FINAL
SITE-SPECIFIC
ENVIRONMENTAL ASSESSMENT
FOR PHASE 5 EXPANSION AND IMPROVEMENTS AT THE
Riverside National Cemetery
Riverside, California

June 2018
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Lead Agency for the EA: U.S. Department of Veterans Affairs (VA)
Title of Proposed Action: Phase 5 Gravesite Expansion and Cemetery Improvements Project at the Riverside National Cemetery, Riverside, California
Affected Jurisdiction: City of Riverside, Riverside County, California
Document Designation: Final Site-Specific Environmental Assessment
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Abstract:
This Site-Specific Environmental Assessment (SEA) identifies, analyzes, and documents the potential physical, environmental, cultural, and socioeconomic impacts associated with the United States (U.S.) Department of Veterans Affairs (VA) National Cemetery Administration (NCA) Proposed Action for the gravesite expansion and cemetery improvements at the Riverside National Cemetery in Riverside, California. The 922-acre Riverside National Cemetery has been expanded in phases. This phase would expand the existing cemetery in the identified Phase 5 area of the cemetery—approximately 43 acres for burial—and would entail infrastructure repairs and upgrades to the existing cemetery.

This SEA evaluates two (2) alternatives in depth: the Preferred Alternative and the No Action Alternative. The Preferred Alternative is to implement the VA’s preferred design for a 43-acre expansion of the Riverside National Cemetery (Phase 5 expansion) and improvements to facilities and infrastructure throughout the existing cemetery. Under the No Action Alternative, the proposed expansion and upgrades would not occur. This alternative reflects the status quo and serves as a baseline against which the effects of the Proposed Action can be evaluated.

This SEA evaluates possible effects on aesthetics, air quality, cultural resources, geology and soils, hydrology and water quality, floodplains and wetlands, wildlife and habitat, noise, community services, solid and hazardous materials, utilities, environmental justice, and cumulative effects. This SEA concludes that no significant direct, indirect, or cumulative effects on the local environment or quality of life are likely to occur as a result of implementing the Preferred Alternative, which includes Best Management Practices identified to address issues identified in the preparation of this SEA, as summarized in Table 5-1.
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EXECUTIVE SUMMARY

Introduction
This Site-Specific Environmental Assessment (SEA) has been prepared to analyze and evaluate the potential effects of actions associated with the 43-acre expansion of the Riverside National Cemetery (Phase 5 expansion) and improvements to facilities and infrastructure throughout the existing cemetery. This SEA is prepared in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [U.S.C.] 4321 et seq.), the President’s Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), 38 CFR Part 26 (Environmental Effects of the Department of Veterans Affairs Actions), and the U.S. Department of Veterans Affairs’ (VA) NEPA Interim Guidance for Projects (VA, 2010a).

In 1978, an Environmental Impact Statement (EIS) was finalized that analyzed the initial site selection and the reasonably foreseeable impacts associated with the phased construction and operation of a new National Cemetery in Riverside, California. The findings of the 1978 EIS are updated throughout this SEA (VA, 1978).

The cemetery sits on 922 unincorporated acres in Riverside County, California. It is located south of the city of Riverside, immediately west of March Air Reserve Base (ARB).

Purpose and Need
The purpose of the Proposed Action is to continue to enable the VA to provide eligible veterans and their families in Southern California. This proposed expansion of the National Cemetery is projected to serve the regional veterans’ needs for at least 10 years (38 U.S.C. § 2400). Phase 5 of the Riverside National Cemetery is designed to serve anticipated regional veterans’ cemetery burial needs for at least 10 years, as enabled by VA Directive program policies and procedures.

The Proposed Action is needed to meet the VA National Cemetery Administration (NCA) goal of providing eligible veterans with reasonable access to VA burial options. Burial at a National Cemetery is an earned benefit provided to veterans through the VA. In addition, the Proposed Action is needed to meet the NCA’s goal of increasing burial options in areas with an unserved veteran population, as specified by Congress, in response to the Evaluation of the VA Burial Benefits Program (August 2008) of at least 80,000, in accordance with the Servicemembers Civil Relief Act, also known as the Veteran’s Benefit Act of 2010.

Proposed Action and Alternatives Considered
In accordance with NEPA and CEQ regulations for implementing NEPA, alternatives to the Proposed Action must be considered. However, detailed analysis is only required for those alternatives that reasonably fulfill the purpose of, and need for, the Proposed Action. As such, this SEA only examines the VA’s Preferred Alternative and the No Action Alternative, which is required by NEPA.

In 1976, March Air Force Base (AFB) transferred 740 acres of land to the VA. Following the completion of the 1978 EIS for the construction and operation of the new National Cemetery in Riverside County, Riverside National Cemetery was dedicated and opened on November 11, 1978 (VA, 2010b; NCA, 2014a). A master plan was prepared in 1976 to guide the growth and
expansion of the cemetery. In 2003, an additional 182 acres was acquired. An updated cemetery master plan is currently underway to account for the additional acreage and program changes that have occurred since 1976 (NCA, 2014a).

By nature of the master design process, these design alternatives were constantly being assessed for impacts on the technical resource areas. They were eliminated or revised to avoid effects, and thus these alternatives and many other minor changes were not reviewed individually against each resource area in this SEA.

**Preferred Alternative.** The VA’s Preferred Alternative, analyzed in this SEA, is to construct and expand operations on 43 acres within the existing cemetery site to provide for at least 10 more years of burial expansion for all burial options (casket, columbarium, and in-ground cremation sites), supporting infrastructure, landscaping, drainage, irrigation, parking, signage, amenities, and operational facility improvements, as detailed in Section 2 of this EA. In addition, some infrastructure repairs would occur within the original Riverside National Cemetery. Construction, and repairs would occur in accordance with the VA’s NCA Facilities Design Guide and 38 CFR 39.60, General Requirements for Site Selection and Construction of Veterans Cemeteries.

Under the Preferred Alternative, the Phase 5 development would provide an additional 23,000 cremation gravesites (10,000 columbarium niches and 13,000 in-ground sites) and 20,000 new casket burial sites. Implementation of the Preferred Alternative is anticipated to be phased-in over several years. The project would also include a redesign of the main cemetery roadway, construction of a satellite maintenance facility and public restrooms, new roads and parking, grading, drainage, landscaping, irrigation, and signage. Future phases of cemetery development would be analyzed under separate NEPA documents prior to the construction and operation of those phases.

**No Action Alternative.** Under the No Action Alternative, the Proposed Action would not be implemented and gravesite capacity would eventually be depleted at Riverside National Cemetery. Veterans and their families residing in Southern California would be underserved; in many cases, this would require many veterans and their families to travel more than 100 miles to reach an open National Cemetery. The distribution of national cemeteries in the region would be unequal, and the VA would not be in compliance with the requirements of the Service Members Civil Relief Act. Not providing an additional 10 years of burial options at Riverside National Cemetery could prevent eligible veterans and their families from obtaining the earned benefit of a no-cost burial at a National Cemetery, resulting in undue hardship and lost recognition to those individuals. The No Action Alternative was retained to provide a comparative baseline against which to analyze the effects of the Proposed Action, as required under the CEQ regulations (40 CFR 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.

**Affected Environment and Environmental Consequences**

The affected environment of the Preferred Alternative and its immediate surroundings, or the region of influence (ROI), was evaluated for 12 resource areas and is further discussed in Section 3 of this SEA. The Preferred Alternative and the No Action alternatives are evaluated to determine their potential direct, indirect, and cumulative effect(s) on the physical, environmental, cultural, and socioeconomic aspects of the Proposed Action’s ROI. Table ES-1 presents the resource categories analyzed within this SEA, including anticipated impacts.
Table ES-1. Summary of Impact Analysis

<table>
<thead>
<tr>
<th>Resource Area</th>
<th>Preferred Alternative</th>
<th>No Action Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics</td>
<td>Minor, short-term, adverse effects from construction activities and minor, long-term, beneficial effects from property and facility improvements.</td>
<td>Minor, adverse effects on aesthetics from the deterioration of facilities.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Minor, short- and long-term, adverse impacts due to criteria pollutant emissions from construction and operational activities. Emissions would be below de minimis levels. No significant impacts.</td>
<td>Negligible, long-term, adverse impacts because veterans and their families would be required to travel greater distances to other National Cemeteries, resulting in increased air emissions. No significant impacts.</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>No adverse effects. The action would not diminish the NRHP-eligible status of the cemetery, and the expanded site would be a new contributing resource to the cemetery; therefore, it would not be a significant impact on cultural resources. Any inadvertent discoveries would be handled in accordance with federal regulations and through consultation with SHPO and applicable tribal representatives.</td>
<td>No effects.</td>
</tr>
<tr>
<td>Geology, Topography, and Soils</td>
<td>Minor, short-term, adverse effects from soil erosion and sedimentation during construction. Negligible-to-minor, long-term, adverse effects on topography and soils; no effects on geology.</td>
<td>No effects.</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Negligible, short-term, adverse effects; no long-term, adverse effects on surface water resources. No effects on ground water.</td>
<td>No effects.</td>
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<tr>
<td>Floodplains and Wetlands</td>
<td>No effects on floodplains. Impacts on wetlands contingent on U.S. Army Corps of Engineers (USACE) jurisdictional determination.</td>
<td>No effects.</td>
</tr>
<tr>
<td>Resource Area</td>
<td>Preferred Alternative</td>
<td>No Action Alternative</td>
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<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Wildlife and Habitat</td>
<td>Minor impacts on wildlife and habitat. Little natural habitat remaining; most habitat has been disturbed. Direct and indirect impacts to Stephen’s Kangaroo Rat would be minimized and offset by adhering to the conservation measures provided within the U.S. Fish and Wildlife Service Biological Opinion for this action.</td>
<td>No effects.</td>
</tr>
<tr>
<td>Noise</td>
<td>Minor, short-term and negligible, long-term, adverse effects on sensitive noise receptors.</td>
<td>No effects.</td>
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<tr>
<td>Community Services</td>
<td>Moderate, beneficial effects from expansion of burial needs for veterans.</td>
<td>Minor, adverse effects from lack of reasonable access to burial needs for veterans.</td>
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<tr>
<td>Solid and Hazardous Waste</td>
<td>Negligible adverse effects.</td>
<td>No effects.</td>
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<td>Utilities</td>
<td>No significant impacts on consumption or regional availability of utilities.</td>
<td>No effects.</td>
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<tr>
<td>Environmental Justice</td>
<td>No measurable effect on local populations; no significant impacts.</td>
<td>No effects.</td>
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<td>Cumulative Effects</td>
<td>No significant cumulative impacts.</td>
<td>No effects.</td>
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<tr>
<td>Potential for Generating Substantial Controversy</td>
<td>None identified.</td>
<td>None identified.</td>
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1 INTRODUCTION

This Site-Specific Environmental Assessment (SEA) has been prepared to identify, analyze, and document potential physical, environmental, cultural, and socioeconomic effects associated with the Department of Veterans Affairs’ (VA) Proposed Action: 43-acre expansion of the Riverside National Cemetery (Phase 5 expansion) and improvements to facilities and infrastructure throughout the existing cemetery (Figure 1-1). Construction of the Proposed Action would be completed in fiscal year (FY) 2019, and would be expected to provide sufficient burial sites until FY 2029. Each subsequent phase of the cemetery would be analyzed under separate National Environmental Policy Act (NEPA) documents prior to construction and operation.

This SEA is prepared in accordance with NEPA (42 United States Code [U.S.C.] 4321 et seq.), the President’s Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Environmental Regulations [CFR] Parts 1500–1508), 38 CFR Part 26 (Environmental Effects of the Department of Veterans Affairs Actions), and the VA’s NEPA Interim Guidance for Projects (VA, 2010a).

Figure 1-1. Site Location
In Southern California, there are four other national cemeteries. The Los Angeles National Cemetery in Los Angeles, 70 miles west of Riverside, is closed to new interments. Fort Rosecrans National Cemetery in San Diego, 115 miles southeast of Riverside, is also closed to new interments. Miramar National Cemetery, an annex to the Fort Rosecrans National Cemetery in San Diego, is open to full burial options. Bakersfield National Cemetery in Arvin is open to full burial options. Bakersfield National Cemetery is approximately 120 miles northwest of Riverside National Cemetery, and is separated by a significant mountain barrier (NCA, 2014a).

1.1 Project Background and Existing Site

The subject site is located on Riverside National Cemetery in the southeastern portion of the city of Riverside, California. Riverside National Cemetery is 922 acres, of which 646 acres are currently undeveloped. It is located at 22495 Van Buren Boulevard, in the city of Riverside, Riverside County, California (Figure 1-2).

**Figure 1-2. Riverside National Cemetery Existing Site Boundary and Phase 5 Expansion**
INTRODUCTION

In 1976, March Air Force Base (AFB) transferred 740 acres of land to the VA. Following the completion of the 1978 EIS for the construction and operation of the new National Cemetery in Riverside County, Riverside National Cemetery was dedicated and opened on November 11, 1978 (NCA, 2014a; VA, 2010b). A master plan was prepared in 1976 to guide the growth and expansion of the cemetery. In 2003, an additional 182 acres was acquired. An updated cemetery master plan is currently underway to account for the additional acreage and program changes that have occurred since 1976 (NCA, 2014a).

This SEA identifies, analyzes, and documents the potential physical, environmental, cultural, and socioeconomic impacts associated with Phase 5 of expanding and improving Riverside National Cemetery. This proposed project would expand casket, columbarium, and in-ground cremation sites on 43 acres of the Riverside National Cemetery and provide upgrades to facilities and infrastructure at the current site, including a public information booth, supporting infrastructure, parking, irrigation, landscaping, visitor amenities, signage, and operational facility improvements. A more detailed description of the Proposed Action can be found in Section 2.1.

1.2 Purpose and Need

The purpose of the Proposed Action is to continue to enable the VA to provide burial benefits to eligible veterans and their families in Southern California. This proposed expansion of the National Cemetery is projected to serve the regional veterans’ needs for at least 10 years (38 U.S.C. § 2400). Phase 5 of the Riverside National Cemetery is designed to serve anticipated regional veterans’ cemetery burial needs for at least 10 years, as enabled by VA Directive program policies and procedures.

The Proposed Action is needed to meet the VA National Cemetery Administration (NCA) goal of providing eligible veterans with reasonable access to VA burial options. Burial at a National Cemetery is an earned benefit provided to veterans through the VA. In addition, the Proposed Action is needed to meet the NCA’s goal of increasing burial options in areas with an unserved veteran population, as specified by Congress, in response to the Evaluation of the VA Burial Benefits Program (August 2008) of at least 80,000, in accordance with the Service Members Civil Relief Act, also known as the Veteran’s Benefit Act of 2010.

1.3 Decision Making

As a federal agency, the VA is required to incorporate a range of physical, environmental, cultural, and socioeconomic considerations into its decision-making processes for proposed actions. This SEA serves to

- inform the public of the possible environmental effects of the Proposed Action and considered alternatives and methods to these effects;
- provide for input and consultation among federal, state, and local agencies and Native American tribal entities for integration into the VA’s planning and evaluation;
- document adherence to the NEPA process; and
- support informed decision making by the VA.

This federal decision making includes identifying the actions that the government would commit to undertake to minimize environmental effects, as required under the NEPA, CEQ regulations, and 38 CFR Part 26.
The decision to be made is whether, having considered potential physical, environmental, cultural, and socioeconomic effects, the VA should implement the Proposed Action and, as appropriate, carry out measures to reduce its effects on resources. Implementation of the Best Management Practices (BMPs) identified herein, summarized in Section 5, would ensure that direct, indirect, and significant cumulative effects would not occur.
This section provides necessary background information and a description of the Proposed Action and alternatives considered by the VA for this SEA. CEQ and VA regulations for NEPA implementation require all reasonable alternatives to be rigorously explored and objectively evaluated.

2.1 Proposed Action

Under the Proposed Action, the VA would construct and operate the fifth phase (Phase 5) of the Riverside National Cemetery, as well as upgrade facilities and infrastructure throughout the original cemetery (see Figure 2-1). Phase 5 would encompass approximately 43 acres and provide all burial options. Infrastructure repairs and upgrades would also occur, including improvements to public restrooms, security, maintenance facilities, and other present infrastructure. This action would take place over the course of approximately 10 years (NCA, 2014a).

The Proposed Action would include the following elements and features (NCA, 2014a):

- Early turnover: Approximately 3,000 preplaced crypts would be developed. This would occur within two years of the initiation of the design and construction of the expansion and improvement project to meet immediate interment needs.
- Casketed remains area: Approximately 20,000 preplaced crypt full casket gravesites would be developed on the 43-acre expansion site.
- Cremated remains area: Approximately 13,000 traditional, 3-foot-by-3-foot, in-ground cremains and 10,000 columbarium niches would be constructed.
- Roadways and parking: New roadways and parking would be constructed in the Phase 5 expansion site to provide access to cemetery facilities and the maintenance area. The roadways would be developed in a north–south direction across the Phase 5 project area.
- Roadway entrance. Within the original cemetery property, the road at the entrance by the information building would be configured and there would be capability for pull-off.
- Cortege Lane Improvements. Eight new cortege lanes, to accommodate 30 vehicles per lane, would be installed near the amphitheater.
- Public Information Booth. A public information booth would be constructed on the original Riverside Cemetery property (outside of the Phase 5 expansion site). The building would be tall enough to accommodate full-height commercial vehicles.
- Records Building: A Records Building would be constructed adjacent to the existing Administration Building on the original cemetery. The Records Building would be approximately 500 gross square feet and would consist of records storage space.
- Public Restrooms: Public restrooms would be constructed in the western portion of the expansion site. The building would also include a mechanical room and telephone and communications system.
- Satellite Maintenance Facility. This facility would house equipment and material needed to complete the construction work in Phases 5–7. This would include, but is not limited to, an electrical and mechanical room, an office, restrooms, storage areas for vehicles and equipment, wash bays, and landscape storage areas.
- Signage and site stations: Phase 5 signage would be provided to be uniform, per National Cemetery Administration (NCA) criteria. Signs would be added to demonstrate recycled water use. New burial areas would include standardized stations for trash, flowers, and water.
• Landscaping and fencing: Turf would be planted in the expansion site from seed, and renovation and repair of existing turf would be planted from sod. Geographically compatible plants, shrubs, and trees would be planted in keeping with the existing cemetery landscaping. The spoils from the Phase 5 burial sections would be removed and potentially used for new berms.

• Irrigation. The irrigation system would be developed for the full build-out of the Phase 5 expansion site. The VA would construct a lake to serve irrigation needs. The expansion site irrigation pumping system would be independent of the developed cemetery, but would provide for cross-connection as a backup system.

• Utilities: Electrical power, sanitary sewer, potable water, storm sewer, and natural gas utilities would be acquired for the Phase 5 needs of the expansion site.

• Under the Proposed Action, the following changes to surfaces would be expected:
  • Pavement: There would be an increase in impervious surface by 275,000–325,000 SF from roadways and additional pavement.
  • Buildings: There would be an increase in impervious surface by 9,000–12,000 SF from new buildings.

Drainage problems throughout the cemetery, in particular, within the existing road and parking areas, would be addressed under the Proposed Action. In addition, the Proposed Action would include irrigation repairs to the water channel and lake system throughout the cemetery site, which includes repairs to the concrete lining of the water channel, lakes, and modifications to the concrete drainage outlets. Upgrades and extensions of irrigation into the newly developed areas (Phase 5) would be completed (NCA, 2014a).

Current infrastructure deficiencies would be improved within the maintenance area. The supply storage, vehicle maintenance, vehicle storage, and maintenance yard are undersized and in poor condition. A satellite maintenance facility would be constructed to allow a separation of maintenance functions to increase security and reduce thefts and vandalism. Repairs and upgrades would be completed to facilities in the existing maintenance areas. Increased security features would also be part of the Proposed Action, including higher fencing, an improved security gate, and monitoring cameras with an active alarm system (NCA, 2014a).
Land improvement activities associated with implementation of the Proposed Action would include land clearing, excavation, soil stockpiling, grading, installing various site improvements, creating roads, creating irrigation ponds, corrections to the water channel and lake system, and extending selected utilities to serve Riverside National Cemetery. It is expected that 200,000 cubic yards of cut and fill would occur on the property to implement the Proposed Action.

Prior to constructing any component of the Proposed Action, the VA would obtain all required federal and state permits and approvals necessary to comply with applicable laws. Applicable environmental permits required are described in Section 10. Furthermore, the VA would comply with the conditions of applicable local permits. In addition, the VA would implement the BMPs listed in Section 5 as part of the Proposed Action. These include measures that serve to proactively minimize environmental effects as identified through this SEA process.

2.2 Alternatives Analysis

NEPA, CEQ regulations, and 38 CFR Part 26 require that all reasonable alternatives be rigorously explored and objectively evaluated. Alternatives that are eliminated from detailed study must be identified, along with a brief discussion of the reasons for eliminating them. For the purposes of this analysis, an alternative was considered “reasonable” only if it would enable the VA to accomplish the primary mission of providing a suitable National Cemetery that meets the purpose of, and need for, the Proposed Action. “Unreasonable” alternatives would not enable the VA to meet the purpose of, and need for, the Proposed Action. Although the No Action Alternative does not meet the purpose of, and need for, the Proposed Action, this alternative was to be retained.
because it reflects the status quo and serves as a benchmark against which the effects of the Proposed Action can be evaluated, as required under the CEQ regulations (40 CFR 1502.14).

2.2.1 Alternatives Development

The following objectives were based on information in the Veterans Administration National Cemetery, Riverside California Master Plan (1976) for logical growth and expansion at the Riverside National Cemetery site.

- Facilities that accommodate the burial function and provide effective means for visitor participation in the environment of a National Cemetery
- Operational processes and service facilities that are efficient and economical
- Design (i.e., site development, landscape, architectural features, and engineering) that maximizes use and minimizes waste of resources
- Landscape that incorporates the natural environment to the extent possible (VA, 1976).

Working with an architecture–engineering consultant, the VA considered options within the existing cemetery and the expansion site for the configuration of cemetery elements, identifying concepts that efficiently developed available area, complemented the parklike aesthetics of the existing National Cemetery, and minimized potentially adverse impacts on the environment. The following criteria were used to refine possible alternatives, and guided the VA in its decision to select the Preferred Alternative for further analysis. Screening criteria include the following:

- Capacity: The Phase 5 expansion should provide sufficient capacity for the needs of veterans and their families within the region. Approximately 20,000 preplaced full casket gravesites, 13,000 in-ground cremains, and 10,000 columbarium niches would provide enough capacity for the next 10 years.
- Availability: The design of the Phase 5 expansion must provide at least a portion of components (i.e., 3,000 preplaced crypts) within two years of beginning construction to meet immediate interment needs.
- Aesthetic Buffers/Land Use Compatibility: The design of the Phase 5 expansion should use a range of natural and native earth-forms and plant materials that recollect the surrounding desert landscape.
- Stormwater Management: The design of the Phase 5 expansion should not increase flooding of adjacent lands, and should serve to properly manage on-site stormwater, correcting drainage problems, in compliance with Section 438 of the Energy Independence and Security Act.
- Avoid Sensitive Environmental Areas: The design of the Phase 5 expansion should avoid wetlands to the maximum extent practicable, including retaining sufficient buffers. The design would comply with applicable state and federal environmental permitting requirements and processes, as well as consider local permitting guidelines.
- Avoid Sensitive Species: The design of the Phase 5 expansion should minimize impacts on Stephen’s kangaroo rat (SKR) to the maximum extent practicable. The design should consider existing corridors to minimize potential impacts on SKR movement.
2.2.2 Evaluated Alternatives

This EA analyzes two alternatives, the Preferred Alternative and the No Action Alternative.

2.2.2.1 Preferred Alternative

The VA identified one alternative that best met all of the VA’s screening criteria, as well as the purpose of, and need for, the Proposed Action. The VA’s Preferred Alternative is to construct Phase 5 of the Riverside National Cemetery on 43 acres of the cemetery site, as well as conduct necessary infrastructure repairs and upgrades on the original cemetery property. The Preferred Alternative includes the implementation of the Proposed Action as described in Section 2.1 and shown in Figure 2-1.

2.2.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented and gravesite capacity would eventually be depleted at Riverside National Cemetery. Veterans and their families residing in Southern California would be underserved in the future; in many cases, this would require veterans and their families to either travel more than 100 miles to reach a National Cemetery in Southern California or to use a private cemetery for burials. The VA would not be in compliance with the requirements of the Servicemembers Civil Relief Act. Furthermore, the No Action Alternative would create a hardship for the survivors of deceased veterans for attending the funerals and for grave visitations, because of the distances between homes and the burial sites. If veterans and their families must resort to private burials, they are deprived of the honor and privilege bestowed upon them by a grateful nation for their service to their country.

Although the No Action Alternative does not meet the purpose of, and need for, the Proposed Action, this alternative was retained, because it reflects the status quo and serves as a benchmark against which the effects of the Proposed Action can be evaluated, as required under the CEQ regulations (40 CFR Part 1502.14).

2.2.3 Alternatives Identified but Not Evaluated in Detail

Since the inception of the project, the VA has worked with the architects and engineers responsible for designing the project to identify, evaluate, and screen a range of design alternatives. Throughout the design process, the VA has ensured that the Phase 5 design would avoid undisturbed areas to the greatest extent practicable, and sensitive areas (e.g., jurisdictional wetlands, SKR habitat, areas with potential cultural resources). The Phase 5 development area avoids sensitive resources to the greatest extent practicable. Based on the results of this process, the VA identified one reasonable alternative for the Phase 5 expansion that best met all the VA’s criteria, and purpose of, and need for, the Proposed Action, which was selected as the Preferred Alternative. No other on-site configuration for Phase 5 was considered better for achieving the purpose of, and need for, the Proposed Action, while also avoiding environmentally sensitive areas previously discussed. Therefore, other on-site design alternatives were eliminated from further study.
3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Scope of Analysis
This section describes the baseline (existing) physical, environmental, cultural, and socioeconomic conditions at the proposed National Cemetery site in Riverside, California, and its general vicinity, with emphasis on those resources potentially affected by the alternatives.

3.1.1 Resources Evaluated but Not Carried Forward
The VA determined that land use, transportation and parking, and socioeconomics do not require detailed analysis in this SEA. These resource areas are not carried forward for further analysis, as discussed below.

Land Use. The Phase 5 expansion site consists of previously disturbed open space and low-intensity construction. Under the Proposed Action, no substantial changes in land use would occur; however, upgrades to infrastructure would perpetuate existing land uses and provide aesthetic enhancements. Overall, the Proposed Action would result in beneficial effects on land use by converting a previously disturbed, denuded site into a parklike national shrine, providing aesthetic benefits and reflecting the land uses of surrounding parcels. In addition, this site is surrounded by the existing cemetery on three sides and bounded by an interstate highway to the east; therefore, it would have no direct or indirect effect on off-site land uses. Consequently, land use is not carried forward for further analysis.

Transportation and Parking. During construction, a temporary increase in construction vehicles and workers’ personal vehicles would slightly increase traffic on surrounding roadways. The construction of a new interchange at the intersection of Interstate 215 (I-215) and Van Buren Boulevard in 2014 improved transportation in the immediate vicinity, enhancing the ability of local roads to respond to temporary increases in traffic. Due to the capacity of surrounding roads (specifically Van Buren Boulevard and I-215) and their existing use as major thoroughfares, the increases in construction vehicles would be insignificant relative to current levels of service. In the long-term, roadway and facility modifications would improve the flow of traffic at the main entrance by adding cortege staging lanes and additional visitor parking (NCA, 2014a). As a result, the Proposed Action would result in beneficial effects on transportation at the entrance to the cemetery and to internal road networks. Therefore, transportation and parking are not carried forward for further analysis.

Socioeconomics. Within the context of Riverside County’s population and geographic size, Riverside National Cemetery does not factor as a major regional or local employer. In addition, because the Proposed Action would not considerably alter the scale or scope of operations at the cemetery, the relevance of the project to regional socioeconomic considerations is limited. Therefore, socioeconomics is not carried forward for further analysis.

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

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

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

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

In this SEA, the significance of potential direct, indirect, and cumulative effects has been determined through a systematic evaluation of each considered alternative in terms of its effects on each individual technical resource area. The following technical resource areas are considered in depth in this SEA:

- Aesthetics
- Air Quality
- Cultural Resources
- Geology and Soils
- Hydrology and Water Quality
- Floodplains and Wetlands
- Wildlife and Habitat
- Noise
- Community Services
- Solid and Hazardous Materials
- Utilities
- Environmental Justice

3.2 Aesthetics

3.2.1 Existing Conditions

Riverside National Cemetery is situated within a low-density suburban environment with industrial and commercial land uses to the north, residential uses to the northwest, recreational uses and open space directly west, and a mix of residential and commercial uses to the south. The Phase 5 expansion site is situated between an operational portion of the Riverside National Cemetery to the west and March Air Reserve Base (ARB) to the east. I-215 separates the National Cemetery and March ARB properties. Just farther to the west, beyond the existing cemetery site, is a golf course. The area north of the Phase 5 expansion site is part of the cemetery, while the area to the south is VA property that is slated for cemetery expansion in future phases.
The Phase 5 expansion site is currently undeveloped grassland and grassland-scrub mixed stands. There has been considerable disturbance of the ground surface, and portions of the area have been previously used as roads and storage areas (VA, 2016c).

The cemetery was planned to emphasize and accentuate surrounding viewsheds. These views include desert hills that rise to form enclosing mountain ranges, including Box Spring Mountain to the north, the Badlands to the northeast, and Bernasconi Hills to the southeast. Easterly views are available even from lower elevation portions of the site, although partially obscured by facilities at March ARB. The crest above the golf course to the west substantially obscures views in that direction (VA, 1976).

### 3.2.2 Environmental Consequences of the Preferred Alternative

The Preferred Alternative is expected to have minor short-term, adverse effects and minor, long-term, beneficial effects on aesthetics.

An alternative could adversely affect visual resources if it resulted in abrupt changes to the complexity of the landscape and skyline (i.e., in terms of vegetation, topography, or structures) when viewed from publicly accessible areas. The master planning process involves a visual and operations analysis with consideration to the expansion of cemetery facilities and operation of the site. The design would develop the site in a manner that strives to preserve and accentuate many of its existing topographical, vegetative, and water body features. The cemetery buildings are secondary features to the grounds themselves. Under the Preferred Alternative, they would be blended in a subtle manner within the context of the cemetery setting, surrounding topography, and local vernacular architecture. The buildings and site elements and features would adhere to the VA’s *NCA Facilities Design Guide*, which dictates that the architectural design be integrated with the surrounding landscape, and have a residential, noninstitutionalized character.

In the short term, the presence of construction equipment during the construction of the cemetery expansion and improvements would have a minor adverse effect on the visual quality of the area for visitors to the cemetery. Construction activities would be conducted with consideration for interment services, and impacts would be temporary and minor. The location of the expansion site is likely far enough away from residential areas that it would have minimal to negligible effects on the visual quality of the area for nearby residents. Aesthetic changes to the expansion site likely would be visible from the existing cemetery (north and west of the site) and I-215 (east of the site). The number of visual receptors are relatively small; therefore, the construction impacts would be considered short-term and minor.

In the long term, the Preferred Alternative would be expected to benefit the aesthetics of the cemetery. The proposed expansion of Riverside National Cemetery would enhance the aesthetic quality of the site to an area with parklike landscaping. The Phase 5 expansion site is currently undeveloped open space, and the appearance of the site would change to a manicured cemetery landscape with any built structures adhering to the NCA Facilities Design Guide criteria. Much of the expansion site would include irrigated turf grown from seed. Along the eastern border and fence line, geographically compatible plants, shrubs, and trees would be planted in keeping with the existing cemetery landscaping.

The Preferred Alternative would have no significant effects on aesthetics.
3.2.3 Environmental Consequences of the No Action Alternative

The No Action Alternative would have minor, adverse effects on aesthetics. Improvements to, and expansion of, the cemetery would not occur, resulting in no change from the baseline condition. Improvements to roadways and drainage systems on the existing cemetery would not occur, roads could eventually deteriorate, and standing water would intermittently collect at certain areas of the cemetery. The aesthetic benefits of developing the undeveloped site into a National Cemetery would not occur. These impacts on aesthetics would not be considered significant.

3.2.4 Minimization/Management Measures

The following management measures would be employed to limit short-term, adverse effects and maximize long-term, beneficial effects associated with the Preferred Alternative:

- Incorporate existing topography and natural features into site design, wherever possible.
- Maintain landscaped areas, buildings, roadways, and signage.
- Design the site to accentuate existing viewsheds.
- Conduct construction activities with a sensitivity toward maintaining the dignity and solemnity of the National Cemetery environment during interment services.

3.3 Air Quality

3.3.1 Existing Conditions

The U.S. Environmental Protection Agency (USEPA) Region 9 and the California Air Resources Board (CARB) regulate air quality in California. Riverside National Cemetery is located in the South Coast Air Basin and, therefore, is under the air quality jurisdiction of the South Coast Air Quality Management District (SCAQMD). Each of these agencies develops rules, regulations, and policies for regulating air quality in accordance with applicable legislation. USEPA regulations may not be superseded; however, state and local regulations may be more stringent.

3.3.1.1 Air Quality Standards and Conformity

The Clean Air Act (42 U.S.C. 7401 et seq.), as amended, authorizes the USEPA to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that set acceptable upper limits of concentration levels for seven criteria pollutants: particulate matter less than or equal to 10 microns (PM10), fine particulate matter less than or equal to 2.5 microns (PM2.5), sulfur dioxide (SO2), carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), and lead. These criteria pollutants are those for which the USEPA has placed the greatest emphasis and has developed health-based concentrations for ambient air.

In compliance with the Clean Air Act, CARB maintains a State Implementation Plan (SIP) that directs statewide goals, milestones, and agreements to reduce criteria pollutants below NAAQS thresholds. In addition, the State of California has instituted the California Ambient Air Quality Standards, which implement generally more stringent thresholds for all NAAQS criteria pollutants and additional standards for sulfates, hydrogen sulfide, vinyl chloride (chloroethene), and visibility-reducing particles.

Areas that violate a NAAQS are designated as nonattainment areas; areas with levels below NAAQS are designated as attainment areas. An area may also be classified as a maintenance area if it was once classified as nonattainment but has since reached attainment of NAAQS for a probationary period through implementation of a maintenance plan.
The USEPA General Conformity Rule (40 CFR Part 93) applies to federal actions in maintenance areas and nonattainment areas. A conformity applicability analysis is the first step to assess if a federal action must be supported by a full conformity determination. If the results of the applicability analysis indicate that the total direct and indirect emissions of a proposed project would not exceed the de minimis emissions thresholds, then the conformity evaluation process is completed. If total direct and indirect emissions would equal or exceed the de minimis thresholds, then a full conformity determination in accordance with the General Conformity Rule is required to ensure that federal actions do not cause or contribute to violations of the NAAQS or affect NAAQS attainment. The USEPA has designated the following attainment statuses for the South Coast Air Basin, as shown in Table 3-1.

Table 3-1. Criteria Pollutant Attainment Statuses for the South Coast Air Basin and Applicable de minimis Thresholds

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Federal Designation</th>
<th>Applicable de minimis Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-hour O₃ (2008 standard)</td>
<td>extreme nonattainment</td>
<td>10 tpy NOₓ or VOC</td>
</tr>
<tr>
<td>PM₂.₅ (1997 standard)</td>
<td>moderate</td>
<td>70 tpy direct emissions of PM₂.₅, NOₓ, VOC, and ammonia (serious nonattainment)</td>
</tr>
<tr>
<td>PM₂.₅ (2006 standard)</td>
<td>serious</td>
<td></td>
</tr>
<tr>
<td>PM₂.₅ (2012 standard)</td>
<td>moderate</td>
<td></td>
</tr>
<tr>
<td>PM₁₀ (1987 standard)</td>
<td>maintenance</td>
<td>100 tpy</td>
</tr>
<tr>
<td>CO (1971 standard)</td>
<td>maintenance</td>
<td>100 tpy</td>
</tr>
<tr>
<td>NO₂ (1971 standard)</td>
<td>maintenance</td>
<td>100 tpy</td>
</tr>
<tr>
<td>SO₂</td>
<td>attainment</td>
<td>not applicable</td>
</tr>
<tr>
<td>Lead</td>
<td>attainment</td>
<td>not applicable</td>
</tr>
</tbody>
</table>


3.3.1.2 State and Local Air Quality

The SCAQMD is responsible for implementing and updating an Air Quality Management Plan (AQMP) to achieve reduction goals for criteria pollutants and other air quality management goals in compliance with the SIP. The AQMP uses population growth projections, energy use trends, and transportation demand estimates to forecast emissions rates and develop control strategies. Policies are primarily directed at emissions reductions from transportation demand or major stationary sources of emissions.

Riverside National Cemetery is within the South Coast Air Basin, which includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. Although air quality in this area has dramatically improved in recent years, the South Coast Air Basin still exceeds public health standards for both ozone and particulate matter and experiences some of the worst air pollution in the nation. According to the 2016 AQMP, the most significant air quality challenge in the South Coast Air Basin is reducing NOₓ emissions sufficiently to meet the ozone standard deadlines by 2023 and 2031. Mobile sources contribute heavily to the NOₓ and PM₂.₅ emissions inventories (SCAQMD, 2017). Baseline air emissions within the South Coast Air Basin are summarized in Table 3-2.
Table 3-2. South Coast Air Basin Emissions Inventory

<table>
<thead>
<tr>
<th>Year</th>
<th>VOC  (tpy)</th>
<th>CO   (tpy)</th>
<th>NOx  (tpy)</th>
<th>SO2  (tpy)</th>
<th>PM2.5 (tpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>171,550</td>
<td>774,895</td>
<td>197,100</td>
<td>6,570</td>
<td>24,090</td>
</tr>
<tr>
<td>2019</td>
<td>137,240</td>
<td>528,155</td>
<td>128,845</td>
<td>6,205</td>
<td>23,360</td>
</tr>
<tr>
<td>(projected)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>132,130</td>
<td>483,625</td>
<td>142,350</td>
<td>6,205</td>
<td>23,360</td>
</tr>
<tr>
<td>(projected)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: (SCAQMD, 2017)
Note: tpy=tons per year

No large sources of regulated air emissions exist on Riverside National Cemetery or on the adjoining expansion site (e.g., boilers and generators). Thus, the VA, as the owner of the site, is not required to have a Title V air operating permit, based on current conditions.

CEQ's NEPA regulations require evaluation of the degree to which a proposed action affects public health (40 CFR 1508.27). Children, elderly people, and people with illnesses are especially sensitive to the effects of air pollutants; therefore, hospitals, schools, convalescent facilities, and residential areas are sensitive receptors for air quality impacts. Arnold Heights Elementary is within one mile of the project area on Riverside National Cemetery (USEPA, 2017b). Students at this school range from kindergarten through fifth grade and attend year-round (California Department of Education, 2017). Several residences west of the golf course are also within one mile of the project area. Other sensitive receptors are just beyond one mile from the project area, including Altavita Village, a retirement community; Tomas River Elementary School; and residents in the Orangecrest subdivision.

3.3.2 Environmental Consequences of the Preferred Alternative

The Preferred Alternative would have minor, short-term adverse effects and negligible, long-term adverse effects on air quality. Short-term, adverse effects would result from air emissions during construction, whereas long-term impacts would be associated with expanded operations at the cemetery as well as an increase in private vehicles visiting the expanded cemetery. Construction and operation emissions would not be expected to exceed any de minimis applicability thresholds. The project would not be expected to cause or contribute to new violations of a NAAQS, increase the frequency or severity of any existing violation of a NAAQS, or delay the timely attainment of a NAAQS. Furthermore, increased emissions would be a negligible percentage of regional emissions within the South Coast Air Basin (which are shown in Table 3-2), and no noticeable effects on regional air quality would be expected. The estimated construction and operations criteria pollutant emissions are summarized in Table 3-3.
### Table 3-3. Preferred Alternative Estimated Air Emissions Compared to *de minimis* Thresholds

<table>
<thead>
<tr>
<th>Activity</th>
<th>VOC (tpy)</th>
<th>CO (tpy)</th>
<th>NO\textsubscript{x} (tpy)</th>
<th>SO\textsubscript{2} (tpy)</th>
<th>PM\textsubscript{10} (tpy)</th>
<th>PM\textsubscript{2.5} (tpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>de minimis</em> Thresholds (tons per year)</td>
<td>10</td>
<td>100</td>
<td>10</td>
<td>70</td>
<td>100</td>
<td>70</td>
</tr>
<tr>
<td><strong>2018</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Phase: Non-road Equipment</td>
<td>1.04</td>
<td>5.28</td>
<td>7.28</td>
<td>0.013</td>
<td>0.36</td>
<td>0.33</td>
</tr>
<tr>
<td>Construction Phase: On-Road Trucks</td>
<td>0.05</td>
<td>0.45</td>
<td>1.00</td>
<td>0.0021</td>
<td>0.09</td>
<td>0.06</td>
</tr>
<tr>
<td>Construction Phase: Fugitive Dust Emissions (controlled)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20.40</td>
<td>4.32</td>
</tr>
<tr>
<td>Total 2018 (tons per year)</td>
<td>1.09</td>
<td>5.72</td>
<td>8.28</td>
<td>0.01</td>
<td>20.85</td>
<td>4.71</td>
</tr>
<tr>
<td>exceeds <em>de minimis</em>?</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td><strong>2019</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Phase: Non-road Equipment</td>
<td>0.43</td>
<td>2.29</td>
<td>2.95</td>
<td>0.01</td>
<td>0.14</td>
<td>0.13</td>
</tr>
<tr>
<td>Construction Phase: On-Road Trucks</td>
<td>0.03</td>
<td>0.32</td>
<td>0.71</td>
<td>0.001</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td>Construction Phase: Fugitive Dust Emissions (controlled)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5.14</td>
<td>1.09</td>
</tr>
<tr>
<td>Begin Operations (burials, visitors, standby generator)</td>
<td>0.21</td>
<td>12.41</td>
<td>1.31</td>
<td>0.01</td>
<td>0.36</td>
<td>0.09</td>
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<tr>
<td>Total 2019 (tons per year)</td>
<td>0.66</td>
<td>15.02</td>
<td>4.97</td>
<td>0.02</td>
<td>5.71</td>
<td>1.35</td>
</tr>
<tr>
<td>exceeds <em>de minimis</em>?</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>
## AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

<table>
<thead>
<tr>
<th>Activity</th>
<th>VOC (tpy)</th>
<th>CO (tpy)</th>
<th>NOx (tpy)</th>
<th>SO2 (tpy)</th>
<th>PM10 (tpy)</th>
<th>PM2.5 (tpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2020 and on</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Annual Operations</strong> (burials, visitors, standby by generator)</td>
<td>0.41</td>
<td>24.82</td>
<td>2.62</td>
<td>0.03</td>
<td>0.72</td>
<td>0.18</td>
</tr>
<tr>
<td><strong>exceeds de minimis?</strong></td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

Note: tpy=tons per year

Summary of inputs:

**Construction Non-road**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site prep, grading: 100 percent in 2018</td>
<td>Backhoe 2,940 total operating hours</td>
</tr>
<tr>
<td>Demolition: 100 percent in 2019</td>
<td>Dozer 84 total operating hours</td>
</tr>
<tr>
<td>Construction (Burial Areas, Facilities): 67 percent in 2018, 33 percent in 2019</td>
<td>Skid Steer Loader 6,048 total operating hours</td>
</tr>
<tr>
<td>Paving: 69 percent in 2018, 31 percent in 2019</td>
<td>Roller 2,688 total operating hours</td>
</tr>
<tr>
<td>Interior: 67 percent in 2018, 33 percent in 2019</td>
<td>Air compressor 760 total operating hours</td>
</tr>
<tr>
<td>Landscaping: 100 percent in 2019</td>
<td>Misc. Equipment 4,200 total operating hours</td>
</tr>
</tbody>
</table>

**Construction On-road: 58 percent in 2018, 42 percent in 2019**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Pump Trucks</td>
<td>30,240 vehicle miles traveled</td>
</tr>
<tr>
<td>Heavy Trucks</td>
<td>33,600 vehicle miles traveled</td>
</tr>
<tr>
<td>Truck Deliveries</td>
<td>100,500 vehicle miles traveled</td>
</tr>
<tr>
<td>Passenger Trucks</td>
<td>151,200 vehicle miles traveled</td>
</tr>
</tbody>
</table>

**Annual Operations: 50 percent in 2018, 100 percent in 2019**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visitors: 300 per day</td>
<td></td>
</tr>
<tr>
<td>Site Maintenance and Burial:</td>
<td></td>
</tr>
<tr>
<td>Backhoe 1,460 total operating hours</td>
<td></td>
</tr>
<tr>
<td>Standby generators:</td>
<td></td>
</tr>
<tr>
<td>559.5 kilowatt/750 horsepower, 500 total operating hours</td>
<td></td>
</tr>
</tbody>
</table>
3.3.2.1 Construction Emissions

Site preparation and construction activities such as clearing, grading, digging, roadwork, and temporary stockpiling of soils would generate fugitive dust emissions. Fugitive dust emissions (i.e., particulate matter) would be greatest during site preparation and would vary from day to day depending on the work phase, level of activity, and prevailing weather conditions. The quantity of uncontrolled fugitive dust emissions from the construction site would be proportional to the area of land being worked and the level of activity. Exhaust from construction equipment and construction vehicles gaining access to the site would also contain criteria pollutant and carbon dioxide emissions. These emissions could cause minor, localized, short-term impacts on air quality and create minor, temporary nuisance concerns for surrounding landowners, such as reduced visibility on adjacent roadways. Short-term emissions would last only during construction activities.

The estimated construction emissions are summarized in Table 3-3. These estimates are categorized according to the calendar years in which they would occur, based on the anticipated construction schedule. Air emissions would occur during grading, construction, paving, and landscaping over approximately 12 months, from May 2018 through May 2019 (VA, 2017). Site preparation and demolition activities would likely include backhoes, graders, bulldozers, and forklifts. Construction equipment would likely include loaders, forklifts, a crane, and portable diesel generators. Paving activities would likely include rollers and pavers. Other miscellaneous equipment used during site preparation or construction could include air compressors for architectural coatings, landscaping equipment, and small hand-held tools. Furthermore, the duration of general construction activities would require that on-road truck deliveries, concrete trucks, heavy trucks, and passenger trucks gain access to the site on a regular basis.

The existing air quality in Riverside County is already poor, as evidenced by its status as an extreme O₃ and a serious PM₂.₅ nonattainment area, the short-term generation of VOC, NOₓ, and PM₂.₅ (of which VOC and NOₓ are precursors of O₃ and PM₂.₅). The projected construction emissions of VOC, NOₓ, and PM₂.₅ would not exceed the established de minimis thresholds for O₃ and PM₂.₅. During ground-disturbing activities, the Preferred Alternative would increase the concentration of criteria pollutants in the immediately surrounding environment, which includes sensitive receptors of several residences and a school within one mile of the project site. Construction could have short-term, adverse effects on sensitive individuals, especially on days when ambient air quality is poor with high levels of O₃ and PM₂.₅.

3.3.2.2 Operational Emissions

Long-term sources of air emissions associated with cemetery operation would include burial operations, a new emergency generator, and vehicles visiting the site (summarized in Table 3-3). Riverside National Cemetery is the busiest National Cemetery by interment workload. In 2012, 8,119 burials were conducted at Riverside National Cemetery (VA, 2014a), which is approximately 22 burials per day; it is assumed that this rate would be continued under the Preferred Alternative. Operational activities such as digging, temporary stockpiling of soil, maintenance, and landscaping activities would continue for another 10 years under the Preferred Alternative, resulting in minor fugitive dust and vehicle emissions. More visitors would travel to and from the site each year following cemetery expansion. These increases would have a minor impact on local air quality.

It is anticipated that the satellite maintenance facility would have a diesel-driven standby generator. For the purposes of estimating emissions, it was assumed that the generator would
output approximately 560 kilowatts (750 horsepower) and operate no more than 500 hours per year. Long-term emissions from this emergency generator would be minor.

3.3.2.3 General Conformity Applicability

The VA must complete a conformity applicability analysis to determine whether the action is subject to the General Conformity Rule (40 CFR Part 93). Riverside National Cemetery is within the South Coast Air Basin; as noted in Section 3.3.1 and Table 3-1, this is a designated nonattainment area for O₃ and PM₂.₅. It is also a maintenance area for CO, NO₂, and PM₁₀.

An action is exempt from the General Conformity Rule if the total direct and indirect annual emissions from the project would be below the established de minimis thresholds in 40 CFR 93.153(b)(1) for extreme O₃ nonattainment (measured as NOₓ or VOCs) and serious PM₂.₅ nonattainment (measured as direct PM₂.₅, SO₂, NOₓ, VOC, and ammonia), as well as 40 CFR 93.153(b)(2) for CO, NO₂, and PM₁₀ maintenance areas. As shown in Table 3-3, activities are below the de minimis thresholds for extreme O₃ and serious PM₂.₅ nonattainment areas and CO, NO₂, and PM₁₀ maintenance areas. Therefore, the action is exempt from the General Conformity Rule requirements to prepare a full conformity determination.

3.3.3 Environmental Consequences of the No Action Alternative

The No Action Alternative would result in negligible, adverse effects on air quality. Expansion and upgrades to the cemetery would not occur at the site, resulting in no short-term changes in air emissions. However, on a regional scale, the No Action Alternative may result in increased vehicle emissions (including criteria pollutants as well as GHG emissions), as veterans and their families are required to travel greater distances to other national cemeteries in the region. Should the site be developed for another use, air quality impacts could result from that changed land use and would depend upon the nature of the development.

3.3.4 Minimization/Management Measures

Since the Proposed Action would not present any significant adverse effects on air quality, specific minimization measures would not be required. The following construction BMPs would be implemented to control and minimize fugitive dust emissions at the site:

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

In accordance with the VA’s Climate Change Adaptation Plan, new VA buildings will use Adaptive Climatology Design Standards to prevent over- or under-designing building systems, reducing energy waste (VA, 2014b).
3.4 Cultural Resources

Section 106 and Section 110 of the National Historic Preservation Act of 1966, as amended (NHPA) (Public Law 89-655, 16 U.S.C. 470 et seq.), ensures that federal agencies consider cultural resources, defined as any prehistoric or historic district, site, building, structure, or object eligible for inclusion on the National Register of Historic Places (NRHP), in their proposed programs, projects, and actions prior to initiation.

Analysis of potential effects on cultural resources considers both direct and indirect effects. Direct effects may be the result of physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the importance of the resource; introducing visual, atmospheric, or audible elements that are out of character for the period the resource represents (thereby altering the setting); or neglecting the resource to the extent that it deteriorates or is destroyed. An adverse effect according to Section 106 Criteria for Adverse Effect (36 CFR 800.5) is if an undertaking (action) diminishes any of the characteristics that qualify a property for inclusion in the NRHP. These effects are analyzed according to the integrity of the property’s location, design, setting, materials, workmanship, feeling, and association.

3.4.1 Existing Conditions

3.4.1.1 Historic Context

The project site is located between the Southern California Coastal and the Mojave Desert archaeological regions. It is within the prehistoric ethnographic territory of several Native American cultures. It is likely that the project site itself was within Cahuilla territory, although it is possible that it was settled by Luiseno or Serrano Indians or multiple cultures (IT Corporation, 1996). The first Europeans entered the area in 1774 with the Juan Bautista de Anza expedition, and relations with local Indians were characterized as hostile. Contact among Europeans and native cultures was minimal until the early 19th century, when several Spanish missions were established in the Riverside region. In 1863, a smallpox outbreak decimated the local Cahuilla population. This epidemic, the establishment of reservations, U.S. government-led acculturation efforts, and new settlement substantially threatened traditional Cahuilla cultural practices in the area (Bean, John Lowell, 1978). However, several federally recognized Cahuilla tribes persist in the region, preserving traditional cultural practices and serving as stewards to cultural resources (NCA, 2014b).

The Riverside region was part of the Spanish Empire from the first European settlements in the 1770s until 1822, when the area became part of Mexico. During this time, settlement was sparse among several large land grants. Following California's admission to the United States in 1850, the colony that would become the city of Riverside was established in the 1870s. By the 1880s, the population was growing rapidly as the region became the center of an expanding citrus industry. The economy has grown and diversified since Riverside County has blended with the outer western suburbs of Los Angeles.

In 1918, March AFB was established approximately a mile east of the project site. Previously the largest airfield in the western United States, March AFB was reorganized as March ARB in 1993. Most of the current extent of Riverside National Cemetery’s property was once Camp Haan, a military reservation directly west of, and adjacent to, March AFB. Originally a tent camp developed in 1940, Camp Haan served alternately as an artillery training center, army service depot, World War II prisoner-of-war camp, and a separation point for soldiers returning from World War II. The
The camp had a peak population of 80,000 and was the site of over 350 wooden structures. After being declared surplus in 1947, a portion of the land went to March AFB and the rest was privately sold. All existing buildings were either moved or destroyed, and roads were largely dismantled or left to deteriorate (IT Corporation, 1996). In 1976, 740 acres of March AFB that were once part of Camp Haan were transferred to the VA to establish Riverside National Cemetery.

### 3.4.1.2 Known Historic Resources in the Area of Potential Effect

The site of the Proposed Action has not been surveyed for belowground cultural resources. All national cemeteries are considered historic districts and are, therefore, eligible for the NRHP. Thus, despite being less than 50 years old, the existing Riverside National Cemetery is considered a historic property for purposes of Section 106 of the NHPA.

In 1975, during the original master planning process for the cemetery, the California State Historic Preservation Officer (SHPO) concluded that the acquisition and development of the Riverside National Cemetery property, inclusive of the project site, would have no adverse effect on present or potential non-federally owned NRHP-listed property.

A cultural resources record search conducted in March 2016 through the California Historical Resources Information System, Eastern Information System, indicates that there are 27 cultural records within, or adjacent to, the Riverside National Cemetery property boundary. Seven prehistoric sites or resources, none of which are located within the project site, have been previously identified on the property and have been deemed ineligible for listing on the NRHP.

In addition to a review of surveys and archaeological sites located outside of the project area, an initial cultural resource impact prediction study (Row 10 Historic Preservation Solutions, LLC, 2016) was completed for the acquisition area to the west of this project area, the General Archie Old Golf Course at 16700 Village West Drive, March ARB; an archaeological sensitivity assessment was conducted, including a windshield survey (Environmental Research Group, LLC, 2017); an archaeological survey report was completed for the Golf Course expansion (Environmental Intelligence, LLC, 2017), which is outside of and to the west of the current Area of Potential Effect (APE) for this project area; and a focused ethnographic landscape study was also completed (PaleoSolutions, LLC, 2017). These last three reports include discussion of the current APE.

The 2017 Sensitivity Study included a records search and a windshield survey. The August 2017 report described results of a May 2017 pedestrian survey of 705 acres within the Golf Course Expansion Area, as well as an Eastern Information Center (EIC) records search. The EIC records search included the current APE, and two new prehistoric resources, both bedrock milling stations, were identified during the pedestrian survey. One new historic period site was identified, a secondary deposit of historic cans, dating no earlier than the 1950s. The new sites were identified as not eligible for listing on the NRHP.

Prehistoric sites found in the area include dozens of milling slicks and some areas of rock art. In addition, a letter from the California Native American Heritage Commission (NAHC) stated that their search of the Sacred Lands File identified positive results. Consultation with Native American tribes is ongoing to determine the nature of these results and potential impacts from the proposed action.
3.4.1.3 Native American Resources and NHPA Section 106 Consultation

For all federally proposed actions, federal agencies are required to consult with federally recognized Native American tribes in accordance with NEPA, the NHPA, the Native American Graves Protection and Repatriation Act (NAGPRA), EO 13007, and EO 13175. The VA contacted the NAHC to request information on known traditional cultural properties or Native American sacred places currently known to exist within the project area, and to request a list of tribes with an interest in the project area. The NAHC responded, stating that the Sacred Lands File records search identified positive results, and provided a list of Native American tribal stakeholders.

During the development of this SEA, the VA consulted with the following federally recognized Native American tribes that have possible interest in the project area (Table 3-4). As part of the public outreach effort, letters were disseminated to those particular Native American Tribes.

<table>
<thead>
<tr>
<th>Tribe Name</th>
<th>Tribe Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqua Caliente Band of Chauilla Indians</td>
<td>Morongo Band of Mission Indians</td>
</tr>
<tr>
<td>Augustine Band of Chauilla Indians</td>
<td>Pala Band of Mission Indians</td>
</tr>
<tr>
<td>Cabazon Band of Mission Indians</td>
<td>Pauma Band of Luiseño Indians</td>
</tr>
<tr>
<td>Cahuilla Band of Mission Indians</td>
<td>Pechanga Band of Luiseño Indians</td>
</tr>
<tr>
<td>Chemehuevi Indian Tribe</td>
<td>Quechan Tribe of the Fort Yuma Indian Reservation</td>
</tr>
<tr>
<td>Cocopah Indian Reservation</td>
<td>Ramona Band of Chauilla</td>
</tr>
<tr>
<td>Colorado River Indian Tribes of the Colorado River Indian Reservation</td>
<td>Rincon Band of Luiseño Indians</td>
</tr>
<tr>
<td>Fort Mojave Indian Tribe</td>
<td>San Fernando Band of Mission Indians</td>
</tr>
<tr>
<td>Gabrieleno Band of Mission Indians – Kizh Nation</td>
<td>San Luis Rey Band of Mission Indians</td>
</tr>
<tr>
<td>Gabrieleno/Tongva San Gabriel Band of Mission Indians</td>
<td>San Manuel Band of Mission Indians</td>
</tr>
<tr>
<td>Gabrieleno/Tongva Nation</td>
<td>Santa Rosa Band of Cahuilla Indians</td>
</tr>
<tr>
<td>Juaneño Band of Mission Indians</td>
<td>Serrano Nation of Mission Indians</td>
</tr>
<tr>
<td>Juaneño Band of Mission Indians Acjachemen Nation</td>
<td>Soboba Band of Luiseño Indians</td>
</tr>
<tr>
<td>La Jolla Band of Luiseño Indians</td>
<td>Torres-Martinez Desert Cahuilla Indians</td>
</tr>
<tr>
<td>Los Coyotes Band of Cahuilla and Cupeno Indians</td>
<td>Twenty-Nine Palms Band of Mission Indians</td>
</tr>
</tbody>
</table>

In addition, the VA initiated consultation with the California SHPO in a letter that was sent March 7, 2018. Copies of all correspondence, as well as any comments and responses received, can be found in Appendix A.

3.4.2 Environmental Consequences of the Preferred Alternative

The Preferred Alternative would have no adverse effects pursuant to 36 CFR 800.5(d)(2). The Preferred Alternative would not directly or indirectly affect any historic properties that are eligible for listing in the NRHP outside of the National Cemetery itself.
Under the Preferred Alternative, signage would be replaced to match the new signage at the cemetery expansion site. It is likely that this new signage would vary from the original in materials and/or style; however, the replacement of the original signage would not diminish the NRHP-eligible status listing of the cemetery; therefore, it would not have a significant impact on cultural resources.

Activities under the Preferred Alternative would also include adding a records building and reconfiguring the information building within the original cemetery historic district. Assessing adverse effects of new construction is evaluated as to whether the character of the property’s use or physical features that contribute to its historical significance are affected, and if its introduction causes a visual element that would diminish the integrity of the property’s significant historic features. The addition of the records building and the reconfiguring of the information building, would not result in an adverse effect, since it would conform to the Secretary of the Interior’s Standards for Rehabilitation. The new construction would be compatible with the historic materials, features, size, scale, and proportion. The new records building would be a contributing resource after its construction since it would fall within the period of significance for the cemetery, which is its establishment (1978) to the present. Therefore, they would be considered to have minor, long-term beneficial effects on cultural resources at the existing NRHP-eligible cemetery.

Ground disturbance would occur as part of the Preferred Alternative. Land improvement would include land clearing, excavation, soil stockpiling, grading, installing various site improvements, creating roads, creating irrigation ponds, corrections to the water channel and lake system, extending selected utilities, and construction of crypts, cremains gravesites, and columbarium niches. Some potential may exist for disturbance of previously unknown archaeological resources during earthwork and construction efforts; however, the site of the Preferred Alternative has been previously disturbed with no known archaeological resources. Consultation with Native American tribal stakeholders is ongoing.

The expansion site is grassland and grassland-scrub mixed stands. There has been previous disturbance of the ground surface, and portions of the area have been previously used as roads and storage areas. Adherence to federal regulations and consultation with the SHPO and any stakeholder Native American tribes would reduce potential effects on previously unknown sites during site preparation and construction, so that there would be no adverse impacts.

**Summary of Impacts**

Improvements to the original National Cemetery property and facilities would result both in minor, short-term and long-term adverse effects and minor, long-term, beneficial effects on cultural resources at the site. Adverse effects include the removal of original signs and the disturbance of as-yet-unknown archaeological sites. Beneficial effects include the addition of a new contributing resource to the NRHP-eligible cemetery. None of these impacts would be considered significant.

The Preferred Alternative would have no adverse effects on resources aboveground in the Phase 5 expansion site because it is a noncontributing resource to the NRHP-eligible cemetery. For cultural resources belowground, adherence to federal regulations and consultation with the California SHPO and Native American stakeholders would reduce potential effects on previously unknown sites during site preparation and construction.

The Preferred Alternative would not directly or indirectly affect cultural resources that are eligible for listing in the NRHP outside of the National Cemetery itself. Implementation of the Preferred Alternative may not result in significant impacts on cultural resources. Although as-yet-unknown
archaeological sites could exist within the project area, the Phase 5 site has been previously disturbed with no known archaeological resources. The VA is consulting with the California SHPO and interested stakeholder Native American tribes to mitigate any adverse impacts to archaeological sites, should any be located within the project area.

3.4.3 Environmental Consequences of the No Action Alternative

The No Action Alternative would result in no effect on aboveground cultural resources and belowground resources. Cemetery expansion would not occur and operations would remain at their current level. Archaeological sites would not be disturbed.

3.4.4 Minimization/Management Measures

No project-specific minimization measures are recommended, other than adherence to federal and state regulations. The VA would comply with the NHPA, Archaeological Resources Protection Act of 1979, NAGPRA, American Indian Religious Freedom Act, and 36 CFR Part 79 during the development process. Should human remains or other cultural items, as defined by NAGPRA, be discovered during project construction, work would immediately cease. The VA, each of the interested Native American tribes, and the SHPO would be contacted, and a qualified archaeologist would properly identify and appropriately treat discovered items in accordance with applicable state and federal law(s). Potential effects on cultural resources would be held at acceptable, less-than-significant levels if these measures were employed.

3.5 Geology and Soils

3.5.1 Existing Conditions

3.5.1.1 Geology

Riverside National Cemetery is located within the northern end of the Peninsular Ranges, or the Lower California province. These ranges are dominated by granitic rocks, which characterize most of the bedrock throughout the project vicinity. Located in a valley between the Santa Ana Mountains and the San Jacinto Mountains, the project site is largely flat but characterized by several hills and small mountains. The San Jacinto Groundwater Basin underlays the project site. The San Jacinto Basin’s aquifers are generally unconfined and largely comprise a series of alluvium-filled valleys bounded by steep-sided bedrock mountains and hills. Alluvial deposits largely range from 200 to 1,000 feet thick (U.S. Geological Survey, 2009).

3.5.1.2 Soils (Including Prime Farmland Soils)

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Monserate sandy loam soils cover the entirety of the project site. Monserate silt loam is a well-drained, moderately thin soil, transitioning to duripan between 20 and 39 inches below soil surface (NRCS, 2015). Though not prime farmland, Monserate silt loam soils are considered farmland of statewide importance (California Department of Conservation, 2009). The soils at the project site are characterized by exposed and vegetated native soils and are mapped on Figure 3-1. A portion of the site currently serves as a maintenance and construction staging area for ongoing gravesite expansion and includes mounds of stockpiled soil between three and eight feet in height.
Soil Erosion and Stormwater Management

The USEPA has authorized the State of California to administer the federal National Pollutant Discharge Elimination System (NPDES) program, including stormwater discharge permits. The NPDES permit program controls water pollution by regulating point sources (i.e., a pipe or man-made ditch) that discharge pollutants into waters of the United States. These pollutants could include dirt; sand; rock; and agricultural, industrial, and municipal waste. In California, the program is implemented through the State Water Resources Control Board and nine Regional Water Quality Control Boards. Riverside National Cemetery is located within Region 8. The State Water Resources Control Board has adopted a statewide general permit to regulate stormwater discharges associated with construction activities. This permit requires the development of a Stormwater Pollution Prevention Plan (SWPPP).

3.5.1.3 Topography

The topography of the site is largely flat with slopes of generally less than 5 percent that descend from east to west. Elevation is approximately 1,530 feet above sea level. Large, granitic boulders exposed at the surface are scattered throughout the property.

3.5.1.4 Geotechnical Report

A geotechnical evaluation was conducted in August 2016 to identify potential geological issues with expanding the Riverside National Cemetery, and the suitability of the expansion site for gravesite development and facility construction. Forty-six borings were drilled to a depth of 10.3 feet to 16.5 feet across 350 undeveloped acres of the Riverside National Cemetery property, including the project site (VA, 2016b). The undeveloped portion of the cemetery was divided among three Zones (A, B, and C) to characterize the subsurface conditions. All 43 acres of the Phase 5 expansion site fall within Zone A, in which very dense material was not encountered to depths of 10 to 15 feet below ground surface. Stratum 1 of Zone A, which ranges from 2 feet to 16.5 feet (the maximum depth of exploration), was composed of sand with variable amounts of silt and clay, and was loose to very dense. Stratum 2, which ranges from 7.5 feet to 11.5 feet, was composed of stiff to hard clay with variable amounts of sand and silt. Stratum 3, which was encountered at 16.5 feet (the maximum depth of exploration), was composed of medium-dense to very dense sand with variable amounts of silt and clay (VA, 2016b).
Figure 3-1. Soil Types at the Riverside National Cemetery

- Riverside National Cemetery
- Phase 5 (43 acres)
- Farmland of statewide importance
- Monserate sandy loam, 0 to 5 percent slopes
- Monserate sandy loam, 5 to 8 percent slopes, eroded
- Monserate sandy loam, 8 to 15 percent slopes, eroded

Source: Riverside National Cemetery, Balance Environmental, USGS EROS Orthoimagery
3.5.2 Environmental Consequences of the Preferred Alternative

Minor, direct and indirect, short-term, adverse effects from soil erosion and sedimentation (E&S) would be expected during construction activities that require earthwork. New construction would remove vegetative cover, further disturb the soil surface, and compact the soil. This would increase the soil’s susceptible to erosion by wind and surface runoff until it is stabilized. Exposure of the soils during construction has the potential to result in increased sedimentation into the on-site stormwater management systems, and the potential for off-site discharges of sediment-laden runoff. However, such potential E&S effects would be prevented through the use of appropriate BMPs and adherence to the terms of the California Environmental Protection Agency (CEPA) General Permit for Discharges of Storm Water Associated with Construction Activity. Immediately following construction, exposed areas would be revegetated to stabilize the soil and minimize erosion. Once construction is complete, no long-term E&S effects would be anticipated due to the nature of the Preferred Alternative.

Improvements under the Preferred Alternative would have negligible-to-minor, adverse effects on topography and soils, and no effects on geology. In some areas, minor alterations to topography would be expected to prepare moderately sloped areas for gravesite or facility development as recommended in the NCA Facilities Design Guide. Other minor grading and fill would occur to prepare the site for construction of roads. Otherwise, the proposed action activities would be designed in concert with the site’s natural topography to the extent possible to avoid extensive grading and to preserve the natural and scenic features of the site (VA, 2010c). Under the Preferred Alternative, there would be an increase in impervious surface from the construction of roadways/parking areas (275,000–325,000 square feet) and new building construction (9,000–12,000 square feet). These effects would be minimized by including an appropriately designed stormwater system as part of final site design, and ensuring that post-project hydrology mirrors pre-project hydrology. No long-term soil erosion effects would occur as a result of increased impervious surfaces on-site.

A Farmland Conversion Impact Rating form for the proposed site was submitted to NRCS, who determined that there was no prime, unique, statewide, or locally important farmland at the site. This form can be found in Appendix A.

Implementation of the Preferred Alternative would not result in significant effects on geology, topography, or soils.

3.5.3 Environmental Consequences of the No Action Alternative

The No Action Alternative would result in no effect on geology, topography, or soils because the Proposed Action would not occur and operations would remain at their current level.

3.5.4 Minimization/Management Measures

3.5.4.1 Soil Erosion and Stormwater Management

The use of BMPs to reduce potential effects during construction would help minimize short-term effects on local soils. The construction contractor would develop a CEPA 2009-0009-DWQ Construction General Permit and associated SWPPP adhering to California Stormwater Quality Associated BMPs. This permit would require stormwater management and E&S-control BMPs that could include earthen berms, detention basins, vegetative buffers, and equipment spill prevention techniques. Implementing BMPs to reduce E&S effects during construction would minimize the potential effects on local soils and water quality. The construction contractor would
implement the following, as appropriate and necessary, to minimize soil loss and protect surface water quality, as part of the CEPA permit:

- Phase clearing and grading to the maximum extent practical to prevent exposed inactive areas from becoming sources of erosion.
- Minimize erosion during and after soil disturbance using BMPs such as temporary seeding and planting, final vegetative cover, mulches, compost blankets, erosion-control blankets and mats, and soil tackifiers.
- Use water or a soil-binding agent or other dust-control technique as needed to avoid wind-blown soil.
- Preserve existing vegetation and revegetate open areas when practical. Do not remove temporary sediment control practices until final vegetative cover or permanent stabilization measures are established.
- Control sediment, as needed, along the site perimeter and at all operational internal storm drain inlets at all times during construction.
- Design impervious surfaces to drain to stormwater management systems.

Following approval of the CEPA permit and implementation of permit requirements, soil E&S effects would be minor. This would ensure compliance with state and federal water quality standards and minimize short- and long-term adverse effects on soils.

3.6 Hydrology and Water Quality

Hydrology and water quality include those portions of the natural environment related to surface and groundwater and their measurable health according to state and federal water quality regulations.

3.6.1 Existing Conditions

3.6.1.1 Groundwater

The northwestern boundary of the San Jacinto Groundwater Basin underlays the project site. Recharge of the San Jacinto Groundwater Basin primarily occurs through percolation of flow of the San Jacinto River and its tributaries rather than through rainfall infiltration. Reclaimed water supplements the recharge through infiltration ponds in the northern reaches of the river, and percolation of water stored in Lake Perris has provided additional augmentation since the 1970s (Eastern Municipal Water District, 2011).

A geotechnical field investigation conducted in August 2016 did not encounter subsurface groundwater at, or in, the vicinity of the project site to depths of approximately 15 feet below ground surface. Based on monitoring wells located approximately 1.5 miles southeast of the site, the California Department of Water Resources estimated the historical high groundwater level in that area to be deeper than 80 feet below ground surface. Riverside County estimates groundwater at the site to generally occur between 30 and 50 feet below ground surface (Riverside County, 2016). Groundwater levels fluctuate seasonally and can also vary considerably due to weather events (VA, 2016b).

3.6.1.2 Surface Water

Riverside National Cemetery is located within the Perris Reservoir and Lake Mathews watersheds of the Santa Ana River basin. The project site is entirely within the Lake Perris (Perris Reservoir) watershed (see Figure 3-2). There are no major waterways or surface waters on the Riverside
National Cemetery property or in the immediate vicinity. Lake Perris, an artificial lake built in 1973 to supplement the state’s water supply, is located approximately five miles west of the project site.

Figure 3-2. Watersheds in the Vicinity of the Riverside National Cemetery

An aquatic resources field delineation conducted in March 2016 across 176 acres that included the project site identified four surface water resources at the site. Within the 176-acre site, the surface hydrology was identified as severely altered due to irrigation for the cemetery and adjacent golf course.

Two ditches and one ponded area totaling 1.58 acres were delineated within the proposed Phase 5 expansion site (see Figure 3-3). The two ditches appear to be constructed to take excess irrigation water from the General Old Golf Course and the existing portion of the cemetery to collection ponds that would then be used to recirculate the water back for irrigation. The irrigation is originally diverted from Lake Mathews.

At the time of the aquatic resources field study, the study area was recovering from a multiyear drought, so no soils in the project site were saturated in the upper profile. However, inundation within the ponded area is visible on aerial imagery obtained, which indicates that the area was historically inundated (VA, 2016c). In addition, the study identified excavated pond areas that collect runoff from the golf course and cemetery. Both the excavated ponds and drainage ditches were artificially created (VA, 2016c).
Figure 3-3. Aquatic Resources Identified at the Phase 5 Expansion Site
As authorized by the Clean Water Act, the NPDES regulates point sources of water pollution and stormwater runoff into waters of the United States. The California State Water Resources Control Board retains authority over NPDES permits (also known statewide as waste discharge requirements) and establish statewide policies and recommendations, which are implemented through nine Regional Water Quality Control Boards. The Riverside National Cemetery is under the jurisdiction of Regional Water Board 8. As described in Section 3.5.4.1, the State Water Resources Control Board has adopted a statewide general permit to regulate stormwater discharges associated with construction activities.

3.6.2 Environmental Consequences of the Preferred Alternative

The Preferred Alternative would not be expected to affect groundwater resources. Based on the geotechnical field study, no groundwater is present at the site at depths of at least 15 feet below ground surface; other estimates suggest that the water table near the project site is 30 feet or deeper below ground surface. Because excavation is not anticipated even at depths of 15 feet, it is not anticipated that any construction or earthwork activities would affect groundwater resources.

Upon completion of construction activities, burials would begin at the project site. Current preferred NCA designs for casket burials indicate the construction of subsurface concrete crypts for eventual casket placement. The use of pre-placed concrete crypts coupled with the depth of groundwater at the site greatly limit the potential for groundwater interaction with embalming fluids or decomposition products. The VA is not involved in funeral homes processes; however, modern embalming fluids are no longer arsenic-based and are biodegradable, resolving toxicity issues previously associated with traditional embalming preparations. The increased use of cremains interment or columbaria would further decrease the risk of adverse effects on groundwater. Therefore, no significant impacts on groundwater are expected.

The Preferred Alternative would result in negligible, short-term, adverse effects and no long-term, adverse effects on surface water resources. As discussed in Section 3.5.2, minor, short-term, adverse E&S effects associated with construction activities would occur. These effects would be minimized through the use of E&S controls and other measures as specified under the CEPA permit, including adherence to the SWPPP. The SWPPP would include specific and detailed management measures designed to minimize construction-related pollutants. Long-term E&S effects on on-site and surrounding surface waters would not be expected.

Once operational, the expanded cemetery would be subject to additional routine herbicide application commensurate with the increase in the size of the cemetery. These products would be minimally applied to maintain the parklike aesthetics of the cemetery, resulting in negligible, adverse effects on water quality.

The Preferred Alternative would not result in significant impacts on hydrology or water resources.

3.6.3 Environmental Consequences of the No Action Alternative

Under the No Action Alternative, surface and ground hydrology would remain the same, and no effects on hydrology or water quality would occur.
3.6.4 Minimization/Management Measures

As discussed in Section 3.5.4, the use of BMPs to reduce E&S effects would minimize impacts on water resources. Furthermore, CEPA permits would require stormwater management and E&S-control BMPs including earthen berms, detention basins, vegetative buffers, and equipment spill prevention techniques, to reduce effects on surface waters and stormwater.

A jurisdictional wetland determination by the U.S. Army Corps of Engineers for the proposed site is pending, and the determination may result in additional mitigation measures.

The VA would implement the following management, BMP, and permitting actions to minimize potential effects on surface water resources:

- Develop a site design that prevents surface water runoff to the on-site and adjacent surface waters, and avoids interaction with on-site and adjacent surface waters.
- Develop a site design that accounts for pre-/post-100-year volume stormwater drainage, at a minimum.
- Implement pre-/post-100-year volume stormwater retention, at a minimum.
- Implement stormwater management facilities and other related stormwater management infrastructure for the site.
- Clear ephemeral drainages and intermittent and perennial streams of all work items, debris, or other obstructions placed by, or resulting from, construction operations.
- Locate machinery servicing and refueling areas away from streambeds and washes to reduce the possibility and minimize the impacts of accidental spills or discharges.
- Inspect and maintain construction vehicles in good working order and maintain a spill kit.
- Establish turf on finished slopes and ditches within 14 days after completion of construction on a portion of the site.
- Continue involvement in wastewater recycling program.

3.7 Floodplains and Wetlands

3.7.1 Existing Conditions

3.7.1.1 Floodplains

EO 11988, Floodplain Management, as amended by EO 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, requires that federal agencies avoid development, when possible, in the 100-year and the 500-year flood zone. The Phase 5 expansion site is not located in either the 100-year or the 500-year flood zone as mapped by the Federal Emergency Management Agency (FEMA) (VA, 2010b). This is an area of minimal flooding hazard.

3.7.1.2 Wetlands

An aquatic resources delineation of the Phase 5 expansion site was completed in March 2016. The survey’s methodology followed the USACE’s Wetland Delineation Manual (1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (2010). The survey of the waterways was based on guidance from A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE, 2008). The investigation revealed uplands, streams, open water, and wetlands within the project area. Wetland indicators were
checked within potential wetland and waterway areas across an approximately 176-acre area that includes the 43-acre project site (VA, 2016c).

Only one aquatic resource met the three indicators for being considered a wetland. The wetland was classified as palustrine scrub/shrub wetlands. The excavated ponded areas do not appear to have outlets; however, there was a historic blue line drainage on the U.S. Geological Survey (USGS) Topo map that crossed the project area near the location of the northern ditch. Because the wetland is isolated with no clear nexus with an identified water of the United States, the aquatic resources report does not recommend that it be considered a jurisdictional wetland.

### 3.7.2 Environmental Consequences of the Preferred Alternative

#### 3.7.2.1 Floodplains

The expansion site is not located in either a 100-year or 500-year flood zone; therefore, there would be no effects on floodplains resulting from the Preferred Alternative.

#### 3.7.2.2 Wetlands

Based on the aquatic resources delineation of the Phase 5 expansion site that was completed in March 2016, no jurisdictional wetlands are present on the Preferred Alternative site. As such, no impacts to on-site wetlands would be expected under the Preferred Alternative. However, a final jurisdictional wetland determination by the U.S. Army Corps of Engineers is pending.

As described in Section 2.1, consultation with pertinent federal, state, and local regulatory agencies would help minimize temporary adverse impacts associated with the expansion of the cemetery.

### 3.7.3 Environmental Consequences of the No Action Alternative

Under the No Action Alternative, no construction would occur at the project site. Therefore, no effects on floodplains or wetlands would occur.

### 3.7.4 Minimization/Management Measures

The expansion site is not located within a 100-year or 500-year flood zone; therefore, no minimization or management measures for floodplains would be needed under the Preferred Alternative. The Preferred Alternative would not present any significant adverse effects on wetlands; therefore, specific minimization measures would not be required.

### 3.8 Wildlife and Habitat

#### 3.8.1 Existing Conditions

#### 3.8.1.1 Habitat

Riverside National Cemetery is situated in the northwest of Riverside County, California, and lies within the Fontana Plain-Calimesa Terraces ecological subregion, as designated by the U.S. Forest Service (California Native Plant Society, 2006). This ecoregion is characterized by gently sloping alluvial fans and basin floor. The climate is sub-humid and hot with a mean annual precipitation range of 15 to 25 inches. The mean annual temperature is between 62 and 64 °F. The elevation within the ecoregion ranges from 1,400 to 2,600 feet (California Native Plant Society, 2006).
The original 922-acre cemetery property includes paved roadways and walkways, numerous small buildings, four ponds, maintained turf, shrubs, and scattered deciduous and evergreen trees, as well as palms within the developed, landscaped areas. Very little of the existing cemetery could be considered undeveloped.

The Phase 5 expansion site contains vegetation typical of coastal sage scrub habitat. Within the project area, there has been significant past disturbance to the ground surface. Common vegetation includes disc mayweed (*Matricaria discoidea*), red brome (*Bromus rubens*), bristly fiddleneck (*Amsinckia tessellate*), redstem stork’s bill (*Erodium cicutarium*), and dame’s rocket (*Hesperis matronalis*). In the northern portion of the site, there is a constructed ditch that directs runoff from the golf course to an excavated pond; hydrology in this water feature is greatly influenced by the release of irrigation water for the existing cemetery and the adjacent golf course. Due to the varied water flow, the stream flowing through this ditch is considered ephemeral. This pond does not meet wetland criteria, because it neither contains hydrophytic vegetation nor has hydric soils in the area surrounding the open water. All the soils present on the project site are well-drained, with over 96 percent being composed of monserate sandy loam (Balance Environmental, 2017).

### 3.8.1.2 Threatened and Endangered Species

The Endangered Species Act of 1973 provides a program for the protection and conservation of threatened and endangered plants and animals, and their habitat. The lead agency for implementation of the Endangered Species Act is the U.S. Fish and Wildlife Service (USFWS). The Endangered Species Act requires federal agencies, in consultation with the USFWS, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat.

A USFWS Information for Planning and Consultation (IPaC) Trust Resources Report was generated and reviewed, followed by consultation with USFWS staff to determine the potential presence of federal-listed rare and threatened and endangered species (USFWS, 2017). Species that the USFWS indicated were potentially present have been included in Table 3-5.

The California Natural Diversity Database (CNDDB) was also used to assess potential impacts on state- and federal-listed threatened and endangered species. A list of species present within a quadrangle bounding the site of the Riverside National Cemetery was generated using this tool (California Department of Fish and Wildlife, 2016). Any threatened or endangered species present within this area were then researched to determine habitat type and occurrence record locations. These results were cross-referenced with the U.S. Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS) critical habitat online mapper results to see if any designated critical habitat was present within, or near, the boundaries of Riverside National Cemetery (USFWS, 2016a). This analysis concluded that the Stephens’ kangaroo rat (SKR; *Dipodomys stephensi*) is the only threatened or endangered species (vegetation or wildlife) that is known to occur on site. These results mirror the findings of the 2010 EA for Proposed Photovoltaic Systems (VA, 2010b).
Table 3-5. Federal- and State-Listed Species That Were Examined for the Potential to Occur at the Project Site

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Federal Status</th>
<th>State Status</th>
<th>Habitat</th>
<th>Potential for Occurrence in the Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen’s kangaroo rat</td>
<td>Dipodomys stephensi</td>
<td>FE</td>
<td>ST</td>
<td>Open grassland and sparse coastal sage scrub habitat. This species is strongly associated with sparsely-vegetated habitat, including disturbed areas, and other sites with a high percentage of bare ground (USFWS, 1997).</td>
<td>Present; this species is present at the project site. Surveys were conducted in 2016 that revealed the presence of this species (Natural Resources Assessment, Inc., 2016).</td>
</tr>
<tr>
<td>Santa Ana sucker</td>
<td>Catostomus santaanae</td>
<td>FT</td>
<td>None</td>
<td>This species is typically found in perennial rivers and larger streams, though water levels in suitable habitat can range from several inches to a several feet, and have currents ranging from slight to swift. Optimal water conditions are unpolluted, clear water, at temperatures less than 72 degrees F (22 degrees C) (USFWS, 2011a).</td>
<td>Unlikely; there are only two ephemeral drainages on the National Cemetery, and only one of these is in the Phase 5 expansion site. These features are unlikely to support this species due to their ephemeral nature (USFWS, 2011a; Balance Environmental, 2017).</td>
</tr>
<tr>
<td>Common Name</td>
<td>Scientific Name</td>
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<td>Habitat</td>
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<tr>
<td>Crustaceans</td>
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<tr>
<td>Riverside fairy shrimp</td>
<td><em>Streptocephalus woottoni</em></td>
<td>FE</td>
<td>None</td>
<td>This species is found in vernal pools and other non-vegetated ephemeral pools greater than 12 inches (30.5 centimeters) in depth in Southern California and northwestern Baja California, Mexico. This species generally occurs in groups of vernal pools called complexes (USFWS, 2008).</td>
<td>Unlikely; there is no vernal pool habitat within the Phase 5 expansion site (Balance Environmental, 2017). Though the project site is located within the Western Riverside County Vernal Pool Region, it is not located within the Harford Spring Core Area (USFWS, 2005). It should be noted, though, that this species has been identified at nearby March ARB in one vernal pool (USFWS, 2008).</td>
</tr>
<tr>
<td>Vernal pool fairy shrimp</td>
<td><em>Branchinecta lynchi</em></td>
<td>FT</td>
<td>None</td>
<td>Vernal pools and other vernal pool-like habitat (USFWS, 2007).</td>
<td>Unlikely; there isn’t any vernal pool habitat within the Phase 5 expansion site (Balance Environmental, 2017). Although the project site is located within the Western Riverside County Vernal Pool Region, it is not located within the Harford Springs Core Area (USFWS, 2005).</td>
</tr>
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### AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

#### SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT

#### RIVERSIDE NATIONAL CEMETERY

#### FINAL

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Federal Status</th>
<th>State Status</th>
<th>Habitat</th>
<th>Potential for Occurrence in the Project Area</th>
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<tbody>
<tr>
<td><strong>Birds</strong></td>
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<tr>
<td>Bald eagle</td>
<td><em>Haliaeetus leucocephalus</em></td>
<td>BGEPA</td>
<td>SE</td>
<td>Nests in forested areas near large bodies of water. Often perches on tall, mature deciduous or coniferous trees that allow for an expansive view of the surroundings (Cornell Lab of Ornithology, 2015b).</td>
<td>Potentially present; this species spends winters in Southern California and has been seen at the nearby Perris Reservoir (Cornell Lab of Ornithology, 2015b; CA Parks, 2017).</td>
</tr>
<tr>
<td>Golden eagle</td>
<td><em>Aquila chrysaetos</em></td>
<td>BGEPA</td>
<td>None</td>
<td>Open and semi-open habitat, avoiding developed areas and solid forests. Nests on cliffs and other steep escarpments (Cornell Lab of Ornithology, 2015a).</td>
<td>Potentially present; though it is a migratory species, the golden eagle is present in Riverside County year-round (Cornell Lab of Ornithology, 2015a). A golden eagle nest survey report from 2013 did not indicate any nest sites or survey detections within Riverside National Cemetery, but it is possible that foraging habitat for the species may be present, because this species has been sighted at nearby locations (WRC MSCP BMP, 2013).</td>
</tr>
<tr>
<td>Common Name</td>
<td>Scientific Name</td>
<td>Federal Status</td>
<td>State Status</td>
<td>Habitat</td>
<td>Potential for Occurrence in the Project Area</td>
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<tr>
<td>Coastal California gnatcatcher</td>
<td><em>Polioptila californica</em></td>
<td>FT</td>
<td>None</td>
<td>Suitable habitat for this species is coastal scrub vegetation. This plant community is described as consisting of low (less than three feet [one meter]) shrub and sub-shrub species that are usually drought-deciduous. Even within suitable habitat, species presence may be patchy and localized (USFWS, 2010a).</td>
<td>Potentially present; this species is known to occur in Riverside County, and Riverside National Cemetery lies within this species’ range (California Department of Fish and Wildlife, 2016; USFWS, 2010a). However, due to past disturbance and the high-density urban development surrounding the project site, it is unlikely that sufficient habitat is present for this species to use the site for nesting. If present, it would most likely use the site for foraging. The main factor influencing species distribution within its range is coastal scrub vegetation, which is present at the project site.</td>
</tr>
<tr>
<td>Common Name</td>
<td>Scientific Name</td>
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<td>State Status</td>
<td>Habitat</td>
<td>Potential for Occurrence in the Project Area</td>
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<tr>
<td>Least Bell’s vireo</td>
<td>Vireo bellii pusillus</td>
<td>FE</td>
<td>SE</td>
<td>Riparian habitat, ideally surrounded by intact native upland plant communities such as coastal sage scrub, chaparral, or oak woodlands. (USFWS, 2006).</td>
<td>Unlikely; this species is not likely to be present on the project site. Although extant breeding pairs are located in Riverside County, suitable riparian habitat capable of supporting this species is not present (USFWS, 2006; Balance Environmental, 2017; California Department of Fish and Wildlife, 2016).</td>
</tr>
<tr>
<td>Southwestern willow flycatcher</td>
<td>Empidonax traillii extimus</td>
<td>FE</td>
<td>SE</td>
<td>Riparian habitat along rivers, streams, or wetlands where there is a mosaic of relatively dense trees and shrubs. Common species found in nesting areas include willow (Salix spp.) and tamarisk (Tamarix ramosissima) (USFWS, 2014).</td>
<td>Unlikely; although this species occurs in Riverside County, suitable riparian habitat capable of supporting this species is not present (USFWS, 2014; Balance Environmental, 2017; California Department of Fish and Wildlife, 2016).</td>
</tr>
</tbody>
</table>
### Flowering Plants

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Federal Status</th>
<th>State Status</th>
<th>Habitat</th>
<th>Potential for Occurrence in the Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nevin’s barberry</td>
<td><em>Berberis nevinii</em></td>
<td>FE</td>
<td>SE</td>
<td>Ideal habitat conditions for this species include an elevation between 1,400 and 1,700 feet, a strong association with sandy alluvial soils or other non-marine sedimentary-based soils, and the presence of associated plant communities such as coastal sage scrub and riparian scrub (USFWS, 2009a).</td>
<td>Potentially present; although there are no known occurrences located within the project site, this species has been found nearby within the county (California Department of Fish and Wildlife, 2016). The general habitat conditions needed by the species can be found at the site, but past disturbance greatly reduces the likelihood of this species’ being present (Balance Environmental, 2017).</td>
</tr>
<tr>
<td>San Diego ambrosia</td>
<td><em>Ambrosia pumila</em></td>
<td>FE</td>
<td>None</td>
<td>Suitable habitat includes the upper terraces of rivers and drainages, in coastal sage scrub habitat, on sandy loam or clay soil, and below 1,600 feet in elevation (USFWS, 2010b). Habitat located near water that experiences periodic flooding is presumed to be necessary for the species (USFWS, 2011b).</td>
<td>Unlikely. There are no known occurrences located within, or near, the project site, and the absence of a significant riparian feature means that the general habitat conditions needed by the species do not exist at the project site (California Department of Fish and Wildlife, 2016).</td>
</tr>
</tbody>
</table>
### Santa Ana river woolly-star

**Eriastrum densifolium sanctorum**

- **Federal Status:** FE
- **State Status:** SE

This species is typically found in terraces associated with the Santa Ana River and its tributaries. Habitat for this pioneer species is maintained by periodic flooding, scouring, and sediment deposition (USFWS, 2010c).

Unlikely; the riparian habitat and flooding processes needed to maintain habitat for this species do not occur on the project site (Balance Environmental, 2017).

### Spreading navarretia

**Navarretia fossalis**

- **Federal Status:** FT
- **State Status:** None

Vernal pools or ditches and other artificial depressions that have a similar hydroperiod (USFWS, 2009b).

Unlikely; there is no vernal pool habitat present, and the irrigation ditch present at the project site has been excavated, channelized, and bermed up-slope through the project site (Balance Environmental, 2017).

### Thread-leaved brodiaea

**Brodiaea filifolia**

- **Federal Status:** FT
- **State Status:** SE

This species typically occurs in open habitat conditions on soils with a large clay component (USFWS, 2009c).

Unlikely; the soil types present at the project site are 96 percent Monserate sandy loam and do not have a strong clay component. The other two soil types are also well-drained loams (Balance Environmental, 2017).

**Notes:**

- FT = federally threatened; FE = federally endangered; FC = federal species of concern; SE = state endangered; ST = state threatened;
- BGEPA = Bald and Golden Eagle Protection Act
- Sources for species status: (USFWS, 2017); (California Department of Fish and Wildlife, 2016)
The SKR is a small, nocturnal mammal that is more closely related to squirrels than to either mice or rats. Native habitat for this species includes relatively flat or gently sloping ground located within open grasslands and sparse coastal sage scrub, at an elevation of between 180 to 4,100 feet. The SKR prefers areas with loose soil at least 18 inches deep in which to construct its burrows. The species was first listed as threatened under the Endangered Species Act in 1971 due to extensive habitat loss and fragmentation throughout San Diego and Riverside Counties. It was subsequently listed as endangered under the Endangered Species Act in 1988 (USFWS, 1997). No critical habitat rules have been published for this species (VA, 2016b); however, during the development of Phase 4 of Riverside National Cemetery, the VA created management areas designed to protect SKR habitat and corridors (USFWS, 1993a). These management areas, outlined in Figure 3-4, are referred to as the SKR Habitat Area, the Western SKR Corridor, and the Northern SKR Corridor.

Preparation of this SEA included a biological survey for the SKR, but did not include any other vegetation or wildlife within the scope of the survey. The site was surveyed for the presence of active SKR burrows using a transect method. Population size was then estimated based on an assumption of an average of 2.5 individuals per active burrow. Population density was then determined for predefined zones by dividing the total population estimate by the area of the zones in hectares. Based on this methodology, the Phase 5 expansion site is considered to have a low density of SKR at approximately 0.36 – 1.18 individuals/acre (1-3 individuals/hectare) (Natural Resources Assessment, Inc., 2016). There are an estimated 15 – 50 individual SKRs present within the 43-acre Phase 5 expansion site.

Figure 3-4. Stephen’s Kangaroo Rat Habitat and Habitat Corridors at the Riverside National Cemetery
Based upon the IPaC report provided by the USFWS, we examined the potential of presence for five federal-listed threatened species, seven federal-listed endangered species, and two federal trust species protected under the Bald and Golden Eagle Protection Act (BGEPA). One federal-listed endangered species is known to occur on the property (the SKR). One additional federal-listed threatened species (the California gnatcatcher) and one federal-listed endangered species (Nevin’s barberry) has the potential to occur on the project site because suitable habitat exists, and the species have been observed nearby within Riverside County. However, neither has been observed on-site to date (California Department of Fish and Wildlife, 2016). Neither the bald eagle nor the golden eagle are known to nest or forage on the project site, but both species have been observed nearby (CA Parks, 2017; WRC MSCP BMP, 2013). None of the species included in Table 3-5 are state-designated threatened or endangered species that lack federal protection status; the results of the CNNDDB database search for species present near the project site indicate that no such species are present (California Department of Fish and Wildlife, 2016). Nevin’s barberry is listed as endangered at both the federal and state levels, and is the only state-listed species that may potentially be present (California Department of Fish and Wildlife, 2016). Previous disturbance on the site greatly reduces the likelihood that Nevin’s barberry is present, and development would not occur in areas where the species is potentially present. Details regarding all federal- and state-listed species are outlined in Table 3-5.

3.8.1.3 Migratory Birds

Riverside National Cemetery is located within the Pacific Flyway. Nonresident migratory species that use this region as a flyway or as habitat for a portion of their life cycle, and that the CNNDDB indicates are present in Riverside County, include the grasshopper sparrow (Ammodramus savannarum), yellow-breasted chat (Icteria virens), ferruginous hawk (Buteo regalis), northern harrier (Circus cyaneus), black-chinned sparrow (Spizella atrogularis), merlin (Falco columbarius), Lawrence’s goldfinch (Spinus lawrencei), yellow warbler (Setophaga petechia), Allen’s hummingbird (Selasphorus sasin), Lawrence’s goldfinch (Carduelis lawrencei), rufous hummingbird (Selasphorus rufus), and least Bell’s vireo (Vireo bellii pusillus) (California Department of Fish and Wildlife, 2016; USFWS, 2017). Least Bell’s vireo is currently classified as an endangered species with extant breeding pairs located in Riverside County, though this species is most likely not present at the project site due to lack of suitable riparian habitat (Balance Environmental, 2017). No critical habitat has been identified for this species within Riverside National Cemetery (USFWS, 2016b).

Bald eagles (Haliaeetus leucocephalus) and golden eagles (Aquila chrysaetos) receive additional protection under the BGEPA. The BGEPA prohibits the taking, possession, or commerce of these bird species. Potential foraging habitat exists within the project site for both species. Though it is a migratory species, the golden eagle is present in Riverside County year-round (Cornell Lab of Ornithology, 2015a). A golden eagle nest survey report from 2013 did not indicate any nest sites or survey detections within Riverside National Cemetery, but it is possible that foraging habitat for the species may be present, because this species has been sighted at nearby locations (WRC MSCP BMP, 2013). Winter habitat for the bald eagle is present throughout Southern California (Cornell Lab of Ornithology, 2015b). Though the bald eagle was delisted in 1997, both it and the golden eagle are still protected under the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act (USFWS, 2015).

The lack of significant riparian, palustrine, or lacustrine habitat within the area of the National Cemetery proposed for development indicates low-quality habitat for many of the migratory shorebirds and waterbirds using the Pacific Flyway (Balance Environmental, 2017). In addition, Riverside National Cemetery is not located within a designated Important Bird Area, as identified
by the National Audubon Society, though these areas have been designated roughly 3 miles to the east, and 4.5 miles to the west, of the cemetery (Audubon California, 2015).

3.8.2 Environmental Consequences of the Preferred Alternative

Implementation of the Preferred Alternative at the original cemetery site would have minor, adverse impacts on wildlife and habitat. There is little to no natural habitat remaining at the original cemetery site that is capable of supporting any of the species included in Table 3-5.

Implementation of the Preferred Alternative within the Phase 5 expansion site would have minor, adverse impacts on wildlife and habitat. Proposed activities include the construction of paved roads to allow access throughout the expansion site, two restroom facilities, a maintenance facility building, columbaria, crypts, and an area for in-ground cremains. Most of the vegetation at the site would be converted to irrigated lawn, with shrubs and trees planted throughout the site between distinct areas of the property. The existing pond in the northeastern portion of the expansion site would remain.

There is one federal-listed endangered species known to occur on the property (the SKR), and an additional two federal-listed threatened or endangered species potentially occur on the project site (see Table 3-5). Based upon available information and agency inquiries, no critical habitat would be affected by the Preferred Alternative (USFWS, 2017). The Preferred Alternative would not result in substantial changes to topography or drainage. The Preferred Alternative would include site development that is complementary to the area’s existing natural features, to be designed in coordination with the natural topography and drainage patterns.

There is the potential for displacement of common wildlife that may inhabit or use portions of the expansion site for nesting, foraging, or temporary cover. If initial clearing of the undisturbed areas of the property were to occur during the bird breeding season (typically February through August), there could be impacts on nesting migratory bird species that are protected under the MBTA. This could be minimized by following the measures identified in Section 3.8.4.

As previously discussed, development at the Phase 5 expansion site would affect approximately 15 – 50 individual SKRs on 43 acres, representing a trace population density for this species (Natural Resources Assessment, Inc., 2016). The highest SKR densities on the project site occur within the SKR Habitat Area and the Western SKR Corridor, neither of which would sustain long-term impacts associated with the Preferred Alternative. Construction activities would disturb the soil, which would remove native vegetation cover, regrade the surface, and compact the soil. The process of relocating the SKR may also have short-term effects on the individuals relocated due to the stress of handling and transport, as well as a temporarily elevated risk of predation for a short period of time after being relocated to a new habitat area. Both short- and long-term effects on the SKR would be minimized by following the minimization and management measures described in Section 3.8.4. Namely, the SKR present within this area would be relocated prior to the initiation of construction activities. Suitable relocation areas would be determined through consultation with the USFWS. In addition, mitigation fees would be paid for impacts on SKR habitat, at a rate to be determine through consultation with the USFWS.

Within Riverside County, the SKR is covered under two separate Habitat Conservation Plans, which are designed to conserve essential habitat for the species through a system of conservation reserves as well as establish a system for mitigating unavoidable impacts on this habitat.
A long-term Habitat Conservation Plan was established for the SKR in 1996 and is intended to remain in place for 30 years (USFWS, 1996). A second plan, called the Western Riverside County Multi-Species Habitat Conservation Plan, was established in 2004 and will last for 75 years. This plan covers 118 different species (USFWS, 2004).

Consultation with the USFWS in accordance with section 7 of the Endangered Species Act of 1973 (ESA) regarding the proposed Phase 5 expansion and its potential effects on the SKR has occurred. The USFWS prepared a Biological Opinion, dated March 16, 2018. The Biological Opinion outlines conservation measures for the VA to avoid, minimize, and offset direct and indirect effects to SKR. These measures are listed in Section 3.8.4.

The lack of large forests within the proposed Phase 5 expansion site greatly reduces the likelihood that this area is currently used as a nesting site for either the bald eagle or the golden eagle. Any potential impacts on these species would most likely occur from impacts on foraging habitat, which are expected to be minimal. As field surveys have noted, there is only one small pond and associated drainage ditch located within the project site, and existing vegetation has been affected by past activities (Balance Environmental, 2017).

The coastal California gnatcatcher is common but patchy and localized wherever coastal sage scrub habitat is present (USFWS, 2010a). This is the predominant ecosystem type present at the project site; however, due to past disturbance and the high-density urban development surrounding the project site, it is unlikely that sufficient habitat is present for this species to use the site for nesting. If present, this species would most likely use this location for foraging only. Records indicate that this species has been observed within the county near Riverside National Cemetery (California Department of Fish and Wildlife, 2016). Activities associated with the Preferred Alternative would have some potential for impacts on this species, if present. The conversion of existing vegetation to irrigated lawn would have a temporarily impact on foraging habitat during construction, and may affect foraging habitat quality in the long term after construction is completed.

The optimal habitat conditions for Nevin’s barberry nominally match those found at the proposed project site in terms of elevation, soil type, and associated plant community, but past disturbance greatly reduces the likelihood that the species is present (USFWS, 2009a). Short-term and long-term impacts to the potential habitat are likely to be negligible. Prior to the initiation of construction activities, a walk-through of the site would be conducted to search for the species. If present, this species will be easily identifiable, because it is a large shrub that can grow up to 13 feet tall (4 meters).

### 3.8.3 Environmental Consequences of the No Action Alternative

The No Action Alternative would have no effect on biological resources, because the Proposed Action would not occur and operations would remain at their current level.

### 3.8.4 Minimization/Management Measures

As with most VA cemetery designs, plans would incorporate naturally vegetated gravesite buffers and regionally native flora for landscaping. In nonburial areas, drought-tolerant alternatives to standard turf would be considered. In addition, using native species to the extent practicable when revegetating land disturbed during construction would avoid the potential introduction of nonnative or invasive species.
To avoid impacts on nesting migratory song birds, construction personnel would walk through the site immediately before clearing an area to search for nests that could be affected. If a nest was discovered within areas where site disturbance was about to occur, nest protection practices would be established in consultation with VA Construction and Facilities Management environmental staff on a case-by-case basis.

As noted in Section 3.8.2, a walk-through of the project site would be conducted before construction activities begin to search for Nevin’s barberry.

When controlling weeds and unwanted vegetation, precautions would be taken to mow or scrape this vegetation during daylight hours and remove cut weeds, rather than disk these areas with a tractor implement (USFWS, 1996). In addition, minimizing the use of pesticides within and adjacent to SKR habitat would help to avoid impacts on the species. Covering open trenches or other openings overnight would also help prevent inadvertently trapping and killing of SKR, a nocturnal mammal (USFWS, 1993b).

As described in Section 3.8.2, the overall impacts on the SKR would be minimized by adhering to the conservation measures outlined in the Biological Opinion, to include:

- the VA will pay into an in-lieu-fee mitigation fund that has been developed for the species;
- a biological monitor with SKR experience or qualified biologist would be present during construction activities to document project compliance with protective measures;
- prior to initiating ground-disturbing activities the perimeter of the action area would be delineated with temporary barrier fencing, installed to USFWS specifications under the supervision of a qualified biologist;
- all contractors and personnel involved in the construction would receive environmental awareness training, developed in consultation with the qualified biologist or a biological monitor to provide information about the SKR and habitat within the vicinity of the project site;
- construction activities would be limited to daylight hours to the extent feasible, and if nighttime work is necessary lighting will be shielded away from surrounding natural areas;
- work crews would be prohibited from bringing domestic pets to the site; and
- spoils, trash, and excavation-generated debris would be removed to an approved off-site disposal facility (USFWS, 2018).

3.9 Noise

3.9.1 Existing Conditions

The Riverside National Cemetery is located in a suburban setting with low-density commercial, industrial, recreational, and military land uses adjacent to the site. The existing Riverside National Cemetery property is bordered to the north by Van Buren Boulevard, a four-lane, partially controlled access highway that separates the cemetery from Meridian Business Park, a light industrial and commercial business park that is currently under development. I-215, a controlled access interstate highway, borders the National Cemetery to the east, separating the cemetery from March ARB. The National Cemetery is bordered to the south and west by General Old Golf Course. A small portion of the western boundary borders Village West Drive, a two-lane byway.

The project site borders I-215, the existing National Cemetery, and undeveloped areas planned for future National Cemetery expansion. Sensitive noise receptors in the vicinity include the following:
3.9.2 Environmental Consequences of the Preferred Alternative

The Preferred Alternative would be expected to have minor, short-term and negligible, long-term, adverse effects on sensitive noise receptors, specifically General Old Golf Course and the existing Riverside National Cemetery.

Construction activities associated with the Preferred Alternative would result in minor, short-term, adverse effects. Construction-related noise would vary throughout the construction process and depend on the type and number of equipment and tools being used as well as operating schedules. Construction activities would be typical of construction projects of this scale and would include transport, site preparation, excavation, placement of foundations, and paving. The greatest source of noise would be construction equipment with internal combustion engines, including, but not limited to, excavators, front-end loaders, bulldozers, dump trucks, utility trucks, and fork lifts.

Peak noise exposure at adjacent receptors would depend on topography, vegetation, and weather conditions. Noise exposure would be intermittent because equipment would not be operated continuously throughout the construction cycle. Overall, peak noise levels of approximately 108 A-weighted decibels (dBA) could occur during active construction, diminishing with distance from the construction site. Table 3-6 shows the peak noise levels associated with various pieces of equipment that could be used during proposed construction activities. As points of comparison, the hum of a refrigerator averages 40 decibels (dB), normal conversation averages 60 dB, gas-
powered lawnmowers average 90 dB, and a loud entertainment venue averages 104 to 110 dB (Centers for Disease Control and Prevention, 2016).

Table 3-7 shows the “worst-case” combined peak noise level that could be expected if several loud pieces of equipment were operated simultaneously. These conditions would be expected to be rare during the course of the construction activity. However, they would create temporary peak noise levels exceeding 90 dBA up to 200 feet from the construction area, depending on the specific pieces of equipment being operated. The only sensitive off-site noise receptor within 200 feet of the proposed construction activity is General Old Golf Course. The satellite maintenance facility is the only facility planned for construction within 200 feet of the golf course (approximately 200 feet) and would not be expected to create a “worst-case” combined peak noise scenario based on the requirements. The intermittent and infrequent nature of “worst-case” circumstances would be unlikely to create more than a temporary nuisance for those in the vicinity.

<table>
<thead>
<tr>
<th>Source</th>
<th>0 feet</th>
<th>50 feet</th>
<th>100 feet</th>
<th>200 feet</th>
<th>400 feet</th>
<th>1,000 feet</th>
<th>1,700 feet</th>
<th>2,500 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dump Truck</td>
<td>108</td>
<td>88</td>
<td>82</td>
<td>76</td>
<td>70</td>
<td>62</td>
<td>58</td>
<td>54</td>
</tr>
<tr>
<td>Concrete Mixer</td>
<td>108</td>
<td>85</td>
<td>79</td>
<td>73</td>
<td>67</td>
<td>59</td>
<td>55</td>
<td>51</td>
</tr>
<tr>
<td>Jack-hammer</td>
<td>108</td>
<td>88</td>
<td>82</td>
<td>76</td>
<td>70</td>
<td>62</td>
<td>58</td>
<td>54</td>
</tr>
<tr>
<td>Generator</td>
<td>96</td>
<td>76</td>
<td>70</td>
<td>64</td>
<td>58</td>
<td>50</td>
<td>46</td>
<td>42</td>
</tr>
<tr>
<td>Crane</td>
<td>104</td>
<td>75–88</td>
<td>69–82</td>
<td>63–76</td>
<td>55–70</td>
<td>49–62</td>
<td>45–48</td>
<td>41–54</td>
</tr>
<tr>
<td>Pile Driver</td>
<td>105</td>
<td>95</td>
<td>89</td>
<td>83</td>
<td>77</td>
<td>69</td>
<td>65</td>
<td>61</td>
</tr>
<tr>
<td>Forklift</td>
<td>100</td>
<td>95</td>
<td>89</td>
<td>83</td>
<td>77</td>
<td>69</td>
<td>65</td>
<td>61</td>
</tr>
</tbody>
</table>

Note: Peak noise levels are in A-weighted decibels (dBA), attenuated
Source: (Tipler, 1976).

Table 3-7. Worst-Case Combined Peak Noise Level
(Bulldozer, Jackhammer, and Scraper)

<table>
<thead>
<tr>
<th>Distance from Source</th>
<th>50 feet</th>
<th>100 feet</th>
<th>200 feet</th>
<th>1/4 mile</th>
<th>1/2 mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Peak Noise Level (dBA)</td>
<td>103</td>
<td>97</td>
<td>91</td>
<td>74</td>
<td>68</td>
</tr>
</tbody>
</table>

Other sources of noise during construction would include workers commuting to and from the site and transport of construction materials. Increases in local traffic would result in a commensurate but minor increase in noise levels immediately before, during, and after work hours. Relative to existing traffic on heavily traveled main roadways adjacent to the cemetery and the Phase 5 expansion site, these impacts would be insignificant. Due to the temporary and intermittent nature of these impacts, they would not be considered significant as compared to existing noise levels.
in the area. Following the construction and site improvements associated with the Preferred Alternative, operations and routine maintenance activities at the site would return to a similar baseline to such activities at the current National Cemetery site. Routine noise sources such as worker vehicles, visitor traffic, and maintenance equipment (e.g., lawn mowers and leaf blowers) would be operated at the existing cemetery site as well as at the Phase 5 expansion site. New operations at the Phase 5 expansion site would not expose additional sensitive noise receptors to significant increases in noise.

No new committal shelters would be constructed under the Preferred Alternative. Therefore, noises associated with rifle salutes would occur at a similar frequency and level to current memorial services at the site.

3.9.3 Environmental Consequences of the No Action Alternative

Under the No Action Alternative, cemetery expansion and improvements would not occur, and no additional noise effects would result. Gravesite development and ceremonial rifle salutes would continue until current cemetery capacity is reached, after which routine maintenance activities would continue.

3.9.4 Minimization/Management Measures

Implementing BMPs to reduce noise generated during construction would further minimize the potential effects on the local noise environment. Though no project-specific minimization measures would be required, the construction contractor could implement the following typical noise-control BMPs, as applicable, to minimize the potential for adverse noise effects:

- Limit construction activity to daylight hours.
- Use properly maintained and muffled vehicles and equipment.
- Observe local noise ordinances at all times.
- Locate stationary operating equipment as far away from surrounding residents as possible. Shut down heavy equipment and other noise emitters when they are not in use.

3.10 Community Services

Community services such as police protection, fire protection, emergency services, education, health care, and recreation are not analyzed in this SEA. It is not anticipated that the scale of expansion and improvement to the cemetery would result in any measurable effects, either adverse or beneficial, on these services.

3.10.1 Existing Conditions

The Riverside National Cemetery has provided burial services for veterans and their families in the region for the past 39 years, since 1978. The cemetery’s current capacity is estimated to be reached in 2019.

3.10.2 Environmental Consequences of the Preferred Alternative

Implementation of the Preferred Alternative would result in long-term, moderate, beneficial effects on community services in the region. The Riverside National Cemetery would be expanded and improved to help meet burial needs for veterans and their families in Southern California through 2029. Master planning for the remaining undeveloped portions of the Riverside National Cemetery
property would also allow the VA to plan for up to 100 years of needed veterans’ interment capacity in the region (NCA, 2014a).

3.10.3 Environmental Consequences of the No Action Alternative

Under the No Action Alternative, expansion of, and improvements to, the Riverside National Cemetery would not occur. The Riverside area would lack adequate interment options to meet the needs of the region’s veterans and their families, requiring them to travel outside of the region to obtain such services. The NCA considers a region’s veterans to have reasonable access to burial options if such options are available within 75 miles of the veterans’ residence. Riverside National Cemetery is expected to exhaust casket burial options by 2019, at which point the nearest National Cemeteries with full burial options would be the Miramar National Cemetery (approximately 84 miles by car) or the Bakersfield National Cemetery (approximately 159 miles by car). Other veterans’ cemeteries in the region are closed to new burial options; Fort Rosecrans National Cemetery exhausted casketed burial sites in 1966, and Los Angeles National Cemetery closed to new burial options in 1997. In addition, necessary upgrades to the cemetery’s infrastructure would not occur, resulting in diminished services and experiences to families and visitors. Therefore, the No Action Alternative would have minor, adverse effects on community services.

3.10.4 Minimization/Management Measures

No adverse impacts on community services would be expected to result from implementation of the Preferred Alternative. Therefore, no specific minimization or management measures would be required.

3.11 Solid and Hazardous Materials

3.11.1 Existing Conditions

California Code of Regulations Title 22, and all applicable federal regulations under 40 CFR 260–268, 273, and 279 and 29 CFR 1910 create the regulatory structure for hazardous waste management at Riverside National Cemetery. The California Department of Toxic Substances Control administers California’s hazardous waste regulations. The Riverside County Solid Waste Program regulates the handling and disposal of solid waste at Riverside National Cemetery. This program regulates solid waste facilities, medical waste, and biosolids land application throughout Riverside County.

The USEPA has designated Riverside National Cemetery as a small-quantity generator of hazardous waste. This designation indicates that the cemetery generally generates more than 100 kilograms (220 pound) but less than 1,000 kilograms (approximately 2,200 pounds) of hazardous waste per month. As such, Riverside National Cemetery may accumulate hazardous waste on-site for up to 180 days without a permit (USEPA, 2016). Such waste, which often includes pest control and weed management materials, is managed in satellite accumulation areas on-site and hauled off by contractors for treatment, disposal, or recycling (VA, 2010b).

Routine cemetery operations generate solid waste, including office waste, memorial items left at gravesites, and waste generated in the course of routine maintenance and operational activities. Burial operations also generate small volumes of excess soils, which the VA attempts to reuse on-site, whenever possible (NCA, 2016). Spills areas at Riverside National Cemetery are located in undeveloped portions of the site to limit visitors’ exposure to aesthetic impacts and airborne dust.
A 74-acre historical landfill associated with the operation and closure of Camp Haan is located in the southeastern corner of the undeveloped Riverside National Cemetery property. The site is characterized by extensive demolition debris, including concrete foundations. A cultural resource survey of the site conducted in 1996 identified a smaller historic trash dump of approximately 430 square feet within the larger landfill with largely inert, domestic materials (IT Corporation, 1996). The landfill site does not intersect with the project site and would not require remediation under the Preferred Alternative.

3.11.2 Environmental Consequences of the Preferred Alternative

Impacts on solid waste resulting from the Preferred Alternative would not be significant. Construction activities associated with the Preferred Alternative would generate solid waste in the short term; however, in the context of regional solid waste management, the effects would be negligible.

Under the Preferred Alternative, the spoils area located in the Phase 5 expansion site would be removed and relocated elsewhere on-site. Excess soils associated with cemetery expansion under the Preferred Alternative would be moved elsewhere on the Riverside National Cemetery property to limit visitors' exposure to aesthetic impacts and airborne dust. Staging and operation of construction vehicles and equipment would increase the potential for incidental releases or spills of fluids, including fuels and detergents, but proper maintenance and inspection would prevent any significant adverse impacts.

Continued operations at Riverside National Cemetery would likely generate similar amounts of solid waste as compared to current operations. The intensity and tempo of such operations would not increase dramatically, and impacts relative to the current baseline would not be significant.

3.11.3 Environmental Consequences of the No Action Alternative

Under the No Action Alternative, cemetery expansion would not occur, and no new construction-related solid waste and hazardous material would be generated. Solid waste generation associated with new burials would continue until the cemetery reaches capacity, at which point it would decrease. Waste generation associated with routine cemetery operations would be expected to continue at the present rate.

3.11.4 Minimization/Management Measures

VA would use the following measure to minimize adverse effects related to solid and hazardous materials:

- Inspect and maintain construction vehicles and equipment to reduce the risk of incidental spills or releases of hazardous fluids.

3.12 Utilities

3.12.1 Existing Conditions

*Water.* The Western Municipal Water District (WMWD) currently supplies domestic drinking water to the project site. The project site is located in the WMWD’s Riverside Service Area, which receives water from the Metropolitan Water District of Southern California’s Henry J. Mills Water Treatment Plant. The Henry J. Mills Water Treatment Plant draws water from the Colorado River Aqueduct.
In 2002, the WMWD acquired the Western Water Recycling Facility (the former March ARB Wastewater System). Treated water from the Western Water Recycling Facility is used to irrigate more than 900 acres of grass and plants at the project site. As of 2012, approximately 1,210 acre-feet of treated water is delivered to the cemetery on an annual basis. Water used for irrigation is stored in man-made lakes at the cemetery.

**Sanitary Sewer.** Sanitary sewer service is currently available at the site through the WMWD. Wastewater is treated at the Western Water Recycling Facility, which has a wastewater treatment capacity of three million gallons per day (gpd). In 2010, the facility’s capacity was expanded from one million gpd to three million gpd to help meet the needs of current and future customers.

**Electricity.** Electrical service is currently available at the Riverside National Cemetery from two sources, the local utility provider and an on-site photovoltaic system. Initially, electrical service to Riverside National Cemetery was solely provided by the Southern California Edison Company. In an effort to meet the renewable energy requirements of the Energy Policy Act, EO 13423, and EO 13514, photovoltaic (solar) systems were installed in 2010. The photovoltaic systems provide supplemental electrical power to the project site, thus decreasing the reliance on power from the Southern California Edison Company. In addition, individual solar panels are used to power water utility meters throughout the project site (VA, 2010b).

According to the 2010 EA, the annual electrical consumption for the Riverside National Cemetery from October 2008 through September 2009 was 1,133,004 kWh. The photovoltaic systems generate approximately 172,507 kWh of energy annually, which represents approximately 15 percent of the electrical power demand. The remaining 85 percent of electrical power is provided by the Southern California Edison Company.

**Natural Gas.** The Southern California Gas Company currently provides natural gas service to Riverside National Cemetery. High-pressure distribution lines located north of the cemetery along Van Buren Boulevard and east of the project site along I-215 provide possible connections to service the Phase 5 expansion site (Southern California Gas Company, 2016).

**Telecommunication.** Several national vendors provide telecommunication services in the form of fiber-optic and telephone communication lines to the Riverside National Cemetery.

### 3.12.2 Environmental Consequences of the Preferred Alternative

The Preferred Alternative would require extending utility services, in coordination with local providers, to a proposed satellite maintenance facility. All major utility services (i.e., water, sanitary sewer, electricity, and telecommunications) are available at the site.

Additional domestic water usage is required to accommodate proposed new building construction and expansion. The primary water usage for the facilities would be restrooms. New drinking water lines would require connection to the existing lines to accommodate additional facilities including the satellite maintenance facility construction. The Preferred Alternative would require additional volumes of irrigation water to accommodate development within the Phase 5 expansion site. Potable and irrigation water sources are readily available at the site to adequately meet the demands required under the Preferred Alternative. Therefore, additional water usage would not have an adverse impact on potable and irrigation water sources.

Additional infrastructure would be constructed to accommodate wastewater discharge from the proposed satellite maintenance facility and public restrooms. Given that the facility’s capacity was
expanded from one million gpd to three million gpd in 2010 to meet the needs of current and future customers, WMWD’s expanded wastewater treatment capacity is adequate to meet relatively minor increases in wastewater production at the site.

The current electrical service has adequate capacity to accommodate the actions under the Preferred Alternative. Design plans would require coordination with the Southern California Edison Company prior to development activities (VA, 2010b).

Telecommunication services are available to the proposed facilities. Based on the SEA analysis, implementation of the Preferred Alternative would have no significant impacts on consumption or regional availability of utilities.

3.12.3 Environmental Consequences of the No Action Alternative
Under the No Action Alternative, no construction would occur. Therefore, no effects on utilities would occur.

3.12.4 Minimization/Management Measures
In an effort to maintain potential effects on utilities at acceptable levels, design plans should be coordinated with each available utility provider to determine specific connection requirements and implement the necessary connection requirements.

3.13 Environmental Justice

3.13.1 Existing Conditions
In 1994, President Bill Clinton issued E.O 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, to focus the attention of federal agencies on the disproportionate adverse health and environmental effects of major federal actions on minority and low-income communities. This EO defines these communities as follows:

Minority populations: Persons of Hispanic origin of any race, African Americans, American Indians or Alaska Natives, Asians, Native Hawaiians or Pacific Islanders.

Low-income populations: Persons living below the poverty level, based on a total annual income of $24,300 for a family of four (Office of the Assistant Secretary for Planning and Evaluation, 2016).

As shown in Table 3-8, Riverside County’s demographics are largely reflective of the state overall. Riverside has a lower proportion of residents who identify primarily as Asian as compared to the state, but closer to the national average. Also, Riverside County considerably outpaces the state in residents who identify as Hispanic or Latino, and the statewide proportion of Hispanic residents is more than double the national average.
Table 3-8. Regional Percent Population by Race and Ethnicity

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Pop.</th>
<th>White</th>
<th>Black or African American</th>
<th>American Indian or Alaska Native</th>
<th>Asian</th>
<th>Native Hawaiian or Other Pacific Islander</th>
<th>Two or More Races</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverside County</td>
<td>2,361,818</td>
<td>80.20%</td>
<td>7.10%</td>
<td>1.90%</td>
<td>6.90%</td>
<td>0.40%</td>
<td>3.40%</td>
<td>47.90%</td>
</tr>
<tr>
<td>California</td>
<td>39,144,818</td>
<td>72.90%</td>
<td>6.50%</td>
<td>1.70%</td>
<td>14.70%</td>
<td>0.50%</td>
<td>3.80%</td>
<td>38.80%</td>
</tr>
<tr>
<td>United States</td>
<td>321,418,820</td>
<td>77.10%</td>
<td>13.30%</td>
<td>1.20%</td>
<td>5.60%</td>
<td>0.20%</td>
<td>2.60%</td>
<td>17.60%</td>
</tr>
</tbody>
</table>

Source: (U.S. Census Bureau, 2015).

As noted in Table 3-9, Riverside County’s economy slightly trails state and national estimates in terms of per capita income and the proportion of the population below the poverty line.

Table 3-9. Regional Income and Employment

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of Households</th>
<th>Median Household Income</th>
<th>Per Capita Income ($)</th>
<th>Percent of Population below Poverty Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverside County</td>
<td>690,388</td>
<td>$56,592</td>
<td>$23,660</td>
<td>17%</td>
</tr>
<tr>
<td>California</td>
<td>12,617,280</td>
<td>$61,489</td>
<td>$29,906</td>
<td>15%</td>
</tr>
<tr>
<td>United States</td>
<td>116,211,092</td>
<td>$53,482</td>
<td>$28,555</td>
<td>14%</td>
</tr>
</tbody>
</table>

Source: (U.S. Census Bureau, 2015).

The population of Riverside County is not characterized by an appreciably greater proportion of minority or low-income populations than California as a whole. There are few residential areas located within one mile of the project site; commercial, recreational, military, and industrial uses predominate in the area. The nearest residential area is located approximately 0.9 miles southwest of the project site. This area is within Census Tract 420.10. An estimated 32 percent of the tract’s residents live below the poverty level. It also has a disproportionately large population identifying as Hispanic or Latino, comprising approximately 72 percent of the residents of the census tract. Other non-white ethnic groups are represented at, or below, state and national averages (U.S. Census Bureau, 2014).

3.13.2 Environmental Consequences of the Preferred Alternative

Implementation of the Preferred Alternative would not have adverse effects on environmental justice. The Preferred Alternative would be unlikely to expose local residents to environmental hazards due to the nature of the proposed activities, the VA’s use of management measures, and the distance of the project site from local residential areas. Few concentrations of minority or low-income communities are within the immediate vicinity, and no related impacts on those groups relative to human health or environmental degradation would occur. Construction vehicles would gain access to the Phase 5 expansion site via roads to the north and east of the project location, and would not be expected to impact the minority or low-income populations in Census Tract 420.10. Management measures described in previous sections and summarized in Section 5 would control and/or reduce anticipated adverse, minor effects. The Preferred
Alternative is not likely to have any measurable effect on local populations, and minority or low-income populations would not be expected to experience any disproportionately high or adverse environmental effects.

3.13.3 Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the expansion of, and improvements to, Riverside National Cemetery would not occur, and no environmental justice effects would be expected.

3.13.4 Minimization/Management Measures

Under the Preferred Alternative, no environmental justice effects would occur, and no project-specific mitigation or management measures would be required.

3.14 Cumulative Effects

As defined by CEQ regulations in 40 CFR 1508.7, a cumulative impact is those that “results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, without regard to the agency (federal or nonfederal) or person who undertakes such other actions.”

Cumulative impact analysis captures the effects that result from the Preferred Alternative in combination with the effects of other actions taken during the duration of the Preferred Alternative in the same geographic area. Because of extensive influences of multiple forces, cumulative effects are the most difficult to analyze.

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

3.14.1 Considered Cumulative Actions

At the Riverside National Cemetery, future developments are proposed adjacent to the Phase 5 project area. As shown in Figure 3-5, development in Phases 6 and 7 will occur south of the proposed Phase 5 expansion site. Phases 6 and 7 are expected to add an additional 43,300 burial options each, as well as roads, infrastructure, and landscaping to support each land parcel.

Riverside National Cemetery is within the March Joint Powers Authority (JPA) Planning Area; consequently, much of the land surrounding the cemetery is controlled by the JPA. Projects and activities in the vicinity of the Riverside National Cemetery are primarily being carried out by the March JPA and include the following:

- continued redevelopment of the previous March AFB Arnold Heights residential area into Meridian Business Park immediately north of the existing Riverside National Cemetery
- continued redevelopment of previous March AFB surplus lands between Barton Street and Riverside National Cemetery, including the potential redevelopment of General Old Golf Course
3.14.2 Environmental Consequences of Cumulative Actions

No significant cumulative adverse effects on any resources would be anticipated as a result of the implementation of the Preferred Alternative. The project site is undeveloped, and is surrounded by Riverside National Cemetery property on three sides and adjacent to an interstate highway on the fourth.

The aesthetic appearance of the project site as an extension of the existing Riverside National Cemetery, constructed in concert with regional vernacular architecture and natural landscapes, would incorporate the site into the surrounding setting. The cumulative effects of implementation of Phases 5, 6, and 7 at the Riverside National Cemetery would result in a contiguous landscape with a parklike setting. Overall, there would be beneficial cumulative impacts on aesthetics.

The Preferred Alternative would have no adverse effects on resources aboveground in the Phase 5 expansion site since it is a noncontributing resource to the NRHP-eligible cemetery. The Preferred Alternative would not directly or indirectly affect cultural resources that are eligible for listing in the NRHP outside of the National Cemetery itself. For cultural resources belowground, adherence to federal regulations would reduce potential effects on previously unknown sites during site preparation and construction. Since no significant impacts on cultural resources would occur from the Preferred Alternative, no cumulative impacts on cultural resources would occur.

Soil erosion and sedimentation could occur from construction activities during each of the Phases (5, 6, and 7) at the Riverside National Cemetery and from redevelopment activities at March ARB.
However, these effects would be minimized through the use of appropriate BMPs and adherence to the terms of the CEPA General Permit for Discharges of Storm Water Associated with Construction Activity. Immediately following construction, exposed areas would be revegetated to stabilize the soil and minimize erosion. This would also minimize short-term adverse impacts on water resources. In addition, development in each of the Phases at the National Cemetery would occur consecutively, they would not occur all at once; therefore, no cumulative impacts on soil erosion and sedimentation and water resources would occur. Long-term effects from the increase in impervious surface would be minimized by including an appropriately designed stormwater system as part of final site design, and ensuring post-project hydrology mirrors pre-project hydrology at the National Cemetery and March ARB. Therefore, no long-term cumulative effects on soil erosion and sedimentation and water resources are anticipated.

Since development in each of the Phases at the National Cemetery would not occur all at once, short-term impacts from construction activities on air quality, noise, and solid and hazardous materials would not result in cumulative effects. No significant long-term impacts on these resources from the Preferred Alternative, or project considered under cumulative impacts, would occur.

The Preferred Alternative would have no effects on floodplains, utilities, and environmental justice; therefore, no cumulative effects would occur.

As discussed in Section 3.8, SKR, which are federal-listed endangered and state-listed threatened species, are within the project site for the Preferred Alternative, as determined from surveys conducted in 2016. Before work would begin in the Phases 5, 6, and 7 project sites, mitigation in consultation with the USFWS would occur. SKR individuals would be relocated prior to the start of construction. In addition, money would be contributed to an in-lieu-fee mitigation fund based upon the amount of habitat acreage that would be affected. Currently, consultation with the USFWS is ongoing.

Implementation of Phases 5, 6, and 7 at the Riverside National Cemetery would expand and improve services to help meet burial needs for veterans and their families in Southern California. This would result in long-term, moderate, beneficial effects on community services in the region.

As additional parcels of the Riverside National Cemetery are developed, site-specific NEPA analysis for the subsequent phasing would be conducted to analyze the environmental effects. However, considered generally, the cumulative effects of the next two phases of the Riverside National Cemetery would not be expected to be significant. The ground-disturbing activities of the subsequent phases of cemetery development would occur on distinct parcels over phased intervals.

The VA continues to construct, expand, and operate dozens of similar National Cemeteries without causing cumulative impacts; this is largely attributable to the VA's implementation of BMPs during construction and operation, which limits any potential adverse effects to less-than-significant levels. Furthermore, the overall action—including both construction and operation of the cemetery—is generally low-intensity. Accordingly, no significant cumulative impacts are anticipated from the Preferred Alternative.

Under the No Action Alternative, there would be no change to baseline conditions; no cumulative effects are anticipated.

However, these effects would be minimized through the use of appropriate BMPs and adherence to the terms of the CEPA General Permit for Discharges of Storm Water Associated with Construction Activity. Immediately following construction, exposed areas would be revegetated to stabilize the soil and minimize erosion. This would also minimize short-term adverse impacts on water resources. In addition, development in each of the Phases at the National Cemetery would occur consecutively, they would not occur all at once; therefore, no cumulative impacts on soil erosion and sedimentation and water resources would occur. Long-term effects from the increase in impervious surface would be minimized by including an appropriately designed stormwater system as part of final site design, and ensuring post-project hydrology mirrors pre-project hydrology at the National Cemetery and March ARB. Therefore, no long-term cumulative effects on soil erosion and sedimentation and water resources are anticipated.

Since development in each of the Phases at the National Cemetery would not occur all at once, short-term impacts from construction activities on air quality, noise, and solid and hazardous materials would not result in cumulative effects. No significant long-term impacts on these resources from the Preferred Alternative, or project considered under cumulative impacts, would occur.

The Preferred Alternative would have no effects on floodplains, utilities, and environmental justice; therefore, no cumulative effects would occur.

As discussed in Section 3.8, SKR, which are federal-listed endangered and state-listed threatened species, are within the project site for the Preferred Alternative, as determined from surveys conducted in 2016. Before work would begin in the Phases 5, 6, and 7 project sites, mitigation in consultation with the USFWS would occur. SKR individuals would be relocated prior to the start of construction. In addition, money would be contributed to an in-lieu-fee mitigation fund based upon the amount of habitat acreage that would be affected. Currently, consultation with the USFWS is ongoing.

Implementation of Phases 5, 6, and 7 at the Riverside National Cemetery would expand and improve services to help meet burial needs for veterans and their families in Southern California. This would result in long-term, moderate, beneficial effects on community services in the region.

As additional parcels of the Riverside National Cemetery are developed, site-specific NEPA analysis for the subsequent phasing would be conducted to analyze the environmental effects. However, considered generally, the cumulative effects of the next two phases of the Riverside National Cemetery would not be expected to be significant. The ground-disturbing activities of the subsequent phases of cemetery development would occur on distinct parcels over phased intervals.

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Under the No Action Alternative, there would be no change to baseline conditions; no cumulative effects are anticipated.
3.15 Potential for Generating Substantial Public Controversy

As discussed in Section 4, the VA will solicit input from various federal, state, and local government agencies regarding the Proposed Action. In addition, the VA, as the federal proponent of this Proposed Action, will publish and distribute the Draft SEA for a 30-day public comment period, as announced by a Notice of Availability (NOA) published in the Press-Enterprise newspaper on March 22 and 25, 2018. Review copies of the Draft SEA will be made available for public review on the VA website (http://www.cem.va.gov/EA.asp). Public comments received within the 30-day public comment period will be reviewed and addressed, as warranted, in the Final SEA.

Based on beneficial effects of the Preferred Alternative, there appears to be little potential for generating public controversy. Because the planned development of the site would occur in a manner that is consistent with local zoning and local plans, and considering the findings of this SEA (no significant adverse environmental effect) and the absence of identified opposition during SEA processes, it is not anticipated that there would be substantial public controversy regarding the Proposed Action. The No Action Alternative may result in a controversy concerning veterans’ desire for interment in a veteran’s cemetery. No action would result in limited burials at the site, requiring veterans to either be buried in the nearest National Cemetery (over 100 miles away) or resort to private burials.
This section describes the public, agency, and Native American consultation process associated with development of this SEA.

4.1 Agency Coordination

During development and review of the SEA for expansion and improvements at Riverside National Cemetery, the NCA contacted federal, state, and local agencies with oversight responsibilities related to this project. Table 4-1 lists the agency coordination and consultation activities conducted to date in support of this SEA.

Table 4-1. Agency Coordination for Riverside National Cemetery Expansion and Improvements

<table>
<thead>
<tr>
<th>Entity</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agua Caliente Band of Cahuilla Indians</td>
<td>The project area is within the Tribe’s Traditional Use Area, but the Tribe defers to the Soboba Band of Luiseno Indians. No further consultation necessary.</td>
</tr>
<tr>
<td>Augustine Band of Cahuilla Indians</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Cabazon Band of Mission Indians</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Cahuilla Band of Mission Indians</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Chemehuevi Indian Tribe</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Cocopah Indian Reservation</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Colorado River Indian Tribes of the Colorado River Indian Reservation</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Fort Mojave Indian Tribe</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Gabrieleno Band of Mission Indians - Kizh Nation</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Gabrieleno/Tongva San Gabriel Band of Mission Indians</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Gabrieleno/Tongva Nation</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Joaneno Band of Mission Indians</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Juaneno Band of Mission Indians Acjachemen Nation</td>
<td>No response to date.</td>
</tr>
<tr>
<td>La Jolla Band of Luiseno Indians</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Los Coyotes Band of Cahuilla Cupeno Indians</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Morongo Band of Mission Indians</td>
<td>The project is located within the Tribe’s aboriginal territory or in an area considered to be a traditional use area or one in which the Tribe has cultural ties. Requests to engage in consultation.</td>
</tr>
<tr>
<td>Pala Band of Mission Indians</td>
<td>No objection to project activities, defer to Tribes in closer proximity.</td>
</tr>
<tr>
<td>Pauma Band of Luiseno Indians</td>
<td>No response to date.</td>
</tr>
<tr>
<td>Pechanga Band of Luiseno Indians</td>
<td>No response to date.</td>
</tr>
</tbody>
</table>
A full list of all agencies and individuals with whom the VA coordinated with during the preparation of this SEA can be found in Section 9. Copies of all correspondence, as well as comments and responses received, can be found in Appendix A.

4.2 Native American Consultation

For federal proposed actions, federal agencies are required to consult with federally recognized Native American tribes in accordance with NEPA, the NHPA, NAGPRA, and EO 13175. Section 9 of this SEA contains a list of the federally recognized Native American tribes invited to consult during the SEA process. The VA conducted all Native American tribe correspondence by certified letters. During preparation of the SEA, 30 identified tribes were contacted by letter.

4.3 Public Involvement

As stated in the VA’s NEPA Interim Guidance for Projects (VA, 2010a), public involvement for an EA may include public engagement during scoping, drafting, and finalizing the SEA through NOAs or public meetings. The public involvement process for this SEA has consisted of publication of an NOA of the Draft SEA, a 30-day public comment period on the Draft SEA, consideration of the public comments in the Final SEA, and publication of a NOA for the Final SEA and Finding of No Significant Impact (FONSI).

4.3.1 Public Review of the Draft Environmental Assessment

The VA, as the federal proponent of this Proposed Action, published the Draft SEA for a 30-day public comment period, as announced by an NOA that was published in the Press-Enterprise. Review copies were available for public review on the VA website (http://www.cem.va.gov/EA.aspx). No public comments were received on the Draft SEA.
5 MANAGEMENT MEASURES

This section summarizes the management measures (as applicable) identified in Section 3 that are proposed to minimize and control adverse effects of the proposed action at acceptable, minor levels. “Management measures” are defined as routine BMPs and/or regulatory environmental compliance and protection measures that are regularly implemented as part of proposed activities, as appropriate, across California. Per established protocols, procedures, and requirements, the VA (and the VA’s design and construction contractors) would implement BMPs and would satisfy all applicable regulatory requirements in association with the proposed cemetery expansion and improvements.

Management measures are different from “minimization measures,” which are defined as project-specific requirements that are not routinely implemented as part of development projects, but are necessary to reduce identified environmental effects to less-than-significant levels.

Table 5-1 provides a summary of BMPs and environmental protection measures included in the Proposed Action to ensure that adverse, minor effects are controlled and/or reduced. Implementation of management measures, as identified in Table 5-1, would maintain impacts at acceptable levels for all resource areas analyzed.

Table 5-1. Best Management Practices Incorporated into the Proposed Action

<table>
<thead>
<tr>
<th>Technical Resource Area</th>
<th>Best Management Practice/Environmental Protection Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics</td>
<td>Incorporate existing topography and natural features into site design, wherever possible.</td>
</tr>
<tr>
<td></td>
<td>Maintain landscaped areas, buildings, roadways, and signage.</td>
</tr>
<tr>
<td></td>
<td>Design the site to accentuate existing viewsheds.</td>
</tr>
<tr>
<td></td>
<td>Conduct construction activities with a sensitivity toward maintaining the dignity and solemnity of the National Cemetery environment during interment services.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Use appropriate dust suppression methods during on-site construction activities. Available methods include application of water, dust palliative, or soil stabilizers; use of enclosures, covers, silt fences, or wheel washers; and suspension of earth-moving activities during high wind conditions.</td>
</tr>
<tr>
<td></td>
<td>Maintain an appropriate speed to minimize dust generated by vehicles and equipment on unpaved surfaces.</td>
</tr>
<tr>
<td></td>
<td>Cover haul trucks with tarps.</td>
</tr>
<tr>
<td></td>
<td>Stabilize previously disturbed areas through revegetation or mulching if the area would be inactive for several weeks or longer.</td>
</tr>
<tr>
<td></td>
<td>Visually monitor all construction activities regularly, in particular, during extended periods of dry weather, and implement dust control measures, when appropriate.</td>
</tr>
<tr>
<td>Technical Resource Area</td>
<td>Best Management Practice/Environmental Protection Measure</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Comply with the NHPA, Archaeological Resources Protection Act, Native American Graves Protection and Repatriation Act, American Indian Religious Freedom Act, and 36 CFR Part 79 during the proposed future development process. Implement procedures for inadvertent discovery if any archaeological resources are unearthed during construction or during excavation associated with burials, including coordination with SHPO and applicable tribal representatives.</td>
</tr>
<tr>
<td>Geology and Soils</td>
<td>Phase clearing and grading to the maximum extent practical to prevent exposed inactive areas from becoming sources of erosion. Minimize erosion during and after soil disturbance using BMPs such as temporary seeding and planting, final vegetative cover, mulches, compost blankets, erosion-control blankets and mats, and soil tackifiers. Use water or a soil-binding agent or other dust control technique, as needed, to avoid wind-blown soil. Preserve existing vegetation and revegetate open areas, when practical. Do not remove temporary sediment control practices until final vegetative cover or permanent stabilization measures are established. Control sediment, as needed, along the site perimeter and at all operational internal storm drain inlets at all times during construction. Design impervious surfaces to drain to stormwater management systems.</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Develop a site design that prevents surface water runoff to the on-site and adjacent surface waters, and avoids interaction with on-site and adjacent surface waters. Develop a site design that accounts for pre-/post 100-year volume stormwater drainage at a minimum. Implement pre-/post 100-year volume stormwater retention, at a minimum. Implement stormwater management facilities and other related stormwater management infrastructure for the site. Clear ephemeral drainages and intermittent and perennial streams of all work items, debris, or other obstructions placed by, or resulting from, construction operations. Locate machinery servicing and refueling areas away from streambeds and washes to reduce the possibility and minimize the impacts of accidental spills or discharges. Inspect and maintain construction vehicles in good working order and maintain a spill kit. Establish turf on finished slopes and ditches within 14 days after completion of construction on a portion of the site. Continue involvement in the wastewater recycling program.</td>
</tr>
<tr>
<td>Floodplains and Wetland</td>
<td>Specific management and mitigation measures are not required.</td>
</tr>
<tr>
<td>Technical Resource Area</td>
<td>Best Management Practice/Environmental Protection Measure</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Wildlife and Habitat</strong></td>
<td>When controlling weeds and unwanted vegetation, take precautions to mow or scrape this vegetation during daylight hours and remove cut weeds.</td>
</tr>
<tr>
<td></td>
<td>Implement the conservation measures outlined in the Biological Opinion to minimize the incidental take of SKR.</td>
</tr>
<tr>
<td></td>
<td>Use native vegetation in cemetery landscaping to the extent practicable.</td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td>Limit construction activity to daylight hours.</td>
</tr>
<tr>
<td></td>
<td>Use properly maintained and muffled vehicles and equipment.</td>
</tr>
<tr>
<td></td>
<td>Observe local noise ordinances at all times.</td>
</tr>
<tr>
<td></td>
<td>Locate stationary operating equipment as far away from surrounding residents as possible. Shut down heavy equipment and other noise emitters when they are not in use.</td>
</tr>
<tr>
<td>Land Use</td>
<td>Specific management and mitigation measures are not required.</td>
</tr>
<tr>
<td>Socioeconomics</td>
<td>Specific management and mitigation measures are not required.</td>
</tr>
<tr>
<td>Community Services</td>
<td>Specific management and mitigation measures are not required.</td>
</tr>
<tr>
<td>Solid and Hazardous Materials</td>
<td>Inspect and maintain construction vehicles and equipment to reduce the risk of incidental spills or releases of hazardous fluids.</td>
</tr>
<tr>
<td>Transportation and Parking</td>
<td>Specific management and mitigation measures are not required.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Design plans will be submitted to each available utility provider to determine specific connection requirements and implement the necessary connection requirements.</td>
</tr>
<tr>
<td>Environmental Justice</td>
<td>Specific management and mitigation measures are not required.</td>
</tr>
</tbody>
</table>
Department of Veterans Affairs Staff

Mr. Glenn Elliott
Environmental Engineer
U.S. Department of Veterans Affairs Office of Construction & Facilities Management

Marstel-Day, LLC (NEPA Consultant)

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Years of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erika Wettergreen</td>
<td>Document Preparation and Review</td>
<td>25</td>
</tr>
<tr>
<td>Randall Farren</td>
<td>Management Support, Subject-Matter Expert, Document Preparation and Review</td>
<td>8</td>
</tr>
<tr>
<td>Elizabeth Pratt</td>
<td>Subject-Matter Expert, Document Preparation</td>
<td>10</td>
</tr>
<tr>
<td>Tanya Perry</td>
<td>Management Support, Document Preparation</td>
<td>17</td>
</tr>
<tr>
<td>Mary Young</td>
<td>Subject-Matter Expert, Document Preparation</td>
<td>12</td>
</tr>
<tr>
<td>Claire Reynolds</td>
<td>Mapping, Subject-Matter Expert, Document Preparation</td>
<td>2</td>
</tr>
<tr>
<td>Jonathan Kohl</td>
<td>Subject-Matter Expert, Document Preparation</td>
<td>11</td>
</tr>
<tr>
<td>Laurie Griffith</td>
<td>Editor, Document Review</td>
<td>19</td>
</tr>
<tr>
<td>Sean Donahoe</td>
<td>Management Support, Senior Document Review</td>
<td>31</td>
</tr>
<tr>
<td>William Gray (LRS Group)</td>
<td>Subject-Matter Expert, Document Preparation</td>
<td>14</td>
</tr>
</tbody>
</table>
References


California Native Plant Society. (2006, May). *Vegetation Alliances of Western Riverside County, California*. Prepared for the California Department of Fish and Game Habitat Conservation Division.


NCA. (2014a, November). Riverside National Cemetery Phase 5 Development Project Narrative.


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USFWS. (1993b, November 10). Amendment to the Biological Opinion Regarding a Proposed Expansion and management Plan at the Riverside National Cemetery (1-6-93-F-10).


REFERENCES


## LIST OF ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFB</td>
<td>Air Force Base</td>
</tr>
<tr>
<td>AQCR</td>
<td>Air quality control region</td>
</tr>
<tr>
<td>AQMP</td>
<td>Air Quality Management Plan</td>
</tr>
<tr>
<td>ARB</td>
<td>Air Reserve Base</td>
</tr>
<tr>
<td>BMP</td>
<td>Best Management Practice</td>
</tr>
<tr>
<td>CARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>CEPA</td>
<td>California Environmental Protection Agency</td>
</tr>
<tr>
<td>CEQ</td>
<td>Council on Environmental Quality</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CNDDDB</td>
<td>California Natural Diversity Database</td>
</tr>
<tr>
<td>CNHP</td>
<td>Colorado Natural Heritage Program</td>
</tr>
<tr>
<td>CO</td>
<td>Carbon monoxide</td>
</tr>
<tr>
<td>CO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>Carbon dioxide</td>
</tr>
<tr>
<td>CO&lt;sub&gt;2e&lt;/sub&gt;</td>
<td>Carbon dioxide equivalents</td>
</tr>
<tr>
<td>dB</td>
<td>Decibel</td>
</tr>
<tr>
<td>dBA</td>
<td>A-weighted decibel</td>
</tr>
<tr>
<td>E&amp;S</td>
<td>Erosion and sedimentation</td>
</tr>
<tr>
<td>ECOS</td>
<td>Environmental Conservation Online System</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>EO</td>
<td>Executive Order</td>
</tr>
<tr>
<td>ESA</td>
<td>Endangered Species Act</td>
</tr>
<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
</tr>
<tr>
<td>FONSI</td>
<td>Finding of No Significant Impact</td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal year</td>
</tr>
<tr>
<td>gpd</td>
<td>Gallons per day</td>
</tr>
<tr>
<td>gsf</td>
<td>Gross square feet</td>
</tr>
<tr>
<td>HCP</td>
<td>Habitat Conservation Plan</td>
</tr>
<tr>
<td>kWh</td>
<td>Kilowatt-hours</td>
</tr>
<tr>
<td>MT</td>
<td>Metric tons</td>
</tr>
<tr>
<td>NAAQS</td>
<td>National Ambient Air Quality Standards</td>
</tr>
<tr>
<td>NAGPRA</td>
<td>Native American Graves Protection and Repatriation Act</td>
</tr>
<tr>
<td>NCA</td>
<td>National Cemetery Administration</td>
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<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<td>NHPA</td>
<td>National Historic Preservation Act</td>
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<td>NO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>Nitrogen dioxide</td>
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<tr>
<td>NOA</td>
<td>Notice of Availability</td>
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<td>NPDES</td>
<td>National Pollutant Discharge Elimination System</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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<td>O&lt;sub&gt;3&lt;/sub&gt;</td>
<td>Ozone</td>
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<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>Particulate matter less than or equal to 10 microns</td>
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<td>Acronym</td>
<td>Description</td>
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<tr>
<td>PM$_{2.5}$</td>
<td>particulate matter less than or equal to 2.5 microns</td>
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<tr>
<td>ROI</td>
<td>region of influence</td>
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<td>SCAQMD</td>
<td>South Coast Air Quality Management District</td>
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<tr>
<td>SEA</td>
<td>Site-Specific Environmental Assessment</td>
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<td>SHPO</td>
<td>State Historic Preservation Officer</td>
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<tr>
<td>SIP</td>
<td>State Implementation Plan</td>
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<tr>
<td>SKR</td>
<td>Stephens’ kangaroo rat</td>
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<tr>
<td>SWPPP</td>
<td>Stormwater Pollution Prevention Plan</td>
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<tr>
<td>SO$_2$</td>
<td>sulfur dioxide</td>
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<td>U.S.</td>
<td>United States</td>
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<td>USACE</td>
<td>United States Army Corps of Engineers</td>
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<td>USDA</td>
<td>United States Department of Agriculture</td>
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<tr>
<td>USEPA</td>
<td>United States Environmental Protection Agency</td>
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<td>USFWS</td>
<td>United States Fish and Wildlife Service</td>
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<td>USGS</td>
<td>United States Geological Survey</td>
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<tr>
<td>VA</td>
<td>Department of Veterans Affairs</td>
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<tr>
<td>WMWD</td>
<td>Western Municipal Water District</td>
</tr>
</tbody>
</table>
AGENCIES AND INDIVIDUALS CONSULTED

Native American Tribes

Patricia Garcia-Plotkin, Director, Tribal Historic Preservation Officer (THPO)
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Amanda Vance, Chairwoman
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Newhall, CA 91322

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San Luis Rey Band of Mission Indians, California  
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Vista, CA 92081

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Anza, CA 92539

Goldie Walker, Chairwoman  
Serrano Nation of Mission Indians, California  
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Patton, CA 92369

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San Jacinto, CA 92581

Michael Mirelez, Cultural Resource Coordinator  
Torres-Martinez Desert Cahuilla Indians, California  
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Thermal, CA 92274

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Twenty-Nine Palms Band of Mission Indians, California  
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Coachella, CA 92236
AGENCIES AND INDIVIDUALS CONSULTED

Federal Agencies
U.S Army Corps of Engineers - Los Angeles District, Riverside Regulatory Division
915 Wilshire Boulevard, Suite 930
Los Angeles, CA 90017

U.S. Department of Agriculture
Natural Resources Conservation Service
Riverside Area Office
Jae Lee, ASTC Field Operations
4500 Glenwood Drive
Riverside, CA 92501-3042

U.S. Fish and Wildlife Service
Palm Springs Fish & Wildlife Office
Ms. Amanda Swaller
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262

State Agencies
California Native American Heritage Commission
Frank Lienert
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691

California Office of Historic Preservation
Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100
Sacramento, CA 95816

Media
The Press Enterprise
1825 Chicago Ave., Suite 100
Riverside, CA 92507
## LIST OF ENVIRONMENTAL PERMITS REQUIRED

<table>
<thead>
<tr>
<th>Permit, Approval or Certification</th>
<th>Responsible Agency</th>
<th>Applicable Criteria</th>
<th>Required Actions</th>
<th>Permitting Schedule</th>
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<tbody>
<tr>
<td>State Environmental</td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>
| Clean Water Act (CWA) Section 401 Permit | California Environmental Protection Agency | Required for projects where activities will disturb jurisdictional Waters of the United States | • Complete CWA Section 404 Permit Application  
• Submit Site Plan  
• Submit description of BMPs | Approximately 2 days to prepare application. Agency review takes approximately 60 days. |
| Construction Activities           | California Environmental Protection Agency | Required for projects where activities would disturb one acre or more of land. | Electronically submit Permit Registration Documents | Approximately 5 days to prepare application. |
| Stormwater General Permit         |                                     |                                       |                                                                                  |                                   |
| Federal                           |                                     |                                       |                                                                                  |                                   |
| CWA Section 404 Permit            | U.S. Army Corps of Engineers (USACE), Los Angeles District | Required for projects where activities will disturb jurisdictional “Waters of the United States” | • Complete Individual Permit if adverse impacts are anticipated.  
• Complete General Permit if minimal impacts are anticipated. | Approximately 2 days to prepare application. Agency review takes approximately 60 days. |
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<thead>
<tr>
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<th>Required Actions</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Farmland Conversion Impact Rating</td>
<td>United States Department of Agriculture (USDA)</td>
<td>Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland to nonagricultural uses, will initially complete Parts I and III of the form to determine if the proposed conservation is in compliance with the Farmland Protection Policy Act.</td>
<td>Complete Parts I and III of the form and submit to USDA; a site inspection may be required.</td>
<td>Initial response within 10 days; up to 30 days to conduct site inspection.</td>
</tr>
<tr>
<td>Section 7 Consultation</td>
<td>United States Fish and Wildlife Service (USFWS)</td>
<td>Federal agencies involved in projects that may affect a listed endangered or threatened species must consult with the USFWS.</td>
<td>Request an informal consultation. If determined that project may affect a listed species, prepare a biological assessment to assist in its determination of the project’s effect on a species. If the biological assessment determines that listed species are likely to be adversely affected, request a formal consultation.</td>
<td>Formal consultation may last up to 90 days, after which the USFWS will prepare a biological opinion. Federal agency has 45 days after completion of formal consultation to write the opinion.</td>
</tr>
</tbody>
</table>