FINAL

ENVIRONMENTAL ASSESSMENT

FOR THE PROPOSED

TAHOMA NATIONAL CEMETERY
PHASE 3 EXPANSION

18600 SE 240TH STREET
KING COUNTY, WASHINGTON

U.S. DEPARTMENT OF VETERANS AFFAIRS

OFFICE OF CONSTRUCTION AND FACILITIES MANAGEMENT

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WASHINGTON, DC 20001

July 20, 2022

EXECUTIVE SUMMARY

This environmental assessment (EA) has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with the U.S. Department of Veterans Affairs' (VA's) proposed Phase 3 expansion project at Tahoma National Cemetery. This EA has been prepared as required in accordance with the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code 4321 *et seq*.), the President's Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and *Environmental Effects of the Department of Veterans Affairs Actions* (38 CFR Part 26), and in accordance with *VA NEPA Interim Guidance for Projects* (2010).

In 1991, VA prepared an environmental impact statement (EIS) for the selection and acquisition of land in the Seattle-Tacoma Washington area to develop and operate a new national cemetery. Four prospective sites were evaluated within the EIS; the Tahoma site (now Tahoma National Cemetery), located at 18600 SE 240th Street in King County, Washington, was selected.

VA acquired the approximately 158-acre Tahoma National Cemetery property from the State of Washington in 1993. At that time, the property was undeveloped wooded land. The Master Plan for the cemetery was prepared in 1995 and the first phase of cemetery development was completed in 1997. Site design and an EA for Phase 2 of the cemetery development was conducted in 2011 and Phase 2 construction activities were completed in 2014. As interments at the cemetery increase and remaining burial capacity is reduced, VA is now planning to design and construct Phase 3 of the cemetery.

Proposed Action

VA's Proposed Action is to complete the planned Phase 3 expansion within the existing grounds of Tahoma National Cemetery.

The Phase 3 expansion area is approximately 43 acres of mostly undeveloped land located in the northwestern portion of the 158-acre cemetery property. The Phase 3 expansion area is mostly wooded land of varying topography with several small wetlands, which are generally located within low-lying depressional areas between ridges and hills. The cemetery maintenance yard/supply area is located in the north-central portion of the 43-acre area. An intermittent tributary of Jenkins Creek flows southeast across the northeastern portion of the 43-acre expansion area.

Purpose and Need

The purpose of the Proposed Action is to expand Tahoma National Cemetery to continue to serve eligible Veterans and their family members in the Seattle-Tacoma metropolitan area for approximately 15 years after the existing burial space is fully used.

One of the primary objectives of the VA burial program is to ensure that the burial needs of Veterans and eligible family members are met. The VA National Cemetery Administration (NCA) further defines this objective on the assumption that the burial needs of Veterans are met if they have reasonable access to burial options (whether for caskets, remains or cremated remains, either in-ground or in a columbarium) in a national cemetery or VA-funded state Veterans cemetery within 75 miles of the Veteran's place of residence.

The Proposed Action is needed to ensure the burial needs of area Veterans are met once the current burial space at Tahoma National Cemetery is depleted. There are currently no other national cemeteries in the State of Washington that are open for new casket and cremains interments.

Alternatives

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

- **Proposed Action:** The Proposed Action includes the Phase 3 cemetery development within the northwestern portion of the 158-acre Tahoma National Cemetery property, generally consistent with the 1995 Master Plan for the cemetery. The Phase 3 development would include a new loop drive accessed from existing cemetery roads, with eleven new interment areas totaling approximately 15 acres, interspersed with wooded and wetland areas along the drive. The cemetery expansion will be designed in concert with the existing topography, with the existing wetland areas avoided. Interment areas would include pre-placed crypt fields, traditional in-ground burial areas, a green burial area, columbarium structures, and areas for in-ground cremains. Approximately 30,500 additional interment spaces would be provided by the Phase 3 cemetery expansion. As part of the Phase 3 expansion, the existing cemetery maintenance yard and materials storage area would be relocated to the northwestern corner of the expansion area and a new, approximately 720-square-foot satellite public restroom building would be constructed in the southeastern portion of the expansion area. In addition, the Proposed Action includes the construction of an approximately 1,400-square-foot building for the cemetery honor guard, an approximately 2,900-square-foot expansion of the cemetery administration building, and renovations to the public information center, administration building, and committal shelters, within the existing developed cemetery areas.
- **No Action Alternative:** Under the No Action Alternative, the planned Phase 3 expansion of Tahoma National Cemetery would not occur. The northwestern portion of the 158-acre cemetery property would remain mostly undeveloped. NCA would continue to provide burial services at the cemetery until the existing capacity is reached, after which the cemetery would be maintained and open for visitors, but would be closed for new interments.

  This alternative would limit VA's ability to continue to provide a national cemetery and associated burial services for eligible Veterans and their family members in the Seattle-Tacoma metropolitan area, and thus would not meet the purpose of or need for the Proposed Action. However, the No Action Alternative was evaluated in this EA as required under the CEQ regulations; it also provides a benchmark for comparing potential impacts of the Proposed Action.

Affected Environment and Environmental Consequences

The affected environment of the proposed Phase 3 cemetery expansion site and its immediate surroundings, or the region of influence of the Proposed Action, is discussed in Section 3 of this EA.

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

Technical areas evaluated in this EA include:

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

Potential Effects of the Proposed Action

The Proposed Action would result in the impacts identified throughout Section 3 and summarized in the table below. These include potential short-term and/or long-term adverse impacts to aesthetics, air quality, geology and soils, hydrology and water quality, wildlife and habitat, noise, land use, wetlands, solid waste and hazardous materials, transportation, and utilities. All of these potential impacts are less than significant and would be further reduced through careful implementation of the general best management practices (BMPs); management, minimization, and avoidance measures; and compliance with regulatory requirements, as identified in Section 4.

The Proposed Action would enable VA to provide proximate national cemetery burial benefits to the regional Veteran community for approximately 15 years after the existing Tahoma National Cemetery interment space is depleted, a significant beneficial socioeconomic effect.

Potential Effects of the No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented. No beneficial impacts attributable to the Proposed Action would occur. Veterans and their families residing in the Seattle-Tacoma metropolitan area would continue to use Tahoma National Cemetery until space is no longer available. Once Tahoma National Cemetery reaches capacity, Veterans and their families in the region would be required to travel much longer distances to the nearest national cemetery for burial and subsequent visits, at increased cost and time.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Aesthetics	**Minor short-term and long-term, direct adverse impact**. Minor short-term direct adverse visual impacts during construction (heavy machinery, land disturbance, and dust). Minor long-term direct adverse aesthetic impacts to properties adjacent to the Site as a result of the cemetery expansion. Current undeveloped wooded areas would be replaced by the cemetery. Cemetery expansion would be designed in concert with the natural topography and features and would have low visual impact, consistent with the existing cemetery development. Cemetery design would include unimproved buffers and/or berms along boundaries with adjacent residences.	No impact.
Air Quality	**Minor short-term and long-term, direct adverse and beneficial impacts.** Minor short-term direct adverse impact due to construction dust and particulate matter managed through BMPs. Minor local long-term direct adverse impacts due to vehicle emissions from visitors to the cemetery. Regional long-term reduction in vehicle emissions from visitors traveling to more distant cemeteries (beneficial impact).	Indirect long-term impacts associated with vehicular air emissions as Veterans travel greater distances to other national cemeteries.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Cultural Resources	No impact. No archaeological resources identified at the Site and no historic properties would be affected. WA SHPO concurred with VA's No Adverse Effect determination.	No impact.
Geology and Soils	**Minor short-term direct adverse impact**. Minor short-term direct adverse soil erosion and sediment impacts during cemetery construction managed through BMPs.	No impact.
Hydrology and Water Quality	**Minor short-term direct adverse impact**. Minor short-term direct adverse stormwater runoff impacts during cemetery construction managed through BMPs. Cemetery would be designed in concert with the current drainage patterns and would include stormwater retention within the cemetery. A minimum 100-foot-wide buffer of undisturbed land would be maintained along the tributary to Jenkins Creek as recommended by WSDE. Negligible long-term water quality impact.	No impact.
Wildlife and Habitat	**Minor short-term and long-term direct adverse impact**. Minor short-term direct adverse impact during construction. Site provides potential nesting habitat for olive-sided flycatcher, rufous hummingbird, and western screech-owl (protected by the Migratory Bird Treaty Act). Vegetation clearing would be conducted outside the nesting seasons for these birds (March through August) or a nest survey would be conducted by a qualified biologist prior to clearing. Minor long-term direct adverse impact as mostly wooded and vegetated land would be cleared for the cemetery. Environmentally sensitive areas (wetlands and tributary to Jenkins Creek) would not be disturbed. A minimum 100-foot-wide buffer of undisturbed land would be maintained along the tributary to Jenkins Creek as recommended by WSDE.	No impact.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Noise	**Minor short-term and long-term, direct adverse impact.** Minor short-term direct adverse heavy equipment noise impacts during cemetery development controlled through construction BMPs. Negligible to minor long-term operational direct adverse noise impacts associated with occasional heavy equipment use and periodic ceremonial rifle fire (approximately 5 to 10 times per day) during weekday business hours in existing cemetery areas. Operational noise levels would be similar to existing levels, but extended in duration for approximately 15 years.	No impact.
Land Use	**Minor long-term direct adverse impact**. Minor long-term direct adverse impact as a result of the Site's conversion from mostly undeveloped wooded and vegetated land into a cemetery. However, the expanded cemetery would be consistent with the 1995 Master Plan for the phased cemetery development at the 158-acre property and the existing Tahoma National Cemetery at the remainder of the property.	No impact.
Floodplains, Wetlands, and Coastal Zone Management	**Minor long-term indirect adverse impacts.** Negligible long-term indirect impacts to wetlands. Small depressional wetlands located within the expansion area would be avoided. Buffers of undeveloped green space would be established around each wetland area to provide additional wetland protection. The cemetery is located in a State of Washington designated coastal zone. The Proposed Action would not affect coastal resources and would have negligible coastal zone impacts. No impacts to floodplains. No mapped FEMA floodplains were identified on the Site or surrounding properties. No development would occur within potential minor floodplains associated with the tributary to Jenkins Creek.	No impact.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Socioeconomics	**Minor short-term and significant long-term beneficial impacts.** Minor short-term indirect beneficial impacts to local economy as a result of temporary construction jobs. Significant long-term direct beneficial impact as Proposed Action would continue to provide a regionally proximate national cemetery of sufficient size for regional Veterans and their families.	Inadequate VA cemetery options – adverse direct, long-term impact to local Veterans.
Community Services	**No/negligible impact.** Cemetery expansion would put minimal additional load on the local police department and other community services.	No impact.
Solid Waste and Hazardous Materials	**Minor short-term and long-term, direct adverse impact.** Potential minor short-term and long-term direct adverse impacts from petroleum/hazardous substance storage and handling during cemetery construction and operation managed through standard BMPs.	No impact.
Transportation and Parking	**Minor short-term and long-term, direct adverse transportation impacts.** Minor short-term direct adverse impacts associated with cemetery construction traffic on local roads. Minor long-term direct adverse traffic impacts during expanded cemetery operation. Daily traffic associated with the proposed cemetery expansion would be similar to those currently experienced at the cemetery. No parking impact; the expanded cemetery would include adequate on-site parking.	No impact.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Utilities	**Minor long-term, direct adverse impact.** Negligible short-term local utility impacts; public utilities needed by the expanded cemetery already service the cemetery. New on-site septic systems, designed and constructed per Washington State Department of Health guidance, would be installed for the satellite restroom and honor guard buildings. Minor long-term direct adverse utility impact associated with the use of municipal water for cemetery irrigation. The irrigation main installed at the cemetery was designed to accommodate the Phase 3 cemetery expansion. The municipal water system has sufficient capacity to provide irrigation water for the cemetery without a substantial reduction in available water for other users.	No impact.
Environmental Justice	**No/negligible impact.** No short-term or long-term local environmental justice impacts; the Site is not located in an area with a larger than average low-income or high minority population. Regional low-income and minority Veterans and their families would benefit from a proximate national cemetery once the current cemetery interment space is depleted, a minor long-term beneficial impact.	No impact.

Cumulative Impacts

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

Agency and Public Involvement

Agencies consulted for this EA include:

- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- U.S. Department of Transportation
- U.S. Department of Agriculture Natural Resource Conservation Service
- Washington State Department of Ecology - Northwest Region

- Washington State Department of Ecology - Air Quality
- Washington State Department of Ecology - Environmental Assessment Program
- Washington State Department of Ecology - Hazardous Waste and Toxics Reduction
- Washington State Department of Ecology - Shorelands and Environmental Assistance
- Washington State Department of Ecology - Solid Waste Program
- Washington State Department of Ecology - Spill Prevention, Preparedness, and Response
- Washington State Department of Ecology - Toxic Cleanup Program
- Washington State Department of Ecology - Water Quality Program
- Washington State Department of Ecology - Water Resources Program
- Washington Department of Natural Resources - Shoreline District
- Washington Department of Natural Resources – South Puget Sound Region
- Washington Department of Natural Resources - Natural Heritage Program
- Washington Department of Fish and Wildlife - North Puget Sound
- Washington State Department of Transportation - Northwest Region
- King County Conservation District
- King County Executive Office
- King County Department of Natural Resources and Parks
- King County Local Services

Responses were received from U.S. Environmental Protection Agency and Washington State Department of Natural Resources Natural Heritage Program. Input provided by these agencies is summarized in Section 6. Agency information and comments have been incorporated into this EA, as and where appropriate. Copies of relevant correspondence can be found in Appendix B.

On November 23, 2021, VA initiated National Historic Preservation Act (NHPA) Section 106 consultation with the Advisory Council on Historic Preservation, Washington Department of Archaeology and Historic Preservation (WA SHPO), King County Historic Preservation, Washington Trust for Historic Preservation, and the following seven federally recognized Native American Tribes with geographic or cultural affiliation with the Site area:

- Confederated Tribes and Bands of the Yakama Nation
- Confederated Tribes of the Warm Springs Reservation of Oregon
- Muckleshoot Indian Tribe
- Puyallup Tribe of the Puyallup Reservation
- Snoqualmie Indian Tribe
- Stillaguamish Tribe of Indians of Washington
- Suquamish Indian Tribe of the Port Madison Reservation

The Section 106 consultation letters included a description of VA's proposed undertaking (Proposed Action), definition of the area of potential effects, identification of historic properties, and VA's finding of effects on historic properties (no adverse effect). VA invited the agencies and Tribes to provide input regarding the Proposed Action.

WA SHPO concurred with VA's findings and No Adverse Effect determination in a response letter dated December 14, 2021. No other agencies or Tribes have responded or elected to participate in the Section 106 consultation process. Section 106 agency and Tribal information and comments have been incorporated in

this EA (Section 3.4) and are summarized in Section 6. Section 106 correspondence is provided in Appendix C.

VA published and distributed the Draft EA for a 30-day public comment period as announced by a Notice of Availability (NOA) published in the Seattle Times on March 24 and 27, 2022. The Draft EA was made available for public review on the VA Office of Construction and Facilities Management Environmental Program website (https://www.cfm.va.gov/environmental/index.asp). VA also emailed notification of the Draft EA for review and comment, with a link to the Draft EA on VA's website, to each of the government agencies and Tribes that were contacted during the NEPA scoping and Section 106 consultation. The Washington State Department of Ecology (WSDE) and Washington Department of Fish and Wildlife (WDFW) provided comments on the Draft EA. These comments were considered in preparing the Final EA, as appropriate, and are summarized in Section 5.2.

Conclusions

This EA concludes there would be no significant adverse impact, either individually or cumulatively, to the human environment associated with the Proposed Action, provided the management, minimization, avoidance and regulatory compliance measures described in this EA are implemented.

TABLE OF CONTENTS

EXECUTIVE SUMMARY **1**

TABLE OF CONTENTS ..... **i**

ACRONYMS AND ABBREVIATIONS ..... **iv**

1.0 INTRODUCTION, INCLUDING PURPOSE OF AND NEED FOR THE ACTION **1**
1.1 INTRODUCTION 1
1.2 BACKGROUND 1
1.3 PURPOSE AND NEED 7

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES **9**
2.1 INTRODUCTION 9
2.2 PROPOSED ACTION 9
2.3 ALTERNATIVES DEVELOPMENT 9
2.4 ALTERNATIVES EVALUATED IN THIS EA 9
2.4.1 PROPOSED ACTION 9
2.4.2 NO ACTION ALTERNATIVE 11
2.5 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION 11

3.0 AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES **13**
3.1 INTRODUCTION 13
3.2 CRITERIA FOR ANALYSIS OF IMPACTS 13
3.3 AESTHETICS 14
3.3.1 EFFECTS OF THE PROPOSED ACTION 14
3.3.2 EFFECTS OF THE NO ACTION ALTERNATIVE 14
3.4 AIR QUALITY 15
3.4.1 AMBIENT AIR QUALITY 15
3.4.2 STATE AND LOCAL REGULATIONS 15
3.4.3 GREENHOUSE GASES AND CLIMATE CHANGE 15
3.4.4 SENSITIVE RECEPTORS 16
3.4.5 EFFECTS OF THE PROPOSED ACTION 16
3.4.6 EFFECTS OF THE NO ACTION ALTERNATIVE 16
3.5 CULTURAL AND HISTORIC RESOURCES 16
3.5.1 EFFECTS OF THE PROPOSED ACTION 17
3.5.2 EFFECTS OF THE NO ACTION ALTERNATIVE 17
3.6 GEOLOGY AND SOILS 18
3.6.1 PRIME AND UNIQUE FARMLAND SOILS 19
3.6.2 EFFECTS OF THE PROPOSED ACTION 20
3.6.3 EFFECTS OF THE NO ACTION ALTERNATIVE 20
3.7 HYDROLOGY AND WATER QUALITY 20
3.7.1 SURFACE WATERS 20
3.7.2 GROUNDWATER 21
3.7.3 EFFECTS OF THE PROPOSED ACTION 21
3.7.4 EFFECTS OF THE NO ACTION ALTERNATIVE 22
3.8 WILDLIFE AND HABITAT 22
3.8.1 THREATENED AND ENDANGERED SPECIES 22
3.8.2 EFFECTS OF THE PROPOSED ACTION 24

3.8.3 EFFECTS OF THE NO ACTION ALTERNATIVE 25
3.9 NOISE 25
3.9.1 SENSITIVE RECEPTORS 25
3.9.2 EFFECTS OF THE PROPOSED ACTION 25
3.9.3 EFFECTS OF THE NO ACTION ALTERNATIVE 28
3.10 LAND USE 28
3.10.1 EFFECTS OF THE PROPOSED ACTION 29
3.10.2 EFFECTS OF THE NO ACTION ALTERNATIVE 29
3.11 WETLANDS, FLOODPLAINS, AND COASTAL ZONE MANAGEMENT 29
3.11.1 WETLANDS 29
3.11.2 FLOODPLAINS 31
3.11.3 COASTAL ZONE 32
3.11.4 EFFECTS OF THE PROPOSED ACTION 33
3.11.5 EFFECTS OF THE NO ACTION ALTERNATIVE 33
3.12 SOCIOECONOMICS 33
3.12.1 DEMOGRAPHICS 34
3.12.2 INCOME 34
3.12.3 COMMUTING PATTERNS 34
3.12.4 PROTECTION OF CHILDREN 34
3.12.5 EFFECTS OF THE PROPOSED ACTION 35
3.12.6 EFFECTS OF THE NO ACTION ALTERNATIVE 35
3.13 COMMUNITY SERVICES 35
3.13.1 EFFECTS OF THE PROPOSED ACTION 36
3.13.2 EFFECTS OF THE NO ACTION ALTERNATIVE 36
3.14 SOLID WASTE AND HAZARDOUS MATERIALS 36
3.14.1 EFFECTS OF THE PROPOSED ACTION 36
3.14.2 EFFECTS OF THE NO ACTION ALTERNATIVE 37
3.15 TRAFFIC, TRANSPORTATION, AND PARKING 37
3.15.1 EFFECTS OF THE PROPOSED ACTION 38
3.15.2 EFFECTS OF THE NO ACTION ALTERNATIVE 38
3.16 UTILITIES 38
3.16.1 EFFECTS OF THE PROPOSED ACTION 38
3.16.2 EFFECTS OF THE NO ACTION ALTERNATIVE 39
3.17 ENVIRONMENTAL JUSTICE 39
3.17.1 EFFECTS OF THE PROPOSED ACTION 39
3.17.2 EFFECTS OF THE NO ACTION ALTERNATIVE 39
3.18 CUMULATIVE IMPACTS 40
3.18.1 EFFECTS OF THE PROPOSED ACTION 40
3.18.2 EFFECTS OF THE NO ACTION ALTERNATIVE 41
3.19 POTENTIAL FOR GENERATING SUBSTANTIAL PUBLIC CONTROVERSY 41

4.0 MANAGEMENT, MINIMIZATION, AND MITIGATION MEASURES 42

5.0 PUBLIC PARTICIPATION 46
5.1 SCOPING 46
5.2 PUBLIC REVIEW 46

6.0 AGENCIES AND PERSONS CONSULTED 50
6.1 AGENCY COORDINATION 50
6.2 NATIONAL HISTORIC PRESERVATION ACT SECTION 106 CONSULTATION 51

6.3 NATIVE AMERICAN CONSULTATION 51

7.0 LIST OF PREPARERS 52

8.0 REFERENCES 53

9.0 GLOSSARY 55

FIGURES

Figure 1-1 Tahoma National Cemetery Location Map 2
Figure 1-2 Topographic Location Map (Maple Valley, WA 1995) 3
Figure 1-3 Aerial Photograph of Tahoma National Cemetery 4
Figure 1-4 Tahoma National Cemetery Map 5
Figure 1-5 1995 Tahoma National Cemetery Master Plan 6
Figure 1-6 Phase 3 Expansion Area 7
Figure 2-1 Proposed Phase 3 Expansion Schematic Design 12
Figure 3-1 Fault Zone Map 19
Figure 3-2 National Wetlands Inventory Map 30
Figure 3-3 Wetland Survey Map 31
Figure 3-4 Flood Insurance Map 32

TABLES

Table 3-1 Federally Listed Species in the Vicinity of the Site 23
Table 3-2 Peak Noise Levels Expected from Typical Construction Equipment 27
Table 3-3 Estimated M-16 Rifle Blank Noise Levels at Varying Distances 28
Table 3-4 Demographic Data for King County and Washington 34
Table 3-5 Regional Income for King County and Washington 34
Table 4-1 Management, Minimization and Avoidance Measures Incorporated into the Proposed Action 42

APPENDICES

Appendix A List of Environmental Permits Required
Appendix B Agency Correspondence
Appendix C Section 106 and Native American Tribe Correspondence
Appendix D Site Photographs
Appendix E Other Relevant Environmental Data
Appendix F Schematic Design Drawings
Appendix G Public Notices and Comments

ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-Containing Materials
APE	Area of Potential Effects
AQP	Air Quality Program
ASTs	Aboveground Storage Tanks
bgs	below ground surface
BMPs	Best Management Practices
CAA	Clean Air Act
CAAA	Clean Air Act Amended
CARS	Cultural and Archaeological Resource Survey
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CZMA	Coastal Zone Management Act
DAHP	WA Department of Archaeology and Historic Preservation
dBA	decibels, A-weighted scale
DNR	WA Department of Natural Resources
EA	Environmental Assessment
EIS	Environmental Impact Statement
ERG	Environmental Research Group, LLC
ESA	Endangered Species Act
E&S	Erosion and Sedimentation
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
GSF	Gross Square Feet
IPaC	USFWS Information for Planning and Conservation
KCCO	King County Code of Ordinances
MBTA	Migratory Bird Treaty Act
msl	mean sea level
NAAQS	National Ambient Air Quality Standards
NCA	National Cemetery Administration
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOC	Notice of Construction
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
OSHA	Occupational Safety and Health Administration
Phase I ESA	Phase I Environmental Site Assessment
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Office
SPCC	Spill Prevention, Control, and Countermeasures Plan
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Loads
TTL	TTL Associates, Inc.

USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VA	Department of Veterans Affairs
WA	Washington
WDFW	Washington Department of Fish and Wildlife
WQP	Water Quality Program
WSDE	Washington State Department of Ecology
WSDOT	Washington State Department of Transportation

1.0 INTRODUCTION, INCLUDING PURPOSE OF AND NEED FOR THE ACTION

1.1 Introduction

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) honors Veterans and their families with final resting places in national shrines with lasting tributes that commemorate their service and sacrifice to the nation. NCA operates 155 national cemeteries and 34 soldiers' lots and monument sites in 42 states and Puerto Rico. More than 4 million Americans, including Veterans of every war and conflict, are buried in VA's national cemeteries.

In 1991, VA prepared an environmental impact statement (EIS) for the selection and acquisition of land in the Seattle-Tacoma Washington area to develop and operate a new national cemetery. Four prospective sites were evaluated within the EIS; the Tahoma site (now Tahoma National Cemetery), located at 18600 SE 240th Street in King County, Washington, was selected.

VA acquired the approximately 158-acre cemetery property from the State of Washington in 1993. At that time, the property was undeveloped wooded land. The Master Plan for the cemetery was prepared in 1995 and the first phase of cemetery development was completed in 1997. Site design and an environmental assessment (EA) for Phase 2 of the cemetery development was conducted in 2011 and Phase 2 construction activities were completed in 2014. As interments at the cemetery increase and remaining burial capacity is reduced, NCA is now planning to design and construct Phase 3 of the cemetery.

This EA has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with VA's proposed Phase 3 expansion project at Tahoma National Cemetery. This EA was prepared, as required, in accordance with the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code [USC] 4321 et seq.), the President's Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), Environmental Effects of the Department of Veterans Affairs Actions (38 CFR Part 26), and VA's NEPA Interim Guidance for Projects (U.S. Department of Veterans Affairs 2010). Federal agencies are required to consider the environmental effects of their proposed actions. This EA is required to determine if VA's Proposed Action, the proposed Phase 3 expansion, would have significant environmental impacts.

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

1.2 Background

Tahoma National Cemetery is located within an unincorporated area of King County, Washington, approximately 1.5 miles northeast of the City of Kent, approximately 20 miles southeast of the City of Seattle, and approximately 20 miles northeast of the City of Tacoma. The cemetery is located in an area of mostly low-density residential properties and undeveloped wooded land. Maple View Middle School is located adjacent to the southwest of the cemetery. Figures 1-1 through 1-3 depict the location of Tahoma National Cemetery.

The 1995 Master Plan included the phased development for the entire cemetery. The first phase of development consisted of approximately 60 acres and included the cemetery administrative buildings, public information center and restrooms, entrance features, public assembly area, three committal shelters, cemetery roads and other infrastructure, and the initial burial sites and columbarium structures. The Phase

2 cemetery expansion included two areas totaling approximately 52 acres, located in the southeastern and west-central portions of the 158-acre cemetery property. The Phase 2 expansion primarily consisted of the development of additional burial areas, but also included the construction of memorial walls, an ossuary, and additional cemetery infrastructure. The existing cemetery development is shown on Figure 1-4. The 1995 Master Plan is shown on Figure 1-5.

The Phase 3 expansion area is approximately 43 acres of mostly undeveloped land located in the northwestern portion of the 158-acre cemetery property. The Phase 3 expansion area is mostly wooded land of varying topography with several small wetlands, which are generally located within low-lying depressional areas between ridges and hills. The cemetery maintenance yard/supply area is located in the north-central portion of the 43-acre area. An intermittent tributary of Jenkins Creek flows southeast across the northeastern portion of the 43-acre expansion area. Figure 1-6 depicts the approximately 43-acre Phase 3 cemetery expansion area.

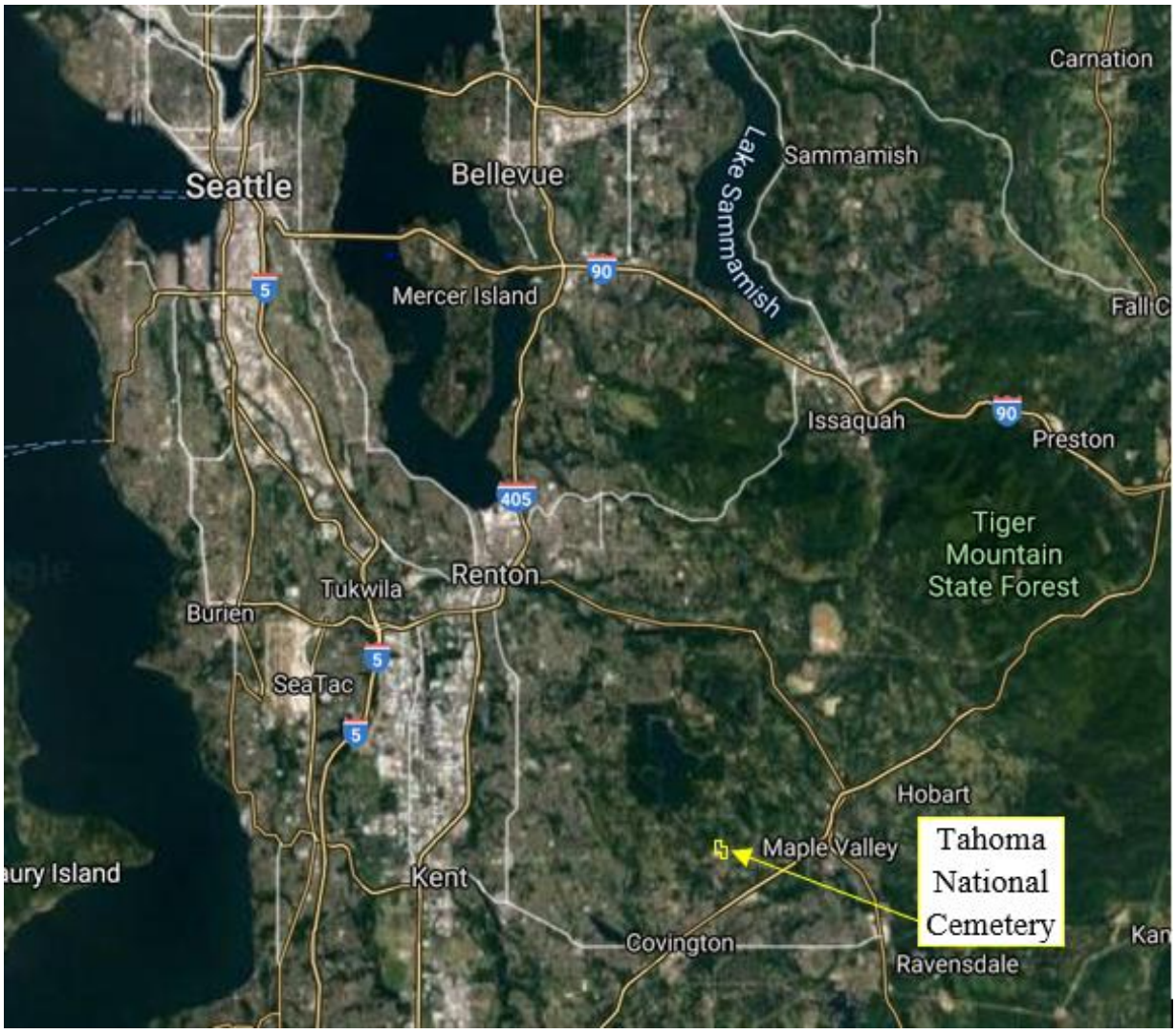

Figure 1-1 Tahoma National Cemetery Location Map

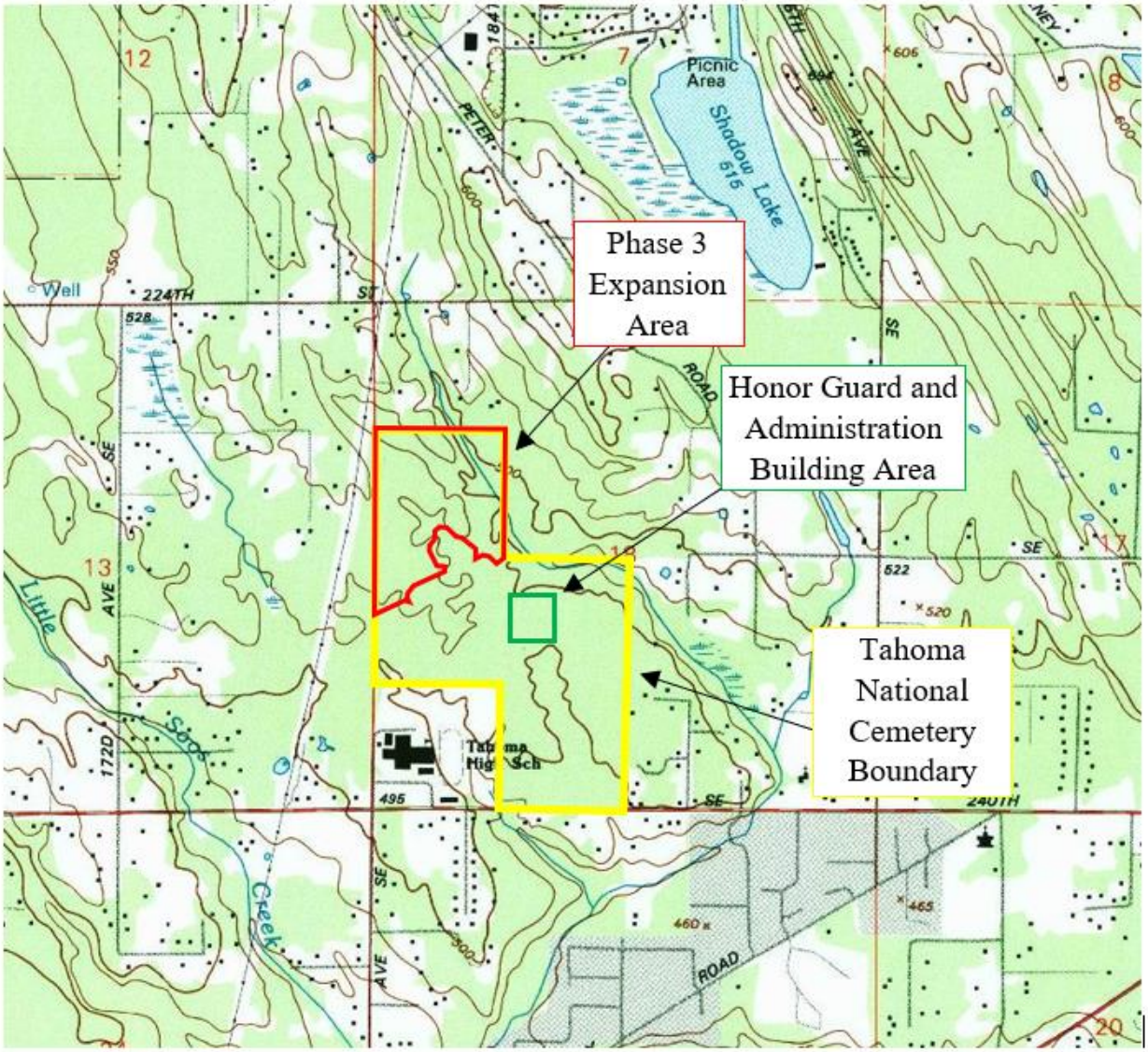

Figure 1-2 Topographic Location Map (Maple Valley, WA 1995)

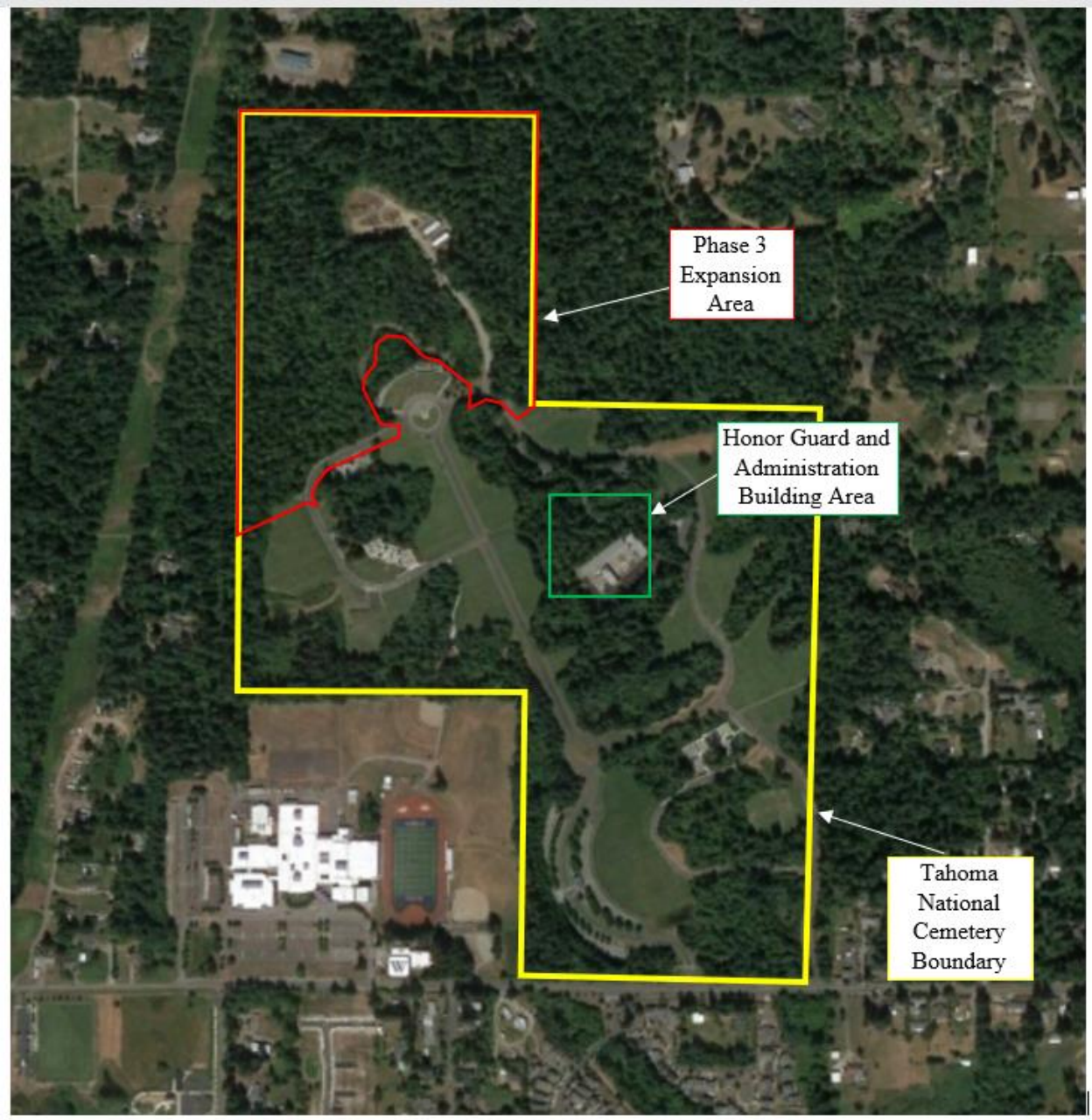

Figure 1-3 Aerial Photograph of Tahoma National Cemetery

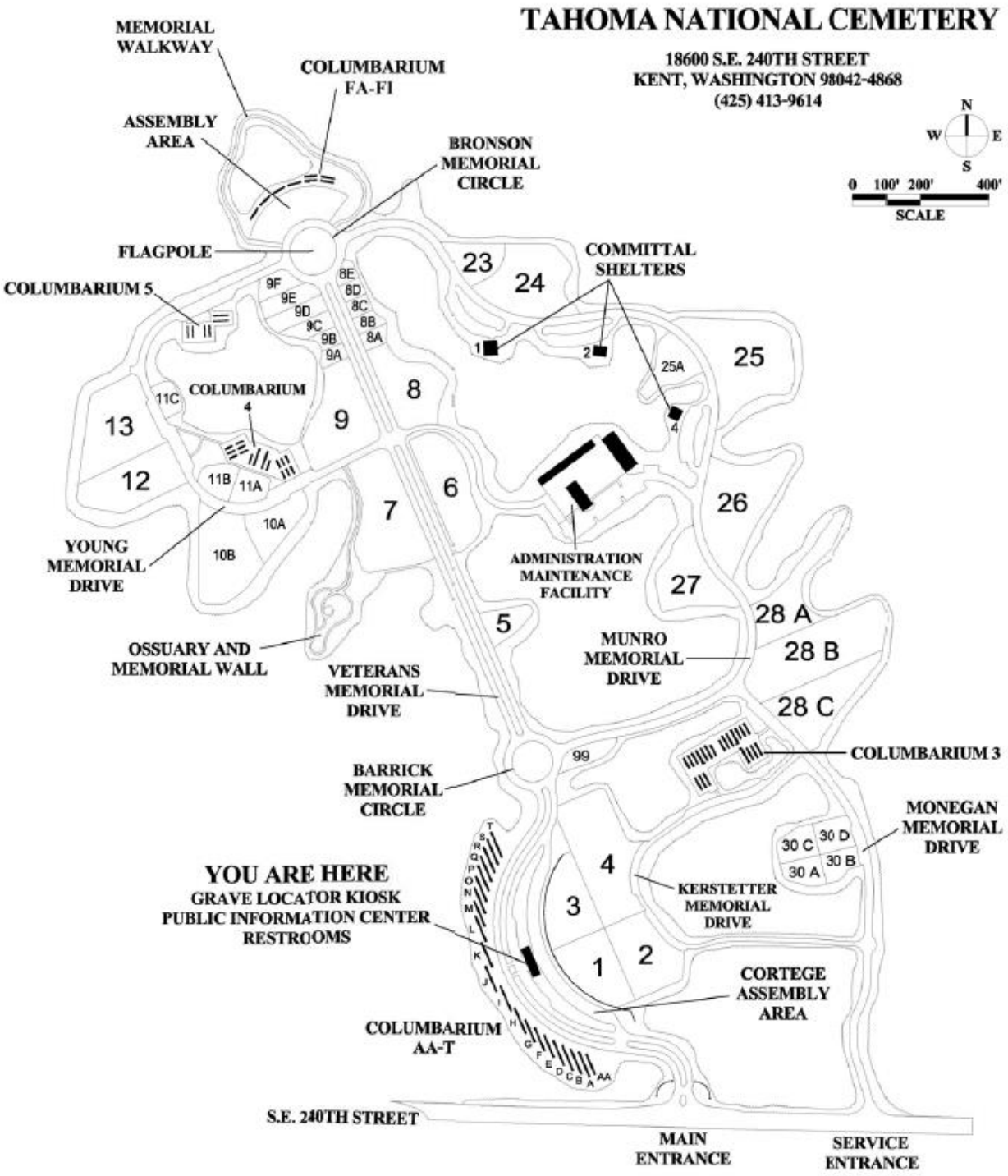

Figure 1-4 Tahoma National Cemetery Map

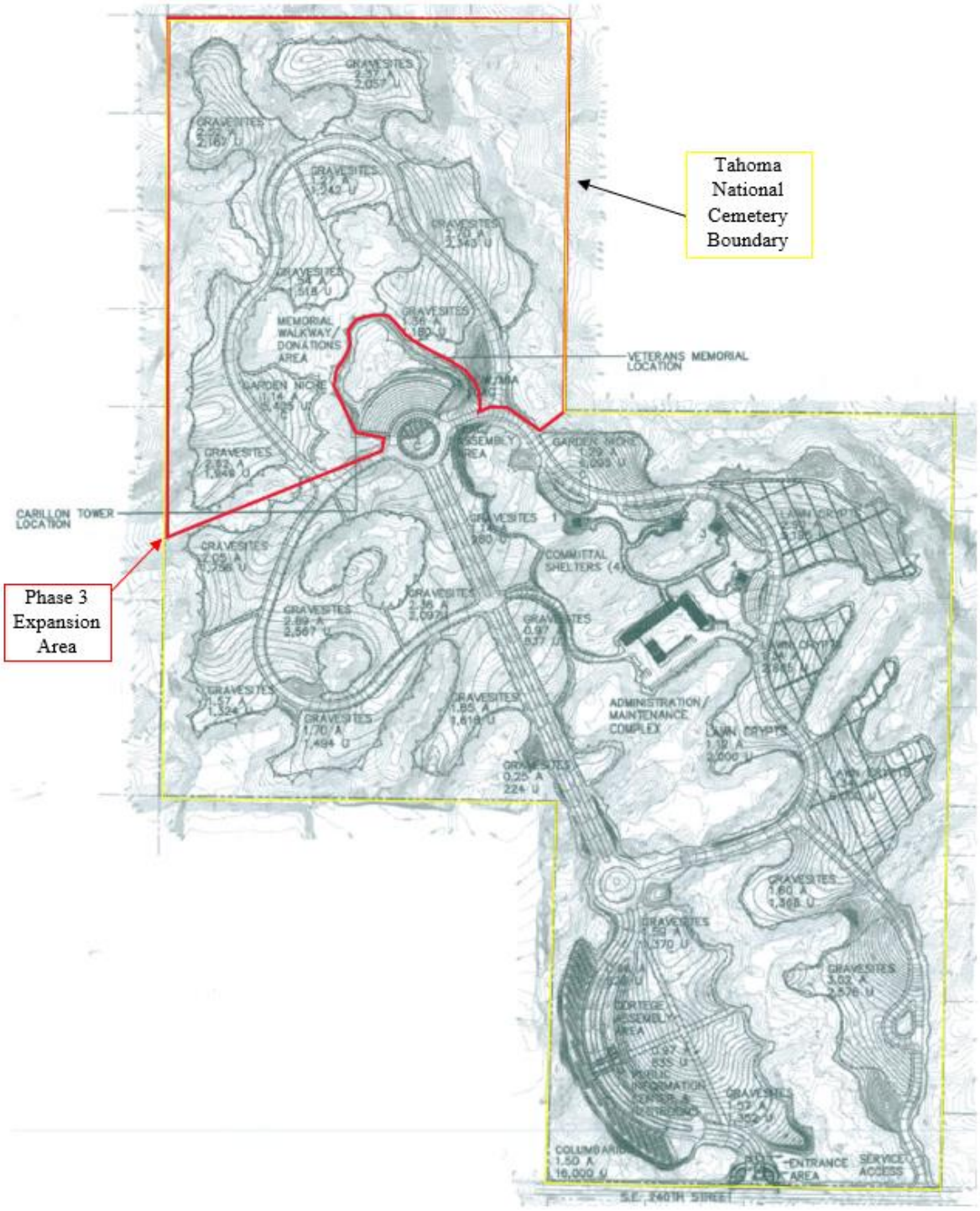

Figure 1-5 1995 Tahoma National Cemetery Master Plan

Figure 1-6 Phase 3 Expansion Area

1.3 Purpose and Need

The purpose of the Proposed Action is to expand Tahoma National Cemetery to continue to serve eligible Veterans and their family members in the Seattle-Tacoma metropolitan area for approximately 15 years after the existing burial space is fully used.

One of the primary objectives of the VA burial program is to ensure that the burial needs of Veterans and eligible family members are met. NCA further defines this objective on the assumption that the burial needs of Veterans are met if they have reasonable access to burial options (whether for caskets, remains or cremated remains, either in-ground or in a columbarium) in a national cemetery or VA-funded state Veterans cemetery within 75 miles of the Veteran's place of residence.

The Proposed Action is needed to ensure the burial needs of area Veterans are met once the current burial space at Tahoma National Cemetery is depleted. There are currently no other national cemeteries in the State of Washington that are open for new casket and cremains interments.

1.4 Decision-Making

This EA has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic effects associated with VA's proposed Tahoma National Cemetery Phase 3 expansion project.

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

Ultimately, VA will decide, in part based on the analysis presented in this EA and after having taken potential physical, environmental, cultural, and socioeconomic effects into account, whether VA should implement the Proposed Action, and, as appropriate, carry out management, avoidance, and mitigation measures to reduce effects to the environment.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction

This Section provides information regarding the Proposed Action and its alternatives, including those that VA initially considered, but eliminated, and the reasons for eliminating them. The screening criteria and process developed and applied by VA to hone the number of reasonable alternatives is described, providing an understanding of VA's rationale for only analyzing the Proposed Action and the No Action Alternative in this EA.

2.2 Proposed Action

VA's Proposed Action is to complete the planned Phase 3 expansion within the existing grounds of Tahoma National Cemetery.

2.3 Alternatives Development

VA acquired the approximately 158-acre cemetery property in 1993 and completed a Master Plan in 1995 for the phased development of the national cemetery at the property. The proposed Phase 3 expansion area is the last remaining large, undeveloped portion of the 158-acre property owned by VA and already planned for cemetery development. Consequently, no other areas at the existing 158-acre cemetery property or other sites in the Seattle-Tacoma metropolitan area were considered by VA for the expanded cemetery. As part of the 1991 EIS, VA evaluated four prospective sites for establishing the national cemetery, and selected the current Tahoma National Cemetery property.

2.4 Alternatives Evaluated in this EA

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

2.4.1 Proposed Action

The Proposed Action includes the Phase 3 development within the northwestern portion of the 158-acre Tahoma National Cemetery property, generally consistent with the 1995 Master Plan for the cemetery. In 2021, VA contracted Anderson Engineering (Anderson) to conduct the design for the Phase 3 cemetery expansion. The initial design effort included the creation of a refined master plan for the 43-acre, northwestern portion of the cemetery property. The refined master plan includes two development phases, Phase 3, which is generally consistent with the 1995 Master Plan, and a future Phase 4, which would more fully utilize the remaining cemetery property once the Phase 3 expansion area reaches its burial capacity. This Proposed Action only includes the Phase 3 development. The future Phase 4 development would be evaluated in a future NEPA analysis.

In January 2022, Anderson completed the initial schematic design for the Phase 3 expansion. As the design process has progressed, and in response to comments received from the Washington State Department of Ecology's (WSDE's) review of the Draft EA, the schematic design was revised in July 2022. The Phase 3 development would include a new loop drive accessed from the existing cemetery roads, with eleven new interment areas totaling approximately 15 acres, interspersed with wooded and wetland areas along the drive. The cemetery expansion will be designed in concert with the existing topography, with the existing wetland areas avoided. A minimum 100-foot-wide buffer of undisturbed land would be maintained along the intermittent tributary of Jenkins Creek, as recommended by WSDE. Interment areas would include pre-placed crypt fields, traditional in-ground burial areas, a green burial area, columbarium structures, and areas

for in-ground cremains. Approximately 30,500 additional interment spaces would be created by the Phase 3 expansion. Figure 2-1 depicts the revised schematic design for the Phase 3 expansion.

Based on the revised schematic design, the Phase 3 expansion is anticipated to include the following:

- A new paved, internal cemetery loop road that connects with existing cemetery roads (Munro Memorial Drive and Young Memorial Drive)
- Three columbarium pods along the new loop road. Each pod would contain two to four courts of columbarium wall structures that are 3 to 5 niches high (approximately 5 to 8 feet high). A total of approximately 18,500 niches would be provided by the new columbarium pods.
- Four sections for in-ground cremains along the new loop road. The four sections would provide space for approximately 9,200 cremains.
- One pre-placed crypt field located along the new loop road, in the southwestern portion of the expansion area. Development of this area would include the installation of grave sites, which would consist of gravel base, drainage piping, and pre-placed concrete vault/crypt system. Approximately 20-22 inches of soil would be placed on top of each vault/crypt. The pre-placed crypt field would provide space for space for approximately 1,600 casketed burials.
- One burial section located north of the pre-placed crypt field that include oversized pre-placed crypts (approximately 475) and traditional casket gravesites (approximately 260).
- One natural/green burial section located along the western side of the new loop road that would include approximately 200 gravesites.
- The relocation of the existing cemetery maintenance yard and materials storage area from the central portion of the expansion area to the northwestern corner of the expansion area. The new maintenance yard/storage area would include two Quonset huts (similar to the existing yard) and concrete block-walled materials storage bins. A new maintenance road would provide access to the new maintenance yard from the new loop road.
- A new approximately 720-square-foot satellite public restroom building located in the southeastern portion of the expansion area. The restroom building would be connected to the existing domestic water service line and electrical service at the cemetery and would be serviced by its own septic system.
- Utilities, including potable and irrigation water, electrical lines, and other supporting infrastructure would be extended to and throughout the site, as required.

In addition to the primary Phase 3 cemetery expansion project, the Proposed Action includes other minor projects that would be completed within the existing, developed portion of Tahoma National Cemetery:

- Construction of a new approximately 1,400-square-foot, single story building for use by the cemetery honor guard. The honor guard building would be located between the committal shelters and the cemetery administration building, in the east-central portion of the cemetery property. The honor guard building would include men's and women's locker rooms and a small lounge. The building would be connected to the existing domestic water service line and electrical service at the cemetery and would be serviced by its own septic system.
- Construction of two additions, totaling approximately 2,900 square feet, on the northern and eastern sides of the existing one-story cemetery administration building. The additions would provide space for cemetery workers, a reception desk, a family meeting room, public restrooms, a training room, and locker rooms for staff and volunteers. Approximately eight additional parking spaces would be

added to the existing parking lot, southeast of the administration building. The building would continue to be serviced by the existing utilities.

- Renovations to the existing portion of the administration building, existing public information center, and committal shelters. Renovations would include interior reconfigurations for improved use, repairs, replacements, and upgrades.
- Repairing the existing cemetery roads damaged by the Phase 3 construction. The construction access route pavement would be milled and repaved (asphalt overlay) at the completion of the construction.

The Phase 3 cemetery expansion will be designed to match the overall appearance and character of the existing developed portions of the cemetery.

Schematic design information prepared by Anderson is provided in Appendix E. Site development details may change as the design process is completed; however, these drawings provide useful information regarding the general Phase 3 cemetery expansion plans.

Prior to construction, VA would obtain all applicable, required federal, state, and local permits for the proposed cemetery development from appropriate government authorities. VA, as a federal agency, is typically not subject to state and local laws, regulations, and requirements.

2.4.2 No Action Alternative

Under the No Action Alternative, the planned Phase 3 expansion of Tahoma National Cemetery would not occur. The northwestern portion of the 158-acre cemetery property would remain mostly undeveloped. NCA would continue to provide burial services at the cemetery until the existing capacity is reached, after which the cemetery would be maintained and open for visitors, but would be closed for new interments.

This alternative would limit VA's ability to continue to provide a national cemetery and associated burial services for eligible Veterans and their family members in the Seattle-Tacoma metropolitan area, and thus would not meet the purpose of or need for the Proposed Action. However, the No Action Alternative was evaluated in this EA as required under the CEQ regulations; it also provides a benchmark for comparing potential impacts of the Proposed Action.

2.5 Alternatives Eliminated from Further Consideration

As described in Section 2.3, VA acquired the approximately 158-acre property in 1993 for the development of Tahoma National Cemetery. The proposed Phase 3 expansion area is the last remaining large, undeveloped portion of the 158-acre property already owned by VA and planned for cemetery development. Consequently, no other alternatives were considered by VA for the expanded cemetery.

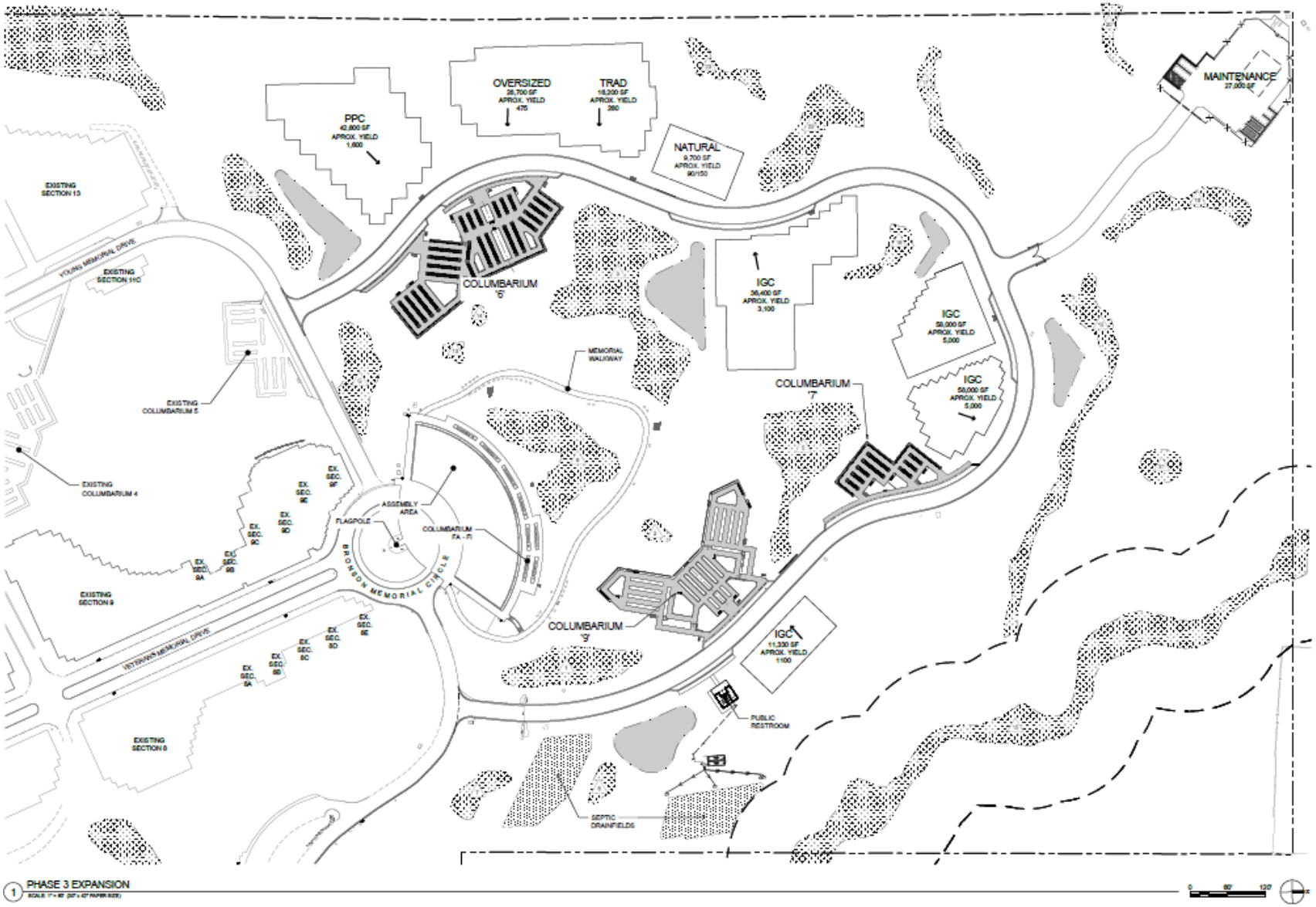

Figure 2-1 Proposed Phase 3 Expansion Schematic Design

3.0 AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This Section describes the baseline (existing) physical, environmental, cultural, and socioeconomic conditions of the proposed Phase 3 expansion area and its general vicinity (i.e., the Proposed Action's region of influence), with emphasis on those resources potentially affected by the Proposed Action. Appendix D contains photographs of the Site and the surrounding area. Under each resource area (Sections 3.3 through 3.17), the potential direct and indirect effects of the Proposed Action and the No Action Alternative are identified. Potential cumulative impacts are discussed in Section 3.18.

Resource areas considered in this EA are as follows:

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

3.2 Criteria for Analysis of Impacts

Each alternative was evaluated for its potential impacts on physical, biological, and socioeconomic resources in accordance with the CEQ regulations at 40 CFR 1508.8. The specific criteria for evaluating the potential environmental impacts of the Proposed Action and the No Action Alternative are described in the following sections. The significance of an action is also measured in terms of its context and intensity. The potential environmental impacts are described in terms of duration, whether they are direct or indirect, the magnitude of the impact, and whether they are adverse or beneficial, as summarized in the following paragraphs:

Short-term or long-term: In general, **short-term** impacts are those that would occur only with respect to a particular time-lined activity, for a finite period, or only during the time required for construction or installation activities. **Long-term** impacts are those that are more likely to be persistent and chronic.

Direct or indirect: A **direct** impact is caused by an action and occurs around the same time at or near the location of the action. An **indirect** impact is caused by an action and might occur later in time or be farther removed in distance but still be a reasonably foreseeable outcome of the action.

Less than significant (negligible, minor, moderate), or significant: These relative terms are used to characterize the magnitude or intensity of an impact. **Negligible** impacts are generally those that might be perceptible but are at the lower level of detection. A **minor** impact is slight, but detectable. A **moderate** impact is readily apparent. **Significant** impacts are those that, in their context and due to their magnitude (severity), have the potential to meet the thresholds for significance set forth in the CEQ regulations (40 CFR 1508.27) and, thus, warrant heightened attention and examination for potential means for mitigation to fulfill the policies set forth in NEPA.

Adverse or beneficial: An **adverse** impact is one having unfavorable or undesirable outcomes on the man-made or natural environment. A **beneficial** impact is one having positive outcomes on the man-made or natural environment.

3.3 Aesthetics

Tahoma National Cemetery is located within an unincorporated area of King County approximately 1.5 miles northeast of the City of Kent, approximately 20 miles southeast of the City of Seattle, and approximately 20 miles northeast of the City of Tacoma (Figure 1-1). The cemetery is located in an area of mostly low-density residential properties and undeveloped wooded land. Maple View Middle School is located adjacent to the southwest of the cemetery.

The Phase 3 cemetery expansion area is mostly wooded land of varying topography with several small depressional wetlands, which are generally located within the low-lying areas between ridges and hills. An intermittent tributary of Jenkins Creek flows southeast across the northeastern portion of the 43-acre Site. The north-central portion of the Site contains a cleared, graded area that includes the cemetery maintenance yard/storage area, with two Quonset huts and piles of stored materials. The Site features are shown on Figure 1-6.

The area north of the Site consists of wooded land with a commercial structure located approximately 200 feet north of the Site and a few houses located approximately 300 to 400 feet north of the Site. The area east of the Site is undeveloped wooded land with a house located approximately 600 feet east of the Site. The Site is bordered to the south and southeast by the developed portions of the cemetery. The area west of the Site consists of a thin strip of wooded land, beyond which is an approximately 150 to 200 feet wide, mostly grassy, electrical transmission line utility corridor, across which are a few residences, approximately 300 to 600 feet from the Site.

3.3.1 Effects of the Proposed Action

With the exception of the small honor guard building construction, administration building additions, and cemetery building renovations, Phase 3 construction activities would mostly occur within the 43-acre, mostly wooded Site. Phase 3 cemetery development on the Site would produce visual changes, including the removal of the current, mostly wooded vegetation; grading; installation of the new cemetery loop road, new satellite restroom building, maintained grassy burial areas and columbarium walls; and relocation of the maintenance yard/storage area to the northwestern corner of the Site. The cemetery expansion would be designed and developed to be similar to the existing cemetery and in concert with the Site's topography and features. Developed areas would be interspersed with natural areas containing wetlands and trees.

Given the low visual impact of the Phase 3 cemetery development, which would be designed in concert with the existing topography and landscape, and would be consistent with the existing Tahoma National Cemetery development, no significant aesthetics impacts would occur. The Phase 3 cemetery expansion would be mostly visible from the existing cemetery. The cemetery design would include unimproved buffers and/or berms along boundaries with adjacent residences.

3.3.2 Effects of the No Action Alternative

Under the No Action Alternative, no development or visual changes to the Site would occur; there would be no aesthetic impacts.

3.4 Air Quality

3.4.1 Ambient Air Quality

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

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

According to the WSDE and USEPA Green Book websites, Tahoma National Cemetery is located within a full NAAQS attainment area. Consequently, VA is not subject to the General Conformity Provision of the CAA for the Phase 3 cemetery expansion project.

3.4.2 State and Local Regulations

The WSDE Air Quality Program (AQP) coordinates State-wide air compliance and enforcement activities through the Puget Sound Clean Air Agency. The Puget Sound Clean Air Agency implements the air quality standards, issues air quality construction and operating permits, and enforces air quality regulations and permit conditions, and has jurisdiction over King County including the Tahoma National Cemetery area.

For any project that involves the installation of a new source of air pollution or modification an existing source of air pollution, including heating and cooling equipment and emergency generators, a Notice of Construction (NOC) permit may be required prior to the start of construction activities. NOCs are designed to ensure the State of Washington meets state and federal air quality requirements, limit the amount of air pollutants a business can emit, and apply to either an increase or decrease in emissions. Based on the nature of the proposed cemetery expansion project, a NOC permit is not required.

3.4.3 Greenhouse Gases and Climate Change

In December 2014, CEQ released its revised draft guidance for federal agencies on consideration of greenhouse gas (GHG) emissions and the effects of climate change in NEPA reviews, which describes how federal agencies should consider the effects of GHG emissions and climate change in their NEPA decision-making documents. The guidance indicates that federal agencies should consider both the potential effect of a proposed action on climate change, as indicated by its estimated GHG emissions, and the implications of climate change for the environmental effects of a proposed action. The guidance indicates that the agency analysis should be commensurate with the projected GHG emissions and climate impacts of the proposed action. It recommends that agencies consider 25,000 metric tons of carbon dioxide equivalent emissions on an annual basis as a threshold below which quantitative analysis of GHG is not recommended.

3.4.4 Sensitive Receptors

Sensitive air quality receptors in the Site area include residences located approximately 300 to 600 feet and farther north, west, and east of the Site, and the Maple View Middle School grounds located approximately 900 feet south of the Site. No other sensitive air quality receptors are located within 1,000 feet of the Site.

3.4.5 Effects of the Proposed Action

Air emissions generated from the proposed Phase 3 cemetery expansion would have less-than-significant, direct and indirect, short-term impacts to the existing air quality environment around the Site. Short-term increased air emission levels would occur during the cemetery expansion construction.

Construction activities would be performed in accordance with federal and state air quality requirements. Construction-related emissions are generally short-term, but may still have adverse impacts on air quality, primarily due to the production of dust. Dust can result from a variety of activities, including excavation, grading, and vehicle travel on paved and unpaved surfaces. Dust from construction can lead to adverse health effects and nuisance concerns, such as reduced visibility on nearby roadways. The amount of dust is dependent on the intensity of the activity, soil type and conditions, wind speed, and dust suppression activities used. Implementing dust control measures (BMPs) greatly reduces dust emissions from construction. Construction-related emissions also include the exhaust from the operation of construction equipment, including diesel particulate matter. The use of newer construction equipment with emissions controls and minimizing the time that the equipment is idling (BMPs) reduce construction equipment exhaust emissions. Implementation of BMPs, discussed in Section 4, would minimize these anticipated less-than-significant adverse, short-term, construction-related, air quality impacts.

Vehicle air emissions associated with the operation of the expanded cemetery would be minor and similar to current Tahoma National Cemetery levels. The Phase 3 cemetery expansion would increase the burial capacity, and consequently, the longevity of interments at the cemetery. However, the rate of interments, and the associated burial vehicle trips, are not expected to increase as a result of the Proposed Action. A minor increase in cemetery visitation is likely as the cemetery expands; however, the increased number of vehicle trips associated with visitors would be minor.

The Proposed Action would have a negligible contribution to long-term global climate change. Direct GHG emissions from the short-term use of vehicles and mechanical equipment during construction activities would cease after the construction has been completed. Indirect GHG emissions from the minor increased vehicle traffic to and from the expanded cemetery are anticipated to be minor. GHG emissions as a result of Proposed Action construction and operational activities are anticipated to be well below the threshold of 25,000 metric tons of carbon dioxide annually.

3.4.6 Effects of the No Action Alternative

Under the No Action Alternative, no air quality impacts associated with the Proposed Action would occur. In the future, when Tahoma National Cemetery reaches its burial capacity and regional Veterans are interred at more distant national cemeteries, Veterans and their families would travel greater distances, which would contribute to increased regional air emissions, a less-than-significant, long-term adverse air quality impact.

3.5 Cultural and Historic Resources

The Site was unimproved vegetated and wooded land from at least 1900 to 1997. The first phase of the Tahoma National Cemetery development was completed in 1997. Since that time, the Site has mostly remained unimproved vegetated and wooded land with a cleared area in the north-central portion of the Site used as a cemetery maintenance yard/storage area.

Row 10 Historic Preservation Solutions (Row 10) completed a Cultural & Archaeological Resource Survey (CARS) report for the Phase 3 expansion project in July 2021. The CARS report stated that Tahoma National Cemetery, as with all national cemeteries, is eligible for listing in the National Register of Historic Places (NRHP). However, the expansion of a national cemetery or development of land held by VA, but previously unimproved, for cemetery purposes does not constitute an adverse effect to historic properties. The CARS report did not identify any other historic built resources within the Area of Potential Effect (APE) of the Proposed Action.

The Washington Department of Archaeology and Historic Preservation has developed a predictive model for archaeological sensitivity across the state. The land of the Tahoma National Cemetery is rated "low risk" and "moderately low risk" for holding intact archaeological deposits. Previous archaeological investigations on the cemetery property (not including the Phase 3 area) have not identified intact deposits meeting the criteria for listing in the NRHP. However, the CARS report recommended that VA continue the established policy of archaeological investigations prior to development set by VA in the 1991 EIS for the cemetery and continued through the past expansion of the cemetery.

A Cultural Resources Assessment (Phase I archaeological survey) was conducted by Environmental Research Group, LLC (ERG) at the Site in August and September 2021. The ERG assessment included an intensive pedestrian survey and subsurface testing by qualified archaeologists. Subsurface testing was conducted by the excavation of shovel test probes placed at 20-meter intervals along a grid of the Phase 3 expansion area and the proposed honor guard building area. No cultural materials were identified during the pedestrian survey or recovered during subsurface testing. Based on the results of the pedestrian survey and subsurface testing, ERG concluded the proposed Phase 3 expansion area and honor guard building area are unlikely to contain subsurface archaeological resources.

3.5.1 Effects of the Proposed Action

Based on the results of the CARS and Phase I archaeological survey, the Proposed Action would not affect historic properties eligible for listing in the NRHP.

On November 23, 2021, VA initiated NHPA Section 106 consultation with the Advisory Council on Historic Preservation, Washington Department of Archaeology and Historic Preservation (Washington State Historic Preservation Office or WA SHPO), King County Historic Preservation, Washington Trust for Historic Preservation, and seven federally recognized Native American Tribes with geographic or cultural affiliation with the Site area (Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Warm Springs Reservation of Oregon, Muckleshoot Indian Tribe, Puyallup Tribe of the Puyallup Reservation, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, and Suquamish Indian Tribe of the Port Madison Reservation). The Section 106 consultation letters included a description of VA's proposed undertaking (Proposed Action), definition of the APE, identification of historic properties (the results of the CARS and Phase I archaeological survey), and VA's finding of effects on historic properties (no adverse effect).

WA SHPO concurred with VA's findings and No Adverse Effect determination in a response letter dated December 14, 2021. No other agencies or Tribes have responded or elected to participate in the Section 106 consultation process. Section 106 correspondence is provided in Appendix C.

3.5.2 Effects of the No Action Alternative

Under the No Action Alternative, no cultural resources impacts would occur.

3.6 Geology and Soils

The Site is in the Puget Lowlands physiographic province, a broad, low-lying region between the Cascade Range to the east and the Olympic Mountains and Willapa Hills to the west. Tahoma National Cemetery is located in the Jenkins Creek Basin, which was created through extensive landscape modification by repeated glacial scouring and deposition with elongated topography with hills and swales oriented in the direction of the ice flow (north-northwest to south-southeast). According to the Geologic Map of Washington State, the area is characterized by Pleistocene-age continental glacial drift, consisting of unconsolidated gravel and sand.

A review of the Maple Valley, Washington United States Geological Survey (USGS) Topographic Quadrangle (dated 1995) and topographic information provided by VA indicates that surficial topography in the Site's vicinity is generally undulating with several low-lying wetland areas, with elevations ranging from approximately 500 to 550 feet above mean sea level (msl). Locally, the Site has a general slope to the east, toward the unnamed tributary of Jenkins Creek. The area has a general regional slope to the southeast towards Jenkins Creek, located approximately one mile southeast of the Site (Figure 1-2).

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, the Site soils consist of Alderwood gravelly sandy loam, 8 to 15 percent slopes. The Alderwood soil series contains of hills of moderately well drained, gravelly sandy loam over very gravelly sandy loam consisting of glacial drift and/or glacial outwash over dense glaciomarine deposits. Alderwood soils may include inclusions of poorly drained Norma sandy loam, Bellington silt loam, Seattle muck, Tukwila muck, and Shalar muck. Norma soils were identified in the depressional wetland areas of the Site.

TTL Associates, Inc. (TTL) completed a geotechnical subsurface investigation of the Site in August 2021. The geotechnical investigation found the Site consists of approximately 6 inches of gravel or gravelly topsoil generally underlain by silty sand and gravel to the depth of boring termination at 15 feet below ground surface (bgs). No bedrock was encountered in the geotechnical soil borings.

Earthquakes occur nearly every day in Washington; however, most are too small to be felt or cause damage. Washington has the second highest risk in the U.S. of large and damaging earthquakes because of its geologic setting (active faults, volcanoes, and plate boundary). The Site is located in an area between the Seattle Fault Zone (to the north) and the Tacoma Fault Zone (to the south). A review of the Washington Department of Natural Resources (WA DNR) Division of Geology and Earth Resources, Faults and Earthquakes in Washington (dated 2014) did not depict any faults in the immediate Site vicinity. According to the USGS Earthquakes Hazard Program and WA DNR, the closest recorded earthquake to the Site was centered approximately 3,000 feet east of the Site, registered 2.6 on the Richter Scale, and occurred on March 22, 1991 at a depth of approximately 3.4 miles bgs. Refer to Figure 3-1.

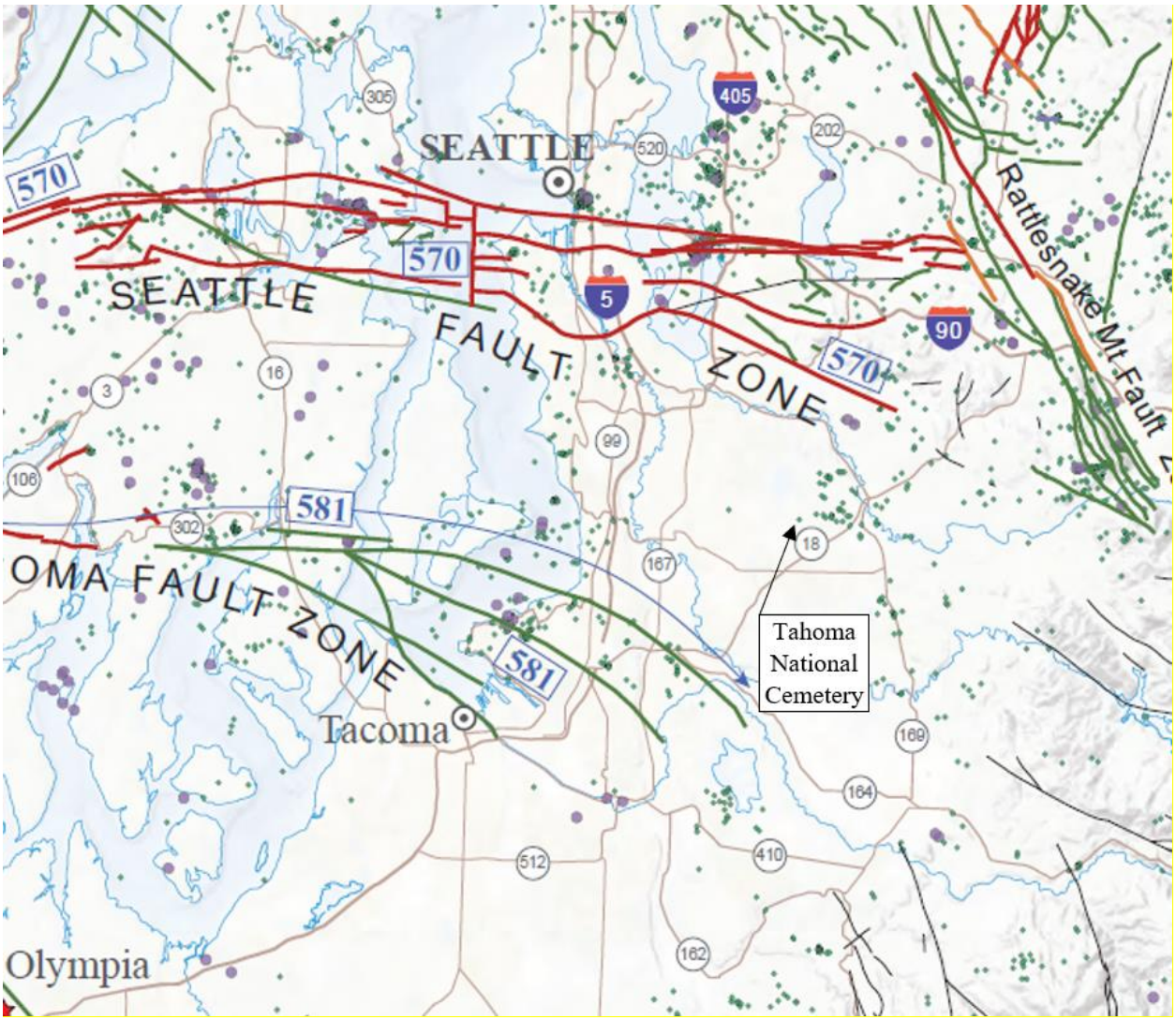

Figure 3-1 Fault Zone Map

3.6.1 Prime and Unique Farmland Soils

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

The USDA-NRCS maps the Site soils as Alderwood gravelly sandy loam, which are listed as prime farmland, if irrigated. During the completion of the NEPA EA for the Phase 2 cemetery development in 2011, USDA-NRCS stated the Tahoma National Cemetery property is considered "land already in or committed to urban development" that does not meet the definition of important farmland.

3.6.2 Effects of the Proposed Action

The proposed Phase 3 cemetery expansion would have less-than-significant geology and soils effects. No major changes to topography or drainage are expected at the Site due to the development of the cemetery. The cemetery would be designed in concert with the natural topography and current drainage patterns to the extent possible. Some cutting and filling would be required due to the hilly terrain of the Site. Although the standard for NCA design is to achieve on-site cut-and-fill soil balance as much as practicable, it is anticipated that excess soil from the crypt fields and geotechnically unsuitable soils would be exported from the cemetery property.

Less-than-significant impacts to geology would be anticipated. No active faults are located within the immediate Site vicinity and earthquakes recorded in the area have been small and unlikely to cause damage; as such, no significant impacts associated with seismic hazards are identified. No significant impacts to mineral resources are anticipated, as the proposed cemetery expansion would not involve the commercial extraction of mineral resources, nor affect mineral resources considered important on a local, state, national, or global basis.

During construction of the Phase 3 cemetery expansion, less-than-significant, direct and indirect, short-term soil erosion and sedimentation (E&S) impacts could occur as the new loop road, small buildings, grave sites, and other cemetery improvements are constructed. Construction activities would remove the current vegetative cover, disturb the soil surface, and compact the soil. The soil would then be susceptible to erosion by wind and surface runoff. Exposure of the soils during construction has the potential to result in increased in offsite discharges of sediment-laden runoff. However, such potential adverse E&S effects would be prevented through utilization of appropriate BMPs as described in Section 4 and adherence to the terms of approved WSDE Water Quality Program (WQP) National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit, including the development and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP), and the prevention of increased pre and post-construction sediment yield and flow velocity. Permit standards would be adhered to during all construction activities.

No long-term E&S impacts would be anticipated due to the nature of the Proposed Action. There would be limited additional impervious surfaces associated with the cemetery expansion and long-term soil erosion impacts would be managed by maintaining appropriately designed stormwater management features associated with the cemetery. VA will include WSDE's recommended 100-foot-wide undisturbed buffer along the tributary to Jenkins Creek in the final Phase 3 cemetery expansion design, which would further reduce potential stormwater runoff impacts.

3.6.3 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to soils, topography, or geology would occur.

3.7 Hydrology and Water Quality

3.7.1 Surface Waters

The Site is located in the Jenkins Creek Basin of the Soos Creek sub-watershed of the Duwamish/Green River Watershed. An unnamed, intermittent tributary to Jenkins Creek crosses the northeastern portion of the Site. The tributary continues southeast of the Site and eventually discharges into Jenkins Creek approximately 1.5 miles south of the Site. From there, Jenkins Creek flows south and southwest, eventually discharging to Big Soos Creek approximately four miles southwest of the Site.

Surface water bodies located within the Tahoma National Cemetery area have been identified by the USEPA and WSDE as impaired water bodies and are included on Clean Water Act 303(d) list. Jenkins

Creek is listed on the 303(d) list as an impaired water body for fecal coliform. WSDE also lists Jenkins Creek as Category 5 (polluted water that requires a water improvement project) for temperature and bioassessment.

WSDE stated that the cemetery is located within the Soos Creek watershed and the waters of Soos Creek do not meet state water quality standards for temperature, dissolved oxygen, bacteria levels, or the health of aquatic insects. WSDE indicated that they are studying these problems through Total Maximum Daily Load (TMDL) studies and a TMDL that is being developed will include recommendations for improved riparian buffer vegetation along the streams within the watershed. WSDE commented that the Proposed Action presents an opportunity to preserve valuable mature streamside vegetation and encouraged VA to take care to retain riparian buffer trees to protect Jenkins Creek. WSDE recommended that VA include a 100-foot buffer between the cemetery expansion area and the tributary to Jenkins Creek.

WSDE also stated that a fine sediment TMDL is being developed to address general stream health. WDSE noted that studies of the Soos Creek watershed have found that high-peak flows associated with stormwater runoff increase sediment loads in stream channels. WSDE stated that the King County Stormwater Design Manual guidelines should be followed in the design of the cemetery stormwater management system. WSDE also encouraged VA to maximize the integration of existing mature trees into the cemetery expansion design to minimize the impact on stream health and allow remaining mature trees to continue reducing stormwater runoff impacts.

The King County Sensitive Areas Map depicts the portion of the unnamed tributary to Jenkins Creek that crosses the northeast portion of the Site as unclassified. Farther downstream (southeast) of the Site, the tributary is classified as a Class 2 salmonid stream. The Washington Department of Fish and Wildlife (WDFW) stated that the tributary, although it goes dry for part of the year, is considered fish habitat and potential coho salmon and steelhead habitat.

3.7.2 Groundwater

The Groundwater Atlas of the United States indicated that the Site is underlain by unconsolidated deposit aquifers that consist primarily of alluvial sand and gravel.

The Tahoma National Cemetery area is serviced by municipal water provided by Cedar River Water and Sewer and the City of Covington. The cemetery currently uses potable water supplied by Cedar River Water and Sewer for domestic water use and irrigation. Although the Site area is serviced by municipal water, the King County Groundwater Well Viewer internet mapping application indicates water wells are present at scattered locations throughout the area. Tahoma National Cemetery is not located within an USEPA-designated sole source aquifer area, per the USEPA Sole Source Aquifers internet mapping application.

The 2021 geotechnical investigation of the Site generally did not encounter groundwater within 15 feet of the ground surface. However, perched groundwater was observed between 4 and 11 feet bgs at two locations in the southeastern portion of the Site. Groundwater likely occurs at varying depths across the Site due to the variation in topography.

3.7.3 Effects of the Proposed Action

No direct impact to Jenkins Creek or its on-site tributary would occur as a result of the Proposed Action. The Phase 3 cemetery expansion would occur entirely west of the tributary, with a minimum 100-foot-wide buffer of undeveloped land between the expansion area and the tributary as recommended by WSDE.

Indirect surface water impacts associated with the expanded cemetery development (associated with soil erosion and sedimentation) would be less than significant. The expanded cemetery would be designed in

concert with the natural topography and current drainage patterns. VA would implement BMPs described in Section 4 to control construction-related impacts of soil erosion and sedimentation and would provide on-site stormwater management following the development of the cemetery. The stormwater management system would be designed in accordance with applicable regulations. The 100-foot-wide undisturbed buffer along the tributary to Jenkins Creek would further reduce stormwater runoff impacts. In addition, the cemetery design would avoid wetland areas and maintain some wooded areas, further enhancing water quality.

Based on the geotechnical investigation, perched groundwater could be encountered at some locations during cemetery construction activities. However, it is anticipated that primary subsurface components of the cemetery, such as burial areas and septic systems, would be located in areas with deeper groundwater.

No significant groundwater impacts are expected as a result of the Proposed Action. Based on standard modern burial practices, it is unlikely that toxic embalming fluid or other decomposition byproducts would be released into the soil and/or groundwater. The standard NCA design incorporates (for full casket burials) sub-surface concrete crypts, an entire section of which would be installed during site construction, above the water table. Using this technique, the caskets are not buried directly in the soil, but are rather set in a pre-placed concrete crypt (established turf and soil temporarily removed, crypt lid removed, casket placed, followed by the reverse process to complete). In addition, modern embalming fluids are markedly less toxic as the primary active ingredients are no longer arsenic based. Modern embalming fluids are commonly biodegradable. Additionally, as selection of either cremains interment or columbaria placement increase, and green burials increase, the potential for soil or groundwater contamination commensurately decreases as no embalming fluids are used. Less than eight percent of the planned Phase 3 expansion interment spaces are designated for casket burials.

3.7.4 Effects of the No Action Alternative

Under the No Action Alternative, the Site would remain undeveloped and no impacts to hydrology or water quality would occur.

3.8 Wildlife and Habitat

The majority of the Site is heavily vegetated and wooded, with a clearing and roadway currently used for the cemetery maintenance yard and material storage. Common tree species in the unimproved areas include Douglas fir, western hemlock, big leaf maple, western red cedar, vine maple, and red alder. Sapling/shrub species include sampling of these trees, cascara false buckthorn, four-line honeysuckle, California dewberry, salmon raspberry, Himalayan blackberry, salal, and devils club. Herbs and grasses include maidenhead fern, lady fern, tall manna grass, two leaf false Solomon's seal, spotted touch-me-not, false lily of the valley, pacific bleeding heart, slough sledge, yellow-skunk cabbage, and water parsley.

Vegetative communities on the Site and surrounding area support wildlife species associated with partially developed areas of rural King County.

3.8.1 Threatened and Endangered Species

As part of the preparation of this EA, the USFWS and various state natural resources agencies were contacted to identify the potential for the presence of state or federally listed species on or in the vicinity of the Site.

The USFWS Information for Planning and Conservation (IPaC) official species list generated for the Site identified four federally listed threatened species and one federally listed proposed endangered species for the vicinity of the Site. No critical habitats for protected species were identified on or adjacent to the Site.

The IPaC report for the Site is provided in Appendix D. Table 3-1 provides a summary of the federally protected species listed in the IPaC report, their habitat requirements, and the potential presence of their required habitat at the Site.

Table 3-1 Federally Listed Species in the Vicinity of the Site

Species	Status	Habitat	Potential Habitat Present at the Site
Mammals			
Gray Wolf *Canis lupus*	Proposed Endangered	Most common in relatively flat forested areas, rolling hills, or open spaces such as river valleys and basins, where prey animals are easier to chase and catch.	No
Birds			
Marbled Murrelet *Brachyramphus marmoratus*	Threatened	Primarily a shore marine bird and spends a majority of its time on the ocean, but comes inland up to 50 miles to nest in forest stands with old growth forest characteristics. Large, unfragmented stands of old growth provide preferred nesting habitat.	No
Streaked Horned Lark *Eremophila alpestris strigata*	Threatened	Large expanses of bare or sparsely vegetated land, including fields, prairies, upper beaches, airports, and similar areas with low/sparse grassy vegetation.	No
Yellow-billed Cuckoo *Coccyzus americanus*	Threatened	Wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. Requires large blocks of riparian habitat (particularly woods with cottonwood and willow) for nesting.	No
Fishes			
Bull Trout *Salvelinus confluentus*	Threatened	Spawn in water temperatures below 48 degrees Fahrenheit, require the cleanest stream substrates, need complex habitats, including streams with riffles and deep pools, side channels, undercut banks, and lots of large instream wood/logs for shelter and foraging, rely on river, lake and ocean habitats that connect to headwater streams for annual spawning and feeding migrations.	No

The Site and adjacent properties do not contain the habitat required by the federally listed species identified for the Site vicinity. None of these species are likely to be present at the Site.

Certain birds are protected under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act. The IPaC report identified bald eagles and four bird species (great blue heron, olive-sided

flycatcher, rufous hummingbird, and western screech-owl) protected under the MBTA that may be present in the Site area during various times of the year. Bald eagles' nest in large trees near marine shorelines, large lakes, and rivers. Great blue herons' nest in colonies in large trees near lakes and ponds bordered by forests. The Site does not provide suitable nesting habitat for bald eagles or great blue herons.

Olive-sided flycatchers breed in various forest and woodland habitats and mostly nest in coniferous trees. Rufous hummingbirds' nest in both coniferous and deciduous trees and typically breed in open or shrubby areas, forest openings, yards, and parks, and sometimes in forests, thickets, swamps, and meadows from sea level to about 6,000 feet. The western screech-owl lives mainly in forested habitats, especially in bands of deciduous trees along canyons and other drainages and nest in tree cavities excavated by woodpeckers or other suitable cavities. Based on habitat requirements, the olive-sided flycatcher, rufous hummingbird, and western screech-owl have the potential to nest at the Site.

As of February 2020, the Washington Fish and Wildlife Commission has classified 45 animal species as endangered, threatened, or sensitive for the entire State of Washington. The WDFW Priority Habitat and Species (PHS) internet mapping database identified the wetland habitat adjoining the Jenkins Creek tributary in the northeastern portion of Site as priority habitat, but did not identify any specific protected species for the Site. The WDFW stated that the tributary, although it goes dry for part of the year, is considered fish habitat and potential coho salmon and steelhead habitat.

The Washington Department of Natural Resources (WDNR) – Natural Heritage Program lists 28 plant species of conservation concern in King County. However, the WDNR – Natural Heritage Program indicated there are no records for rare plants, rare nonvascular species, or rare/high-quality ecological communities in the vicinity of the Site.

The King County, Washington Rare, Threatened, and Endangered Plant and Animal Species map (dated February 2008) identified 17 animal species and a general plant species listing for King County, but did not identify any rare, threatened, or endangered state-listed plant or animal species in the Tahoma National Cemetery area.

3.8.2 Effects of the Proposed Action

The Proposed Action has the potential to impact wildlife and habitat as approximately 15 acres of mostly wooded and vegetated land would be cleared for the expanded cemetery. However, environmentally sensitive areas (wetlands and tributary to Jenkins Creek) would not be disturbed by the development activities. VA would maintain a minimum 100-foot-wide buffer of undisturbed land between the cemetery development and the tributary to Jenkins Creek, as recommended by WSDE.

The Phase 3 cemetery development would have no effect on federally-listed protected species or their critical habitats. The Site does not provide suitable habitat for federally-listed protected species that may be present in the area. In addition, it is not expected that the Phase 3 cemetery would impact state-listed protected species; no state-listed protected species were identified at the Site. The 100-foot-wide undeveloped buffer along the tributary to Jenkins Creek would protect water quality within the tributary and downstream surface waters that may be used by salmonids.

Olive-sided flycatchers, rufous hummingbirds, and western screech-owls, protected under the MBTA, may be present at the Site during their nesting seasons. It is anticipated that vegetation clearing activities associated with the cemetery expansion would be conducted outside of the nesting season of these birds (March through August). If vegetation clearing cannot be conducted outside of the nesting season, a qualified biologist would survey the Site for active nests prior to clearing. Active nests would not be disturbed until the eggs have incubated and the young birds have fledged.

With the implementation of these management and avoidance measures, wildlife and habitat impacts associated with the Proposed Action would be less than significant.

3.8.3 Effects of the No Action Alternative

Under the No Action Alternative, the Site would remain mostly wooded, undeveloped land and no impacts to wildlife or habitat would occur.

3.9 Noise

The existing noise environment at and around the Site is relatively quiet with minor noise associated with nearby two-lane roads, residences, Maple View Middle School, and current Tahoma National Cemetery operations, including periodic ceremonial rifle salute discharges during weekday, day time hours. No other notable noise-generating sources are present in the immediate vicinity of the Site. As such, the Site's noise environment can be characterized as that typical of a partially developed, mostly rural area.

3.9.1 Sensitive Receptors

Sensitive noise receptors in the Site area include residences located approximately 300 to 600 feet and farther north, west, and east of the Site, the Maple View Middle School grounds located approximately 900 feet south of the Site, and the existing developed portions of Tahoma National Cemetery. No other sensitive noise receptors are located within 1,000 feet of the Site.

3.9.2 Effects of the Proposed Action

The Proposed Action would have short-term impacts to the existing noise environment during the Phase 3 construction activities. Noise generating sources during construction activities would be associated primarily with standard construction equipment and construction equipment transportation. These increased noise levels could directly affect neighboring areas.

Construction activities generate noise by their very nature and are highly variable, depending on the type, number, and operating schedules of equipment. Construction projects are usually executed in stages, each having its own combination of equipment and noise characteristics and magnitudes. Construction activities are expected to be typical of other similar construction projects and would include mobilization, site preparation, excavation, placing foundations, pre-placed crypt installation, utility development, heavy equipment movement, and paving roadways and parking areas.

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

Peak noise levels vary at a given location based on line of sight, topography, vegetation, and atmospheric conditions. In addition, peak noise levels would be variable and intermittent because each piece of equipment would only be operated when needed. However, peak construction noise levels would be considerably higher than existing noise levels. Relatively high peak noise levels in the range of 93 to 108 dBA (decibels, A-weighted scale) would occur on the active construction site, decreasing with distance from the construction areas. Table 3-2 presents peak noise levels that could be expected from a range of construction equipment during proposed construction activities.

Generally speaking, peak noise levels within 50 feet of active construction areas and material transportation routes would most likely be considered “striking” or “very loud”, comparable to peak crowd noise at an

indoor sports arena. At approximately 200 feet, peak noise levels would be loud - approximately comparable to a garbage disposal or vacuum cleaner at 10 feet. At 0.25 mile, construction noise levels would generally be quiet enough so as to be considered insignificant, although transient noise levels may be noticeable at times.

Combined peak noise levels, or worst-case noise levels when several loud pieces of equipment are used in a small area at the same time as described in Table 3-2, are expected to occur rarely, if ever, during the project. However, under these circumstances, peak noise levels could exceed 90 dBA within 200 feet of the construction area, depending on equipment being used.

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

Areas that could be most affected by noise from construction include those closest to the construction footprint, including nearby residences, developed areas of the cemetery, and Maple View Middle School. Indoor noise levels would be expected to be 15-25 decibels lower than outdoor levels. In addition, construction noise impacts would be temporary and would be minimized through BMPs outlined in Section 4.

King County regulates construction noise by time of day instead of decibel level. Normal and usual sounds created by construction are allowed during the following times: heavy equipment between 7 a.m. to 7 p.m. weekdays and 9 a.m. to 7 p.m. weekends; impact construction equipment (jack hammers, pile drivers, etc.) between 8 a.m. to 5 p.m. weekdays and 9 a.m. to 5 p.m. weekends; and all other construction activities between 7 a.m. to 10 p.m. weekdays and 9 a.m. to 8 p.m. weekends. It is anticipated construction activities would be conducted during these hours.

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

Table 3-2 Peak Noise Levels Expected from Typical Construction Equipment

Source	Peak Noise Level (dBA, attenuated)							
	Distance from Source (feet)							
	0	**50**	**100**	**200**	**400**	**1,000**	**1,700**	**2,500**
Heavy truck	95	84-89	78-93	72-77	66-71	58-63	54-59	50-55
Dump truck	108	88	82	76	70	62	58	54
Concrete mixer	108	85	79	73	67	59	55	51
Jack-hammer	108	88	82	76	70	62	58	54
Scraper	93	80-89	74-82	68-77	60-71	54-63	50-59	46-55
Bulldozer	107	87-102	81-96	75-90	69-84	61-76	57-72	53-68
Generator	96	76	70	64	58	50	46	42
Crane	104	75-88	69-82	63-76	55-70	49-62	45-48	41-54
Loader	104	73-86	67-80	61-74	55-68	47-60	43-56	39-52
Grader	108	88-91	82-85	76-79	70-73	62-65	58-61	54-57
Pile driver	105	95	89	83	77	69	65	61
Forklift	100	95	89	83	77	69	65	61

Combined Peak Noise Level (Bulldozer, Jackhammer, Scraper)					
Combined Peak Noise Level	**Distance from Source**				
	50 feet	**100 feet**	**200 feet**	**¼ mile**	**½ mile**
	103	97	91	74	68

Source: (Tipler 1976)

Proposed operational activities at the expanded cemetery would include vehicle traffic to and from the Site, and the use of powered equipment for grave site preparation, maintenance, and upkeep. Periodic ceremonial rifle discharges would occur during week day, day time hours from the committal shelters located in the currently developed portion of the cemetery. No new committal shelters are planned for the Phase 3 expansion area. Ceremonial rifle salute noise levels would remain the same as current levels. Estimated ceremonial noise levels at varying distances based on U.S. Army estimates are provided in Table 3-3. The cemetery operational activities would not produce excessive noise and would not produce a significant adverse noise impact on surrounding land uses. The facility would continue be a relatively quiet cemetery.

Table 3-3 Estimated M-16 Rifle Blank Noise Levels at Varying Distances

Distance (meters)	A-Weighted Exposure Level (dBA)	A-Weighted Maximum Level (dBA)
50	67	76
100	61	70
200	54	63
400	40	49
800	32	41
1,600	22	31

3.9.3 Effects of the No Action Alternative

Under the No Action Alternative, the noise environment surrounding the Site would not be altered by Proposed Action. In the future, when Tahoma National Cemetery reaches its burial capacity, noise from current cemetery operations would decrease as no new burials would be conducted (reduced traffic, equipment operation, and ceremonial rifle salute noise). However, the general character of the noise environment, a relatively quiet cemetery, would remain unchanged.

3.10 Land Use

The Site is located in the northwestern portion of the 158-acre Tahoma National Cemetery property and consists of approximately 43 acres of mostly unimproved, vegetated and wooded land. The north-central portion of the Site contains a cleared, graded area that includes the cemetery maintenance yard/storage area, with two Quonset huts and piles of stored materials. An unnamed intermittent tributary to Jenkins Creek runs through the northeastern portion of the Site.

The cemetery is located in an area of mostly low-density residential properties and undeveloped wooded land. Maple View Middle School is located adjacent to the southwest of the cemetery.

The area north of the Site consists of wooded land with a commercial structure located approximately 200 feet north of the Site and a few houses located approximately 300 to 400 feet north of the Site. The area east of the Site is undeveloped wooded land with a house located approximately 600 feet east of the Site. The Site is bordered to the south and southeast by the developed portions of the cemetery. The area west of the Site consists of a thin strip of wooded land, beyond which is an approximately 150 to 200 feet wide, mostly grassy electrical transmission line utility corridor, across which are a few residences, approximately 300 to 600 feet from the Site.

Zoning in unincorporated King County is regulated by King County Code Title 21A (Zoning). The entire 158-acre cemetery property, including the Phase 3 development area, is zoned RA-5 (Rural Area, one dwelling unit per 5 acres). Cemeteries are a permitted use within the Rural Area zoning district, subject to conditional use review. The neighboring properties to the north, east, and west of the Site are also zoned Rural Area. Areas to the south and southwest of the cemetery property are zoned Single-Family Residential.

3.10.1 Effects of the Proposed Action

The Proposed Action would have less-than-significant adverse land use effects. The Site would be transformed from mostly undeveloped wooded land to a cemetery. However, the 158-acre cemetery property has been owned by VA and planned for phased cemetery development since 1993. The Phase 3 expansion is consistent with the 1995 Master Plan for the overall cemetery development, and the development of the remainder of the 158-acre property.

Federal actions on federal government-owned land are exempt from local zoning regulations. However, the Phase 3 cemetery expansion would be consistent the local zoning and compatible with surrounding land use.

3.10.2 Effects of the No Action Alternative

Under the No Action Alternative, no land use impacts would occur. The Site would remain mostly undeveloped wooded land.

3.11 Wetlands, Floodplains, and Coastal Zone Management

3.11.1 Wetlands

The USFWS National Wetlands Inventory (NWI) Map for the Site area identifies the portion of the unnamed tributary to Jenkins Creek that crosses the northeastern portion of the Site as a freshwater forested/shrub wetland. The NWI map did not identify any other wetlands within the proposed Phase 3 expansion area or the proposed honor guard building area (see Figure 3-2).

In 2021, TTL completed a wetlands survey of the approximately 43-acre Site and an approximately 5-acre area for the proposed honor guard building. Twenty small wetlands were identified within the Phase 3 expansion area and three wetlands were identified in the proposed honor guard building area. The wetlands formed in low-lying depressional areas between the hills and ridges of the Site. The delineated wetlands are depicted on Figure 3-3 (and Figure 2-1).

All but three of the identified wetlands drain to the east to the unnamed tributary of Jenkins Creek. The wetland in the southwest corner of the Phase 3 area drains to the west to Little Soos Creek. Two wetlands are isolated; these wetlands do not have an outlet or drain. Jenkins Creek and Little Soos Creek are considered waters of the United States (WOTUS), consequently all of the identified wetlands except the two isolated wetlands are likely to be considered WOTUS and under US Army Corps of Engineers (USACE) jurisdiction under the Clean Water Act. Prior wetland delineations and USACE jurisdictional determinations have determined that most wetlands on the cemetery property are under USACE's jurisdiction. Isolated wetlands fall under the jurisdiction of the WSDE. USACE and/or WSDE permits and mitigation would be required for direct wetland impacts.

Figure 3-2 National Wetlands Inventory Map

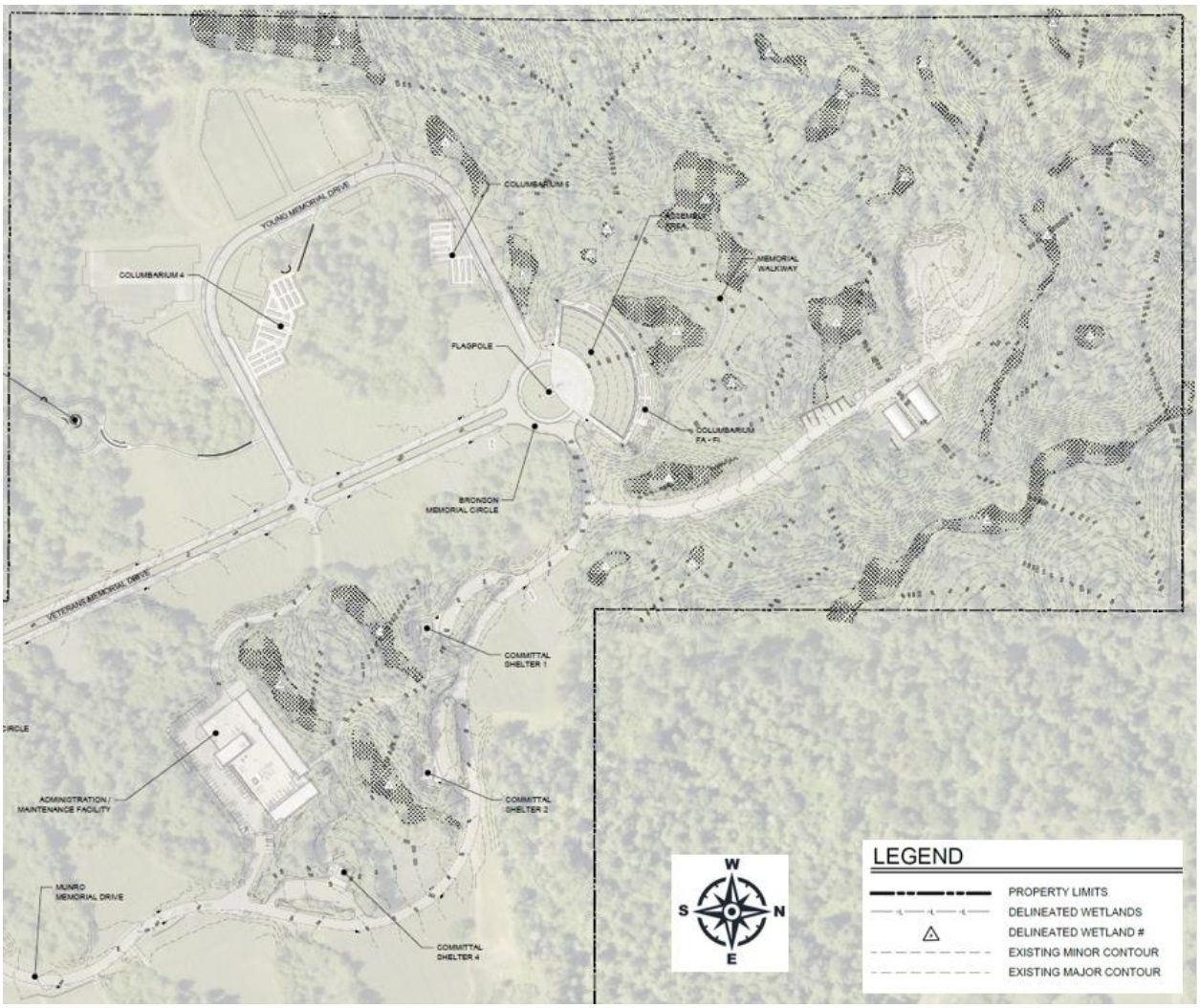

Figure 3-3 Wetland Survey Map

3.11.2 Floodplains

Available Federal Emergency Management Agency (FEMA) floodplain mapping (FIRM Map Number 53033C1015G, dated August 19, 2008) indicated that the Tahoma National Cemetery property is not located within the 100-year or 500-year floodplain (Zone X). Areas adjacent to the cemetery are also not included in the 100-year or 500-year floodplain. The floodplain map is shown as Figure 3-4.

The tributary to Jenkins Creek is a small, intermittent, sloping stream that flows through a well-defined valley within the 43-acre Site. Based on these characteristics, the tributary is not likely to exhibit notable flooding.

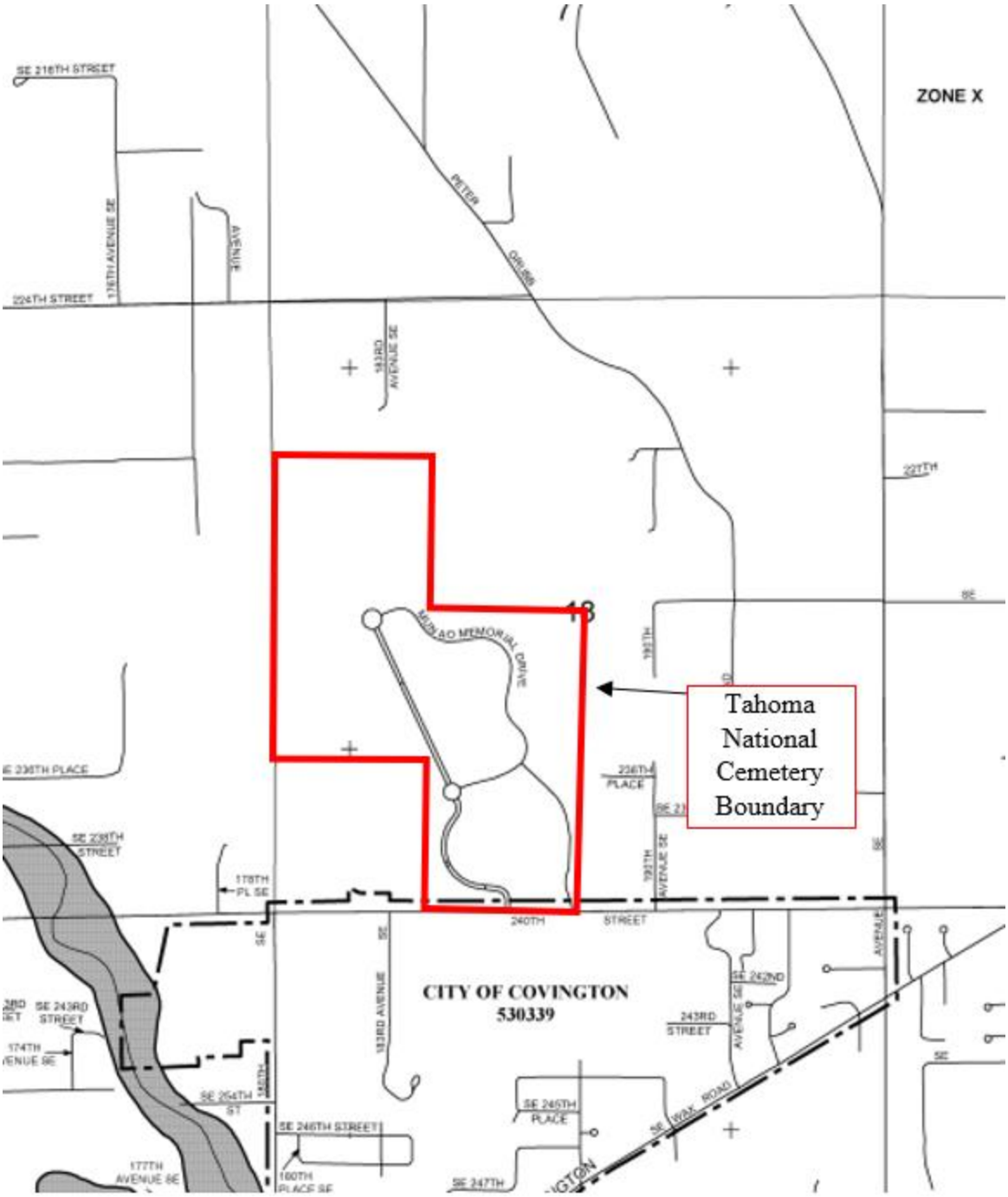

Figure 3-4 Flood Insurance Map

3.11.3 Coastal Zone

The Coastal Zone Management Act (CZMA) was promulgated to control nonpoint pollution sources that affect coastal water quality. The CZMA encourages states to preserve, protect, develop, and where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. The State of

Washington does not have a stand-alone law for coastal zone management, the state relies on its network of state laws and regulations including: State Water Pollution Control Act, Washington Clean Air Act, State Ocean Resource Management Act, State Shoreline Management Act, Energy Facility Site Evaluation Council, and State Environmental Policy Act to protect coastal uses and resources.

King County (and Tahoma National Cemetery) are located within a designated State of Washington Coastal Zone.

The CZMA requires that federal actions within the coastal zone that could have reasonably foreseeable impacts on land, water, and natural resources of the coastal zone be consistent with the state's federally-approved Coastal Management Program under federal consistency regulations. The federal agency must determine if its project or activity has any reasonably foreseeable direct or indirect effects on Washington's coastal uses or resources. If the federal agency determines that the project will have such effects, then it must prepare a "consistency determination" and submit it to WSDE for concurrence. If a consistency determination is needed, the federal agency must describe the potential coastal effects and explain how the project or activity is consistent to the maximum extent practicable with Washington's Coastal Zone Management Program's enforceable policies.

3.11.4 Effects of the Proposed Action

The Phase 3 cemetery expansion is being designed to avoid all identified, delineated wetlands, regardless of whether they are likely to be considered WOTUS or isolated (see Figure 2-1). No development, disturbance, or filling or other direct impact would occur within the wetland areas. Buffers of undeveloped green space would be established around each wetland area to provide additional wetland protection. Buffer areas would be surveyed and staked to prevent incidental impact during construction. Wetland impacts would be less than significant.

The Phase 3 cemetery expansion would not impact floodplains. No mapped FEMA floodplains were identified on the Site or surrounding properties.

The tributary to Jenkins Creek is a small, intermittent, sloping stream that flows through a well-defined valley and is not likely to exhibit notable flooding. No development would occur within 100 feet of the ordinary high-water level of the tributary during the Phase 3 cemetery expansion. Based on the Site topography, the cemetery development would be at least 5 to 10 feet higher in elevation than the creek. Therefore, the Proposed Action is not anticipated to affect floodplains or flood hazards.

Although Tahoma National Cemetery is located within a designated coastal zone, the Proposed Action would not affect coastal resources and would have negligible coastal zone impacts.

3.11.5 Effects of the No Action Alternative

The No Action Alternative would result in no wetlands, floodplains, or coastal zones impacts.

3.12 Socioeconomics

The following subsections identify and describe the socioeconomic environment of King County and the State of Washington. Presented data provide an understanding of the socioeconomic factors that have developed the area. Socioeconomic areas of discussion include the local demographics of the area, regional and local economy, local housing, and local recreation activities. Data used in preparing this section were collected from the 2020 Census of Population and Housing (US Census Bureau 2020), subsequent US Census Bureau data, and the U.S. Department of Commerce Bureau of Economic Analysis.

3.12.1 Demographics

King County's estimated population in 2020 was 2,269,675 residents. The estimated population total for the State of Washington in 2020 was 7,705,281 residents (Table 3-4). Age distribution and high school graduation rates are generally similar for King County and the State of Washington. Minority populations for King County are higher than that of the State of Washington as a whole. Minority population rates specific to the Site area are discussed in Section 3.17 (Environmental Justice).

Table 3-4 Demographic Data for King County and Washington

Area	All Individuals (2020 Estimate)	Population Under 18 Age Years (2019 Estimate)	Population Over 65 Age Years (2019 Estimate)	Minority (2020 Estimate)	High School Graduates (2019 Estimate)	Veterans (2019 Estimate)
King County	2,269,675	17.1%	16.7%	43.9%	96.4%	6.6%
Washington	7,705,281	19.8%	18.6%	33.4%	93.7%	10%
Source: US Census Bureau, 2020 Census; American Community Survey, Profile of General Demographic Characteristics, 2019 (US Census Bureau 2020).						

3.12.2 Income

King County has a higher median household income and lower population below the poverty line than the State of Washington as a whole (Table 3-5). Household incomes specific to the Site area are discussed in Section 3.17.

Table 3-5 Regional Income for King County and Washington

Area	Number of Households	Median Household Income	Population Below Poverty Level (18 and over)	Unemployment Rate
King County	619,447	$107,460	6.1%	5.1% (July 2021)
Washington	2,321,258	$79,556	8.4%	5.1% (July 2021)
Source: US Census Bureau, 2010 Census; American Community Survey, Profile of General Demographic Characteristics, 2019. (U.S. Census Bureau 2020) and U.S. Bureau of Labor Statistics, Unemployment rate in States and Local Areas (U.S. Bureau of Labor Statistics 2020).				

3.12.3 Commuting Patterns

Residents of King County are largely dependent on personal automobiles for transportation to and from work. Public transportation is available in King County through King County Metro; however, no King County Metro bus stops are currently located in the immediate Site vicinity. The average commuting time in King County was approximately 30 minutes in 2019.

3.12.4 Protection of Children

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

locations where numbers of children may be proportionately high (for example, schools, childcare centers, and family housing) in areas potentially affected by the Proposed Action.

Children are not regularly present at the Site, which is part of the Tahoma National Cemetery owned by VA. Children may be present in the residential areas located approximately 300 to 600 feet north, east, and west of the Site and at the Maple View Middle School grounds located approximately 900 feet south of the Site. No other schools, childcare centers, or developed recreational areas are located within 0.25-mile of the Site.

3.12.5 Effects of the Proposed Action

The proposed cemetery expansion on the Site is anticipated to result in minor short-term, beneficial socioeconomic impacts to local employment and personal income by providing temporary construction jobs. However, due to the short-term, finite nature of this construction project, no long-term impacts to the construction labor force are anticipated. The Proposed Action would indirectly benefit the local economy through the spending of business and personal income generated from the construction of the cemetery expansion, although these impacts would be minor. The Proposed Action would result in long-term significant beneficial socioeconomic impacts by continuing to provide a proximate national cemetery of sufficient size to regional Veterans and their families.

No adverse health or safety risks to children are anticipated to result from the Phase 3 cemetery expansion. Children would only be present at the Site as visitors. Construction areas would be secured to prevent unauthorized access by children from nearby areas. The construction contractor would limit and control construction dust and noise as discussed in Section 4, thereby minimizing adverse effects to children in the area.

3.12.6 Effects of the No Action Alternative

Under the No Action Alternative, no short-term or long-term socioeconomic benefit to the Site area due to VA's action would occur.

Most importantly, the No Action Alternative would not enable VA to continue to provide adequate regional burial sites commensurate with the long-term need for these services once the existing Tahoma National Cemetery interment space is full, resulting in a significant adverse, long-term, impact to Veterans and their families. Veterans and their families residing in the Seattle-Tacoma metropolitan area would have to travel much longer distances to the nearest national cemetery for interment and subsequent visits, at increased cost and time. In addition, interment in a distance cemetery would reduce the ability for subsequent visits by Veteran families.

3.13 Community Services

The Site is located within the Tahoma School District. Maple View Middle School is located southwesterly adjoining to Tahoma National Cemetery and is approximately 900 feet south of the Site. There are no other schools located within one mile of the Site.

The King County Sherriff's Department provides police protection to the Tahoma National Cemetery area. The Kent Fire Department provides fire protection and emergency medical services to the cemetery and its vicinity.

The King County Department of Transportation Local Services Division and Washington State Department of Transportation (WSDOT) provide local road and bridge maintenance services in the Site vicinity.

The MultiCare Covington Medical Center facilities are located approximately two miles south/southwest of Tahoma National Cemetery. There are no additional major medical facilities located within three miles of the Site.

Public transportation for the King County area is provided by the King County Metro. The Site is located in the King County Metro coverage area (Bus Route 165); however, no public transportation stops are currently available to the immediate Site vicinity from King County Metro. The closest bus stop to the Site is located at the intersection of 132nd Avenue and SE 240th Street, located approximately 3.3 miles west of the Tahoma National Cemetery.

Covington Community Park & Soccer Field and BMX Park are located approximately 1,400 feet southwest of Tahoma National Cemetery (approximately 2,250 feet south of the Site) and the Maple View Middle School athletic fields are located approximately 950 feet south of the Site. There are no additional developed, public recreational facilities in the immediate vicinity of the Site.

3.13.1 Effects of the Proposed Action

The Phase 3 cemetery expansion would have negligible community service impacts. No significant additional load is expected to be placed on the fire or police departments as the result of the Proposed Action. Use of other public or community services as a result of the proposed expansion would be minor.

3.13.2 Effects of the No Action Alternative

Under the No Action Alternative, there would be no community services impacts.

3.14 Solid Waste and Hazardous Materials

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

TTL conducted a Phase I Environmental Site Assessment (Phase I ESA) of the Site on behalf of VA in July 2021. The Phase I ESA included a site visit, interviews with persons knowledgeable about the Site, a review of historic information, and review of local, state, and federal regulatory information for the Site and surrounding area. The Site was unimproved vegetated and wooded land from at least 1900 until 1997. The first phase of the Tahoma National Cemetery development was completed in 1997. Since that time, the Site has mostly remained unimproved vegetated and wooded land with a small cleared area in the north-central portion of the Site used as a maintenance yard and material storage and staging area for the cemetery.

The Phase I ESA identified no significant hazardous substance or petroleum handling, storage or releases at the Site. In addition, the Phase I ESA did not identify any evidence of petroleum or hazardous materials releases in the vicinity of the Site that were considered likely to impact the Site. Two very small hydraulic oil spills (approximately one gallon each) were identified for the Site, but were reportedly cleaned up quickly. The small hydraulic oil spills were not considered to be a significant environmental concern. The Phase I ESA did not identify any recognized environmental conditions (RECs) in connection with the Site.

3.14.1 Effects of the Proposed Action

The Proposed Action could result in short-term, less-than-significant impacts due to the increased presence and use of petroleum products and hazardous materials during construction of the Phase 3 cemetery expansion. An increase in construction vehicle traffic would increase the possibility of a release of vehicle operating fluids (such as oil, diesel, gasoline, and antifreeze) and maintenance materials. As such, a less-

than-significant, short-term adverse impact is possible. Implementation of standard construction BMPs (Section 4) would serve to ensure this impact is further minimized.

The structures to be renovated at the cemetery may contain asbestos-containing building materials (ACM). An asbestos survey of the structures to be renovated would be conducted by a State of Washington-licensed inspector prior to renovation. Identified ACMs that would be disturbed during renovation would be removed and properly disposed of by licensed asbestos abatement contractors in accordance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) and State of Washington requirements prior to renovation. Asbestos abatement procedures require the removal of ACM with various controls and monitoring to prevent asbestos emissions and worker exposure.

No significant adverse long-term impacts during operation of the expanded cemetery are anticipated. Long-term operational solid wastes and hazardous materials would be managed in accordance with applicable federal and state laws. Wastes would be collected and properly disposed of by licensed, contracted transportation and disposal companies, similar to current Tahoma National Cemetery operations.

The development and operation of the cemetery at the Site would not result in a substantial increase in the generation of solid or hazardous substances or wastes, increase the exposure of persons to hazardous or toxic substances, increase the presence of hazardous or toxic materials in the environment, or place substantial restrictions on property use due to hazardous waste, materials, or site remediation. As noted in Section 3.7.3, based on standard modern burial practices and VA's cemetery design guidance, it is unlikely that embalming fluid would be released into the soil or groundwater.

3.14.2 Effects of the No Action Alternative

Under the No Action Alternative, VA would continue to use the Site as a cemetery maintenance yard and material storage area. Small spills associated with materials handling machinery, such as the two previously reported hydraulic oil spills could occur, but would be cleaned up promptly. Solid waste and hazardous materials impacts would be less than significant.

3.15 Traffic, Transportation, and Parking

Traffic in the Site area is regulated by the King County Department of Transportation Local Services Division and WSDOT. Local roads are maintained by King County.

Access to Tahoma National Cemetery is provided by two drives from SE 240th Street, a two-lane, asphalt-paved King County Road. Average daily traffic data from 2018 for SE 240th Street were obtained from King County. Based on traffic data from the intersection of SE 240th Street and 164th Avenue, approximately 1.5 miles west of the cemetery, SE 240th Street is estimated to have an annual average daily traffic (AADT) volume of approximately 5,000 vehicles near the cemetery.

The primary cemetery entrance (Veterans Memorial Drive) is located in the southwestern portion of the cemetery. The intersection of SE 240th Street and Veterans Memorial Boulevard is unsignalized and without stop controls. At the intersection, SE 240th Street has a center turn lane for eastbound traffic making left turns into the cemetery. Veterans Memorial Drive is a divided road at the intersection. A short distance onto the cemetery property from the intersection, at the public information center, the cemetery has three lanes for funeral corteges.

The secondary cemetery entrance (Monegan Memorial Drive) is located approximately 500 feet east of the main entrance. The intersection of SE 240th Street and Monegan Memorial Drive is unsignalized and without stop controls. Monegan Memorial Drive intersects with Munro Memorial Drive, which leads to the Phase 3 expansion area.

Tahoma National Cemetery experiences approximately 35 to 40 funeral processions per week (approximately 5 to 10 per each weekday), averaging 10 to 20 cars per procession. In total, the cemetery experiences approximately 250 round trip vehicle trips (500 on-way vehicle trips) per day.

3.15.1 Effects of the Proposed Action

Construction traffic associated with the cemetery expansion, consisting of material transport trucks, workers' personal vehicles, and construction equipment, would temporarily increase traffic volumes in the local area, but would not likely cause long delays. Thus, only less-than-significant, short-term adverse impacts would be anticipated.

Vehicle trips associated with the expanded cemetery would be similar to those currently experienced at Tahoma National Cemetery. The Phase 3 expansion would increase the burial capacity and, consequently, the duration of interments at the cemetery by approximately 15 years, but would not increase the rate of burials, burial vehicle trips, or burial parking demand. The number of visitors to the cemetery would likely increase, as the total number of interments would increase; however, the additional vehicle trips associated with increased visitors is expected to be minor.

No modifications to the cemetery intersections with SE 240th Street are anticipated to be necessary with the cemetery expansion.

3.15.2 Effects of the No Action Alternative

Under the No Action Alternative, traffic conditions near the cemetery would not be altered by Proposed Action. In the future, when Tahoma National Cemetery reaches its burial capacity, traffic volumes would decrease as no new burials would be conducted; however, cemetery visitor traffic would remain.

3.16 Utilities

Tahoma National Cemetery is currently connected to potable water, electricity, natural gas and telecommunication services. Utility providers to the cemetery are as follows:

- **Cedar River Water and Sewer** supplies potable water to the cemetery. The cemetery originally connected to a six-inch water main along SE 240th Street to meet the cemetery water demand. During Phase 2 cemetery construction, the original water service was abandoned, and the cemetery was connected to an 8" main at the northwestern corner of the Site by installing a 6" service line and meter. On the cemetery property, the water supply splits into a 6" irrigation main line and a 4" domestic supply line. This service provides water supply for the entire irrigation and domestic water demand of the current cemetery.

- **Puget Sound Energy** supplies electrical service and natural gas service to the cemetery.

- **Qwest Communications** provides telecommunication services to the cemetery.

Municipal sanitary sewerage service is not available at the cemetery. The cemetery public information and administration buildings are serviced by on-site septic systems.

3.16.1 Effects of the Proposed Action

The proposed Phase 3 cemetery expansion would result in the increased use of electricity, potable water, and natural gas services, and the installation of additional septic systems.

The new satellite restroom and honor guard buildings would be connected to the existing cemetery electrical and potable water services. In addition, a new natural gas emergency generator would be installed to service the administration building It is not anticipated that the new restroom and honor guard buildings would be connected to the natural gas service. The increased use of public utilities to service these buildings would be negligible.

The satellite restroom and honor guard buildings would be serviced by on-site septic systems installed near the buildings. The septic systems will be designed using Washington State Department of Health guidance for non-residential systems and are expected to include a septic tank, a recirculating/mixing tank, a drain field dose tank, and a drain field.

The primary utility expected to be used for the Phase 3 expansion is irrigation water. Aqua Engineering completed an irrigation demand study in August 2021 to determine if the existing water supply was adequate for the Phase 3 cemetery expansion. The irrigation study indicated the 6" irrigation main line installed at the cemetery during Phase 2 was sized to irrigate 47 acres. The combined Phase 1 and 2 cemetery development includes approximately 29.2 irrigated acres; consequently, the current water supply is sufficient to meet the Phase 3 irrigation demand (less than 15 acres). NCA's modern cemetery development practices include the use of native grasses and low moisture tolerant vegetation, to the extent possible, thereby reducing the need for irrigation.

Utility impacts would be less than significant.

3.16.2 Effects of the No Action Alternative

Under the No Action Alternative, no utility impacts would occur.

3.17 Environmental Justice

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

The USEPA-developed EJSCREEN (an environmental justice mapping and screening internet application) indicates the Site vicinity includes a lower minority population (23 percent) than the State of Washington as a whole (31 percent) and a lower low-income population (21 percent) than the State of Washington (27 percent).

3.17.1 Effects of the Proposed Action

The Proposed Action would not have adverse environmental justice effects. The Site is not located in an area with elevated low-income or minority populations and the Proposed Action would have only minor impacts on the residents in the area. During construction, effects on nearby residential land uses, such as through noise and dust, would be limited and controlled through BMPs described in Section 4.

3.17.2 Effects of the No Action Alternative

Under the No Action Alternative, the Phase 3 cemetery expansion would not occur and there would be no direct environmental justice effects. However, VA would not meet its long-term cemetery needs for the region. The absence of a national cemetery in the Seattle-Tacoma metropolitan area after Tahoma National Cemetery reaches its current capacity would have a disproportionate effect on low-income Veterans and their families in the region, who are less able to afford travel to a more distant national cemetery.

3.18 Cumulative Impacts

The CEQ Regulations define cumulative impacts as those which "result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions," (40 CFR 1508.7). Cumulative impact analysis captures the effects that result from the Proposed Action in combination with the effects of other actions taken before, during, or after the Proposed Action in the same geographic area.

Tahoma National Cemetery is located within an unincorporated area of King County approximately 1.5 miles northeast of the City of Kent, approximately 20 miles southeast of the City of Seattle, and approximately 20 miles northeast of the City of Tacoma. The cemetery is located in an area of mostly low-density residential properties and undeveloped wooded land. Maple View Middle School is located adjacent to the southwest of the cemetery.

Since the mid-1990s when the cemetery was first developed, the surrounding area north of SE 240th Street has experienced increased, mostly scattered residential development; however, the density of the houses remains relatively low, with interspersed wooded areas and other undeveloped land. The area south of cemetery, south of SE 240th Street, is more developed (with residences). The areas south and southwest of the cemetery was developed with higher density residential neighborhoods between 2000 and 2009. No large commercial, industrial, or institutional developments have occurred in the immediate cemetery area within the past 30 years.

The area near the cemetery north of SE 240th Street contains areas of undeveloped land and is likely to continue to experience a slow increase in scattered residential development. Additional residential development may also occur south of SE 240th Street, but the remaining space is more limited. No specific development plans for off-site properties in the immediate vicinity of the cemetery were identified.

As discussed in Section 2.4, refined master planning was conducted in late 2021 for the development of the remaining approximately 43-acre, northwestern portion of the cemetery property. The refined master plan includes a potential future Phase 4, which would more fully utilize the remaining cemetery property once the Phase 3 expansion area reaches its burial capacity (approximately 15 years after opening). Figure 2-1 illustrates the refined master plan, with the potential future, smaller Phase 4 development depicted in orange. Preliminarily, the future Phase 4 expansion would provide approximately one-third of the interment spaces as Phase 3 (approximately 11,000 spaces) and primarily consist of columbarium and in-ground cremains areas. Other than the potential future Phase 4 expansion in approximately 15 to 20 years, no other development in planned for the cemetery.

3.18.1 Effects of the Proposed Action

The Proposed Action would result in the impacts to the Site area as identified in Sections 3.3 through 3.17. These include potential adverse impacts to aesthetics, air quality, geology and soils, hydrology and water quality, wildlife and habitat, noise, land use, wetlands, solid waste and hazardous materials, transportation, and utilities. All of these potential impacts are less than significant and would be further reduced through careful coordination and implementation of general BMPs; management, minimization and avoidance measures; and compliance with regulatory requirements, as identified in Section 4. Given the nature of the Proposed Action and the limited recent and potential future large development in the Site area, no significant cumulative adverse impacts to any of these resource areas are anticipated. Other potential development in the cemetery area would be subject to zoning requirements and site plan approval by King County, which would serve to maintain and control regional, potentially cumulative impacts.

The Proposed Action could have cumulative impacts with respect to the previous (Phase 2) and potential future (Phase 4) expansions of the cemetery. However, the phased developed of the 158-acre cemetery property is consistent with the original 1995 Master Plan for the cemetery. Each development phase is

subjected to a NEPA evaluation and the identification of management, minimization and avoidance measures to reduce project impacts. With the implementation of this process, potential cumulative impacts would be minor.

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

3.18.2 Effects of the No Action Alternative

Under the No Action Alternative, no cumulative impacts are anticipated.

3.19 Potential for Generating Substantial Public Controversy

As discussed in Sections 5 and 6, VA has solicited input from various federal, state, and local government agencies regarding the Proposed Action. Governmental agencies have provided input; none of the input has identified opposition or controversy related to the Proposed Action. VA published and distributed the Draft EA for a 30-day public comment period. No comments of opposition or controversy related to the Proposed Action were received.

4.0 MANAGEMENT, MINIMIZATION, AND MITIGATION MEASURES

This section summarizes the management, minimization, and avoidance measures, and mitigation measures (if necessary), that are proposed to minimize and maintain potential adverse effects of the Proposed Action at acceptable, less-than-significant levels.

Per established protocols, procedures, and requirements, VA and its contractors would implement BMPs and would satisfy all applicable regulatory requirements in association with the design, construction, and operation of the proposed Phase 3 cemetery expansion. These "management measures" are described in this EA and are included as components of the Proposed Action. "Management measures" are defined as routine BMPs and/or regulatory compliance measures that are regularly implemented as part of proposed activities, as appropriate, across the State of Washington. In general, implementation of such management measures would maintain impacts at acceptable levels for all resource areas analyzed. These are different from "mitigation measures," which are defined as project-specific requirements, not routinely implemented as part of development projects, necessary to reduce identified potentially significant adverse environmental impacts to less-than-significant levels.

The routine BMPs, and management, minimization and avoidance measures summarized in Table 4-1 would be included by VA in the Proposed Action to minimize and maintain adverse effects at less-than-significant levels.

Table 4-1 Management, Minimization and Avoidance Measures Incorporated into the Proposed Action

Technical Resource Area	Measure
Aesthetics	Develop the cemetery in concert with the Site's natural topography and features. Preserve existing wetlands and some wooded/natural areas.
	Use natural buffers and/or berms between the developed portions of the cemetery and adjacent residential properties.
Air Quality	Use appropriate dust suppression methods (such as the use of water, dust palliative, covers, suspension of earth moving in high wind conditions) during onsite construction activities.
	Stabilize disturbed areas through re-vegetation or mulching if the areas would be inactive for several weeks or longer. Specific requirements would be identified with the Stormwater Pollution Prevention Plan.
	Implement measures to reduce diesel particulate matter emissions from construction equipment, such as reducing idling time and using newer equipment with emissions controls.
Cultural and Historic Resources	Should potentially historic or culturally significant items be discovered during project construction, the construction contractor would immediately cease work until VA, a qualified archaeologist, WA SHPO, Tribes and other consulting parties are contacted to properly identify and appropriately treat discovered items in accordance with applicable state and federal laws.

Technical Resource Area	Measure
Geology, Topography, and Soils	Control soil erosion and sedimentation impacts during construction by implementing erosion prevention measures and complying with the WSDE Water Quality Program (WQP) National Pollutant Discharge Elimination System (NPDES) permitting process. Implement effective controls per a site-specific Stormwater Pollution Prevention Plan (SWPPP). The NPDES permit would require stormwater runoff and erosion management using BMPs, such as earth berms, vegetative buffers and filter strips, and spill prevention and management techniques. The construction contractor would implement the sedimentation and erosion control measures specified in the NPDES permit and the SWPPP to protect surface water quality.
Hydrology and Water Quality	Utilize low impact development techniques, such as permeable pavements, to the extent practicable, during the cemetery expansion design.
	Control soil erosion and sedimentation impacts during construction by complying with the NPDES permit and the SWPPP.
	Maintain a minimum 100-foot-wide undisturbed buffer between the cemetery development and the unnamed tributary to Jenkins Creek in the northeastern portion of the Site.
	Design improvements in accordance with the requirements of Energy Independence and Security Act Section 438 with respect to stormwater runoff quantity and characteristics.
	Ensure the Phase 3 cemetery design includes sufficient on-site stormwater management so as not to adversely affect the water quantity/quality in receiving waters and/or offsite areas. Design the stormwater management system in accordance with applicable regulations.
Wildlife and Habitat	Conduct vegetation clearing outside the olive-sided flycatcher, rufous hummingbird, and western screech-owl nesting season (March through August). If vegetation clearing cannot be conducted outside of the nesting season, a qualified biologist would survey the Site for active nests prior to clearing. Active nests would not be disturbed until the eggs have incubated and the young birds have fledged.
	Maintain a minimum 100-foot-wide buffer of undisturbed land between the cemetery development and the tributary to Jenkins Creek.
	Native species should be used to the extent practicable when re-vegetating land disturbed by construction to avoid the potential introduction of non-native or invasive species.

Technical Resource Area	Measure
Noise	Limit, to the extent possible, construction and associated heavy truck traffic to occur between 7:00 a.m. and 7:00 p.m. Monday through Friday, or during normal, weekday, work hours.
	Comply with the King County noise regulations.
	Locate stationary operating equipment as far away from sensitive receptors as possible.
	Shut down noise-generating heavy equipment when it is not needed.
	Maintain equipment per manufacturer's recommendations to minimize noise generation.
	Encourage construction personnel to operate equipment in the quietest manner practicable (such as speed restrictions, retarder brake restrictions, and engine speed restrictions).
Land Use	None required.
Wetlands, Floodplains, and Coastal Zone Management	Ensure that the Phase 3 cemetery expansion design avoids all delineated wetland areas.
	Maintain green space buffer areas between the delineated wetlands and the development areas. Ensure all buffers are staked and protected to prevent disturbance during construction.
	Coordinate with WSDE, as necessary, to ensure the Proposed Action is consistent with the Washington's Coastal Zone Management Program.
Socioeconomics	Secure construction areas to prevent unauthorized access by children from nearby residential areas.
Community Services	None required.
Solid Waste and Hazardous Materials	Complete an asbestos survey for cemetery structures to be renovated. Remove asbestos containing materials that would be disturbed by renovation in accordance with the federal and state requirements prior to renovation.
	Comply with applicable federal and state laws governing the use, generation, storage, transportation, and disposal of solid waste and hazardous materials.

Technical Resource Area	Measure
Transportation and Parking	Ensure cemetery construction activities do not adversely affect traffic flow on local roadways; construction traffic would be timed to avoid peak travel hours.
	Ensure debris and/or soil is not deposited on local roadways during the construction activities.
Utilities	Contact the utility providers to determine the connection/extension requirements and implement the necessary requirements.
	Adhere to Washington State Department of Health guidelines for the design and installation of septic systems associated with the satellite restroom and honor guard buildings, to the extent practicable.
	Plant low moisture tolerant species suited to the region, to the extent practicable, to minimize irrigation needs.
Environmental Justice	None required.

5.0 PUBLIC PARTICIPATION

VA invites public participation in decision-making on new proposals through the NEPA process. Public participation with respect to decision-making on the Proposed Action is guided by 38 CFR Part 26, VA's regulations for implementing NEPA. Additional guidance is provided in *VA's NEPA Interim Guidance for Projects* (U.S. Department of Veterans Affairs 2010). Consideration of the views and information of all interested persons promotes open communication and enables better decision-making. Members of the public with a potential interest in the Proposed Action are encouraged to participate. A record of the public involvement associated with this EA is provided in Appendix G.

5.1 Scoping

VA initiated the NEPA public scoping process for the Proposed Action in July 2021, which included a public notice published in the Seattle Times on July 4 and 6, 2021. No public comments or input were received in response to the scoping notice.

5.2 Public Review

VA published and distributed the Draft EA for a 30-day public comment period as announced by a Notice of Availability (NOA) published in the Seattle Times on March 24 and 27, 2022. The Draft EA was made available for public review on the VA Office of Construction and Facilities Management Environmental Program website (https://www.cfm.va.gov/environmental/index.asp). VA also emailed notification of the Draft EA for review and comment, with a link to the Draft EA on VA's website, to each of the government agencies and Tribes that were contacted during the NEPA scoping and Section 106 consultation. WSDE and WDFW provided comments on the Draft EA (Appendix G). Public and government agency comments regarding the Draft EA are summarized below. Responses to the comments are integrated into the Final EA, as applicable.

Agency Comments on Draft EA		
Comment	**Response**	**Section**
Hydrology and Water Quality		
WSDE stated that the cemetery is located within the Soos Creek watershed and the waters of Soos Creek do not meet state water quality standards for temperature, dissolved oxygen, bacteria levels, or the health of aquatic insects. WSDE indicated that they are studying these problems through TMDL studies and a TMDL that is being developed will include recommendations for improved riparian buffer vegetation along the streams within the watershed. WSDE commented that the Proposed Action presents an opportunity to preserve valuable mature streamside vegetation and encouraged VA to take care to retain riparian buffer trees to protect Jenkins Creek. WSDE noted the Draft EA did not specify the riparian buffer width the would be maintained between the cemetery expansion area and the tributary to Jenkins Creek and recommended a 100-foot buffer along the tributary.	Additional information regarding the Soos Creek watershed and WSDE's planned TMDL recommendations has been added to Section 3.7. At the time of the Draft EA, only the initial schematic design for the Phase 3 expansion had been completed. VA will include WSDE's recommended 100-foot-wide undisturbed buffer along the tributary to Jenkins Creek in the final Phase 3 cemetery expansion design.	3.7
WSDE stated that a fine sediment TMDL is being developed to address general stream health. WDSE noted that studies of the Soos Creek watershed have found that high-peak flows associated with stormwater runoff increase sediment loads in stream channels. WSDE noted that the Draft EA stated VA would mitigate changes in the drainage patterns by building a stormwater retention system and WSDE stated that the King County Stormwater Design Manual guidelines should be followed. WSDE also encouraged VA to maximize the integration of existing mature trees into the cemetery expansion design to minimize the impact on stream health and allow remaining mature trees to continue reducing stormwater runoff impacts.	As noted in Sections 3.6 and 3.7, VA would design the cemetery, obtain required permits, and implement construction BMPs to minimize short-term and long-term erosion and sedimentation impacts associated with the Proposed Action. VA will include WSDE's recommended 100-foot-wide undisturbed buffer along the tributary to Jenkins Creek in the final Phase 3 cemetery expansion design, which would further reduce stormwater runoff impacts. In addition, the cemetery design would avoid wetland areas and maintain some wooded areas, further enhancing water quality.	3.6 and 3.7

Agency Comments on Draft EA		
Comment	**Response**	**Section**
Hydrology and Water Quality		
WDFW stated that the stream classification for the intermittent tributary to Jenkins Creek identified in the Draft EA (described as likely Class 3) is incorrect and provided a WDFW Fish Passage and Diversion Screening Inventory Report for the tributary. WDFW stated that under Washington State code and local code, the tributary is considered fish habitat with potential coho and steelhead habitat. WDFW noted the tributary goes dry for part of the year; however, includes wetlands and ponds upstream and downstream. WSDE also expressed concern regarding the classification of the intermittent tributary to Jenkins Creek within the Draft EA, as WDFW classifies the stream as accessible to salmonids, and reiterated their recommended 100-foot buffer width for the intermittent tributary.	The Draft EA noted the intermittent tributary, which is depicted on the King County Sensitive Areas Map as unclassified, would be likely be considered Class 3 because it is intermittent. With the input provided regarding its consideration as potential salmonid habitat, Section 3.7 has been modified to eliminate the presumptive Class 3 classification. VA will include the 100-feet-wide buffer recommendation for the tributary in the final design for the Phase 3 cemetery expansion.	3.7
Wildlife and Habitat		
WSDE stated that Table 3-1 of the Draft EA includes bull trout (listed as threatened under the ESA), but omits fall chinook salmon (also listed as threatened under the ESA).	Table 3-1 is based on the USFWS IPaC report for the Site area; the IPaC report does not include the fall chinook as a species of concern for the Site area. The WDFW Fish Passage and Diversion Screening Inventory Report does not identify chinook salmon as a Priority Index species for the tributary to Jenkins Creek. In addition, spawning habitat for chinook salmon (gravel bottoms of large streams and rivers) is not present at the Site. The 100-foot-wide undeveloped buffer along the tributary to Jenkins Creek would protect water quality within the tributary and downstream surface waters that may be used by salmonids.	3.8

Agency Comments on Draft EA		
Comment	**Response**	**Section**
Floodplains		
WSDE stated the Draft EA concludes the Proposed Action would not take place in the floodplain of the Jenkins Creek tributary, but the determination was made in the absence of a floodplain assessment.	FEMA floodplain mapping information (provided in Section 3.11) indicates the entire Tahoma National Cemetery property and all of the surrounding properties are not located within the 100-year or 500-year floodplain (Zone X). The tributary to Jenkins Creek is a small, intermittent, sloping stream that flows through a well-defined valley within the 43-acre Site. Based on these characteristics, the tributary is not likely to exhibit notable flooding. During the proposed Phase 3 cemetery expansion, no development would occur within 100 feet of the ordinary high-water level of the creek. Based on the Site topography, the cemetery development would be at least 5 to 10 feet higher in elevation than the creek. Therefore, the Proposed Action is not anticipated to affect floodplains or flood hazards.	3.11

6.0 AGENCIES AND PERSONS CONSULTED

6.1 Agency Coordination

Agencies consulted for this EA include:

- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- U.S. Department of Transportation
- U.S. Department of Agriculture Natural Resource Conservation Service
- Washington State Department of Ecology - Northwest Region
- Washington State Department of Ecology - Air Quality
- Washington State Department of Ecology - Environmental Assessment Program
- Washington State Department of Ecology - Hazardous Waste and Toxics Reduction
- Washington State Department of Ecology - Shorelands and Environmental Assistance
- Washington State Department of Ecology - Solid Waste Program
- Washington State Department of Ecology - Spill Prevention, Preparedness, and Response
- Washington State Department of Ecology - Toxic Cleanup Program
- Washington State Department of Ecology - Water Quality Program
- Washington State Department of Ecology - Water Resources Program
- Washington Department of Natural Resources - Shoreline District
- Washington Department of Natural Resources – South Puget Sound Region
- Washington Department of Natural Resources - Natural Heritage Program
- Washington Department of Fish and Wildlife - North Puget Sound
- Washington State Department of Transportation - Northwest Region
- King County Conservation District
- King County Executive Office
- King County Department of Natural Resources and Parks
- King County Local Services

VA initiated the agency scoping process for the Proposed Action in June and July 2021, which included emailing the agencies scoping letters with a request for information and comment based on the available information regarding the Proposed Action.

VA received responses from the USEPA and Washington Department of Natural Resources – Natural Heritage Program. Input provided by these agencies is addressed in the appropriate resource sub-sections of Section 3. Written correspondence from the agencies is provided in Appendix B. The following summarizes that input, which VA used to focus this EA's analysis:

- **USEPA** provided comments for VA's use in the preparation of the Draft EA, including recommendations for the impacts analysis, public outreach, coordination with Native American Tribes, and NHPA Section 106 consultation. USEPA recommended the Draft EA thoroughly analyze the scope of potential alternatives and environmental impacts, including mitigation measures to avoid, minimize

and compensate for those impacts. USEPA recommended the Draft EA analyze the following resource areas:

- Water quality, aquatic resources, surface waters, wetlands, stormwater, and waters of the U.S. (discussed in Sections 3.6, 3.7, and 3.11).
- Air quality impacts, ambient air conditions, mitigation measures, NAAQS criteria pollutants, and greenhouse gas emissions (discussed in Section 3.4).
- Threatened and endangered species (discussed in Section 3.8).
- Indirect and cumulative impacts (discussed in Section 3.18).
- Greenhouse gas emissions (discussed in Section 3.4).
- Environmental justice (discussed in Section 3.17).

- **Washington Department of Natural Resources – Natural Heritage Program** indicated there are no records for rare plants, rare nonvascular species, or rare/high-quality ecological communities in the vicinity of the Phase 3 expansion area.

6.2 National Historic Preservation Act Section 106 Consultation

On November 23, 2021, VA initiated NHPA Section 106 consultation with the Advisory Council on Historic Preservation, Washington Department of Archaeology and Historic Preservation (WA SHPO), King County Historic Preservation, Washington Trust for Historic Preservation, and federally recognized Native American Tribes with geographic or cultural affiliation with the Site area. The Section 106 consultation letters included a description of VA's proposed undertaking (Proposed Action), definition of the area of potential effects (APE), identification of historic properties (the results of the CARS and Phase I archaeological survey), and VA's finding of effects on historic properties (no adverse effect).

WA SHPO concurred with VA's findings and No Adverse Effect determination on December 14, 2021.

Written Section 106 correspondence with the consulting parties is provided in Appendix C.

6.3 Native American Consultation

VA initiated consultation with seven federally-recognized Native American Tribes as part of this NEPA process, in accordance with 36 CFR 800.2 and Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, November 2000. These Tribes, identified as having possible geographic or cultural affiliation with the Site area, were invited by VA to participate in the Section 106 process on November 23, 2021. Tribes consulted include:

- Confederated Tribes and Bands of the Yakama Nation
- Confederated Tribes of the Warm Springs Reservation of Oregon
- Muckleshoot Indian Tribe
- Puyallup Tribe of the Puyallup Reservation
- Snoqualmie Indian Tribe
- Stillaguamish Tribe of Indians of Washington
- Suquamish Indian Tribe of the Port Madison Reservation

No Native American Tribal responses have been received by VA. Written Section 106 correspondence with Tribes is provided in Appendix C.

7.0 LIST OF PREPARERS

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8.0 REFERENCES

Association of Natural Burials, 2011 and 2012.

Clean Air Act of 1970 (42 U.S. Code [USC] 7401 et. seq.; 40 CFR Parts 50-87) Section 176(c).

Clean Water Act (Federal Water Pollution Control Act) of 1948, as amended (1972, 1977) (33 USC 1251 *et seq*.); Sections 401 and 404.

Council on Environmental Quality. 40 CFR Parts 1500-1508, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA).

Cultural and Archaeological Resource Survey/Background Research for the Tahoma National Cemetery Phase 3 Expansion, 18600 SE 240th Street, King County, Washington, prepared by Row 10 Historical Preservation Solutions, LLC and dated July 2021.

Cultural Resources Assessment for the Tahoma National Cemetery Expansion (Phase 3), King County, Washington, prepared by Environmental Research Group, LLC and dated October 2021.

Department Of Veterans Affairs 1998. Environmental Compliance Manual. Last Updated July 1998.

Environmental Impact Statement for a National Cemetery to Serve the Seattle-Tacoma Area, prepared by VA and dated November 1991.

Farmland Protection Policy Act (FFPA) (7 USC 4201, et seq.), 1994.

Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map No. 53033C1015G, dated August 19, 2008.

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King County, Washington, 2021.

King County Conservation District, 2021.

Phase I Environmental Site Assessment for the Tahoma National Cemetery Phase 3 Expansion, 18600 SE 240th Street, King County, Washington, prepared by TTL Associates, Inc. and dated July 2021.

SD1 Submittal Tahoma National Cemetery Phase 3 Development, 18600 SE 240th Street, Kent, Washington 98042, prepared by Anderson and dated January 2022.

U.S. Army Corps of Engineers, 2021.

U.S. Department of Commerce Bureau of Economic Analysis, 2020.

U.S. Census Bureau. 2010.

U.S. Department of Agriculture, Natural Resources Conservation Service Web Soil Survey, 2021.

U.S. Environmental Protection Agency (USEPA), 2021.

U.S. Environmental Protection Agency (USEPA) National Ambient Air Quality Standards (NAAQS). 2008.

USEPA's Total Maximum Daily Loads (TMDL) Report (USEPA 2006, Total Maximum Daily Loads, Section 303[d] List).

U.S. Fish and Wildlife Service (USFWS), 2021.

USFWS National Wetlands Inventory Online Mapper, 2021.

Utility Report for the Tahoma National Cemetery Phase 3 Expansion, 18600 SE 240th Street, King County, Washington, prepared by Calibre Engineering and dated September 2021.

Washington State Department of Ecology, 2021.

Washington State Department of Natural Resources, 2021.

Washington State Department of Transportation, 2021.

Wetlands Determination/Delineation for the Tahoma National Cemetery Phase 3 Expansion, 18600 SE 240th Street, King County, Washington, prepared TTL Associates, Inc. and dated January 2022.

Other internet searches and data (accessed May 2021 – January 2022):

King County: https://kingcounty.gov/

Washington Department of Ecology: https://ecology.wa.gov/

Washington Department of Natural Resources: https://www.dnr.wa.gov/

Washington Department of Transportation: https://www.dot.state.nm.us/content/nmdot/en.html

US Army Corps of Engineers: http://www.usace.army.mil

National Wetlands Inventory: https://www.fws.gov/wetlands/Data/mapper.html

FEMA Flood Hazard Insurance Map: http://msc.fema.gov/portal

US Bureau of Census (2010 US Census Data): http://www.census.gov

USDA NRCS Web Soil Survey: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

US Environmental Protection Agency: https://www.epa.gov

US Fish and Wildlife Service: https://www.fws.gov

US Geological Survey: https://store.usgs.gov/map-locator

Various mapping tools: www.maps.google.com, www.google.earth.com, etc.

9.0 GLOSSARY

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

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

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

Ambient Air Quality Standards - Those standards established under the Clean Air Act to protect health and welfare.

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

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

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

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

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

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

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

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

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

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

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

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

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

Emission - A release of a pollutant.

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

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

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

Agricultural land - Cropland, pastures, meadows, and planted woodland.

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

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

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

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

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

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

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

Any substance designated pursuant to section 311 (b)(2)(A) of the Clean Water Act.

Any element, compound, mixture, solution, or substance designated pursuant to Section 102 of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Any hazardous substance as defined under the Resource Conservation and Recovery Act (RCRA).

Any toxic pollutant listed under TSCA.

Any hazardous air pollutant listed under Section 112 of the Clean Air Act.

Any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to Subsection 7 of TSCA.

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

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

Hazardous Waste Storage - As defined in 40 CFR 260.10, ". . . the holding of hazardous waste for a

temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere".

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

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

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

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

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

Listed Species - Any plant or animal designated by a state or the federal government as threatened, endangered, special concern, or candidate species.

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

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

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

National Ambient Air Quality Standards (NAAQS) - Nationwide standards set up by the USEPA for widespread air pollutants, as required by Section 109 of the Clean Air Act. Currently, six pollutants are regulated by primary and secondary NAAQS: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide.

National Environmental Policy Act (NEPA) - U.S. statute that requires all federal agencies to consider the potential effects of major federal actions on the human and natural environment.

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

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

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

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

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

Potable Water - Water which is suitable for drinking.

Prime Agricultural land - A special category of highly productive cropland that is recognized and described by the U.S. Department of Agriculture's Natural Resource Conservation Service and receives special protection under the Surface Mining Law.

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

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

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

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

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

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

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

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

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

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

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

Waters of the United States - Include the following: Territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters.

Watershed - The region draining into a particular stream, river, or entire river system.

Wetlands - Areas that are regularly saturated by surface or groundwater and, thus, are characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include swamps, bogs, fens, marshes, and estuaries.

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