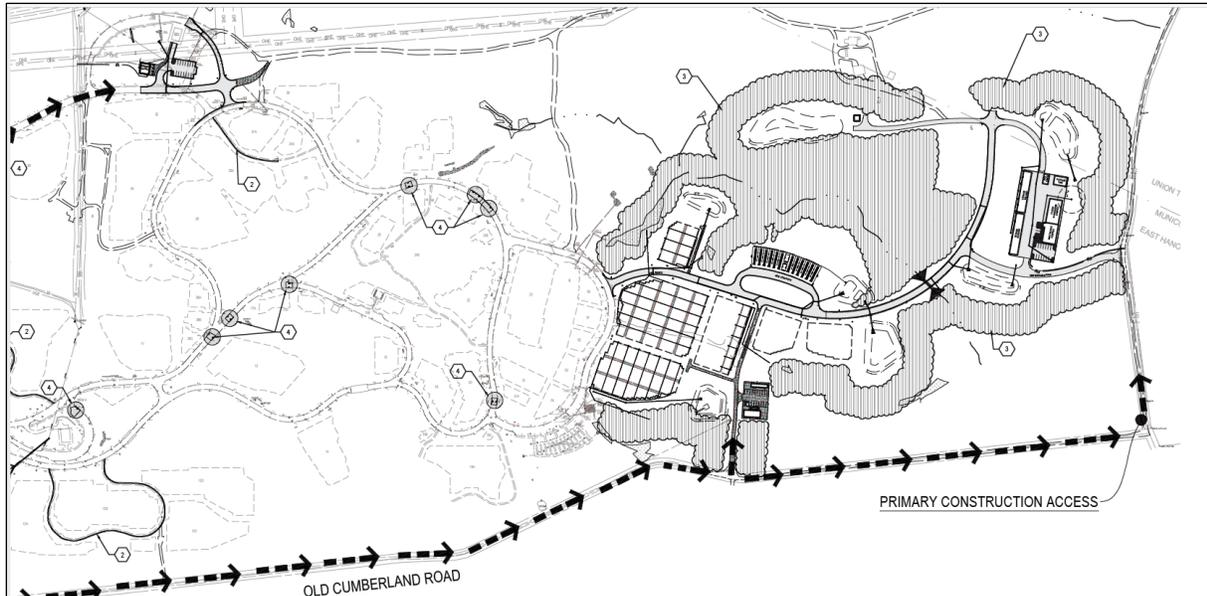
Figure 3. 120-acre Study Area



## 2.3 Proposed Action

Under the Proposed Action, VA would implement the proposed Phase 5 expansion at IGNC. The Phase 5 expansion would provide at least 15 years of burial capacity through the development of approximately 45 acres of land located within the current IGNC property boundary; no new land would be acquired. The layout of the Phase 5 expansion would follow the design developed by VA in 2020-2021 (Figure 4). The Phase 5 expansion would be located immediately east of the existing developed cemetery areas (Phases 1 through 4), such that the Phase 5 expansion is a natural extension of those areas.

**Figure 4. Proposed Action Phase 5 Expansion Area**



The Proposed Action would include the following elements.

- Burial Expansion
  - Provide approximately 15,700 gravesites, including both casketed and cremain sites in new burial sections, including the following burial components:
    - 4,500 Double Depth Pre-Placed Crypts
    - 800 Double Depth Oversized Pre-Placed Crypts
    - 400 Traditional Full Casket sites with Grade Beam
    - 4,000 In-Ground Cremains
    - 6,000 Columbarium Niches
- New Access Roads
  - New access roads and parking as required.
  - Install a culvert spanning the unnamed stream to allow for a bridge connecting the Phase 5 burial areas to the new eastern satellite maintenance yard.
  - Addition of concrete curbs to control drainage.
  - Pavement resurfacing.

- Widening/reconstructing existing asphalt walkways.
- Construction of gravel pathways to accommodate equipment.
- Repairing three (3) existing box culvert bridges within the existing cemetery.
- Removal and Replacement of the Honor Guard Building and Parking Area
  - A new Honor Guard building (approximately 1,300 SF) would be constructed to west of the existing Honor Guard building; the existing building would then be demolished.
  - A new Honor Guard parking lot with parking for approximately 20 vehicles would be constructed.
  - The current access road to the existing Honor Guard building and parking area would be removed. A new access road to the new Honor Guard and parking lot would be constructed directly from the northern loop road.
- Grading, Drainage, and Landscaping
  - Clear and grade within the approximately 45-acre Phase 5 expansion area.
  - Balance cut and fill to the maximum extent practicable area.
  - Correct drainage near Funk's Diner to prevent erosion and flooding.
  - Create stormwater retention basins.
  - Implement a forest management plan for replanting felled trees and for removal of invasive trees and shrubs.
  - Plant native, non-invasive, drought tolerant vegetation consistent with existing developed portions of IGNC.
- New Groundwater Supply Well and Extend Irrigation
  - Install new groundwater well to supply irrigation water for new landscaping within the Phase 5 expansion.
  - Installation of a 320 SF pumphouse.
  - Provide improvements required necessary to support expended irrigation system.
  - Add irrigation system to unirrigated areas including PIC/Admin, islands, and other high visibility areas.
  - Add water hydrant to maintenance areas for filling water trucks.
- Satellite Maintenance Facility Upgrades
  - Construction of a 4,500 SF open storage building and a 4,500 SF enclosed storage building for equipment and vehicles.
  - Addition of break room, rest rooms, enclosed equipment storage, bulk soil storage, and open-air fuel storage and pumping area to upgrade Satellite Maintenance facility.

The Phase 5 expansion also incorporates the following elements to protect the natural environment.

- *Avoidance of Wetlands and Watercourses.* The final Phase 5 design avoids development of all wetland and watercourses to the maximum extent practicable. A culvert (approximately 50-feet-long and 7-feet-wide) needed to bridge the unnamed stream channel would require impacting approximately 0.02 acres of wetland adjacent to the stream channel. VA submitted a joint 404/401 permit application to USACE and PADEP to allow impacts to the wetland and stream channel. USACE issued the 404 permit on 03 December 2021; VA would implement all impact avoidance measures. PADEP is in the process of reviewing the 401 permit application; the permit is required to be obtained prior to construction of the culvert, and all 401 permit requirements would be implemented.
- *Avoidance and Protection of Listed Species.* Completion of a Phase II Bog Turtle Survey confirmed no bog turtles were present within the Phase 5 project area and a 300-foot buffer. VA also determined that potential bog turtle habitat was present in portions of existing Phase 4 developed cemetery grounds. To avoid potential impacts to bog turtles during intrusive subsurface work within 300 feet of their potential habitat in the Phase 4 area, VA would follow time of year restrictions by performing such work only from November 1 to March 31, as well installing 18-inch compostable filter socks adjacent to those wetlands having potential bog turtle habitat. Otherwise, VA would implement the specified avoidance measures described in USFWS's concurrence letter dated 16 November 2021 (see Appendix B). Additionally, potential impacts to the northern-long-eared bat and the Indiana bat would be avoided by adhering to the USFWS's seasonal tree clearing restriction, which prohibits tree clearing from March 31 to October 1 (see USFWS letter dated 25 February 2021 in Appendix B).
- *Avoidance of Cultural Resources.* No artifacts or archaeological sites were identified during a Phase IB archaeological survey within the limits of disturbance of the Phase 5 expansion area. VA has determined that Proposed Action would have no adverse effect to archaeological historic properties or cultural resources. Pursuant to Section 106, VA has received concurrence from the Pennsylvania Bureau for Historic Preservation State Historic Preservation Officer (SHPO) with this determination of finding. Additionally, commitments to preserve historic ash trees would occur by avoiding the removal of any healthy ash trees growing within the Phase 5 expansion area as per prior agreements between the SHPO and NCA.
- *Stormwater Management.* Construction of the Phase 5 project area would include up to eight stormwater basins and one infiltration gallery. As part of the design process, VA would also comply to the maximum extent technically feasible to ensure pre- and post-development hydrology are similar, in compliance with Section 438 of the *Energy Independence and Security Act (EISA)* (USEPA, 2009).
- *Irrigation Water Supply.* VA would install a new groundwater well to supply irrigation water for newly landscaped grounds within the Phase 5 expansion area. To limit groundwater consumption, the 45-acre Phase 5 expansion area would require irrigating only approximately eight (8) acres of landscaped vegetation.

### **2.3.1 No Action Alternative**

The No Action alternative serves as a benchmark against which the effects of the Proposed Action can be evaluated, as required under the CEQ (40 CFR Part 1502.14). For this project, No Action is defined as not implementing the Proposed Action and retaining conditions at IGNC as they

currently exist for the foreseeable future. The area proposed for the Phase 5 expansion would remain in its present condition for the foreseeable future.

Under the No Action alternative, long-term, reasonable access to burial benefits would not be provided to the estimated 32,000 Veterans living in east central Pennsylvania. Furthermore, due to the distances between homes and the burial sites, the No Action alternative would result in a hardship for the survivors attending the funerals and for grave visitations of deceased Veterans interred in other National Cemeteries outside of east central Pennsylvania. If Veterans and their families must resort to private burials, they are deprived of the honor and privilege bestowed upon them by a grateful nation for their service to their country. The No Action alternative would challenge NCA's goal of continuing to provide eligible Veterans and their family members with reasonable access to VA burial options in east central Pennsylvania and, therefore, would not meet the purpose and need for action.

### **2.3.2 Alternatives Identified but Not Evaluated in Detail**

During master planning for the design of the Phase 5 expansion, several conceptual design alternatives within the 120-acre area were developed, each adjusting the alignment and phasing for burial areas, roadways, stormwater management basins, and irrigation systems (Figure 5 and Figure 6).

These conceptual design alternatives did not efficiently utilize the area and thus required greater potential impacts compared to the Proposed Action. Therefore, these conceptual design alternatives are not further evaluated in detail in this SEA.

Any future development within other portions of the 120-acre area, or elsewhere within the undeveloped portions of IGNC, not used for the Phase 5 expansion may be developed under a separate project in the future. VA would complete separate NEPA-compliant analyses prior to implementing any such development.



## 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

### 3.1 Criteria for Analysis of Impacts

This section describes the existing conditions at IGNC and presents an analysis of the potential consequences of implementing the Proposed Action or the No Action alternative. Each alternative was evaluated for its potential impacts on physical, biological, and socioeconomic resources in accordance with CEQ guidelines at 40 CFR Part 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 context and intensity of 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 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 set forth in CEQ regulations (40 CFR Part 1508.27) and, thus, warrant heightened attention and examination for potential means for mitigation to fulfill the policies set forth in NEPA. Significance criteria by resource area are presented in the following sections.
- **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.

#### 3.1.1 Procedures

VA's policy includes provisions to act with care in carrying out its mission of providing services for Veterans and to ensure it does so consistently with national environmental policies. Specifically, VA shall ensure that all practical means and measures are used to:

- Protect, restore and enhance the quality of the human environment;
- Avoid or minimize adverse environmental consequences, consistent with other national policy considerations;
- Prepare concise and clear environmental documents which shall be supported by documented environmental analyses; and

- Preserve historical, cultural, and natural aspects of our national heritage.

This SEA examines the impacts of the proposed construction and operation of the Phase 5 expansion at IGNC. As previously described, many of the baseline environmental studies and assessments described in this SEA were conducted within the 120-acre area. The exception was the Phase 1B cultural resource survey, which was able to be focused within the 45-acre Proposed Action site. In the following analyses, information about existing conditions is generally based on information from studies in the larger 120-acre area, unless otherwise noted.

### **3.2 Aesthetics**

Aesthetics refers to the visual resources, including natural and man-made features that give a particular piece of land its aesthetic properties. A combination of natural and built features influence and contribute to the aesthetic environment of an area. Natural features may include topography and vegetation, which may have been altered over time by human action, while built features can include buildings and other constructed elements. Beneficial or adverse impacts may occur depending on how changes to the existing aesthetic environment are perceived by human receptors, which can include visitors and residents living adjacent to and in the vicinity of the area.

#### **3.2.1 Existing Environment**

Of the 677-acre IGNC property, approximately 245 acres have been developed as cemetery grounds to date. Development includes burial areas and associated infrastructure (roads, administration/maintenance facilities, committal shelters, columbaria, etc.) and preservation of vegetative buffers between the developed areas and properties outside of IGNC. Currently, the Phase 1-4 development areas are located in the western portion of IGNC. These areas contain professionally manicured grounds, a scatter garden, a stormwater retention pond, two irrigation wells, winding interior roadways, and small buildings with regionally consistent architectural design. A prominent aesthetic structure in the central portion of the currently developed grounds features the Pennsylvania Veterans' Memorial. This memorial is designated to honor Veterans of all eras from the Revolutionary War forward and is currently the largest veteran's memorial in any of the National Cemeteries operated by VA (VA, 2020a).

Features surrounding IGNC that contribute to the visual character and scenic quality of the community mainly include agricultural fields and forested land to the south, as well bordering roads with sparsely populated areas. The surrounding vegetation is predominately pasture and cultivated fields.

IGNC is accessible to visitors from a formal main entrance located off North State Route 934, which becomes Indiantown Road. Staff use a maintenance entrance located along Old Cumberland Street along the southern border of IGNC.

IGNC is visible to vehicles traveling on Fisher Avenue, Biddle Drive, and Old Cumberland Street. Biddle Drive is located along the northern boundary of IGNC, as well as the Proposed Action area. Indiantown Road is located along the southwest portion of IGNC and becomes Old Cumberland Street along the central southern border of IGNC. Old Cumberland Street turns north near the central portion of IGNC and forms the eastern boundary of the Proposed Action area.

An overhead electric utility line owned and operated by Met-Edison (Met-Ed) (a FirstEnergy company) passes through the northern portion of IGNC and the 120-acre area. Vegetation beneath the utility line is maintained by Med-Ed, forming a corridor free of visual obstructions. The

corridor is approximately 0.75-miles long and 50-feet wide. Additional discussion about the corridor is provided under the Utility heading in Section 3.10.

Fort Indiantown Gap is located immediately adjacent to the northern boundary of IGNC, on the north side of Biddle Road. This 18,000-acre installation serves as headquarters for the Pennsylvania National Guard and the Pennsylvania Department of Military and Veterans Affairs. Fort Indiantown Gap is one of the busiest pre-deployment military training sites in the nation, training more than 100,000 troops each year (MyBaseGuide, 2020). Several buildings located near the southern portion of Fort Indiantown Gap are visible from the northern border of IGNC. The Fort Indiantown Gap wastewater treatment plant is also visible when facing east from the above-ground electric utility corridor.

Due to the presence of a densely wooded buffer around the perimeter of IGNC, much of the aforementioned external development and transportation network surrounding IGNC is not visible from within the cemetery grounds. Likewise, this buffer also prevents views into IGNC from the surrounding properties.

The aesthetics within the 45-acre Phase 5 expansion area is dominated by undeveloped woodlands. Numerous wetland and stream channels and the approximately 2-acre satellite maintenance complex and two spoils areas are located within the Proposed Action area. The satellite maintenance building supports maintenance operations and is where a wood shop, electrical room, and covered landscaping materials are located. A 1.5-acre spoils area for excess soil is northeast of the satellite maintenance complex. Southwest of the satellite maintenance complex is the location of the 2-acre gravel-covered spoils area. These designated maintenance and storage facilities are concealed from the view of visitors to preserve the integrity of IGNC's aesthetic resources.

IGNC formerly supported many ash trees, which together with other mature deciduous trees, provided a mature tree canopy to define lawn spaces, create views and vistas, and provided a vegetative buffer from adjacent interstate and road noise. However, no healthy ash trees have been encountered within the Proposed Action area; all of the ash trees have become diseased or died due to the Emerald Ash Borer beetle (*Agrilus planipennis*).

### **3.2.2 Environmental Consequences**

#### **3.2.2.1 Proposed Action**

National Cemeteries are National Shrines with a park-like setting. NCA guidelines recommend that native vegetation be used in site landscaping and valuable trees be preserved. Accordingly, the design plans for the Proposed Action limit the Phase 5 expansion area to 45 acres. Additionally, the design would avoid clear-cutting the entire area to retain natural forested buffers. (It is noted that no live and healthy ash trees have been identified within the 45-acre expansion area.) This method effectively retains the forested appearance and natural contours of IGNC and creates consistency in the IGNC aesthetic.

**Construction.** During construction of the Phase 5 expansion, construction-related equipment would be present in the Proposed Action area. Construction would require the use and presence of heavy construction equipment used for vegetation clearing, earth moving, grading burial sections, road construction, crypt placement, and other related improvements. The heavy equipment phase of construction is anticipated to require approximately 30 months and would not necessarily occur over one continuous period. The presence of heavy equipment and unfinished stages of site preparation and construction would temporarily impact the visual quality of the central portion of

the cemetery, particularly near the existing northern committal shelter, Honor Guard building, columbarium D, and gravesite locations between the northern committal shelter and columbarium D. However, the majority of the Phase 5 construction activities would occur outside of the view of these and other developed portions of the cemetery. Additionally, temporary privacy fencing would be installed around the construction site to further obstruct the view of on-going construction activities.

Land clearing and grading activities would expose underlying soils and increase the potential for fugitive dust generation to the air and loose soil on the cemetery roadways and surrounding roadways, leading to nuisance concerns about the construction activities at IGNC.

To minimize these potential adverse impacts, the construction contractor would implement industry-standard construction BMPs to limit fugitive dust generation and tracking of loose soil onto roadways. These BMPs include the use of water trucks or other dust palliatives for dust suppression; physically removing loose soil from construction vehicles' tires before leaving the construction site; and installing gravel pads at the construction exits to further prevent the tracking of soil onto roadways. Following grading, the contractor would plant native, non-invasive, drought-tolerant vegetation to stabilize exposed soils.

Development of the area for the Phase 5 expansion would permanently result in the loss of unmanaged forest. However, the construction phase would transform this area into a National Shrine with manicured grounds and native vegetation, including trees, shrubs, and grasses, to resemble a park-like setting. Additionally, remaining forested areas at IGNC would not be developed under the Proposed Action.

These impact minimization measures and BMPs would ensure that Proposed Action construction activities would have a temporary short-term, direct, less-than-significant adverse impact on aesthetics.

**Operation.** Operations within the Phase 5 expansion area would include regularly scheduled professional landscape maintenance to ensure the upkeep of the park-like appearance of the grounds and associated physical infrastructure (e.g. roads, buildings). Maintenance activities would be scheduled to limit potential disruptions to committal services. These operational maintenance activities would not have an adverse impact on aesthetics.

Operation of the Phase 5 cemetery would provide long-term, direct, moderately beneficial aesthetic effects within the property.

#### **3.2.2.2 No Action**

Under the No Action alternative, no changes to the current aesthetic or visual character of the grounds would occur at IGNC. The existing unmanaged forest within the Phase 5 expansion area would remain as it currently exists. The current infrastructure would remain unchanged, as described above.

Although the less-than-significant adverse impacts associated with construction of the Proposed Action would be avoided, the beneficial impacts to aesthetics associated with operations would not occur.

### 3.3 Air Quality

Air quality refers to the concentration of air contaminants in a specific location. Air quality is determined by the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions.

#### 3.3.1 Regional Climate

Weather and climate are important influences on air resources. On average, Pennsylvania receives approximately 42 inches of rainfall per year. July is the wettest month of the year, with average rainfall of 5 inches, while February is historically the driest month, with an average of 2.8 inches of rainfall (NOAA, 2020).

#### 3.3.2 Air Quality Standards

**National Ambient Air Quality Standards.** The *Clean Air Act* (CAA) and its subsequent amendments require USEPA to establish National Ambient Air Quality Standards (NAAQS) for pollutants that may endanger public health or welfare. The USEPA has promulgated primary and secondary NAAQS for six criteria pollutants including carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), lead (Pb), particulate matter (PM; particulate matter sized 10 microns or less (PM<sub>10</sub>) and particulate matter sized 2.5 microns or less (PM<sub>2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). Primary standards set limits to protect public health, and secondary standards set limits to protect public welfare (Table 1). The CAA also gives the authority to states to establish air quality rules and regulations stricter than the federal standards.

Lebanon County, PA, is under the jurisdiction of the PA DEP Bureau of Air Quality and is within Harrisburg-Lebanon-Carlisle-York Air Quality Control Region (AQCR) 195 (USEPA, 2020a). The USEPA defines AQCRs, which are used to evaluate compliance with the NAAQS per the CAA. Pennsylvania has developed an Air Quality State Implementation Plan (SIP) that outlines regulations, control measures, and strategies to achieve compliance with NAAQS (PADEP, 2014).

**Table 1. National Ambient Air Quality Standards**

NAAQS Pollutant	Primary/Secondary	Averaging Time	Level <sup>(1)</sup>	Form
Carbon Monoxide	Primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Nitrogen Dioxide	Primary	1-hour	100 ppb	98th percentile, averaged over 3 years
	Primary and secondary	Annual	53 ppb	Annual Mean
Ozone	Primary and secondary	8-hour	70 ppb	Annual 4 <sup>th</sup> highest daily maximum 8-hr concentration, averaged over 3 years
Particulate Matter (PM <sub>2.5</sub> )	Primary	Annual	12 µg/m <sup>3</sup>	Annual mean, averaged over 3 years
	Secondary	Annual	15 µg/m <sup>3</sup>	Annual mean, averaged over 3 years
	Primary and secondary	24-hour	35 µg/m <sup>3</sup>	98th percentile, averaged over 3 years
Particulate Matter (PM <sub>10</sub> )	Primary and secondary	24-hour	150 µg/m <sup>3</sup>	Not to be exceeded more than once per year on average over 3 years
Lead	Primary and secondary	Rolling 3-month average	0.15 µg/m <sup>3</sup>	Not to be exceeded
Sulfur Dioxide	Primary	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

*1 – Units of measure for the standards are parts per million (ppm) by volume, parts per billion (ppb) by volume, and micrograms per cubic meter of air (µg/m<sup>3</sup>)*

### 3.3.3 Clean Air Act Conformity

The 1990 amendments to the CAA require federal agencies to ensure that their actions conform to the SIP in a nonattainment area. Under Section 176(c) of CAA, a project is in “conformity” if it corresponds to a SIP’s purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving their expeditious attainment. Conformity further requires that such activities would not:

- cause or contribute to any new violations of any standards in any area;
- increase the frequency or severity of any existing violation of any standards in any area; or
- delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The USEPA published final rules on general conformity (40 CFR Parts 51 and 93) in the Federal Register on November 30, 1993. The General Conformity Rule (GCR) (CAA Part 176(c)(4)) applies to all federal actions in nonattainment or maintenance areas. This rule requires that any federal action meet the requirements of a SIP or Federal Implementation Plan. More specifically, CAA conformity is ensured when a federal action would not cause a new violation of the NAAQS; contribute to an increase in the frequency or severity of violations of NAAQS; or delay the timely attainment of any NAAQS, interim progress milestones, or other milestones toward achieving compliance with the NAAQS. AQCRs that comply with the NAAQS are designated “attainment” areas by the USEPA, while areas where the standards are not met are designated as “non-attainment” areas.

The rules specify *de minimis* emission levels by pollutant to determine the applicability of conformity requirements for a project. The corresponding *de minimis* threshold values for each criteria pollutant is 100 tons per year. A federal action is exempt from the GCR requirements if the action’s total net emissions are below the *de minimis* threshold or are otherwise exempt per 40 CFR 51.153. There are two main components to the overall process: an applicability analysis to determine whether a conformity determination is required and, if it is, a conformity determination to demonstrate that the action conforms to the SIP.

### 3.3.4 Existing Emissions Sources

Current emissions sources at IGNC include gasoline- and diesel-fueled maintenance vehicles. No sources of regulated air emissions exist on the property; therefore, VA, as the owner of the property, is not required to have a Title V operating permit.

The Harrisburg-Lebanon-Carlisle-York AQCR is designated as in compliance for all criteria pollutants, with the exception of PM<sub>2.5</sub> (moderate non-attainment) (USEPA, 2020a). The PM<sub>2.5</sub> is likely attributed to vehicle emissions and other industrial processes within the more industrialized areas located within the AQCR. Regardless, the potential emissions associated with the Proposed Action are required to be compared to the GCR *de minimis* thresholds. If the Proposed Action emissions are below the thresholds, then a full Conformity Determination is not required.

### 3.3.5 Sensitive Receptors

CEQ’s NEPA regulations require evaluation of the degree to which the proposed action affects public health (40 CFR Part 1508.27). Children, elderly people, and people with illnesses are especially sensitive to the effects of air pollutants; therefore, hospitals, schools, convalescent facilities, religious institutions, and residential areas are considered to be sensitive receptors for air quality impacts, particularly when located within one mile from the emissions source.

The nearest residential area is located approximately 0.1 miles north of IGNC, along Biddle Road. There are no schools or hospitals within one mile of IGNC. There is one religious institution, “Salem Walmers Church,” located approximately 0.4-miles northeast of IGNC (USEPA, 2020b).

### 3.3.6 Environmental Consequences

The impacts on air quality are evaluated on the basis of the Proposed Action exceeding the *de minimis* threshold established by USEPA in the GCR.

#### 3.3.6.1 Proposed Action

**Construction.** Construction of the Phase 5 expansion would require approximately 30 months of earthwork activities associated with land clearing, grading, construction of interment areas, roadways, stormwater retention basins, maintenance facilities, pump house, and associated infrastructure improvements, as well as demolishing the existing Honor Guard building and constructing its replacement. The following sections describe construction activities that would generate criteria pollutants.

##### 3.3.6.1.1 Surface Disturbance (Fugitive Dust)

Construction would require heavy equipment with petroleum-fueled engines, resulting in emissions of criteria pollutants (with the exception of lead, which is no longer an additive in these fuels). Construction would also generate particulate matter into the air from activities including land clearing, grading, and vehicles traveling on paved and unpaved surfaces. The amount of particulate emissions generated can be estimated from the amount of ground surface exposed, the type and intensity of activity, soil type and conditions, wind speed, and dust control measures.

Total suspended particulates were calculated using the emission factor for heavy construction activity operations from “AP-42, Compilation for Air Pollutant Emission Factors” (USEPA, 1995), to provide a conservative estimate of particulate matter emissions. Particulate emissions estimated from ground-clearing activities during construction of the Proposed Action area presented in Table 2.

**Table 2. Estimate of Particulate Emissions during Construction of the Proposed Action**

Total Area (acres)	Exposed Area (acres)	Construction Duration (months)	Emission Factor (tons/acre/month) <sup>1</sup>	Control Efficiency (%)	Total Suspended Particulate Emissions (tons/year)
45	45	30	1.2	80%	0.466

<sup>1</sup> – Emission factor for Heavy Construction Operations (USEPA, 1995).

##### 3.3.6.1.2 Off-Road Construction Equipment Emissions

Operation of off-road construction equipment, such as excavators, dozers, loaders, and graders, would emit criteria pollutants during the approximately 30-month Phase 5 construction period, though not necessarily continuously during each month. Based on similar expansion projects, a table of construction equipment and frequency of use was estimated for the Proposed Action (Table 3).

Emissions were estimated using “Off-Road – Model Mobile Source Emission Factors” for the year 2022 from the California South Coast Air Quality Management District (SCAQMD, 2020) because Pennsylvania and federal USEPA emission factors are not available. The applicable emission factors are presented in Table 4. The annualized total emissions for these construction activities are presented in Table 5.

**Table 3. Estimated Construction Equipment Use**

Equipment Type	Number of Units	Operational Hours/Day	Total Days/Year
Grader	2	4	60
Tractors/Loaders/Backhoes	4	4	260
Rubber Tired Dozers	2	8	260
Pavers	1	8	15
Paving Equipment	1	8	10
Rollers	1	8	5
Other Construction Equipment <sup>(1)</sup>	4	4	260

1 - The term "Other Construction Equipment" is an umbrella category that includes other common construction equipment used during typical commercial development and allows for a conservative estimate when calculating construction emissions.

**Table 4. SCAB Fleet Average Emission Factors (Diesel)**

Equipment Type	Emissions Factors <sup>(1)</sup>				
	CO (lb/hr)	VOC <sup>(2)</sup> (lb/hr)	NO <sub>2</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	PM <sup>(3)</sup> (lb/hr)
Graders	0.5732	0.0807	0.4657	0.0015	0.0218
Rubber Tire Dozer	0.7353	0.1919	1.3612	0.0025	0.0536
Tractors/loaders/backhoes	0.3599	0.0384	0.2302	0.0008	0.0095
Pavers	0.4840	0.0870	0.4750	0.0009	0.0296
Paving Equipment	0.4042	0.0666	0.4137	0.0008	0.0261
Rollers	0.3799	0.0500	0.3198	0.0008	0.0181
Other Construction Equipment	0.3488	0.0507	0.2785	0.0013	0.0106

1 - From South Coast Air Basin (SCAB), emission factor year 2022, Table 5-21; composite emission factors used.

2 - VOCs are considered equivalent to Reactive Organic Gases (ROG) for calculating non-road construction equipment emissions.

3 - PM emissions represent combined PM<sub>10</sub> and PM<sub>2.5</sub>.

**Table 5. Total Criteria Pollutant Emissions from Construction Equipment**

Equipment Type	CO (total lbs)	VOC (total lbs)	NO <sub>2</sub> (total lbs)	SO <sub>2</sub> (total lbs)	PM (total lbs)
Graders	0.137	0.019	0.112	0.0003	0.005
Rubber Tire Dozer	1.529	0.399	2.831	0.005	0.112
Tractors/loaders/backhoes	0.748	0.079	0.479	0.002	0.020
Pavers	0.029	0.005	0.028	5.3695E-05	0.002
Paving Equipment	0.016	0.003	0.016	3.1719E-05	0.001
Rollers	0.008	0.001	0.006	1.5391E-05	0.0003
Other Construction Equipment	0.725	0.105	0.579	0.003	0.022
<b>Total 2022 Emissions (tpy)</b>	<b>3.194</b>	<b>0.613</b>	<b>4.052</b>	<b>0.010</b>	<b>0.162</b>
<i>de minimis</i> level (tpy)	100	100	100	100	100

### 3.3.6.1.3 On-Road Heavy-Duty Construction/Haul Trucks

Construction of the Proposed Action would utilize on-road heavy-duty vehicles, such as multi-axle dump trailers and flatbeds that would be used to transport construction materials and pre-cast crypts to the site. Table 6 summarizes vehicle types and frequency of use during a typical 12-month construction period. Table 7 summarizes the emissions estimated for diesel-fueled heavy-duty vehicles (8,501+ lbs) using emissions factors specific to Pennsylvania for the year 2022 (USAF, 2020). The assumptions used to develop the on-road construction haul truck emissions estimates are provided in Appendix A.

**Table 6. On-Road Heavy-Duty Construction Vehicle Estimates**

Vehicle Type	Estimated Number of Vehicle Trips
Asphalt Trucks	143
Columbarium Trucks	39
Cut and Fill	307
Logging Truck	27
Crypt Transport Trucks	530
Total Number of Trucks	1046
Estimated miles traveled per trip <sup>(1)</sup>	100
<b>Total miles traveled for all vehicles<sup>(2)</sup></b>	<b>104,607</b>

1 - The estimated average distance from IGNC to the materials source is estimated to be 50 miles; therefore, a truck would travel 100 miles round trip.

2 - Total number of trucks multiplied by the miles per trip.

**Table 7. Heavy Duty Diesel Vehicle Emissions**

Heavy Duty Diesel Vehicle (HDDV)	Total mileage	CO	VOC	NO <sub>2</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Emissions, lbs/mile	104,607 <sup>(1)</sup>	0.0034	0.0009	0.0093	<0.0001	0.0003	0.0003
Emissions, lbs/project	--	355	89	971	3	30	27
<b>Emissions, tons/project</b>	--	<b>0.178</b>	<b>0.045</b>	<b>0.486</b>	<b>0.001</b>	<b>0.015</b>	<b>0.014</b>

1 - Total miles travelled, from Table 7.

#### 3.3.6.1.4 Construction Workers' Vehicle Emissions

Emissions were estimated from construction workers' vehicles in use during the Proposed Action construction phase. Annually, it is estimated that 30 workers would support the construction phase, traveling to and from IGNC approximately a distance of 20 miles per day for 260 days per year, and anticipating a commuting factor of 0.6. This is equivalent to a total of 93,600 miles traveled annually (30 workers \* 260 days \* 20 miles/vehicle \* 0.6). Table 8 presents emission factors specific to Pennsylvania for emission year 2022, for gasoline-fueled light-duty vehicles (LDGV) (passenger cars and trucks) (USAF, 2020). Table 9 presents the estimated emissions from construction workers' vehicles.

**Table 8. Construction Worker - Emissions Factors for Light-Duty Gasoline-Fueled Vehicles**

Light-Duty Gasoline-Fueled Vehicles	CO	VOC	NO <sub>2</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Emissions factors (lbs/mile)	0.0060825	0.0004916	0.0003461	0.0000044	0.0000154	0.0000132

**Table 9. Construction Worker - Emissions from Light-Duty Gasoline-Fueled Vehicles**

Light-Duty Gasoline-Fueled Vehicles	CO	VOC	NO <sub>2</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Emissions, lbs/year <sup>(1)</sup>	569.3	46.0	32.4	0.4	1.4	1.2
<b>Emissions, tpy</b>	<b>0.2847</b>	<b>0.0230</b>	<b>0.0162</b>	<b>0.0002</b>	<b>0.0007</b>	<b>0.0006</b>

1 - Lbs/mile calculation from Table 9 (emission factor multiplied by the total miles travelled annually [93,600]).

#### 3.3.6.1.5 Total Construction Emissions

The total estimated emissions from all elements related to constructing the Phase 5 expansion are summarized in Table 10. Based on these data, none of the criteria pollutant concentrations exceed the General Conformity *de minimis* threshold limits and construction activities would result in only

short-term, direct, negligible adverse impacts on air quality. Additionally, a formal General Conformity Determination would not be needed.

**Table 10. Total Emissions for the 2022 Construction Phase**

NAAQS:	CO	VOC	NO <sub>2</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Fugitive Dust Emissions	N/A	N/A	N/A	N/A	0.405	0.061
Off-Road Construction Equipment	3.194	0.613	4.053	0.010	0.162	0.061
Heavy Duty Diesel Truck Construction Equipment Emissions	0.178	0.045	0.486	0.001	0.015	0.014
Construction Worker Vehicle Emissions	0.285	0.023	0.016	0.000	0.001	0.001
<b>Total Construction Emission (typ)</b>	<b>3.656</b>	<b>0.681</b>	<b>4.554</b>	<b>0.011</b>	<b>0.582</b>	<b>0.136</b>
<i>de minimis</i> threshold (typ)	100	100	100	100	100	100

N/A – Not Applicable

**Operation.** Operational sources of air emissions would be generated from the use of routine maintenance equipment (e.g. mowers, backhoes, power washers, blowers) for upkeep of the newly landscaped grounds, memorial headstones, markers, and facilities. New operational emissions would also be generated by vehicles potential new workers hired to support maintenance of the Phase 5 expansion. Operational emissions were not calculated, because operating additional maintenance equipment and new workers’ vehicles would contribute a negligible amount of criteria pollutants to the atmosphere and at concentrations below the Proposed Action construction emissions. Thus, operational emissions would not result in an exceedance of the *de minimis* thresholds, and a formal Conformity Determination for the Proposed Action is not required.

Therefore, operation of the Proposed Action would result in long-term, direct, negligible adverse impacts on air quality.

### 3.4 Cultural and Historical Resources

Cultural resources are generally defined as the physical remains of a people’s way of life and include historical architecture and archaeology. The baseline age established by the National Historic Preservation Act (NHPA) for historic resources is 50 years or older. Although IGNC is not 50 years of age, the National Park Service (NPS) has determined that all National Cemeteries are exceptionally significant places that are eligible for listing in the National Register of Historic Places (NRHP). However, the NPS has provided guidance that unimproved portions of a National Cemetery that have only been set aside for future use and are not ready to receive burials are not eligible for the NRHP (NPS, 2011).

#### 3.4.1 Existing Environment

IGNC is within the Fort Indiantown Gap Historic District, which the Pennsylvania Historical & Museum Commission (PHMC) has identified as National Register eligible (site ID 107363) (PHMC, 2020).

The IGNC property and its surroundings were originally domain to various Native American tribes (VA, 1979). Prior to VA's ownership, the property was part of Fort Indiantown Gap. During development of the 1979 EIS for site selection, a review of the NRHP did not identify any properties listed or eligible for listing at the 677-acre property. However, a local avocational archaeologist reported that six archaeological sites were present on the proposed cemetery property. On July 29-30, 1977, Interagency Archaeological Services of Atlanta, Georgia, completed approximately 20 hours of pedestrian survey on approximately 42 acres at the proposed cemetery in an effort to relocate the six reported archaeological sites. No other sites were discovered during the archaeological reconnaissance and no further archaeological research was recommended. When provided with the results of the archaeological reconnaissance, the Advisory Council on Historic Preservation (ACHP) did not recommend any additional archaeological surveys be completed at the site (VA, 1979). Subsequently, ownership of the property was transferred from the Commonwealth of PA to VA in 1979. IGNC opened for interments in 1982.

Subsequently, VA completed several expansions to provide additional burial capacity, with the most recent expansion (Phase 4) in 2015-2017. An EA for the Phase 4 expansion was performed in 2010-2012 (VA, 2012). As part of the Phase 4 EA, a Phase I Cultural Resources Survey was conducted at the two proposed expansion areas: one area was north of the Phase 1, 2, and 3 developments, while the other was located immediately to the east. In total, the two potential areas covered approximately 36.5 acres. The Phase I and IB investigation identified a total of 19 artifacts, including three archaeological sites and one Isolated Find. VA committed to avoid these sites during the Phase 4 construction; the PA SHPO concurred that further investigation was not required (VA, 2012). Accordingly, these sites were avoided during the subsequent Phase 4 construction and operation.

Due to the presence of known archaeological sites in the adjacent Phase 4 cemetery area, VA elected to conduct a Phase IB archaeological investigation within the Phase 5 APE.

#### ***3.4.1.1 Phase I/IB Archaeological Investigation***

As part of this effort, a desktop cultural resources literature review and records search was conducted. This involved the examination of historical aerial photographs and available data provided by the PHMC. The historic use of the property prior to becoming a National Cemetery was various forms of agriculture, include pasture fields that were separated by hedgerows. These hedgerows appear on-site up until the 1970's, when the property was no longer maintained and allowed to become forested.

From April 20-23, 2021, the Phase IB investigation was performed by R. Christopher Goodwin & Associates, Inc. (RCG&A) to assess the Phase 5 APE for the presence or absence of cultural resources. All work was completed following standards promulgated in *Archaeology and Historic Preservation: The Secretary of the Interior's Standards and Guidelines*, and in the revised *Guidelines for Archaeological Investigations in Pennsylvania* (PA SHPO 2017).

In undisturbed areas of 15 percent slope or less, systematic survey was undertaken using shovel tests excavated at 15 m (49.2 ft) intervals. Geomorphological review had indicated that no deep testing was needed. A total of 224 shovel tests were excavated.

No archaeological artifacts were recovered, and no archaeological sites were identified during the Phase IB survey. Thus, VA determined that no historic properties would be adversely affected by the Proposed Action. On June 15, 2021, VA submitted this determination of findings with the Phase IB report to the SHPO for review and concurrence pursuant to Section 106.

Additionally, IGNC maintenance staff commented that they have never discovered an artifact on IGNC property (Plummer, 2020).

On July 14 and 16, 2021, the PA SHPO issued written letters concurring with VA's determination of finding of no adverse effects for both above ground resources and archaeological resources. Copies of the letters are provided in Appendix B.

#### **3.4.1.2 Historic Ash Trees**

During the prior IGNC Phase 4 expansion, NCA determined that hedgerows consisting of ash trees present at IGNC contributed to the historic resource. Due in part to safety concerns, NCA developed a plan to remove and replace diseased/dead ash trees at IGNC. As part of this plan, VA completed Section 106 consultation with the PA SHPO to issue a finding of effect and outline mitigation for the Phase 4 expansion on 27 February 2018. Per that correspondence with PA SHPO, NCA committed to replace dead/diseased green ash at 2:3. The replacement trees were to be 3-inch caliper and of various species suited to the region. A record of the prior Section 106 coordination is provided in Appendix B.

As previously described in Section 3.2, green ash trees currently present at IGNC have largely been killed by emerald ash borer beetles. Within the Proposed Action area, no living green ash were observed. However, if during construction of the Proposed Action ash trees are found and in healthy condition, then they would not be removed because these trees may be genetically resistant to emerald ash borer and are important for the protection of the species within the region.

#### **3.4.2 Native American Resources and Consultation**

For all federally proposed actions, federal agencies are required to consult with federally recognized Native American Tribes in accordance with NEPA, the NHPA, the *Native American Graves Protection and Repatriation Act* (NAGPRA), Executive Order (EO) 13007, *Indian Sacred Sites*, and EO 13175, *Consultation and Coordination with Indian Tribal Governments*. During the preparation of this SEA, VA solicited input on the Proposed Action from the following four federally recognized Native American tribes having ancestral ties to Lebanon County, PA, as listed in the Department of Housing and Urban Development Tribal Directory Assessment Tool (TDAT) (HUD, 2020). To date, none of the Tribes have provided a response. These Tribes will be notified again when the Draft SEA is released for a 30-day review and comment period.

- Delaware Nation, Oklahoma
- Delaware Tribe of Indians
- Eastern Shawnee Tribe of Oklahoma
- Seneca-Cayuga Nation

#### **3.4.3 Environmental Consequences**

##### **3.4.3.1 Proposed Action Construction and Operation.**

Due to the absence of historic properties within the Phase 5 APE, no impact to cultural resources is anticipated.

In the event that ground-breaking activities and development of infrastructure during the Proposed Action lead to disturbance and/or removal of previously undiscovered cultural resources, the following Inadvertent Discovery plan would be implemented to ensure no adverse impact occurs to these resources.

#### *3.4.3.1.1 Inadvertent Discovery Plan*

In accordance with NHPA's *Act of 1979* and NAGPRA's EO 13007, VA would implement an "Inadvertent Discovery" plan. Under this plan, if prehistoric or historic artifacts that could be associated with Native American, early European, or American settlement are encountered at any time during construction or operation of the expansion areas, VA would cease all activities involving subsurface disturbance in the vicinity of the discovery. Should human remains or other cultural items, as defined by NAGPRA, be discovered during project construction, the construction contractor would immediately cease work until VA, a qualified archaeologist, any affected tribes, and the SHPO, are contacted to properly identify and appropriately treat discovered items in accordance with applicable state and federal law(s). The work would not resume in the area of the discovery until the resource has been documented and evaluated for eligibility for the NRHP, in compliance with Section 106 of the NHPA.

#### *3.4.3.1.2 Ash Tree Management*

As previously described, per correspondence between NCA and the PA SHPO in 2018, NCA is committed to replacing any ash trees removed during the Proposed Action construction. Unless otherwise directed by NCA, mitigation would follow the replacement of 3-inch caliper trees at a 2:3 ratio. The replacement trees would be 3" caliper and of various species suited to the region. A copy of the correspondence from NCA is provided in Appendix A.

#### *3.4.3.2 No Action*

The No Action Alternative would result in no impact on cultural resources because expansion would not occur, leaving potential undiscovered cultural resources undisturbed.

### **3.5 Geology, Topography, and Soils**

This section examines the potential loss of soils, and changes in geological conditions due to rock excavation, soil erosion, soil compaction, soil horizon removal, grading, cutting, and filling operations. This section presents an overview of the geology, topography, and soils encompassing the proposed expansion area. Additional descriptions of these resources can be found in the 1979 EIS, which presents additional background information on the geology (VA, 1979). Updated information is presented below, where applicable.

#### **3.5.1 Existing Environment**

##### *3.5.1.1 Geology*

IGNC is located in the Lebanon Valley, which is an east-to-northeast trending valley approximately 30-miles long and ranging from 9- to 14-miles wide (Meisler, 1962). It is part of the Great Valley Section of the Valley and Ridge Physiographic Province of Pennsylvania. It is characterized by extensive lowlands that developed from relatively easily eroded Cambrian and Ordovician rocks. The Lebanon Valley is bounded on the north by Blue Mountain, which is a ridge formed by the resistant Silurian Tuscarora Sandstone, and on the south by the crystalline rocks of the Reading Hills and the surrounding hills and uplands formed by the rocks of Triassic age. The southern one-third of the Lebanon Valley is underlain by Cambrian and Ordovician limestones and dolomites, and the northern two-thirds of the Valley are primarily underlain by the Ordovician rocks of the Hamburg Klippe. The structure of the Lebanon Valley is complex and is characterized by highly folded and faulted sedimentary strata. IGNC is located in the northern part of the Lebanon Valley and is underlain by the Hamburg Sequence, specifically shale containing zones of interbedded sandstone (Meisler, 1962).

The lithology of the bedrock underlying the stream valleys and low-lying areas of IGNC is dominated by weathered shale, which is less resistant to weathering and erosion, while the lithology of the bedrock underlying the upland areas is dominated by more resistant interbedded shale and sandstone, and perhaps shale and limestone. Outcrops of interbedded shale and sandstone were observed along the north and south sides of Biddle Road, which constitutes the northern cemetery boundary. The occurrence of limestone has been observed during interment preparation in some of the existing burial areas located in uplands (VA, 1979).

Sinkholes are common where the subsurface rock formations are comprised of limestone, carbonate rock, or other surface that can dissolved by groundwater. According to the Pennsylvania Department of Conservation and Natural Resources karst features map, there is no karst topography, sinkholes, or depressions within the Proposed Action site (PADCNR, 2020).

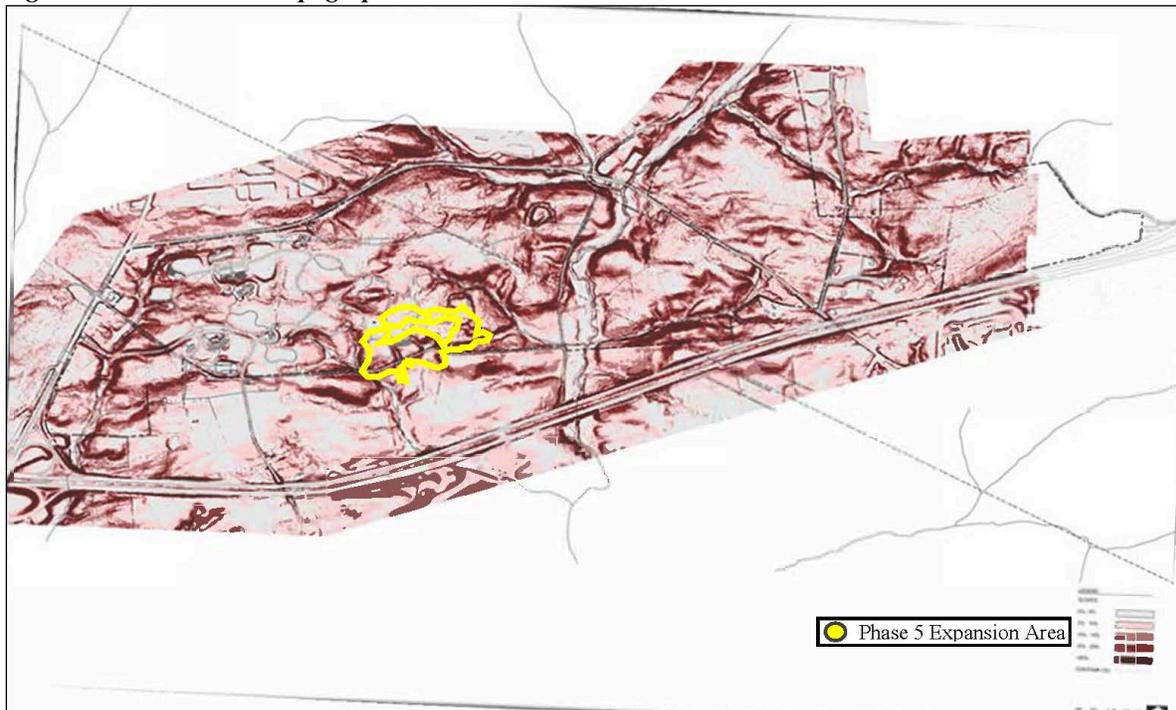
### 3.5.1.2 Topography

The existing topography of IGNC consists of sloping hills ranging from approximately 400-feet above mean sea level (amsl) at the lowest point to approximately 517-feet (amsl) at the highest (USFWS, 2020a).

The topography of IGNC is influenced by the underlying geology. Slopes IGNC were mapped based on available LiDAR data (Figure 7). The NCA Design Guidelines (Section 10.6, Grading) require interment areas be located on slopes of 15% or less (NCA, 2016). These same design guidelines establish a maximum slope of 25% for mowed slopes.

As illustrated on Figure 7, there are areas identified throughout the Proposed Action site with greater than 15% slopes. Most of these slopes are associated with natural drainage features. The Proposed Action site is generally steepest in the central portion, with a general downward slope from west to east.

Figure 7. LiDAR-Based Topographic Contours



### 3.5.1.3 Soils

Soil information was obtained from the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS, 2020). A description of each mapped soil unit is provided in the following subsections, while Table 11 summarizes the acreage of each soil unit within the larger 120-acre area within which the 45-acre Phase 5 expansion would occur. Figure 8 depicts the locations of these soil units throughout the larger area.

Figure 8. USDA-NRCS Soil Map



Note: See definition of codes in paragraphs below

**Bedington shaly silt loam (BeB and BeD):** The Bedington series consists of very deep, well drained soils with slopes ranging from 0 to 35%. Runoff class is medium. Bedington soils are found on hills in uplands. Parent material is acid residuum weathered from sedimentary rock. Moderate permeability. The depth to the water table is more than 80 inches. Available water capacity is moderate at approximately 6.9 inches. This soil does not meet hydric criteria.

**Berks channery silt loam (BkB and BkD):** The Berks series consists of moderately deep, well drained soils with slopes ranging from 0 to 80%. Berks soils are found on ridges and mountain slopes. Parent material is residuum weathered from shale, siltstone, and fine-grained sandstone. Permeability is moderate or moderately rapid. The depth to the water table is more than 80 inches. Available water capacity is very low at approximately 2.9 inches. These soils meet hydric criteria.

**Comly silt loam (CmB):** The Comly series consists of very deep, moderately well drained soils with slopes ranging from 0 to 25%. Comly soils are found on hills. Parent material is colluvium weathered from shale, sandstone, and siltstone. Permeability is moderate. The depth to the water

table is approximately 6 to 36 inches. Available water capacity is low at approximately 4.8 inches. This soil meets hydric criteria.

**Holly silt loam (Ho):** The Holly series consist of very deep, very poorly drained soils with slopes ranging from 0 to 3%. Holly soils are formed from loamy alluvium and are found on flood plains. The depth to the water table is approximately 0 to 12 inches. Available water capacity is high at approximately 9.9 inches.

**Weikert channery silt loam (WeB and WeD):** The Weikert series consists of shallow, well drained soils with slopes ranging from 0 to 100%. Weikert soils are found on ridges. Parent material is acid residuum weathered from shale and siltstone and/or fine-grained sandstone. Permeability is moderately rapid. The depth to the water table is more than 80 inches. Available water capacity is very low at approximately 1.5 inches. These soils do not meet hydric criteria.

#### **3.5.1.4 Prime Farmland**

Prime farmland is a significant soil measure to determine if soils are of the best physical and chemical characteristics for producing food, feed, forage, crops, and more as defined by the U.S. Department of Agriculture (USDA-NRCS, 2020). Farmland of statewide importance does not meet the criteria for prime farmland but does meet criteria defined by State agencies that is pertinent to the corresponding state. Generally, these soils fall short of being prime farmland but still yield large quantities of crops and other favorable conditions (USDA-NRCS, 2020).

Due to loss of farmland, Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98) containing the Farmland Protection Policy Act (FPPA) subtitle I of Title XV, Section 1539-1549, on June 17, 1994. The FPPA is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land. Federal projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to non-agricultural use and are completed by a federal agency or with assistance from a federal agency.

During preparation of the Draft SEA, VA solicited input from USDA-NRCS on the Proposed Action on October 27, 2020. USDA-NRCS responded on December 8, 2020, stating that VA should use Form AD-1006 to evaluate the proposed conversion of farmland to nonagricultural use. VA completed Form AD-1006 and obtained a total site assessment score of 55. A score less than 160 does not require any additional actions or alternatives with regard to the FPPA. A copy of the completed Form AD-1006 is provided in Appendix B.

**Table 11. USDA-NRCS Soil Characteristics**

Soil Map Unit	Soil Map Unit Name	Drainage Class	Hydric (Yes/No)	Prime/Farmland of Statewide Importance	Acres within Proposed Action area
BeB	Bedington shaly silt loam, 3 to 8% slopes	Well drained	No	All areas are prime farmland	7.3
BeD	Bedington shaly silt loam 15 to 25% slopes	Well drained	No	Not prime farmland	7.1
BkB	Berks channery silt loam, 3 to 8% slopes	Well drained	Yes	Farmland of statewide importance	16.4
BkD	Berks channery silt loam, 15 to 25% slopes	Well drained	Yes	Farmland of statewide importance	32.6
CmB	Comly silt loam, 3 to 8% slopes	Moderately well drained	Yes	All areas are prime farmland	18.0
Ho	Holly silt loam	Poorly drained	Yes	Farmland of statewide importance	1.8
WeB	Weikert channery silt loam, 3 to 8% slopes	Somewhat excessively drained	No	Farmland of statewide importance	7.2
WeD	Weikert channery silt loam, 15 to 25% slopes	Somewhat excessively drained	No	Not prime farmland	30.3
<b>Totals</b>					<b>120.6</b>

### 3.5.2 Environmental Consequences

If a project would result in an increased geologic hazard or a substantial change in the availability of a geologic resource, it could have a significant effect. Such geologic and soil hazards would include, but not be limited to, seismic vibration, land subsidence, and slope instability.

#### 3.5.2.1 Proposed Action

##### 3.5.2.1.1 Geology

**Construction.** There have been localized issues with shallow hard limestone bedrock in some upland portions of the Phase 4 cemetery (VA, 2012). Additionally, shallow weathered shale bedrock has been encountered in other areas of the cemetery, but reportedly has been easily excavated during burial area development (VA, 2012). Conventional excavation methods would be suitable for ripping the highly weathered bedrock, while special excavation techniques such as hammering or blasting could be required if excavations encounter denser layers of rock. Encountering and excavating into the underlying bedrock would not be considered by itself to be, or lead to, an adverse impact on the competency of bedrock at or in the vicinity of the Phase 5 construction area.

Therefore, construction of the Proposed Action would have a short-term, direct, negligible adverse impact on geology.

**Operation.** Operation of the Proposed Action would have no mechanism to further impact geologic resources.

### 3.5.2.1.2 *Topography*

**Construction.** Construction of the Proposed Action would require grading to ensure slopes are consistent with NCA Guidelines for roadways, burial sections, and other constructed features. Suitable on-site soils would be used for grading to the maximum extent practicable. Additionally, the existing topographic features, such as valleys leading to stream channels and undulating hills, would be retained. Thus, there would be no widespread landscape-level changes to topography.

**Operation.** Operation of the Proposed Action would have no mechanism to further impact topographic features.

### 3.5.2.1.3 *Soils*

**Construction.** Construction of the Phase 5 expansion would adversely impact native soils through several mechanisms. The primary mechanism is land clearing and grading, which would remove vegetation that stabilizes the underlying soil. Exposed soils that have not been compacted or restabilized with vegetation or hardscape may be susceptible to erosion by wind, temporarily increasing particulate matter (dust) in the area and creating adverse short-term health, visibility, and aesthetic impacts. Precipitation can erode exposed soil and potentially result in off-site discharges of sediment-laden runoff. Compaction can reduce the infiltration rate of soil, leading to increased run-off potential and erosion of the down-gradient soils.

To minimize the potential adverse impacts caused by construction activities, appropriate BMPs would be implemented as required by VA and other applicable federal and state rules and regulations. The construction contractor would be required to adhere to the terms of the NPDES permit, which would specify the BMPs to prevent and reduce soil erosion and sedimentation during construction. The stormwater management systems are referenced in the Pennsylvania Stormwater Best Management Practices Manual (PA BMP Manual). Stormwater management, along with sediment and erosion control, is regulated under Chapter 102 of Pennsylvania State Code, *Commonwealth's Erosion Control Law* (25 PA Code Ch.102), and the Federal National Pollutant Discharge Elimination System (NPDES). Under State Code, the PA DEP is authorized to delegate permitting responsibilities to the county level. For Lebanon County, PA DEP has delegated its review to the Lebanon County Conservation District (LCCD). Accordingly, separate plans and design reports for stormwater management and for sediment and erosion control would need to be prepared and submitted to the LCCD for their approval. Erosion control methods must account for factors that influence the degree of erosion and chosen method, such as rainy periods and slope. Such practices may include:

- Silt fences
- Re-vegetation of bare soils
- Mulching of bare soils
- Wet suppression of soils to reduce wind erosion
- Covering of soil stockpile
- Preserving existing site vegetation
- Construction monitoring and reporting

The Phase 5 expansion design also includes construction of stormwater basins to collect and manage stormwater runoff by preventing high velocity run-off rates along steep slopes. The design further seeks to balance cutting and filling to regrade steep slopes to the maximum extent feasible.

Soil that cannot be reused for burials or landscaping would be stockpiled at the designated IGNC spoils area.

Construction vehicles and equipment could accidentally release petroleum-based fluids (diesel, hydraulic fluid) that can degrade soil quality, if the release is not immediately remediated. To avoid such potential releases and impacts, construction equipment would be properly maintained in good working order and equipped with emergency spill kits, with worker's trained on the proper deployment of kits. This would ensure that construction contractors are prepared to respond to an emergency release of petroleum-based fluids, contain the release, and prevent impacts to soil. Additionally, construction equipment would be refueled in designated areas with impervious surfaces to avoid potentially impacting soil from spilled fuel.

By utilizing appropriate erosion and sedimentation BMPs, stormwater management BMPs, and adherence to the terms of the PA DEP General NPDES permit, impacts from construction of the Proposed Action on soil would be minimized to short-term, direct, less-than-significant adverse levels.

**Operation.** During operation, soil impacts would be limited to excavation of topsoil for individual in-ground burial sites in designated burial sections. Excavated soil would be temporarily stockpiled and returned to the burial site from which it was obtained, and then sodded to prevent erosion. Any excess soil would be immediately removed from the interment area and stockpiled at the designated IGNC spoils area. These soils would be vegetated or stored under a protective cover to prevent erosion.

Therefore, operation of the Proposed Action would have a short-term, direct, negligible adverse impact on soils.

### **3.5.2.2 No Action**

No changes to the site would occur from implementation of the No Action alternative; therefore, no impacts to geology, topography, or soils would occur. Baseline conditions would remain, as described above.

## **3.6 Hydrology and Water Quality**

Hydrology and water quality include those portions of the natural environment related to surface water and groundwater and its movements.

### **3.6.1 Existing Environment**

#### **3.6.1.1 Watercourses (Streams and Surface Water Bodies, Excludes Wetlands)**

The IGNC property is located within the 570-square-mile Swatara Creek Watershed. Several minor streams and/or creeks are located on the cemetery property. One major watercourse at IGNC is Aires Run. Aires Run flows south into Swatara Creek. The Swatara Creek flows southeast to the neighboring Dauphin county, then flows south for approximately 28 miles until discharging into the Susquehanna River Basin, which ultimately drains to the Chesapeake Bay. The Susquehanna River is the largest tributary to the Chesapeake Bay and provides 90% of the freshwater flow to the Upper Bay (LCCD, 2019).

According to the 2016 Final Pennsylvania Integrated Water Quality Monitoring and Assessment Report, no watercourses within the vicinity of IGNC are listed as siltation impaired waterbodies (PADEP, 2016).

According to the Pennsylvania Department of Environmental Protection (PADEP) Code “Title 25, Environmental Protection, Chapter 93, Water Quality Standards,” the Susquehanna River basin, including its tributaries, is designated as a Warm Water Fishery (WWF) and Migratory Fishery (MF). A WWF includes the maintenance and propagation of fish species and additional flora and fauna, which are indigenous to a warm water habitat. Furthermore, MF waters include the passage, maintenance and propagation of anadromous and catadromous fishes and other fishes, which move to or from flowing waters to complete their life cycle in other waters (PADEP, 2009a).

Aires Run has a PA Code, Title 25, Chapter 93 designated protected aquatic life uses of WWF and MF (PADEP, 2009a). PADEP does not list Aires Run or any of its tributaries located within the vicinity of IGNC as having an Existing Use Classification. Additionally, the Pennsylvania Fish and Boat Commission (PFBC) does not list Aires Run as Stocked Trout Waters (PFBC, 2020a) or as Wild Trout Waters (PFBC, 2020b).

The survey conducted within the 120-acre area on October 6-8, 2020, identified and delineated 19 watercourses, including ten (10) ephemeral (EPH) watercourses, seven (7) intermittent (INT) watercourses, and two (2) perennial (PER) watercourses. EPH watercourses are defined as small surface water drainage courses, INT water courses convey seasonal ground water hydrology, and PER watercourses contain persistent surface water flow. Generally a watercourse that only conveys surface water from precipitation events was considered EPH. Watercourses that originate in wetlands or at the discharge of seasonal groundwater seeps were classified as INT. Watercourses that contained a persistent surface flow associated with connection to the ground water table were classified as PER. PER watercourses also typically contained species of aquatic organisms including finfish and macroinvertebrate species that require persistent surface water for survival.

Of these, only one watercourse, an unnamed stream, was present within the 45-acre Proposed Action site. The Proposed Action includes constructing a culvert and roadway over this unnamed stream channel. The roadway would connect the new burial areas to the upgraded satellite maintenance facility. The culvert would be approximately 50-feet long and 7-feet wide and once constructed would allow for unobstructed water flow.

Finfish were observed in the deepest pools of the stream channel during a site visit to this area on 28 April 2021. This was documented in the PA Riverine Condition Level 2 Rapid Assessment Protocol form. It is noted, however, that the Pennsylvania Fish and Boat Commission (PFBC) does not list Aires Run as Stocked Trout Waters (PFBC, 2020a) or as Wild Trout Waters (PFBC, 2020b). Through the PNDI process, PFBC indicated that no impact is anticipated to threatened and endangered species and/or special concern species and resources from the Proposed Action.

### ***3.6.1.2 Stormwater Management***

The developed portions of IGNC generally utilize roadside drainage swales and lawn area inlets to convey storm flow through an underground piped storm sewer system with several stormwater detention basins and an infiltration basin and bed. Other storm sewer discharges are overland to wooded or low-lying areas with eventual discharge to one of the numerous streams at IGNC. The storm sewer system eventually outflows into tributaries of Aires Run south and east of IGNC and into tributaries of Indiantown Run, which is located to the west of IGNC. No naturally occurring lakes or ponds are present at IGNC.

VA reported numerous drainage issues that affect IGNC operations (VA, 2020b). These issues are as follows:

- Burial Sections 12, 17, 21 and 25 have been identified as wet areas.
- Drainage pipes in sections 36 and 37 have been noted to consistently have water flowing from them.
- Various roadside swales require many visitors to traverse wet swales to access the burial areas after periods of rain.
- Excess inundation south of the existing Funk's Diner after a storm event.

### **3.6.1.3 Groundwater/Bedrock Hydrology**

Conditions described in the original 1979 EIS were generally representative of the hydrologic conditions observed during the October 2020 site visit. The occurrence and flow of groundwater within the sedimentary bedrock underlying the IGNC is through fractures, primarily bedding plane fractures and joints (VA, 1979). Bedrock dominated by interbedded shale and sandstone tends to have a greater yield than that dominated by shale. The occurrence and flow of groundwater in the soil and highly weathered bedrock that overlies the more competent bedrock is through intergranular openings, and this groundwater either discharges to the small streams that flow through IGNC or is held in storage as it slowly recharges the underlying bedrock system.

The depth to groundwater beneath IGNC is at the surface to more than 9-feet below the ground surface and fluctuates seasonally, with the greatest range in fluctuation in the upland recharge areas and the least fluctuation in the low-lying discharge areas. Shallow groundwater flow beneath the surface generally mimics the surface topography (USACE, 1976). The groundwater table is close to the soil surface in the northwest border of the 120-acre area, adjacent to the Phase 4 development.

At least three springs have been documented at IGNC (VA, 2012). One flowing spring was encountered when the Veteran's Memorial in the central portion of IGNC was being constructed. It was reported to be known locally and used as water for livestock. This artesian spring may have formed as a fracture spring or joint spring where permeable fractures in relatively impermeable bedrock intersected near the ground surface. During construction of the Veteran's Memorial, the spring was sealed. A second spring saturated the grounds near the IGNC main entrance. A third spring was observed within an undeveloped scrub-shrub/wooded area. This flowing spring discharged to a nearby small stream. These may be depression springs that formed where the groundwater table reached the ground surface at a topographic break. The IGNC's administration officer commented that new springs often appear, and the excessive saturation is an issue (Plummer, 2020).

### **3.6.1.4 Groundwater Wells**

Two groundwater wells were installed at IGNC in 2012 (Plummer, 2020). Groundwater from the wells fills the existing irrigation pond; the water is used to irrigate landscaped vegetation in the Phase 1, 2, 3, and 4 developments. The administration officer stated that irrigation frequently depends on the conditions but occurs approximately three days per week. IGNC obtains potable water through a metered connection from Fort Indiantown Gap.

## **3.6.2 Environmental Consequences**

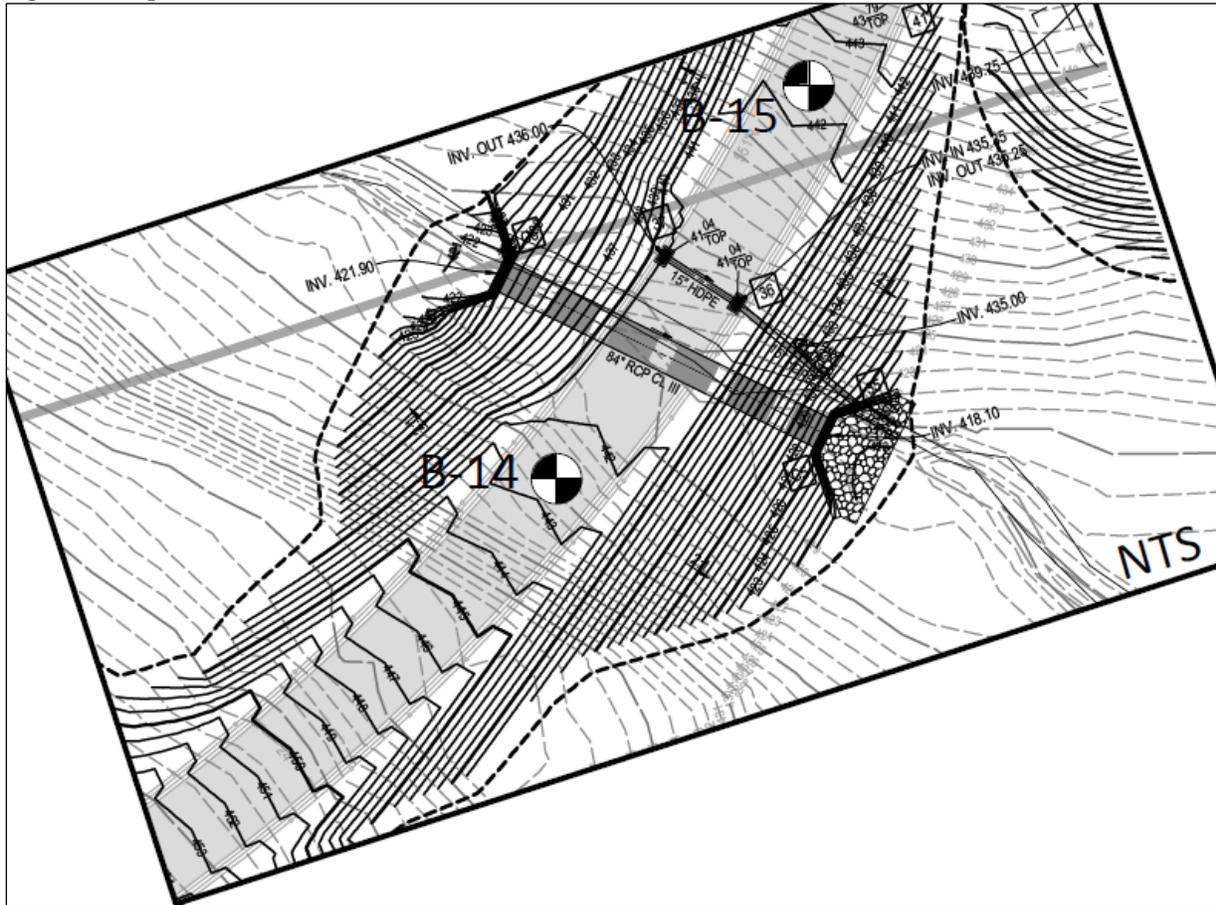
### **3.6.2.1 Proposed Action**

#### **3.6.2.1.1 Watercourses**

**Construction.** The design for the proposed Phase 5 expansion avoids all watercourses, with the exception of a proposed stream crossing, which would involve installing an approximately 50-

foot-long and 7-foot-wide culvert; this stream channel is located in the central portion of the proposed Phase 5 expansion area (Figure 9). VA is currently preparing a joint USACE/PADEP application for a PADEP Section 401 State Water Quality Certification (SWQC) to permit the stream crossing. The permit would be obtained prior to performing any construction that would cross the stream.

**Figure 9. Proposed Culvert at the Unnamed Stream Channel**



Additionally, the Proposed Action includes repairs to three (3) existing box culvert bridges within the existing cemetery. The proposed work would not require removing the existing bridge abutments and would not require in-water work. The installation of rip-rap and a geotextile underlay would serve to improve the embankment near the existing bridge abutments and further prevent erosion of the embankment and sedimentation of run-off. The rip-rap stops prior to the stream bank. Repairs to the existing bridges would not change existing uses and have no mechanism to impact stream flow or water quality.

Similar to soil impacts, a release of petroleum-based fluids from construction equipment could adversely impact surface water or groundwater quality. As such, construction equipment would be properly maintained in good working order and equipped with emergency spill kits. This would ensure that construction contractors are prepared to respond to a release of petroleum-based fluids (diesel, hydraulic fluid) to surface water or groundwater. Additionally, construction equipment would be refueled in designated impervious areas away from surface water resources.

Therefore, construction of the Proposed Action would have long-term, direct, less-than-significant adverse impact on surface water resources.

**Operation.** Operation of the Phase 5 expansion would have negligible, indirect impacts on watercourses; potential impacts would be limited to stormwater run-off that is allowed to reach the stream channels. This potential impact would be minimized by properly maintaining the Phase 5 stormwater basins, such that stormwater does not exceed containment, and quickly revegetating any soil that becomes exposed during the normal course of cemetery operation.

During operation, pesticide/herbicide applications (as part of routine maintenance activities) and the use of road deicing chemicals during the winter would be performed to the minimum extent necessary and in accordance with manufacturer specifications, resulting in minimal impacts to surface water.

Therefore, operation of the Proposed Action would have a long-term, indirect, negligible impact on surface water resources.

#### *3.6.2.1.2 Stormwater Management*

**Construction.** During construction, less-than-significant, direct and indirect, short-term soil erosion and sedimentation impacts would be possible during site grading and construction of the Honor Guard building, roadways, and other project elements are constructed. Construction would remove the 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 the potential to result in increased sedimentation to stormwater management systems and offsite discharges of sediment-laden runoff.

To minimize these potential adverse impacts, erosion and sediment controls and stormwater management systems specified in an approved PADEP-issued NPDES permit, including the development and implementation of a site-specific erosion and sedimentation control plan, would be implemented at the start of the construction process, and continuously maintained. As mentioned above, as many as four stormwater basins would be constructed during development.

Additionally, the Phase 5 expansion is be designed to comply with EISA Section 438 (USEPA, 2009) to the maximum extent technically feasible through engineering and design controls, such as minimizing the area of new impervious surfaces, directing stormwater run-off to designated storage basins, and allowing precipitation to infiltrate into the ground surface to the maximum extent possible.

Similarly, the design for the Proposed Action would adhere to the PA Stormwater BMP Manual guidelines and regulations, which indicates that there should not be an increase in post-development runoff volume for all storms equal to or less than the 2-year/24-hour storm event. The PA Stormwater BMP Manual also indicates that the post-development peak rate of discharge for the 1-year through 100-year events should not exceed the pre-development peak rates. Additionally, the composite efficiency of the proposed stormwater BMPs shall provide an 85% reduction in post-development particulate associated pollutant load, an 85% reduction in post-development total phosphorus loads, and a 50% reduction in post-development solute loads. VA would construct stormwater management systems that adhere to these design requirements, such that operation of the Proposed Action would not have a significant adverse impact on stormwater management and surface water quality. Stormwater management practices may also include the

construction of infiltration basins and trenches, bioretention basins, vegetated filter strips, and vegetated swales.

Concerning drainage issues, the Proposed Action includes several drainage improvements where erosion has occurred along non-curbed sections of existing IGNC roadways, and where “wet/soggy” areas are present near Funks Diner near the IGNC main entrance. The uncurbed portions of IGNC roadways would have curb and drains added to eliminate the erosion issues. For the wet areas near the IGNC entrance, the currently maintained lawn would be replanted with suitable native, non-invasive trees and shrubs, thereby avoiding the need for further mowing or maintenance in this area.

Therefore, construction of the Proposed Action would have a short-term, direct, less-than-significant adverse impact on stormwater management.

**Operation.** Operation of the Proposed Action would generate stormwater run-off from the new impervious surfaces, including the new roadways and other hardscapes such as the new honor guard building and columbarium. However, no long-term soil erosion impacts are anticipated to occur because the additional stormwater run-off volume would be managed by the newly constructed stormwater basins. Additionally, vegetation in landscaped areas would be maintained to prevent exposure of underlying soils.

Therefore, operation of the Proposed Action would have a long-term, direct, negligible impact on stormwater management.

#### 3.6.2.1.3 Groundwater/Bedrock Hydrology

**Construction.** Construction activities that require deep excavations/cutting may encounter perched groundwater within or above fine-grained soils. If shallow groundwater is encountered during construction, appropriate groundwater engineering controls would be implemented to ensure that groundwater contamination does not occur, such as cleaning machinery of petroleum-based fluids prior to contacting groundwater.

The Phase 5 expansion crypt fields would be constructed with an adequate underdrainage system to avoid prolonged contact between the crypts and groundwater, per NCA design requirements (VA, 2020b).

Therefore, construction would result in short-term, direct, negligible adverse impacts to groundwater hydrology.

**Operation.** Based on standard modern burial practices, it is unlikely that embalming fluid or other decomposition products would be released into the soil and/or groundwater during operation of the Phase 5 cemetery. The standard NCA design incorporates subsurface concrete crypts (for full casket burials), an entire section of which would be installed during the Phase 5 expansion construction. Using this technique, the caskets are not buried directly in the soils, rather they are set in a pre-placed concrete crypt. Modern embalming fluids are markedly less toxic as the primary active ingredients are no longer arsenic-based. Additionally, as selection of either cremains interment or columbaria placement increases, the potential for groundwater contamination commensurately decreases, as no embalming fluids are used in these burial processes.

Additionally, as previously described, the proposed crypt fields would utilize an adequate underdrainage system designed to keep groundwater from reaching the inside of the lowest crypt. As a result, operation of crypt fields is not anticipated to encounter groundwater, or, if groundwater is present, the contact period would be temporary.

During operations, pesticide herbicide and deicing applications (as part of routine maintenance activities) would be conducted to the minimum extent necessary and in accordance with manufacturer specifications, resulting in minimal impacts to underlying groundwater resources.

Therefore, operation of the Proposed Action would have a long-term, direct, negligible adverse impact on groundwater.

#### 3.6.2.1.4 Groundwater Supply Well

**Construction and Operation.** The Proposed Action includes the installation of a new groundwater well to supply irrigation water for newly landscaped vegetation within the Phase 5 expansion area. Approximately 4.8 million gallons per year, under 100,000-gallons per day on a monthly average, of groundwater would be withdrawn to supply irrigation water for approximately eight acres of newly landscaped vegetation within the Phase 5 expansion area.

VA has contracted a PA-licensed hydrogeologist to design the well and complete all permitting documents required by the Susquehanna River Basin Commission (SRBC) to ensure that the planned extraction volume has no adverse impacts on groundwater quality or supply to other groundwater users in this watershed. The permit application has been submitted and is currently under review by SRBC.

Thus, the Proposed Action would be anticipated to have a long-term, negligible adverse impact on groundwater function or quality.

#### **3.6.2.2 No Action**

No changes to the property would occur from implementation of the No Action alternative; therefore, no impacts to hydrology or water quality would occur. Baseline conditions would remain, as described above.

### **3.7 Wetlands, Floodplains, and Coastal Zone Management**

#### **3.7.1 Existing Environment**

##### **3.7.1.1 Wetlands**

###### 3.7.1.1.1 Regulatory Basis

The USACE has regulatory jurisdiction over waters of the United States, including wetlands pursuant to Section 404 of the Clean Water Act and Navigable Waters of the United States pursuant to Section 10 of the 1899 Rivers and Harbors Act. In Pennsylvania, wetlands and streams are potentially regulated by the PADEP under Title 25, Pennsylvania Code, Section 105, Dam Safety and Water Management as *Regulated Waters of this Commonwealth* (PADEP, 2009b). Jurisdictional wetlands are delineated based upon the presence of hydric soils, hydrologic indicators, and hydrophytic vegetation in accordance with the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual for the Eastern Mountains and Piedmont Region, Version 2.0* (USACE, 2012) and *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, 1979).

Impacts to jurisdictional wetlands require a 404 permit from USACE and 401 permit from PADEP prior to any disturbance.

###### 3.7.1.1.2 Wetland Survey

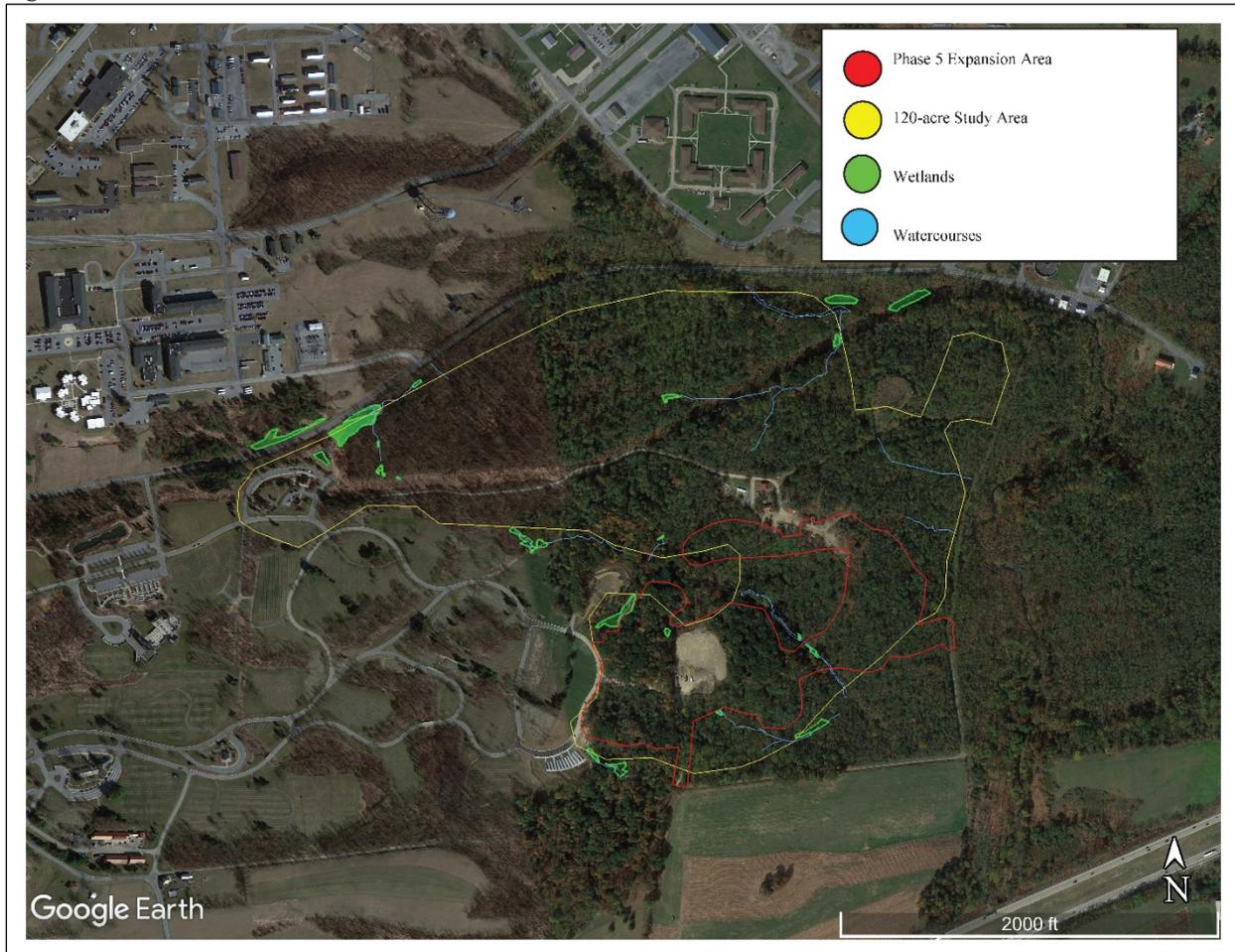
On October 6-8, 2020, and April 28, 2021, wetlands were identified and delineated within the larger 120-acre area using the Modified Routine Wetland Delineation Method described in the USACE Wetland Delineation Manual (USACE, 1987). Data was collected for each delineated

wetland and an adjacent upland sample point including dominant vegetation, soil characteristics, hydrology, and other information necessary to complete USACE Wetland Determination Data Forms. Further details on the methodology and findings from the wetland survey are presented in the *Aquatic Resource Delineation Report* included in Appendix A.

In summary, a total of 14 wetlands, all of which were classified palustrine emergent and totaling 1.09 acres, were located, and delineated within the 120-acre study area. The total area of wetlands identified within the study area was 1.09 acres. The wetland locations are depicted on Figure 4.

On April 28, 2021, USACE completed a field view and confirmed the wetland delineation findings. VA is in the process of requesting a preliminary jurisdictional determination from USACE.

**Figure 10. Wetlands and Watercourses**



### 3.7.1.2 Floodplains

Based on review of available Federal Emergency Management Agency (FEMA) Flood Zone Maps for the Township of North Annville, code number 420970, the Proposed Action area is depicted on two FEMA floodplain maps: the western floodplain boundary code is listed as 42075C0115E, effective July 8, 2020, and the eastern floodplain boundary code is listed as 42075C0120E, effective July 8, 2020 (FEMA, 2020) (see Figure 11 and Figure 12).

The Proposed Action area is located within “Areas of Minimal Flood Hazard, Zone X,” which is defined by FEMA as a special flood hazard area whose surrounding areas are higher than the elevation of 0.2-%-annual-chance (or 500-year) flood (FEMA, 2020).

At the northern portion of the Aires Run Zone A floodplain, adjacent to the boundary separating the East Hanover and Union townships is a “Limit of Study” line. It is noted that PADEP, in absence of a FEMA-mapped floodplain, regulates the floodway, which is assumed to be 50 feet from top-of-bank on either side of the stream.

Figure 11. FEMA Floodplain Map (update) (western floodplain boundary map 42075C0115E)

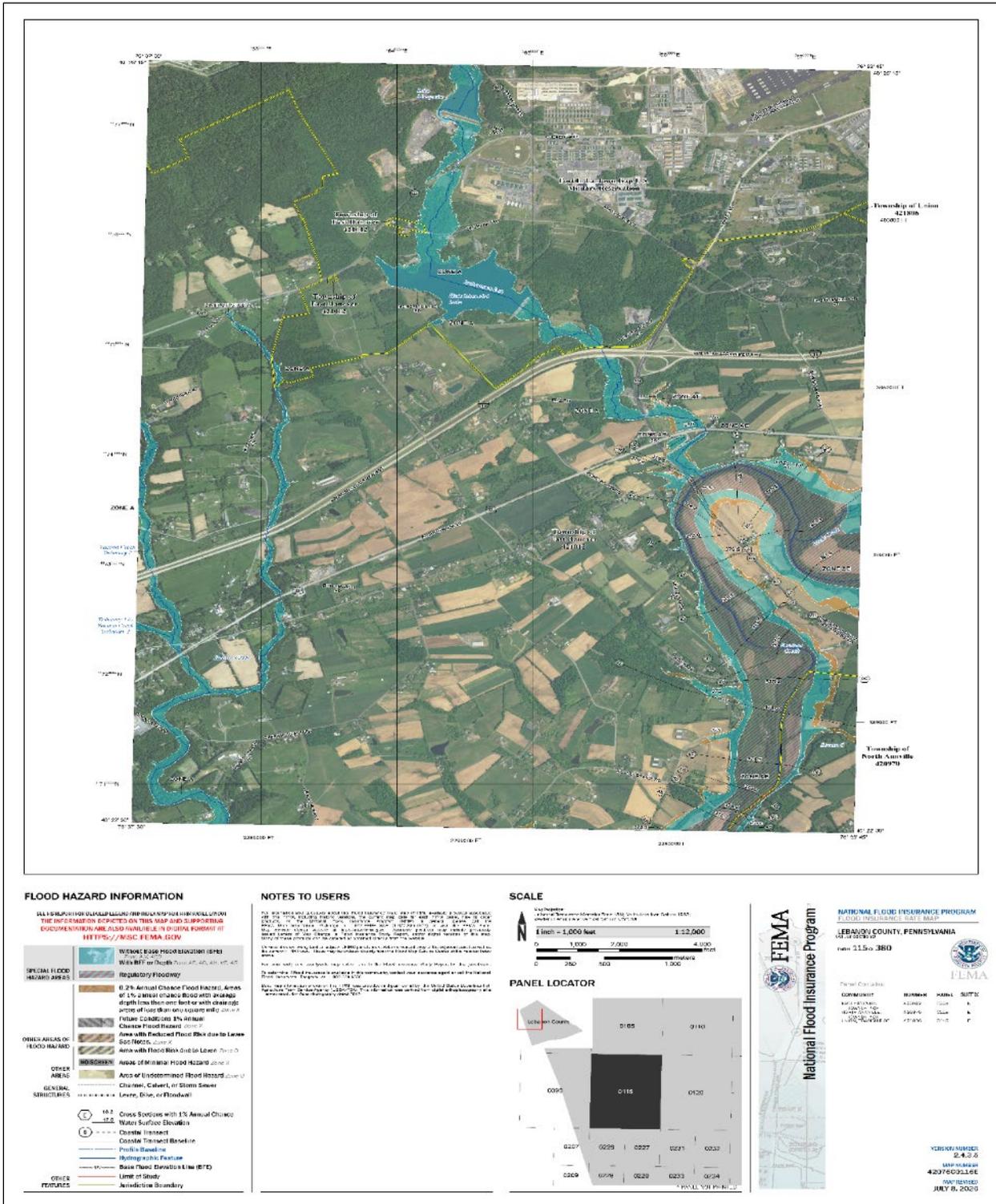
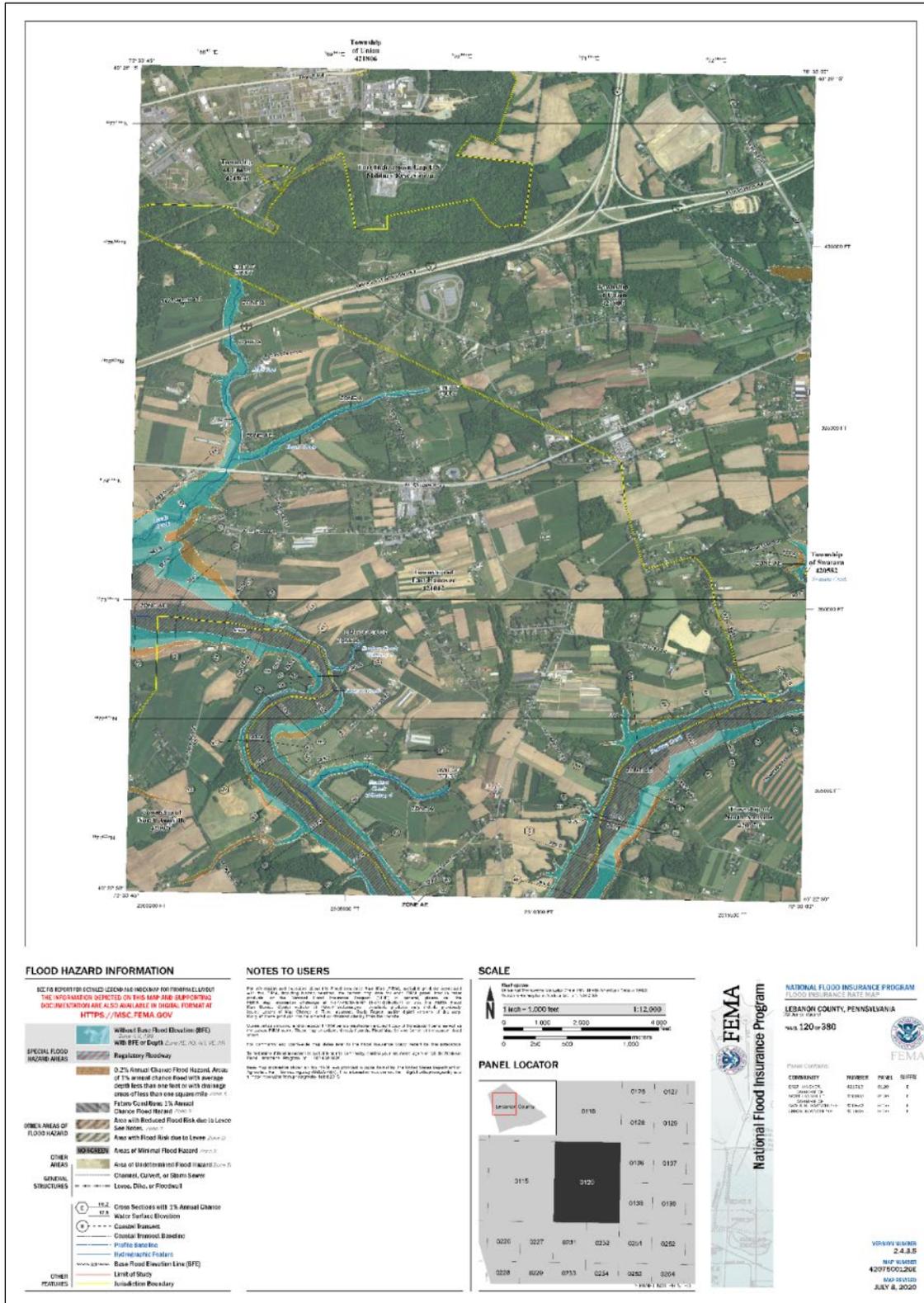


Figure 12. FEMA Floodplain Map (eastern floodplain boundary map 42075C0120E)



### 3.7.1.3 Coastal Zone Management

Federal actions with reasonably foreseeable coastal effects are subject to the federal consistency no matter where they occur – whether within or outside of the state’s coastal zones. The Coastal Resources Management Program (CRM) within the PADEP has been tasked with coordinating federal consistency reviews and concurring with or objecting to proposed federal actions subject to the federal consistency requirements.

IGNC is located outside of the PA coastal zone boundary and the coastal nonpoint boundary, and the Proposed Action has no mechanisms to reasonably impact coastal zone resources. Thus, pursuant to 15 CFR §930.33(a)(2), VA has determined that the Proposed Action would have no effects on any coastal use or resource, and a negative determination under 15 CFR §930.35 would not be required, and further coordination with the PA CRM under section 307 of the Coastal Zone Management Act would not be required. No further analysis of this topic is included in this SEA.

## 3.7.2 Environmental Consequences

### 3.7.2.1 Proposed Action

#### 3.7.2.1.1 Wetlands

**Construction.** As previously described, the Phase 5 expansion design avoids all wetlands and waterbodies, with the exception of a 0.02-acre wetland located adjacent to a proposed stream crossing. This wetland would be permanently impacted during the construction of a culvert installed to create a bridge over the stream channel. The culvert would be approximately 50-feet-long and 7-feet wide. The culvert would support a paved roadway that would connect the Phase 5 expansion area to the proposed satellite maintenance yard. Once the culvert is installed, the stream channel would continue to flow unobstructed.

The joint 404/401 permit would be required to authorize wetland impacts prior to construction of the culvert. Accordingly, VA submitted a joint 404/401 permit application to USACE and PADEP to allow impacts to the wetland and stream channel. USACE issued the 404 permit on 03 December 2021; VA would implement all impact avoidance measures (see Appendix B). PADEP is in the process of reviewing the 401 permit application; the permit is required to be obtained prior to construction of the culvert, and all 401 permit requirements would be implemented. VA is currently preparing the 404/401 permit application for regulatory review and approval.

Therefore, construction of the Proposed Action would have long-term, direct, less-than-significant adverse impact on wetlands.

**Operation.** Operation of the Proposed Action has no anticipated activities that would continue to adversely impact wetlands. Existing and new stormwater engineering controls would be properly maintained to ensure stormwater run-off is properly managed such that its flow would not cause soil erosion or sedimentation of run-off that could reach a wetland. Additionally, newly landscaped vegetated areas would be professionally maintained to ensure soils remain covered and are not subject to potential erosive forces. Herbicide/pesticide applications would be made accordingly to label instructions as part of routine maintenance activities and would avoid direct application to or near wetlands or surface water bodies.

Therefore, operation of the Proposed Action would result in long-term, direct, negligible adverse impacts on wetlands.

### 3.7.2.1.2 *Floodplains*

The Proposed Action is not located within 100- or 500-year floodplains. Construction of the culvert over the stream would result in an unavoidable impact to the PADEP floodway, which is within 50 feet from the top-of-bank on either side of the stream.

However, the culvert is relatively wide, and its length is relatively short compared with the respective width and length of the stream channel. In the event of a flood, floodwaters would be able to flow relatively unobstructed within and around the culvert. As a result, the Proposed Action would not be reasonably anticipated to induce flooding either on-site or down stream of IGNC. Therefore, the Proposed Action would have no adverse impact on floodplains.

### 3.7.2.2 *No Action*

The No Action Alternative would not impact wetlands because the 0.02-acre wetland would not be filled, and all other current conditions would remain unchanged. Similar to the Proposed Action, the No Action alternative would have no impact on floodplains.

## 3.8 **Habitat and Wildlife**

### 3.8.1 **Existing Environment**

#### 3.8.1.1 *Regulatory Basis*

Federally listed species are those plants and animals protected by the federal government pursuant to the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). Federally listed species are classified as endangered or threatened.

State-listed species are those plants and animals managed by the Commonwealth of Pennsylvania pursuant to Title 30, Chapter 75: Fish and Boat Code (fish, amphibians, reptiles, and aquatic organisms), Title 34, Chapter 133: Game and Wildlife Code (wild birds and mammals), and Title 17, Chapter 45: Conservation of Wild Plants (native plant species). State-listed species are classified as endangered, threatened, and species of special concern.

#### 3.8.1.2 *Desktop Review*

The potential for federally- and state-listed plant and animal species occurring within the 120-acre area was assessed via USFWS Information for Planning and Consultation (IPaC) system and the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Tool on October 1, 2020.

The USFWS IPaC indicated the potential occurrence in the 120-acre area for two listed mammals and one reptile (Table 12) and 15 migratory bird species protected under the *Migratory Bird Treaty Act* of 1918 (MBTA) and the *Bald and Golden Eagle Protection Act* of 1940 (Table 13). The 120-acre Proposed Action area was assessed for the occurrence of USFWS Critical Habitat as defined by 17 CFR 35.1532. Per the USFWS Critical Habitat for Threatened & Endangered Species database, the Proposed Action area does not contain critical habitat. A copy of the IPaC result is included in Appendix A.

The PNDI environmental review for the Proposed Action stated that the PA Game Commission (PGC), the PADCNr, and PA Fish and Boat Commission (PFBC) have not identified any known anticipated impacts on threatened and endangered species and/or special concern species and resources. A copy of the PNDI environmental review is included in Appendix A.

**Table 12. Federally Listed Species Potentially Present**

Scientific Name	Common Name	Federal Status	State Status
<b>Mammals</b>			
<i>Myotis septentrionalis</i>	Northern long-eared bat	T	C – Rare
<i>Myotis sodalist</i>	Indiana bat	E	C – Rare
<b>Reptiles</b>			
<i>Glyptemys muhlenbergii</i>	Bog turtle	T	C – Rare

Notes: T = Threatened; E = Endangered; C = Candidate

### 3.8.1.2.1 Northern Long-Eared Bat

The northern long-eared bat is listed as threatened by USFWS. The northern long-eared bat is characterized by its long, rounded ears that, when folded forward, extend beyond the tip of the nose. In Pennsylvania, the northern long-eared bat is found in forests. Northern long-eared bats hunt at night over small ponds, in forest clearings, at tree top level, and along forest edges. They use caves and underground mines for hibernation. Maternity roosts are located in tree cavities, under exfoliating bark, and in buildings. The primary threat to the species is white-nose syndrome, a fungus that appears on the muzzle and other parts of hibernating bats. Impacts to hibernacula and loss or degradation of summer habitat can also cause mortality in northern long-eared bats (USDA-NRCS, 2016). The PA Game Commission has confirmed the presence of northern long-eared bats at several sites in PA (PGC, 2017).

During an interview with Mabbett on October 7, 2020, IGNC maintenance staff indicated that they had observed bats flying above the property, but the species were not known (Plummer, 2020).

USFWS considers that all activities in this region may affect NLEB; therefore, consultation with USFWS pursuant to Section 7(a)(2) of the ESA is required. However, the Proposed Action may rely on the USFWS’s January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation. Additionally, USFWS confirmed in a letter dated 25 February 2021, that the Proposed Action site is not located within 0.25 mile of a known northern long-eared bat hibernaculum or within 150 feet from a known, occupied maternity roost tree; therefore, any incidental take that may occur is in accordance with the Final 4(d) Rule and is not in violation of the Endangered Species Act (see USFWS letter dated 25 February 2021 in Appendix B).

### 3.8.1.2.2 Indiana Bat

The Indiana bat is listed as endangered by USFWS. It is also designated as a “priority species” under the state of Pennsylvania’s Game and Wildlife Code. Close in resemblance to the little brown bat, the Indiana bat is distinguished by its grayish chestnut coloring and pink facial area. In Pennsylvania, the Indiana bat is found in river and stream corridors as well as upland forests in the summer months. Indiana bats eat a variety of insects located along rivers and lakes in upland forests. They use limestone caves and underground mines for hibernation. Maternity roosts are located in tree cavities, under exfoliating bark, and occasionally in buildings. Much like the northern long-eared bat, the primary threat to the Indiana bat is white-nose syndrome, a fungus that appears on the muzzle and other parts of hibernating bats. Impacts to hibernacula, loss or degradation of summer habitat, and a lack of winter roost sites also cause mortality in northern Indiana bats (USFWS, 2011). The PA Game Commission has confirmed the presence of Indiana bats at several sites in PA (PGC, 2017).

### 3.8.1.2.3 Bog Turtle

Based on the findings in the USFWS IPaC, the project Proposed Action area may contain habitat suitable for the bog turtle. During an interview with Mabbett on October 7, 2020, IGNC maintenance staff indicated that they were aware of bog turtles and USFWS bog turtle regulations, but none of the staff had observed any bog turtles at IGNC (Plummer, 2020).

The bog turtle is listed as threatened by the USFWS. The bog turtle is also Pennsylvania’s smallest turtle at approximately 4-inches in length (PFBC, 2011). The bog turtle distinguishing feature is the yellow markings found on each side of their head. Bog turtles can be an indicator of wetland health and water quality due to their habitat requirements. Bog turtles habituate spring-fed meadows and bogs; specifically, early successional and sedge and grass-dominated wetlands. They require deep mucky soils for hibernation and thermoregulation. Bog turtles are exceptionally sensitive to changes in conditions, which can result in population decline and even disappearance from the area. Habitat loss, habitat fragmentation and succession are major factors in the decline of this species. Other threats include decreased water quality and roadway mortality.

### 3.8.1.2.4 Migratory Bird Treaty Act

The MBTA makes it unlawful to kill, hunt, sell, or possess listed birds (USFWS, 2017). Table 14 summarizes the MBTA species that the USFWS IPaC database indicated could potentially be present at IGNC.

Overhead powerlines are a common cause of death to migratory birds. There is an overhead powerline at IGNC which transects the northern boundary of the Proposed Action area from east to west. This electric utility line is not owned or operated by VA, but by Met-Edison (Met-Ed) (a FirstEnergy company), and is described in further detail in Section 3.10. VA is in discussion with Met-Ed on the possible relocation of the electric utility line to a location off-of the IGNC property.

**Table 13. Migratory Bird Treaty Act Species Potentially Present**

Scientific Name	Common Name	Level of Concern
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Vulnerable
<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo	Bird of Concern
<i>Poecile atricapillus praticus</i>	Black-capped Chickadee	Bird of Concern
<i>Dolichonyx oryzivorus</i>	Bobolink	Bird of Concern
<i>Cardellina canadensis</i>	Canada Warbler	Bird of Concern
<i>Dendroica cerulea</i>	Cerulean Warbler	Bird of Concern
<i>Antrostomus vociferus</i>	Eastern Whip-poor-would	Bird of Concern
<i>Vermivora chrysoptera</i>	Golden-winged Warbler	Bird of Concern
<i>Oporornis formosus</i>	Kentucky Warbler	Bird of Concern
<i>Aegolius acadicus</i>	Northern Saw-whet Owl	Bird of Concern
<i>Dendroica discolor</i>	Prairie Warbler	Bird of Concern
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	Bird of Concern
<i>Euphagus carolinus</i>	Rusty Blackbird	Bird of Concern
<i>Hylocichla mustelina</i>	Wood Thrush	Bird of Concern
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	Bird of Concern

#### 3.8.1.2.5 *Bald Eagles*

Although the bald eagle is no longer state or federally listed, it is still federally protected by the *Bald and Golden Eagle Protection Act* in accordance with 16 United States Code 668. The bald eagle typically uses riparian habitat associated with coastal areas, lake shorelines, and riverbanks. The nests are generally located near bodies of water that provide a dependable food source. According to the USFWS Pennsylvania Bald Eagle Nesting Sites mapper, the nearest nest is located approximately 1.5 miles to the northwest of IGNC at the Fort Indiantown Gap installation and none are located at the Proposed Action area (USFWS, 2020). Additionally, no bald eagles or nests were observed during the field survey on October 6-8, 2020. For these reasons, it has been determined that the Proposed Action would have no impact on the bald eagle.

During an interview with Mabbett on October 7, 2020, IGNC maintenance staff stated they observed eagles flying above IGNC, but no eagle nests have been observed at IGNC within at least the past five years (Plummer, 2020).

#### 3.8.1.3 *Field Survey*

A pedestrian survey was performed on October 6-8, 2020, to assess the potential for any of the listed species identified in the USFWS IPaC to be present within the 120-acre area. This area was selected because, at the time, the specific size and alignment for the Phase 5 expansion within the 120-acre area had not yet been selected.

During the survey, common wildlife observed included red-tailed hawk (*Buteo jamaicensis*), white-tailed deer (*Odocoileus virginianus*), American robin (*Turdus migratorius*), Canada warbler (*Cardellina canadensis*), wild turkey (*Meleagris gallopavo*), Eastern gray squirrel (*Sciurus carolinensis*), and Eastern chipmunk (*Tamias striatus*).

#### 3.8.1.4 *MBTA*

The Canada warbler was the only MBTA bird species observed during the pedestrian survey; one individual bird was observed outside of the Proposed Action area, but no suitable habitat was observed within the Proposed Action area.

#### 3.8.1.5 *Bog Turtle*

On October 7 and 8, 2020, VA contracted a PA-licensed bog turtle biologist who completed a Phase I bog turtle habitat survey according to the USFWS *Guidelines for Bog Turtle Surveys* (revised April 2006) at the 120-acre site and a surrounding 300-foot buffer. One wetland (INC-W-002) was determined to be *Potential Bog Turtle Habitat* (PBTH). This determination was made due to the presence of persistently groundwater fed hydrology, mucky soil substrate, and the presence of a vegetative structure containing microhabitat conditions. Approximately 0.12-acres of DSA (designated survey area) was identified within the wetland. DSA is defined as all areas of the wetland where soft muck-like soils are present.

In April and May 2021, a subsequent Phase II Bog Turtle Survey was conducted within the approximately 0.12-acre DSA. Bog turtles were not identified, and no further survey of this area was warranted. Copies of the Phase I and Phase II Bog Turtle Survey Reports are provided in Appendix A.

Additionally, potential bog turtle habitat has been identified in existing portions of the Phase 4 cemetery. Although Phase II surveys have not been performed to confirm whether individual bog turtles are present or absent, VA would implement avoidance measures (described in the following section) to ensure potential impacts to bog turtles are avoided.

### **3.8.1.6 Vegetation**

To date, approximately 245 acres of the 677-acre IGNC property have been developed for burial areas and associated infrastructure (roads, administration/maintenance facilities, committal shelters, columbaria), or have been maintained as planned vegetative buffers. Cemetery areas developed for in-ground burials are planted with a turf grass mix that is maintained with frequent mowing and occasional application of fertilizer. The remainder of the IGNC property generally has been left in a natural state, predominately consisting of naturally wooded areas.

Vegetation within the 120-acre Proposed Action area is comprised primarily of undeveloped temperate forest and woodland canopy species, primarily dominated by cold-deciduous broad-leaved trees and some conifers. During the field survey on October 6-8, 2020, the primary tree species observed included red maple (*Acer rubrum*), sugar maple (*Acer saccharum*), hickory (*Carya* spp.), American beech (*Fagus grandifolia*), white ash (*Fraxinus americana*), tulip tree (*Liriodendron tulipifera*), oak (*Quercus* spp.), black walnut (*Juglans nigra*), and American basswood (*Tilia americana*). There are numerous dead or dying green ash trees located on-site that have been impacted by the Emerald Ash borer beetle; no living green ash trees were observed within the 45-acre Phase 5 expansion area.

Groundcover in the 120-acre Proposed Action area mainly consisted of Japanese stiltgrass (*Microstegium vimineum*), Northern spicebush (*Lindera benzoin*), and Autumn olive (*Elaeagnus umbellata*).

## **3.8.2 Environmental Consequences**

### **3.8.2.1 Proposed Action**

#### **3.8.2.1.1 Wildlife**

**Construction.** The majority of the wildlife currently found at the 120-acre Proposed Action area are adapted to living in a disturbed and/or suburban area and co-existing with human activity. The Proposed Action would disturb approximately 45 acres of forest habitat suitable for common wildlife species. This would create long-term, adverse impacts on those species that are not able to relocate to other forested areas elsewhere at IGNC.

##### **3.8.2.1.1.1 Bog Turtle**

As previously described, no bog turtles were found in the 0.12-acre DSA. Thus, bog turtle avoidance measures are not required for development at or within 300-feet of this area.

As previously described, other PBTH is present in portions of the Phase 4 cemetery. In the absence of conducting a Phase II survey, it is assumed bog turtles could potentially be present in the selected wetlands.

Accordingly, VA would implement management measures to avoid adverse impacts to bog turtles during any surface disturbance work occurring within 300 feet of the wetlands having PBTH. VA coordinated with USFWS and obtained their concurrence with this approach, as documented in the USFWS letter dated 16 November 2021 (see Appendix B). To avoid potential impacts to bog turtles during intrusive subsurface work within 300 feet of their potential habitat in the Phase 4 area, VA would follow the USFWS-specified time of year restrictions by performing such work

only from November 1 to March 31 (when bog turtles would be hibernating and not at risk from encountering surface disturbing activities) and installing 18-inch compostable filter socks adjacent to those wetlands having potential bog turtle habitat. However, should VA be unable to adhere to this seasonal time restriction and engineering control, then the following measures would be required (as outlined in the USFWS letter dated 16 November 2021; see Appendix B):

1. If any exclusionary fencing is entirely erected between November 1 and March 31, it will not be necessary to perform a pre-construction survey.
2. During the period between April 1 and October 31, one pre-construction bog turtle clearance search of the proposed project area of effect will be completed prior to any earth disturbance activity, fencing installation, or other construction. The search area will extend to include an area 10 feet beyond the planned Limit of Disturbance and any temporary staging areas. The pre-construction bog turtle clearance search must be performed by a qualified bog turtle surveyor, who will be obtained from the most current list of “U.S. Fish and Wildlife Service and Pennsylvania Fish and Boat Commission Recognized Qualified Bog Turtle Surveyors.” The bog turtle clearance search must be completed immediately prior to the installation of the habitat protection fence described below.
3. Except as otherwise noted within these avoidance measures, the pre-construction bog turtle clearance search shall be conducted according to the most current survey protocol provided by the U.S. Fish and Wildlife Service and the Pennsylvania Fish and Boat Commission. All Phase 2 survey procedures are applicable except that one pre-construction clearance search per wetland rather than the minimum of four searches per wetland shall be acceptable, and the time of year for performing the search has been extended.
4. If the pre-construction bog turtle clearance search occurs after June 15, herbaceous vegetation within the survey area shall be cut to a height of 4 to 6 inches prior to the survey in order to promote search effectiveness. Vegetation shall be cut using a hand-held trimmer/weed cutter and then carefully raked away from the area to be searched. The qualified surveyor shall conduct the vegetation clearing.
5. Immediately following the pre-construction bog turtle clearance search, a 30-inch-high silt barrier fence shall be erected at the edge of the Limit of Disturbance as habitat protection fencing in accordance with the approved Erosion and Sediment Pollution Control Plan. The habitat protection fence shall be constructed in upland habitat between identified suitable bog turtle habitat and the limit of disturbance to deter bog turtles from circumventing the barrier. No other construction activities may begin until installation of this habitat protection fencing is completed. The habitat protection fence will act as a barrier to prevent possible bog turtles from migrating out of wetlands and waterways into the construction area and to prevent construction activity and sediment from entering the wetland and waterway. The habitat protection fencing will be installed as indicated as soon as practicable following the turtle search and clearance by the qualified bog turtle surveyor. The fencing will be installed only after receiving approval to do so from the qualified bog turtle surveyor following completion of their site search for bog turtles.
6. Installation of all habitat protection fencing and silt barrier fence for erosion and sediment control shall be the responsibility of the contractor and shall be installed and removed by hand. The qualified bog turtle surveyor shall be present during the erection of the habitat protection fence to ensure that it is properly installed at the correct location and depth.

Immediately following the fence installation, it shall be inspected by the qualified bog turtle surveyor to ensure that no trench, which could act as a pit-fall trap to turtles, occurs on either side of the fencing. After installation, the habitat protection fence will be inspected and logged daily by the contractor to ensure that no holes are present that turtles can crawl through. If at any time there are holes in the habitat protection fence, OR any turtle (alive, injured, or dead) is observed within the Limit of Disturbance, construction will stop immediately, and Permit Condition 11 below will be followed.

7. All work associated with the project shall be conducted in accordance with the Erosion and Sediment Pollution Control Plan approved by the County Conservation District.
8. All equipment and machinery shall avoid wetland/watercourse habitat upstream and downstream of the proposed construction area. Orange construction fence will be installed to delineate these avoidance areas and will act as a visual warning to prevent construction equipment and personnel from entering and disturbing the potential bog turtle habitat outside the Limit of Disturbance. The Township or its designated representative(s) shall identify and clearly delineate all wetlands for the contractor(s) and will either attach the orange construction fence onto the habitat protection fence or install it immediately in front of the habitat protection fence within the Limit of Disturbance.
9. No material shall be excavated, deposited, or positioned so as to lower the water table or impede the flow of water to any wetland areas; that is, implementation of the project shall not directly or indirectly affect the water quality and quantity of any wetland areas.
10. The qualified bog turtle surveyor shall forward the results of the pre-construction bog turtle survey in writing to the U.S. Fish and Wildlife Service and the Pennsylvania Fish and Boat Commission via mail, facsimile, or e-mail within 48 hours of installation of the habitat protection fence.
11. During construction, if any turtle is observed at a location within 100 feet from the Limit of Disturbance, then construction may continue so long as there are no holes in the habitat protection fence. However, if any turtle (alive, injured, or dead) is observed at any time within the Limit of Disturbance, OR if a hole is observed in the habitat protection fence, then construction will cease immediately, and the following steps will be taken:
  - a. The contractor will immediately inform the pre-designated site manager who will immediately contact the qualified bog turtle surveyor. The site manager will then immediately implement the following measures:
  - b. If the turtle appears dead or immobile, the turtle will be left where it was initially observed. If the turtle appears to be mobile, efforts will be made to temporarily contain the turtle until the qualified bog turtle surveyor can take possession of it. Temporary containment will consist of placing the turtle in a thoroughly clean bucket that has a depth of more than 18 inches. Less than 1 inch of water should be placed in the bucket with the turtle to keep the animal cool and hydrated. The bucket should be placed in a quiet, well-shaded area, preferably within the wetland. The turtle should be handled as little as possible, and temporary containment must not exceed 6 hours.
  - c. The qualified bog turtle surveyor will identify the species of turtle found and document the location and condition of the turtle. The qualified bog turtle surveyor

will also inspect the habitat protection fence and direct any repairs of the fence as needed. If there are holes in the habitat protection fence and/or the turtle is found to be a bog turtle, construction will not resume until the agency consultation procedures described herein are fully implemented, and the habitat protection fence is repaired to re-establish an effective turtle exclusion barrier.

- d. If the qualified bog turtle surveyor identifies the turtle species as a bog turtle (*Glyptemys muhlenbergii*), then this biologist will immediately notify endangered species biologists at both the U.S. Fish and Wildlife Service and the Pennsylvania Fish and Boat Commission. The elapsed time for contacting both of these jurisdictional agencies from the time of bog turtle discovery should be as soon as possible, but must not exceed 24 hours. Following arrival of the qualified bog turtle surveyor at the project site, the turtle may be handled only by this biologist according to the recommendations of the U.S. Fish and Wildlife Service and/or the Pennsylvania Fish and Boat Commission. The biologist will consult with these agencies concerning safe handling and possible relocation of the turtle. Construction will resume only at the completion of this consultation.
  - e. If the qualified bog turtle surveyor identifies the turtle as a species other than the bog turtle, and the turtle appears healthy, then the qualified surveyor will mark the turtle for future identification and release it unharmed no more than 300 feet from the site of discovery to a safe location outside of the Limit of Disturbance. The site manager will be shown how and where to release the turtle if it is again found outside of the Limit of Disturbance. Construction may continue once the turtle is relocated. The site manager must log all turtle relocations.
  - f. If any turtle found appears injured or dead, consult with the U.S. Fish and Wildlife Service and/or the Pennsylvania Fish and Boat Commission concerning safe handling of an injured turtle, and the taking of possession of the specimen, whether injured or dead, by one of the jurisdictional agencies. Only the qualified bog turtle surveyor will handle the turtle. Construction will resume only at the completion of consultation.
12. The contractor will remove the habitat protection fencing and all silt barrier fencing by hand immediately upon completion of all construction activities, including stabilization of earth disturbance areas.
  13. The project proponent, or designated representative(s), will submit a brief final report including bog turtle survey results and a summary of the field construction completed, including color photographs, to the U.S. Fish and Wildlife Service and the Pennsylvania Fish and Boat Commission. The final report will be submitted 30 days after construction is completed and the habitat protection fencing is removed.

#### 3.8.2.1.1.2 Northern Long-Eared Bat

To avoid prohibited incidental take of northern long-eared bats during the pup season, VA would implement the USFWS time-of-year-restriction for NLEB from June 1 to July 31; during this time, no tree removal—which includes cutting down, harvesting, destroying, trimming or manipulating of trees, saplings, or snags—would occur (USFWS, 2020b). This time-of-year-restriction is covered by the longer restriction for the Indiana bat, as described in the following section. As previously described in Section 3.8.1.2.1, USFWS determined that the project was not located within 0.25 mile

of a known northern long eared bat hibernaculum or within 150 feet from a known, occupied maternity roost tree; therefore, USFWS concluded that any incidental take that may occur is in accordance with the Final 4(d) Rule and not in violation of the Endangered Species Act. USFWS confirmed this in their letters dated 25 February 2021 and 16 November 2021 (see Appendix B for copies of both letters).

#### 3.8.2.1.1.3 *Indiana Bat*

To avoid prohibited incidental take of Indiana bats during the pup season, VA would implement the USFWS time-of-year-restriction from March 31 through October 1; during this time, no tree removal—which includes cutting down, harvesting, destroying, trimming or manipulating of trees, saplings, or snags—would occur (USFWS, 2011). By implementing this avoidance measure, no further consultation or coordination under the ESA would be required. USFWS concurred with this approach in their letter dated 25 February 2021 (see USFWS letter in Appendix B).

#### 3.8.2.1.1.4 *Migratory Birds*

The Proposed Action does not involve constructing large towers or other structures that would adversely impact migrating birds. As previously described, overhead powerlines are a common cause of death to migratory birds. Should there be a bird death resulting from electrocution by the Met-Ed powerline, VA would notify Met-Ed. VA administrative staff stated that Met-Ed anticipates moving the powerline off the IGNC property, although the date is yet to be determined. By doing so, this would eliminate the only potential threat to migratory birds under the MBTA.

As previously described, no bald eagle nests were identified during the field survey on October 6-8, 2020. Should a new nest be identified prior to or during construction, pursuant to USFWS bald eagle guidelines, any disturbance within 660 feet of the new bald eagle nest would require additional coordination with USFWS (USFWS, 2014b).

**Operation.** During operation of the Proposed Action, common wildlife species would utilize the landscaped grounds, similar to other developed portions of IGNC property. The Proposed Action does not have any direct mechanisms to impact wildlife within the Phase 5 expansion.

Therefore, the Proposed Action would have a short-term, less-than-significant adverse impact on wildlife during construction, and no impact during operations.

#### 3.8.2.1.2 *Habitat*

**Construction.** The Proposed Action would convert approximately 45 acres of unmanaged wooded land into manicured grounds, extending the park-like setting from the existing cemetery to the new Phase 5 expansion area. Graded areas would be hydroseeded to stabilize soil, then planted with native, non-invasive vegetation. Where graded areas are to be reforested, approximately 538 bare root plantings per acre would occur in the spring. These reforested areas are generally adjacent to burial plots. Within forest management areas, which bound the reforested areas, improvements would include the removal of invasive trees and shrubs, including autumn olive, and treating the cut stems with herbicide. This process would occur each October during the active construction phase for the Phase 5 expansion. Wooded areas outside of the Phase 5 expansion area would not be impacted.

Therefore, disturbances and alterations during construction of the Proposed Action would have long-term, direct, less-than-significant adverse impacts on habitat at IGNC.

**Operation.** Operation of the Proposed Action would involve the regular routine maintenance of newly planted vegetation. No further maintenance of the reforestation or forest management areas

is planned under the Proposed Action. However, IGNC staff are not prohibited from performing maintenance in those areas, as necessary.

Therefore, the Proposed Action would have no impact on habitat during operations.

### **3.8.2.2 No Action**

Under the No Action Alternative, the wooded area proposed for the Phase 5 expansion would not be cleared. However, invasive trees and shrubs would likely continue to expand within the Phase 5 area. Environmental conditions would remain as they currently exist, and there would be no impact to wildlife or changes in the type or quality of habitat.

## **3.9 Utilities**

### **3.9.1 Existing Environment**

The following sections described existing utility information at IGNC (VA, 2020b). Information on stormwater management systems and irrigation water supply is provided in Section 3.7.

#### **3.9.1.1 Electricity**

A 69 kilovolt overhead electric utility line owned by Met-Ed enters the northern central boundary of IGNC from Biddle Drive. The utility line travels south into IGNC for approximately 300 feet, then turns east and continues through IGNC for another 4,000 feet, where it then exits IGNC near the intersection of Biddle Drive and Rickards Road. IGNC does not utilize the electricity provided by this overhead power line. The powerline reportedly serves Fort Indiantown Gap and other nearby customers; it does not serve IGNC. The land beneath the utility line is reportedly under an easement to Met-Ed.

The IGNC existing medium voltage electrical distribution was installed in 1981-82. This is based on design drawings from August 1980. The switchgear is owned by the VA, who is responsible for maintenance, repairs, and replacement if necessary. The normal life expectancy of the electrical switchgear is 30-40 years. An inspection of the switchgear would be scheduled to determine its condition before proceeding with any changes to the electrical distribution. The results of the inspection would be used to determine if the switchgear can be used to provide power to the proposed new buildings of the Phase 5 design plan. Alternatives would include refurbishing or replacing the switchgear based on the inspection recommendations.

#### **3.9.1.2 Sanitary Sewer**

The East Hanover Township owns and operates a force main sewer line that was built through the central portion IGNC circa 2007. An easement for this sanitary sewer line is located beneath the portion of Indiantown Road, east of the Proposed Action area.

Additionally, an effluent outfall pipe (24-inch diameter reenforced concrete pipe) from the Fort Indiantown Gap wastewater treatment plan “loosely parallels” the force main route.

#### **3.9.1.3 Potable Water**

Potable water for IGNC is provided from Fort Indiantown Gap through a 10-inch waterline feed. This water line crosses beneath Biddle Drive and then enters a metering pit, prior to distribution to IGNC. From the 10-inch waterline, it appears there are several smaller lines throughout the cemetery, mainly around the administration facility, providing water service or fire service (fire hydrants) to the various facilities.

## 3.9.2 Environmental Consequences

### 3.9.2.1 Proposed Action

**Construction and Operation.** The Proposed Action would require extending these utility services to the new facilities at the Phase 5 expansion area.

#### 3.9.2.1.1 *Electricity*

The Proposed Action would have the following new electrical loads:

- Honor Guard Building – 27 KVA
- Staff Building – 125 KVA
- Enclosed Storage Building – 35KVA
- Open Storage Building – 35 KVA
- Pumphouse – 80 KVA

The design would include adequate electrical service for each building. Service for the Honor Guard would be fed from the existing electrical service feeding the existing Honor Guard Building. The new development to the east would be fed by the existing medium voltage distribution on the site if it is found to have spare space for a new feeder. A new 13,200-volt to 208/120-volt, three phase, four wire transformer would be located at the exterior of each of these buildings. These transformers would feed a new panelboard in each building. The Pump House would be fed from the existing medium voltage distribution on the site. A new 13,200-volt to 480/277-volt, three phase, four wire transformer would be located at the exterior of this building. This equipment would feed a 480/277 panelboard inside the building. A 480-volt to 208/120-volt, three phase, four wire transformer and 208/120-volt panel board would be located inside the pump house to serve small loads and convenience outlets. The Storage Building would be fed from the Staff Building transformer.

#### 3.9.2.1.2 *Potable Water and Sanitary Sewer Service*

The satellite maintenance facility would have staff restrooms requiring potable water supply and sanitary sewer service. Due to the remote nature of the new facility, there are no existing potable water connections in the vicinity. There would be very little demand for potable water with the new facility, so a new domestic well is recommended for this expansion.

VA proposes to extend a new sanitary sewer line from the new satellite maintenance facility to East Hanover Township's existing force main along Indiantown Road. VA is currently preparing an application to allow for this connection; the application will be submitted to East Hanover Township for review and approval.

Adding new branches to an existing utility is a standard routine operation that typically has no impact on utility service quality. Any new connections within the Phase 5 expansion are not anticipated to disrupt or impact utility services over a short- or long-term period.

### 3.9.2.2 No Action

Under the No Action alternative, no changes to any of the utility services would be required. Baseline conditions would remain, as described above. Regular maintenance of these utilizes would be performed by VA.

## 3.10 Noise

Sound occurs when vibrations that travel through a medium are interpreted by the biological elements of the ear. Noise occurs when sounds become undesirable, unpleasant, or damaging.

Noise-sensitive receptors are residences, hospitals, libraries, recreation areas, and religious institutions.

Sound pressure levels are quantified in decibels (dB), which is dependent on both frequency and intensity, and is given a level on a logarithmic scale. The way the human ear hears sound intensity is quantified in A-weighted decibel (dBA), which are level “A” weights according to weighting curves. Sound levels for common activities and construction work are presented in Table 14. Noise levels and durations from these activities would vary depending on the specific equipment being used, and the impact from this noise on a receptor would depend on the distance between the receptor and the source of the noise. Generally, noise levels decrease by approximately 6 dBA for every doubling of distance for point sources (such as a single piece of construction equipment), and approximately 3 dBA for every doubling of distance for line sources (such as a stream of motor vehicles on a busy road at a distance).

The National Institute for Occupational Safety and Health (NIOSH) recommends that individuals working in an environment of 85 dBA or louder for an eight-hour workday limit their exposure to this noise level and wear protective earwear to help manage and prevent hearing loss due to noise exposure.

### **3.10.1 Noise Receptors**

Sensitive noise receptors are defined as properties where frequent human use occurs and where a lowered noise level would be of benefit. Sensitive noise receptors are considered to be residences, hospitals, libraries, recreation areas, religious institutions, and other similar uses. No schools, hospitals, or religious institutions are located within one mile of the IGNC. Approximately two residences are located within one mile of IGNC.

*Table 14. Common Household, Industrial, and Construction Sound Levels*

<b>Sound Level (dBA)</b>	<b>Common Sounds</b>	<b>Effect</b>
<b>140</b>	Jet engine	Painful
<b>130</b>	Near air-raid siren	Painful
<b>120</b>	Jet plane takeoff, siren	Painful
<b>110</b>	Chain saw, Thunder, Garbage Truck	Extremely Loud
<b>100</b>	Hand drill	Extremely Loud
<b>90</b>	Subway, passing motorcycle	Extremely Loud
<b>85</b>	Backhoe, Paver	Very Loud
<b>80</b>	Blow-dryer, kitchen blender, food processor, cement mixer, power saw	Very Loud
<b>70</b>	Busy traffic, vacuum cleaner, alarm clock	Loud
<b>60</b>	Typical conversation, dishwasher, clothes dryer	Moderate
<b>50</b>	Moderate rainfall	Moderate
<b>40</b>	Quiet room	Moderate
<b>30</b>	Whisper, quiet library	Faint

### **3.10.2 Existing Environment**

IGNC is characterized as a quiet, rural area surrounded by agricultural and low-density residential land uses generating noises typical of rural/residential areas. During the site visit on October 6-8, 2020, daytime background sound levels ranged from 40 to 50 dBA. The predominant ambient sounds audible within IGNC were from continuous vehicle traffic on Interstate 81. Vehicle traffic on Biddle Road is infrequent and does not substantively influence noise levels at IGNC. There is

an active agricultural field south of IGNC. During planting and harvest, tractors and other agriculture equipment would likely be audible near the southern portions of IGNC.

Sources of noise within IGNC include routine maintenance and landscaping activities (mowing, leaf blowing; approximately 85 dBA), and visitor traffic within the cemetery grounds. Noise is also generated from ceremonial rifle salutes during memorial services at committal shelters; up to a three-volley salute may occur during each memorial service. Memorial services occur six times a day during weekdays.

As detailed in Table 15, the A-weighted maximum levels (Lmax dBA) for blanks from rifle salutes at various distances and angles from a source decrease with both angle and distance (VA, 2013). These sound levels correspond to firing directly (0 degrees) or at different angles to the receptor, and do not account for sound shielding from tree lines, berms, and other buffers; thus, actual sound levels at a receptor site are expected to be lower than those shown. For comparison purposes, speech ranges from approximately 50 to 80 dBA. The shortest distance between an IGNC committal shelter and a residence (along Old Cumberland Street) is approximately 200 meters (690 feet), separated by a partially forested area. The rifle salute sound level potentially experienced at this residential area would be approximately 45 dBA. Due to near-constant noise from traffic on I-85, the rifle salute sound would be an infrequent and minor contributor to overall sounds experienced at these residential areas.

VA administrative staff stated they have never received a noise complaint from a cemetery attendee or neighboring resident (Plummer, 2020). No other notable noise-generating sources are present at IGNC.

**Table 15. Azimuth Predicted Noise Levels from Rifle Salutes**

Distance from Source Meters	A-Weighted Maximum Sound Level (Lmax, dBA), Degrees from Source		
	0°	90°	180°
50	66-76	64-74	64-74
100	60-70	58-68	58-68
200	53-63	51-61	51-61
400	39-49	38-48	38-48
800	31-41	30-40	30-40
1600	21-31	20-30	20-30

### **3.10.3 Environmental Consequences**

If a project significantly increases ambient noise levels at sensitive receptors locations or result in excessive ground-borne vibration to persons or property, it could have a significant adverse effect.

#### **3.10.3.1 Proposed Action**

**Construction.** Noise would be produced by construction equipment during the Phase 5 expansion primarily due to land clearing, grading, road construction, and building construction. Once mobilized to the site, the majority of construction equipment would remain within the construction area until that phase of construction for which the equipment was needed is complete. This approach would minimize the need for multiple mobilizations of equipment, thereby decreasing the amount of noise associated with equipment travel within IGNC and on nearby roads.

Within the proposed Phase 5 expansion area, noise from construction activities would vary depending on the type of equipment being used at the time. The impact from this noise on a receptor depends on the distance between the noise source and receptor. Anticipated cumulative

construction sound levels generated during daytime hours at specified distances are shown in Table 16.

As previously described, the nearest sensitive noise receptor would be the residential properties bordering the IGNC property along Biddle Road and Old Cumberland Road. The existing forested buffer at IGNC would be retained and continue to attenuate the intensity of any construction noises generated at the Phase 5 expansion area.

Noise impacts would be further minimized by equipping construction equipment with appropriate sound-muffling devices (i.e. from the original equipment manufacturer or better), and limiting engine idling to less than 5 minutes. Additionally, construction activities would take place during daylight hours and during weekdays, unless there is a specific activity that needed to be completed outside of this schedule to avoid impacting current memorial services.

**Table 16. Estimated Noise Levels from Construction Activities**

Distance from Noise Source, feet (meters)	Estimated Sound Level in dBA
50 (15.2)	90–94
100 (30.5)	84–88
150 (45.7)	81–85
200 (61.0)	78–82
400 (121.9)	72–76
800 (243.8)	66–70
1,200 (365.8)	< 64

Construction workers would be working in close proximity to construction equipment and could be exposed to noise levels above 90 dBA. This is above the permissible noise exposure level defined by the Occupational Safety and Health Administration (OSHA). These levels would be reduced to permissible levels through feasible administrative or engineering controls, and/or the use of BMPs such as the use of hearing protection equipment to ensure compliance with applicable OSHA standards.

Therefore, construction of the Proposed Action would result in short-term, direct, less-than-significant adverse impacts to noise receptors including visitors to the cemetery, off-site receptors, and workers.

**Operation.** Ceremonial rifle salutes would continue to occur at the existing IGNC committal shelters, which to date have not resulted in any documented noise concerns (Plummer, 2020). Operation of the Proposed Action would create noise associated with maintenance activities and visitor traffic within the new Phase 5 expansion area. The noise levels generated from these activities would be similar to current IGNC maintenance operations. To ensure operational maintenance noises do not become a nuisance, the maintenance equipment would be maintained in good working order. Additionally, maintenance equipment would be operated during daylight working hours and away from committal services, thereby maintaining the dignity and solemnity of memorial services.

As such, operation of the Proposed Action would result in short-term, direct, negligible adverse noise impacts on sensitive receptors.

### **3.10.3.2 No Action**

Under the No Action Alternative, the cemetery expansion would not occur, and no additional noise impacts would result. Ceremonial rifle salutes would continue until cemetery capacity is reached; grounds maintenance activities would continue thereafter.

### 3.11 Transportation and Parking

#### 3.11.1 Existing Environment

The IGNC main entrance is located off State Route 934 (Fisher Avenue). A secondary entrance is located along Indiantown Road (Boundary Road) and Lakota Lane. Fisher Avenue also forms the western border of IGNC, and Boundary Road is primarily limited to cemetery maintenance vehicles. A third entrance is located along Biddle Drive. Biddle Drive is a two-lane paved road that separates IGNC (to the south) and Fort Indiantown Gap (to the north). The southern portion of the Proposed Action area is bordered by Old Cumberland Street. Old Cumberland Street continues east until intersecting with Indiantown Road. Indiantown Road runs north through IGNC and until intersecting with Biddle Drive. Indiantown Road is unpaved and forms the eastern border of the Proposed Action area. Several unpaved connections exist along both Old Cumberland Road and Indiantown Road; these connections provide access to the various spoils areas within IGNC. The proposed Phase 5 expansion area is accessible by traveling east along the paved roadways within IGNC.

I-81 is located south of IGNC and is the primary major east-west artery through east central PA. IGNC is accessible from I-81 via Fisher Avenue. According to the Pennsylvania Department of Transportation (PennDOT), Interstate 81 has an Annual Average Daily Traffic (AADT) volume of 55,000 vehicles, and Fisher Avenue has an AADT of 4,600 vehicles (PennDOT, 2020).

There is no public transportation available within a mile of IGNC. Lebanon County's public transportation system, Lebanon Transit, provides a "Shared Ride" transportation program to eligible residents at a reduced rate, and free rides for citizens over the age of 65 within Lebanon County (Lebanon Transit, 2020).

The main visitor parking areas are located around the IGNC PIC/Admin building. There is also consecutively placed signage along the cemetery's roadways directing cars to park on the side of the road but not on the landscaped areas. IGNC administrative staff established that there has never been a shortage of parking space, including major holidays such as Memorial Day.

It was noted that there is often a parking shortage at the Honor Guard building near the northern committal shelter. Additionally, due to the alignment of the Honor Guard access road, vehicles associated with Honor Guard duties exit onto the same road as visitors who are leaving the adjacent committal shelter, resulting in traffic bottlenecks at this single exit point.

#### 3.11.2 Environmental Consequences

##### 3.11.2.1 Proposed Action

**Construction.** The Phase 5 development includes new access roads and corresponding parking space, pavement resurfacing/restoration of asphalt roads, construction of gravel pathways to accommodate equipment access at new burial sections, realignment of Honor Guard facility and parking area, and widening public walkways and equipment access pathways.

During construction of the Proposed Action, there would be a temporary increase in the number of vehicles (including both construction vehicles and worker vehicles) on area roadways including Fisher Avenue, Indiantown Gap Road, Old Cumberland Street, and cemetery roadways. These roadways are adequate to handle the temporary construction traffic and would not require physical alternation or traffic pattern modifications. No more than 30 vehicles per day associated with the construction phase are anticipated. This is less than 20% of the AADT on Fisher Avenue, which is the only road with readily available AADT values.

Construction vehicles would access the Phase 5 construction area from perimeter access roads off of Indiantown Gap Road and Old Cumberland Road. These roads have minimal traffic volume, and the unpaved portion of Old Cumberland Road (east of Indiantown Road) is not generally used by private vehicles because it does not have an eastern outlet to a public roadway. Using these roads for construction activities ensures construction vehicle traffic would not occur through the formal cemetery grounds and would not disrupt the solemnity of committal services and processions. To ensure that construction vehicles do not degrade the quality of the existing or planned future roadways within IGNC, gravel pads would be established at the exit of the construction area to ensure dirt is removed from vehicle tires before they travel on the cemetery or public roadways.

Therefore, construction activities associated with the Proposed Action would have a short-term, direct, negligible adverse impact on transportation and parking within or in the vicinity of IGNC.

**Operation.** Operation of the Phase 5 expansion would generate a minor increase in visitor traffic through the existing cemetery grounds. The increase in traffic would not be considered adverse impact on transportation because the Phase 5 expansion would also provide new roadways with parking available on the paved road shoulder.

To alleviate parking congestion at the existing committal shelter near Biddle Road, the existing Honor Guard building would be demolished and replaced with a new Honor Guard building and parking area just to the southwest of the original footprint. The access road to and from the Honor Guard parking area would no longer be connected to the committal shelter exit road, alleviating the existing safety issues and traffic bottleneck at the current intersection.

Therefore, operation of the Proposed Action would create long-term, direct, moderate beneficial impact on transportation and parking within or in the vicinity of IGNC.

#### **3.11.2.2 No Action**

No changes to transportation or parking at IGNC would occur under the No Action alternative; therefore, no impacts would occur. Baseline conditions would remain, as described above. Safety and traffic issues would remain unresolved at the intersection used by the Honor Guard volunteers and visitors leaving the adjacent committal shelter.

### **3.12 Socioeconomics**

#### **3.12.1 Existing Environment**

The IGNC is located within a rural, low-density residential area in Lebanon County, Pennsylvania. The socioeconomic conditions are influenced by the employment opportunities in the region, which are predominantly associated with agriculture, manufacturing, trade, transportation, and utilities (Data USA, 2020). The median annual income in Lebanon County is \$59,144, which is slightly less than the median annual income of \$59,445 for Pennsylvania and \$60,293 for the United States. Lebanon County is the 24<sup>th</sup> most populated county out of the 67 counties in Pennsylvania, and the population has increased by 8% to approximately 145,000 individuals from 2010 to 2020 (the year the most recent data were reported) (USCB, 2020).

Relevant demographic data for Lebanon County and for Pennsylvania are presented in Table 17 and economic data are presented in Table 18. The data presented are from the U.S. Census Bureau's 2012-2019 Quick Facts dataset (USCB, 2021).

**Table 17. Demographic Data for Lebanon County and Commonwealth of Pennsylvania**

Location	Total Population	Median Age	% Population under age 18	% Minority Population <sup>(1)</sup>	% High School Graduates	Veterans
Lebanon County	141,793	41.2	22.7%	7.4%	87.0%	9,529
Commonwealth of Pennsylvania	12,801,989	40.6	20.6%	18.4%	90.2%	782,682

Notes:

1 – Data include all race/ethnicity categories except non-Hispanic White persons

**Table 18. Economic Data for Lebanon County and the Commonwealth of Pennsylvania**

Location	Number of Households	% Population in Poverty	Total Unemployment
Lebanon County	58,254	10.0%	47,340
Commonwealth of Pennsylvania	5,732,628	12.0%	5,478,025

### 3.12.2 Environmental Consequences

#### 3.12.2.1 Proposed Action

**Construction.** Construction of the Phase 5 expansion would require the temporary employment (by the construction contractor) of skilled laborers. Additionally, supplies and materials (aggregate, masonry, landscape plantings) may be purchased from local and regional vendors. Thus, the temporary increase in employment and spending on materials would have a short-term, direct, less-than-significant beneficial impact on the local economy. However, on a regional scale, construction would not be considered to result in a direct or indirect significant beneficial or adverse impact on socioeconomics.

**Operation.** Based on interviews with IGNC staff, three to five additional maintenance staff may be hired (once Phase 5 is operational) to help maintain the larger area of landscaped grounds (Plummer, 2020). While hiring would benefit these individuals, maintaining or slightly increasing staff levels would have no measurable impact on county or regional socioeconomic conditions.

The Proposed Action would increase the interment capacity, and therefore the longevity of IGNC. Over time, this would lead to a slight increase in the number of visitors to this area of east central Pennsylvania. These visitors could potentially utilize area businesses (restaurants, lodging, service stations, etc.) during visits, although the potential increase in spending would have a negligible beneficial impact in context to the overall economic activity in Lebanon County. Extending the longevity of IGNC allows veterans in east central Pennsylvania to continue choosing to be interred at this National Cemetery, and allows their families, who may also reside in east central Pennsylvania, to avoid traveling longer distances to access other National Cemeteries outside of this region.

Therefore, operation of the Proposed Action would have a long-term, direct and indirect, negligible beneficial impact on socioeconomics.

#### 3.12.2.2 No Action

Under the No Action alternative, the Proposed Action would not be implemented, and the longevity of IGNC would not be extended. The benefits to visitors associated with the Proposed Action would not be realized. Therefore, the No Action alternative would have a short-and long-term, negligible adverse impact on socioeconomics.

### **3.13 Community Services**

#### **3.13.1 Existing Environment**

The IGNC has provided burial benefits for Veterans and their families in east central Pennsylvania since 1982. Although IGNC has approximately 14,500 gravesites remaining, VA anticipates this capacity would be reached in the next several years (the specific date is not calculated because burial frequency can change over time). As previously described in Section 1, there are no other National Cemeteries within 115-miles of IGNC.

Other community services provided by Lebanon County include police and fire protection, ambulatory service, schools, health care, and parks and recreation. Because no additional load is expected to be placed on these or other community services as a result of the Proposed Action, impacts to community services other than Veterans' burial benefits are not analyzed in this SEA.

#### **3.13.2 Environmental Consequences**

##### ***3.13.2.1 Proposed Action***

**Construction and Operation.** The Proposed Action would provide approximately 15,700 gravesites for the Veterans of east central Pennsylvania. Therefore, the Proposed Action is anticipated to extend the longevity of IGNC for at least another 15 years. This would allow VA to meet the continued demand for burial benefits by Veterans and their families in east central Pennsylvania, resulting in a direct, long-term, significant beneficial impact on this community resource.

##### ***3.13.2.2 No Action***

Under the No Action alternative, the Proposed Action would not be implemented and there would be no increase in burial capacity or extension of the longevity of IGNC. Upon reaching capacity, Veterans in east central Pennsylvania would be required to obtain burial benefits at another National Cemetery, the nearest of which is located approximately 115-miles away. NCA has learned through experience that few people would elect burial at a National Cemetery that is farther than 100 miles from their residence, and that there is a reluctance for burial to take place across a state line from the place of residence (VA, 2019a). Veterans, their families, and visitors would have to travel more than 75 miles—a distance considered to be an undue burden—to obtain burial benefits at the next nearest National Cemetery in Pennsylvania, Washington Crossing National Cemetery. Thus, the No Action alternative would not comply with the *Service Members Civil Relief Act*. Therefore, the No Action alternative would result in a long-term, direct, significant adverse impact on burial opportunities for Veterans and their families in east central Pennsylvania.

### **3.14 Solid Waste and Hazardous Materials**

#### **3.14.1 Existing Environment**

A limited amount of hazardous materials is used for maintenance of IGNC equipment, facilities, and grounds (Plummer, 2020). These materials include batteries for maintenance vehicles, paints and cleaners, and herbicides. Spent batteries are recycled off-site. Paints, cleaners, and herbicides are stored in the maintenance area in designated lockers to prevent unauthorized use or release. Waste oils from light and heavy machinery and vehicles is temporarily stored in a designated 250-gallon above-ground tank prior to being transport by a private vendor for off-site recycling.

New gasoline and diesel fuel are stored in a 1,500-gallon above-ground convault equipped with two chambers (one for gasoline, one for diesel); these fuels are used to power maintenance vehicles.

A database of reported federal and state-reported hazardous material and waste sites was obtained by Mabbett & Associates, Inc. (Mabbett) from Environmental Data Resources, LLC (EDR). The data indicated that there have been no reported releases of hazardous materials at IGNC. The EDR report identified several sites outside of IGNC where releases of reportable quantities of regulated materials have occurred. Based on the topographical relief, estimated hydraulic gradient, and distance from IGNC, none of the release sites identified in the EDR report are likely to have adversely impacted soil or groundwater quality at IGNC.

During site reconnaissance on October 6-8, 2020, no hazardous materials or wastes were observed within the 120-acre area. However, a small pile of crushed and empty metal 5-gallon fuel containers was observed on the ground at the satellite maintenance complex. No noticeable odor or discolored ground or distressed vegetation around the pile was observed.

### **3.14.2 Environmental Consequences**

#### **3.14.2.1 Proposed Action**

**Construction.** Construction of the Proposed Action would generate solid waste consisting of cleared vegetation, excess soil, excess construction materials and packaging, and demolition debris from the Honor Guard building and parking area. All construction contractors would comply with VA's solid waste and hazardous materials SOPs and management measures described in NCA Master Construction Specifications (VA, 2020c).

Cleared vegetation would be composted on- or off-site. Any excess soil be generated during cut and fill operations would be stored at a designated on-site stockpile area. Excess construction materials would be containerized in a designated area within the construction site, and then transported off-site for recycling; materials that cannot be recycled would be landfilled at a USEPA-licensed facility off-site. The nearest PA-licensed landfill is the Schilling Farm Landfill at 1610 Russell Road, Lebanon, PA, and operated by the Greater Lebanon Refuse Authority, though other licensed landfills may also be used.

Accordingly, the nature of the solid wastes generated during construction of the Proposed Action would be similar to a typical construction project (e.g. packaging, scrap hardscape supplies), and the volumes generated would not be anticipated to make a major contribution to the overall solid waste volume generated and disposed of in Lebanon County or east central Pennsylvania.

These management measures would ensure that potential impacts from construction of the Proposed Action would remain at short-term, direct, negligible adverse levels.

**Operation.** Hazardous materials used during operation of the Proposed Action would be limited to approved herbicides, pesticides, fertilizers applied according to the manufacturers' labeled instructions. These would be applied to control weeds at burial areas where there is landscaped vegetation and/or built structures (e.g. columbaria). Ice melt would be applied in winter only when and where required to ensure safe operation of maintenance vehicles and visitor access.

Operation of the Proposed Action would result in a negligible increase in the volume of solid wastes currently generated at IGNC. These additional solid wastes would consist of flowers and other items left behind at burial sites. This potential future waste stream would be combined with the existing sanitary solid waste stream. Operation of the Phase 5 expansion would also produce a negligible volume of waste from expanded maintenance activities. Solid waste would continue to be collected weekly in designated dumpsters and transferred by a qualified private contractor to an appropriate off-site municipal solid waste landfill.

Therefore, operation of the Proposed Action would have a long-term negligible adverse impact on solid waste and hazardous material use.

**3.14.2.2 No Action**

Under the No Action alternative, the Proposed Action would not be implemented. No changes to solid waste and hazardous material volumes or management procedures would occur, and baseline conditions would remain, as described above.

**3.15 Environmental Justice**

**3.15.1 Existing Environment**

Executive Order (EO) 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” was enacted in 1994 to focus federal agencies attention on the environmental and human health conditions in minority communities and low-income communities with the goal of achieving environmental justice. Under this EO, federal agencies must identify and address the human health or environmental effects of its actions on minority and low-income populations.

For this analysis, data for minority and low-income population were obtained for the area within a 2.5-mile radius of IGNC, Lebanon County, and the Commonwealth of Pennsylvania (USCB, 2021) (Table 19). According to these data, the area within a 2.5-mile radius of IGNC has a smaller minority population than Lebanon County and Pennsylvania, and a lower percentage of low-income populations (household income less than \$25,000/year) than either the county or state.

**Table 19. Minority and Low-Income Populations**

Location	Total Population	% Minority Population <sup>(1)</sup>	Percentage of Population below Poverty Level
2.5-mile radius of IGNC	5,816	1.7%	8.4%
Lebanon County	141,793	7.4%	10.0%
Commonwealth of Pennsylvania	12,801,989	18.4%	12.0%

Notes:

1 – Includes all race/ethnicity categories except non-Hispanic White persons

**3.15.2 Environmental Consequences**

**3.15.2.1 Proposed Action**

The Proposed Action would not have a disproportionate impact on low-income or minority groups in Lebanon County, as these populations are not present at dissimilar rates within the community compared with the county or state. The Proposed Action has no reasonable mechanisms to cause changes in population, income levels, housing, local tax revenues, or other non-cemetery community services. However, the Proposed Action may provide a temporary increase in local employment if the contractor(s) selected to perform construction activities hires local staff, which could result in a minor short-term positive socioeconomic impact on the community. Additionally, the Proposed Action would extend the longevity of IGNC, thereby avoiding the need for minority or low-income Veterans, their families, and visitors to travel to another National Cemetery outside of east central Pennsylvania.

**3.15.2.2 No Action**

No changes at IGNC would occur under the No Action alternative. No impacts to environmental justice conditions would occur in the short term. However, once existing burial capacity is depleted

and IGNC is closed to new burials, minor adverse environmental justice impacts to minority and low-income populations would occur, as these populations would have to travel to another National Cemetery outside of east central Pennsylvania.

### **3.16 Land Use**

The Phase 5 expansion area is within IGNC property, owned by the federal government, and designated for use as a National Cemetery. Thus, the Proposed Action is consistent with the intended use of the property. The Proposed Action activities would occur within the property and therefore have no mechanism to induce changes in land use outside of the IGNC property. Therefore, this resource topic is not further analyzed in this SEA.

## 4 Cumulative Impacts

The CEQ regulations for implementing NEPA define cumulative effects as “the impact on the environment which results 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. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR Part 1508.7). This SEA considers past, present, and reasonably foreseeable short-term and long-term future effects from implementing the Proposed Action and other projects that coincide with the location and timetable of the Proposed Action. Reasonably foreseeable projects are projects for which plans have been approved, projects for which funding has been identified, recently completed projects, and projects in progress.

### 4.1 Proposed Action

As determined through the analysis provided in Section 3, resources that have the potential to be cumulatively affected by the Proposed Action, when combined with other past, present, and reasonably foreseeable future projects at IGNC, include Aesthetics, Soils, Surface Water and Wetlands, Wildlife and Habitat, and Noise. Therefore, past, present, and reasonably foreseeable future projects that could result in effects on these resource areas were considered for analysis.

### 4.2 Projects Considered for Potential Cumulative Impacts

Impacts from the Proposed Action, when combined with other actions within the region, could result in cumulative impacts. Other actions that may have cumulative impacts on the environment include:

- Past and future phases of construction for IGNC, to include development on the remaining 427 acres and associated support facilities and roadways.
- Intent to increase in Lebanon County housing growth by 80% in downtown areas, suburban areas, and planned public infrastructure (Lebanon County Planning Department, 2007).
- Intent to establish in Lebanon County a countywide system of parks, recreation areas, trails, and greenways (Lebanon County Planning Department, 2007).

No other major regional developments were identified that would reasonably contribute to cumulative impacts when considered in combination the Proposed Action’s impacts.

### 4.3 Effects of Cumulative Actions on the Proposed Action

The following is analysis of cumulative impacts on Aesthetics, Cultural Resources, Topography, Soils, Surface Water and Wetlands, Wildlife and Habitat, and Noise.

**Aesthetics.** Short-term, direct, less-than-significant adverse, cumulative impacts on aesthetics are expected from the construction of the Proposed Action. The approximately 30-month construction period for the Proposed Action would not necessarily occur over one continuous period. Furthermore, the result of Proposed Action would have long-term beneficial impacts on the aesthetic conditions of the area. The Proposed Action would expand the park-like setting of the National Cemetery to more areas across IGNC. Maintaining the aesthetic integrity of IGNC includes preserving portions of the forested areas for hedgerows, preserving healthy ash trees, and maintaining a wooded buffer around the north, east, and southern borders of the Phase 5 expansion area. However, the potential cumulative adverse impacts from these temporary projects would not

increase to a significant adverse level. Therefore, the Proposed Action would result in less-than-significant cumulative adverse impacts on aesthetics.

**Soils.** Construction of the Proposed Action would have a short-term, direct, less-than-significant adverse impact on soils due to increased potential for soil erosion and sedimentation of stormwater runoff. Soils at IGNC have been under extensive long-term agricultural production followed by more recent cemetery development. Individually, construction activities would have short-term, negligible to minor, adverse impacts due to vegetation removal, compaction of soils, and increased potential for soil erosion and sedimentation. Construction activities occurring at the same time and in the same vicinity could have short-term, minor, adverse cumulative effects on soils, but implementation of BMPs in the SESC plan and NPDES Permit would ensure cumulative impacts are maintained at less-than-significant levels. Therefore, considered cumulatively, the Proposed Action would result in short-term, less-than-significant adverse impacts on soils.

**Surface Water and Wetlands.** Short- and long-term, less-than-significant adverse impacts on surface water and wetlands are expected from implementation of the Proposed Action and when considered cumulatively with other projects. All projects in Pennsylvania are required to implement design measures and permit-required erosion and sedimentation controls to avoid and/or minimize adverse impacts, while appropriate mitigation for unavoidable wetland impacts would be determined and performed prior to construction. These management and mitigation measures, when warranted, would ensure that cumulative impacts on these resources remain at less-than-significant adverse levels.

**Wildlife and Habitat.** Short- and long-term, less-than-significant adverse impacts on wildlife and habitat are expected from implementation of the Proposed Action and when considered cumulatively with other projects. The Proposed Action incorporates impacts avoidance measures for federally- and state-listed species, as would future projects at IGNC and other permit-required projects elsewhere in Pennsylvania. These measures include surveys for listed species, implementing impact-avoidance measures, and performing permit-approved mitigation when impacts cannot be avoided. These management and mitigation measures, when warranted, would ensure that cumulative impacts on these resources remain at less-than-significant adverse levels.

**Noise.** Short- and long-term, less-than-significant impacts to sensitive noise receptors could occur during construction and operation of the Proposed Action. Noise generated from other projects at IGNC and in the immediately surrounding areas would not have a cumulative impact on receptors, as the distance between these individual sources is too great to have an additive effect on noise levels. Therefore, considered cumulatively, the Proposed Action would result in short- and long-term, less-than-significant impacts on sensitive noise receptors.

#### **4.4 Effects of Cumulative Actions on the No Action Alternative**

Under the No Action alternative, the conditions at IGNC would remain as they currently exist for the foreseeable future. The current burial capacity would not be increased; once the remaining burial capacity is reached, IGNC would close to new burials. Veterans and their eligible family members electing to be buried at a National Cemetery would have to select another location with available capacity. This could have the effect of increasing gravesite depletion rates at other National Cemeteries, requiring other facilities to consider expansions sooner than planned. Thus, considered cumulatively, the No Action alternative would continue to have a significant adverse impact on this community service.

#### **4.5 Potential for Generating Substantial Controversy**

The Proposed Action is not likely to generate substantial public controversy. The Proposed Action would extend the longevity of IGNC for approximately an additional 15 years. This would be positively perceived by Veterans and the public. As discussed in previous sections, no elements of the Proposed Action are anticipated to generate substantial controversy or lead to negative public reaction.

Under the No Action alternative, substantial public controversy would be anticipated due to the lack of burial opportunities in east central Pennsylvania and the decrease in IGNC's longevity.

## 5 Agency Coordination and Public Involvement

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 policy for implementing the NEPA. Additional guidance is provided in VA's Environmental Compliance Management Directive (VA, 2012) and 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. Agencies, organizations, and members of the public with a potential interest in the Proposed Action, such as minority, low-income, and disadvantaged persons, are encouraged to participate. A record of the agency and public involvement associated with this EA is provided in Appendix C.

### 5.1 Draft SEA

#### 5.1.1 Early Input from Native American Tribes, and Federal, State, and Local Agencies

During preparation of the Draft SEA, VA solicited input from selected federal, state, and local agencies, and Native American Tribes, for early input on the Proposed Action and environmental concerns to be addressed in the draft SEA. Comments received have been incorporated in the Draft SEA. Copies of correspondence are provided in Appendix C.

#### 5.1.2 Public Review

The Draft SEA has been published and released for a 30-day review and comment period, as announced by a Notice of Availability (NOA) published in the *Lebanon Daily News*, a daily newspaper of general circulation. The NOA was also mailed to selected federal, state, and local agencies, and Native American Tribes, to inform them of the 30-day review and comment period. A copy of the Draft SEA NOA is provided in Appendix C.

As stated in the NOA, the Draft SEA was available for review in print at the IGNC Public Information Center and in the reference section of the Lebanon Community Library at 125 N 7th St, Lebanon, PA 17046; and available for electronic download from the VA website: <https://www.cfm.va.gov/environmental/index.asp>.

Comments or requests for additional information should be sent to: Mr. Glenn Elliott, U.S. Department of Veterans Affairs, Office of Construction & Facilities Management, 425 I (eye) Street, NW, Room 6W317D, Washington, D.C., 20001; by email at [VACOEnvironment@va.gov](mailto:VACOEnvironment@va.gov); or by telephone at (202) 632-5879. Reference "Indiantown Gap National Cemetery – Phase 5 Expansion" in all correspondence.

Comments received during the 30-day review period for the Draft SEA will be included and addressed in the Final SEA.

## 6 Environmental Protection Measures and Monitoring

This chapter summarizes the avoidance, minimization, and management measures incorporated into the Proposed Action to ensure that adverse impacts remain at or below less-than-significant adverse levels. “Management measures” are defined as routine BMPs and/or regulatory environmental compliance and protection measures that are regularly implemented as part of proposed activities, as appropriate, across Pennsylvania. Per established protocols, procedures, and requirements, VA (and VA’s design and construction contractors) would implement these management measures and satisfy all applicable regulatory requirements associated with the design, construction, and operation of the Proposed Action. These management measures are summarized in Table 20. Additionally, environmental permits and approvals potentially required for construction and operation of the Proposed Action are summarized in Table 21.

**Table 20. Environmental Protection Measures and Monitoring Incorporated into the Proposed Action**

<b>AESTHETICS</b>
<b>Construction</b>
<ul style="list-style-type: none"> <li>▪ Construct according to the design presented in VA’s approved Phase 5 expansion plan.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Control fugitive dust emissions by implementing industry-standard construction BMPs, including water trucks for dust suppression, brushing loose soil off construction vehicle tires before leaving the construction site, and installing and maintaining gravel pads at construction exits to prevent tracking loose soil onto roadways.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Install construction privacy fencing between the expansion area and the existing cemetery burial sections to reduce visual impacts to visitors.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Plant native, non-invasive, drought-resistant vegetation following grading to stabilize soils and minimize dust generation.</li> </ul>
<b>Operation</b>
<ul style="list-style-type: none"> <li>▪ Professionally maintain the landscaped areas consistent with existing IGNC operations.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Conduct maintenance activities (mowing, power-washing, etc.) on a schedule that limits potential disruptions to committal services and visitation activities.</li> </ul>
<b>AIR QUALITY</b>
<b>Construction and Operation</b>
<ul style="list-style-type: none"> <li>▪ Implement the dust control BMPs described for aesthetics.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Utilize appropriate construction scheduling (avoid earthwork during extremely windy and dry periods).</li> </ul>
<ul style="list-style-type: none"> <li>▪ Limit engine idling to less than five minutes for equipment not immediately needed.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Construction vehicles traveling on paved roads within and outside of IGNC would follow posted speed limits. This would minimize dust generated by vehicles and equipment on paved surfaces. On unpaved surfaces at the site, maintain vehicle speeds below 15 miles per hour to prevent dust generation of exposed soils.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Cover dump trucks and trailers holding soil or loose material with haul tarps to prevent fugitive dust generation.</li> </ul>
<ul style="list-style-type: none"> <li>▪ On a daily basis visually monitor construction activities. During extended periods of dry weather or sustained high winds, implement additional dust control measures, as needed.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Maintain equipment in good working order according to manufacturer’s instruction.</li> </ul>

<b>CULTURAL RESOURCES</b>
<b>Construction and Operation</b>
<ul style="list-style-type: none"> <li>Implement the “Inadvertent Discovery” plan as follows; should human remains or other cultural items as defined by the <i>Native American Graves Protection and Repatriation Act</i> (NAGPRA) be discovered during project construction, the construction contractor shall immediately cease work until VA, a qualified archaeologist, and the SHPO, and The Delaware Tribe of Indians .Tribes are contacted to properly identify and appropriately treat discovered items in accordance with applicable federal and state regulations.</li> </ul>
<ul style="list-style-type: none"> <li>Preserve any live ash trees encountered within the Phase 5 expansion area. Replace dead/diseased ash trees at 2:3. The replacement trees are to be 3” caliper and of various species suited to the region per PA SHPO correspondence with NCA in 2018 (see Final SEA Appendix B).</li> </ul>
<b>GEOLOGY, SOILS, AND TOPOGRAPHY</b>
<b>Construction</b>
<ul style="list-style-type: none"> <li>Follow NCA Guidelines on slopes and grades.</li> </ul>
<ul style="list-style-type: none"> <li>Prepare and implement a soil erosion and sedimentation control (SESC) plan as part of the PADEP NPDES Permit and approved by the Lebanon County Conservation District (LCCD). Implement and maintain the specified BMPs.</li> </ul>
<ul style="list-style-type: none"> <li>Quickly revegetate disturbed areas following completion of construction activities to minimize the length of time that soils are exposed.</li> </ul>
<ul style="list-style-type: none"> <li>Implement spill and leak prevention and response procedures for construction equipment, including maintaining a complete spill kit at the project area, to minimize the potential impact from an accidental fuel release on soil quality. Refuel equipment in designated impervious areas. Ensure construction staff are trained in proper use of spill kits and notification procedures.</li> </ul>
<ul style="list-style-type: none"> <li>Re-use excess soils on-site to the maximum extent practicable.</li> </ul>
<b>Operation</b>
<ul style="list-style-type: none"> <li>Maintain stormwater management systems such that systems meet their original design parameters.</li> </ul>
<ul style="list-style-type: none"> <li>To prevent soil erosion, revegetate exposed soils and manage excess soils by stockpiling in designated covered spoils areas.</li> </ul>
<b>HYDROLOGY AND WATER QUALITY</b>
<b>Construction and Operation</b>
<ul style="list-style-type: none"> <li>Implement USACE 404 and PADEP 401 State Water Quality Certification to allow for 0.02 acres of wetland impacts and the installation and operation of the proposed culvert in the unnamed stream channel.</li> </ul>
<ul style="list-style-type: none"> <li>Prepare and implement a stormwater management plan consistent with Chapter 102 of PA State Code approved by LCCD. Implement and maintain the specified BMPs.</li> </ul>
<ul style="list-style-type: none"> <li>Implement the soil erosion and stormwater management system BMPs listed above for Geology, Soils, and Topography.</li> </ul>
<ul style="list-style-type: none"> <li>Design the Proposed Action to comply with the EISA Section 438 to the maximum extent technically feasible.</li> </ul>
<ul style="list-style-type: none"> <li>Design the Proposed Action to adhere to guidance in the PA Stormwater BMP Manual (363-0300-002, December 2006) for pre- and post-development stormwater management.</li> </ul>

<ul style="list-style-type: none"> <li>Route stormwater runoff from impervious surfaces to designated stormwater management systems.</li> </ul>
<ul style="list-style-type: none"> <li>Apply pesticides/herbicides according to label requirements and keep these and road deicing usage to the lowest quantities possible, thereby reducing the potential for water quality impacts.</li> </ul>
<ul style="list-style-type: none"> <li>Implement spill and leak prevention and response procedures for construction equipment, including maintaining a complete spill kit at the project area, to minimize the potential impact from an accidental fuel release on soil quality. Refuel equipment in designated impervious areas. Ensure construction staff are trained in proper use of spill kits and notification procedures.</li> </ul>
<ul style="list-style-type: none"> <li>Design crypt fields with an adequate underdrainage system to avoid prolonged contact with groundwater per NCA design requirements.</li> </ul>
<ul style="list-style-type: none"> <li>Locate, install, and operate new groundwater well in compliance with Susquehanna River Basin Commission (SRBC) requirements.</li> </ul>
<p><b><i>HABITAT AND WILDLIFE</i></b></p>
<p><b>Construction and Operation</b></p>
<ul style="list-style-type: none"> <li>For any living green ash found in healthy condition, it shall not be removed. They are genetically resistant to emerald ash borer and are important for the protection of the species within the region.</li> </ul>
<ul style="list-style-type: none"> <li>Avoid impacts to wildlife and habitats by developing only the necessary area needed to establish interment areas, roadways, and other physical infrastructure.</li> </ul>
<ul style="list-style-type: none"> <li>Potential impacts to the northern-long-eared bat and the Indiana bat would be avoided by adhering to the USFWS's seasonal tree clearing restriction, which prohibits tree clearing from March 31 to October 1 (see USFWS letter dated 25 February 2021 in Appendix B).</li> </ul>
<ul style="list-style-type: none"> <li>Should a bald eagle nest be identified prior to construction, pursuant to USFWS bald eagle guidelines, any disturbance within 660 feet of a bald eagle nest requires additional coordination and potential permitting with USFWS.</li> </ul>
<ul style="list-style-type: none"> <li>To avoid potential impacts to bog turtles during intrusive subsurface work within 300 feet of their potential habitat in the Phase 4 area, VA would follow time of year restrictions by performing such work only from November 1 to March 31, as well installing 18-inch compostable filter socks adjacent to those wetlands having potential bog turtle habitat. Otherwise, VA would implement the specified avoidance measures described in USFWS's concurrence letter dated 16 November 2021 (see Appendix B).</li> </ul>
<p><b><i>NOISE</i></b></p>
<p><b>Construction</b></p>
<ul style="list-style-type: none"> <li>Schedule construction activities for daylight hours during the weekday to minimize potential impacts to memorial services and nearby residential areas.</li> </ul>
<ul style="list-style-type: none"> <li>Maintain mufflers and sound shielding on construction equipment and shut down construction equipment not in use for more than five minutes.</li> </ul>
<ul style="list-style-type: none"> <li>Schedule notably loud construction work to avoid impacting memorial services.</li> </ul>
<ul style="list-style-type: none"> <li>Provide hearing protection to workers for activities exceeding the OSHA permissible noise exposure level.</li> </ul>
<p><b>Operation</b></p>
<ul style="list-style-type: none"> <li>Maintain routine maintenance equipment in good working order.</li> </ul>
<ul style="list-style-type: none"> <li>Operate maintenance equipment during daylight working hours and away from</li> </ul>

<p>committal services, thereby maintaining the dignity and solemnity of IGNC environment during these services.</p>
<p><b><i>WETLANDS and FLOODPLAINS</i></b></p>
<p><b>Construction and Operation</b></p> <ul style="list-style-type: none"> <li>▪ As discussed for hydrology and water quality, implement the USACE 404 and PADEP 401 State Water Quality Certification to allow for 0.02 acres of wetland impacts and the installation and operation of the proposed culvert in the unnamed stream channel.</li> <li>▪ Through the PADEP NPDES Permit, obtain permission to allow the culvert to be constructed within the PA-designated floodplain, which is located within 50-feet of either side of the top of the bank of the unnamed stream channel.</li> </ul>
<p><b><i>SOLID WASTE AND HAZARDOUS MATERIALS</i></b></p>
<p><b>Construction</b></p> <ul style="list-style-type: none"> <li>▪ Reuse excess construction materials and soils to the maximum extent practicable. Recycle materials that cannot be reused. Properly dispose of all other materials. Follow NCA Master Construction Specifications for construction waste management.</li> <li>▪ Manage any regulated building materials according to federal and state regulations.</li> </ul>
<p><b>Operation</b></p> <ul style="list-style-type: none"> <li>▪ Manage new solid waste volumes with existing and similar waste streams for collection and off-site disposal.</li> <li>▪ Continue implementing existing IGNC practices for hazardous materials use and storage (pesticides, herbicides, spent batteries, paints, solvents).</li> </ul>
<p><b><i>TRANSPORTATION AND PARKING</i></b></p>
<p><b>Construction</b></p> <ul style="list-style-type: none"> <li>▪ Construction vehicles shall use designated access roads to travel to and from the construction site; travel on existing paved cemetery roadways shall be prohibited unless authorized by the IGNC Director.</li> <li>▪ Design the new Honor Guard facility and parking area to eliminate the current traffic bottleneck at intersection of the current Honor Guard and committal shelter.</li> </ul>
<p><b>Operation</b></p> <ul style="list-style-type: none"> <li>▪ Allow visitors to park on the shoulder, but off of the grass, on new roadways within the Phase 5 expansion area.</li> </ul>
<p><b><i>UTILITIES</i></b></p>
<p><b>Construction and Operation</b></p> <ul style="list-style-type: none"> <li>▪ Obtain approval from East Hanover Township to connect the new satellite maintenance restrooms to the force main sewer line.</li> </ul>

Table 21. Potential List of Environmental Permits Required

Permit, Approval, or Certification	Responsible Agency	Applicable Criteria	Required Actions	Permitting Schedule	Comments
<i>Federal or State Environmental</i>					
USACE 404 and PADEP 401 Permits	USACE and PADEP	Required for projects with anticipated impacts to jurisdictional wetlands within the Commonwealth of Pennsylvania.	Joint 404/401 permit applications have been submitted.  Implement all 404 and 401 permit-required impact avoidance measures and maintain throughout construction and operation.	1 month to prepare, 30 days for regulatory review.	USACE 404 permit obtained on 03 December 2021.  PADEP 401 permit application is still under review by PADEP as of this SEA. Through VA, the construction contractor must obtain the 401 permit prior to impacting the wetland and unnamed stream associated with the culvert construction.  The construction contractor is responsible for implementing and maintaining all permit-required measures. The construction contractor is also responsible for renewing the permits at least 12-months in advance of either permit expiration date, whichever comes first, if either permit expires prior to work completion.
PADEP Chapter 102 PAG-02 NPDES General Permit for Stormwater Discharges Associated with Construction Activities  <a href="https://www.dep.pa.gov/Business/Water/CleanWater/StormwaterMgmt/Stormwater%20Construction/Pages/default.aspx">https://www.dep.pa.gov/Business/Water/CleanWater/StormwaterMgmt/Stormwater%20Construction/Pages/default.aspx</a>	Pennsylvania Department of Environmental Protection (PADEP)	Construction of any facility that disturbs 1 acre or more.	Permit application has been submitted and is under PADEP review.	1 month to prepare, 45 days to achieve permit coverage.	The NOI gets submitted to the Lebanon County Conservation District (LCCD) in Lebanon County, PA.  Through VA, permit must be obtained prior to beginning any land-disturbing activities.  The construction contractor is responsible for implementing and maintaining all permit-required measures, and for renewing the permit if it expires prior to work completion.
USFWS Endangered Species Act Consultation	USFWS	For projects that may affect federally threatened or endangered species	Perform surveys for bog turtles and potential habitat and report findings to USFWS. Identify avoidance measures for bog turtle, northern long-eared bat, and Indiana bat.	USFWS may take up to 3 months for review.	USFWS concurrence on avoidance measures and VA commitment to implement was achieved on 25 February 2021 and 16 November 2021 (see Appendix B for USFWS letters).  The construction contractor is responsible for implementing and maintaining all avoidance measures specified in the USFWS letters.
<i>Other Permits/Approvals</i>					
Pennsylvania Natural Heritage Program (PNHP) Threatened and Endangered Species Consultation  <a href="http://www.naturalheritage.state.pa.us/">http://www.naturalheritage.state.pa.us/</a>	Pennsylvania Game Commission (PGC), Pennsylvania Department of Conservation and Natural Resource (DCNR), Pennsylvania Fish and Boat Commission (PFBC), and U.S. Fish and Wildlife Service (USFWS)	Required for all projects.	Upload project shapefile to PHNP's online mapper to determine impacts to threatened and endangered species.	Online review takes approximately 15 minutes to a half hour; if further consultation is required, agency response time can be up to two months.	October 1, 2020, a PNHP environmental review was submitted. According to the PNHP environmental review, USFWS response to the Proposed Action is that the proposed project is potentially within the vicinity of bog turtle habitat. USFWS concurrence was obtained for bog turtle avoidance measures in the letter dated 16 November 2021 (see Appendix B).
Section 106 of the National Historic	Advisory Council on Historic	Required when a	Consultation with federally recognized	Correspondence would be ongoing and	VA initiated preliminary consultation with

Permit, Approval, or Certification	Responsible Agency	Applicable Criteria	Required Actions	Permitting Schedule	Comments
<p>Preservation Act (NHPA): Consultation and Coordination with Indian Tribal Governments (EO 13175) and Native American Graves Protection and Repatriation Act (NAGPRA) (EO 13007)</p> <p><a href="https://www.epa.gov/laws-regulations/summary-executive-order-13175-consultation-and-coordination-indian-tribal">https://www.epa.gov/laws-regulations/summary-executive-order-13175-consultation-and-coordination-indian-tribal</a></p> <p><a href="https://www.nps.gov/history/local-law/eo13007.htm">https://www.nps.gov/history/local-law/eo13007.htm</a></p>	Preservation (AHP)	federal agency project or effort may affect historic properties located on tribal lands, or land that has cultural/historic significance regardless of location.	Native American Tribes.	would continue until the completion of the project.	representatives of 4 federally recognized Native American tribes with ancestral ties to Lebanon County, PA. No responses have been received as of the date of this Final SEA.
<p>Section 106 of the National Historic Preservation Act (NHPA)</p> <p><a href="https://www.phmc.pa.gov/Preservation/About/Documents/SHPO-Guidelines-Archaeological-Investigation.pdf">https://www.phmc.pa.gov/Preservation/About/Documents/SHPO-Guidelines-Archaeological-Investigation.pdf</a></p>	PA State Historic Preservation Office (SHPO)	Required when a federal agency project or effort may affect sites that have yielded or may be likely to yield information important in prehistory or history.	A Phase I Cultural Resources Survey must be conducted to determine the presence or absence of previously identified historical cultural resources. Subsequently, a Phase IB archaeological investigation would be completed to locate any potentially unidentified artifacts or historically significant sites. The findings would be submitted to the SHPO for concurrence.	1 month to prepare findings. Agency review takes approximately 1 month.	VA completed Phase IB surveys and found no artifacts; VA determined the Proposed Action would have no adverse effect. The SHPO concurred with this finding on 14 and 16 July 2021 (see Appendix B). Additionally, VA would implement an “Inadvertent Discovery” plan, stating that VA would cease all disturbance activities upon the discovery of an artifact.
Sanitary Sewer Connection Approval	East Hanover Township	Required prior to construction	Design contractor to prepare and submit application. Construction contractor to follow approved requirements.	Estimated 30- to 60-day review process.	VA proposes to extend a new sanitary sewer line from the new satellite maintenance facility to East Hanover Township’s existing force main along Indiantown Road.
New Groundwater Well Installation and Operation	Susquehanna River Basin Commission (SRBC)	Required prior to construction	Design contractor to prepare and submit application. Construction contractor to follow approved requirements.	Estimated 30- to 60-day review process.	A PA-licensed hydrogeologist would design the well and complete all permitting documents required by the Susquehanna River Basin Commission (SRBC) to ensure that the planned extraction volume has no adverse impacts on groundwater quality or supply to other groundwater users in this watershed.

**\*Assumptions**

*Local permits would not be obtained.*

## **7 List of Preparers**

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Environmental Engineer

### Contractor Staff

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E. Fernandes, B.S.

## 8 Agencies and Individuals Consulted

### Federal Agencies

#### **U.S. Army Corps of Engineers, Pittsburgh District**

Regulatory Branch  
2200 William S. Moorhead Federal  
Building, 1000 Liberty Avenue  
Pittsburgh, PA 15222-4186

#### **U.S. Department of Agriculture, Natural Resources Conservation Service**

Pennsylvania State Office  
Ms. Denise Coleman, State Conservationist  
359 East Park Drive, Suite 2  
Harrisburg, PA 17111-2747

#### **U.S. Department of Fish & Wildlife**

Pennsylvania Field Office  
Ms. Sonja Jahrsdoerfer  
110 Radnor Rd, Suite 101  
State College, PA 16801

#### **U.S. Department of Environmental Protection Agency**

Region 3 Regulatory Branch  
1650 Arch Street  
Philadelphia, PA 19103-2029

### State Agencies

#### **Pennsylvania Department of Conservation and Natural Resources**

Bureau of Forestry  
Rachel Carson State Office  
Building, 6th Floor  
P.O. Box 8552  
Harrisburg, PA 17105-8552

#### **Pennsylvania Department of Environmental Protection**

Bureau of Watershed Management  
186 Enterprise Road, Moshannon Valley  
Industrial Park  
Philipsburg, PA 16866

#### **Pennsylvania Game Commission**

Division of Environmental Planning and  
Habitat Protection

Mr. Bruce Metz, Southeast Region Director  
253 Snyder Road  
Reading, PA 19605

#### **Pennsylvania Department of Transportation**

PennDOT Engineering District 8  
2140 Herr Street  
Harrisburg PA 17103-1699

#### **Fort Indiantown Gap**

Pennsylvania National Guard Bureau of  
Environmental Management  
Bldg. 0-11, Fort Indiantown Gap  
Annville, PA 17003-5002

### County Agencies

#### ***Lebanon County, Pennsylvania***

#### **Lebanon County Conservation District**

2120 Cornwall Road, Suite 5  
Lebanon, PA 17042-9788

#### **Lebanon County Planning Department**

400 South 8th Street  
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### Native American Tribes

#### **Delaware Nation, Oklahoma**

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PO Box 825  
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Ms. Deborah Dotson, President

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Anadarko, OK 73006

#### **Delaware Tribe of Indians**

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**Seneca-Cayuga Nation**

Mr. William Tarrant, Tribal Historic  
Preservation Officer  
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**Elected Officials**

The Honorable Russ Diamond  
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Lebanon, PA 17042

The Honorable Sue Helm  
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Harrisburg, PA 17110

The Honorable Dan Meuser  
414 Cannon House Office Building  
Washington, DC 20515

The Honorable Frank Ryan  
149A East Wing, PO Box 202101  
Harrisburg, PA 17120-2101

The Honorable Bob Casey Jr.  
393 Russell Senate Office Building  
Washington, DC 20510

The Honorable Chris Gebhard  
101 Municipal Building,  
400 South 8th Street  
Lebanon, PA 17042

The Honorable Pat Toomey  
50 Constitution Ave NE  
Washington, DC 20002

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## 10 Glossary

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**Aesthetic resources:** The components of the environment as perceived through the visual sense only. Aesthetic specifically refers to beauty in both form and appearance.

**Affected environment:** A portion of the NEPA document that succinctly describes the environment of the area(s) to be affected or created by the alternatives under consideration. Includes the environmental and regulatory setting of the proposed action.

**Alternative:** A reasonable way to fix the identified problem or satisfy the stated need.

**Attainment area:** An area that the Environmental Protection Agency has designated as being in compliance with one or more of the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for some pollutants but not for others.

**Conformity analysis:** The *Clean Air Act* requires the Environmental Protection Agency to promulgate rules to ensure that federal actions conform to the appropriate state implementation plans (SIP) for air quality. Two sets of rules (one for transportation and one for all other actions) developed by USEPA establish the criteria and procedures governing the determination of this conformity. A conformity analysis follows these criteria and procedures to quantitatively assess whether a proposed federal action conforms with the SIP.

**Council on Environmental Quality (CEQ):** Established by Congress within the Executive Office of the President as part of the *National Environmental Policy Act of 1969*, CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives. The Council's Chair, who is appointed by the President with the advice and consent of the Senate, serves as the principal environmental policy adviser to the President. The CEQ reports annually to the President on the state of the environment, oversees federal agency implementation of the environmental impact assessment process, and acts as a referee when agencies disagree over the adequacy of such assessments.

**Criteria pollutant:** An air pollutant that is regulated by National Ambient Air Quality Standards (NAAQS). Criteria pollutants include sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and two size classes of particulate matter, PM10 and PM2.5. New pollutants may be added to, or removed from, the list of criteria pollutants as more information becomes available.

**Cumulative effect (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.

**Decibel (dB):** A unit for expressing the relative intensity of sounds on a logarithmic scale from zero for the average least perceptible sound to about 130 for the average level at which sound causes pain to humans. For traffic and industrial noise measurements, the A-weighted decibel (dBA), a frequency-weighted noise unit, is widely used. The A-weighted decibel scale corresponds approximately to the frequency response of the human ear and thus correlates well with the loudness perceived by people.

**Effects:** Effects and impacts, as used in NEPA, are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effect would be beneficial. There are direct effects and indirect effects. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

**Endangered species:** Plants or animals that are in danger of extinction through all or a significant portion of their ranges and that have been listed as endangered by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service following the procedures outlined in the *Endangered Species Act (ESA)* and its implementing regulations.

**Environmental assessment (EA):** A concise public document for which a federal agency is responsible that serves to briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or a finding of no significant impact; aid an agency's compliance with NEPA when no environmental impact statement is necessary; or facilitate preparation of an EIS when one is necessary. Includes brief discussions of the need for the proposal, of alternatives, of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

**Environmental impact statement (EIS):** A detailed written statement required by Section 102(2)(C) of NEPA, analyzing the environmental impacts of a proposed action, adverse effects of the project that cannot be avoided, alternative courses of action, short-term uses of the environment versus the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitment of resources.

**Environmental justice:** The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Executive Order 12898 directs federal agencies to make achieving environmental justice part of their missions by identifying and addressing disproportionately high and adverse effects of agency programs, policies, and activities on minority and low-income populations.

**Finding of no significant impact (FONSI):** A public document issued by a federal agency briefly presenting the reasons why an action for which the agency has prepared an environmental

assessment has no potential to have a significant effect on the human environment and, thus, would not require preparation of an environmental impact statement.

**Floodplain:** The lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

**Fugitive emissions:** Emissions that do not pass through a stack, vent, chimney, or similar opening where they could be captured by a control device. Any air pollutant emitted to the atmosphere other than from a stack. Sources of fugitive emissions include pumps; valves; flanges; seals; area sources such as ponds, lagoons, landfills, and piles of stored material (such as coal); and road construction areas or other areas where earthwork is occurring.

**Hazardous material:** Any material that poses a threat to human health and/or the environment. Hazardous materials are typically toxic, corrosive, ignitable, explosive, or chemically reactive.

**Historic property:** Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

**Impacts:** see Effects.

**Impervious surface:** A hard surface area that either prevents or retards the entry of water into the soil or causes water to run off the surface in greater quantities or at an increased rate of flow. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, parking lots, storage areas, concrete or asphalt paving, and gravel roads.

**National Ambient Air Quality Standards (NAAQS):** Standards defining the highest allowable levels of certain pollutants in the ambient air (i.e., the outdoor air to which the public has access). Primary standards are established to protect public health; secondary standards are established to protect public welfare (for example, visibility, crops, animals, buildings).

**National Pollutant Discharge Elimination System (NPDES):** A provision of the *Clean Water Act* that prohibits discharge of pollutants into waters of the United States unless a special permit is issued by the Environmental Protection Agency, a state, or, where delegated, a tribal government on an Indian reservation.

**National Register of Historic Places:** The nation's inventory of known historic properties that have been formally listed by the National Park Service (NPS). The National Register of Historic Places is administered by the NPS on the behalf of the Secretary of the Interior. National Register listings include districts, landscapes, sites, buildings, structures, and objects that meet the set of criteria found in 36 CFR 60.4.

**No action alternative:** The alternative where current conditions and trends are projected into the future without another proposed action.

**Particulate matter (PM), PM10, PM2.5:** Any finely divided solid or liquid material, other than uncombined (that is, pure) water. A subscript denotes the upper limit of the diameter of particles included. Thus, PM10 includes only those particles equal to or less than 10 micrometers (0.0004

inch) in diameter; PM2.5 includes only those particles equal to or less than 2.5 micrometers (0.0001 inch) in diameter.

**Proposed action:** In a NEPA document, this is the primary action being considered. Its impacts are analyzed together with the impacts from alternative ways to achieve the same objective and the required no action alternative, which means continuing with the status quo.

**Runoff:** The portion of rainfall, melted snow, or irrigation water that flows across ground surface and is eventually returned to streams. Runoff can pick up pollutants from the air or the land and carry them to streams, lakes, and oceans.

**Scope:** Consists of the range of actions, alternatives, and impacts to be considered in an environmental analysis. The scope of an individual statement may depend on its relationships to other statements (also see tiering).

**Scoping:** An early and open process for determining the extent and variety of issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR §1501.7). The scoping process helps not only to identify significant environmental issues deserving of study, but also to deemphasize insignificant issues, narrowing the scope of the NEPA process accordingly, and for early identification of what are and what are not the real issues (40CFR §1500.5(d)). The scoping process identifies relevant issues related to a proposed action through the involvement of all potentially interested or affected parties (affected federal, state, and local agencies; recognized Indian tribes; interest groups, and other interested persons) in the environmental analysis and documentation.

**Significantly:** As used in NEPA, requires considerations of both context and intensity.

*Context*—significance of an action must be analyzed in its current and proposed short- and long-term effects on the whole of a given resource (for example, affected region).

*Intensity*—refers to the severity of the effect.

**Solid waste:** Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, solid waste also refers to liquids and gases in containers.

**Wetlands:** Those areas that are inundated by surface water or groundwater with a frequency sufficient to support, and under normal circumstances do, or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas.

Jurisdictional wetlands are those wetlands protected by the *Clean Water Act*. They must have a minimum of one positive wetland indicator from each parameter (vegetation, soil, and hydrology). The U.S. Army Corps of Engineers requires a permit to fill or dredge jurisdictional wetlands.