3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Scope of Analysis and Analytical Approach

This section describes the baseline (existing) physical, environmental, cultural, and socioeconomic conditions at the proposed National Cemetery site near Colorado Springs in El Paso County, Colorado, and its general vicinity, with emphasis on those resources potentially affected by the Proposed Action or alternatives.

3.1.1 Resources Evaluated but Not Carried Forward

As described in Section 1.2, through the PEA process and by incorporating BMPs identified in the Final PEA into the site-specific Proposed Action, the VA determined that the following technical resource areas were sufficiently analyzed in the Final PEA and do not require further analysis in this SEA:

- Land Use
- Socioeconomics
- Community Services
- Solid and Hazardous Materials
- Environmental Justice

The results of the Final PEA (VA 2012) for these resources are incorporated by reference in this SEA.

3.1.2 Resources Evaluated and Carried Forward

Under each of the remaining technical resource areas, the potential direct and indirect effects of implementing the Preferred Alternative and the No Action Alternative are identified.

In this SEA, effects are identified as either significant, minor (i.e., common effects that would not be of the context or intensity to be considered significant under the NEPA or CEQ Regulations), negligible effect (an effect that is not easily detectable and very minor), or no effect. Where appropriate and clearly discernible, each effect is identified as either adverse or beneficial. CEQ regulations specify that in determining the significance of effects, consideration must be given to both *context* and *intensity* (40 CFR 1508.27). Context means the geographic, social, and environmental circumstances within which the project might have effects. The regulations refer to

- society as a whole, defined as including all human society and the society of the nation;
- the affected region;
- affected interests, such as those of a community, Native American tribe, or other group; and
- the immediate locality.

Intensity is the severity of the potential impact considered in context. The regulations direct agencies to consider

- both beneficial and adverse impacts;
- impacts on human health and safety; and
- impacts on an area's unique characteristics, such as historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, and ecologically critical areas.

In this SEA, 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 technical resource area. Significance criteria for technical resource areas considered in depth in this SEA are listed below. It should be noted that any one of these effects would not necessarily indicate a significant impact, as significance must be considered in the context of overall impact to the resource area, along with management measures used to reduce adverse effects.

- ***Aesthetics.*** An alternative could significantly affect visual resources if it resulted in abrupt changes to the complexity of the landscape and skyline (i.e., in terms of vegetation, topography, or structures) when viewed from points readily accessible by the public.
- ***Air Quality.*** A project could have a significant air quality effect if it would result in emissions that exceed applicability thresholds, be regionally significant, or contribute to a violation of any federal, state, or local air regulation.
- ***Geology and Soils.*** If an alternative would result in an increased geologic hazard or a change in the availability of a geologic resource, it could have a significant effect. Such geologic and soil hazards would include seismic vibration, land subsidence, and slope instability.
- ***Hydrology and Water Quality.*** If an alternative would result in a reduction in the quantity or quality of water resources for existing or potential future use, it could have a significant effect. A significant effect could occur if the demand exceeded the capacity of the potable water system or if the action resulted in reduced water quality that violated applicable state or federal water quality standards.
- ***Floodplains and Wetlands.*** An alternative could have a significant effect on water resources if it would cause substantial flooding or erosion, if it would subject people or property to flooding or erosion, or if it would adversely affect a significant water body, such as a stream, lake, floodplain, or coastal zone. The measurable degradation of wetlands could also be significant.
- ***Wildlife and Habitat.*** The effect of an alternative on biological resources and ecosystems could be significant if it would disrupt or remove any endangered or threatened species or its designated critical habitat. The loss of a substantial number of individuals of any plant or animal species (sensitive or nonsensitive species) that could affect the abundance or diversity of that species beyond normal variability could also be considered significant.

- ***Cultural Resources.*** An adverse effect on historic properties occurs when an undertaking alters (directly or indirectly) any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that diminishes the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. An adverse effect is not considered significant if the federal agency, in consultation with the State Historic Preservation Office (SHPO), Advisory Council on Historic Preservation (ACHP), and other consulting parties, resolves the adverse effect.
- ***Noise.*** If an alternative would result in perceptible increases in ambient noise levels at sensitive receptors, or result in excessive ground-borne vibration to persons or property, it could have a significant effect.
- ***Utilities.*** An alternative could have a significant effect on utility infrastructure if it would increase demand over capacity, requiring a substantial system expansion or upgrade, or if it would result in substantial system deterioration over the current condition.
- ***Transportation and Parking.*** An alternative could have a significant effect on transportation and parking if it would increase the volume of traffic beyond the existing roadway capacity, cause parking availability to fall below minimum local standards, or require new or substantially improved roadways or traffic control systems.

3.2 Aesthetics

3.2.1 Existing Conditions

Colorado Springs is situated in one of the most spectacular natural settings, surrounded by mountain views along the Front Range of the Colorado Rockies and near the base of one of the most famous American mountains, Pikes Peak, which rises over 8,000 feet above the city. Stretching out from the foot of Pikes Peak, the city encompasses forested foothills, sheer-walled canyons, mountain streams, unique rock formations, expansive grasslands, meandering creeks, and scenic bluffs and mesas. Due to the changes in elevation within the city limits, which ranges from approximately 5,500 feet to 7,500 feet above sea level, this setting provides distinctive topographic features and rich ecological diversity. Stunning views of the Pikes Peak and the Front Range mountains can be enjoyed from almost every part of the city (City of Colorado Springs 1998).

The site is located in a rural area just outside the city limits of Colorado Springs, El Paso County, Colorado (VA 2012). The site is located approximately 15 miles east of the center of Colorado Springs and is bounded to the north by Drennan Road, a rural two-lane road. A utility corridor that includes overhead electrical lines and a natural gas pipeline is located along the eastern site boundary (AES Group, Inc. 2015).

Since at least the early 1900s, the site has primarily remained undeveloped rangeland, with the exception of a historic farm home and associated structures that are no longer extant. As recently as within the past year, the site was used for livestock grazing. The site is flat to gently rolling in the north-central portion of the site and characterized as a shortgrass prairie underlain by alluvium. A hill is present in the southeast corner of the site and slopes to the north, northwest, and west. The hill is underlain by alluvium and shale and meets the generally flat north-central portion of the site at an unnamed, ephemeral arroyo that flows to the southwest within the site, eventually discharging into Jimmy Camp Creek approximately 1,200 feet downstream. The western portion of the site consists of an unnamed ephemeral arroyo that flows into Jimmy Camp Creek approximately 500 feet downstream. The arroyos in the central and western portions of the

site, along with a generally flat shortgrass prairie in the northeast portion of the site, are characterized as floodplains and encompass approximately 97.4 acres of the site (Terracon Consultants, Inc. 2012a). Several neighborhoods that are directly west of the arroyo and Jimmy Camp Creek have been developed and are visible from the site. Otherwise, the area surrounding the site currently remains undeveloped. Due to limited development within the area, Drennan Road has retained its rural character and has not severed the landscape viewshed.

The site area provides a transitional zone between the surrounding natural, scenic open space and the city. The site still retains the elements of open space with land being unimproved and containing significant natural features such as a floodplain, undulating topography, and prairie grasslands. The experience of a naturally dark night or a pristine starry night sky are important elements of "scenery" within open space areas. The night sky in the area is still relatively dark; light sources in the vicinity of the site are comprised primarily of scattered streetlights in the rural living areas.

3.2.2 Effects of the Preferred Alternative

The construction and operation of Phase 1 of the new VA National Cemetery in the Southern Colorado area would be expected to have negligible, short-term and negligible-to-minor, long-term, adverse effects on aesthetics.

As identified in Section 3.1.2, an alternative could affect visual resources if it resulted in abrupt changes to the complexity of the landscape and skyline (i.e., in terms of vegetation, topography, or structures) when viewed from points readily accessible by the public. A visual analysis was conducted in a manner consistent with the referenced future development of a new National Cemetery on the site. The current design would develop the site in a manner that strives to preserve many of its existing features, such as hills, wetlands, and trees adjacent to arroyos. Indigenous and native plants would be used, helping to preserve existing aesthetics. Preparation of, and adherence to, a comprehensive Site Management Plan by a landscape architect would ensure that the long-term aesthetic quality of the cemetery is not compromised (AES Group, Inc. 2015).

During the October 2015 public scoping meeting, the VA received questions regarding the potential impacts of the Proposed Action on the local viewshed, specifically concerning vistas of Pikes Peak. Master Plan 5 notes that the Pikes Peak vista would be a focal point of the landscaping and site design to those arriving at and visiting the proposed National Cemetery (AES Group, Inc. 2015). Therefore, no adverse impacts would be expected on aesthetics as they relate to local viewsheds.

The cemetery buildings are "secondary" to the grounds; although considered an important element of interment services, they will be blended in a subtle manner within the context of the cemetery setting, surrounding topography, local vernacular architecture, and scenic grasslands. The buildings and site elements and features would adhere to the VA's *NCA Facilities Design Guide*, which dictates that the architectural design be integrated with the surrounding landscape, and have a residential, noninstitutionalized character (AES Group, Inc. 2015). As part of the strategy to meet Silver-level LEED® standards in energy efficiency and commercial airport overlay district requirements for nonintrusive lighting sources in accordance with state, county, and FAA regulations, site design lighting would conform to El Paso County and Federal Aviation Administration (FAA) standards. All lighting sources would face downwards and consist only of way-finding signage. There would be little to no nighttime lighting within the site, except for flagpole and security lighting; therefore, lighting is unlikely to affect night sky visual resources.

3.2.3 Effects of the No Action Alternative

The No Action Alternative would have no effect on aesthetics. Construction of a cemetery would not occur at the site, resulting in no change from the existing condition. Should the site ultimately be developed for another use, aesthetics effects could result from that changed land use.

3.2.4 Minimization/Management Measures

Future proposed cemetery development at the Preferred Alternative Site would comply with FAA lighting requirements and, to the extent possible, with El Paso County development guidelines. The following design measures and construction BMPs would be implemented to improve aesthetics:

- Incorporate existing topography and natural features into site design wherever possible.
- Incorporate elements of local vernacular architecture into facility and site design.
- Maintain landscaped areas, buildings, roadways, and signage.
- Design the site to accentuate existing viewsheds, including vistas of Pikes Peak.

Since the Proposed Action would not present any significant adverse effects on aesthetics, specific minimization measures would not be required.

3.3 Air Quality

3.3.1 Existing Conditions

The USEPA evaluates air quality compliance with the National Ambient Air Quality Standards (NAAQS), which measure seven criteria pollutants: carbon monoxide; nitrogen dioxide; ozone, which is measured by its precursors, nitrogen oxides and volatile organic compounds; sulfur dioxide; particulate matter measuring less than 10 microns in diameter; particulate matter measuring less than 2.5 microns in diameter; and lead. These criteria pollutants are those for which the USEPA has placed the greatest emphasis and has developed health-based concentrations for ambient air.

Air Quality Control Regions (AQCRs) that are in violation of NAAQS are designated as nonattainment areas; AQCRs with levels below NAAQS are designated as attainment areas. An area may also be classified as a maintenance area if it was once classified as nonattainment but has since reached attainment of NAAQS for a probationary period through implementation of a maintenance plan. El Paso County is currently designated as in attainment for all criteria pollutants (USEPA 2015). Therefore, the ROI, including the site, has good ambient air quality. A Conformity Determination is not required.

USEPA guidance stresses that, given the nature of GHGs and their persistence in the atmosphere, climate change impacts should be considered on a cumulative level. Federal agencies address emissions of GHGs by reporting and meeting reductions mandated in federal laws, EOs, and agency policies. The most recent of these are the USEPA's Mandatory Reporting of Greenhouse Gases Final Rule (40 CFR Parts 86, 87, 89 et al.); EO 13653, *Preparing the United States for the Impacts of Climate Change*; and EO 13693, *Planning for Federal Sustainability in the Next Decade*, which builds upon and supersedes EOs 13423 and 13514.

Given the current land use of the site, no sources of regulated air emissions exist (e.g., from boilers, emergency generators, or other minor equipment). As such, the VA, as the site owner, does not have, and is not required to have, a Title V operating permit based on current conditions. There are no sensitive air quality receptors in the immediate vicinity of the site.

3.3.2 Effects of the Preferred Alternative

The construction and operation of Phase 1 of the new VA National Cemetery in the Southern Colorado area would be expected to have minor, direct and indirect, short- and long-term adverse effects on existing air quality around the site, which is consistent with the findings presented in the Final PEA (VA 2012).

Phase 1 would include clearing, excavating, and grading of the 65-acre site; facilities construction; and road construction. Construction activities would generate criteria pollutant emissions and GHGs from heavy equipment and fugitive dust emissions during ground-disturbing activities. These emissions would cause minor, localized, temporary effects on air quality. The fugitive dust could cause nuisance concerns, such as reduced visibility on nearby roadways. These effects would be minor and temporary and would not be considered significant. The Preferred Alternative would require an Air Pollutant Emission Notice and General Construction Permit for Land Development Projects (CDPHE 2009).

During operation of Phase 1 and future phases, sources of air emissions would include emergency generators and vehicles visiting the site, which could result in negligible, nonsignificant effects on air quality. Based on the design, administrative and maintenance buildings would each have a diesel-driven standby generator sized to provide an alternative source of power to the entire building if the normal power source fails (i.e., one 112.5-kilovolt-ampere-generator, one 150-kilovolt-ampere-generator) (AES Group, Inc. 2015). Stationary internal combustion engines for emergency power that operate no more than 250 hours per year are considered *de minimis* and exempt from air permitting, but an Air Pollutant Emission Notice would be required (CDPHE 2014). Although a greater number of vehicles would be present on-site compared to the No Action Alternative, the Preferred Alternative would result in fewer regional emissions because veterans and their families would not be required to travel such great distances to other national cemeteries in Colorado.

3.3.3 Effects of the No Action Alternative

The No Action Alternative would result in negligible, adverse effects on air quality. Construction of a cemetery would not occur at the site, resulting in no change in air emissions. However, on a regional scale, the No Action Alternative may result in increased vehicles emissions, as veterans and their families are required to travel greater distances to other national cemeteries in the region. Should the site be developed for another use, air quality impacts could result from that changed land use and would depend upon the nature of the development.

3.3.4 Minimization/Management Measures

The following construction BMPs would be implemented to control and minimize fugitive dust emissions at the site:

- Use appropriate dust suppression methods during on-site construction activities. Available methods include application of water, dust palliative, or soil stabilizers; use of enclosures, covers, silt fences, or wheel washers; and suspension of earth-moving activities during high wind conditions.
- Maintain an appropriate speed to minimize dust generated by vehicles and equipment on unpaved surfaces.
- Cover haul trucks with tarps.
- Stabilize previously disturbed areas through revegetation or mulching if the area would be inactive for several weeks or longer.
- Visually monitor all construction activities regularly, in particular, during extended periods of dry weather, and implement dust-control measures, when appropriate.

In accordance with the VA's *Climate Change Adaptation Plan*, new VA buildings will use Adaptive Climatology Design Standards to prevent over- or under-designing building systems, reducing energy waste (VA 2014). Since the Proposed Action would not present any significant adverse effects on air quality, specific minimization measures would not be required.

3.4 Geology and Soils

The Final PEA (Section 3.5) presented background information on geology, topography, and soils. The Final PEA described potential impacts on these resources from construction and operation of a National Cemetery and BMPs to minimize potential impacts.

3.4.1 Existing Conditions

3.4.1.1 Geology

The project site is located within the Colorado Piedmont section of the Great Plains physiographic province. The Colorado Piedmont, formed during the Late Tertiary and Early Quaternary time (approximately two million years ago), is a broad, erosional trench that separates the Southern Rocky Mountains from the High Plains. Structurally, the site lies along the western flank of the Denver Basin. During the Late Mesozoic and Early Cenozoic periods (approximately 70 million years ago), intense tectonic activity occurred, causing the uplifting of the Front Range and associated downwarping of the Denver Basin to the east. Relatively flat uplands and broad valleys characterize the present-day topography of the Colorado Piedmont in this region.

Surficial geologic conditions at the site, as mapped by the Colorado Geological Survey (CGS) (Madole and Thorson 2002), indicate that the site is underlain by the Young Alluvium 1 and 2, followed by the cone-in-cone zone of Lavington. The Young Alluvium 1 is described as chiefly light brownish gray, grayish brown, and dark grayish brown, poorly sorted sand, silty sand, and minor pebble gravel. The Young Alluvium 2 is described as similar to Young Alluvium 1, except the formation includes several thin beds and lenses of dark grayish brown to very dark grayish brown sediment. The cone-in-cone formation generally consists of dark gray, clayey, or silty shale containing reddish brown siderite iron concretions, gray iron stained limestone concretions, thin bentonite beds, and concretions with cone-in-one structure.

The VA conducted a geotechnical investigation of the site concurrent with the PEA, including five borings. Subsurface materials encountered at the surface and underlying the topsoil predominantly consisted of silty sand and clay sand soils at depths ranging from 6 to 20 feet below ground surface. A subsequent geotechnical investigation associated with the master planning process analyzed selected samples from 54 borings of locations across the 374.3-acre parcel. Technicians subdivided the project area into three zones, with the majority of the Phase 1 footprint falling within Zone B and small areas of the site intersecting Zones A and C at the western and southern site boundaries respectively. Subsurface conditions Zone A indicated clay interbedded with sand to a depth of approximately 11 feet and underlain by sands. Zone B indicated surficial clays overlying interbedded layers of clay and sand. Zone C indicated surficial clays with isolated sand layers. Borings for this geotechnical study terminated at depths of up to 100 feet without reaching bedrock (Shannon and Wilson, Inc. 2015).

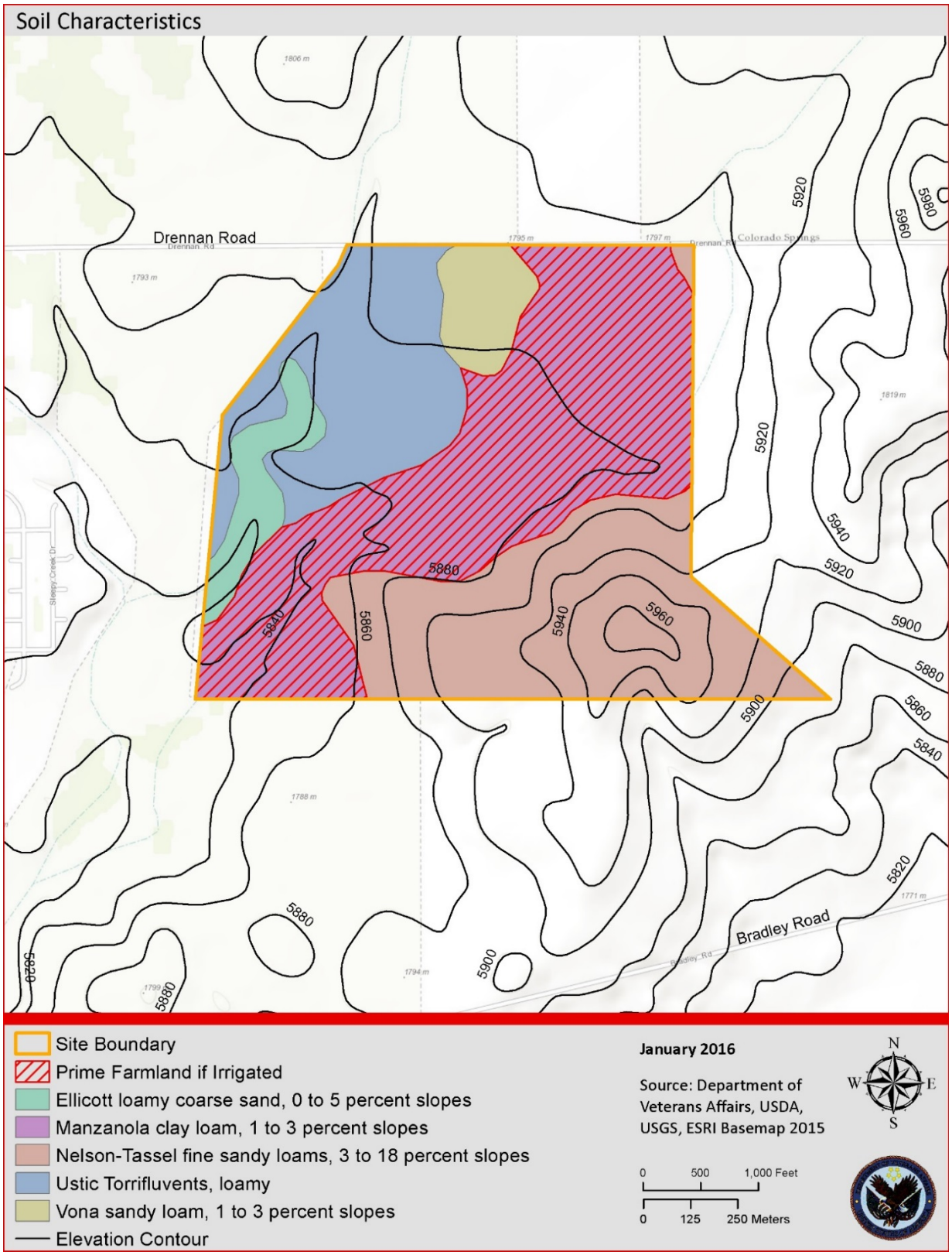
A review of the Elsmere U.S. Geologic Survey (USGS) Topographic Quadrangle (dated 1994) indicated that surficial topography in the region of the site is gently rolling, with a topographic high area in the northeastern portion of the site. From the high point (170 feet above mean sea level [AMSL]) in the northeastern portion of the site, the topography slopes downward to the northwestern portion of the site (approximately 70 feet AMSL), to the southwestern portion of the site (approximately 80 feet AMSL), and to the southeastern portion of the site (approximately 70 feet AMSL).

3.4.1.2 Soils (Including Prime Farmland Soils)

Manzanola clay loam covers 160 acres of the property, comprising nearly half its total acreage (see Figure 3-1). Other soils include Nelson-Tassel fine sandy loams (23 percent), Ustic Torrifluvents loam (19 percent), Ellicot loamy course sand (5 percent), and Vona-Unit sandy loam (5 percent). For the most part, because these are moderately coarse textured soils that are fairly well drained, they should not be highly erodible. The majority of the site, including Phase 1, consists of material with low swell potential near the surface. However, the southeast portion of the site appears to be more susceptible to swelling at greater depths (Shannon and Wilson, Inc. 2015). The Draft Geotechnical Design Report found clay soils that have a potential to swell, causing heave. Due to the risk of swell-related movements at this site, appropriate best management practices (BMP) are included to allow for, and/or minimize, potential impacts of heaving.

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, the Manzanola clay loam soil type may be characterized as prime farmland, if irrigated. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Prime farmland contains soils of the highest quality and can economically produce sustained high yields of crops when treated and managed according to acceptable farming methods (Soil Survey Division Staff 1993). Prime farmland is protected under the Farmland Protection Policy Act (FPPA) (7 U.S.C. 4201, et seq.) in order to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. Because this project has the potential to convert important farmland to nonfarm use, the VA coordinated with the NRCS to determine the potential effects of the Preferred Alternative on farmland soils (see Section 3.4.2).

Figure 3-1. Topographic and Soils Including Prime Farmland Map, Southern Colorado National Cemetery, Colorado



3.4.1.3 Soil Erosion and Stormwater Management

The USEPA has authorized the State of Colorado to administer the federal National Pollutant Discharge Elimination System (NPDES) program, including stormwater discharge permits. The state's permit program is known as the Colorado Discharge Permit System (CDPS) and is enforced by the Colorado Department of Public Health and Environment (CDPHE), Office of Environment Water Quality Control Division (WQCD). The CDPS stormwater program regulates point source discharges of stormwater into surface waters of the state of Colorado from certain municipal, industrial, and construction activities.

The cemetery will be landscaped, and appropriate grasses would be planted for aesthetic value and for erosion control. Permanently irrigated areas will include in-ground burial sections, landscaped areas around the columbarium, landscaped area around the public information center, administrative and maintenance buildings, the cemetery entrance, and the flagpole assembly area. Phase 1 will include approximately 20 irrigated acres, with an additional 18 irrigated acres added in Phases 2 and 3. The landscaping design was developed using water-wise landscaping principles. The plants selected are native to the El Paso County area and are adapted to that specific climate. There are a variety of trees, shrubs, flowering perennials, ferns, and vines in the design. The grass in prominent areas will be Bermuda grass, with the rest of the grass consisting of Bahia grass (AES Group, Inc. 2015).

3.4.2 Effects of the Preferred Alternative

Future development of a new National Cemetery on the site would have negligible-to-minor adverse impacts on geology and soils. No significant changes to topography would be expected on the Preferred Alternative site due to future proposed cemetery development. The proposed cemetery would be designed largely in concert with the natural topography, and alterations to drainage patterns would be ultimately beneficial to the site's flood regime (see Section 3.6.3). Paved areas would be designed to drain to a suitable, site-specific, and properly engineered and designed stormwater management system.

The Preferred Alternative would have minor, long-term adverse impacts on the site's topography. Due to the area's being essentially a broad rolling plain, no significant, major earth-moving operations would be required. The existing topography would be altered slightly by grading for roads, construction of buildings, and burial sites.

Minor, direct and indirect, short-term, adverse soil erosion and sedimentation (E&S) impacts would be expected during construction and operation of the site. Construction would remove vegetative cover, disturb the soil surface, and compact the soil. The soil would then be susceptible to erosion by wind and surface runoff. Exposure of the soils during construction has the potential to result in increased sedimentation into the on-site stormwater management systems, and the potential for off-site discharges of sediment-laden runoff. However, such potential E&S effects would be prevented through utilization of appropriate BMPs and adherence to the terms of the CDPS General Permit for Stormwater Discharge Associated with Construction Activities, the City of Colorado Springs Drainage Criteria Manual Volume 2, and the El Paso County Engineering Criteria Manual. Once construction is complete, no long-term E&S effects would be anticipated due to the nature of the Preferred Alternative. No long-term soil erosion effects would occur as a result of increased impervious surfaces on site. These effects would be minimized by including an appropriately designed stormwater system as part of final site design, and ensuring post-project hydrology mirrors pre-project hydrology (see Section 3.5).

In March 2016, the VA consulted with the NRCS Colorado Springs Field Office to determine the potential effects of the Preferred Alternative on prime farmland soils. The NRCS determined that the site does not contain Prime, Unique, or Local Important Farmland and concluded that the Preferred Alternative would have a Farmland Conversion Impact Rating of 0, indicating no effect (see Appendix B).

The draft development plan associated with the Preferred Alternative would not result in discharge of stormwater from the site for all flooding scenarios, with the exception of the 500-year flood. There is no need to convey water below grade in pipes except for the 500-year flood elevation (AES Group, Inc. 2015). Further information is included in Section 3.6.

3.4.3 Effects of the No Action Alternative

Under the No Action Alternative, no construction by the VA would occur. No impacts on geology or soils would occur.

3.4.4 Minimization/Management Measures

The use of BMPs to reduce potential effects during construction would minimize potential effects on geology and soils resources. These management measures include those discussed below.

Review and Approval Processes

In addition, future proposed cemetery development of the site would comply with the following state and local review and approval processes:

- obtaining a CDPS permit for the Preferred Alternative from the CDPHE
- complying, to the extent practical, with the City of Colorado Springs Drainage Criteria Manual Volume 2, and the El Paso County Engineering Criteria Manual

Soil Erosion and Stormwater Management

Implementing BMPs to reduce E&S effects during future construction would further minimize the potential effects on local soils and water quality. The construction contractor would implement the following, as appropriate and necessary, to protect surface water quality, as part of CDPS permit:

- Design impervious surfaces to drain to stormwater management systems.
- Install and monitor erosion-prevention BMPs, including silt fences, detention ponds, sediment berms, rip-rap, and/or other sediment-control structures.
- Reseed/revegetate areas temporarily cleared of vegetation.
- Install erosion-control fabric on slopes created by new construction during revegetation activities.
- Retain on-site vegetation to the extent possible.
- Create and maintain tree-lined borders to minimize viewshed impacts.
- Obtain all required permits in advance of construction activities and adhere to permit conditions during.

Soil E&S impacts would be minor through correct implementation of the CDPS permit. This would ensure compliance with state and federal water quality standards and minimize short- and long-term adverse impacts on soils.

Since the Proposed Action would not present any significant adverse effects on geology and soils, specific minimization measures would not be required.