Environmental Assessment for
Construction of a Veterans Care Center in
Virginia Beach, Virginia

May 2017

Virginia Department of Veterans Services
Office of the Commissioner
101 North 14th Street, 17th Floor
Richmond, VA 23219
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<th>Description</th>
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<tr>
<td>APE</td>
<td>Area of Potential Effects</td>
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<tr>
<td>BMP</td>
<td>Best Management Practice</td>
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<tr>
<td>CEQ</td>
<td>Council on Environmental Quality</td>
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<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
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<tr>
<td>CO</td>
<td>Carbon monoxide</td>
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<td>CWA</td>
<td>Clean Water Act</td>
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<tr>
<td>dB</td>
<td>Decibel</td>
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<tr>
<td>dBA</td>
<td>A-weighted decibel</td>
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<tr>
<td>DCR</td>
<td>Virginia Department of Conservation and Recreation</td>
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<tr>
<td>DEQ</td>
<td>Virginia Department of Environmental Quality</td>
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<tr>
<td>DHR</td>
<td>Virginia Department of Historic Resources</td>
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<td>DVS</td>
<td>Virginia Department of Veterans Services</td>
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<tr>
<td>EA</td>
<td>Environmental Assessment</td>
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<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
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<tr>
<td>EO</td>
<td>Executive Order</td>
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<td>EPA</td>
<td>Environmental Protection Agency</td>
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<td>ESA</td>
<td>Endangered Species Act</td>
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<tr>
<td>E&amp;SC</td>
<td>Erosion and Sediment Control</td>
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<tr>
<td>FIRM</td>
<td>Flood Insurance Rate Map</td>
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<tr>
<td>FONSI</td>
<td>Finding of No Significant Impact</td>
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<tr>
<td>FPPA</td>
<td>Farmland Protection Policy</td>
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<tr>
<td>GHG</td>
<td>Greenhouse Gas</td>
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<tr>
<td>HVAC</td>
<td>Heating, Ventilation, and Air Conditioning</td>
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<tr>
<td>HREC</td>
<td>Historical Recognized Environmental Condition</td>
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<tr>
<td>IPaC</td>
<td>Information for Planning and Conservation</td>
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<tr>
<td>MS4</td>
<td>Municipal Separate Storm Sewer System</td>
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<tr>
<td>NAAQS</td>
<td>National Ambient Air Quality Standards</td>
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<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<td>NHD</td>
<td>National Hydrology Dataset</td>
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<td>NHPA</td>
<td>National Historic Preservation Act</td>
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<tr>
<td>NO₃</td>
<td>Generic term for mono-nitrogen oxide</td>
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<tr>
<td>NRCS</td>
<td>Natural Resources Conservation Service</td>
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<td>NRHP</td>
<td>National Register of Historic Places</td>
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<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
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<tr>
<td>PM</td>
<td>Particulate Matter</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Fine Particulate Matter (less than 2.5 micrometers in diameter)</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Particulate Matter (less than 10 micrometers in diameter)</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>SO₂</td>
<td>Sulfur dioxide</td>
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<tr>
<td>SWPPP</td>
<td>Stormwater Pollution Prevention Plan</td>
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<tr>
<td>USACE</td>
<td>United States Army Corps of Engineers</td>
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<tr>
<td>USC</td>
<td>United States Code</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>USFWS</td>
<td>United States Fish and Wildlife Service</td>
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<tr>
<td>VA</td>
<td>Virginia</td>
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<tr>
<td>VaFWIS</td>
<td>Virginia Fish and Wildlife Information Service</td>
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<tr>
<td>V-CRIS</td>
<td>Virginia Cultural Resource Information System</td>
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<tr>
<td>VDGIF</td>
<td>Virginia Department of Game and Inland Fisheries</td>
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<tr>
<td>VDOT</td>
<td>Virginia Department of Transportation</td>
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<tr>
<td>VOCs</td>
<td>Volatile organic compounds</td>
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<tr>
<td>VSMP</td>
<td>Virginia Stormwater Management Program</td>
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<tr>
<td>WOUS</td>
<td>Water of the United States</td>
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Executive Summary

The Commonwealth of Virginia, Department of Veterans Services (DVS) proposes to construct a new Veterans Care Center in the City of Virginia Beach, Virginia (Proposed Action). Because DVS plans to seek funding from the U.S. Department of Veterans Affairs (Veterans Affairs), DVS and Veterans Affairs have prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] §§ 4321-4347), the President’s Council on Environmental Quality (CEQ) NEPA Implementing Regulations (Title 40 of the Code of Federal Regulations [CFR] §§ 1500-1508), Veterans Affairs’ NEPA regulations titled “Environmental Effects of the Department of Veterans Affairs Actions” (38 CFR Part 26), and Veterans Affairs’ NEPA Interim Guidance for Projects (VA 2010).

Under the Proposed Action, DVS would construct a new residential care facility with 120 to 128 beds to provide skilled nursing, Alzheimer’s/memory care, and short-term rehabilitative care to veterans. The Veterans Care Center would provide dining, physical activity and physical therapy, entertainment and social event services to veterans in both indoor and outdoor spaces. The proposed facility would feature all private rooms organized into household and neighborhoods that surround a central community center.

The proposed project site is in the City of Virginia Beach on property to be owned by the Commonwealth of Virginia. The property comprises approximately 26 acres and is located near the intersection of West Neck Road and North Landing Road.

The purpose of the Proposed Action is to construct a state-of-the-art residential care facility to help meet the current and projected future residential skilled nursing, Alzheimer’s/memory, and short-term care needs of veterans in the Hampton Roads area of Virginia. The Proposed Action is needed because the two existing veterans care facilities in Virginia do not currently have sufficient capacity to meet the demand for veterans’ medical programs and services, and they are geographically too far from the target area of Hampton Roads.

DVS and the VA have prepared this EA in accordance with NEPA to analyze the potential environmental effects of the Proposed Action. The analysis performed in this EA concludes that the Proposed Action would not have significant adverse impact, either individually or cumulatively, to the human environment, provided mitigation measures consisting of best management practices and regulatory compliance measures described in this EA are implemented. Therefore, this EA concludes that a Finding of No Significant Impact is appropriate and that an Environmental Impact Statement is not required.
1.0 INTRODUCTION

The Commonwealth of Virginia, Department of Veterans Services (DVS) proposes to construct a new Veterans Care Center in the City of Virginia Beach, Virginia (Proposed Action). Because DVS plans to seek funding from the U.S. Department of Veterans Affairs (Veterans Affairs), DVS and Veterans Affairs have prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] §§ 4321-4347), the President’s Council on Environmental Quality (CEQ) NEPA Implementing Regulations (Title 40 of the Code of Federal Regulations [CFR] §§ 1500-1508), Veterans Affairs’ NEPA regulations titled “Environmental Effects of the Department of Veterans Affairs Actions” (38 CFR Part 26), and Veterans Affairs’ NEPA Interim Guidance for Projects (VA 2010).

These requirements specify that Veterans Affairs must evaluate the potential environmental impacts of Veterans Affairs-related funding decisions prior to taking action. This EA is intended to be a concise document that 1) briefly provides sufficient evidence and analysis for determining whether significant impacts would result from implementing the Proposed Action and whether the Veterans Affairs should prepare an Environmental Impact Statement (EIS); 2) aids the Veterans Affairs’ compliance with NEPA when no EIS is necessary; and 3) facilitates preparation of an EIS if one is necessary. If the analysis finds there are no significant impacts, a Finding of No Significant Impact (FONSI) can be issued concluding the NEPA process. This EA has been prepared to address compliance with a variety of other Federal statutes, including the Endangered Species Act (ESA), Clean Water Act (CWA), Clean Air Act, National Historic Preservation Act (NHPA), various Executive Orders (EOs), and other applicable Federal and State regulations.

1.1. Project Background

The proposed project site is in the City of Virginia Beach on property to be owned by the Commonwealth of Virginia. The property is located near the intersection of West Neck Road and North Landing Road (Figure 1). The Veterans Care Center would be constructed on approximately 26 acres in an agricultural field currently owned by the City of Virginia Beach (Figure 2).

The property to the east, also owned by the City, is composed primarily of woods, the majority of which (14.22 acres) are forested wetlands, as verified by the U.S. Army Corps of Engineers (USACE) in 2015. DVS would obtain some of the forest/forested wetlands to the east as a vegetative buffer a minimum of 90 feet and a maximum of 165 feet wide; therefore, the total acreage of forest to the east that DVS would own has not been finalized, but is anticipated to be between one and four acres. Any forested wetlands obtained by DVS would be left undisturbed and would not be developed. A 300-foot-wide row of trees exists on the north side of the agricultural field, about half of which would be in the project site boundary. The Virginia Beach National Golf Club golf course is located immediately north of this 300-foot strip of trees. A narrow strip of trees borders a portion of the western property boundary, and there is a new
residential subdivision under construction immediately west of the property. To the south and southwest is residential housing. There are several existing man-made open channels (agricultural ditches) running across the agricultural field, two of which are larger than the others (the two primary channels are shown on Figure 2). These channels are not under the jurisdiction of the USACE (USACE 2015). Groundwater depths within the proposed project site (the agricultural field) range from three to four feet below ground surface. A three- to four-foot layer of soil with high clay content occurs at the ground surface and is underlain by sand (ECS 2016). Soils would be amended to support site construction.

1.1. Purpose and Need

The Commonwealth of Virginia currently operates two Veterans Care Centers: the Virginia Veterans Care Center in Roanoke, which opened in 1992, and the Sitter & Barfoot Veterans Care Center in Richmond, which opened in 2008. The Proposed Action would be the state’s third veterans care facility, and a fourth Veterans Care Center is being planned for Northern Virginia in Fauquier County. DVS identified the need to provide residential care services to veterans in the Northern Virginia and Hampton Roads regions due to the large population, and thus numbers of veterans, and lack of nearby existing facilities in these areas.

The purpose of the Proposed Action is to construct a state-of-the-art residential care facility to help meet the current and projected future residential skilled nursing, Alzheimer’s/memory, and short-term care needs of veterans in the Hampton Roads area of Virginia.

The Proposed Action is needed because the two existing veterans care facilities in Virginia do not currently have sufficient capacity to meet the demand for veterans’ medical programs and services, and they are geographically too far from the target area of the Hampton Roads region.
Figure 1. Project Location
Figure 2. Site Layout and Project Area

Note: Plans shown are not final and may be modified slightly to reduce the footprint or revise the exact configuration of the buildings and roads.
2.0 ALTERNATIVES

2.1. Development of Alternatives

NEPA, CEQ regulations, and Veterans Affairs NEPA guidance require a range of reasonable alternatives to be explored and objectively evaluated. Alternatives eliminated from detailed analysis must be identified along with a brief discussion of the reasons for eliminating them. DVS considered an alternative as "reasonable" only if it would enable DVS to construct and operate a new facility that would meet the purpose of and need for the Proposed Action.

DVS initially considered three sites as potential locations for construction of a new Veterans Care Center in the Hampton Roads area of Virginia including:

- Virginia Beach (the Proposed Action);
- the City of Hampton, Armistead Pointe Development; and
- the City of Hampton, Hampton Roads Center North campus area.

DVS conducted a site selection analysis that included scoring and ranking of the potential sites in the following categories (Wiley Wilson 2016):

- property size and shape (17% of the total score)
- location including proximity to medical care and public safety, veteran population, and interstate (15% of total score)
- contextual compatibility and quality of life including aesthetics, zoning, connectivity to community, and livability (12% of total score)
- traffic control (4% of total score)
- drainage and stormwater including topography, impacts to floodplain, tree cover related to stormwater management (16% of total score)
- soils based on suitability for construction (12% of total score)
- environmental considerations including potential impacts to waters of the U.S. (streams and wetlands), threatened and endangered species, hazardous materials and permitting requirements (19% of total score)
- adequacy of existing utilities (5% of total score)

The Virginia Beach site received the highest score in the site selection analysis; therefore, the other two potential sites were dismissed from further consideration during initial site selection.

2.2. Alternatives Retained for Detailed Analysis

This section describes the alternatives that will be carried forward for analysis in this EA; construction of a Veterans Care Center in Virginia Beach (the Proposed Action), as well as the No Action Alternative. No other reasonable alternatives were identified, as described in Section 2.1. A summary of the potential impacts from the Proposed Action and No Action Alternative evaluated in this EA is provided in Section 6.
2.2.1. Proposed Action

Under the Proposed Action, the DVS would construct a new residential care facility with 120 to 128 beds to provide skilled nursing, Alzheimer’s/memory care, and short-term rehabilitative care to veterans. The Veterans Care Center would also provide dining, physical activity and physical therapy, entertainment and social event services to veterans in both indoor and outdoor spaces. The proposed facility would feature all private rooms organized into households and neighborhoods that surround a central community center (Figure 3). The campus would also include an access road, parking lots, and landscaped areas. The facility will be designed to Virginia Energy Conservation & Environmental Standards. All proposed buildings would be no more than one and ½ stories tall and would include exterior lighting.

![Figure 3. Architectural Rendering of Proposed Veterans Care Center](image)

The Veterans Care Center would be built on approximately 26 acres in the existing agricultural field (Figure 2). DVS would obtain some of the forest, including forested wetlands, to the east of the agricultural field to provide a vegetative buffer a minimum of 90 feet and a maximum of 165 feet wide. The total acreage of forest to the east that DVS would own has not been finalized, but is anticipated to be between one and four acres. Any forested wetlands obtained by DVS would be left undisturbed and would not be developed.

All staging of equipment and materials and construction-related parking would occur on-site in areas of existing cleared space in the agricultural field. Access to the Veterans Care Center would be provided from an entrance driveway that would connect to a new extension of Nimmo Parkway on the north side of the project site (the City of Virginia Beach is constructing the Nimmo Parkway extension as part of the City’s Comprehensive Plan to connect Nimmo Parkway to Indian River Road). There would be a temporary access road constructed on the
south side of the property connecting to North Landing Road that would be used during construction.

Up to approximately three acres of trees would be permanently removed within the project site boundary for: construction of the entrance driveway, construction within the strip of trees on the northern portion of the property, and construction of the temporary construction access road on the southern portion of the property. DVS designed the facility to avoid disturbing 4.2 acres of the total 7 acres of trees within the 26-acre agricultural field area. DVS would plant trees and shrubs to provide for or enhance a vegetated buffer along the western and southern sides of the agricultural field a minimum of 15 feet wide to provide some visual buffer of the Veterans Care Center to the adjacent residential housing.

The Veterans Care Center would be operated by DVS and would employ approximately 150 staff operating on a three-shift cycle (days, swings, nights) seven days a week for direct patient care, plus an 8 a.m. to 5 p.m. office shift Monday through Friday. DVS anticipates that traffic associated with the Veterans Care Center would include: approximately one ambulance per day, vehicles associated with approximately 120 (out of 150) employees arriving and departing each weekday (fewer on the weekends), an average of approximately 50 visitor vehicles a day, and approximately three delivery trucks per week. The facility would include a single two-megawatt emergency generator to provide backup to the heating, ventilation and air conditioning (HVAC) system during power outages.

DVS would install new underground utilities that would connect to existing underground and above-ground utilities along North Landing Road. Stormwater would be managed through the construction of multiple stormwater wet ponds designed to have a shallow pool of water all the time along with the capacity to manage the total volume of rainfall from the 95th percentile storm, thus maintaining pre-development hydrology as required under Section 438 of the Energy Independence and Security Act.

Construction would start in October 2017, following acquisition of the property by DVS, and last approximately two years, with the facility planned to open in late 2019.

2.2.2. No Action Alternative

Under the No Action Alternative, DVS would not construct a new veterans care facility in the Hampton Roads area of Virginia. The DVS goal of providing safe, economical, and high-quality integrated healthcare services to veterans in the Hampton Roads area would not occur. The proposed project site in Virginia Beach would likely be developed by others. Although the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, this alternative provides a comparative baseline against which to analyze the effects of the action alternatives, as required under 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.
3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES

This chapter describes the environmental conditions at the proposed project site and vicinity and potential impacts that may occur as a result of the Proposed Action and the No Action Alternative. The existing conditions provide a baseline for analyzing potential impacts. The analysis considers direct, indirect, short-term or long-term, adverse or beneficial impacts. Where applicable, best management practices and mitigation measures that would minimize or eliminate adverse impacts are identified. Section 3.14 discusses the cumulative impacts that may be associated with the Proposed Action in conjunction with other past, present, and reasonably foreseeable activities in the project area.

3.1. Aesthetics

Aesthetics include the physical (natural and manmade) and biological features of the landscape that contribute to the visual character or scenic quality of the area. Scenic quality is a measure of the visual appeal of the landscape, which is subjective and varies among observers.

3.1.1. Existing Environment

The visual character of the project site includes open space consisting of an agricultural field, areas of un-mowed grass, and trees. Features surrounding the project site that contribute to the visual character of the area include roads, trees to the north and east, and residential homes to the west, southwest. The project site is directly visible to the residents along the southern property border, drivers along North Landing Road, and will be visible from the new homes being constructed west of the project site. Visibility varies based on the amount of trees on private property between the homes and the project site.

3.1.2. Environmental Consequences

3.1.2.1. Proposed Action

Construction

Construction activities would temporarily adversely affect the visual quality of the area due to the presence of heavy equipment and unfinished stages of the site preparation and building construction. Impacts on visual quality would change over the course of construction, progressing toward negligible in the later stages as landscaping is completed and work focuses on the interiors of completed structures. To the extent possible, construction activities would be limited to daylight hours to minimize impacts from nighttime lighting from the use of construction equipment lights. Security lighting would be installed at construction staging areas, which would have short-term adverse impacts on existing nighttime light levels. All areas disturbed during construction, including temporary staging and disturbance areas, would be restored to their pre-existing condition or better.
Operation

The Veterans Care Center would resemble a residential development (see Figure 3) as opposed to a commercial facility or multi-story hospital. All proposed buildings would be no more than one and ½ stories tall and there would be landscaping around the buildings and parking areas. The new buildings would include exterior lighting; DVS would incorporate exterior lighting mitigation measures such as cutoff shields and non-glare fixture design, and directing the light downward to minimize impacts. The structures would create a noticeable long-term difference compared to the existing open space/agricultural landscape, and because aesthetics is objective, to some, the impacts may be adverse, but to others, the addition of the Veterans Care Center may result in neutral feelings related to aesthetics or may improve the visual quality of the area.

DVS would plant trees and shrubs to provide for or enhance a vegetated buffer along the western and southern sides of the agricultural field a minimum of 15 feet wide to provide some visual buffer of the Veterans Care Center to the adjacent residential housing (see Figure 2). Given the screening that would be provided by the proposed vegetated buffers, the low profile of the buildings, and that the trees currently providing screening of the site along the north and east sides of the property would remain, the new Veterans Care Center is not anticipated to result in significant adverse changes to the viewshed.

3.1.2.2. No Action

Because there would be no immediate change to the existing character of the site under the No Action Alternative, there would be no changes to aesthetics. Some residents or observers may view the existing open space and condition of the project site (an agricultural field) as aesthetically neutral or displeasing. Even though DVS would not own or develop the site under the No Action Alternative, the project site would likely be developed for commercial and/or industrial use; future development would likely have similar impacts as the Proposed Action.

3.2. Land Use

Land use is described by land activities, ownership, and the governing entities’ management plans. Local zoning defines land use types and regulated development patterns.

3.2.1. Existing Environment

The project site is currently owned and managed by the City of Virginia Beach. The site is vacant and undeveloped. The majority of the property is an agricultural field with wooded areas on the northern and eastern portion of the site. The Virginia Beach National Golf Club is located north of the property, and a new residential subdivision is currently under construction to the west. To the south and southwest is residential housing. The site is currently zoned as agricultural (AG1 and AG2) and located in an area characterized by the City of Virginia Beach as a “special economic growth area” called Princess Anne Commons, where future land use plans call for low-impact, mixed-use development (City of Virginia Beach 2016). The existing
zoning for the surrounding community is predominantly residential and office; no heavy industry is currently allowed in the vicinity of the project site (Wiley Wilson 2016).

3.2.2. Environmental Consequences

3.2.2.1. Proposed Action

Construction

Construction activities would have no impacts on land use or zoning. The project site would temporarily be a construction site.

Operation

Construction of the proposed Veterans Care Center would be allowed under a conditional use permit from the City of Virginia Beach. The property is located in a “special economic growth area” that calls for low-impact, mixed-use development, therefore the change in land use is consistent with approved planning and zoning (City of Virginia Beach 2016). There would be long-term changes to land use, but these impacts would not be significant or adverse.

3.2.2.2. No Action

Under the No Action Alternative, land use at the project site would not change from existing conditions. Although DVS would not own or develop the site under the No Action Alternative, future low-impact development would likely occur at the project site and would have similar impacts as the Proposed Action.

3.3. Air Quality

The Clean Air Act, as amended, requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. NAAQS have been established for six principal, or "criteria" pollutants: ozone, carbon monoxide (CO), nitrogen dioxide, sulfur dioxide (SO₂), lead, and particulate matter (PM) including coarse particulate matter less than or equal to 10 microns (PM₁₀), and fine particulate matter less than or equal to 2.5 microns (PM₂.₅). Ground-level ozone results from a chemical reaction of sunlight, volatile organic compounds (VOCs), and nitrogen oxides (NOₓ), which are the two primary ozone precursors (and to a lesser extent CO). Airsheds that cannot attain compliance with the NAAQS are designated as non-attainment areas, while those areas that meet the NAAQS are designated as attainment areas.

The Virginia DEQ Air Division, on behalf of the State Air Pollution Control Board, is responsible for developing regulations that implement Virginia’s Air Pollution Control Law (Virginia Code §10.1-1300 et seq.). The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The DEQ Air Division regulates emissions of air pollutants from industries and facilities and implements programs designed to ensure that Virginia meets national air quality standards.
In addition to NAAQS criteria pollutants, the impact of greenhouse gases (GHGs) is also considered during air quality evaluation. Global climate change is a transformation in the average weather of the Earth, which can be measured by changes in temperature, wind patterns, and precipitation. Scientific consensus has identified human-related emissions of GHGs above natural levels as a significant contributor to global climate change (USCCSP 2009). GHGs effectively trap heat in the atmosphere and influence the Earth’s temperature. GHGs include water vapor, carbon dioxide, methane, nitrous oxide, ground-level ozone, and fluorinated gases such as chlorofluorocarbons and hydrochlorofluorocarbons.

In 2016, CEQ issued Guidance on Considering Climate Change in NEPA Reviews, which provides Federal agencies with direction on when and how to consider the effects of greenhouse gas emissions and climate change in their evaluation of proposed Federal actions. The guidance characterizes climate change as a global issue exacerbated by a series of small decisions and uses projected GHG emissions as a proxy for assessing a Proposed Action's potential climate change impacts. The guidance also establishes 25,000 tons per year as a reference point under which a quantitative analysis of greenhouse emissions is not warranted "unless quantification below that reference point is easily accomplished." The guidance states that the reference point relates to the disclosure of impacts, not to the determination of the significance of those impacts and notes that NEPA requires agencies to consider "the potential significance of the climate change impacts of their Proposed Actions, [based on] both context and intensity, as they do for all other impacts" (CEQ 2016).

### 3.3.1. Existing Environment

The project area is in an attainment area for all criteria pollutants (EPA 2016a); therefore, a General Conformity (40 CFR Part 93, Subpart B) analysis is not needed.

### 3.3.2. Environmental Consequences

#### 3.3.2.1. Proposed Action

**Construction**

Construction activities would generate particulate emissions (fugitive dust) from grading the ground surface for site preparation, excavating (e.g., for installing utilities and building foundations), operation of heavy equipment and driving construction vehicles on unpaved and paved roads at the project site. During construction, the construction contractor would be required to minimize fugitive dust by implementing dust control measures such as application of water to suppress dust and washing down construction vehicles and paved roadways immediately adjacent to the construction site. Fuel combustion in construction vehicles would temporarily result in increased emissions of VOCs, NOx, SO2, PM2.5 and CO. The construction contractor would implement Best Management Practices (BMPs) such as use of compressed natural gas as fuel and minimizing idling of construction and delivery vehicles to the extent practicable to minimize impacts. Construction workers would use privately owned vehicles to travel to and from the
project site during the construction, which would also result in temporary emissions. Construction activities at the project site would not significantly adversely affect air quality.

**Operation**

DVS would install and operate stationary air emission sources, including HVAC systems at the proposed facility, which would result in long-term, less-than-significant effects to local air quality during facility operations. One diesel-fueled two-megawatt generator would be used at the Veterans Care Center for backup power during emergencies. Because DEQ stipulates that diesel-fueled emergency generators with 1,125 kilowatts or more are not exempt from air permitting, DVS would be required to obtain an air quality permit from the DEQ.

Potential air quality impacts would be minimized by implementing the requirements for protection of air resources outlined in the Veterans Affairs Specification Section 015719, *Temporary Environmental Controls*. These include compliance with federal air quality regulations and standards, and control of particulate matter, CO emissions, and odors. Emissions associated with hazardous air pollutants (e.g. formaldehyde, acetaldehyde, acrolein, methanol, polycyclic aromatic hydrocarbons, volatile organic carbons, CO, NOx, and PM) are regulated in the National Emission Standards for Hazardous Air Pollutants; DVS would comply with the emission limitations, operating limitations, and other requirements detailed in 40 CFR 63 Subpart ZZZZ (§63.6605).

Operation of the Veterans Care Center would result in emissions from vehicles associated with workers and bringing patients to/from the facility; DVS estimates that approximately one ambulance per day and three trucks per week would travel to and from the Veterans Care Center. In addition, commute trips for approximately 120 employees on weekdays (fewer on the weekends) would result in 240 trips per day to/from the project site. Emissions from these vehicles are not expected to substantially adversely impact local air quality at the project site and surrounding area.

The Proposed Action would result in negligible additions of greenhouse gas emissions at a local and regional scale, therefore, a quantitative analysis of greenhouse emissions is not warranted. DVS does not anticipate any significant impacts on air quality or climate change under the Proposed Action.

**3.3.2.2. No Action**

The project site would not be used for the Veterans Care Center and there would be no construction or operational impacts on air quality. Although DVS would not own or develop the site under the No Action Alternative, the project site would likely be developed for commercial and/or industrial use; future development would have similar impacts on air quality as the Proposed Action.
3.4. Cultural Resources

Cultural resources include both archaeological resources and historic structures in the built environment. The NHPA of 1966 (Public Law 89-665; 16 USC §470 et seq.) as amended, outlines Federal policy to protect historic properties and promote historic preservation in cooperation with States, Tribal governments, local governments, the public and other consulting parties. The NHPA established the National Register of Historic Places (NRHP) and designated the Virginia Department of Historic Resources (DHR) as the entity responsible for administering State-level programs in the Commonwealth of Virginia. Section 106 of the NHPA outlines the procedures that Federal agencies follow to consider the effect of their actions on historic properties. The Section 106 process applies to a Federal undertaking that has the potential to affect historic properties, defined in the NHPA as those properties (i.e., archaeological sites, buildings, structures, historic districts, and objects) that are listed in or eligible for listing in the NRHP. For state projects or activities on state lands, DHR is afforded an opportunity to review and comment on: (1) the demolition of state property; (2) major state projects requiring an Environmental Impact Report; (3) archaeological investigations on state-controlled land; (4) projects that involve a landmark listed in the Virginia Landmarks Register; (5) the sale or lease of surplus state property; (6) exploration and recovery of underwater historic properties; and (7) excavation or removal of archaeological or historic features from caves.

Although buildings and archaeological sites are most readily recognizable as historic properties, a diverse range of resources are listed in the NRHP, including roads, boundary markers, shipwrecks, trolley cars, battlefields and landscapes. Under Section 106, Federal agencies are responsible for identifying historic properties within the Area of Potential Effects (APE) for an undertaking, assessing the effects of the undertaking on those historic properties, if present, and considering ways to avoid, minimize, and mitigate any adverse effects of its undertaking on historic properties. The APE is the geographic area within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist.

3.4.1. Existing Environment

The direct APE for architectural and archaeological resources is defined as the project site boundary (primarily the agricultural field, but also including the area where the permanent and the temporary construction access roads would be constructed outside of the agricultural field). Based on the DHR Virginia Cultural Resource Information System (V-CRIS) database search (See DHR consultation in Appendix A), no architectural or archaeological resources are within the direct APE (Figure 4). According to V-CRIS, no Phase I Archaeological Surveys have been undertaken within the project site; it is not known whether any archaeological surveys of the site have been undertaken but not recorded in V-CRIS.

The indirect APE, which includes architectural resources that are evaluated for potential effects on their viewsheds, is defined as a 0.5-mile buffer around the project site. V-CRIS identified five architectural resources in the indirect APE (Appendix A). Of these, only one architectural resource, the Virginia Beach Courthouse Village and Municipal Center Historic District, has
been evaluated as Eligible for listing in the NRHP. DHR determined that two of the architectural properties, the Court House Elementary School and the Farm on Princess Anne Road, are Not Eligible for NRHP listing. The remaining two properties, a house on North Landing Road and the Hickory Bridge School, have not been evaluated for NRHP eligibility. The viewsheds of all five architectural properties are separated from the project site by forest, roadway, commercial development, and/or residential development (Figure 4).

Figure 4. Cultural Resources in the Project Area
3.4.2. Environmental Consequences

3.4.2.1. Proposed Action

Construction

Based on the results of V-CRIS, which did not identify any architectural or archaeological resources within the project site boundary, DVS does not anticipate that the proposed project would result in direct adverse effects to cultural resources from ground disturbance or construction activities.

Operation

DVS evaluated potential effects on architectural resources in the indirect APE from potential changes to viewsheds that would result from the addition of the Veterans Care Center. The Virginia Beach Courthouse Village and Municipal Center Historic District, which has been evaluated as Eligible for listing in the NRHP, is separated from the project site by forest, roadway, commercial development, and residential development, and there are no direct views of the project site from this historic district. The proposed Veterans Care Center would be designed to maintain the aesthetics and character of a residential community. Because the project site is separated from the historic properties by existing forest, commercial and/or residential development, and would be further separated by the proposed vegetative buffers, there would be no direct views of the project site, and thus the proposed Veterans Care Center, from historic properties. Therefore, DVS has determined that the Proposed Action would not result in adverse effects on the viewshed of historic properties identified in the indirect APE.

On February 4, 2017, DVS submitted a letter to DHR requesting concurrence that the Proposed Action would have no direct or indirect adverse effects on archaeological or architectural resources. On March 6, 2017 DHR concurred with DVS’s determination of no effects on historic properties (Appendix A).

3.4.2.2. No Action

The project site would not be used for the Veterans Care Center and there would be no construction or operational impacts on cultural resources. Although DVS would not own or develop the site under the No Action Alternative, the project site would likely be developed for commercial and/or industrial use; viewshed impacts from future development would depend on the type of structure built and therefore may not be similar to potential impacts from development of the site by DVS.

3.5. Geology, Soils, and Topography

Geology and soils include the physical surface and subsurface features and landforms of the project site. The Farmland Protection Policy Act (FPPA) (7 USC §4201 et seq.) states that Federal agencies must “minimize the extent to which Federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses…” (NRCS 2013). Resources
protected by the FPPA include prime and unique farmland. However, according to the FPPA, farmland does not include land that is already in or committed to urban development (NRCS 2013). The definition of farmland already in urban development includes lands identified as “urbanized areas” on the U.S. Census Urban Area Reference Maps. The project site meets the definition of farmland already in urban development because it is in the Virginia Beach, VA urbanized area on the U.S. Census Bureau map (USCB 2010).

To minimize soil erosion and sedimentation, the Virginia Stormwater Management Program (VSMP) regulations require project proponents to develop project-specific Erosion and Sediment Control (E&SC) plans for land-disturbing activities of 10,000 square feet or greater (or local thresholds when they are more stringent than state requirements), and to submit the plan to DEQ for review and approval prior to commencing land-disturbing activity at the project site. For projects that involve a land-disturbing activity of 1 acre or greater, preparation of a project-specific stormwater management plan for review and approval by DEQ is required prior to initiation of any regulated activities at the project site. The operator or owner of a construction activity involving land disturbance of equal to or greater than 1 acre is required to register for coverage under the General Permit for Stormwater Discharges from Construction Activities and develop a project-specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit, and the SWPPP must address water quality and quantity in accordance with the VSMP permit regulations.

3.5.1. Existing Environment

The project site is generally level with elevation at approximately 13 to 14 feet above mean seal level (Wiley Wilson 2016). Virginia Beach is located in an area with very small probability of seismic activity (FEMA 2015). The project area is underlain by the Tabb Formation – Lynnhaven Member, a young geologic layer that consists of various sediments including pebbly and cobbly sand grading upward into muddy, fine sand and silt (USGS 1993). Soils at the project site are mapped as loams and silt loams (NRCS 2016); however, recent on-site testing for the preliminary engineering design found a layer of clay at the ground surface down to approximately three feet deep, with a layer of sand below the clay (ECS 2016). All soils are classified as hydric (NRCS 2016). Soils at the project site are classified as Prime Farmland if Drained (NRCS 2015); however, the project site is located in an urbanized area as designated by the U.S. Census Bureau (USCB 2010) so the FPPA does not apply.

3.5.2. Environmental Consequences

3.5.2.1. Proposed Action

Construction

Depth of excavation for construction activities is not likely exceed five to ten feet below ground surface, and it is not anticipated that excavation activities would encounter bedrock. If deeper excavations or drilling were required and rock was encountered during construction, impacts on
geology would be negligible. The high clay content soils at the ground surface would be amended to make them more suitable for construction of buildings and pavement.

There would be short- and long-term minor adverse impacts on soils due to removal of topsoil for site leveling and grading, disturbance of the ground surface layer in areas where soil is not removed, and changes to soils from any soil amendments that would be added. Grading and leveling would result in negligible changes to site topography since the site is already flat. Disturbed and exposed soils would be prone to erosion by wind and stormwater. DVS would minimize potentially adverse impacts from erosion by implementing a site-specific E&SC plan prior to initiating ground-disturbing activities. DVS would obtain a Virginia Pollutant Discharge Elimination System General Construction Permit prior to construction and would implement the E&SC plan, including erosion control BMPs, during and after construction to stabilize soils. Excavated soil would be managed in accordance with applicable local, State, and Federal regulations. If contaminated soils/materials are discovered during construction activities, work would cease until the appropriate procedures could be implemented and applicable permits obtained. Although soils at the project site are classified as Prime Farmland if Drained (USDA 2016), the permanent conversion of these soils from potential farmland to development is not a significant adverse impact because the project site is in an urbanized area (USCB 2010).

Accidental release of contaminants, such as pollutants from vehicles or equipment, could occur. The impacts of an accidental release on soils could be adverse, although the likelihood of an accidental release would be low due to vehicle and equipment maintenance as well as implementation of spill prevention and containment measures.

**Operation**

Operation of the Veterans Care Center would have no impacts to topography, geology, and soils.

**3.5.2.2. No Action**

The project site would not be used for the Veterans Care Center and there would be no impacts on geology, soils or topography. Although DVS would not own or develop the site under the No Action Alternative, the project site would likely be developed for commercial and/or industrial use; future development would likely have similar impacts as the Proposed Action.

**3.6. Water Resources**

Hydrology addresses surface and stormwater drainage patterns, whereas water quality addresses the control of stormwater runoff to protect the quality of receiving waters, and the presence and quality of groundwater.

The CWA (33 U.S.C. §1251 et seq.), as amended in 1977, established the basic framework for regulating discharges of pollutants into the waters of the United States (WOUS). The CWA National Pollutant Discharge Elimination System (33 U.S.C. §1342) requires permits for stormwater discharges associated with construction activities. EO 11990 *Protection of Wetlands* requires Federal agencies to avoid or minimize adverse impacts on wetlands.
EO 11988 *Floodplain Management* requires Federal agencies to avoid direct or indirect support of development within the 100-year floodplain whenever there is a practicable alternative. The Federal Emergency Management Agency uses Flood Insurance Rate Maps (FIRMs) to identify the regulatory 100-year floodplain for the National Flood Insurance Program.

The DEQ Office of Stormwater Management administers the following laws and regulations governing construction activities:

- Virginia Erosion and Sediment Control Law (§62.1-44.15:51 *et seq.*) and Regulations (9VAC25-840)
- Virginia Stormwater Management Act (§62.1-44.15:24 *et seq.*)
- VSMP regulation (9VAC25-870)
- 2014 General Virginia Pollutant Discharge Elimination System Permit for Discharges of Stormwater from Construction Activities (9VAC25-880)
- VSMP General Permit for Stormwater Discharges from Construction Activities related to Municipal Separate Storm Sewer Systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the VSMP (9VAC25-890-40)

As described in Section 3.5, VSMP regulations require E&SC and stormwater management plans, coverage under the General Permit for Stormwater Discharges from Construction activities, and preparation of a SWPPP.

### 3.6.1. Existing Environment

The project site is located in the West Neck Creek subwatershed of the Albemarle watershed (Hydrologic Unit Code 03010205). Surface runoff from the project site flows primarily into existing non-jurisdictional man-made ditches (see Figure 2).

#### 3.6.1.1. Waters of the U.S., Including Wetlands

WOUS within the project site and adjacent areas and have been previously delineated and verified by USACE via an Approved Jurisdictional Determination (AJD) on March 20, 2015 (NAO-2013-02226), as indicated on the attached AJD and associated figure (see USACE coordination letter in Appendix B). Of those WOUS verified under the AJD, one non-tidal forested wetland feature (wetland LL, which totaled 14.22 acres) occurs partially within the proposed eastern DVS property boundary, but outside the proposed Veterans Care Center footprint of disturbance. No streams have been delineated or identified within the proposed site boundary, as shown on the AJD map.

There are several existing non-jurisdictional man-made open channels (agricultural ditches) running across the agricultural field, two of which are larger than the others (see the two channels on Figure 2). The two primary non-jurisdictional man-made ditches one in nearly straight lines in a northwest-southeast direction along the western and eastern sides of the agricultural field (see Figure 2). Between these two drainage ditches, and running perpendicular
to them, are eight more agricultural drainage ditches running parallel to each other in a northeast-southwest alignment through the agricultural field. Although these ditches are mapped on the National Hydrography Dataset (NHD), the AJD confirmed that all of these linear drainage features are not regulated by the USACE.

3.6.1.2. **Groundwater**

Groundwater depths within the proposed project site (the agricultural field) range from approximately three to ten feet below ground surface. A three- to four-foot layer of soil with high clay content occurs at the ground surface and is underlain by sand; results of preliminary engineering testing at the site conducted by ECS in 2016 did not indicate the presence of a perched water table (ECS 2016).

Virginia Beach is in the Eastern Virginia Groundwater Management Area (DEQ, 2014). Under the Ground Water Management Act of 1992, any entity located within a declared GWMA must obtain a permit to withdraw 300,000 gallons or more of groundwater in any one month.

A review of EPA Envirofacts (EPA 2016b) and DEQ Virginia Environmental Geographic Information Systems (VEGIS) *What’s in My Backyard* (DEQ VEGIS 2016) did not indicate any known sources of groundwater contamination within the project vicinity.

3.6.1.1. **Floodplains**

The project site is located on FIRM 5155310180G, which shows the entire project site in Zone X (unshaded); Zone X designates areas outside of the 100-year and 500-year floodplains (FEMA 2015). Therefore, the project site is not in a floodplain.

3.6.1.2. **Stormwater**

Surface runoff from the project site flows primarily into existing non-jurisdictional man-made ditches, as described in Section 3.6.1.1 (see Figure 2). According to the surveyed site elevations presented in the Southern Virginia Site Selection Report (Wiley Wilson 2016), existing grades within the project site (agricultural field) are flat (average slopes less than 1%) and slightly concave, with such slight elevation change that during and after a rain event, any storm runoff that does not infiltrate into the ground drains toward the center of the site. Therefore, it is expected that most precipitation is retained onsite through infiltration into groundwater, with any excess runoff exiting the site through the man-made ditches.

3.6.1.1. **Impaired Waters**

DEQ released the Final 2014 305(b)/303(d) Water Quality Assessment Integrated Report on June 13, 2016 (DEQ 2016b); this report is a summary of the water quality conditions in Virginia from January 1, 2007, through December 31, 2012. The DEQ develops and submits this report to the U.S. Environmental Protection Agency (EPA) to satisfy CWA Sections 305(b) and 303(d). Based on the 2014 Integrated Report, no impaired waters are located within the project site. A
majority of the non-jurisdictional man-made ditches within the project site (with the exception of the ditch along the east side of the agricultural field, which is not shown on DEQ mapping) are listed as Virginia DEQ and EPA Category 3A waters, meaning that data is not available to determine if any designated use is attained and the water was not previously listed as impaired. A majority of the tributaries in the project subwatershed and downstream are also identified as Category 3A, with the exception of the middle segment of West Neck Creek (approximately one mile east of the project site), which is identified as Category 5D, impaired for aquatic life use due to low dissolved oxygen concentrations, impaired for fish consumption due to PCB in fish tissue, and impaired for recreation due to *E. coli*.

### 3.6.1.2. Wild & Scenic Rivers

There are no Federally-designated wild and scenic rivers in Virginia (National Wild and Scenic River System 2016) and no State-designated wild and scenic rivers near the project site (DCR 2016). The North Landing River, which is has two forks approximately 2.5 miles southwest and southeast of the project site, respectively, is identified by the Virginia Department of Conservation and Recreation (DCR) as a designated scenic river. This river cannot be seen from the project site, nor can the project site be seen from any point along the river.

### 3.6.1.3. Coastal Zone Management and Chesapeake Bay Preservation

Virginia Beach is located within Virginia’s Coastal Zone; therefore, the proposed project is subject to regulation under the Virginia Coastal Zone Management Program (DEQ 2016a). Virginia Beach is also considered “Tidewater Virginia” as defined in the Code of Virginia §28.2-100 (Code of Virginia 2014). All of the Resource Protection Areas designated under the Chesapeake Bay Preservation Act are located north of the project site (City of Virginia Beach 2014) and the project site is not in the Chesapeake Bay watershed (ArcGIS Online 2017); therefore, the Chesapeake Bay Preservation Act does not apply.

### 3.6.2. Environmental Consequences

#### 3.6.2.1. Proposed Action

**Construction**

DVS would avoid and minimize impacts to WOUS to the maximum extent practicable, and there would be no direct impacts to wetlands. DVS would not disturb or develop wetlands within their property and adjacent to it. DVS understands that if the Proposed Action changes in a way that would potentially impact WOUS, coordination and permitting with the USACE and DEQ would be required.

Construction activities would expose soils at the ground surface to erosion from stormwater runoff, which could result in temporary adverse impacts on water quality. Potential impacts would be minimized with implementation of a SWPPP and associated E&SC BMPs for soil
stabilization as required in the VSMP Construction General Permit that would be required for the Proposed Action.

Because groundwater depths for the project site are relatively shallow (approximately three to ten feet below ground surface), some groundwater dewatering may be required during construction, depending on depths of excavation. Dewatering BMPs would be included in the VSMP Construction General Permit, and groundwater would be temporarily stored on site and transported by the contractor for off-site disposal or would be discharged on site in accordance with local, State and Federal regulations. Therefore, DVS does not anticipate adverse impacts on groundwater during construction.

Construction of the facility as well as the stormwater wet ponds would result in long-term changes to the hydrology of the project site. There would be no impacts to floodplains, impaired waters, or scenic rivers.

In accordance with the Coastal Zone Management Act, DVS has prepared a Federal Consistency Determination (see Appendix C), in which DVS concluded that the Proposed Action is consistent with the enforceable policies of Virginia’s Coastal Zone Management Program. DEQ has 60-days in which to review and respond, and DEQ’s response will be included in the Final EA.

Operation

An increase in impervious surfaces at the project site due to the addition of new buildings, roads, and parking lots would alter the hydrology on-site and would result in an increase in the quantity and rate of stormwater discharge from the site. DVS would obtain a VSMP permit and would prepare and implement a SWPPP that would include measures to avoid and minimize impacts from stormwater runoff during construction activities. The final site design stormwater management plan would adhere to VSMP Regulations. VSMP Regulations 9VAC25-870-63 and 9VAC25-870-66 include specific requirements with regards to the quality and quantity of stormwater from new developments, respectively. Stormwater would be managed through a combination of multiple Level II wet ponds to satisfy state stormwater quality and quantity regulation requirements. The wet ponds have been designed to have a permanent pool of water all the time along with the capacity to manage the total volume of rainfall from the 95th percentile storm, thus maintaining pre-development hydrology as required under Section 438 of the Energy Independence and Security Act. In addition, the majority of the existing forested area to the north and east of the footprint of disturbance would remain undisturbed, which would minimize the overall amount of pollutants leaving the project site in stormwater runoff.

Potable water would be provided by the City of Virginia Beach; the city’s potable water supply system has the capacity to handle the water needs of the proposed Veterans Care Center. Therefore, there would be no long-term adverse impacts to groundwater from withdrawals.
3.6.2.2. No Action

Under the No Action Alternative, the project site would not be used for the construction and operation of a Veterans Care Center, and no construction or operational impacts to hydrology or water quality would occur. However, the site would likely be developed by others. Future development of the project site by others would likely have similar impacts as the Proposed Action.

3.7. Wildlife and Habitat

The federal ESA (16 USC 1531-1544) provides a program for the conservation of threatened and endangered plants and animals and their habitats. Under Section 7 of the ESA, all Federal agencies, in consultation with the USFWS and/or National Oceanic and Atmospheric Administration’s National Marine Fisheries Service, are required to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of federally-listed threatened or endangered species, or designated critical habitats. Potential impacts of the Proposed Action were also considered in light of Commonwealth of Virginia regulations implemented by DCR to protect natural heritage resources including state-listed plants and insects (Virginia Natural Area Preserves Act [Code of Virginia §10.1-209 through 217]; Virginia Endangered Plant and Insect Species Act [Code of Virginia §3.2-1000 through 1011]) and by VDGIF to protect state-listed animal species under Virginia’s Endangered Species Act (Code of Virginia § 29.1-563 through 570) and wildlife generally (4VAC 15; Code of Virginia §29.1-521).

3.7.1. Existing Environment

Land cover at the project site within the proposed Veterans Care Center footprint is predominantly an open, productive agricultural field with multiple crops in rotation, with an approximately 300-foot strip of trees along the northern boundary and forest to the east. Depending on the final acreage that DVS acquires, between one and four acres of forested wetlands would be within the eastern side of the DVS’ property; however, these wetlands would be outside of the Proposed Action’s footprint of disturbance (Figure 2). A series of open man-made drainage ditches are located throughout and along the borders of the agricultural field.

3.7.1.1. Wildlife

The project site has the potential to support wildlife species that use open fields as well as edge species using adjacent forest. The VDGIF Virginia Fish and Wildlife Information Service (VaFWIS) database search report identifies 625 species of wildlife with a potential to occur within a two-mile radius of the project site including fish, sea turtles, manatees, bats, shorebirds, raptors, snakes, and amphibians (see Appendix D). With the exception of the peregrine falcon (Falco peregrinus), discussed in Section 3.7.1.2 below, none of the species observation buffers for species with confirmed records intersect the project site boundary. Aquatic habitat in the project site footprint of disturbance is limited to the agricultural drainage ditches in the
agricultural field, which may provide low-quality habitat or serve as limited travel corridors for some wildlife species (e.g. amphibians, birds, reptiles). Wildlife likely to use the project site include species primarily adapted to low-height grasslands or field habitats, developed areas, and agricultural ditches. Typical wildlife that would likely use the site include grey squirrels, shrews, chipmunks, rabbits, voles, mice, tree bats, foxes, white-tail deer, weasels, striped skunk, coyote, opossum, raccoon, feral house cats, frogs, and snapping turtles. Birds at the site might include a mixture of forest, forest edge, and open habitat species, including migratory grassland species and songbirds, many of which are protected by the Migratory Bird Treaty Act. Some raptors, shorebirds, and waterfowl may occasionally use the project site or adjacent wetlands.

3.7.1.2. Threatened and Endangered Species

Northern long-eared bat

According to the USFWS Information for Planning and Conservation (IPaC), there is one species with federal status having the potential to occur in the project area: the northern long-eared bat (*Myotis septentrionalis*), which is listed as federally- and state-threatened (USFWS 2016a). Northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. In the winter, these bats hibernate in mines and caves (USFWS 2016b). There is forest along the northern and eastern portions of the limits of disturbance. The Proposed Action would result in clearing of up to approximately three acres of trees. The trees may provide potential summer habitat for this species; however, because the project lacks suitable subterranean habitats required for this species, no potential winter habitat for northern long-eared bats is present. There are no VaFWIS records for northern long-eared bat occurrences within a two-mile radius of the project site (VDGIF 2016a) (see Appendix D). According to the VDGIF map of northern long-eared bat hibernacula and roosts, the project site is greater than five and a half miles from known occupied maternity roost trees (VDGIF 2016b). As of February 2017, no northern long-eared bat hibernacula or known occupied maternity roost trees have been documented in the City of Virginia Beach, although some known occupied maternity roost trees have been documented in the nearby City of Chesapeake, over three miles southwest of the project site (VDGIF 2016b).

Canebrake rattlesnake

The DCR Natural Heritage Data Explorer initial review report indicated one state-listed species within a two-mile radius of the project site: the state-endangered canebrake rattlesnake (*Crotalus horridus*) (DCR 2016) (see Appendix D). The VDGIF VaFWIS database search report also identified confirmed observations of the canebrake rattlesnake within a two-mile radius of but outside the project boundary. The canebrake rattlesnake was documented within the North Landing River: West Neck Creek Conservation Site, which intersects the two-mile radius but is outside the project site. According to VDGIF’s canebrake rattlesnake conservation plan, canebrake rattlesnakes in southeastern Virginia typically occupy mature hardwood and mixed hardwood-pine forests along riverine corridors, forested cane thickets, ridges adjacent to swampy areas, and wetlands, although individuals will occasionally use disturbed habitats including agricultural fields (VDGIF 2011). Fields adjacent to forested areas (wetlands or uplands) with
high quality habitat of mixed oaks, beech, and maple, and an abundance of woody cover and stump holes would be considered potential habitat for the canebrake rattlesnake. VDGIF has internal guidance that recommends canebrake rattlesnake habitat mitigation for proposed projects within two miles of a documented occurrence of this species (VDGIF 2010).

Peregrine falcon

The VaFWIS search report also identified confirmed observations of the state-threatened peregrine falcon dated September 1999, with a very large species observation site polygon that includes the project site (VDGIF 2016a) (see Appendix D). Peregrine falcons are found in terrestrial inland, aquatic, and coastal areas; historically the peregrine falcon nests on rocky cliffs, typically near water but can also use human structures such as bridges, towers, or skyscrapers, and in Virginia, the peregrine falcon has nesting sites on artificial platforms on barrier islands. Migrant and wintering peregrine falcons frequent coastal estuaries and intertidal mudflats where they prey on shorebirds and waterfowl (VDGIF 2016b). The VDGIF Time of Year Restrictions Table indicates a TOYR within 600 feet of a peregrine falcon nest; however, the species observation record indicated observations of migrating rather than nesting individuals (VDGIF 1999), therefore a TOYR for peregrine falcons would not apply to this project.

Bald and golden eagles

According to the Center for Conservation Biology’s Nest Locator, the nearest known bald eagle nests are 1.5 miles northwest, 1.7 miles southeast, and 2.6 miles southwest of the project area (CCB 2016); therefore, the project site is outside of the 660-foot action area distance from a nest for the management of bald eagles. No golden eagles (Aquila chrysaetos) have been recorded in Virginia Beach according to VDGIF records; the nearest species observation for golden eagle is located north of the project area in Northampton County (VDGIF 2016c). Therefore, no State or federal coordination to address bald and golden eagle management is required.

Migratory birds

The project site is within the Atlantic Flyway, which may provide resting, feeding, and breeding grounds for migratory birds, especially flocking species (USFWS 2008). Trees and open field areas at the project site may provide habitat for some migratory birds.

3.7.1.3. Invasive Species

EO 13112 Invasive Species was created to prevent the introduction of invasive species and to provide for their control. Under this EO, Federal agencies cannot authorize, fund, or carry out actions that are likely to cause or promote the introduction or spread of invasive species in the U.S.

Due to the lack of suitable aquatic habitat and mostly dry to moist upland areas on the site, it is unlikely that invasive animals such as Canada geese, beavers, and muskrats would regularly occupy the site such that an abatement plan for invasive animals would be required to be implemented. It is not known what populations of invasive plant species exist on the site. It is likely that populations of noxious and invasive plants have been managed and controlled at the project site in the agricultural field while it was used as an agricultural property to maintain and
increase agricultural production. Some of the typical invasive plant species that might be expected on an agricultural area in Virginia Beach may include but are not limited to reed grass (*Phragmites australis*), tree of heaven (*Ailanthus altissima*), autumn olive (*Elaeagnus umbellata*), honeysuckles (*Lonicera spp.*), multiflora rose (*Rosa multiflora*), stiltgrass (*Eulalia vimineum*), jointhead grass (*Arthraxon hispidus*), garlic mustard (*Alliaria petiolata*), broadleaved cattail (*Typha latifolia*), and possibly Canada thistle (*Cirsium arvense*), and purple loosestrife (*Lythrum salicaria*).

### 3.7.2. Environmental Consequences

#### 3.7.2.1. Proposed Action

**Construction**

There would be short-term direct and indirect adverse impacts on wildlife and habitat during construction. Direct impacts would occur due to the removal of habitat during clearing and site grading. Temporary indirect impacts on wildlife would include disturbance from construction noise and increased human presence during construction activities. Site grading would likely remove or otherwise destroy existing populations of any invasive plant species on most of the site. Implementation of BMPs to reduce or eliminate the recolonization or introduction of invasive plants would be included as part of construction plans; therefore, potential impacts from invasive species would be reduced or eliminated.

**Operation**

Portions of site would be converted from agricultural field and trees to impervious surface and maintained lawn. However, most of the forest and all of the forested wetlands along the eastern side of the property would be left undisturbed and undeveloped. DVS would plant trees and shrubs to provide for or enhance a vegetated buffer along the western and southern sides of the agricultural field in a strip a minimum of 15 feet wide. New plantings throughout the site would include the use of native species of vegetation to the extent practicable.

Following site construction, no long-term direct impacts to wildlife due to facility operation are anticipated. Long-term indirect adverse impacts on wildlife would occur from additional traffic, noise, lighting, and human presence in the project area; however, these impacts would be minor because there is already a human presence in the area surrounding the project site. The new Veterans Care Center would be equipped with nighttime security lighting that would result in direct and ambient glow visible to wildlife. Long-term adverse impacts to wildlife from security lighting could be mitigated through use of direction louvres to direct light downward and minimize ambient glow; therefore, DVS anticipates that impacts would be minor.

There is a possibility that invasive plants could be present or could become established that may require abatement actions. BMPs to reduce or eliminate the proliferation of invasive plants would be implemented as part of facility maintenance plans; therefore, impacts from invasive species are anticipated to be minor.
Replacement of some trees and open field areas of the project site with impervious surfaces and mowed lawn would cause direct, minor, long-term adverse impacts on migratory songbirds by removing habitat that may be used during migration. The presence of critical life history requirements for and a sustainable population of migratory songbirds within the existing agricultural field is unlikely due to disturbance and agricultural chemical use over time. Therefore, impacts to migratory birds are expected to be negligible.

**Threatened and Endangered Species**

Trees at the project site may provide summer roosting and foraging habitat for the northern long-eared bat, although human use of the adjacent developed areas surrounding the project site may discourage use of this habitat by bats. Because the project site is greater than five and a half miles from northern long-eared bat hibernacula (caves, mines, etc.) and is greater than 150 feet from known occupied maternity roost trees (VDGIF 2016b), and according to USFWS guidance, no time of year restriction on tree clearing is required. DVS has determined that the Proposed Action may affect but is not likely to adversely affect the northern long-eared bat. Because USFWS’ consultation process for threatened and endangered species under the ESA specifies that federal agencies should complete a self-certification process and submit their determination via email to USFWS, DVS prepared the IPaC self-certification package, which was emailed to the USFWS for review on February 2, 2017. The USFWS acknowledged receipt of the IPaC package, and as noted in their email reply, USFWS does not typically respond when a self-certification letter is submitted, but would respond within 30 days if they had questions. The USFWS did not provide any additional response within 30 days, thus USFWS concurrence is presumed. The IPaC submission and USFWS correspondence is found in Appendix D.

The project site does not provide high quality habitat or critical life history requirements for either the canebrake rattlesnake or the peregrine falcon. Because the forested wetlands, which may provide suitable habitat for the canebrake rattlesnake, would not be disturbed under the Proposed Action, DVS does not anticipate there would be adverse effects on canebrake rattlesnake. DVS does not anticipate adverse effects to the peregrine falcon as a result of the Proposed Action.

In December 2016, a request for project review via DCR’s Natural Heritage Data Explorer website was made by EEE Consulting, Inc. on behalf of DVS. DCR responded on December 29, 2016 stating that the North Landing River: West Neck Creek Conservation Site is located downstream from the project site, and the natural heritage resource of concern at this Conservation Site is the Duke’s skipper (*Euphyes dukesi*), which is not federally- or state-listed. To minimize adverse impacts to the aquatic ecosystem as a result of the Proposed Action, DCR recommended the implementation of and strict adherence to applicable state and local E&SC and stormwater management laws and regulations. The DCR response letter did not identify any other species that might be affected by the proposed project, but recommended coordination with VDGIF due to the project’s location within two miles of a documented but undisclosed occurrence of a state-listed animal (see DEQ agency coordination including DCR’s response in Appendix E).
On February 2, 2017, DVS submitted coordination letters to DEQ for distribution to DCR and VDGIF, among other agencies. DEQ responded in a letter dated December 19, 2016, that they had provided notice of the scoping request to several state agencies including VDGIF and DCR responded that the North Landing River: West Neck Creek Conservation Site is downstream of the project site and to minimize impacts to this conservation site and species that occur there, DCR “recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations.”

3.7.2.2. No Action

Under the No Action Alternative, the project site would not be used for the construction and operation of a Veterans Care Center, and no construction or operational impacts to wildlife, protected species, or habitat would occur. However, the site would likely be developed by others. Future development of the project site by others would likely have similar impacts as the Proposed Action.

3.8. Noise

The Noise Control Act of 1972 (42 USC 4901 et seq.) directs Federal agencies to comply with applicable Federal, State, interstate, and local noise control regulations. Noise is considered to be undesirable sound that interferes with normal activities or otherwise diminishes the quality of the environment. It may be intermittent or continuous, steady or impulsive, stationary or transient. There is wide diversity in responses to noise that vary according to the type of noise, the characteristics of the sound source, the sensitivity of the receptor, the time of day, and the distance between the noise source and the receptor. The unit used to measure the intensity of sound is the decibel (dB). Sound measurement is further refined through the use of “A-weighting,” and are shown in terms of sound pressure levels in A-weighted decibels (dBA) to consider human frequency sensitivity to mid-level sounds.

The EPA and other Federal agencies consider outdoor, 24-hour, energy-averaged noise levels exceeding 55 dBA to be unacceptable for noise-sensitive receptors (e.g., residences, day cares, hospitals). The local noise ordinance in the City of Virginia Beach (Ord. No. 3082, 5-12-09; Ord. No. 3180, 5-24-11, in Chapter 23, article II of the City of Virginia Beach Code of Ordinances) ensures “an environment free from excessive sound that may jeopardize the public health, welfare, peace and safety or degrade the quality of life.” The Occupational Safety and Health Administration (OSHA) regulates noise impacts on workers with limits to ensure that workers are not exposed to an 8-hour, time-weighted average of 90 dBA or noise levels for any duration higher than 115 dBA. Exposure to impulsive or impact noise (i.e., loud, short duration sounds) is not to exceed 140 dB peak unweighted sound pressure level.

Table 1 shows common noise sources, decibels associated with the sound, and how humans perceive the sound.
Table 1. Common Sound Sources and Decibels

<table>
<thead>
<tr>
<th>Noise Source (at a Given Distance in Feet)</th>
<th>Scale of AWeighted Sound Level in Decibels</th>
<th>Noise Environment</th>
<th>Human Judgment of Noise Loudness (Relative to a Reference Level of 70 Decibels*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military Jet Takeoff with Afterburner (50 ft)</td>
<td>140</td>
<td>Aircraft Carrier Flight Deck</td>
<td>Greater than 32 times as loud</td>
</tr>
<tr>
<td>Civil Defense Siren (100 ft)</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Jet Takeoff (200 ft)</td>
<td>120</td>
<td>N/A</td>
<td>Threshold of Pain *32 times as loud</td>
</tr>
<tr>
<td>Pile Driver (50 ft)</td>
<td>110</td>
<td>Rock Music Concert</td>
<td>*16 times as loud</td>
</tr>
<tr>
<td>Ambulance Siren (100 ft)</td>
<td>100</td>
<td>N/A</td>
<td>Very Loud *8 times as loud</td>
</tr>
<tr>
<td>Newspaper Press (5 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspaper Press (5 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Lawn Mower (3 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motorcycle (25 ft)</td>
<td>90</td>
<td>Boiler Room Printing Press Plant</td>
<td>*4 times as loud</td>
</tr>
<tr>
<td>Propeller Plane Flyover (1,000 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diesel Truck, 40 mph (50 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garbage Disposal (3 ft)</td>
<td>80</td>
<td>High Urban Ambient Sound</td>
<td>*2 times as loud</td>
</tr>
<tr>
<td>Passenger Car, 65 mph (25 ft)</td>
<td>70</td>
<td>N/A</td>
<td>Moderately Loud *70 decibels (Reference Loudness)</td>
</tr>
<tr>
<td>Vacuum Cleaner (10 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal Conversation (5 ft)</td>
<td>60</td>
<td>Data Processing Center Department Store</td>
<td>*1/2 as loud</td>
</tr>
<tr>
<td>Air Conditioning Unit (100 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light Traffic (100 ft)</td>
<td>50</td>
<td>Private Business Office</td>
<td>*1/4 as loud</td>
</tr>
<tr>
<td>Bird Calls (distant)</td>
<td>40</td>
<td>Lower Limit of Urban Ambient Sound</td>
<td>Quiet *1/8 as loud</td>
</tr>
<tr>
<td>Soft Whisper (5 ft)</td>
<td>30</td>
<td>Quiet Bedroom</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>20</td>
<td>Recording Studio</td>
<td>Very Quiet</td>
</tr>
<tr>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td>Threshold of Hearing</td>
</tr>
</tbody>
</table>

Source: AECOM 2016

3.8.1. Existing Environment

The project site is located in a mixed-use agricultural and residential area with housing to the south and a housing development under construction to the west of the project site. Noise sensitive receptors include the existing residences located south of the project site, as well as Floyd E. Kellam High School located .25 miles to the south, Bullfrogs and Butterflies Preschool and Kindergarten located .2 miles to the southwest, Hope Haven Children’s Home Assisted Living Facility located .5 miles to the northwest, and Union Mission Ministries Church, also located .5 miles to the northwest. The most commonly occurring noise at the project site is from vehicular traffic. Other sources of noise include sounds from adjacent properties such as HVAC systems; landscape maintenance (mowing); and other general maintenance activities. None of these sources produce excessive noise levels.
3.8.2. Environmental Consequences

3.8.2.1. Proposed Action

Construction of the Veterans Care Center would cause an increase in ambient noise in the areas surrounding the project site including noise that would be heard by existing residences south and southwest of the site and the new residences west of the site. Increases in noise levels would occur from the operation of heavy equipment (such as bulldozers, backhoes, etc.), haul/dump/concrete trucks, and sawing for tree removal. Noise associated with different construction phases can vary greatly depending on the equipment being used; most construction heavy equipment (bulldozers, dump trucks, excavators) operate at a noise level of 80-90 dBA; however, noise levels depend on type and model of equipment, the operation being performed, condition of the equipment, and length of time the equipment is operated. Noise levels from construction sites measured approximately 90 dBA at a distance of 50 feet from the center of a site (CERL 1978). Sites in flat-lying areas with minimal vegetation experience noise attenuation at a rate of 6 dBA for each doubling of distance (100, 200, 400, 800 feet) between the noise source and the receptor, and a further reduction of 5 to 10 dBA if there is dense vegetation or a break in the line of sight between source and receptor (CERL 1978). A receptor located between 400 and 800 feet from the center of a construction site could hear intermittent construction noise levels between 72 and 66 dBA (with no attenuation), which are comparable levels to heavy traffic at 300 feet, a commercial bus area, or a lawn mower at 100 feet. The intermittent increase in noise would likely be an annoyance but would not exceed typical noise thresholds; thus, impacts would not be significant.

The daily commute of construction workers and deliveries of construction materials to the project site would also add to traffic noise in the area.

To mitigate construction-related noise impacts:

- construction activities would take place during normal business hours to the maximum extent practicable;
- equipment and machinery used at the project site would meet all local, State, and Federal noise regulations;
- DVS and the construction contractor would comply with the City of Virginia Beach noise ordinance;
- no work would occur on Federal holidays or Sundays
- Personnel exposed to noise levels exceeding OSHA limits from heavy equipment during construction would be required to wear appropriate hearing protection and practice safety BMPs in accordance with OSHA regulations.

Operation

Operation of the Veterans Care Center would result in increases in noise compared to existing conditions. Noises would include vehicular sounds from an increase in traffic on nearby roadways and at the project site including worker, visitor, and delivery vehicles, ambulance noise (siren) which is estimated to arrive approximately once a day. Stationary sources of noise would
primarily be the equipment associated with the HVAC unit, as well as one two-megawatt emergency generator, which would only be used in time of emergency to provide backup power to the center. Long-term increases in noise levels from operation of the Veterans Care Center under are not expected to result in significant adverse impacts.

3.8.2.2. No Action

The project site would not be used for a Veterans Care Center and no construction or operational noise impacts would occur. However, future development of the project site could have similar impacts on the ambient noise environment of the area as the Proposed Action.

3.9. Socioeconomics and Environmental Justice

The socioeconomic environment includes demographics, employment and income, and housing. The environmental health risks and safety risks to children were also considered, as required by EO 13045 Protection of Children from Environmental Health Risks and Safety Risks.

The goal of environmental justice from a Federal perspective is to ensure fair treatment of people of all races, cultures, and economic situations with regard to the implementation and enforcement of environmental laws and regulations, and Federal policies and programs. EO 12898 Federal Action to Address Environmental Justice in Minority Populations and Low Income Populations (and the February 11, 1994, Presidential Memorandum providing additional guidance for this EO) requires Federal agencies to develop strategies for protecting minority and low-income populations from disproportionate and adverse effects of Federal programs and activities. The EO is “intended to promote non-discrimination in Federal programs substantially affecting human health and the environment.”

3.9.1. Existing Environment

The project site is in Virginia Beach Census Tract 0454.23. Table 2 shows the demographic and economic data for this census tract along with the City of Virginia Beach and the state.

Table 2. Demographic and Economic Data

<table>
<thead>
<tr>
<th>Socioeconomic Statistic</th>
<th>Census Tract 0454.23</th>
<th>Virginia Beach</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>8,703</td>
<td>452,745</td>
<td>8,001,024</td>
</tr>
<tr>
<td>Per capita income</td>
<td>$37,974</td>
<td>$32,269</td>
<td>$33,958</td>
</tr>
<tr>
<td>Median household income</td>
<td>$99,542</td>
<td>$66,634</td>
<td>$64,792</td>
</tr>
<tr>
<td>Percent of minority (non-White) persons</td>
<td>32%</td>
<td>32.3%</td>
<td>36%</td>
</tr>
<tr>
<td>Percent of persons below poverty level</td>
<td>3.0%</td>
<td>6.6%</td>
<td>11.2%</td>
</tr>
</tbody>
</table>

Source: USCB 2015
As shown in Table 2, the percent of the population below poverty level in the Census Tract is lower than the percent of people below poverty level in Virginia Beach and the state. The Census Tract has a comparable percentage of minority population to the City of Virginia Beach and the state. The per capita and median household income for the Census Tract is higher than for the city and state.

The civilian labor force in Virginia Beach consisted of approximately 228,859 workers in 2015, with approximately 3.9 percent unemployed (USCB 2015). In 2015, the majority of the city’s civilian labor force was employed in education services, health care assistance, and social assistance (USCB 2015). In 2016, the City of Virginia Beach Schools and the City of Virginia Beach were the top two employers in Virginia Beach (Virginia Employment Commission 2016).

### 3.9.2. Environmental Consequences

#### 3.9.2.1. Proposed Action

**Construction**

During construction, the Proposed Action would make a slight contribution to the local economy by using local construction labor and through the possible use of local construction materials and supplies.

**Operation**

Operation of the facility would likely provide a few long-term employment opportunities for residents in the surrounding region. Indirect benefits to local businesses would occur from spending by employees, patients, and visitors to the new facility. New businesses could open in the vicinity to support the users of the new care center, providing additional indirect economic and employment benefits. There would be long-term benefits to veterans in the region by reducing the distance they would need to travel to obtain medical care from a facility dedicated to veterans.

The percent of minority persons in the Census Tract is similar to that of the city and State, and the percent of low-income persons is lower in the Census Tract compared to the city and State; neither constitute a majority of the surrounding population. The type and intensity of effects on any minority or low-income persons from the Proposed Action would the same as those affecting persons of all other ethnicities or income, and any impacts would not be disproportionately high.

#### 3.9.2.1. No Action

The project site would not be used for the Veterans Care Center and there would be no construction or operational impacts on minority or low-income populations. Although DVS would not own or develop the site under the No Action Alternative, the project site would likely be developed for commercial and/or industrial use; socioeconomic and environmental justice conditions from future development would likely be similar to the Proposed Action.
3.10. Community Services

Community services include police protection, fire protection, emergency services, schools, health care, and parks and recreation.

3.10.1. Existing Environment

The project site is in an area where police, fire, and other emergency services are provided by the City of Virginia Beach. Schools found within a half-mile radius of the project site include Floyd E. Kellam High School, Bullfrogs and Butterflies Preschool, North Landing Elementary School, and Virginia Beach Technical and Career Education Center. Virginia Beach Sheriff’s Office is approximately 0.5-miles northeast of the project site. A Virginia Beach Parks and Recreation sports complex is approximately 2 miles northwest of the project site. The closest hospital is 3 miles northwest of the project site. There is 17.9% of the population with veteran status for the Census Tract in which the project site lies, which is higher compared to the City and State, with 16.9% and 10.8%, respectively (USCB 2015 a, b, c).

3.10.2. Environmental Consequences

3.10.2.1. Proposed Action

Construction

Construction activities would result in additional construction-related traffic on local roads; however, this addition would not adversely affect the ability of emergency vehicles to access nearby areas. There would be no impacts on community services during construction.

Operation

No significant additional load is expected to be placed on the fire or police departments, and changes are not expected in use of or access to other public or community services as a result of the Proposed Action. The addition of vehicles from employee, visitor and delivery vehicles associated with the Veterans Care Center would increase traffic on local roads; however, this is not expected to affect the ability of emergency vehicles to access nearby areas.

DVS identified the need to provide healthcare services to veterans in the northern Virginia and Hampton Roads regions due to the large population, and thus numbers of veterans, and lack of nearby existing facilities in these areas. Therefore, addition of a new Veterans Care Center in Virginia Beach would benefit the population of veterans in the Hampton Roads area.

3.10.2.2. No Action

The project site would not be used for the Veterans Care Center and there would be no construction or operational impacts on community services. Local veterans would not have the opportunity to benefit from a Veterans Care Center in Virginia Beach, which would reduce travel times to other Veterans Affairs care facilities in the state. Although DVS would not own or
develop the site under the No Action Alternative, the project site would likely be developed for commercial and/or industrial use; community impacts from future development would likely be similar to the Proposed Action.

3.11. Solid and Hazardous Materials

Hazardous substances are defined as any solid, liquid, contained gaseous, or semi-solid waste, or any combination of wastes that pose a substantial present or potential hazard to human health and the environment. Hazardous substances are primarily generated by industries, hospitals, research facilities, and the government. Improper management and disposal of hazardous substances can lead to pollution of groundwater or other drinking water supplies, and the contamination of surface water and soil. The primary Federal regulations for the management and disposal of hazardous substances are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA; 42 USC sections 6901 et seq.).

On behalf of the Virginia Waste Management Board, the DEQ Division of Land Protection and Revitalization is responsible for carrying out the mandates of the Virginia Waste Management Act (Virginia Code §10.1-1400 et seq.), as well as meeting Virginia's federal obligations under the RCRA and CERCLA. The DEQ Division of Land Protection and Revitalization also administers those laws and regulations on behalf of the State Water Control Board governing Petroleum Storage Tanks (Virginia Code §62.1-44.34:8 et seq.), including Aboveground Storage Tanks (9VAC25-91 et seq.) and Underground Storage Tanks (9VAC25-580 et seq. and 9VAC25-580-370 et seq.), also known as “Virginia Tank Regulations,” and § 62.1-44.34:14 et seq. which covers oil spills. Solid wastes generated during the Proposed Action would be regulated by the Virginia Solid Waste Management Regulations (9VAC20-81 et seq.).

3.11.1. Existing Environment

A Phase I Environmental Site Assessment of the project site was completed in March 2016 (EEE Consulting Inc. 2016). The results of the Phase I Environmental Site Assessment did not identify any recognized environmental conditions as defined by 40 CFR Part 312 and ASTM E1527-13.

3.11.2. Environmental Consequences

3.11.2.1. Proposed Action

Construction

The Proposed Action would result in the potential for short-term adverse impacts due to the increased presence and use of petroleum and hazardous substances during construction (such as oil, gasoline, antifreeze, solvents, paints, etc.). Proper handling and storage of hazardous materials would minimize the risk of impacts from a spill. Solid wastes generated during construction would be managed and disposed of in accordance with local, state, and federal regulations; no construction-related solid wastes would remain at the project site once
construction activities are complete. Spill prevention and control measures that would be contained within the E&SC plan and SWPPP would also help to minimize potentially adverse impacts.

**Operation**

Operation of the proposed Veterans Care Center would generate solid waste, medical waste, and small amounts of hazardous wastes. Solid wastes would be stored on site per local, state and federal regulation and transported to regulated waste facilities by the City of Virginia Beach. Waste generation and management, including handling, storage, transportation and disposal, would be done in compliance with federal, state and local regulations. Adherence to these regulations and proper management of solid and hazardous wastes should minimize the risk of accidental releases or environmental degradation. Therefore, DVS anticipates that there would be no long-term impacts from solid and hazardous materials/wastes from the Proposed Action.

3.11.2.2. No Action

The project site would not be used for a Veterans Care Center and no construction or operational impacts would occur. However, future development of the project site by others could have similar impacts as the Proposed Action.

**3.12. Transportation and Parking**

Transportation and parking address the roadway network and physical structures that move a population throughout a specific area. The availability of transportation infrastructure and its capacity to support growth are generally regarded as essential to an area’s economic growth.

3.12.1. Existing Environment

Primary access to the Veterans Care Center would be provided via a private entrance driveway that would stem from a future extension of Nimmo Parkway on the north side of the project site. The City of Virginia Beach, as noted in the city’s 2015 Comprehensive Plan, is planning to build a new road extending Nimmo Parkway approximately 1.5 miles to Indian River Road (City of Virginia Beach 2015). The city plans to construct the first approximately 900-foot segment of the new Nimmo Parkway road prior to constructing the entire 1.5-mile stretch to provide driveway access to the project site by the time the Veterans Care Center opens. DVS would construct a temporary access road on the south side of the property connecting to North Landing Road that would be used during construction.

The Virginia Department of Transportation (VDOT) gathers traffic data and estimates the average number and types of vehicles that travel each segment of road. No traffic data are currently available for the segments of Nimmo Parkway or West Neck Road adjacent to the project site. Based on 2014 traffic data for Virginia Beach, the Annual Average Daily Traffic for the segment of North Landing Road south of the project site was 12,000 vehicles, 99% of which were standard vehicles and 1% of which were buses and large trucks (VDOT 2016). Average
Annual Daily Traffic for the segment of West Neck Road south of the intersection with North Landing Road was 6,000 vehicles in 2014, including 97% standard vehicles and 3% buses and large trucks (VDOT 2016).

3.12.2. Environmental Consequences

3.12.2.1. Proposed Action

Construction
DVS and the construction contractor would use the North Landing Road entrance during construction. The daily commute of construction workers and deliveries of construction materials to the project site would result in additional vehicles traveling the roads adjacent to the project site and in the local area. During construction, there could be temporary disruptions to local traffic when large vehicles and equipment are brought to/from the project site. However, disruptions would be negligible (on the order of minutes) and only on roads immediately surrounding the project site.

Operation
DVS anticipates that traffic associated with the Veterans Care Center would include: approximately one ambulance per day, vehicles associated with approximately 120 employees arriving and departing each weekday (fewer on weekends), an average of approximately 50 visitor vehicles a day, and approximately three delivery trucks per week.

Access to the Veterans Care Center would be provided by an entrance driveway along the future Nimmo Parkway extension. Sufficient parking would be provided onsite so that no on-street parking would be required. Although the Proposed Action would result in increased traffic levels to the area, there would be no changes in local traffic patterns and the addition of visitor, worker, delivery truck and ambulance trips is not anticipated to result in significant adverse impacts to the roads and traffic in the surrounding community.

3.12.2.2. No Action

Under the No Action Alternative, the project site would not be used for a Veterans Care Center, and no construction or operational impacts to transportation would occur; however, traffic conditions around the project site would not remain the same as existing conditions, as the surrounding area is planned for future development. Future development on the project site by DVS or others could have similar impacts as the Proposed Action.

3.13. Utilities

Utilities include municipal water, natural gas and electricity supply systems, sanitary sewer, stormwater discharge receiving system and telecommunications.
3.13.1. Existing Environment

The project site is surrounding by a variety of existing utilities. Potable water is provided by Virginia Beach Public Utilities; there is a 12-inch water line at the end of Nimmo Parkway and a 16-inch water main on North Landing Road from which water can be provided to the project site. Recent fire flow tests determined that there is adequate fire flow water supply available to the site (Wiley Wilson 2016). Sewer service would be provided by Hampton Roads Sanitary District and the capacity of the existing sewer system is adequate to handle the increase in wastewater loads. There is a 10-inch sewer gravity main and a 10-inch sewer force main on North Landing Road. The closest electrical and communication services to the site are overhead electric and underground fiber optic lines located along North Landing Road.

3.13.2. Environmental Consequences

3.13.2.1. Proposed Action

Construction

New utility connections and some temporary connections would transition to permanent ones as construction progresses would be installed. The construction contractor would likely use temporary sources of power and services, such as generators for electricity, water trucks for potable water supply, and portable toilet facilities. The construction contractor would determine the location of existing lines prior to excavation or ground disturbance. There would be no impacts on utilities during construction.

Operation

DVS would install new underground utilities that would connect to existing underground and above-ground utilities along North Landing Road. Utilities needed to support operation of the Veterans Care Center would be designed in accordance with applicable industry standards and regulations and would also be designed to achieve sustainable design standards and minimize energy consumption. All existing utilities/systems have sufficient capacity to meet the demands from operation of the Veterans Care Center so there would be no adverse impacts on utilities as a result of the Proposed Action.

3.13.2.2. No Action

Under the no action alternative, there would be no changes to utilities, and there would be no impacts.

3.14. Cumulative Impacts

This section addresses the cumulative impacts of the Proposed Action. Cumulative impacts are defined by the CEQ in 40 CFR 1508.7 as “impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable
future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

Portions of delineated wetlands are within the Nimmo Parkway extension that would be constructed by the City of Virginia Beach; this roadway extension is part of the City’s Comprehensive Plan to connect Nimmo Parkway to Indian River Road and thus not part of the DVS Proposed Action. DVS has considered these wetland impacts in a cumulative effects analysis.

Reasonably foreseeable actions that could contribute to cumulative impacts would primarily include development of vacant parcels west of the project site and within the City of Virginia Beach overall. New construction in the city would likely result in cumulative effects on several resources, which are described below. However, as described below, none of these cumulative effects would be considered significant. Resources for which there would be no impacts from the Proposed Action are not discussed below and include: geology, topography, floodplains, solid and hazardous materials, and utilities.

**Aesthetics:** The proposed Veterans Care Center is being designed to maintain the aesthetics and character of the surrounding area. The addition of new buildings and the associated landscaping and lighting, when combined with existing and future development in the surrounding areas would contribute to long-term impacts on nighttime visual resources; however, because the project site is in an urban setting, cumulative impacts from the Proposed Action would be negligible.

**Land Use:** Although the project site would be developed, change in land use from vacant undeveloped land to a DVS residential care facility is consistent with approved planning and zoning. No offsite land uses would be affected, and no adverse cumulative impacts would occur.

**Air Quality (and Climate Change):** The increase in air pollutant emissions associated with the Proposed Action construction and operations would result in negligible additions of air quality pollutants including greenhouse gas emissions at a local and regional scale. Therefore, DVS does not anticipate any significant impacts on air quality or climate change under the Proposed Action when combined with other reasonably foreseeable actions. Compliance with State and Federal permitting requirements would ensure cumulative air quality effects do not exceed the threshold of significance.

**Cultural Resources:** The Proposed Action would result in ground disturbing activities and minor changes in the viewshed; however, because of existing forest and buildings between the project site and exiting architectural resources, the site cannot be seen from existing above-ground historic properties. DHR concurred with DVS’ determination that there would be no effects on historic properties.

**Soils:** Ground-disturbing activities during construction of the Proposed Action and other reasonably foreseeable actions would result in short- and long-term potentially adverse impacts on soils from removal of topsoil and erosion. Compliance with construction BMPs in accordance with E&SC plans would ensure that individual and cumulative effects are not significant.
**Water Resources:** With implementation of construction and permanent stormwater management BMPs, including compliance with Section 438 of the EISA, there would be no adverse impacts on offsite water quality and quantity from stormwater runoff, and therefore no cumulative impacts to surface waters would be anticipated. Some groundwater dewatering may be required during construction, but dewatering BMPs would be implemented and DVS does not anticipate adverse impacts on groundwater, and therefore there would be no significant cumulative impacts on groundwater when combined with other reasonably foreseeable actions in the surrounding areas. DVS would avoid and minimize impacts to WOUS to the maximum extent practicable, and there would be no direct or indirect impacts to wetlands with implementation of construction stormwater BMPs, thus no cumulative impacts to wetlands.

**Vegetation and Wildlife:** Loss of vegetation and wildlife habitat, and noise and light disturbances to wildlife during construction and operation are likely to result in short- and long-term minor adverse impacts on vegetation and wildlife. The Proposed Action, coupled with other reasonably foreseeable actions, would continue to result in development of the City of Virginia Beach. Due to the urban nature of the area, any cumulative impacts are not expected to be significant.

**Noise:** Construction projects in the surrounding areas are likely to occur at different times than the construction of the Proposed Action and be spaced out geographically so that multiple projects, and therefore multiple noise sources, would not occur simultaneously for noise receptors such as the residential community east of the project site, thus reducing the potential for short-term adverse cumulative impacts from increased noise levels during construction. Over the long term, the activities and operations when combined with reasonably foreseeable noise sources would not cumulatively significantly adversely affect the local noise environment.

**Socioeconomics:** During construction, the Proposed Action would make a slight contribution to the local economy by using local construction labor and through the possible use of local construction materials and supplies, but the impact when combined with other reasonably foreseeable projects would be negligible to minor. Operation of the facility would provide employment opportunities and result in indirect benefits to local businesses, which may result in minor beneficial cumulative impacts to the local economy.

**Transportation and Parking:** Although access and traffic would likely be affected during construction, DVS would implement mitigation measures, such as appropriate signage and safety measures for construction areas and lane closures to manage these effects to reasonable levels. Construction projects in the surrounding areas are likely to occur at different times and be spaced out geographically so that multiple projects would not affect the roads immediately surrounding the project site simultaneously, thus reducing the potential for short-term adverse impacts from changes in access and an increase of construction-related vehicles on local roads. Over the long term, no activities or operations are proposed or reasonably foreseeable that would cumulatively adversely affect the local traffic conditions.

**Summary:** Based on the above analysis, cumulative impacts attributable to the Proposed Action in combination with reasonably foreseeable actions would not be significant. DVS would ensure
that the Proposed Action is in compliance with the CWA permits and regulations, Virginia Stormwater Management Regulations, and Virginia Erosion and Sediment Control Law along with other local, state and federal regulations.

3.14.1.1. No Action

The Veterans Care Center would not be constructed under the No Action Alternative. However, future development of the project site by DVS or others would likely result in cumulative impacts similar to those described above for the Proposed Action.
4.0 PUBLIC INVOLVEMENT

DVS held two public meetings to provide information to the community about the proposed project. A meeting was held on February 28, 2017 during a publicly open session of the City of Virginia Beach Council meeting with approximately 20 members of the community in attendance. A second meeting, hosted by the City of Virginia Beach Department of Economic Development, was held on March 13, 2017 in which DVS gave a presentation about the proposed project with approximately 150 community members, local television stations, and the Virginian Pilot newspaper in attendance.

The public was notified of the availability of this EA for review through publication of a Notice of Availability in the Virginian Pilot. DVS also sent electronic notification to the members of the Board of Veterans Services, to the members of the Joint Leadership Council of Veterans Service Organizations, through the DVS listserv and social media channels, to City of Virginia Beach officials, and to local citizens and businesses.

This EA is available for public review on DVS’ Web site at https://www.dvs.virginia.gov/veterans-care-centers/hampton-roads-veterans-care-center/. Comments may be submitted until the close of the 30-day public comment period on June 24, 2017 via email to dsutton@wileywilson.com or by mailing them to: Dan Sutton, 6606 West Broad St, Suite 500, Richmond VA 23230-1717. The document is also available by request from Mr. Sutton at the address and email above or at (804) 200-1703. A hard copy of the EA is available at the following location during the 30-day review period (May 27 – June 27, 2016):

Princess Anne Area Library

1444 Nimmo Parkway
Virginia Beach, VA 23456
(540) 422-8500
Hours: Monday-Thursday 10am-7pm
   Friday-Saturday 10am-5pm
   Sunday 1pm-5pm
5.0 AGENCY COORDINATION

DVS coordinated with the following agencies to request review and provide comments on the Proposed Action (agency coordination is provided in Appendices A, B, D and E).

Federal Agencies

- USACE
- USFWS

State Agencies

- DHR
- DEQ – note that DEQ coordinated project review with the following state agencies and local organizations:
  - DEQ Regional Office
  - DEQ Air Division
  - DEQ Office of Wetlands and Stream Protection
  - DEQ Office of Local Government Programs
  - DEQ Division of Land Protection and Revitalization
  - DEQ Office of Stormwater Management
  - DCR
  - Department of Health
  - Department of Agriculture and Consumer Services
  - DGIF
  - DHR
  - Virginia Marine Resources Commission
  - Department of Mines, Minerals, and Energy
  - Department of Forestry
  - Department of Transportation
### 6.0 CONCLUSIONS

Table 3 summarizes the impacts and BMPs to minimize impacts associated with the Proposed Action and the No Action Alternative for each resource analyzed in this EA. Based on the analysis presented in this EA and summarized in Table 3, Veterans Affairs concludes that a FONSI for the Proposed Action is appropriate, and that preparation of an EIS is not required.

#### Table 3. Summary of Impacts

<table>
<thead>
<tr>
<th>Resource Area</th>
<th>Proposed Action</th>
<th>No Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aesthetics</strong></td>
<td>Temporary adverse impacts to viewshed during construction. Long-term changes to viewshed from new Veterans Care Center; however, land use, and therefore viewshed changes are consistent with the City-approved and planned use of this parcel. Vegetated buffers around the project site would minimize impacts.</td>
<td>No impacts.</td>
</tr>
<tr>
<td><strong>Land Use</strong></td>
<td>No impacts on land use; change in land use from vacant undeveloped land to a government/commercial facility is consistent with approved planning and zoning.</td>
<td>No impacts.</td>
</tr>
<tr>
<td><strong>Air Quality</strong></td>
<td>Negligible adverse impacts from emissions during construction and operation. Impacts during construction would be temporary; operation would result in long-term emissions from HVAC and a diesel-fueled generator.</td>
<td>No impacts.</td>
</tr>
<tr>
<td><strong>Cultural Resources</strong></td>
<td>No impacts during construction anticipated. According to DHR, the project would have no effect on historic properties.</td>
<td>No impacts.</td>
</tr>
<tr>
<td><strong>Geology, Soils and Topography</strong></td>
<td>Temporary, minor adverse impacts on soils and topography during construction, no impacts from operation. No impacts on geology.</td>
<td>No impacts.</td>
</tr>
<tr>
<td>Resource Area</td>
<td>Proposed Action</td>
<td>No Action</td>
</tr>
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</tr>
<tr>
<td><strong>Water Resources</strong></td>
<td>Temporary, minor adverse impacts to water quality during construction that would be minimized by implementing BMPs in VSMP construction and operation permits. No impacts on WOUS or groundwater with implementation of construction dewatering BMPs.</td>
<td>No impacts.</td>
</tr>
<tr>
<td><strong>Wildlife and Habitat</strong></td>
<td>Temporary adverse impacts on wildlife and habitat during construction due to removal of vegetation during clearing and grading and from construction noise and increased human presence. Permanent removal of habitat and additional human presence would have minor, long-term adverse impacts. DVS has determined that the Proposed Action may affect but is not likely to adversely affect the northern long-eared bat. No impacts to any other threatened and endangered species.</td>
<td>No impacts.</td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td>Temporary adverse impacts from construction-related noise; long-term increases in noise from traffic, ambulances and human presence would be minor.</td>
<td>No impacts.</td>
</tr>
<tr>
<td><strong>Socioeconomics and Environmental Justice</strong></td>
<td>Minor beneficial impacts to local economy from construction and operation. No impacts on low-income or minority populations.</td>
<td>No impacts.</td>
</tr>
<tr>
<td><strong>Community Services</strong></td>
<td>No impacts during construction; long-term beneficial impacts on veteran population in the region.</td>
<td>No impacts. However, local veterans would not have the opportunity to benefit from a Veterans Care Center in the Hampton Roads area, which would reduce travel times to other DVS care facilities in the state.</td>
</tr>
<tr>
<td><strong>Solid and Hazardous Materials</strong></td>
<td>No adverse impacts anticipated with implementation of appropriate spill prevention, hazardous materials storage and handling, and waste management BMPs and adherence to regulations.</td>
<td>No impacts.</td>
</tr>
<tr>
<td>Resource Area</td>
<td>Proposed Action</td>
<td>No Action</td>
</tr>
<tr>
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<tr>
<td><strong>Transportation and Parking</strong></td>
<td>Potential for temporary disruptions to local traffic during construction; impacts would be on the order of minutes and therefore negligible. Long-term increases in traffic on nearby roads would have negligible adverse impacts on local traffic.</td>
<td>No impacts.</td>
</tr>
<tr>
<td><strong>Utilities</strong></td>
<td>No impacts. Utilities would be designed in accordance with applicable industry standards and regulations and would achieve sustainable design standards and minimize energy consumption. All existing utilities/systems have sufficient capacity to meet the demands from operation of the Veterans Care Center.</td>
<td>No impacts.</td>
</tr>
<tr>
<td><strong>Cumulative Impacts</strong></td>
<td>No significant cumulative impacts on any resources that would be affected by the Proposed Action when combined with other reasonably foreseeable actions.</td>
<td>No impacts.</td>
</tr>
</tbody>
</table>
7.0 LIST OF PREPARERS

The following individuals from EEE Consulting, Inc. contributed to the preparation of this document. The VA, and Mr. Steven Combs, Deputy Commissioner at DVS, reviewed this document.

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<td>3</td>
</tr>
</tbody>
</table>
8.0 REFERENCES CITED


ECS. 2016. Geotechnical Engineering Analysis of the Virginia Beach Veterans Care Center property.


VDGIF. 2010. Canebrake Rattlesnake Mitigation Guidance: VDGIF Internal Guidance, Virginia Department of Game and Inland Fisheries, Bureau of Wildlife Resources, Environmental Services Section. Richmond, VA. 8 pp..


Appendix A: DHR Coordination including V-CRIS Database Information
Appendix B: Approved Jurisdictional Determination and USACE Coordination
Appendix C: Federal Consistency Determination prepared under the Coastal Zone Management Act
Appendix D: USFWS Coordination and Threatened and Endangered Species Database Search Results
Appendix E: Virginia Department of Environmental Quality Coordination