ENVIRONMENTAL ASSESSMENT
OF THE PROPOSED LAND ACQUISITION
FOR THE EXPANSION OF
BLACK HILLS NATIONAL CEMETERY
MEADE COUNTY, SOUTH DAKOTA

DEPARTMENT OF VETERANS AFFAIRS
425 I STREET, NW
WASHINGTON, DC 20001

PREPARED BY:
TTL Associates, Inc.

JANUARY 8, 2019
EXECUTIVE SUMMARY

This Environmental Assessment (EA) has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with the Department of Veterans Affairs’ (VA’s) proposed acquisition of approximately 181 acres of land (Site) located contiguous to the north and west of Black Hills National Cemetery (BHNC) in Meade County, South Dakota for the future expansion of the cemetery. As a Federal action, preparation of this EA is required by the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code [USC] 4321 et seq.), the President’s Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and 38 CFR Part 26 (Environmental Effects of the Department of Veterans Affairs Actions). This EA has also been prepared in accordance with the VA NEPA Interim Guidance for Projects dated 30 September 2010.

VA intends to acquire the Site, already owned by the Federal Government and managed by the Department of Interior Bureau of Land Management (BLM), in early 2019 and hold it until such date when the expansion of the BHNC becomes necessary. At that time, and as part of the cemetery design process, VA will perform a supplemental NEPA analysis to reanalyze and reevaluate the potential effects of the construction and operation of the expanded cemetery at the Site. VA will incorporate the avoidance, management, and minimization measures identified in this EA into that future design process and supplemental NEPA analysis to minimize potential adverse environmental effects.

As such, this EA assesses the potential effects of VA’s acquiring the Site for the ultimate expansion of the BHNC, and preliminarily assesses the effects of the future proposed construction and operation of the expanded cemetery on the Site. Potential effects of the construction and operation of the proposed expanded BHNC on the Site will be reanalyzed and reevaluated in a subsequent NEPA analysis concurrent with Site design, when the expansion of the BHNC becomes necessary.

PROPOSED ACTION

VA’s Proposed Action is to acquire land adjacent to the existing BHNC for the future expansion of the cemetery. The future BHNC expansion would provide VA additional capacity to continue providing national shrine burial benefits to the regional Veterans community.

VA estimates adequate space remains for burials at the BHNC through approximately 2035. VA would acquire the Site in early 2019. The Site would remain unimproved land after VA’s acquisition until such a time that expansion of the BHNC is necessary. It is anticipated that cemetery expansion design and initial development would begin in approximately 5 to 10 years. Design details of the proposed BHNC expansion do not exist at this time; however, future grave site expansion on to the Site would be designed to be similar in appearance to the existing national shrine grounds of BHNC, located adjacent to the Site.
PURPOSE AND NEED

The purpose of the Proposed Action is to expand the BHNC to provide a National Cemetery of sufficient size and capacity to serve the projected interment needs of Veterans in western South Dakota for the next 100 years after the current BHNC burial space is depleted.

A larger, expanded BHNC is needed to continue providing national shrine burial benefits to the regional Veteran community. VA estimates space remaining for burials at the BHNC will be fully depleted by 2035. The nearest National Cemetery to BHNC that is accepting new burials is Fort McPherson National Cemetery, located more than 270 miles from BHNC in Maxwell, Nebraska.

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

ALTERNATIVES

VA considers adjacent/contiguous property to be the first and best option for cemetery expansion as it is the most cost effective and operationally efficient and reduces way finding confusion for visitors. Approximately 181 acres of land adjacent to the north and west of the BHNC, owned by the Federal Government and under control of BLM, has been offered to VA through a no-cost transfer for the cemetery expansion. VA reviewed the other land adjacent to and surrounding the BHNC and found that the BLM-offered land was the only potentially feasible adjacent land available for future cemetery expansion.

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

- **Preferred Action Alternative:** VA would acquire approximately 181 acres of unimproved land adjacent to north and west of the BHNC that is owned by the Federal Government and under BLM control, for future expansion of the BHNC. After acquisition, the Site would remain unimproved until such a date when the expansion of the BHNC becomes necessary. It is anticipated that VA would start construction activities on the expanded BHNC in approximately 2030. The northeastern, relatively level, grassy portion of the Site (approximately 100 acres) would be developed with the expanded cemetery. The southwestern, steeply sloping portion of the Site, would not be altered by VA.

- **No Action Alternative:** Under the No Action Alternative, the Proposed Action would not be implemented. Veterans and their families residing in the western South Dakota area would continue to use the BHNC until space is no longer available. In the future, VA would likely seek other land to expand the BHNC, but may not be able to acquire land contiguous with or near the existing BHNC. The Site likely would remain unimproved land with periodic grazing under BLM control.
The Preferred Action Alternative effectively provides additional land necessary to meet the regional cemetery requirements of VA. The No Action Alternative would not enable VA to provide adequate cemetery facilities in the western South Dakota region. However, the No Action Alternative is assessed in this EA to provide a comparative baseline analysis, as required under the CEQ Regulations.

**Affected Environment and Environmental Consequences**

The affected environment of the Preferred Action Alternative Site and its immediate surroundings, or the Region of Influence (ROI) of the Proposed Action is discussed in Section 3 of this EA.

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

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

**Preferred Action Alternative**

The Preferred Action Alternative would result in the impacts identified throughout Section 3 and summarized in Table 6 of this EA. These include potential adverse impacts to aesthetics, air quality, cultural resources, geology and soils, hydrology and water quality, wildlife and habitat, noise, wetlands, community services, solid and hazardous materials, transportation and utilities. These potential impacts are less-than-significant and would be further reduced through careful implementation of the Best Management Practices (BMPs), management and minimization measures, and compliance with regulatory requirements as identified in Section 5.

The Site has been unimproved land associated with the former Fort Meade Military Reservation since 1878. The central portion of the Fort Meade Military Reservation was entered into the National Register of Historic Places (NRHP) as the Fort Meade Historic District (FMHD) in 1973. Since that time, BLM and the South Dakota State Historic Preservation Office (SHPO) have recognized the importance of the entire Fort Meade Military Reservation and have determined the NRHP Nomination for the FMHD should be updated to reflect the expanded boundaries. The Site is located in the recommended expanded FMHD boundaries.

The initial transfer of the Site from BLM to VA would have no adverse effects on cultural resources. The SHPO concurred with this determination. The future expansion of the BHNC could have direct and indirect impacts on prehistoric and historic cultural resources at the Site that have been
identified, but remain unevaluated as to eligibility for listing on the NRHP, including Native American archaeological sites/features, historic roads, and a small sandstone quarry. The Native American archaeological sites/features may be individually or cumulatively eligible for listing on the NRHP as Traditional Cultural Properties (TCPs), and the historic roads and quarry may be eligible for listing on the NRHP as contributing elements to the FMHD.

Prior to completing the expanded cemetery design, a Tribal Survey and a ground-disturbing, archaeological investigation of the Site would be conducted in consultation with the Native American Tribes and SHPO. VA would formally determine the eligibility of the prehistoric and historic features for listing on the NRHP and would determine the potential adverse effects of the proposed cemetery expansion development in consultation with the Tribes and SHPO. If prehistoric and historic features eligible for listing on the NRHP are identified and would be adversely affected by the proposed BHNC expansion, VA would enter into a Memorandum of Agreement (MOA) with the Tribes, SHPO, Advisory Council on Historic Preservation (ACHP), and other interested parties under Section 106 of the National Historic Preservation Act (NHPA) to mitigate the adverse effects. It is anticipated that the primary mitigation measure would be the avoidance of the prehistoric and historic resources during the expanded cemetery design, although further exploration for data inventory and recovery/curation, and/or archaeological monitoring during excavation work associated with the cemetery construction may also be considered. With the completion of these NHPA mitigation measures, cultural resources impacts would be minimized or avoided.

The Preferred Action Alternative provides VA additional capacity to continue to provide national shrine burial benefits to the regional Veteran community, contiguous with the existing BHNC, a significant beneficial socioeconomic effect.

No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented. Veterans and their families residing in the western South Dakota area would continue to use the BHNC until space is no longer available. In the future, VA would likely seek other land to expand the BHNC, but may not be able to acquire land contiguous or near with the existing BHNC. The Site likely would remain unimproved land with periodic grazing under BLM control.

Cumulative Impacts

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

AGENCY AND PUBLIC INVOLVEMENT

VA consulted with the following agencies during the preparation of this EA: US Fish and Wildlife Service (USFWS), US Environmental Protection Agency (USEPA), US Army Corps of Engineers
(USACE), United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Bureau of Land Management (BLM), South Dakota State Historic Preservation Office (SHPO), South Dakota Department of Environment and Natural Resources (SDDENR), South Dakota Department of Game, Fish, and Parks (SDDGFP), South Dakota Department of Transportation (SDDOT), Pennington Conservation District (PCD), Meade County Equalization/Planning Department (MCEPD), and the City of Sturgis, South Dakota. Responses were received from USFWS, USACE, SHPO, SDDENR, SDDGFP, SDDOT, and the City of Sturgis. Agency information and comments have been incorporated into this EA, as and where appropriate, and are summarized in Section 4. Copies of relevant correspondence can be found in Appendix A.

Ten Federally-recognized Native American tribes were identified as having possible ancestral ties to the Site area. VA invited these tribes to provide input regarding the proposed transfer of the Site from BLM to VA for the future expansion of BHNC. In August 2018, VA held a meeting at the Site with the two responding Native American tribes, the Rosebud Sioux Tribe and the Northern Cheyenne Tribe. Tribal information and comments have been incorporated into this EA (Section 3.4) as appropriate. Tribal input is summarized in Section 4. Tribal correspondence is provided in Appendix B.

VA published and distributed the Draft EA for a 30-day public comment period as announced by a Notice of Availability (NOA) published in the Rapid City Journal, a local newspaper of general circulation, on December 2, 3 and 4, 2018. A copy of the Draft EA was available for public review at the Sturgis Public Library and on the VA National Cemetery Administration website (www.cem.va.gov/cem/EA.asp). VA received no public comments regarding the Draft EA.

CONCLUSIONS

The analysis performed in this EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life associated with the Preferred Action Alternative, provided the management measures, and minimization measures, and regulatory compliance measures described in this EA are implemented. This EA’s analysis determines, therefore, that an Environmental Impact Statement (EIS) is unnecessary for implementation of the Proposed Action, and that a Finding of No Significant Impact (FONSI) is appropriate.
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SECTION 1: INTRODUCTION

1.1 Introduction

This Section provides the reader with necessary introductory and background information concerning the Proposed Action for proper analytical context; identifies the purpose of and need for the Proposed Action; and describes the Federal decision to be made concerning the Proposed Action. Section 4 provides a summary of public and agency involvement (and key issues and concerns identified). Section 11 identifies Federal, State, and local regulations applicable to the Proposed Action.

This Environmental Assessment (EA) has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic effects associated with the Department of Veterans Affairs’ (VA’s) Proposed Action to acquire land adjacent to the existing Black Hills National Cemetery (BHNC), located at 20901 Pleasant Valley Drive in an unincorporated area of Meade County, South Dakota for the future expansion of the cemetery.

Preparation of this EA is required in accordance with the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code [USC] 4321 et seq.), the President’s Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and 38 CFR Part 26 (Environmental Effects of the Department of Veterans Affairs Actions). This EA has been prepared in accordance with VA’s NEPA Interim Guidance for Projects (2010).

VA intends to acquire the 181-acre Site located north and west of the BHNC in early 2019 and hold it until such date when the expansion of the BHNC becomes necessary. At that time, and as part of the cemetery design process, VA will perform a supplemental NEPA analysis to reanalyze and reevaluate the potential effects of the construction and operation of the expanded cemetery at the Site. VA will incorporate the avoidance, management, and minimization measures identified in this EA into that future design process and supplemental NEPA analysis to minimize potential adverse environmental effects.

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

As such, this EA assesses the potential effects of acquiring the Site for the ultimate expansion of the BHNC, and preliminarily assesses the effects of the future proposed construction and operation of the cemetery on the Site. Potential effects of the construction and operation of the
proposed expanded BHNC on the Site will be reanalyzed and reevaluated in a supplemental NEPA analysis concurrent with Site design, when the expansion of the BHNC becomes necessary.

1.2 Background

VA is proposing to acquire (through a no-cost transfer) approximately 181 acres of land adjacent to the north and west of the BHNC (the Site) that is already owned by the Federal Government and under the control of US Department of Interior’s Bureau of Land Management (BLM).

BHNC and the 181-acre Site are both part of the former Fort Meade Military Reservation, an approximately six square mile area centered around historic Fort Meade, located approximately 2.5 miles north of BHNC, and have been owned by the Federal Government since Fort Meade was established in 1878. Jurisdiction of the Fort Meade Military Reservation was transferred to VA in 1944, who transformed the fort into the current Fort Meade VA Medical Center. BHNC was established in the southern portion of the former Fort Meade Military Reservation in 1948. Between 1954 and 1960, VA transferred the remainder of the former military reservation (approximately 6,700 acres) to BLM, which is now the Fort Meade Recreation Area.

The approximately 105-acre existing BHNC provides national shrine burial benefits to Veterans and their families in western South Dakota and is operated by the VA National Cemetery Administration (NCA). VA estimates adequate space remains for burials at the BHNC through approximately 2035; however, additional land would be needed in the future. The 181-acre Site is located adjacent to the BHNC and has been offered to VA by BLM. VA would acquire the Site in early 2019 and would hold it until such date when the expansion of the BHNC becomes necessary. It is anticipated that cemetery design and initial development would begin in approximately 5 to 10 years. Design details of the proposed BHNC expansion do not exist at this time; however, future gravesite expansion onto the Site would be designed to be similar in appearance to the existing national shrine grounds of the adjacent BHNC. The Site location and features are depicted on Figures 1 through 4.

1.3 Purpose and Need

The purpose of the Proposed Action is to expand the BHNC to provide a National Cemetery of sufficient size and capacity to serve the projected interment needs of Veterans in western South Dakota for the next 100 years after the current BHNC burial space is depleted.

A larger, expanded BHNC is needed to continue providing national shrine burial benefits to the regional Veteran community. VA estimates space remaining for burials at the BHNC will be fully depleted by 2035. The nearest National Cemetery to BHNC that is accepting new burials is Fort McPherson National Cemetery, located more than 270 miles from BHNC in Maxwell, Nebraska.

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

1.4 Decision-Making

This EA has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic effects associated with VA’s proposed acquisition of approximately 181 acres of land located adjacent to the BHNC for the future expansion of the cemetery.

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

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

Ultimately, VA will decide, in part based on the analysis presented in this EA and after having taken potential physical, environmental, cultural, and socioeconomic effects into account, whether VA should implement the Proposed Action, and, as appropriate, carry out management, avoidance, and mitigation (if necessary) measures to reduce effects to the environment.
FIGURE 1
VICINITY LOCATION MAP
ENVIRONMENTAL ASSESSMENT
PROPOSED BLACK HILLS NATIONAL CEMETERY EXPANSION
MEADE COUNTY, SOUTH DAKOTA

PREPARED FOR
U.S. DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON D.C.

TTL PROJECT NO.
1469703
INTRODUCTION

FINAL ENVIRONMENTAL ASSESSMENT
PROPOSED BLACK HILLS NATIONAL CEMETERY EXPANSION
MEADE COUNTY, SOUTH DAKOTA

JANUARY 2019

FIGURE 2
TOPOGRAPHIC LOCATION MAP
ENVIRONMENTAL ASSESSMENT
PROPOSED BLACK HILLS NATIONAL CEMETERY EXPANSION
MEADE COUNTY, SOUTH DAKOTA

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FIGURE 3
AERIAL LOCATION MAP
ENVIRONMENTAL ASSESSMENT
PROPOSED BLACK HILLS
NATIONAL CEMETERY EXPANSION
MEADE COUNTY, SOUTH DAKOTA

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FIGURE 4
AERIAL SITE MAP

ENVIRONMENTAL ASSESSMENT
PROPOSED BLACK HILLS
NATIONAL CEMETERY EXPANSION
MEADE COUNTY, SOUTH DAKOTA

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1469703
SECTION 2: DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction

This Section provides the reader with necessary information regarding the Proposed Action and its alternatives, including those that VA initially considered, but eliminated, and the reasons for eliminating them. The screening criteria and process developed and applied by VA to hone the number of reasonable alternatives are described, providing the reader with an understanding of VA’s rationale in ultimately retaining the Preferred Action Alternative, that best meets VA’s purpose of and need for the Proposed Action, for analysis.

2.2 Proposed Action

VA’s Proposed Action is to acquire land adjacent to the existing BHNC for the future expansion of the cemetery. The future BHNC expansion would provide VA additional capacity to continue providing national shrine burial benefits to the regional Veteran community.

VA estimates adequate space remains for burials on current BHNC land through 2035 before additional land is needed. VA would acquire the Site in early 2019 and would hold it until such date when the expansion of the BHNC becomes necessary. It is anticipated that cemetery expansion design and initial development would begin in approximately 5 to 10 years. Design details of the proposed BHNC expansion do not exist at this time; however future gravesite expansion onto the Site would be designed to be similar in appearance to the existing national shrine grounds of the adjacent BHNC.

VA would follow the NCA Facilities Design Guide in the BHNC expansion design. Based on the Design Guide, the proposed BHNC expansion would generally include the following components:

- Roads connecting to the existing BHNC via internal roadways. Roadways would be approximately 28 feet wide and would wind throughout the cemetery in harmony with the natural grade and environmental features of the land. Roadways would loop back around the property to maintain a complete, simple traffic pattern around the cemetery. All of the roadways would have a speed limit of 15 miles per hour (mph).

- Permanent committal shelters would be constructed for ceremonies (there are no grave-side ceremonies at National Cemeteries). These shelters would be designed and located where there are scenic views, maximum weather protection, and minimal potential for noise disruption.

- The acquired land would be developed in phases. Each phase would develop enough gravesites and columbarium niches as needed to accommodate approximately 5 to 10 years of burial demand. Cremation sites, casket gravesites, and columbarium would be
developed in each subsequent phase. The size of each phase, and the total number of phases, is currently unknown.

- Environmentally constrained areas, such as wetlands and culturally sensitive areas, and areas that are otherwise difficult to develop (e.g., steeper slopes) would be left undeveloped and remain as scenic locations at the cemetery. The utilized portions of the Site would be developed to within 20 feet of the Site boundaries.

- The standard for NCA design is to achieve on-site cut-and-fill soil balance as much as practical. Proposed development would primarily be located in relatively level areas, following natural contours to the extent possible. Areas may be minimally leveled to develop a consistent grade with each phase. Development would include the installation of grave sites, which would consist of gravel base, drainage piping, and pre-placed concrete vault/crypt system. Approximately 20-22 inches of soil would be placed on top of each vault/crypt. This design would provide the most space-efficient option. Each grave site would be marked with a small, upright marble headstone.

- Utilities, including potable and irrigation water, sewer, electric, and other supporting infrastructure would be extended throughout the site, as required.

Prior to construction, VA would obtain all applicable Federal, State, and local permits for the proposed cemetery development from appropriate government authorities. VA would avoid any significant onsite environmental resources through sensitive site design, including avoidance of significant cultural and natural resources.

2.3 Alternatives Analysis

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

2.3.1 Alternatives Development

VA estimates adequate space remains for burials on current BHNC land through 2035 before additional land is needed to continue providing national shrine burial benefits for area Veterans in the future.

The NCA Final Land Acquisition Fact Sheet, dated April 2012, states adjacent/contiguous property is considered to be the first and best option for cemetery expansion. National Cemetery expansion onto adjacent land is the most cost effective and operationally efficient manner to expand an existing National Cemetery. Doing so promotes efficiencies and allows the new gravesite areas to be operated by the same staff that operates the existing grounds, with no need
for remote staff, remote buildings, and remote equipment. It also eliminates potential visitor directional and wayfinding confusion that can occur with a remotely located property.

Additionally, the regional Veteran community has indicated that they strongly prefer and support the expansion of BHNC onto adjacent/contiguous property rather than expanding the National Cemetery elsewhere on remote “annex” land. As such, VA would only consider the closure of the BHNC and the acquisition and construction of a new BHNC Annex in a new remote location once all opportunities for the acquisition of adjacent/contiguous land have been exhausted.

Approximately 181 acres of land contiguous to north and west of the BHNC (the Site), already owned by the Federal Government and managed by BLM, and has been offered to VA by the BLM through a no-cost transfer. After identifying the opportunity to acquire additional land adjacent to the existing BHNC for future expansion, VA concluded that acquiring the Site in the short-term, while available, would secure land necessary to meet its long-term cemetery needs. No other feasible sites adjacent to the BHNC were offered to VA or identified as available for acquisition.

2.3.2 Evaluated Alternatives

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

**Preferred Action Alternative**

VA would acquire approximately 181 acres of unimproved land adjacent to north and west of the BHNC that is owned by the Federal Government and under BLM control, for future expansion of the BHNC. After acquisition, the Site would remain unimproved until such date when the expansion of the BHNC becomes necessary. It is anticipated that cemetery design and initial development would begin in approximately 5 to 10 years. The northeastern, relatively level, grassy portion of the Site (approximately 100 acres) would be developed with the expanded cemetery. The southwestern, steeply sloping portion of the Site would not be altered by VA. The Preferred Action Alternative would be implemented as described in Section 2.2.

The Preferred Action Alternative effectively provides additional land necessary to meet the regional cemetery requirements of VA.

**No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be implemented. Veterans and their families residing in western South Dakota would continue to use the BHNC until space is no longer available. In the future, VA would likely seek other land to expand the BHNC, but may not be able to acquire land contiguous with or near the existing BHNC. The Site likely would remain unimproved land managed by BLM.

While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, this alternative was retained to provide a comparative baseline against which to analyze the effects of the Proposed Action, as required under the CEQ Regulations (40 CFR Part 1502.14).
The No Action Alternative reflects the *status quo* and serves as a benchmark against which the effects of the Proposed Action can be evaluated.

### 2.3.3 Alternatives Eliminated From Detailed Consideration

As described in Section 2.3.1, VA was presented the opportunity to acquire via a no-cost transfer from BLM additional land adjacent to the north and west of the existing BHNC for future expansion of the cemetery. VA concluded that acquiring the Site in the short-term, while available, would secure the land necessary to meet its long-term cemetery needs. No other land adjacent to BHNC was offered to VA or identified as available for acquisition.

Closure of the BHNC when it reaches its capacity and acquisition and development of a new BHNC Annex at a remote location would not be cost effective or operationally efficient, would create way finding confusion for visitors, and would only be considered once all opportunities for cemetery expansion on adjacent land have been exhausted.
SECTION 3: AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This Section describes the baseline (existing) physical, environmental, cultural, and socioeconomic conditions of the proposed BHNC expansion Site (see Figures 1-4) and its general vicinity (i.e., the Proposed Action’s Region of Influence (ROI)), with emphasis on those resources potentially affected by the Proposed Action. Appendix C provides photographs, with captions, of the Site and its vicinity. Under each resource area (Sections 3.2 through 3.16), the potential direct and indirect effects of the Preferred Action Alternative and the No Action Alternative are identified. Potential cumulative impacts are discussed in Section 3.17.

In this EA, impacts are identified as either significant, less than significant (i.e., common impacts that would not be of the context or intensity to be considered significant under the NEPA or CEQ Regulations), or no/negligible impact. As used in this EA, the terms “effects” and “impacts” are synonymous. Where appropriate and clearly discernible, each impact is identified as either adverse or beneficial.

The CEQ Regulations specify that in determining the significance of effects, consideration must be given to both “context” and “intensity” (40 CFR 1508.27):

- **Context** refers to the significance of an effect to society as a whole (human and national), to an affected region, to affected interests, or to just the locality. In other words, the context measures how far the effect would be “felt.”

- **Intensity** refers to the magnitude or severity of the effect, whether it is beneficial or adverse. Intensity refers to the “punch strength” of the effect within the context involved.

In this EA, the significance of potential direct, indirect, and cumulative effects has been determined through a systematic evaluation of each considered alternative in terms of its effects on each individual environmental resource component.

Resource areas considered in this EA are as follows:

- Aesthetics
- Air Quality
- Cultural Resources
- Geology and Soils
- Hydrology and Water Quality
- Wildlife and Habitat
- Noise
- Land Use
- Floodplains, Wetlands, and Coastal Zone Management
- Socioeconomics
- Community Services
- Solid and Hazardous Materials
- Transportation and Parking
- Utilities
- Environmental Justice
3.2 Aesthetics

The approximately 181-acre Site is situated in a rural area, within an unincorporated area in the southwestern portion of Meade County, located approximately three miles southeast of the City of Sturgis (Figures 1-3). The Site is adjacent to the north and west of the BHNC. The northeastern approximately 100 acres of the Site are relatively flat, mostly grassy, open land that is periodically used for grazing. The southwestern portion of the Site is steeply sloping and partially wooded. The Site features are depicted on Figure 4.

The area located north of the Site is unimproved, mostly grassy land, associated with Fort Meade Recreation Area and includes a portion of Centennial Trail, a multi-use, recreational trail established in 1989. The area located to the east of the southern portion of the Site is occupied by the BHNC. The area located adjoining to the east of the northern portion of the Site is occupied by railroad tracks and Interstate 90, across which is unimproved, mostly grassy land. The area located to the south of the eastern portion of the Site is occupied by the BHNC. The area located to the south of the western portion of the Site is unimproved mostly wooded, sloping land that is part of the Black Hills National Forest. The area located to the west of the Site is unimproved, mostly wooded sloping land that is part of the Black Hills National Forest. The surrounding land uses are depicted on Figure 4.

3.2.1 Effects of the Preferred Action Alternative

After VA’s acquisition, the Site would remain in its current configuration until such a time that VA is ready to expand the BHNC. The continued use of the Site as unimproved land with periodic grazing while owned by VA would result in no aesthetic impacts.

Future expansion of the BHNC on the Site would produce visual changes, including the installation of roads, maintained grassy burial areas, and possibly a few small, single-story structures. The expanded cemetery design has not been initiated, but it is anticipated that the cemetery expansion would be limited to the open, relatively level northeastern portion of the Site and would be visually consistent with the existing, adjacent BHNC. VA would develop the Site in concert with the Site’s natural topography and features. The sloped, partially wooded southwestern portion of the Site would remain undeveloped. No significant grade changes are anticipated.

Given that the proposed cemetery would be designed to blend with the existing topography and landscape and would be visually consistent with the adjacent existing BHNC, and no sensitive viewshed receptors are located in the Site area, aesthetics effects would be negligible.

3.2.2 Effects of the No Action Alternative

Under the No Action Alternative, no aesthetics impacts would result from VA’s actions. The likely continued use of the Site as unimproved land with periodic grazing would result in no aesthetic impacts.
3.3 Air Quality

3.3.1 Ambient Air Quality

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

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

According to the USEPA Green Book (October 2018), Meade County is currently designated as a full-attainment area.

3.3.2 State and Local Regulations

The South Dakota Department of Environment and Natural Resources (SDDENR) Air Quality Program coordinates State-wide air compliance and enforcement activities through the South Dakota Air Pollution Control Law (Chapter 34A-1 of South Dakota Codified Laws). The SDDENR Air Quality Program stated the Proposed Action would not likely cause a significant impact on the air quality in the area.

Meade County does not maintain an air quality ordinance.

3.3.3 Sensitive Receptors

There are no sensitive air quality receptors in the vicinity of the Site.

3.3.4 Effects of the Preferred Action Alternative

Air emissions generated from the Proposed Action would be expected to have less-than-significant direct and indirect, short-term and long-term impacts to the air quality environment around the Site. No change to air quality is anticipated during the initial continued use of the Site as unimproved land with periodic grazing. Short-term increased air emission levels would occur as a result of the construction of each expansion area of the cemetery. Long-term emissions would occur during the operation of the expanded cemetery.

Construction activities would be performed in accordance with Federal and State air quality requirements. Construction-related emissions are generally short-term, but may still have adverse impacts on air quality, primarily due to the production of dust. Dust can result from a
variety of activities, including excavation, grading, and vehicle travel on paved and unpaved surfaces. Dust from construction can lead to adverse health effects and nuisance concerns, such as reduced visibility on nearby roadways. The amount of dust is dependent on the intensity of the activity, soil type and conditions, wind speed, and dust suppression activities used. Implementing dust control measures (BMPs) significantly reduces dust emissions from construction. Construction-related emissions also include the exhaust from the operation of construction equipment, including diesel particulate matter (DPM). The use of newer construction equipment with emissions controls and minimizing the time that the equipment is idling (BMPs) reduce construction equipment exhaust emissions. Implementation of BMPs, discussed in Section 5, would minimize these anticipated less-than-significant adverse, short-term, construction-related, air quality impacts.

In the future, when the Site would be utilized to expand the BHNC, vehicle trips to the Site associated with interments would likely be similar to current conditions at the adjacent, existing BHNC; the rate of interments per week is not anticipated to increase as a result of the Proposed Action. As additional areas of the BHNC are developed at the Site, the number of visitors to the BHNC would increase; however, the increased number of vehicle trips associated with visitors would be minor. Increased vehicle air emissions associated with the expanded cemetery would be less-than-significant.

3.3.5 Effects of the No Action Alternative

Under the No Action Alternative, no air quality impacts associated with VA’s Proposed Action would result. The likely continued use of the Site as unimproved land with periodic grazing would result in no/negligible air quality impacts.

3.4 Cultural Resources

The Site has been unimproved land associated with the Fort Meade Military Reservation since 1878. The northeastern portion of the Site has been mostly grassy, open land used for livestock grazing and the southwestern portion of the Site has been partially wooded since the 1950s. A sandstone quarry was located in the western portion of the Site, at the foot of the steeply sloping portion of the Site. The central portion of the Fort Meade Military Reservation was entered into the National Register of Historic Places (NRHP) as the Fort Meade Historic District (FMHD) in 1973. Since that time, BLM and the South Dakota State Historic Preservation Office (SHPO) have recognized the importance of the entire Fort Meade Military Reservation and have determined the NRHP Nomination for the FMHD should be updated to reflect the expanded boundaries. The Site is located in the recommended expanded FMHD boundaries. The BHNC was listed on the NRHP in 2016.

BLM conducted a Level III Cultural Resource Survey (CRS) of the southwestern, steeply sloping portion of the Site (approximately 63 acres) in 2004 as part of a timber thinning project to reduce potential catastrophic fires. The BLM CRS included a records and literature search of SHPO files, a pedestrian archaeological survey, and limited shovel tests. No previous surveys for the 63-acre area were identified. No prehistoric artifacts were discovered during the pedestrian archaeology survey and shovel testing.
Niwot Archeological Consultants (Niwot) conducted an Initial Cultural Resources Impact Prediction (ICRIP) for approximately 98 acres of land in the northeastern portion of the Site on behalf of VA and in conjunction with BLM in 2014. The ICRIP included a records and literature search of SHPO files and a pedestrian archaeological survey of the Site. The ICRIP indicated previous cultural resource surveys had been conducted over portions of the 98-acre study area, which identified a historic road and trails and prehistoric artifacts. However, none of these historic and prehistoric resources had been formally recorded or evaluated for their eligibility for the NRHP. In addition, no tribal surveys for potential Traditional Cultural Properties (TCP) had been completed. The ICRIP recommended additional cultural resource investigative activities be performed to comply with Section 106 of the National Historic Preservation Act (NHPA), including additional pedestrian surveys, shovel testing, and TCP surveys.

In 2016, Environmental Research Group, LLC (ERG), in conjunction with BLM, completed a Level III Intensive Cultural Resource Inventory (ICRI) of the northeastern approximately 129 acres of the Site on behalf of VA (final report dated March 2018). The ERG ICRI included a review of the 2004 BLM CRS and 2014 Niwot ICRIP, and the supporting documents for those reports. Field activities included an intensive pedestrian survey of study area by three archaeologists. No subsurface testing was conducted at the request of the consulted Native American tribes.

The ERG ICRI resulted in the identification of Native American (prehistoric) and Euroamerican (historic) cultural resources at the Site. Native American resources identified included: a collection of eight features, including collapsed cairns, stone circles and other alignments, and a likely hanbleceya site (Native American vision quest site) in the northeastern portion of the Site; a piece of banded chert in the southeastern portion of the Site, and a possible Tribal feature (three large boulders) in the northern portion of the Site. As no ground disturbance was permitted during the ICRI, these resources could not be fully evaluated to determine their eligibility for the NRHP.

The Euroamerican resources identified at the Site included two excavations (mining-related prospecting pit and military fox hole), two borrow areas (one filled with dumped architectural debris), and a network of former roads associated with the abandoned sandstone quarry located at the base of the steeply sloping area in the southwestern portion of the Site. The ICRI stated the sandstone quarry may have been used to mine stone for the construction of Fort Meade buildings and, if so, the quarry and associated former roads may contribute to the FMHD. The ICRI did not include further analysis of the quarry. The ICRI stated that the remaining Euroamerican resources at the Site were determined to be non-contributing to the FMHD and not eligible for listing in the NRHP.

Ten Federally-recognized Native American tribes were identified as having possible ancestral ties to the Site area. VA invited these tribes to provide input regarding the proposed land transfer between VA and BLM for the future expansion of BHNC. On August 16, 2018, VA held a consultation meeting with BLM and the Native American tribes. Two tribes, the Rosebud Sioux Tribe and the Northern Cheyenne Tribe, attended the meeting. All of the meeting participants also toured the Site and were shown the Tribal and historic features detailed in the ERG ICRI. Tribal members also described various aspects of the Site and surrounding landscape that were important to their heritage.
In September 2018, VA submitted a letter to SHPO detailing the cultural resources identification and consultation efforts taken to date, and requesting SHPO review and concurrence that the land transfer between BLM and VA would have no adverse effect on cultural resources. VA noted that there are no planned development activities at the Site until approximately 2028. VA also noted that future BHNC expansion activities at the Site will require future Section 106 of the NHPA determinations of effect through consultation with SHPO, Native American tribes, and any other interested parties.

In a letter dated October 26, 2018, SHPO concurred with VA's determination that the land transfer between VA and BLM would have No Adverse Effects on cultural resources. SHPO noted that VA has committed to continuing consultation with Native American tribes to identify places of religious and cultural significance and stated VA's planned future development of the cemetery at the Site would require additional documentation and consultation.

### 3.4.1 Effects of the Preferred Action Alternative

After VA's acquisition, the Site would remain in its current configuration until such a time that VA is ready to expand the BHNC. The continued use of the Site as unimproved land with periodic grazing while owned by VA would result in no cultural resources impacts.

The future expansion of the BHNC at the Site could have direct and indirect impacts on the prehistoric and historic cultural resources features that have been identified at the Site, but remain unevaluated as to eligibility for listing on the NRHP, including Native American archaeological sites/features, historic roads, and the historic sandstone quarry. The Native American archaeological sites/features may be individually or cumulatively eligible for listing on the NRHP as TCPs, and the historic roads and quarry may be eligible for listing on the NRHP as contributing elements to the FMHD.

Prior to completing the expanded cemetery design, a Tribal survey and a ground-disturbing, archaeological investigation of the Site would be conducted in consultation with the Native American Tribes and SHPO. VA would formally determine the eligibility of the prehistoric and historic features for listing on the NRHP and would determine the potential adverse effects of the proposed cemetery expansion development in consultation with the Tribes and SHPO. If prehistoric and historic features eligible for listing on the NRHP are identified and would be adversely affected by the proposed BHNC expansion, VA would enter into a Memorandum of Agreement (MOA) with the Tribes, SHPO, Advisory Council on Historic Preservation (ACHP), and other integrated parties under Section 106 of the NHPA to mitigate the adverse effects. It is anticipated that the primary mitigation measures would be the avoidance of the prehistoric and historic resources during site design, although further exploration for data inventory and recovery/curation, and/or archaeological monitoring during excavation work associated with the cemetery development may also be considered. With the completion of these NHPA mitigation measures, cultural resources impacts would be minimized or avoided.

The Proposed Action would have indirect impacts on the southeasterly adjacent NRHP-listed BHNC. However, the expansion of the BHNC onto the Site would be consistent with the existing cemetery. The impacts resulting from the expansion of the BHNC at the Site would be less-than-significant.
3.4.2 Effects of the No Action Alternative

Under the No Action Alternative, no cultural resources impacts by VA would occur. The likely continued use of the Site as unimproved land with periodic grazing would result in no/negligible cultural resource impacts.

3.5 Geology and Soils

A review of the Fort Meade and Tilford, South Dakota United States Geological Survey (USGS) Topographic Quadrangles (both dated 2015) indicates the surficial topography on the Site is steeply sloping in the southwestern portion [elevation ranging from approximately 4,100 feet above mean sea level (amsl) to 3,720 feet amsl] and gently sloping in the eastern portion (elevation ranging from 3,720 feet amsl to 3,620 feet amsl) to the northeast towards Alkali Creek, located approximately 400 feet north and 500 feet east of the Site (Figure 2).

According to A Tapestry of Time and Terrain, published by the USGS and dated 2000, Meade County is located on the boundary between the Pierre Hills and the Black Hills Regions of the Great Plains physiographic province in western South Dakota. The Pierre Hills consist of a series of smooth hills and ridges with rounded tops. This region is underlain by the Pierre Shale formations and has lower elevations (1,800 to 2,800 feet amsl) than the plateau country to the north and the south. The Black Hills is a mountainous area consisting of a series of upturned sedimentary strata, arranged concentrically around a core of igneous and metamorphic rocks. The Site is located within the Black Hills Region of Meade County.

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey indicates the Site contains five soil type identified as Rapid creek very cobbly sandy loam, 1 to 6 percent slopes, (northern and eastern portions), Nevee-Spearfish silt loams, 6 to 20 percent slopes (central and southeastern portions), Rockerville, moist-Rock outcrop complex, 6 to 40 percent slopes (southwestern portion), Tilford silt loam, 2 to 6 percent slopes (southeastern portion), and St. Onge loam, 0 to 2 percent slopes, rarely flooded (southwestern corner). These soils are characterized as moderately well-drained to somewhat excessively drained with varying permeability and a depth to water table of more than 80 inches below ground surface (bgs). Site soils are depicted on Figure 5.

TTL Associates, Inc. (TTL) completed a geotechnical subsurface investigation of the northeastern portion of the Site in September 2018. The geotechnical investigation found the soils in the northeastern portion of the Site primarily consist of silty gravel to depths of at least 10 feet bgs, the maximum depth explored. Some of the soil borings encountered clay with sand. Four of the soil borings identified gypsum bedrock at depths ranging from near the ground surface to 9 feet bgs.

According to the Evaporite Karst in the Black Hills, South Dakota and Wyoming, and the Oil Play in the Williston Basin, North Dakota and Montana, published by the USGS and dated 2012, the Black Hills and surrounding areas are underlain by evaporite deposits that mainly consist of gypsum, anhydrite, and salt, which has created abundant karstic features (such as sinkholes and caves) at the surface and near-surface in many areas. No obvious sinkholes or caves were identified at the Site during the geotechnical investigation or from a review of the USGS
Topographic Maps. However, aerial photographs depict circular patterns at the Site that may be associated with collapsed sink holes.

According to the South Dakota Geological Survey (SDGS), the Site is not located in an area with known fault lines or significant potential for earthquakes.

### 3.5.1 Prime and Unique Farmland Soils

Prime and Unique Farmlands are regulated in accordance with the Farmland Protection Policy Act (FPPA) to ensure preservation of agricultural lands that are of statewide or local importance. Soils designated as prime farmland are capable of producing high yields of various crops when managed using modern farming methods. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. Unique farmlands are also capable of sustaining high crop yields and have special combinations of favorable soil and climate characteristics that support specific high-value foods or crops.

According to the USDA NRCS Web Soil Survey, Tilford silt loam soils, located in the eastern portion of the Site, were identified as farmland of statewide importance; and St. Onge loam soils, located in the eastern corner of the Site, were identified as prime farmland, if irrigated. Combined, these soils represent approximately seven acres of the Site.

### 3.5.2 Effects of the Preferred Action Alternative

The Site would continue to be unimproved land with periodic grazing after VA’s acquisition until expansion of the BHNC is required. The initial continued use of the Site as unimproved land with periodic grazing would result in no/negligible geology and soils impacts.

The expansion of the BHNC at the Site is anticipated to result in less-than-significant impacts to geology and soils. No significant changes to topography or drainage are expected at the Site. The steeply sloping southwestern portion of the Site would remain undeveloped. The proposed cemetery expansion would be designed in concert with the natural topography and current drainage patterns. Limited paved areas would be designed to drain to a suitable, on-site, properly engineered and designed, stormwater management system.

Cemetery construction activities would 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 existing stormwater management systems and offsite discharges of sediment-laden runoff. However, such potential adverse erosion and sedimentation (E&S) effects would be prevented through utilization of appropriate BMPs as described in Section 5 and adherence to the terms of approved National Pollutant Discharge Elimination System (NPDES) and land disturbance permits, including the development and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP).
No long-term E&S impacts would be anticipated due to the nature of the Proposed Action. No long-term soil erosion impacts would occur as a result of increased impervious surfaces onsite; there would be limited impervious surfaces associated with the cemetery development and long-term soil erosion impact would be managed by maintaining appropriately designed stormwater management features associated with the proposed cemetery.

Approximately seven acres of the Site contains prime farmland soils, if irrigated, and farmland of statewide importance soils. Although not actively farmed currently, the Proposed Action would irreversibly convert these areas into nonagricultural use. As such, the Proposed Action is subject to the FPPA requirements. VA would be required to complete, in conjunction with the NRCS, a Farmland Conversion Impact Rating (Form AD-1006). This process evaluates the relative value of the Site as farmland compared to other farmland in the area and assesses the Site by examining the Site, surrounding areas, and the programs and policies of the State or local government agency. Based on the characteristics of the Site and surrounding area (agricultural use limited to passive grazing), the proposed cemetery development at the Site would have a less-than-significant impact on farmland soils.

The Site is located in a general area where evaporite (gypsum) deposit karst conditions may occur. Although no evidence of karstic conditions (such as sinkholes) was observed in the geotechnical soil borings, aerial photographs indicate possible collapsed sink holes. VA would complete a geotechnical evaluation of the Site during the cemetery development and would implement geotechnical remediation measures, as necessary, to ensure the stability of the development and appropriate stabilization of grave site areas. In addition, VA would implement measures to reduce potential sinkhole development.

Although shallow gypsum bedrock was encountered in some of the geotechnical soil borings, it is anticipated that excavations associated with cemetery development could be conducted using conventional excavation equipment, such as a backhoe or track excavator, with some assistance from pneumatic chippers, jackhammers, or hydraulic wedging equipment. The encountered gypsum was generally penetrable with the drill rig augers and it is not anticipated that extensive use of the rock removal methods would be required.

No active significant faults are known extend through the subsurface geology in the Site area. As such, no significant impacts associated with seismic hazards are identified. No significant impacts to mineral resources are anticipated, as the Proposed Action would not involve the commercial extraction of mineral resources, nor affect mineral resources considered important on a local, State, national, or global basis.

### 3.5.3 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to soils, topography, or geology by VA would occur. The likely continued use of the Site as unimproved land with periodic grazing would result in no/negligible soils, topography, or geology impacts.
FIGURE 5
SOILS MAP

ENVIRONMENTAL ASSESSMENT
PROPOSED BLACK HILLS NATIONAL CEMETERY EXPANSION
MEADE COUNTY, SOUTH DAKOTA

PREPARED FOR
U.S. DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON, D.C.

TTL PROJECT NO.
1469703
3.6 Hydrology and Water Quality

3.6.1 Surface Waters

The Site is located in the Lower Belle Fourche River watershed. The Fort Meade and Tilford, South Dakota USGS Topographic Quadrangles indicate that two small ponds are located along the southeastern Site boundary with BHNC and a small portion of an intermittent tributary of Alkali Creek, which is depicted crossing through the center of BHNC from south to north, crosses the eastern corner of the Site. Alkali Creek is located approximately 400 feet north and 500 feet east of the Site, and generally flows east in the Site vicinity to the Belle Fourche River, located approximately 30 miles east of the Site. Figure 2 depicts the Site on the topographic maps.

Based on site observations, and a review of historic aerial photographs and topographic maps, the two on-site ponds depicted on the topographic maps appear to have been created/modified for periodic stormwater management. Neither pond contained water during TTL’s November 2016 site reconnaissance. East of the ponds is an intermittent stream channel that flows east, along the Site boundary with BHNC to a culvert, where it flows under Interstate 90 to the east to Alkali Creek. The intermittent tributary of Alkali Creek depicted crossing BHNC on the topographic maps has been modified by the BHNC development and discharges to the intermittent stream along the southeastern site boundary with the BHNC.

Surface water runoff at the Site generally flows to the northeast, towards Alkali Creek; however, some runoff flow to the two ponds and intermittent tributary of Alkali Creek, located in the southeastern portion of the Site.

The SDDENR Surface Water Quality Program (SWQP) stated, through using conventional construction techniques, the Proposed Action should not cause violation of any statutes or regulations administered by the SDDENR. The SWQP stated that appropriate erosion and sediment control measures must be installed, a General Permit for Storm Water Discharges Associated with Construction Activities would be required, and a Surface Water Discharge (SWD) permit may be required if any construction dewatering should occur, and surface water tributaries are Waters of the State (protected under the South Dakota Surface Water Quality Standards), and should be avoided or minimized if possible. The SWQP stated that Alkali Creek is classified by South Dakota Surface Water Quality Standards and Uses Assigned to Streams for beneficial uses, including: domestic water supply waters, coldwater marginal fish life propagation waters, limited contact recreation waters, fish and wildlife propagation, recreation, and stock watering waters, and irrigation waters.

3.6.2 Groundwater

According to the Groundwater Atlas of the United States, the Site is underlain by the Northern Great Plains aquifer system. Water wells located in the general vicinity of the Site, including at the adjoining BHNC, are typically at depths of at least 1,100 feet bgs. The BHNC water well is 1,465 feet deep.

Groundwater was not encountered within 10 feet of the ground surface at the Site during the September 2018 geotechnical investigation.
The SDDENR Drinking Water Division stated that the Proposed Action would not have adverse effects to drinking water in the Site area.

3.6.3 Effects of the Preferred Action Alternative

The Site would continue to be unimproved land with periodic grazing after VA’s acquisition until expansion of the BHNC is required. The initial continued use of the Site as unimproved land with periodic grazing would result in no/negligible hydrology and water quality impacts.

The future development of the expanded cemetery at the Site would not result in significant impacts to surface waters, provided that the BMPs described in Section 5 are implemented. These BMPs would control construction-related impacts of soil erosion and sedimentation and would provide proper stormwater management following the development of the cemetery. In addition, it is anticipated that the cemetery design would maintain undeveloped green space between the developed areas of the cemetery and the on-site and adjacent surface waters.

It is not anticipated that groundwater would be encountered or adversely impacted by the proposed cemetery expansion. Based on the geotechnical investigation, groundwater is greater than 10 feet bgs.

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

3.6.4 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to hydrology or water quality by VA would occur. The likely continued use of the Site as unimproved land with periodic grazing would result in no/negligible hydrology or water quality impacts.

3.7 Wildlife and Habitat

3.7.1 Vegetation and Wildlife

The northeastern approximately 100 acres of the Site are relatively flat, mostly grassy, open land that is periodically used for grazing. The southwestern portion of the Site is steeply sloping and partially wooded. Properties surrounding the Site consist of unimproved, mostly grassy land to the north and east across Interstate 90 (Fort Meade Recreation Area). Properties surrounding the Site to the west and southwest are steeply sloping mostly wooded land that is part of Black
Hills National Forest. The BNHC adjoins the Site to the southeast. Vegetative communities on the Site and surrounding area support wildlife species associated with rural Meade County.

### 3.7.2 Threatened and Endangered Species

As part of the preparation of this EA, the US Fish and Wildlife Service (USFWS) and the South Dakota Department of Game, Fish, and Parks (SDDGFP) were contacted to identify the potential for the presence of State or Federally-listed threatened or endangered species on or in the vicinity of the Site.

The USFWS stated that an Official Species List for the Site area may be obtained from the USFWS Information for Planning and Conservation (IPaC) internet website [https://ecos.fws.gov/ipac/](https://ecos.fws.gov/ipac/). According to the USFWS IPaC internet application, four Federally-protected wildlife species were identified for the Site vicinity: Least Tern, Red Knot, Whooping Crane, and Northern Long-Eared Bat. The IPaC report did not identify critical habitat for these protected species at the Site.

The southwestern, steeply sloping, wooded portion of the Site may support the presence of Northern Long-Eared Bats as summer roosting and foraging habitat. However, they are not likely to be present on the northeastern, relatively level, open portion of the Site due to their habitat requirements for wooded areas. The three remaining Federally-protected species (all birds) are typically associated with aquatic environments; as such, they are not likely to be present at the Site.

The USFWS IPaC report also identified one protected migratory birds species (Golden Eagle) that may use the Site area for breeding and/or overwintering. Golden Eagles prefer to nest on rocky crags or cliff faces, but may nest in trees. The southwestern portion of the Site provides marginal habitat for Golden Eagle nesting. The northeastern portion of the Site does not contain suitable Golden Eagle nesting habitat.

The SDDGFP indicated they conducted a search of the South Dakota Natural Heritage Database (SDNHD) for the site vicinity. SDDGFP found records of three protected bat species (Townsend’s Big-Eared Bat, Silver-Haired Bat, and Northern Long-Eared Bat), located approximately 0.5-mile north of the Site. Townsend’s Big-Eared Bat and Silver-Haired Bat are considered rare species in South Dakota, and the Northern Long-Eared Bat is a Federally-listed threatened species. According to the USFWS Environmental Conservation Online System (ECOS), all three bat species are reliant on trees, rocky crevices, and caves for roosting and hibernacula. As such, the Townsend’s Big-Eared Bat, Silver-Haired Bat, and Northern Long-Eared Bat may be present on the southwestern, steeply sloping, wooded portion of the Site, but are not likely to be present on the northeastern, relatively level, grassy portion of the Site, where cemetery development activities are proposed. The SDDGFP stated that they do not anticipate a significant impact to fish and wildlife resources as a result of the proposed cemetery expansion provided the following recommended BMPs are considered during the planning and construction of the project: tree removal should be kept to a minimum, disturbance of riparian areas should be kept to a minimum, the use of indigenous species for revegetation, and implement a sediment and erosion control plan.
3.7.3 Effects of the Preferred Action Alternative

The Site would continue to be unimproved land with periodic grazing after VA’s acquisition until expansion of the BHNC is necessary. The initial continued use of the Site as unimproved land with periodic grazing would result in no/negligible wildlife and habitat impacts.

The development of the cemetery at the Site is not likely to have adverse effects on State or Federally-listed protected species or their critical habitats. Protected species identified for the Site area may be present in the steeply sloping, wooded, southwestern portion of the Site, but are unlikely to be present in the northeastern, mostly grassy portion of the Site where the expanded cemetery would be located. VA would not develop the southwestern portion of the Site. In addition, VA would implement SDDGFP’s site design and development recommendations to minimize and avoid potential wildlife impacts. As such, wildlife and habitat impacts associated with the Proposed Action would be less-than-significant.

3.7.4 Effects of the No Action Alternative

Under the No Action Alternative, no construction by VA would occur. No impacts to vegetation or wildlife habitat would occur as a result of VA’s actions. The likely continued use of the Site as unimproved land with periodic grazing would result in no/negligible vegetation or wildlife habitat impacts.

3.8 Noise

The Site is located in a mostly undeveloped, rural area with no significant noise generation sources other than Interstate 90, located approximately 150 feet east of the Site. Intermittent noise is associated with the railroad line along the eastern site boundary. In addition, ceremonial gun salutes associated with interments at the adjacent BHNC are audible at the Site and surrounding area. The short bursts of noise from the salutes are intermittent and only occur during weekday business hours. No other notable noise-generating sources are present in the immediate vicinity of the Site.

3.8.1 Sensitive Receptors

Sensitive noise receptors in the vicinity of the Site include the BHNC to the south and east. No other sensitive noise receptors, such as residential areas or schools, are located in the vicinity of the Site.

3.8.2 Effects of the Preferred Action Alternative

Based on the proposed initial use of the Site as unimproved land with periodic grazing and the future use of the Site as a cemetery, no significant long-term noise impacts would be anticipated. The Proposed Action would have future short-term impacts to the existing noise environment during the cemetery expansion construction activities. Noise generating sources during construction activities would be associated primarily with standard construction equipment and construction equipment transportation. These increased noise levels could directly affect the neighboring area.
Construction activities generate noise by their very nature and are highly variable, depending on the type, number, and operating schedules of equipment. Construction projects are usually executed in stages, each having its own combination of equipment and noise characteristics and magnitudes. Construction activities are expected to be typical of other similar construction projects and would include mobilization, site preparation, excavation, placing foundations, utility development, heavy equipment movement, and paving roadways and parking areas.

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

Peak noise levels vary at a given location based on line of sight, topography, vegetation, and atmospheric conditions. In addition, peak noise levels would be variable and intermittent because each piece of equipment would only be operated when needed. However, peak demolition and construction noise levels would be considerably higher than existing noise levels. Relatively high peak noise levels in the range of 93 to 108 dBA (decibels, A-weighted scale) would occur on the active construction site, decreasing with distance from the construction areas. Table 1 presents peak noise levels that could be expected from a range of construction equipment during proposed construction activities.

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

Combined peak noise levels, or worst-case noise levels when several loud pieces of equipment are used in a small area at the same time as described in Table 1, are expected to occur rarely, if ever, during the project. However, under these circumstances, peak noise levels could exceed 90 dBA within 200 feet of the construction area, depending on equipment being used.

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

Areas that could be most affected by noise from construction include those closest to the construction footprint. Indoor noise levels would be expected to be 15-25 decibels lower than outdoor levels. In addition, construction noise impacts would be temporary and would be minimized through BMPs outlined in Section 5.

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

### Table 1. Peak Noise Levels Expected from Typical Construction Equipment

<table>
<thead>
<tr>
<th>Source</th>
<th>Peak Noise Level (dBA, attenuated)</th>
<th>Distance from Source (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>Heavy Truck</td>
<td>95</td>
<td>84-89</td>
</tr>
<tr>
<td>Dump Truck</td>
<td>108</td>
<td>88</td>
</tr>
<tr>
<td>Concrete Mixer</td>
<td>108</td>
<td>85</td>
</tr>
<tr>
<td>Jack-hammer</td>
<td>108</td>
<td>88</td>
</tr>
<tr>
<td>Scraper</td>
<td>93</td>
<td>80-89</td>
</tr>
<tr>
<td>Bulldozer</td>
<td>107</td>
<td>87-102</td>
</tr>
<tr>
<td>Generator</td>
<td>96</td>
<td>76</td>
</tr>
<tr>
<td>Crane</td>
<td>104</td>
<td>75-88</td>
</tr>
<tr>
<td>Loader</td>
<td>104</td>
<td>73-86</td>
</tr>
<tr>
<td>Grader</td>
<td>108</td>
<td>88-91</td>
</tr>
<tr>
<td>Pile driver</td>
<td>105</td>
<td>95</td>
</tr>
<tr>
<td>Forklift</td>
<td>100</td>
<td>95</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Combined Peak Noise Level</th>
<th>50</th>
<th>100</th>
<th>200</th>
<th>¼ Mile</th>
<th>½ Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>103</td>
<td>97</td>
<td>91</td>
<td>74</td>
<td>68</td>
</tr>
</tbody>
</table>

Source: Tippler 1976

Proposed future operational activities of the expanded cemetery would include vehicle traffic to and from the Site, use of powered equipment for grave site preparation, maintenance, and upkeep, and periodic (during day-time hours) ceremonial rifle discharges. Estimated ceremonial rifle salute noise levels at varying distances based on US Army estimates are provided in Table 2. These activities would not produce excessive noise, are consistent with the existing adjacent BHNC, and would not produce a significant adverse noise impact on surrounding land uses. The facility would be a relatively quiet cemetery.
Table 2. Estimated M-16 Rifle Blank Noise Levels at Varying Distances

<table>
<thead>
<tr>
<th>Distance (meters)</th>
<th>A-Weighted Exposure Level (dBA)</th>
<th>A-Weighted Maximum Level (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>67</td>
<td>76</td>
</tr>
<tr>
<td>100</td>
<td>61</td>
<td>70</td>
</tr>
<tr>
<td>200</td>
<td>54</td>
<td>63</td>
</tr>
<tr>
<td>400</td>
<td>40</td>
<td>49</td>
</tr>
<tr>
<td>800</td>
<td>32</td>
<td>41</td>
</tr>
<tr>
<td>1,600</td>
<td>22</td>
<td>31</td>
</tr>
</tbody>
</table>

3.8.3 Effects of the No Action Alternative

Under the No Action Alternative, the noise environment surrounding the Site would not be altered by activities of VA. The likely continued use of the Site as unimproved land with periodic grazing would result in no/negligible noise impacts.

3.9 Land Use

The Site has been unimproved land owned by the Federal Government and associated with the former Fort Meade Military Reservation since 1878. VA maintained control of the Site from 1944 until some time between 1954 and 1960, when it was transferred to BLM. The Site is now part of the 6,700-acre Fort Meade Recreation Area managed by BLM. The northeastern portion of the Site has been relatively level, mostly grassy, open land used for occasional livestock grazing and the southwestern portion of the Site has been steeply sloping, partially wooded since at least 1952.

According to Meade County, the Site is owned by the Federal Government, is not subject to Meade County Zoning Regulations, and is not located in a designated zoning district. The surrounding properties are also owned by the Federal Government and are not located in a designated zoning district.

3.9.1 Effects of the Preferred Action Alternative

The initial continued use of the Site as unimproved land with periodic grazing prior to the expansion of the BHNC cemetery would result in no land use impacts.
The expansion of the BHNC at the Site would have land use effects as the northeastern portion of the Site is converted from unimproved grassy land with periodic grazing within the Fort Meade Recreation Area to an expansion of BHNC. However, this is not a significant impact as the Site is rarely used for grazing, is not actively used for recreational purposes, and there are vast amounts of additional BLM-managed recreational and grazing lands in the immediate area.

The Site and surrounding properties are owned by the Federal Government and are not located in a designated zoning district. The future use of the Site as a cemetery would be compatible with the current surrounding land uses, and consistent with the southeasterly adjacent BHNC.

### 3.9.2 Effects of the No Action Alternative

Under the No Action Alternative, no land use impacts due to VA's Proposed Action would occur. The likely continued use of the Site as unimproved land with periodic grazing would result in no land use impacts.

### 3.10 Wetlands, Floodplains, and Coastal Zone Management

#### 3.10.1 Wetlands

This section discusses wetlands at or near the Site and surface waters (streams) as they pertain to wetlands. Additional information regarding surface waters is provided in Section 3.6.

The USFWS National Wetland Inventory (NWI) Mapper depicts a small persistent emergent wetland system located in the southeastern portion of the Site that is connected to the intermittent tributary of Alkali Creek (Figure 6). Alkali Creek is located approximately 400 feet north and 500 feet east of the Site.

The wetland and tributary are depicted along the boundary shared between the southeastern portion of the Site and the existing BHNC. The small wetland system identified on the NWI map correlates with the two small ponds that have been created/modified for periodic stormwater management and the small intermittent stream channel east of the ponds that discharges to the unnamed tributary of Alkali Creek. Observations of the ponds did not identify obvious wetland characteristics (i.e., no evidence of hydrology or wetland vegetation). The ponds were dry at the time of TTL’s November 2016 site visit with similar grassy vegetation as the remainder of the northeastern portion of the Site.

The intermittent tributary of Alkali Creek has been modified as part of the BHNC development and does not remain its original configuration. The tributary is culverted beneath Interstate 90 and flows farther east to Alkali Creek, and is considered Waters of the US. The small intermittent stream channel east of the ponds and possibly the ponds are also likely to be considered Waters of the US and under the jurisdiction of the USACE due to their connection to Alkali Creek. USACE stated that Alkali Creek and the unnamed tributary of Alkali Creek appear to be Waters of the US.

USACE stated that any placement of dredged or fill materials in Waters of the US would require a Section 404 of the CWA permit. The SDDENR SWQP also stated that any impacts to Alkali
Creek and its tributaries would require USACE authorization through a Section 404 of the CWA permit.

3.10.2 Floodplains

According to available FEMA floodplain mapping (FIRM Map Numbers 46093C1188F and 46093C1525F, both dated September 16, 2011), the Site is not located in the 100-year or 500-year floodplain (Zone X). Areas adjacent to the Site are also not included in the 100-year or 500-year floodplain.

3.10.3 Coastal Zone

The Coastal Zone Management Act (CZMA) was promulgated to control nonpoint pollution sources that affect coastal water quality. The CZMA of 1990, as amended (16 USC 1451 et seq.) encourages States to preserve, protect, develop, and where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. According to the National Oceanic and Atmospheric Association (NOAA), Meade County is not located within a designated coastal zone (NOAA 2018).

3.10.4 Effects of the Preferred Action Alternative

The small persistent emergent wetland system identified along the southern site boundary on the NWI map and consisting of two ponds and a small intermittent stream channel that connects to the intermittent tributary of Alkali Creek do not appear to be wetlands, but would likely be considered Waters of the US and under the jurisdiction of the USACE due to their connection to Alkali Creek.

The initial continued use of the Site as unimproved grassy land with periodic grazing would have no/negligible effect on wetlands/Waters of the US. The future development of the cemetery at the Site would not result in significant impacts to wetlands/Waters of the US. The proposed cemetery expansion would not include development within or adjacent to any identified surface waters. It is anticipated that the expanded cemetery design would maintain an undeveloped green space between the developed areas and any identified surface waters.

The Preferred Action Alternative would not result in impacts to floodplains or coastal zones.

3.10.5 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to surface waters at the Site by VA would occur. The likely continued use of the Site as grassy unimproved land with periodic grazing would result in no/negligible wetlands/Waters of the US impacts. The No Action Alternative would result in no floodplains or coastal zones impacts.
FIGURE 6
NATIONAL WETLANDS INVENTORY MAP
ENVIRONMENTAL ASSESSMENT
PROPOSED BLACK HILLS NATIONAL CEMETERY EXPANSION
MEADE COUNTY, SOUTH DAKOTA

PREPARED FOR
U.S. DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON, D.C.
TTL PROJECT NO. 1469703
3.11 Socioeconomics

The following subsections identify and describe the socioeconomic environment of Meade County, South Dakota. Presented data provide an understanding of the socioeconomic factors that have developed the area. Socioeconomic areas of discussion include the local demographics of the area, regional and local economy, local housing, and local recreation activities. Data used in preparing this section were collected from the 2010 Census of Population and Housing (US Census Bureau 2010), subsequent US Census Bureau data, and the US Department of Commerce Bureau of Economic Analysis (BEA).

3.11.1 Demographics

Meade County’s estimated population in 2017 was 28,018 residents. The estimated population total for the State of South Dakota in 2017 was 869,666 residents (Table 3). Age distribution and high school graduation rates are generally similar for Meade County and the State of South Dakota. Minority populations for Meade County are lower than that of the State of South Dakota as a whole. Minority population rates specific to the Site area are discussed in Section 3.16 (Environmental Justice).

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>South Dakota</td>
<td>869,666</td>
<td>24.7%</td>
<td>16.3%</td>
<td>16.5%</td>
<td>91.2%</td>
<td>62,661</td>
</tr>
<tr>
<td>Meade County</td>
<td>28,018</td>
<td>23.2%</td>
<td>14.7%</td>
<td>10.3%</td>
<td>93.4%</td>
<td>3,003</td>
</tr>
</tbody>
</table>

Source: US Census Bureau, 2010 Census, Profile of General Demographic Characteristics, 2012-2016. N/A – Not Available

3.11.2 Income

Meade County has a similar median household income and a lower population below the poverty line than the State of South Dakota as a whole (Table 4). Household incomes specific to the Site area are discussed in Section 3.16.

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of Households</th>
<th>Median Household Income</th>
<th>Population Below Poverty Level</th>
<th>Unemployment Rate May 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Dakota</td>
<td>333,536</td>
<td>$52,078</td>
<td>13.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Meade County</td>
<td>10,653</td>
<td>$53,069</td>
<td>9.9%</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Source: US Census Bureau, 2010 Census, Profile of General Demographic Characteristics, 2012-2016. N/A – Not Available
3.11.3 Commuting Patterns

Residents of Meade County are largely dependent on personal automobiles for transportation to and from work. Other methods of transit include carpooling and walking. Public transportation is not available to the Site vicinity. The average commuting time in Meade County was approximately 21 minutes in 2016.

3.11.4 Protection of Children

Because children may suffer disproportionately from environmental health risks and safety risks, EO 13045, Protection of Children From Environmental Health Risks and Safety Risks, was introduced in 1997 to prioritize the identification and assessment of environmental health risks and safety risks that may affect children and to ensure that Federal agencies’ policies, programs, activities, and standards address environmental risks and safety risks to children.

Although the Site is part of the Fort Meade Recreation Area, there are no developed facilities or unique natural features at the Site that may attract children. Children are not regularly present at the Site. The area adjacent to the north of the Site includes a portion of the South Dakota Centennial Trail, a 111-mile long multi-use trail that is typically used by adults and older children. No schools or recreational areas with amenities for young children (such as playgrounds) are located within the immediate vicinity of the Site.

3.11.5 Effects of the Preferred Action Alternative

The initial continued use of the Site as unimproved grassy land with periodic grazing after VA’s acquisition would have no socioeconomic impact.

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

The Proposed Action would result in long-term significant beneficial socioeconomic impacts by providing a regionally proximate National Cemetery of sufficient size to US Veterans and their families.

No adverse health or safety risks to children are anticipated to result from construction or operation of the cemetery at the Site. Children would only be present at the Site as visitors. Construction areas would be secured to prevent unauthorized access by children from nearby areas. There would be a minimum 100-foot butter between the proposed cemetery and the Centennial Trail. The construction contractor would limit and control construction dust and noise as discussed in Section 5, thereby minimizing adverse effects to children in the area.
3.11.6 Effects of the No Action Alternative

Under the No Action Alternative, the Site would likely continue to be unimproved land with periodic grazing, with no socioeconomic change to the Site area. However, VA would not secure land necessary to meet its long-term cemetery needs for the region, which could result in a future significant adverse, long-term, impact to US Veterans and their families.

3.12 Community Services

The Site is located within the Meade School District. No schools are located within three miles of the Site.

The Meade County Sheriff’s Department provides police protection to the Site and its vicinity. The Meade County Fire Department provides fire protection and emergency medical services to the Site and its vicinity.

The South Dakota Department of Transportation (SDDOT) and the Meade County Highway Department (MCHD) provide local road and bridge maintenance to the Site and its vicinity.

Other than the Sturgis Regional Hospital, located approximately 2.25 miles northwest of the Site, there are no major medical facilities located within five miles of the Site.

Public transportation is not available to the Site vicinity.

The area adjacent to the west of the Site is included as part of the Black Hills National Forest. The Site and areas north and east of the Site are part of the 6,700-acre Fort Meade Recreation Area. The area adjacent to the north of the Site includes the South Dakota Centennial Trail, a multi-use recreational trail. There are no other developed recreational facilities in the immediate vicinity of the Site.

3.12.1 Effects of the Preferred Action Alternative

The initial continued use of the Site as unimproved land with periodic grazing after VA’s acquisition would have no community services impacts.

The future development of the expanded cemetery at the Site would have less-than-significant community service impacts. No additional load is expected to be placed on the fire or sheriff departments as the result of the Proposed Action. Use of other public or community services as a result of the proposed future cemetery development is not expected. A minimum 100-foot buffer between the cemetery development and the Centennial Trail would be maintained, as such, impacts to those using Centennial Trail would be negligible. The Proposed Action would remove approximately 181 acres of land from the 6,700-acre Fort Meade Recreation Area; however, this would be a loss of less than three percent of the recreation area with no loss of any developed features or amenities of the recreational area.
3.12.2 Effects of the No Action Alternative

Under the No Action Alternative, no community services impacts from VA would occur. The likely continued use of the Site as unimproved land with periodic grazing would result in no community services impacts.

3.13 Solid and Hazardous Materials

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

The Site has been unimproved land owned by the Federal Government associated with the former Fort Meade Military Reservation since 1878. The northeastern portion of the Site has been mostly grassy, relatively level, open land used for periodic livestock grazing and the southwestern portion of the Site has been steeply sloping, partially wooded since at least 1952. A small sandstone quarry was formerly located in the western portion of the Site, at the foot of the steeply sloping portion of the Site.

TTL completed a Phase I Environmental Site Assessment (Phase I ESA) for the Site in January 2017. The Phase I ESA did not identify any environmental concerns or recognized environmental conditions (RECs) for the Site.

3.13.1 Effects of the Preferred Action Alternative

The continued initial use of the Site as unimproved land with periodic grazing prior to the expansion of the BHNC at the Site would result in no solid and hazardous materials impacts.

The future cemetery expansion activities at the Site could result in short-term, less-than-significant impacts due to the increased presence and use of petroleum and hazardous substances during construction. A small increase in construction vehicle traffic would increase the likelihood for release of vehicle operating fluids (e.g., oil, diesel, gasoline, antifreeze, etc.) and maintenance materials. As such, a less-than-significant, direct, short-term adverse impact is possible. Implementation of standard construction BMPs (Section 5) would serve to ensure this impact is further minimized.

No significant adverse long-term impacts during operation of the expanded cemetery are anticipated. Long-term operational solid and hazardous materials would be managed in accordance with applicable Federal and State laws and VA’s SOPs. The Preferred Action Alternative would not result in a substantial increase in the generation of solid or hazardous substances or wastes, increase the exposure of persons to hazardous or toxic substances, increase the presence of hazardous or toxic materials in the environment, or place substantial restrictions on property use due to hazardous waste, materials, or site remediation. As noted in Section 3.6.3, based on standard modern burial practices, it is unlikely that embalming fluid would be released into the soil or groundwater.
3.13.2 Effects of the No Action Alternative

Under the No Action Alternative, no solid and hazardous materials use or effects from VA’s activities at the Site would occur. The likely continued use of the Site as unimproved land with periodic grazing would result in no solid and hazardous materials impacts.

3.14 Transportation and Parking

There is currently no direct roadway access to the Site. Interstate 90, a generally north-south oriented (in the Site area), four-lane, divided highway is located approximately 150 feet east of the Site. Interstate 90 Exit 34 at Old Stone Road is located directly east of the entrance to BHNC. The entrance road to the cemetery is a continuation of Old Stone Road. Pleasant Valley Drive (west side of Interstate 90, south of Exit 34) and Blucksberg Drive (east side of Interstate 90) also intersect with Old Stone Road in the Exit 34 area. Primary traffic to BHNC is via Interstate 90. Traffic in the Site area is regulated by SDDOT (Interstate 90) and the MCHD (local roads).

According to an Interstate 90 Exits 32 to 40 Corridor Study, Future Traffic Conditions Technical Memorandum, prepared by Stantec on behalf of SDDOT and dated July 2018 (Corridor Study), Interstate 90 has an average daily traffic (ADT) in the Site vicinity of approximately 21,000 vehicles (2017) with a current estimated Level of Service¹ (LOS) rating of B or better. The Corridor Study indicated that traffic along Interstate 90 is anticipated to increase by 7.4 percent to 43 percent between 2023 and 2050 and maintain a LOS rating of B or better. The Corridor Study also evaluated the local road intersections near Exit 34 (all unsignalized) and found that they currently operate at LOS A and are predicted to continue operating at LOS A through 2050.

SDDOT stated that a reconfiguration/relocation of Exit 34 from its current location is being considered; however, other than noting the exit could be moved north or south, specifics were not available. SDDOT stated that any reconfiguration of Exit 34 would occur around 2024 or later.

3.14.1 Effects of the Preferred Action Alternative

No short-term traffic impacts would be anticipated. The Site would continue to be unimproved land with periodic grazing after VA’s acquisition until the BHNC requires expansion.

In the future, when the Site would be developed with the expanded cemetery, vehicle trips associated with burials would likely be similar to current conditions at the BHNC. The main entrance to the BHNC is located along west side of Interstate 90 at Exit 34. Burial traffic would continue to use this entrance and would access the Site through internal cemetery roads. Based on the anticipated similar amount of burial traffic and traffic patterns as currently exists at the BHNC, the traffic impacts associated with burials at the expanded cemetery would be less-than-significant.

¹ Level of Service – LOS represents a set of qualitative descriptions of a transportation system’s performance. The Federal Highway Administration Highway Capacity Manual defines levels of service for intersections and highway segments, with ratings that range from A (best) to F (worst). Generally, a LOS of D or higher is considered acceptable by transportation planning agencies.
As additional areas of the BHNC are developed and utilized, the number of visitors to the cemetery is likely to increase; however, the increased number of vehicle trips associated with visitors is likely to be minor.

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

3.14.2 Effects of the No Action Alternative

Under the No Action Alternative, the Site would remain unimproved land with periodic grazing with no traffic or parking impacts.

3.15 Utilities

With the exception of electrical service, basic utilities in the Site area (i.e., potable water, sanitary sewer, and natural gas) are not available to the Site vicinity. The BHNC currently uses a 1,465 feet deep water well and septic system. Water is pumped from the BHNC water well, stored in pond located in the southwestern portion of the existing BHNC, and used for irrigation.

Black Hills Power supplies the electrical service to the Site. The electrical service at the Site is likely adequate for the Proposed Action. The cemetery would require minimal electrical service. VA would coordinate, as necessary, with Black Hills Power prior to connecting to the electrical service at the Site.

Overhead electrical lines cross the western section of the northeastern portion of the Site from north to south. A buried natural gas pipeline crosses the central section of the northeastern portion of the Site from north to south.

3.15.1 Effects of the Preferred Action Alternative

The initial continued use of the Site as unimproved land with periodic grazing prior to the future expansion of the BHNC at the Site would result in no utility impacts.

Expansion of the BHNC at the Site would result in the consumption of utilities; however, the cemetery would have generally minimal utility needs. Only electricity would be provided by an outside supplier. Water is anticipated to have the largest demand due to the need for maintaining landscaped areas of the cemetery. Drought tolerant species would be used to minimize irrigation needs. The expanded cemetery would be connected to the existing BHNC irrigation system, which uses groundwater from an irrigation well at the BHNC property. During the cemetery design, the BHNC water supply well would be evaluated to determine if it holds the capacity to irrigate the existing BHNC and the expansion area. If the well does not hold the capacity to support irrigation of the expanded BHNC, an additional water supply well would be installed. Irrigation of the Site would not impact local utilities. The expanded cemetery design would include on-site stormwater retention to prevent impacts to off-site water quality and hydrology.

The expanded BHNC would be designed to avoid impacts to the existing overhead electrical lines and buried natural gas line in the northeastern portion of the Site.
3.15.2 Effects of the No Action Alternative

Under the No Action Alternative, no utility impacts by VA would occur. The likely continued use of the Site as unimproved land with periodic grazing would result in no utility impacts.

3.16 Environmental Justice

In 1994, EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, was issued to focus attention of Federal agencies on human health and environmental conditions in minority and low-income communities and to ensure that disproportionately high and adverse human health or environmental effects on these communities are identified and addressed.

According to the USEPA-developed EJSCREEN (an environmental justice mapping and screening internet application), the Site is not located in an area with a disproportionately high minority or low-income population relative to the State of South Dakota as a whole.

3.16.1 Effects of the Preferred Action Alternative

The Preferred Action Alternative is not anticipated to have environmental justice effects. No concentrations of minority or low-income populations are located in the Site vicinity.

3.16.2 Effects of the No Action Alternative

The likely continued use of the Site as unimproved land with periodic grazing would result in no environmental justice impacts.

3.17 Cumulative Impacts

As defined by CEQ Regulations in 40 CFR Part 1508.7, cumulative impacts are those which “result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, without regard to the agency (Federal or non-Federal) or individual who undertakes such other actions.” Cumulative impact analysis captures the effects that result from the Proposed Action in combination with the effects of other actions taken during the duration of the Proposed Action in the same geographic area. Because of extensive influences of multiple forces, cumulative effects are the most difficult to analyze.

NEPA requires the analysis of cumulative environmental effects of a Proposed Action, or set of actions, on resources that may often be manifested only at the cumulative level, such as traffic congestion, air quality, noise, biological resources, cultural resources, socioeconomic conditions, utility system capacities, and others.

The approximately 181-acre Site is situated in a rural area, located in an unincorporated portion of Meade County. The Site is located within the southwestern portion of the approximately 6,700-acre Fort Meade Recreation Area managed by BLM. Areas west and south of the Site are part of the Black Hills National Forest. Other than Interstate 90, a railroad line, and local roads located east of the Site and the existing BHNC, there is very little development in the Site area.
Although there is very little development in the Site vicinity, further potential development in the area is limited due to ownership of the land by the Federal Government. With the exception of the possible reconfiguration/relocation of Exit 34 on Interstate 90 north or south of its current location, no additional development plans for the immediate Site area were identified.

The Preferred Action Alternative would result in the impacts identified in Section 3.2 through 3.16. These include potential impacts to aesthetics, air quality, cultural resources, geology and soils, hydrology and water quality, wildlife and habitat, noise, wetlands, community services, solid and hazardous materials, transportation, and utilities. All of these impacts are less-than-significant and would be further reduced through careful implementation of the general BMPs, management and minimization measures, and compliance with regulatory requirements as identified in Section 5. Given the nature of the Proposed Action, the limited potential future development in the immediate Site area, no significant cumulative adverse effects to any of these resource areas are anticipated. The Preferred Action Alternative would have very minor transportation impacts. It is not anticipated that the cemetery expansion, scheduled to begin following the completion of the possible reconfiguration of Exit 34, would result in significant cumulative impacts in conjunction with the possible Interstate 90 project. No adverse effects to land use, floodplains, coastal zones, socioeconomics, parking and environmental just are anticipated. As such, no cumulative adverse effects to any of these resource areas are anticipated.

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

Under the No Action Alternative, no cumulative impacts would likely occur, as the Site would likely remain unimproved land with periodic grazing.

3.18 Potential for Generating Substantial Public Controversy

As discussed in Section 4, VA has solicited input from various Federal, State, and local government agencies regarding the Proposed Action. Several of these agencies have provided input; none of the input has identified opposition or controversy related to the Proposed Action. VA published and distributed the Draft EA for a 30-day public comment period; no comments were received from the public. Based on the significant positive effects of the Proposed Action and the findings of this EA (no significant adverse environmental impact), it is not anticipated that there will be substantial public controversy regarding the Proposed Action.
SECTION 4: 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 the 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 urged to participate. A record of agency coordination and public involvement associated with this EA is provided in Appendix A and Appendix E, respectively.

4.1 Agency Coordination

VA consulted with the following agencies during the preparation of this EA: US Fish and Wildlife Service (USFWS), US Environmental Protection Agency (USEPA), US Army Corps of Engineers (USACE), United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Bureau of Land Management (BLM), South Dakota State Historic Preservation Office (SHPO), South Dakota Department of Environment and Natural Resources (SDDENR), South Dakota Department of Game, Fish, and Parks (SDDGFP), South Dakota Department of Transportation (SDDOT), Pennington Conservation District (PCD), Meade County Equalization/Planning Department (MCEPD), and the City of Sturgis, South Dakota.

VA received responses from the following agencies: USFWS, USACE, SHPO, SDDENR, SDDGFP, SDDOT, and the City of Sturgis. Input provided by these agencies is addressed in the appropriate resource sub-sections of Section 3. Written correspondence from the agencies is provided in Appendix A. The following summarizes that input, which VA used to focus this EA’s analysis:

- **USFWS** stated that an Official Species List for the Site area may be obtained from the USFWS IPaC internet website (https://ecos.fws.gov/ipac/). USFWS also stated that if VA determines that the Proposed Action "may adversely affect" listed species in South Dakota, it should request formal consultation from the USFWS. USFWS stated that if VA determines that the Proposed Action “may affect, not likely to adversely affect” listed species in South Dakota, documentation should be submitted to the USFWS for concurrence. USFWS stated that if VA determines that the Proposed Action would have "no effect" on listed species in South Dakota, further consultation may not be necessary; however, documentation should be submitted to the USFWS. VA obtained a list of Federally-protected species for the Site area from the USFWS IPaC internet website. Based on a review of these species and their associated habitat requirements, the environmental conditions of the Site, and the anticipated cemetery expansion, the Proposed Action is not anticipated to effect the identified species.
• **USACE** stated that there appear to be Waters of the US to the north of the Site (Alkali Creek) and on the Site (unnamed tributary of Alkali Creek), and stated that any proposed placement of dredged or fill materials in Waters of the US (including jurisdictional wetlands) would require USACE authorization through a Section 404 of the CWA permit.

• VA provided **SHPO** information regarding historic properties at the Site, VA’s consultation with Native American tribes, and requested SHPO’s concurrence that the transfer of the Site from BLM to VA would have no adverse effect on cultural resources. SHPO concurred that the land transfer between VA and BLM would have No Adverse Effects on cultural resources. SHPO noted that VA has committed to continuing consultation with Native American tribes to identify places of religious and cultural significance and stated VA’s planned future development of the cemetery at the Site would require additional documentation and consultation.

• The **SDDENR Air Quality Program** stated that the Proposed Action would not cause significant impact on the air quality in the area.

• The **SDDENR Surface Water Quality Program (SWQP)** concluded that the Proposed Action, through using conventional construction techniques, should not cause violation of any statutes or regulations administered by the SDDENR. The SWQP stated that appropriate erosion and sediment control measures must be installed, a General Permit for Storm Water Discharges Associated with Construction Activities would be required, a Surface Water Discharge (SWD) permit may be required if any construction dewatering should occur, and tributaries and wetlands are Waters of the State (protected under the South Dakota Surface Water Quality Standards), and should be avoided or minimized if possible. The SWQP stated that Alkali Creek is classified by South Dakota Surface Water Quality Standards and Uses Assigned to Streams for the following beneficial uses: domestic water supply waters, coldwater marginal fish life propagation waters, limited contact recreation waters, fish and wildlife propagation, recreation, and stock watering waters, and irrigation waters. Because of these beneficial uses, SWQP stated special construction measures may have to be taken to ensure that the 30-day average total suspended solids criterion of 90 mg/L is not violated. The SWQP also stated that any impacts to Alkali Creek and its tributaries would require a Section 404 of the CWA permit.

• The **SDDENR Drinking Water Division** stated that the Proposed Action would not have adverse effects to drinking water in the Site area.

• The **SDDENR Waste Management Division** stated that the Proposed Action would have little or no impact on waste management in the Site area.

• The **SDDOT** stated that they are currently conducting planning and environmental studies for the Interstate 90 corridor near the BHNC, and a potential project being considering is the reconfiguration/relocation of Interstate 90 Exit 34 near the BNHC. SDDOT stated that with the exception of current and projected future traffic data for Interstate 90, information from the studies is not yet available for distribution; however, SDDOT stated that they are considering moving Exit 34 either north or south from its current location sometime around 2024 and provided the available traffic data.
The SDDGFP indicated they conducted a search of the SD Natural Heritage Database for the Site vicinity. SDDGFP found records of three protected bat species approximately 0.5 mile northwest of the site: Northern Long-Eared Bat (Federally-threatened), Townsend’s Big Eared Bat (State-listed rare species), and Silver-Haired Bat (State-listed rare species). The SDDGFP stated that they do not anticipate a significant impact to fish and wildlife resources associated with the Proposed Action provided the following recommendations are considered during the planning and construction of the project:

- Removal of trees should be kept to an absolute minimum.
- If the project encounters riparian areas, disturbance should be kept to a minimum.
- Where soil disturbance occurs, SDDGFP suggested seeding with indigenous species immediately after construction.
- A sediment and soil erosion control plan should be implemented.

The City of Sturgis stated that they are concerned that the Proposed Action could potentially adversely impact the Centennial Trail. No additional concerns were noted by the City of Sturgis. Centennial Trail, located near the northern Site boundary, would not be impacted by the Proposed Action. VA would maintain a minimum 100-foot wide buffer between the expanded cemetery and the Centennial Trail.

### 4.2 Native American Consultation

VA is consulting with 10 Federally-recognized Native American tribes as part of this NEPA process, in accordance with 36 CFR Part 800.2 and EO 13175, *Consultation and Coordination with Indian Tribal Governments*, 6 November 2000. These tribes, identified as having possible ancestral ties to the area, were invited by VA to participate in the EA process as Sovereign Nations per EO 13175. VA sent a coordination and consultation letter to each of these tribes. A sample letter sent to the tribes is included in Appendix B. Section 10 contains a list of the tribes invited to consult. Written correspondence from the tribes is provided in Appendix B.

In August 2018, VA held a consultation meeting with BLM and Native American tribes that have been associated with and/or have ancestral lands in the BHNC area. Representatives of the Rosebud Sioux Tribe and the Northern Cheyenne Tribe attended the meeting. All of the meeting participants also toured the Site and were shown the Tribal and historic features that have been identified during the archaeological assessments. Tribal members also described various aspects of the Site and surrounding landscape that were important to their heritage. VA would continue to consult with the tribes during the design of the cemetery at the Site.

### 4.3 Public Review

VA published and distributed the Draft EA for a 30-day public comment period as announced by a Notice of Availability (NOA) published in the Rapid City Journal, a local newspaper of general circulation, on December 2, 3 and 4, 2018. A copy of the Draft EA was available for public review at the Sturgis Public Library and on the VA NCA NEPA website (www.cem.va.gov/cem/EA.asp). VA received no public comments regarding the Draft EA.
SECTION 5: MANAGEMENT AND MINIMIZATION MEASURES

This section summarizes the management, minimization and mitigation measures, if any, that are proposed to minimize and maintain potential adverse effects of the Preferred Action Alternative at acceptable, less-than-significant levels. A supplemental NEPA analysis will be conducted for the construction and operation of the expanded cemetery in approximately 5 to 10 years, during the Site design. The management, minimization, and avoidance measures in this section would be included into the future process and analysis.

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

The routine BMP, management measures and minimization measures summarized in Table 5 would be included in the Preferred Action Alternative to minimize and maintain adverse effects at less-than-significant levels.

<table>
<thead>
<tr>
<th>Technical Resource Area</th>
<th>Best Management Practice/Minimization Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics</td>
<td>Develop the cemetery in concert with the Site's natural topography. Maintain some natural areas.</td>
</tr>
<tr>
<td></td>
<td>Use vegetative buffers to enhance viewscapes.</td>
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<tr>
<td></td>
<td>Comply, to the extent practicable, with the development standards of the Meade County Code of Ordinances (MCCO).</td>
</tr>
<tr>
<td>Technical Resource Area</td>
<td>Best Management Practice/Minimization Measure</td>
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<tr>
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</tr>
<tr>
<td><strong>Air Quality</strong></td>
<td>Use appropriate dust suppression methods (such as the use of water, dust palliative, covers, suspension of earth moving in high wind conditions) during onsite construction activities.</td>
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<tr>
<td></td>
<td>Stabilize disturbed area through re-vegetation or mulching if the area would be inactive for several weeks or longer.</td>
</tr>
<tr>
<td></td>
<td>Implement measures to reduce diesel particulate matter (DPM) emissions from construction equipment, such as reducing idling time and using newer equipment with emissions controls.</td>
</tr>
<tr>
<td></td>
<td>Comply with the applicable South Dakota Department of Environment and Natural Resources (SDDENR) Air Quality Program regulations.</td>
</tr>
<tr>
<td><strong>Cultural Resources</strong></td>
<td>Prior to the expanded cemetery site design, complete a Tribal Survey and a ground-disturbing archaeological investigation in consultation with the Native American Tribes and the South Dakota State Historic Preservation Office (SHPO).</td>
</tr>
<tr>
<td></td>
<td>Formally determine the eligibility of the prehistoric and historic features at the Site for listing on the National Register of Historic Places (NRHP) and determine the potential adverse effects of the proposed cemetery expansion development in consultation with the Tribes and SHPO.</td>
</tr>
<tr>
<td></td>
<td>Enter into a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) with the Native American Tribes, SHPO, Advisory Council on Historic Preservation (ACHP), and other interested parties should there be a need to mitigate any adverse effects.</td>
</tr>
<tr>
<td></td>
<td>Should potentially historic or culturally significant items be discovered during project construction, the construction contractor would immediately cease work until VA, a Secretary of the Interior qualified archaeologist, the appropriate Native American Tribes, and the SHPO are contacted to properly identify and appropriately treat discovered items in accordance with applicable State and Federal law(s).</td>
</tr>
<tr>
<td>Technical Resource Area</td>
<td>Best Management Practice/Minimization Measure</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Geology, Topography, and Soils</td>
<td>Control soil erosion and sedimentation impacts during construction by implementing erosion prevention measures and complying with the SDDENR National Pollution Discharge Elimination System (NPDES) permitting process. Implement effective controls per a site-specific Stormwater Pollution Prevention Plan (SWPPP). The NPDES permit would require stormwater runoff and erosion management using BMPs, such as earth berms, vegetative buffers and filter strips, and spill prevention and management techniques. The construction contractor would implement the sedimentation and erosion control measures specified in the NPDES permit and the SWPPP to protect surface water quality. Any identified potential sinkholes would be geotechnically investigated and remediated (if necessary) during site design and construction. The site design would include management measures to reduce potential sinkhole development. Complete a Farmland Conversion Impact Rating (Form AD-1006) to address irreversibly converted prime farmland.</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Control soil erosion and sedimentation impacts during construction by complying with the NPDES permit and the SWPPP. Obtain a SDDENR Surface Water Discharge (SWD) permit if any construction dewatering is necessary. Design cemetery to maintain existing Site drainage and maintain a buffer of undisturbed land around any surface water resources. Improvements would be designed in accordance with the requirements of EISA Section 438 with respect to stormwater runoff quantity and characteristics. Ensure the design of the cemetery includes sufficient on-site stormwater management so as not to adversely affect the water quantity/quality in receiving waters and/or offsite areas. Obtain appropriate permits for off-site stormwater discharges.</td>
</tr>
<tr>
<td>Technical Resource Area</td>
<td>Best Management Practice/Minimization Measure</td>
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<td>-------------------------</td>
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</tr>
<tr>
<td>Wildlife and Habitat</td>
<td>Minimize disturbance of the southwestern, steeply sloping, wooded portion of the Site.</td>
</tr>
<tr>
<td></td>
<td>Minimize the removal of trees and the disturbance of riparian areas.</td>
</tr>
<tr>
<td></td>
<td>Native species should be used to the extent practicable when re-vegetating land disturbed by construction to avoid the potential introduction of non-native or invasive species.</td>
</tr>
<tr>
<td>Noise</td>
<td>Limit, to the extent possible, construction and associated heavy truck traffic to occur between 7:00 a.m. and 6:00 p.m. on Monday through Friday, or during normal, weekday, work hours.</td>
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<tr>
<td></td>
<td>Locate stationary operating equipment as far away from sensitive receptors as possible.</td>
</tr>
<tr>
<td></td>
<td>Select material transportation routes as far away from sensitive receptors as possible.</td>
</tr>
<tr>
<td></td>
<td>Shut down noise-generating heavy equipment when it is not needed.</td>
</tr>
<tr>
<td></td>
<td>Maintain equipment per manufacturer’s recommendations to minimize noise generation.</td>
</tr>
<tr>
<td></td>
<td>Encourage construction personnel to operate equipment in the quietest manner practicable (e.g., speed restrictions, retarder brake restrictions, engine speed restrictions, etc.).</td>
</tr>
<tr>
<td>Land Use</td>
<td>None required.</td>
</tr>
</tbody>
</table>
Table 5. Best Management Practices and Minimization Measures Incorporated into the Proposed Action (continued)

<table>
<thead>
<tr>
<th>Technical Resource Area</th>
<th>Best Management Practice/Minimization Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetlands, Floodplains, and Coastal Zone Management</td>
<td>Develop a site design that avoids interaction with any identified onsite and adjacent wetlands and surface waters, to the extent possible. It is anticipated the cemetery design would include a buffer of undisturbed land around the small intermittent stream and the unnamed tributary of Alkali Creek located near the southeastern Site boundary. If cemetery design requires the disturbance of Waters of the US, obtain necessary permits from the US Army Corps of Engineers (USACE) and SDDENR Surface Water Quality Program.</td>
</tr>
<tr>
<td>Socioeconomics</td>
<td>None required.</td>
</tr>
<tr>
<td>Community Services</td>
<td>Maintain a minimum 100-foot buffer between the expanded cemetery development and the northerly located Centennial Trail.</td>
</tr>
<tr>
<td>Solid and Hazardous Materials</td>
<td>Comply with VA Standard Operating Procedures and applicable Federal and State laws governing the use, generation, storage, transportation, and disposal of solid and hazardous materials.</td>
</tr>
<tr>
<td>Transportation and Parking</td>
<td>Work with the South Dakota Department of Transportation (SDDOT) and Meade County Highway Department (MCHD), as applicable, during the cemetery expansion design to identify and implement roadway improvements, if necessary. Coordinate with SDDOT and MCHD to ensure that construction and operational traffic are considered in the planning of future transportation improvements in the vicinity. Ensure construction activities do not adversely affect traffic flow on local roadways; construction would be timed to avoid peak travel hours. Ensure debris and/or soil is not deposited on local roadways during the construction activities.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Contact the electricity utility provider to determine the connection/extension requirements and implement the necessary requirements.                                                  Develop a site design that avoids impacts to the existing overhead electrical lines and buried natural gas line on the northeastern portion of the Site.</td>
</tr>
<tr>
<td>Environmental Justice</td>
<td>None required.</td>
</tr>
</tbody>
</table>

The future expansion of the BHNC could have direct and indirect impacts on prehistoric and historic cultural resources that have been identified at the Site, but remain unevaluated as to eligibility for listing on the NRHP, including Native American archaeological sites/features, historic...
roads, and a small sandstone quarry. The Native American archaeological sites/features may be individually or cumulatively eligible for listing on the NRHP as TCPs, and the historic roads and quarry may be eligible for listing on the NRHP as contributing elements to the FMHD.

Prior to completing the expanded cemetery design, a Tribal Survey and a ground-disturbing, archaeological investigation of the Site would be conducted in consultation with the Native American Tribes and SHPO. VA would formally determine the eligibility of the prehistoric and historic features for listing on the NRHP and would determine the potential adverse effects of the proposed cemetery expansion development in consultation with the Tribes and SHPO. If prehistoric and historic features eligible for listing on the NRHP are encountered and would be adversely affected by the proposed BHNC expansion, VA would enter into a MOA with the Tribes, SHPO, ACHP and other interested parties under Section 106 of the NHPA to mitigate the adverse effects. It is anticipated that the primary mitigation measure would be the avoidance of the prehistoric and historic resources during the expanded cemetery design, although further exploration for data inventory and recovery/curation, and/or archaeological monitoring during excavation work associated with the cemetery construction may also be considered. With the completion of these NHPA mitigation measures, cultural resources impacts would be minimized or avoided.
SECTION 6: SUMMARY AND CONCLUSIONS

This EA evaluates VA’s Proposed Action to acquire land adjacent to the existing BHNC, located at 20901 Pleasant Valley Drive, in an unincorporated area of Meade County, South Dakota, for the future expansion of the cemetery. This EA discusses two alternatives: (1) Preferred Action Alternative – Acquire approximately 181 acres of unimproved land adjacent to the north and west of the BHNC, which is owned by the Federal Government and under BLM control, for the future expansion of the BHNC; and (2) the No Action Alternative. This EA evaluates possible effects to aesthetics; air quality; cultural resources; geology and soils; hydrology and water quality; wildlife and habitat; noise; land use; floodplains, wetlands, and coastal zone management; socioeconomics; community services; solid and hazardous materials; transportation and parking; utilities; and environmental justice.

This EA assesses the potential effects of acquiring the Site for the ultimate expansion of the BHNC, and preliminarily assesses the effects of the future proposed construction and operation of the cemetery on the Site. Potential effects of the construction and operation of the proposed expanded BHNC on the Site will be reanalyzed and reevaluated in a supplemental NEPA analysis concurrent with Site design. The management and minimization measures identified in this EA would be incorporated into that future process and analysis.

Table 6 provides a summary of the characteristics and potential environmental effects associated with the Preferred Action Alternative.

<table>
<thead>
<tr>
<th>Technical Resource Area</th>
<th>Preferred Action Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics</td>
<td>Approximately 181 acres of unimproved land that is part of the 6,700-acre Fort Meade Recreation Area, under the control of BLM. The northeastern portion of the Site is relatively flat, mostly grassy land that is periodically used for grazing. The southwestern portion of the Site is steeply sloping and partially wooded. Rural, mostly unimproved area consisting of the adjacent BHNC and Federally-owned recreational land. No sensitive viewshed receptors in the Site area. No significant grade changes are anticipated. The BHNC would be expanded on to the northeastern, relatively flat portion of the Site. The steeply sloping, southwestern portion of the Site would remained undeveloped. Negligible Impacts</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Short-term impacts due to construction dust and particulate matter (managed through BMPs) and long-term due to vehicle emissions (similar to existing conditions). No sensitive air quality receptors in the Site area. Less-than-significant Impacts</td>
</tr>
</tbody>
</table>
### Cultural Resources

Site is located in the recommended expanded FMHD. Cultural resources, including Native American archaeological sites/features, historic roads, and a sandstone quarry were identified on the Site. These resources remain unevaluated as to eligibility for listing on the NRHP. SHPO concurred that the transfer of the Site from BLM to VA would have no adverse effect on cultural resources.

Prior to completing the cemetery design, a Tribal Survey and a ground-disturbing, archaeological investigation of the Site would be conducted in consultation with the Tribes and SHPO. If cultural resources eligible for listing on the NRHP would be adversely impacted by the proposed BHNC expansion, VA would enter into a MOA with the Tribes, SHPO, ACHP and other interested parties under Section 106 of the NHPA to mitigate the adverse effects. It is anticipated that the primary mitigation measure would be the avoidance of the cultural resources during the expanded cemetery design.

Less-than-significant Impacts, if mitigated under NHPA

### Geology, Topography, and Soils

The northeastern portion of the Site is relatively flat and generally slopes to the northeast. The southwestern portion of the Site is steeply sloping to the east-northeast. Only the northeastern portion of the Site would be developed. Soil erosion and sediment impacts would be managed through BMPs.

Site is underlain by gypsum deposits that is likely excavatable using standard construction equipment. Gypsum deposits in the region have abundant karstic features (such as sinkholes) at the surface and near-surface. Sinkholes may be present at the Site. Any identified potential sinkholes would be geotechnically investigated and remediated (if necessary) during site design and construction.

Approximately seven acres of the Site are classified as prime farmland. Cemetery development requires completion of Form AD-1006 under the FPPA.

Less-than-significant Impacts

### Hydrology and Water Quality

Two small ponds that appear to have been created/modified for stormwater management are located along the southeastern Site boundary with the BHNC. East of the ponds is a small intermittent stream channel that flows to the east, merges with an intermittent tributary of Alkali Creek and flows east to Alkali Creek. It appears the ponds and on-site stream channels do not normally contain water. Groundwater is greater than 10 feet below grade.

Cemetery design would avoid the identified surface water features and would include sufficient on-site stormwater management so as not to adversely affect water quantity/quality of receiving waters or off-site areas.

Stormwater runoff during construction and operations would be managed through BMPs.

Less-than-significant Impacts

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<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Cultural Resources</td>
<td>Site is located in the recommended expanded FMHD. Cultural resources, including Native American archaeological sites/features, historic roads, and a sandstone quarry were identified on the Site. These resources remain unevaluated as to eligibility for listing on the NRHP. SHPO concurred that the transfer of the Site from BLM to VA would have no adverse effect on cultural resources. Prior to completing the cemetery design, a Tribal Survey and a ground-disturbing, archaeological investigation of the Site would be conducted in consultation with the Tribes and SHPO. If cultural resources eligible for listing on the NRHP would be adversely impacted by the proposed BHNC expansion, VA would enter into a MOA with the Tribes, SHPO, ACHP and other interested parties under Section 106 of the NHPA to mitigate the adverse effects. It is anticipated that the primary mitigation measure would be the avoidance of the cultural resources during the expanded cemetery design. Less-than-significant Impacts, if mitigated under NHPA</td>
</tr>
<tr>
<td>Geology, Topography, and Soils</td>
<td>The northeastern portion of the Site is relatively flat and generally slopes to the northeast. The southwestern portion of the Site is steeply sloping to the east-northeast. Only the northeastern portion of the Site would be developed. Soil erosion and sediment impacts would be managed through BMPs. Site is underlain by gypsum deposits that is likely excavatable using standard construction equipment. Gypsum deposits in the region have abundant karstic features (such as sinkholes) at the surface and near-surface. Sinkholes may be present at the Site. Any identified potential sinkholes would be geotechnically investigated and remediated (if necessary) during site design and construction. Approximately seven acres of the Site are classified as prime farmland. Cemetery development requires completion of Form AD-1006 under the FPPA. Less-than-significant Impacts</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Two small ponds that appear to have been created/modified for stormwater management are located along the southeastern Site boundary with the BHNC. East of the ponds is a small intermittent stream channel that flows to the east, merges with an intermittent tributary of Alkali Creek and flows east to Alkali Creek. It appears the ponds and on-site stream channels do not normally contain water. Groundwater is greater than 10 feet below grade. Cemetery design would avoid the identified surface water features and would include sufficient on-site stormwater management so as not to adversely affect water quantity/quality of receiving waters or off-site areas. Stormwater runoff during construction and operations would be managed through BMPs. Less-than-significant Impacts</td>
</tr>
</tbody>
</table>
### Summary of Site Characteristics and Potential Impacts Associated with the Preferred Action Alternative (continued)

<table>
<thead>
<tr>
<th>Technical Resource Area</th>
<th>Preferred Action Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wildlife and Habitat</strong></td>
<td>The northeastern approximately 100 acres of the Site are relatively flat, mostly grassy, open land that is periodically used for grazing cattle. The southwestern portion of the Site is steeply sloping and partially wooded.</td>
</tr>
<tr>
<td></td>
<td>The southwestern, steeply sloping, wooded portion of the Site may support the presence of Federally and/or State-protected Northern Long-Eared Bat, Townsend’s Big-Eared Bat, and Silver-Haired Bat as summer roosting and foraging habitat, and provides marginal nesting habitat for Golden Eagles; however, none of these species are likely to be present on the northeastern, relatively level, open portion of the Site, where the cemetery development is proposed. Less-than-significant Impacts</td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td>No sensitive noise receptors in the Site area other than BHNC.</td>
</tr>
<tr>
<td></td>
<td>Short-term noise impacts during cemetery development activities controlled through construction BMPs.</td>
</tr>
<tr>
<td></td>
<td>Minor operational impacts associated with vehicle traffic and intermittent ceremonial rifle fire during weekday business hours.</td>
</tr>
<tr>
<td></td>
<td>Less-than-significant Impacts</td>
</tr>
<tr>
<td><strong>Land Use</strong></td>
<td>Site is unimproved land and is part of the 6,700-acre Fort Meade Recreation Area, owned by the Federal Government and managed by BLM. As land owned by the Federal Government, the Site is not subject to local zoning. The proposed cemetery would be consistent with surrounding land use (existing BHNC and unimproved land owned by the Federal Government).</td>
</tr>
<tr>
<td></td>
<td>No/Negligible Impacts</td>
</tr>
<tr>
<td><strong>Wetlands, Floodplains, and Coastal Zone Management</strong></td>
<td>Two small ponds on the southeastern portion of the Site that appear to have been created/modified for stormwater management and a small intermittent stream channel that flows east from the ponds to intermittent tributary of Alkali Creek were identified on the NWI map as a persistent emergent wetland system. However, observations of the Site did not identify obvious wetland characteristics (hydrology or wetland vegetation) in the ponds. The small stream channel flows to an intermittent tributary of Alkali Creek located on the eastern corner of the Site. The small stream channel and intermittent tributary to Alkali Creek are likely to be considered Waters of the US and under the jurisdiction of the USACE due to their connection to Alkali Creek. USACE may also consider the two small ponds Waters of the US. Cemetery design would avoid any identified wetlands/Waters of the US.</td>
</tr>
<tr>
<td></td>
<td>No floodplains located on-site or adjacent to the Site. Meade County is not located within a coastal zone.</td>
</tr>
<tr>
<td></td>
<td>Less-than-significant Impacts</td>
</tr>
</tbody>
</table>
Table 6. Summary of Site Characteristics and Potential Impacts Associated with the Preferred Action Alternative (continued)

<table>
<thead>
<tr>
<th>Technical Resource Area</th>
<th>Preferred Action Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socioeconomics</strong></td>
<td>Minor beneficial impacts to local economy as a result of temporary construction jobs.</td>
</tr>
<tr>
<td></td>
<td>Long-term beneficial socioeconomic impacts by providing a regionally proximate National Cemetery of sufficient size to US Veterans and their families.</td>
</tr>
<tr>
<td><strong>Community Services</strong></td>
<td>Community services provided to the Site area. Expanded BHNC would not put a significant additional load on these services. A minimum 100-foot buffer between the expanded cemetery and the northerly adjoining Centennial Trail (multi-use recreational trail) would prevent trail impacts.</td>
</tr>
<tr>
<td></td>
<td>Less-than-significant Impacts</td>
</tr>
<tr>
<td><strong>Solid and Hazardous Materials</strong></td>
<td>The Site has been unimproved land owned by the Federal Government associated with the former Fort Meade Military Reservation since 1878. The northeastern portion of the Site has been mostly grassy, open land used for livestock grazing and the southwestern portion of the Site has been steeply sloping, partially wooded land since at least 1952. A small sandstone quarry was formerly located in the western portion of the Site, at the foot of the steeply sloping portion of the Site. Phase I ESA of the Site identified no RECs.</td>
</tr>
<tr>
<td></td>
<td>Potential impacts from petroleum/hazardous substance handling during construction and operation would be managed through standard BMPs and VA SOPs.</td>
</tr>
<tr>
<td></td>
<td>Less-than-significant Impacts</td>
</tr>
<tr>
<td><strong>Transportation and Parking</strong></td>
<td>Primary access to the BHNC is provided by Interstate 90 Exit 34. Cemetery traffic would continue to use the main BHNC entrance. The Site would be accessed via internal BHNC roads. Traffic volumes and patterns are anticipated to be similar to those that currently exist at the BHNC.</td>
</tr>
<tr>
<td></td>
<td>Expanded BHNC would include adequate on-site parking.</td>
</tr>
<tr>
<td></td>
<td>Less-than-significant Impacts</td>
</tr>
<tr>
<td><strong>Utilities</strong></td>
<td>Limited public utilities in the Site area (electrical service) likely adequate for the proposed expanded cemetery. Primary utility demand, irrigation water, would be obtained from the existing BHNC irrigation system, supplied by an existing well at BHNC. Overhead electrical lines and a buried natural gas line cross the northeastern portion of the Site and would be avoided during the site design.</td>
</tr>
<tr>
<td></td>
<td>Less-than-significant Impacts</td>
</tr>
<tr>
<td><strong>Environmental Justice</strong></td>
<td>Site is not located in an area with a larger than average low-income or minority population.</td>
</tr>
<tr>
<td></td>
<td>No/Negligible Impacts</td>
</tr>
</tbody>
</table>
The analysis performed in this EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life associated with the Preferred Action Alternative, provided the management measures, and minimization measures, and regulatory compliance measures described in this EA are implemented. This EA's analysis determines, therefore, that an Environmental Impact Statement (EIS) is unnecessary for implementation of the Proposed Action, and that a Finding of No Significant Impact (FONSI) is appropriate.
## SECTION 7: LIST OF PREPARERS

### DEPARTMENT OF VETERANS AFFAIRS STAFF

**Mr. Glenn Elliott**  
Environmental Engineer  
Department of Veterans Affairs  
Office of Construction and Facilities Management

**Mr. Glenn Madderom**  
Chief, Cemetery Development & Improvement Service  
Department of Veterans Affairs  
National Cemetery Administration

**Ms. Marianne Marinucci**  
Project Manager  
Department of Veterans Affairs  
CFM, Office of Real Property

### TTL ASSOCIATES, INC. (CONSULTANTS)

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Degree</th>
<th>Years of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robin J. Clark</td>
<td>Project Manager, Technical Lead Technical QA/QC Review, Program Management/Project Coordination</td>
<td>B.S., Aquatic Environments/Environmental Science, 1985</td>
<td>32</td>
</tr>
</tbody>
</table>
SECTION 8: REFERENCES CITED

A Level III Intensive Cultural Resource Inventory of a Proposed Land Exchange Between the Bureau of Land Management and the Department of Veterans Affairs, Meade County, South Dakota, Environmental Research Group, LLC, March 26, 2018.
Association of Natural Burials, 2011 and 2012.
City of Sturgis, South Dakota, 2018.
Clean Water Act (Federal Water Pollution Control Act) of 1948, as amended (1972, 1977) (33 USC 1251 et seq.); Sections 401 and 404.
EO 13175, Consultation and Coordination with Indian Tribal Governments. 6 November, 2000.
Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map No. 26161C0262E, dated 3 April 2012.
Geotechnical Subsurface Investigation, Proposed Black Hills National Cemetery Expansion, Sturgis, South Dakota, TTL Associates, Inc., September 2018
Meade County, South Dakota, 2018.
South Dakota Department of Environment and Natural Resources, 2018.
South Dakota Department of Transportation, 2018.
South Dakota Game, Fish, and Parks, 2018.
U.S. Environmental Protection Agency (USEPA), 2018.
U.S. Fish and Wildlife Service (USFWS), 2018.
USFWS National Wetlands Inventory Online Mapper, 2018.

Other internet searches and data (accessed June 2018-November 2018):

City of Sturgis: https://www.sturgis-sd.gov/
Meade County: https://www.meadecounty.org/
South Dakota Department of Environment and Natural Resources: http://denr.sd.gov/
South Dakota Department of Transportation: http://www.sddot.com/
South Dakota Department of Game, Fish, and Parks: https://gfp.sd.gov/
US Army Corps of Engineers: http://www.usace.army.mil
National Wetlands Inventory: https://www.fws.gov/wetlands/Data/mapper.html
FEMA Flood Hazard Insurance Map: http://msc.fema.gov/portal
US Environmental Protection Agency: https://www.epa.gov
US Fish and Wildlife Service: https://www.fws.gov
Various mapping tools: www.maps.google.com, www.google.earth.com, etc.
## SECTION 9: LIST OF ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACA</td>
<td>Air Compliance Assurance</td>
</tr>
<tr>
<td>ACHP</td>
<td>Advisory Council on Historic Preservation</td>
</tr>
<tr>
<td>ADA</td>
<td>Americans with Disabilities Act of 1990</td>
</tr>
<tr>
<td>AIRFA</td>
<td>American Indian Religious Freedom Act</td>
</tr>
<tr>
<td>amsl</td>
<td>above mean sea level</td>
</tr>
<tr>
<td>ARPA</td>
<td>Archaeological Resources Protection Act</td>
</tr>
<tr>
<td>AST</td>
<td>Aboveground Storage Tank</td>
</tr>
<tr>
<td>BEA</td>
<td>Bureau of Economic Analysis</td>
</tr>
<tr>
<td>BLM</td>
<td>Bureau of Land Management</td>
</tr>
<tr>
<td>BMP</td>
<td>Best Management Practice</td>
</tr>
<tr>
<td>CAA</td>
<td>Clean Air Act</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
</tr>
<tr>
<td>CEQ</td>
<td>Council on Environmental Quality</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CMP</td>
<td>Coastal Management Program</td>
</tr>
<tr>
<td>CO</td>
<td>Carbon Monoxide</td>
</tr>
<tr>
<td>CWA</td>
<td>Clean Water Act</td>
</tr>
<tr>
<td>CZMA</td>
<td>Coastal Zone Management Act</td>
</tr>
<tr>
<td>E&amp;S</td>
<td>Erosion and Sedimentation</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Assessment</td>
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<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>EO</td>
<td>Executive Order</td>
</tr>
<tr>
<td>ERP</td>
<td>Environmental Resource Permit</td>
</tr>
<tr>
<td>ESA</td>
<td>Endangered Species Act</td>
</tr>
<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
</tr>
<tr>
<td>FIRM</td>
<td>Flood Insurance Rate Map</td>
</tr>
<tr>
<td>FONSI</td>
<td>Finding of No Significant Impact</td>
</tr>
<tr>
<td>FPAA</td>
<td>Farmland Protection Policy Act</td>
</tr>
<tr>
<td>HAP</td>
<td>Hazardous Air Pollutant</td>
</tr>
<tr>
<td>IICEP</td>
<td>Interagency and Intergovernmental Coordination for Environmental Planning</td>
</tr>
<tr>
<td>LOS</td>
<td>Level of Service</td>
</tr>
<tr>
<td>MSEP</td>
<td>Meade County Equalization/Planning Department</td>
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<tr>
<td>NAAQS</td>
<td>National Ambient Air Quality Standards</td>
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<td>NAGPRA</td>
<td>Native American Graves Protection and Repatriation Act</td>
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<td>NEPA</td>
<td>National Environmental Policy Act of 1969</td>
</tr>
<tr>
<td>NHPA</td>
<td>National Historic Preservation Act</td>
</tr>
<tr>
<td>NOA</td>
<td>Notice of Availability</td>
</tr>
<tr>
<td>NOAAP</td>
<td>National Oceanic and Atmospheric Association</td>
</tr>
<tr>
<td>NOx</td>
<td>Nitrogen Oxides</td>
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<tr>
<td>NPDES</td>
<td>National Pollution Discharge Elimination System</td>
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<tr>
<td>NPS</td>
<td>National Park Service</td>
</tr>
<tr>
<td>NRCS</td>
<td>Natural Resources Conservation Service</td>
</tr>
<tr>
<td>NRHP</td>
<td>National Register of Historic Places</td>
</tr>
<tr>
<td>NWI</td>
<td>National Wetland Inventory</td>
</tr>
<tr>
<td>O₃</td>
<td>Ozone</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>Pb</td>
<td>Lead</td>
</tr>
<tr>
<td>PBF</td>
<td>Public Buildings and Facilities</td>
</tr>
<tr>
<td>PCD</td>
<td>Pennington Conservation District</td>
</tr>
<tr>
<td>PM</td>
<td>Particulate matter</td>
</tr>
<tr>
<td>ppm</td>
<td>parts per million</td>
</tr>
<tr>
<td>PTE</td>
<td>Potential to emit</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>RI</td>
<td>Remedial Investigation</td>
</tr>
<tr>
<td>ROD</td>
<td>Record of Decision</td>
</tr>
<tr>
<td>RONA</td>
<td>Record of Non-applicability</td>
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<tr>
<td>SBI</td>
<td>Sturgis Building and Inspections</td>
</tr>
<tr>
<td>SCM</td>
<td>Sturgis City Manager</td>
</tr>
<tr>
<td>SDDENR</td>
<td>South Dakota Department of Environment and Natural Resources</td>
</tr>
<tr>
<td>SDDOT</td>
<td>South Dakota Department of Transportation</td>
</tr>
<tr>
<td>SFHA</td>
<td>Special Flood Hazard Area</td>
</tr>
<tr>
<td>SDGFP</td>
<td>South Dakota Game, Fish, and Parks</td>
</tr>
<tr>
<td>SHPO</td>
<td>State Historic Preservation Office</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>SIP</td>
<td>State Implementation Plan</td>
</tr>
<tr>
<td>SO₂</td>
<td>Sulfur dioxide</td>
</tr>
<tr>
<td>SPWD</td>
<td>Sturgis Public Works Department</td>
</tr>
<tr>
<td>SPZ</td>
<td>Sturgis Planning and Zoning</td>
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<tr>
<td>SWPPP</td>
<td>Storm Water Pollution Prevention Plan</td>
</tr>
<tr>
<td>TPY</td>
<td>Tons per year</td>
</tr>
<tr>
<td>USACE</td>
<td>United States Army Corps of Engineers</td>
</tr>
<tr>
<td>USC</td>
<td>United States Code</td>
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<tr>
<td>USEPA</td>
<td>United States Environmental Protection Agency</td>
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<td>USFWS</td>
<td>United States Fish and Wildlife Service</td>
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<td>USGS</td>
<td>United States Geological Survey</td>
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<tr>
<td>VA</td>
<td>Department of Veterans Affairs</td>
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## SECTION 10: AGENCIES AND INDIVIDUALS CONSULTED

<table>
<thead>
<tr>
<th>Agencies Consulted</th>
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</thead>
<tbody>
<tr>
<td><strong>U.S. Fish and Wildlife Service</strong></td>
<td><strong>South Dakota Game, Fish, and Parks</strong></td>
</tr>
<tr>
<td>South Dakota Ecological Services Field Office</td>
<td>523 East Capitol Avenue</td>
</tr>
<tr>
<td>420 South Garfield Avenue, Suite 400</td>
<td>Pierre, South Dakota 57501</td>
</tr>
<tr>
<td>Pierre, South Dakota 57501-5408</td>
<td>Phone: (605) 224-8693</td>
</tr>
<tr>
<td><strong>US Environmental Protection Agency, Region 8</strong></td>
<td><strong>South Dakota Department of Transportation</strong></td>
</tr>
<tr>
<td>8OC-EISC</td>
<td>Rapid City Region</td>
</tr>
<tr>
<td>1595 Wynkoop Street</td>
<td>P.O. Box 1970</td>
</tr>
<tr>
<td>Denver, Colorado 80202-1129</td>
<td>Rapid City, South Dakota 57709-1970</td>
</tr>
<tr>
<td>Phone: (303) 312-6312</td>
<td>Phone: (605) 394-2244</td>
</tr>
<tr>
<td><strong>US Army Corps of Engineers – Omaha District</strong></td>
<td><strong>Pennington Conservation District</strong></td>
</tr>
<tr>
<td>South Dakota Regulatory Office</td>
<td>414 East Stumer Road, Suite 300</td>
</tr>
<tr>
<td>28563 Powerhouse Road</td>
<td>Rapid City, South Dakota 57701</td>
</tr>
<tr>
<td>Pierre, South Dakota 57501</td>
<td>Phone: (605) 342-0301, Ext. 3</td>
</tr>
<tr>
<td>Phone: (605) 224-8531</td>
<td></td>
</tr>
<tr>
<td><strong>South Dakota Department of Environment and Natural Resources</strong></td>
<td><strong>Natural Resources Conservation Service</strong></td>
</tr>
<tr>
<td>Division of Environmental Services</td>
<td>Sturgis Service Center</td>
</tr>
<tr>
<td>Joe Foss Building</td>
<td>2202 Main Street</td>
</tr>
<tr>
<td>523 East Capitol Avenue</td>
<td>Sturgis, South Dakota 57785-1338</td>
</tr>
<tr>
<td>Pierre, South Dakota 57501</td>
<td>Phone: (605) 347-4952</td>
</tr>
<tr>
<td>Phone: (605) 773-3151</td>
<td></td>
</tr>
<tr>
<td><strong>Meade County Equalization/Planning Department</strong></td>
<td><strong>Sturgis City Manager</strong></td>
</tr>
<tr>
<td>1300 Sherman Street, Suite 222</td>
<td>1040 Harley-Davidson Way</td>
</tr>
<tr>
<td>Sturgis, South Dakota 57785</td>
<td>Sturgis, South Dakota 57785</td>
</tr>
<tr>
<td>Phone: (605) 347-3818</td>
<td>Phone: (605) 347-4422</td>
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</tbody>
</table>
### Native American Tribes Consulted

**Cheyenne River Sioux Tribe**  
Mr. Harold Frazier, Tribal Chairman  
P.O. Box 590  
Eagle Butte, South Dakota 57625

**Cheyenne River Sioux Tribe Preservation Office**  
Mr. Steve Vance, Tribal Historic Preservation Officer  
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Eagle Butte, South Dakota 57625

**Crow Creek Sioux Tribe, Crow Creek Reservation**  
Mr. Brandon Sazue, Chairperson  
P.O. Box 50  
Fort Thompson, South Dakota 57339-0050

**Crow Creek Sioux Tribe**  
Ms. Bonnie McGhee, Tribal Historic Preservation Officer  
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**Flandreau Santee Sioux Tribe**  
Mr. Anthony Reider, President  
P.O. Box 283  
603 W. Broad Avenue  
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**Flandreau Santee Sioux Tribe**  
Mr. Garrie Kills-a-Hundred, Tribal Historic Preservation Officer  
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Flandreau, South Dakota 57028

**Lower Brule Sioux Tribe**  
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187 Oyate Circle  
Lower Brule, South Dakota 57548-0187

**Lower Brule Sioux Tribe**  
Ms. Clair Green, Cultural Resources/Public Affairs  
187 Oyate Circle  
Lower Brule, South Dakota 57548-0187

**Mandan, Hidatsa and Arikara Nation**  
Mr. Mark Fox, Chairman  
404 Frontage Road  
New Town, North Dakota 58763

**Mandan, Hidatsa and Arikara Nation, THPO**  
Mr. Elgin Crows Breast  
404 Frontage Road  
New Town, North Dakota 58763

**Northern Cheyenne Tribe**  
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P.O. Box 128  
Lame Deer, Montana 59043

**Northern Cheyenne Tribe**  
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19 W. Chiefs Street  
P.O. Box 128  
Lame Deer, Montana 59043
Oglala Sioux Tribe
Mr. Troy Scott Weston, President
P.O. Box 2070
Pine Ridge, South Dakota 57770

Natural Resources - Oglala Sioux Tribe
Mr. Kyle White, Director
P.O. Box 320
Pine Ridge, South Dakota 57770

Rosebud Sioux Tribe
Mr. William Kindle, President
P.O. Box 430
Rosebud, South Dakota 57570

Rosebud Sioux Tribe
Mr. Russell Eagle Bear, Tribal Historic Preservation Officer
P.O. Box 809
Rosebud, South Dakota 57570

Sisseton-Wahpeton Oyate Tribes
Mr. David Flute, Chairman
P.O. Box 509
Agency Village, South Dakota 57262-0509

Sisseton-Wahpeton Oyate Tribes
Ms. Diane Desrosiers, Tribal Historic Preservation Officer
P.O. Box 907
Sisseton, South Dakota 57262

Yankton Sioux Tribe Business and Claims Committee
Mr. Robert Flying Hawk, Chairperson
P.O. Box 1153
100 Main Avenue, S.W.
Wagner, South Dakota 57380

Yankton Sioux Tribe
Mr. Kip Spotted Eagle, Tribal Historic Preservation Officer
P.O. Box 1153
100 Main Avenue, S.W.
Wagner, South Dakota 57380
SECTION 11: LIST OF ENVIRONMENTAL PERMITS REQUIRED

11.1 Regulatory Framework

This EA has been prepared under the provisions of, and in accordance with the NEPA, the CEQ Regulations Implementing the Procedural Provisions of NEPA, and 38 CFR Part 26. In addition, the EA has been prepared as prescribed in VA’s NEPA Interim Guidance for Projects (VA 2010b). Federal, State, and local laws and regulations specifically applicable to this Proposed Action are specified, where appropriate, within this EA, and include:

- Endangered Species Act (ESA) of 1973, as amended (7 USC 136; 16 USC 1531 et seq.).
- Executive Order 12898, Environmental Justice (11 February 1994).
- Farmland Protection Policy Act (FPPA) (7 USC 4201, et seq.)
- Federal Clean Air Act (CAA) of 1990 (42 USC 7401 et seq., as amended).
- Federal Clean Water Act (Federal Water Pollution Control Act) of 1948, as amended (1972, 1977) (33 USC 1251 et seq.); Sections 401 and 404.
- Native American Graves Protection and Repatriation Act, as amended (NAGPRA) (25 USC 3001 et seq.).
11.2 Environmental Permits Required

In addition to the regulatory framework of the NEPA, the CEQ Regulations Implementing the Procedural Provisions of NEPA, 38 CFR Part 26, and VA’s NEPA Interim Guidance for Projects, the following Federal, State, and/or local environmental permits are required as part of this Proposed Action, and include:

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

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

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

Ambient Air Quality Standards - Those standards established according to the CAA to protect health and welfare (AR 200-1).

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

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

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

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

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

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

Compaction - The packing of soil together into a firmer, denser mass, generally caused by the pressure of great weight.

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

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

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

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

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

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

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

Emission - A release of a pollutant.

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

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

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

**Farmland** - Cropland, pastures, meadows, and planted woodland.

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

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

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

**FONSI** - Finding of No Significant Impact, a NEPA document.

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

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

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

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

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

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

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

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

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

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

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

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

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

**Listed Species** - Any plant or animal designated as a State or Federal threatened, endangered, special concern, or candidate species.

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

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

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

**National Ambient Air Quality Standards (NAAQS)** - Nationwide standards set up by the USEPA for widespread air pollutants, as required by Section 109 of the Clean Air Act (CAA). Currently, six pollutants are regulated by primary and secondary NAAQS: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO\(_2\)), ozone (O\(_3\)), particulate matter, and sulfur dioxide (SO\(_2\)).

**National Environmental Policy Act (NEPA)** - U.S. statute that requires all Federal agencies to consider the potential effects of Proposed Actions on the human and natural environment.

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

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

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

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

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

**Potable Water** - Water which is suitable for drinking.

**Prime Farmland** - A special category of highly productive cropland that is recognized and described by the US Department of Agriculture’s Soil Conservation Service and receives special protection under the Surface Mining Law.

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

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

**River Basin** - The land area drained by a river and its tributaries.

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

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

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

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

**Small quantity generator** - A generator who generates greater than 220 pounds but less than 2,200 pounds of hazardous waste in a calendar month and who does not accumulate more than 13,200 pounds of hazardous waste at any one time (if either threshold is exceeded, the generator becomes a large quantity generator). A small quantity generator may accumulate hazardous waste up to 180 days from the accumulation start date.

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

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

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

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

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

**Waters of the United States** - Include the following: (1) All waters which are currently being used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. (2) All interstate waters including interstate wetlands. (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation or destruction of which could affect interstate or foreign commerce.
**Watershed** - The region draining into a particular stream, river, or entire river system.

**Wetlands** - Areas that are regularly saturated by surface or groundwater and, thus, are characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions.

Examples include swamps, bogs, fens, marshes, and estuaries.

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