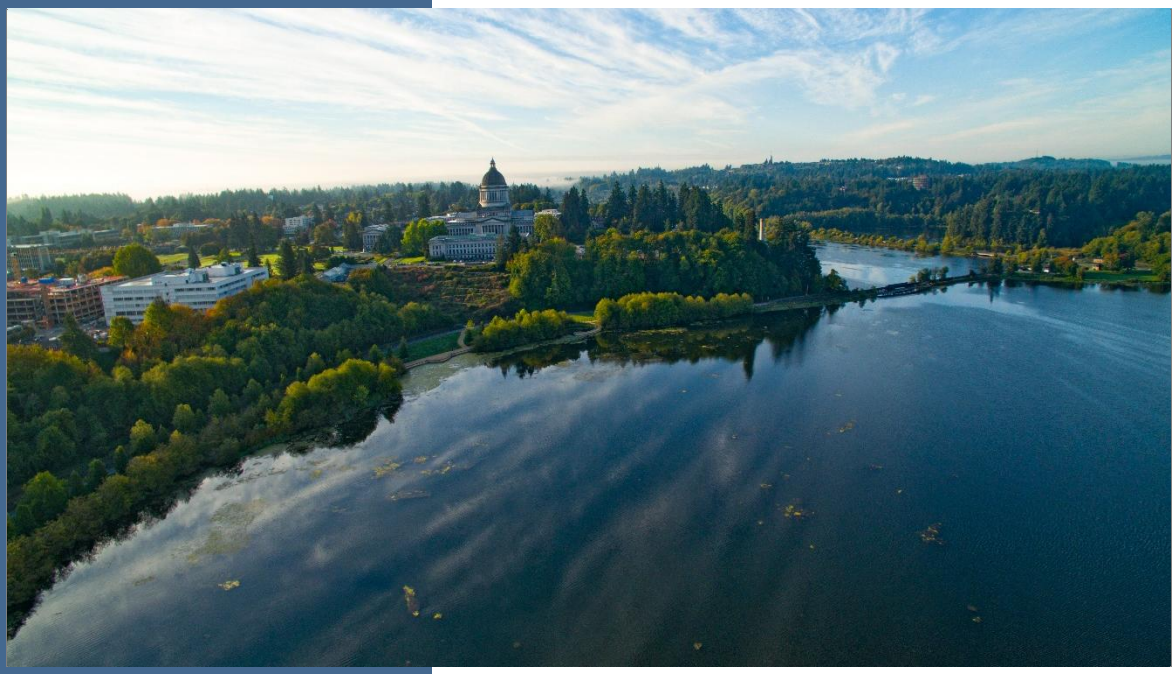

State Environmental Policy Act Draft Supplemental Environmental Impact Statement

Deschutes Estuary Restoration Project

Washington Department of Ecology
Southwest Regional Office
Olympia, Washington

Washington Department of Enterprise Services
Olympia, Washington

October 2026, Publication 26-06-023

WASHINGTON STATE DEPARTMENT OF ECOLOGY
with the Department of Enterprise Services
DESCHUTES ESTUARY
Restoration Project

Publication Information

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To request an ADA accommodation, email lynn.turner@ecy.wa.gov, call 564-250-7417, or call Ecology through the Washington Telecommunication Relay for services including text telephone (TTY) at 711 or through your preferred relay service provider. Visit ecology.wa.gov/ADA for more accessibility information.

STATE OF WASHINGTON

October 9, 2026

Dear Interested Parties and Tribes, Jurisdictions, and Agencies:

Washington Department of Ecology (Ecology) and the Washington Department of Enterprise Services (DES) are issuing this Draft Supplemental Environmental Impact Statement (SEIS) for the proposed Deschutes Estuary Restoration Project. Washington State is proposing to restore 260 acres of estuarine and salt marsh habitat at the mouth of the Deschutes River, at the southern end of Puget Sound. The Project is being implemented to restore estuarine and salt marsh habitat in the historic Deschutes Estuary (present-day Capitol Lake) as a long-term management approach for the water body to address a range of existing environmental impairments.

The Draft SEIS has been prepared to satisfy the requirements of the Washington State Environmental Policy Act (SEPA). The Project was previously reviewed under SEPA in the Capitol Lake – Deschutes Estuary Long-Term Management Final Environmental Impact Statement (EIS) (DES 2022).

This Draft SEIS adopts and supplements the prior 2022 Final EIS, considering updated Project design information. The updated Project design evaluated in this Draft SEIS originated from the preliminary Estuary Alternative concept evaluated in the previous SEPA document. The Estuary Alternative was identified as the Preferred Alternative in the 2022 Final EIS and was subsequently selected for implementation (as the Project). Project design and planning have progressed since publication of the 2022 Final EIS and resulted in a number of changes and refinements.

The Draft SEIS evaluates the probable significant environmental impacts associated with construction and operation of the updated Project design and its contribution to cumulative environmental impacts. The Draft SEIS also considers mitigation measures to eliminate or reduce adverse impacts. In addition to the updated Project design alternative, the Draft SEIS evaluates a No Action Alternative as required by SEPA.

The following resource areas are evaluated in the Draft SEIS:

Fish and Wildlife	Air Quality
Land Use, Shorelines, and Recreation	Cultural Resources
Visual Resources	Tribal Resources
Transportation	Environmental Justice

Impacts to cultural resources and Tribal resources will continue to be determined through ongoing government-to-government consultation.

This Draft SEIS is issued jointly by Ecology and DES as co-lead agencies pursuant to WAC 197-11-926 and WAC 197-11-944. Ecology is acting as the Nominal Lead Agency responsible for procedural requirements and administration of the public comment process.

Comments on this Draft SEIS will be accepted during a 30-day comment period that begins October 9, 2026. Comments will be accepted until 11:59 p.m. on November 9, 2026. Comments should focus on the substance of the Draft SEIS and be as specific as possible. This could include comments on the adequacy of the SEIS, methodology used, mitigation measures proposed, or additional information that should be considered. Comments may be submitted in the following ways:

By mail to:

SEPA Draft SEIS for the Deschutes Estuary Restoration Project
Washington Department of Ecology
c/o Bobbak Talebi, Southwest Region Office
P.O. Box 47775
Olympia, WA 98504-7775

Electronic submittal:

Complete an online comment form at:
https://ecology.commentinput.com/?id=buGTA658B

In person at a public hearing:

Wednesday October 28, 2026
5:30 – 9:30 p.m.
The Olympia Center
222 Columbia St. NW
Olympia, WA 98501

Virtually during an online public hearing:

Tuesday November 3, 2026
5:30 p.m.
Log-in information for the online meeting is available on the Project website at:
https://deschutesestuaryproject.org/meetings/

Comments received on the Draft SEIS during the comment period will be compiled and reviewed. Substantive comments will be considered by Ecology and DES in the preparation of the Final SEIS. Ecology and DES anticipate the Final SEIS will be published in 2027. The Final SEIS may be used by agencies to inform permit decisions for the Project.

Questions about the Draft SEIS may be directed to: Lynn Turner at lynn.turner@ecy.wa.gov or 564-250-7417.

Sincerely,

Bobbak Talebi, Southwest Region Director
SEPA Responsible Official
Washington Department of Ecology

Ben Swanson, Assistant Program Manager – Planning & Project Delivery
SEPA Responsible Official
Washington Department of Enterprise Services

Fact Sheet

Proposed Project Title

Deschutes Estuary Restoration Project

Description of Proposed Project and Alternatives

Washington State is proposing to restore 260 acres of estuarine and salt marsh habitat at the mouth of the Deschutes River.

Recent related environmental review to satisfy the requirements of the State Environmental Policy Act (SEPA) was documented in the 2022 Capitol Lake – Deschutes Estuary Long-Term Management Final Environmental Impact Statement (EIS).[1] The updated Project design evaluated in this Draft Supplemental EIS (SEIS) originated from the preliminary Estuary Alternative concept evaluated in the previous SEPA document. The Estuary Alternative was identified as the Preferred Alternative in the 2022 Final EIS (DES 2022) and was subsequently selected for implementation (as the Project). Project design and planning have progressed since publication of the 2022 Final EIS and resulted in a number of Project changes and refinements.

The habitat design approach has been modified since the 2022 Final EIS was published. The Project now focuses on creation of habitat areas along the shorelines of the North and Middle Basins (instead of creation of habitat islands). The habitat design objective remains the same, which is to restore a mix of coastal wetland habitat zones across the aquatic-to-terrestrial gradient.

The method of habitat construction has also been updated since the 2022 Final EIS. Instead of sheetpile, the Project would utilize geotextile tubes (geotubes) to create containment areas along the shorelines where dredged material would be pumped to allow solids to settle out, water to drain off, and the material to dry. Imported, natural mix of unprocessed gravel would be trucked to shoreline staging and pumping locations, where it would be emptied into hoppers and pumped into the geotubes. Use of imported gravel would increase the number of truck trips required for construction. To accommodate construction vehicles and additional trucks, Deschutes Parkway north of Lakeridge Drive would be closed for up to 3 years.

The alignment and configuration of the new 5th Avenue Bridge have been refined and the Marathon Park Utility and Pedestrian Bridge would be replaced. At Heritage Park, the shoreline habitat would be constructed to raise the existing shoreline elevation by approximately 3 to 4 feet. This “habitat berm” satisfies a key element of the City of Olympia’s Sea Level Rise Resiliency Plan by addressing a primary flooding pathway into downtown. An earthen berm would be constructed at the Tumwater Historic Brewery, also to provide flood resiliency.

[1] https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202205474

Project design updates include a number of other infrastructure and utility design refinements and refinements to the design and extent of recreational elements. In addition, since the publication of the Final EIS, the State has hired a General Contractor/Construction Manager (Contractor). As a result, construction means and methods have been further developed and refined, providing a higher level of certainty regarding the construction approach.

The Deschutes Estuary Restoration Project SEIS is limited to new analysis of the updated Project design, supplementing the 2022 Final EIS. The SEIS also evaluates the No Action Alternative, wherein the proposed Project would not be advanced.

Location

The proposed Project is located at the mouth of the Deschutes River, at the southern end of Puget Sound, along the shorelines of the cities of Olympia and Tumwater, within the Usual and Accustomed Fishing Grounds and Stations of the Squaxin Island Tribe and at the base of the Washington State Capitol Campus. The Project area encompasses the 260-acre Capitol Lake and adjoining shoreline areas. Capitol Lake stretches from the base of Tumwater Falls in Tumwater to the 5th Avenue Dam in Olympia. The lake is divided into three basins: the South Basin, Middle Basin, and North Basin. Additionally, the Project area includes a small portion of West Bay of Budd Inlet, located north of the 5th Avenue Dam, where dam removal and channel deepening activities would occur.

Capitol Lake is part of the historic estuary of the Deschutes River. This area was the homeland of the Steh-Chass. Steh-Chass reference both the pre-colonization inlet and the Squaxin band that lived there. These waters are a portion of the usual and accustomed treaty territory and traditionally the domain of the Indigenous bands that form the modern-day, federally recognized Squaxin Island Tribe.

Project Proponent

Washington Department of Ecology

Proposed Date of Implementation

The State plans to begin construction in 2028, with project completion in 2034, if permitted.

Lead Agency

Washington Department of Ecology – Nominal SEPA Lead Agency

Washington Department of Enterprise Services – SEPA Co-lead Agency

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Required Permits, Licenses, and Approvals

Federal

- Clean Water Act Section 404/10 Permit (U.S. Army Corps of Engineers)
- Rivers & Harbors Act Section 408 Authorization (U.S. Army Corps of Engineers)
- Endangered Species Act Consultation (National Marine Fisheries Service, U.S. Fish and Wildlife Service)
- National Historic Preservation Act Section 106 Consultation (U.S. Army Corps of Engineers)
- Letter of Map Revision, Conditional Letter of Map Revision, or Physical Map Revision (Federal Emergency Management Agency)
- Advance Approval Authorization or Bridge Permit (U.S. Coast Guard)

Tribal

Federal consultations under Section 106 of the National Historic Preservation Act, and Section 7 of the Endangered Species Act

Washington State

- Aquatic Lands Lease (Washington Department of Natural Resources)
- Coastal Zone Management Program Consistency (Ecology)
- Dam Removal Permit (Ecology)
- National Pollutant Discharge Elimination System Construction Stormwater Permit (Ecology)
- Section 401 Clean Water Act Water Quality Certification (Ecology)
- Shoreline Conditional Use and Variance Permit (Ecology)
- Hydraulic Project Approval (Washington Department of Fish and Wildlife)
- Fish Transport Permit (Washington Department of Fish and Wildlife)
- General Permit (Washington State Department of Transportation)

Local

- Shoreline Substantial Development Permit (City of Tumwater)
- Shoreline Conditional Use or Variance Permit (City of Olympia)
- Floodplain Development Permit (City of Olympia and City of Tumwater)
- Critical areas review (City of Olympia and City of Tumwater)
- Local Land Use and Development Permits (City of Olympia and City of Tumwater)
- Local Construction Permits (City of Olympia and City of Tumwater)
- Right-of-Way Use Permit (City of Olympia and City of Tumwater)

Authors and Principal Contributors

This document has been prepared under the direction of Ecology and DES. All chapters and appendices have been prepared for and approved by Ecology and DES. Key authors and principal contributors to the analyses are listed below.

Table 1. SEIS Authors and Principal Contributors

Key Authors and Principal Contributors	Topic(s)
Floyd|Snider	Fish and Wildlife; Land Use, Shorelines, and Recreation; Visual Resources; Transportation; Air Quality; Cultural Resources; Tribal Resources; Environmental Justice; Cumulative Impacts
Environmental Science Associates	Cultural Resources (Archaeological Resources); Air Emissions; Greenhouse Gases
Northwest Vernacular	Cultural Resources (Historic Built Environment Resources)
Heffron Transportation	Transportation
KPFF Consulting Engineers	Design/technical input
KOJV	Technical input
Moffatt & Nichol	Hydrologic and hydraulic modeling
Washington Department of Ecology	Review and oversight of all SEIS sections
Washington Department of Enterprise Services	Review and oversight of all SEIS sections
Washington Department of Fish and Wildlife	Review of Fish and Wildlife; Land Use, Shorelines, and Recreation; Cumulative Impacts
Washington Department of Natural Resources	Review of Land Use, Shorelines and Recreation; Fish and Wildlife; Cultural Resources; Environmental Justice; Cumulative Impacts
Washington State Department of Archaeology and Historic Preservation	Review of Cultural Resources; Tribal Resources
Squaxin Island Tribe	Review of Cultural Resources; Tribal Resources

Date of Draft SEIS Issuance

October 9, 2026

Date Comments are Due

November 9, 2026 (until 11:59 p.m.)

Public Comment and Hearings on Draft SEIS

Comments on this Draft SEIS will be accepted during a 30-day comment period that begins October 9, 2026. Comments will be accepted until 11:59 p.m. on November 9, 2026. Comments should focus on the substance of the Draft SEIS and be as specific as possible. This could include comments on the adequacy of the Draft SEIS, methodology used, mitigation measures proposed, or additional information that should be considered. Comments may be submitted in the following ways:

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c/o Bobbak Talebi, Southwest Region Office
P.O. Box 47775
Olympia, WA 98504-7775

Electronic submittal:

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222 Columbia St. NW
Olympia, WA 98501

Virtually during an online public hearing:

Tuesday November 3, 2026
5:30 p.m.
Log-in information for the online meeting is available on the project website at:
https://deschutesestuaryproject.org/meetings/

Date Final Action is Planned by Lead Agencies

A Final SEIS is estimated to be completed in 2027.

Document Availability

The Draft SEIS is posted on the following websites:

SEPA Register at
https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202604136

Project website at https://ecology.wa.gov/ecologys-work-near-you/regional-work/southwest-region/deschutes-estuary-restoration

The document is also available at the following locations:

Washington Department of Ecology

Washington Department of Ecology, Southwest Region Office
300 Desmond Drive SE
Lacey, WA 98503

Local Libraries

Washington State Library
6880 Capitol Blvd SE, Tumwater, WA 98501
360-704-5200

West Olympia Timberland Library
625 Black Lake Blvd SW, Olympia, WA 98502
360-764-4440

Olympia Timberland Library
313 8th Avenue SE, Olympia, WA, 98501
360-352-0595

Lacey Timberland Library
500 College St SE, Lacey, WA 98503
360-491-3860

Tumwater Timberland Library
7023 New Market Street, Tumwater, WA, 98501
360-943-7790

Location of Background Materials

2022 Capitol Lake – Deschutes Estuary Final EIS is available at:
https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202205474

Reports and background data for the Deschutes Estuary Restoration Project used for the Draft SEIS are available at: https://deschutesestuaryproject.org/library/

Cost of Copy of Draft SEIS

To obtain a CD or printed copy of the Draft SEIS (for the cost of production), follow the instructions provided at: https://ecology.wa.gov/footer-pages/online-tools-publications/publications-forms

State Environmental Policy Act
Draft
Supplemental Environmental Impact Statement

Deschutes Estuary
Restoration Project

Washington Department of Ecology
Southwest Regional Office
Olympia, WA

Washington Department of Enterprise Services
Olympia, WA

October 2026 | Publication 26-06-023

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List of Abbreviations

Abbreviation	Definition
ADA	Americans with Disabilities Act
BMP	best management practice
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
Contractor	General Contractor/Construction Manager
CTMP	Construction Traffic Management Plan
CY	cubic yards
DAHP	Washington State Department of Archaeology and Historic Preservation
dB	decibels
dBA	A-weighted decibels
dBA Leq	A-weighted equivalent continuous sound level
DES	Washington Department of Enterprise Services
DNR	Washington State Department of Natural Resources
Ecology	Washington Department of Ecology
EIS	Environmental Impact Statement

Abbreviation	Definition
geotubes	geotextile tubes
GHG	greenhouse gas
LOS	level of service
N_2O	nitrous oxide
NAVD 88	North American Vertical Datum of 1988
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NO_x	nitrogen oxides
NRHP	National Register of Historic Places
OYLO	Olympia & Belmore Railroad
PM_{10}	inhalable coarse particulate matter
$PM_{2.5}$	fine particulate matter
Port	Port of Olympia
Project	Deschutes Estuary Restoration Project
RCW	Revised Code of Washington
SEIS	Supplemental Environmental Impact Statement
SEPA	State Environmental Policy Act
SHPO	State Historic Preservation Office
SMP	Shoreline Master Program
SO_2	sulfur dioxide
TCP	traditional cultural place
THPO	Tribal Historic Preservation Office
TMDL	Total Maximum Daily Load
TRPC	Thurston Regional Planning Council
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
VdB	vibration decibels
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WISAARD	Washington Information System for Architectural and Archaeological Records Data
WSDOT	Washington State Department of Transportation

1.0 Introduction and Summary

1.1 Introduction

The Deschutes Estuary Restoration Project (Project) is proposed to restore estuarine and salt marsh habitat in the historic Deschutes Estuary (present-day Capitol Lake) as the long-term management approach for this water body. The Project is located within the cities of Olympia and Tumwater and at the base of the State Capitol Campus. The Washington Department of Ecology (Ecology) and Washington Department of Enterprise Services (DES) prepared this Supplemental Environmental Impact Statement (SEIS) to meet the requirements of the Washington State Environmental Policy Act (SEPA); Chapter 43.21C Revised Code of Washington [RCW]) and the SEPA Rules (Chapter 197.11 Washington Administrative Code [WAC]). Ecology and DES are SEPA co-lead Agencies for this SEIS.

On October 31, 2022, DES issued a Final Environmental Impact Statement (EIS) analyzing the probable significant adverse environmental impacts and proposed mitigation for long-term management of Capitol Lake – Deschutes Estuary. DES was the SEPA Lead Agency for the 2022 Final EIS and selected the Estuary Alternative as the long-term management approach that would best meet Project goals. This decision was made after careful consideration of a broad range of technical analyses conducted for the EIS, by asking for feedback from key stakeholders, and public comments. The selected alternative from the 2022 Final EIS (Estuary Alternative) is the Project that is the focus of this SEIS.

Ecology and DES are now issuing this SEIS with more information about the Project to meet SEPA requirements. The information provided in this SEIS and in the 2022 Final EIS are together the complete SEPA environmental review for the Project.

1.2 Purpose of This SEIS

The intent of this SEIS is to add new analysis to the following existing EIS document: Capitol Lake – Deschutes Estuary Long-Term Management Project Final EIS (DES 2022).

An EIS is required because Ecology and DES determined the Project would likely have significant adverse impacts on the environment. The EIS process is used to identify and analyze probable adverse environmental impacts and possible mitigation. Per Washington SEPA Rules in WAC 197-11-405(4), a SEIS should be prepared to supplement a previously prepared SEPA EIS if:

- There are substantial changes to a proposal such that the proposal has the potential to have significant adverse environmental impacts; or
- There is significant new information on a proposal's probable significant adverse impacts.

The environmental review provided in the 2022 Final EIS was based on planning-level design. In 2023, DES started a comprehensive design process for the Project. Ecology expects to complete 100% design in mid-2027. That process has developed a detailed design for and provided more

information related to estuary restoration. With this advancement, several areas of updated Project design have the potential to have new or increased significant adverse environmental impacts, which are the subject of this SEIS. This SEIS does not include an analysis of actions, alternatives, or impacts that were already analyzed in the 2022 Final EIS (WAC 197-11-620).

An EIS is not a permit or a decision to approve or deny a proposed project. Local and state agencies will use this SEIS, along with the prior-issued 2022 Final EIS and other information, to inform permitting decisions related to the Project.

1.3 Proposed Project

The Project would restore 260 acres of estuarine and salt marsh habitat at the mouth of the Deschutes River. Restoration of the Deschutes Estuary would improve ecological conditions, help achieve state water quality standards by restoring a natural estuary condition, improve climate resilience, and restore recreational boating and fishing in the water body. With the removal of the dam, tidal flow would be reintroduced within the Project area, which extends from the base of Tumwater Falls in Tumwater to the 5th Avenue Dam in Olympia.

1.4 Project Purpose and Objectives

The Project is being implemented to restore estuarine and salt marsh habitat in the historic Deschutes Estuary as a long-term management approach for the water body (present-day Capitol Lake).

The habitat restoration component of this Project has the following four primary goals:

- Restore ecological and physical processes to maximize ecosystem benefits and support a dynamic and self-sustaining ecosystem over the long term
- Create a resilient coastal wetland habitat for target species
- Restore the estuary in a manner that fosters cultural resilience and long-term stewardship
- Restore the estuary in a manner that promotes education and community use in ways compatible with the restored ecosystem

1.5 Project Location

The Project is located at the mouth of the Deschutes River, in South Puget Sound, along the shorelines of the cities of Olympia and Tumwater.

1.6 Alternatives Considered

This SEIS evaluates two alternatives:

- Updated Project Design
- No Action Alternative

The 2022 Final EIS evaluated four alternatives for the long-term management of Capitol Lake: the Estuary Alternative, Managed Lake Alternative, Hybrid Alternative, and No Action Alternative. The Estuary Alternative was selected for long-term management and includes removal of the 5th Avenue Dam to reintroduce tidal hydrology to the Capitol Lake Basin, returning the area to estuarine conditions where saltwater from Budd Inlet would mix with freshwater from the Deschutes River. The selected alternative from the 2022 Final EIS (Estuary Alternative) is the Project that is the focus of this SEIS. The updated Project design that is evaluated in this SEIS originated from the preliminary concept for the Estuary Alternative in the 2022 Final EIS.

Because the Managed Lake and Hybrid Alternatives were not selected for long-term management, they are not evaluated within this SEIS. As with the 2022 Final EIS, the No Action Alternative serves as a baseline to compare the Project and represents the future conditions of Capitol Lake if the Project is not implemented.

Detailed information on the Estuary Alternative contained in the 2022 Final EIS is not repeated here. Readers are encouraged to refer to the 2022 Final EIS: https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202205474

1.7 Project Updates Evaluated in This SEIS

Table 1.1 provides a summary of the design refinements and changes since publication of the 2022 Final EIS. The updated Project design focuses on cost efficiency while still achieving Project goals, per direction from the Governor's Office and the Washington State Legislature.

1.8 Supplemental Analysis Scope

This SEIS focuses on supplementing previous environmental review with additional analysis of the potential impacts associated with the updated Project design. Ecology and DES identified the proposed Project (the updated Project design) and the No Action Alternative for evaluation in this SEIS. The following elements of the environment are evaluated in this SEIS:

- Fish and Wildlife
- Land Use, Shorelines, and Recreation
- Visual Resources
- Transportation
- Air Quality
- Cultural Resources
- Tribal Resources
- Environmental Justice

1.9 Summary of Impacts and Mitigation

Tables 1.2 and 1.3 summarize the major environmental impact conclusions of the 2022 Final EIS for the elements of the environment that are also evaluated in this SEIS. The tables also summarize changes resulting from the updated Project design that are evaluated in this SEIS. The tables highlight revised impact determinations and any new or modified mitigation measures. The Project must comply with a variety of regulatory requirements for permits issued by the Cities of Olympia and Tumwater and state and federal agencies. It is expected that those requirements would reduce most of the potential Project impacts to a less-than-significant level. Potential mitigation measures summarized in the tables are those that are beyond what is required by applicable regulations.

Table 1.1 Summary of Project Design Refinements or Changes

Project Feature	Estuary Alternative (2022 Final EIS)	Updated Project Design
Habitat Design Approach	Habitat design was focused on construction of habitat islands. Temporary sheetpile containment areas would be used to create the habitat islands.	The updated Project design includes construction of edge habitat along the shoreline with some habitat islands. Geotextile tubes (geotubes) would be used instead of sheetpile containment to construct the shoreline habitat; gravel must be imported to the site to fill the geotubes.
New 5th Avenue Bridge	The new 5th Avenue Bridge design consisted of five 150-foot-long spans, resulting in a total length of approximately 750 feet. The new bridge would include vehicle lanes, bicycle lane, and sidewalk in each direction, with the sidewalk on the south side providing a dedicated recreational trail connection.	The new 5th Avenue Bridge would consist of three 177-foot-long spans, resulting in a total length of approximately 530 feet, an approximate 30% reduction in length compared to the planning-level design in the 2022 Final EIS. The bridge abutments would be located within the North Basin, and embankment fill would be placed between the abutments and existing shoreline to support the roadway approaches to the bridge. The new bridge design retains separated vehicle and bicycle lanes and sidewalks, and includes more pedestrian space and viewing opportunities as part of a multiuse path.
Heritage Park Sea Level Rise Resiliency Improvements (Heritage Park Berm)	At Heritage Park, the existing seawall separating the North Basin would be coated with epoxy. No berm for flood protection would be provided.	At Heritage Park, the shoreline habitat would be elevated by approximately 3 to 4 feet, to elevation 17 feet North American Vertical Datum of 1988 (NAVD 88), for flood protection and climate resiliency. The Heritage Park Berm satisfies a key element of the City of Olympia's Sea Level Rise Response Plan (City of Olympia et al. 2019) by eliminating a primary flooding pathway into downtown. Sheetpile would be installed along an approximately 1,500-linear-foot portion of the berm to support construction and reduce overall cost.
Tumwater Historic Brewery Flood Protection (Tumwater Brewery Berm)	No flood protection berm was included.	Flood protection berm (Tumwater Brewery Berm) would be constructed at the Tumwater Historic Brewery, across from Tumwater Historical Park, within the South Basin.
Marathon Park Utility and Pedestrian Bridge Replacement	The existing bridge would remain in place with added scour protection.	The bridge is nearing the end of its life and would be replaced in its existing alignment.
Infrastructure and Utility Replacements	Infrastructure and utility replacements focused on measures to protect infrastructure and utilities from tidal forces and included scour protection at existing bridge abutments and slope stabilization along Deschutes Parkway SW. Planning-level design included replacing outfalls at risk of corrosion, but suspended utilities along the Marathon Park Utility and Pedestrian Bridge and on a separate structure adjacent to the Percival Cove Bridge would not be replaced, making them susceptible to saltwater corrosion or impact from floating debris within the estuarine environment. Given the potential for damage to vulnerable utilities, mitigation measures were included to evaluate utilities in low-lying areas to identify corrosion and other risks and put appropriate measures in place to monitor, protect, or replace vulnerable utilities.	In addition to measures described in the 2022 Final EIS, and as part of mitigation described in the 2022 Final EIS, utilities were further evaluated during design. Existing utility trestles next to the Percival Cove Bridge would be raised to protect vulnerable utility lines from tidal estuary conditions. Also as a result of further design, additional scour protection and slope protection would be provided in key areas, a debris barrier would be installed to protect the BNSF Railroad Bridge, and existing culverts at the Capitol Lake Interpretive Center would be replaced with four open-bottom box culverts to increase tidal connection to the basins. As noted above, the Marathon Park Utility and Pedestrian Bridge would be replaced, which would include replacing the related utilities under the bridge, with minimal disruption to utility service.
Recreation	The Estuary Alternative included a 0.75-mile-long boardwalk in the Middle Basin and 0.25-mile-long boardwalk in the South Basin to enhance recreation in the Project area.	The length of the boardwalks were reduced. The boardwalks would now be a 0.25-mile-long boardwalk in the Middle Basin and a 0.20-mile-long boardwalk in the South Basin. These boardwalks, and the fishing pier previously planned in the Middle Basin, would be constructed when funding becomes available. There would be refinements to the trail system within Heritage Park to accommodate the proposed berm. A water access opportunity would be provided at Heritage Park, in addition to the water access opportunity that was previously identified at Marathon Park.

Table 1.2 Summary of Long-Term Impacts and Mitigation

Element of the Environment	2022 Final EIS Conclusion	What has changed?	Revised (or New) Conclusion	Revised (or New) Mitigation
Fish and Wildlife	**Significant unavoidable impacts** were identified to freshwater fish species, as well as Yuma myotis bat and little brown bats at the Woodward Bay bat colony.	• Habitat design and infrastructure refinements	**Significant unavoidable impacts** remain, related to freshwater fish and bats. No additional long-term impacts associated with design refinements were identified.	No new or revised mitigation measures were identified. An Adaptive Management and Monitoring Plan (previously referred to as a Habitat Enhancement Plan in Section 4.5.8.1 of the 2022 Final EIS) will be developed in coordination with the Squaxin Island Tribe.
Land Use, Shorelines, and Recreation	Maintenance dredging was included as part of the Estuary Alternative to address sediment deposition in West Bay. **Significant impacts** on land use, shorelines, and recreational uses at private marinas, Port of Olympia, and the Federal Navigation Channel in West Bay were identified if maintenance dredging does not occur as planned. Impacts would be less-than-significant, assuming implementation of the proposed maintenance dredging, with sediment monitoring identified as mitigation to inform dredging frequency and timing.	• After the 2022 Final EIS, DES and Project partners entered into a legally binding Interlocal Agreement. The Interlocal Agreement defines the governance responsibilities for each partner after the Deschutes Estuary is restored and commits to shared funding for sediment management in West Bay through 2050. • Additional property acquisition of a commercial parcel next to the Project area and construction access on waterward portion of some private parcels in the Middle Basin • Replacement of Marathon Park Utility and Pedestrian Bridge • Changes to Heritage Park infrastructure including installing the Heritage Park Berm • Changes to Arc of Statehood/Heritage Park pathways	The Interlocal Agreement formalizes maintenance dredging responsibilities, including sediment monitoring, which was previously identified as a mitigation measure in the 2022 Final EIS. With the Interlocal Agreement, impacts within West Bay would be **less-than-significant.** No new or increased significant long-term impacts associated with other Project changes were identified.	Additional mitigation measures include the following: • Designing the Heritage Park Berm and water access to maintain views of the estuary
Visual Resources	The appearance of the water body would change substantially, with the basins filling and emptying twice each day. **Less-than-significant impacts** were identified because the landscape would remain unified and harmonious with the natural setting of the existing surroundings.	• Installation of Heritage Park Berm • Changes to Arc of Statehood/Heritage Park pathways • New Heritage Park water access	Impacts remain **less-than-significant.** No additional long-term impacts were identified.	Additional mitigation measures include the following: • Designing the Heritage Park Berm and water access point to maintain views and a feeling of connection from the park to the estuary • Continuing to meet with and ask for input on the design of the Heritage Park Berm and water access point from the State Capitol Committee and Capitol Campus Design Advisory Committee

Element of the Environment	2022 Final EIS Conclusion	What has changed?	Revised (or New) Conclusion	Revised (or New) Mitigation
Transportation	Less-than-significant impacts were identified except for truck trips associated with West Bay maintenance dredging if the dredged material is not suitable for in-water disposal. **Significant impacts** associated with West Bay maintenance dredging were identified if on road transport is needed.	No long-term change	**Significant impacts** remain unless mitigation is feasible. No new or increased significant long-term impacts were identified.	No new or revised mitigation measures were identified.
Air Quality	Air quality impacts associated with West Bay maintenance dredging and odor impacts associated with changed habitat conditions are expected to be **less-than-significant.**	No long-term change	Impacts remain **less-than-significant.** No new or increased long-term impacts were identified.	No new or revised mitigation measures were identified.
Cultural Resources *Note, for archaeological resources, long-term impacts result from operational activities and conditions (e.g., maintenance dredging, future flooding). Most impacts to archaeological resources are associated with construction activities and are summarized in Table 1.3.*	**Significant impacts** are related to removal of eligible resources: 5th Avenue Dam, 5th Avenue Bridge, and Olympic Street W Bridge. Impacts on historic resources from extreme tides and sea level rise are potentially significant.	• Tumwater Brewery Berm has been added to the Project to protect the historic brewery area from flooding, including from sea level rise.	**Significant unavoidable impacts** remain related to removal of eligible resources. No new adverse impacts to the historic built environment have been identified as part of the updated Project design. Impacts from extreme tides and sea level rise are reduced with the addition of the Tumwater Brewery Berm.	As described in the 2022 Final EIS, mitigation to address adverse effects to cultural resources would be developed as part of the Section 106 consultation process. This is a separate, federal process outside of the state's SEPA process. Any significant adverse impacts to cultural resources not discussed during the Section 106 process may be addressed through the SEPA process or permitting. Additional mitigation measures proposed in this SEIS include the following: • Interpretive signage to document the history of the National Register of Historic Places (NRHP)-eligible 5th Avenue Bridge, 5th Avenue Dam, and Olympic Street W Bridge that would be removed as part of estuary restoration
Tribal Resources	Tribal Resources was not a separate section in the 2022 Final EIS. The 2022 Final EIS described removal of the 5th Avenue Dam under the Estuary Alternative as having ecological, cultural, heritage, spiritual, and educational value for Tribes.	• Tribal Resources are added as a distinct section in this SEIS • Removal of 5th Avenue Dam and estuary restoration remains the focus of the Project	**Less-than-significant impacts** were identified for West Bay maintenance dredging related to fishing areas.	An Adaptive Management and Monitoring Plan will be developed in coordination with the Squaxin Island Tribe. Mitigation associated with potential impacts on Tribal resources would be addressed directly with the Squaxin Island Tribe during government-to-government consultations as part of the permitting, regulatory, and consultation processes.
Environmental Justice	Environmental justice was not evaluated in the 2022 Final EIS.	• Environmental Justice is analyzed in this SEIS	**Disproportionate impacts** on low-income populations related to transportation, air quality, and noise could occur during maintenance dredging events in West Bay if dredged material is hauled by truck.	Implementation of mitigation measures proposed for transportation, air quality, and noise would also reduce potential effects on low-income populations.

Table 1.3 Summary of Construction Impacts and Mitigation

Element of the Environment	2022 Final EIS Conclusion	What has changed?	Revised (or New) Conclusion	Revised (or New) Mitigation
Fish and Wildlife	**Less-than-significant.**	• Increased installation of steel piles and steel sheetpiles using impact pile driving methods during construction • Fish transport during construction	Underwater noise associated with installation and proofing of steel piles would increase, but implementation of noise attenuation measures, compliance with in-water work timing restrictions, and adherence to applicable permit conditions would minimize potential impacts on fish. Some fish mortality from transport or migration through construction may occur but will be reduced through transport techniques designed to minimize impacts to fish; construction impacts remain **less-than-significant.**	No new or revised mitigation measures were identified.
Land Use, Shorelines, and Recreation	Impacts to Marathon Park from staging and impacts on recreational use related to noise and other disruptions could not be fully mitigated and would be a **significant unavoidable impact.**	• Additional truck traffic along haul routes • Additional construction activity at or near Heritage Park and Marathon Park	**Significant unavoidable impacts** would remain because of impacts on recreational use and noise, vibration, and other disruptions that cannot be fully mitigated. With Project changes, construction activity would result in recreational use impacts along the shoreline of Heritage Park. Construction-related noise and vibration impacts would be temporary and occurring intermittently throughout the day but would be disruptive at times to park and trail users near Marathon Park and Heritage Park. With the reduced overall Project construction duration, and the limited use of Heritage Park, the updated design would not contribute substantially to the impacts described in the 2022 Final EIS for construction.	Additional mitigation measures include the following: • Heritage Park Construction Access Plan • Preconstruction surveys for buildings or structures that may be affected by vibration-intensive activities
Visual Resources	Given the duration of construction-related staging at Marathon Park and in-water construction and staging, construction impacts on visual resources were considered a **significant unavoidable impact.**	• Additional construction activity at Heritage Park, along Deschutes Parkway SW, and within the basin during the multiyear lake drawdown and creation of in-basin containment areas	The Project changes and refinements would contribute to the construction impacts described in the 2022 Final EIS, which were determined to be a **significant unavoidable impact,** and would introduce additional visual impacts at Heritage Park, along Deschutes Parkway SW, and across the basin itself through the temporary lake drawdown and creation of the in-basin containment areas.	Additional mitigation measures include the following: • Installing temporary signage at key public viewpoints around Heritage Park that describes the Project, illustrates the expected post-construction visual conditions of the restored estuary, and acknowledges the temporary construction-related impacts • Planting all disturbed areas as soon as possible after construction

Element of the Environment	2022 Final EIS Conclusion	What has changed?	Revised (or New) Conclusion	Revised (or New) Mitigation
Transportation	**Less-than-significant.**	• A new extended (up to 3-year) closure of Deschutes Parkway SW north of Lakeridge Drive • Substantial increase in number of construction-related truck trips associated with Project changes and refinements • New proposed primary haul route along U.S. Highway 101 to Cooper Point Road, Evergreen Park Drive SW, Lakeridge Drive, and Deschutes Parkway SW	Extended Deschutes Parkway SW closure and detour would increase travel time between the north and south ends of the lake during construction, which would constitute a **significant unavoidable impact.** The peak hour trucking activity would be increased compared to those estimated in the 2022 Final EIS. With the new proposed primary haul route, and with the mitigation measure included in the 2022 Final EIS restricting construction truck trips through downtown Olympia during the commuter peak periods, construction traffic impact on downtown traffic operations would be less-than-significant.	Additional mitigation measures include the following: • In coordination with the City of Olympia, identify detours for vehicular, transit, bicycle, and pedestrian traffic during periods when Deschutes Parkway SW would be closed to traffic. • Consult with local police, fire, and emergency response to establish emergency vehicle routes so general emergency management services are not compromised during the extended closure of Deschutes Parkway SW. • Coordinate with Intercity Transit to reroute buses that would be displaced from Deschutes Parkway SW during road closure periods.
Air Quality	**Less-than-significant.**	• Additional construction truck traffic	Even with the increase in construction truck trips, the total annual emissions would remain similar and less than general conformity de minimis thresholds. Impacts remain **less-than-significant.**	Mitigation measures would be the same as described in the 2022 Final EIS. No new or revised mitigation measures were identified.
Cultural Resources	**Less-than-significant,** except for **potentially significant impacts** if unrecorded archaeological resources are encountered during construction.	• The areas of construction disturbance have been reviewed with new information from the geotechnical investigations, which provide information on the depth of modern fill and depth of native deposits, and with bathymetric surveys, which provide information on the depth of sediment accumulation over the historic mudline	The potential for construction impacts on cultural resources would generally be the same as described in the 2022 Final EIS. Project-related ground disturbance is confined to modern fill or recently accumulated sediment and therefore has low potential for encountering intact precontact archaeological resources. The Project has a potential to impact unrecorded archaeological resources in portions of the Project area where deep soil mixing would occur. Impacts remain **less-than-significant,** except for **potentially significant impacts** if unrecorded archaeological resources are encountered during construction.	Potential mitigation measures for archaeological resources would generally be the same as described in the 2022 Final EIS. Some of these measures have occurred or are ongoing, such as additional survey and monitoring of geotechnical investigations. Any significant adverse impacts to cultural resources not discussed during the Section 106 process may be addressed through the SEPA process or permitting. Additional mitigation measures proposed at this time include the following: • Additional subsurface testing in the area of deep soil mixing to clarify the origin (cultural or noncultural) of the shell layers observed and to further assess the presence and extent of unrecorded archaeological resources that may be present within the area • Providing an Inadvertent Discovery Plan on-site, training for Project personnel, and implementing the plan during construction in the event of an unanticipated discovery of cultural resources
Tribal Resources	None identified. Tribal Resources was not a separate section in the 2022 Final EIS.	• Tribal Resources are added as a distinct section in this SEIS	**Less-than-significant impacts** identified.	Mitigation associated with potential impacts on Tribal resources would be addressed directly with the Squaxin Island Tribe during government-to-government consultations as part of the permitting, regulatory, and consultation processes.
Environmental Justice	Environmental Justice was not evaluated in the 2022 Final EIS.	• Environmental Justice is analyzed in this SEIS	**Disproportionate and adverse impacts** on communities of color or low-income populations related to haul routes and the extended Deschutes Parkway SW closure and detour would occur.	Implementation of mitigation measures proposed for transportation, air quality, and noise would also reduce potential effects on communities of color and low-income populations.

1.10 Tribal, Agency, and Public Engagement

1.10.1 SEPA EIS Process

DES conducted scoping for the EIS from September 26, 2018, to November 13, 2018. The SEPA Draft EIS was published June 30, 2021, and comments were accepted through an extended public comment period until August 29, 2021. All comments submitted during the Draft EIS public comment period were reviewed and considered in the development of the Final EIS, which was published October 31, 2022.

Between 2018 and 2022, as part of the SEPA process, DES engaged regularly with the Squaxin Island Tribe, governmental and agency partners, and the community. DES sought input about proposed alternatives for long-term management of the water body, methodologies for the environmental analyses, and durability of the final decision. The engagement process conducted as part of the SEPA EIS is depicted in Figure 11 of the 2022 Final EIS.

Comments on this Draft SEIS will be accepted during a 30-day comment period that begins October 9, 2026. Comments will be accepted until 11:59 p.m. on November 9, 2026.

1.10.2 Design Phase Engagement

Throughout the subsequent design process, Ecology and DES have continued to engage with the Squaxin Island Tribe, City of Olympia, City of Tumwater, Thurston County, Port of Olympia (Port), LOTT Clean Water Alliance, the Washington Department of Fish and Wildlife (WDFW), and the Washington State Department of Natural Resources (DNR) on the Project. Additional stakeholders currently engaged include the Deschutes Estuary Restoration Team and other local nonprofit organizations, a Community Sounding Board with approximately 25 representatives, the North Capitol Campus Heritage Park Development Association, adjacent property owners, West Bay marinas, the Capitol Campus Design Advisory Committee, the State Capitol Committee, and the public. Coordination with these entities and community groups is mutually beneficial during the design process so input from the stakeholders can be meaningfully integrated into aspects of the Project, including bridge design, restoration of the estuarine habitat, and incorporation of recreational opportunities throughout the Project area.

The Squaxin Island Tribe and WDFW supplement the Project team with expertise in estuary restoration across the South Puget Sound, provided in design meetings and design document reviews. The Deschutes Estuary has also been an area of significance for the Squaxin Island Tribe for time immemorial—the Project's design phase partnership with the Tribe also provides an opportunity to integrate traditional cultural knowledge into the Project.

The Project is located within the cities of Olympia and Tumwater, and Project improvements span these two municipalities. After construction, the new 5th Avenue Bridge would be conveyed to the City of Olympia and the new South Basin boardwalks would be conveyed to the City of Tumwater. The approach to sea level rise resiliency is also being coordinated with the City of Olympia. Representatives of these entities meet regularly with the Project team to

provide policy-level design guidance, represent constituent interests, and review technical materials.

Coordination efforts with these entities and with the community will continue throughout the design and permitting process.

1.10.3 Tribal Coordination

Ecology continued coordination with the Squaxin Island Tribe throughout the design and SEIS processes. Ecology offered the Tribe the opportunity to engage in formal government-to-government consultation and Ecology remains open to accepting a request for consultation at any time.

In addition to the design phase partnership and reviews by the Squaxin Island Tribe discussed in Section 1.11.2, Ecology sent information to the Tribe in April and May 2026 about the SEIS process and provided the Tribal Resources and Cultural Resources sections to the Tribe in July 2026 for early review and comment during SEIS development.

Ecology and DES met with Squaxin Island Tribe cultural resources staff in June 2026 (virtually) and July 2026 (at the Project Site) to discuss cultural resource assessments and ongoing investigations.

1.10.4 State Agency Coordination

Ecology and DES worked with state agencies that have expertise in areas evaluated in the EIS. These agencies included WDFW, DNR, Washington State Department of Archaeology and Historic Preservation (DAHP), and Washington State Department of Transportation (WSDOT). Meetings for state agencies have been held throughout the design process and SEIS development. State agency experts were provided opportunities to review studies, design documents, and Draft SEIS chapters.

1.11 Areas of Controversy and Uncertainty

The 2022 Final EIS identified maintenance dredging in navigational areas of West Bay as a component of the Estuary Alternative to maintain commercial and recreational navigation after construction. Since the 2022 Final EIS, the members of the former Funding and Governance Work Group, composed of the Cities of Olympia and Tumwater, Thurston County, the Port, LOTT Clean Water Alliance, the Squaxin Island Tribe, DES, and DNR, signed an Interlocal Agreement.[1] The Interlocal Agreement commits funding for maintenance dredging in West Bay through 2050, and assigns responsibilities for long-term maintenance of the constructed assets of the estuary after construction.

The Interlocal Agreement requires that the Olympia Yacht Club, Fiddlehead Marina, Martin Marina, and One Tree Island Marina (the recreational facilities that would be subject to

[1] https://deschutesestuaryproject.org/wp-content/uploads/2024/11/DESCHUTES-ESTUARY-RESTORATION-PROJECT-ILA_SIGNED.pdf

future maintenance dredging) provide funding equivalent to the amount of dredging that would be needed if the 5th Avenue Dam was maintained and DNR lease terms related to minimum depth requirement were upheld. In 2026, Ecology and DES reinitiated coordination with these marinas. At the time of publication of this SEIS, Ecology and DES have not executed an agreement with the marinas regarding their contribution to future maintenance dredging, resulting in uncertainty for this element.

Separately, the Interlocal Agreement also notes that it is anticipated that the 5th Avenue Dam will not be removed until the Port-led remediation in West Bay is complete. If the Port-led remediation is not conducted before removal of the 5th Avenue Dam, it would significantly increase the cost of maintenance dredging to be conducted. At the time of publication of this Draft SEIS, the Port does not have an approved remedial design for West Bay.

As with any large-scale project of this nature, investigations are ongoing during design and there could be new findings that could influence design or environmental review findings. Uncertainty related to the specific details of design will continue to be reduced as the state proceeds through the final design and permitting processes. Local and state agencies will use this SEIS, along with the prior-issued 2022 Final EIS and other information, to inform permitting decisions related to the Project.

Funding for full construction of the Project has not yet been secured and will depend on future appropriations and other funding sources. Accordingly, the timing and phasing of construction remain uncertain and may be affected by the availability and timing of future funding.

1.12 Next Steps

The public is invited to comment on this Draft SEIS during a formal 30-day comment period. Comments will be compiled and reviewed, and substantive comments will be considered by Ecology and DES in the preparation of the Final SEIS.

So that comments are as effective as possible, please focus feedback on the updated analysis and revised environmental impacts presented in this document. Comments about the earlier long-term management alternatives, previously analyzed impacts that have not been modified, or broader issues evaluated in the 2022 Final EIS will be noted but such comments fall outside the scope of this SEIS.

Local and state agencies will use this SEIS, along with the prior-issued 2022 Final EIS and other information, to inform permitting decisions related to the Project. Local, state, and federal permits must be issued before the proposed Project may begin.

A Final SEIS is estimated to be completed in 2027 and will be released to the public.

1.13 SEIS Organization

The SEIS is organized as follows:

- **Publication and Contact Information, Cover Letter, and Fact Sheet**
- **SEIS**
    - **Chapter 1: Introduction and Summary** is contained in this chapter.
    - **Chapter 2: Description of Updated Project Design and Alternatives** describes the purpose and objectives of the SEIS and alternatives considered for this SEIS.
    - **Chapter 3: Affected Environment, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts** describes existing conditions within the Project area and identifies potential significant adverse impacts and mitigation measures.
    - **Chapter 4: References** contains reference information for documents cited within this SEIS.
    - **Chapter 5: Distribution List** identifies agencies, Tribes, organizations, and others who received the Draft SEIS.

2.0 Description of Updated Project Design and Alternatives

2.1 Background

Capitol Lake was created in 1951 when the 5th Avenue Dam and associated tide gate were built across the Deschutes Estuary tidelands to form a freshwater reflecting pool for the Washington State Capitol Campus. This impoundment has led to sediment accumulation, violations of water quality standards, impaired ecological functions, and a dense community of aquatic plants and invasive species that have closed this resource to all water-based recreation.

Approximately 35,000 cubic yards (CY) of sediment are transported annually by the Deschutes River (and Percival Creek) into Capitol Lake, contributing to shallowing conditions. Sediment accumulation has reached up to 13 feet thick in some areas since the dam's construction. Water quality monitoring began in the 1970s due to excessive growth of aquatic plants, dense algal mats, and reduced water clarity caused by high nutrient levels. In 1985, the Capitol Lake swimming beach was closed due to high bacteria levels. Today, modeling completed by Ecology shows that Capitol Lake and the 5th Avenue Dam contribute to dissolved oxygen depletion in Budd Inlet, which is harmful to fish and other aquatic species. Specifically, the Budd Inlet Dissolved Oxygen Total Maximum Daily Load (TMDL) Water Quality Improvement Report and Implementation Plan states that removing the 5th Avenue Dam is "the single most important action to restore water quality in Budd Inlet" (Ecology 2022). The 5th Avenue Dam is characterized by WDFW as a 70% fish passage barrier.

Since the late 1980s, management strategies have been implemented to address aquatic invasive species, with over a dozen different species now present. In 2009, the presence of the invasive New Zealand mudsnail led to the closure of the lake to all public uses.

Historical losses of estuarine habitat across the South Puget Sound have resulted in only about 15% of the original estuarine marsh habitat remaining. Several species, including Chinook salmon, have been listed as threatened due to the severe reduction of estuarine habitats around Puget Sound. Public ownership of Capitol Lake provides the opportunity to restore the estuary and associated habitats on a relatively large scale within the South Sound, to address these existing environmental issues.

2.2 Project Purpose and Objectives

The overall purpose of the Project is to restore estuarine and salt marsh habitat in the historic Deschutes Estuary (present-day Capitol Lake) as the long-term management approach for this water body. Estuary restoration is being implemented as the long-term management approach because it is the most environmentally and economically sustainable approach compared to all other options considered during the earlier SEPA EIS review process. Estuary restoration is intended to manage existing sediment accumulation and future deposition, improve water quality, restore ecological functions, and enhance community use.

The purpose, goals, and criteria described in this SEIS differ from those in the 2022 Final EIS (DES 2022) because the two documents support different decisions. The 2022 Final EIS evaluated a range of long-term management approaches for the water body. Its purpose statement and associated goals were initially broad so that fundamentally different management alternatives could be compared against a common set of measures.

With the selection of the Estuary Alternative, the question of which long-term management approach was resolved. The purpose statement for this SEIS is therefore narrower and specific to the selected approach, and the goals and criteria are more detailed to guide restoration design.

Achieving the Project purpose includes implementing other modifications in the Project area that are needed to retain existing public infrastructure (transportation corridors, stormwater drainage, and utilities); address existing flooding and increase sea-level rise resiliency to surrounding areas; and avoid significant impacts from sedimentation to downstream marinas and the Port. Addressing the existing environmental conditions in the water body would restore and enhance community use of the resource. Public access and recreation elements are important to the overall restoration strategy because of their role in reestablishing active community use of the water body.

Restoration design for the Deschutes Estuary is guided by a set of goals and criteria developed by the state in coordination with the Squaxin Island Tribe.

The habitat restoration component of this Project has four primary goals, as follows:

1. Restore ecological and physical processes to maximize ecosystem benefits and support a dynamic and self-sustaining ecosystem over the long term.
    a) Design habitats that will be resilient and able to adapt to sea level rise (e.g., incorporate natural buffers and transition zones to accommodate upland migration of habitats).
    b) Restore natural sediment processes by restoring habitats in appropriate areas to capture sediment and minimize the scale, frequency, and cost of future maintenance in the restored estuary and long-term management of sediment deposition in Budd Inlet.
2. Create a resilient coastal wetland habitat for target species.
    a) Maximize coastal wetland habitat by restoring a mix of habitat zones across the aquatic to terrestrial gradient (i.e., subtidal/riverine, mudflat, tidal low marsh, tidal high marsh, tidal scrub-shrub, tidal forested wetland, and riparian habitats) and along the estuary gradient upstream to downstream.
    b) Restore habitat for anadromous salmonid species in the Deschutes River Watershed including, but not limited to, coho salmon, Chinook salmon, steelhead, and other marine fish, including forage fish.
    c) Restore habitat to allow potential reestablishment of native shellfish, such as the Olympia oyster.

d) Restore habitat for other coastal wildlife, including shorebirds.

3. Restore the estuary in a manner that fosters cultural resilience and long-term stewardship.
   a) Implement a partnering approach with the Squaxin Island Tribe that allows for continued design and ecosystem management input.
   b) Consider design opportunities that reflect or support traditional ecological knowledge and practices.
   c) Design access to facilitate cultural uses of the wetlands and riparian areas.
4. Restore the estuary in a manner that promotes education and community use in ways compatible with the restored ecosystem.
   a) Develop public facilities and uses in a way that minimizes impacts to habitats and wildlife.
   b) Create viewpoints and water access areas that showcase a naturally functioning, dynamic estuary and the natural beauty of Puget Sound coastal ecosystems.
   c) Design and install interpretive displays and exhibits that describe the Tribal presence within the landscape, as well as the goals and perspectives of the Squaxin Island Tribe; describe estuary functions; and promote environmental stewardship.
   d) Reflect feedback from the broader community in the restoration design, as appropriate, to increase overall community support of the estuary.
   e) As funding allows, maintain and enhance recreational access opportunities, such as providing boardwalks and estuary interpretive viewpoints for estuary viewing, and reconstruction of a fishing pier.

2.3 Location and Regional Setting

The Project is located at the mouth of the Deschutes River, at the southern end of Puget Sound, along the shorelines of the cities of Olympia and Tumwater, within the Usual and Accustomed Fishing Grounds and Stations of the Squaxin Island Tribe and at the base of the Washington State Capitol Campus. The Project area encompasses the 260-acre Capitol Lake and adjoining shoreline areas. Capitol Lake stretches from the base of Tumwater Falls in Tumwater to the 5th Avenue Dam in Olympia. The lake is divided into three basins: the South Basin, Middle Basin, and North Basin. Additionally, the Project area includes a small portion of West Bay of Budd Inlet, located north of the 5th Avenue Dam, where dam removal and channel deepening activities would occur.

Capitol Lake is part of the historic estuary of the Deschutes River. This area was the homeland of the Steh-Chass. Steh-Chass reference both the precolonization inlet and the Squaxin band that lived there. These waters are a portion of the Usual and Accustomed treaty territory and traditionally the domain of the Indigenous bands that form the modern-day, federally recognized Squaxin Island Tribe.

Figure 2.1 provides a Project area map with key features and landmarks.

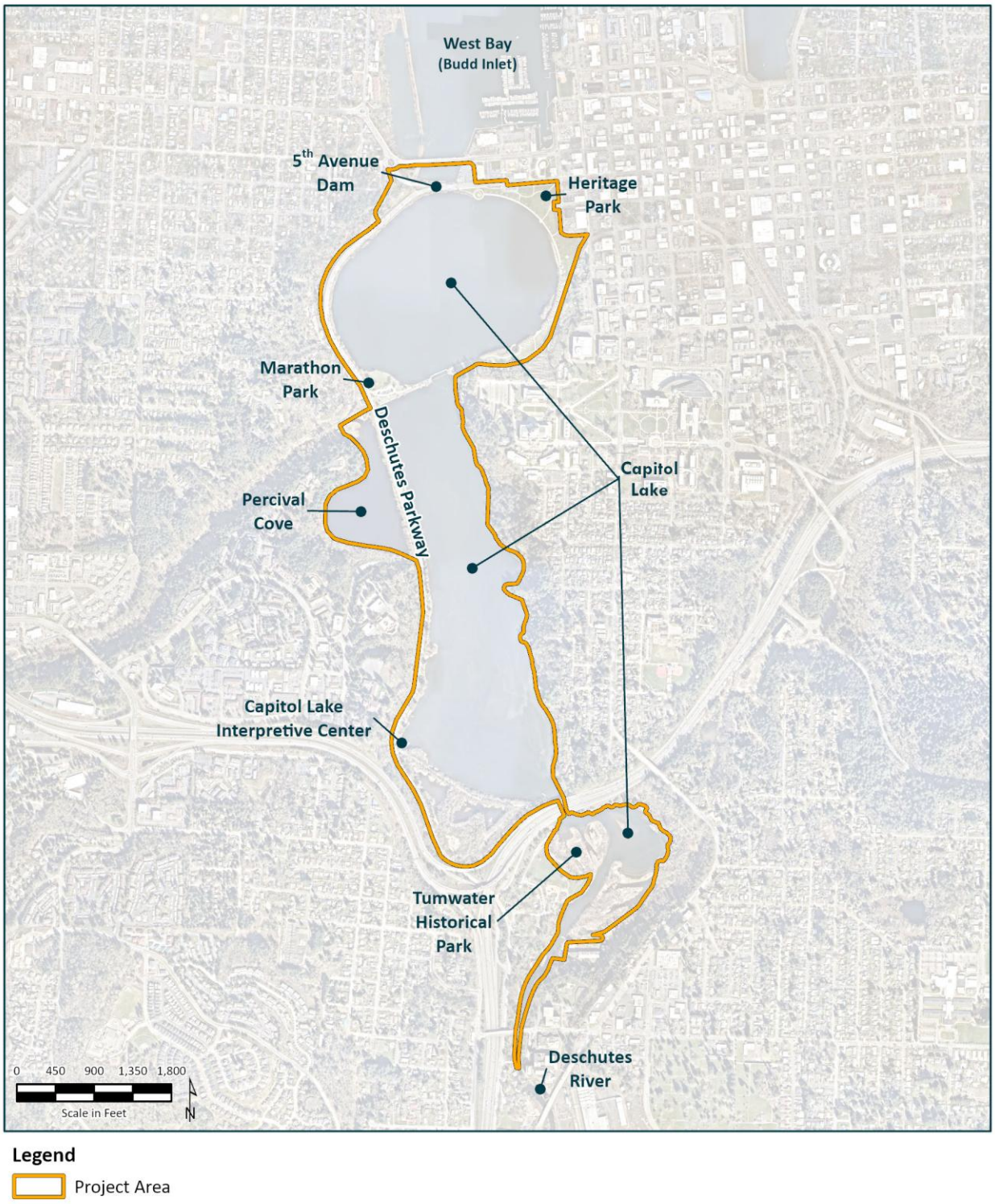


Figure 2.1 Project Area

2.4 Alternatives

The Estuary Alternative was identified as the Preferred Alternative in the 2022 Final EIS (DES 2022) and was selected for implementation (as the Project). This SEIS evaluates two alternatives:

- Updated Project Design
- No Action Alternative

The updated Project design that is evaluated in this SEIS originated from the preliminary concept for the Estuary Alternative in the 2022 Final EIS.

2.5 Updated Project Design

Project design and planning have progressed since publication of the 2022 Final EIS and resulted in a number of changes and refinements. These are illustrated in Figure 2.2 and described in the following sections.

2.5.1 Project Changes and Refinements

2.5.1.1 Habitat Design Approach

The habitat design approach has been modified since the 2022 Final EIS. The Project now focuses on creation of habitat areas along the shorelines of the North and Middle Basins (as opposed to the creation of habitat islands as described in the Final EIS). The habitat design objective remains the same, which is to restore a mix of coastal wetland habitat zones across the aquatic to terrestrial gradient (subtidal/riverine, mudflat, tidal low marsh, tidal high marsh, tidal scrub-shrub, tidal forested wetland, and riparian habitats) and along the estuary gradient upstream to downstream. The planned habitat design elevations are shown in Figure 2.3.

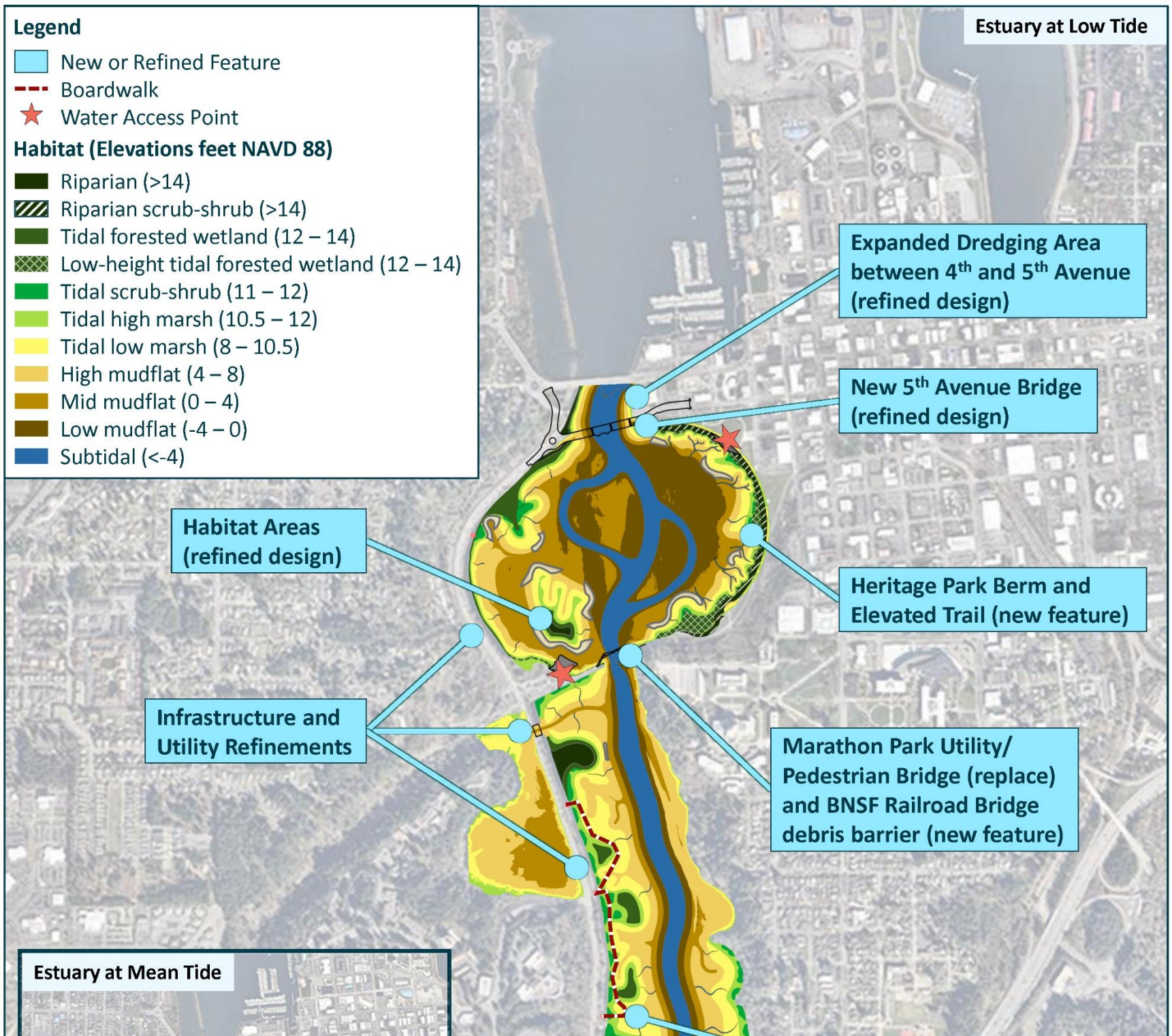


Figure 2.2 Updated Project Design

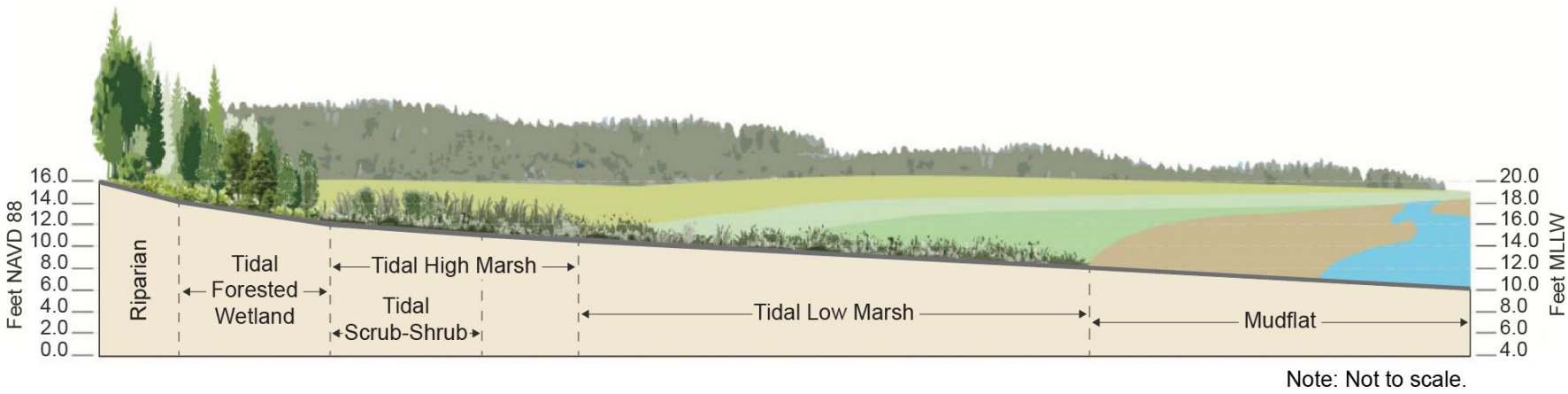


Figure 2.3 Conceptual Habitat Elevation Zones

2.5.1.2 New 5th Avenue Bridge

The alignment and configuration of the new 5th Avenue Bridge have been updated since the release of the 2022 Final EIS.

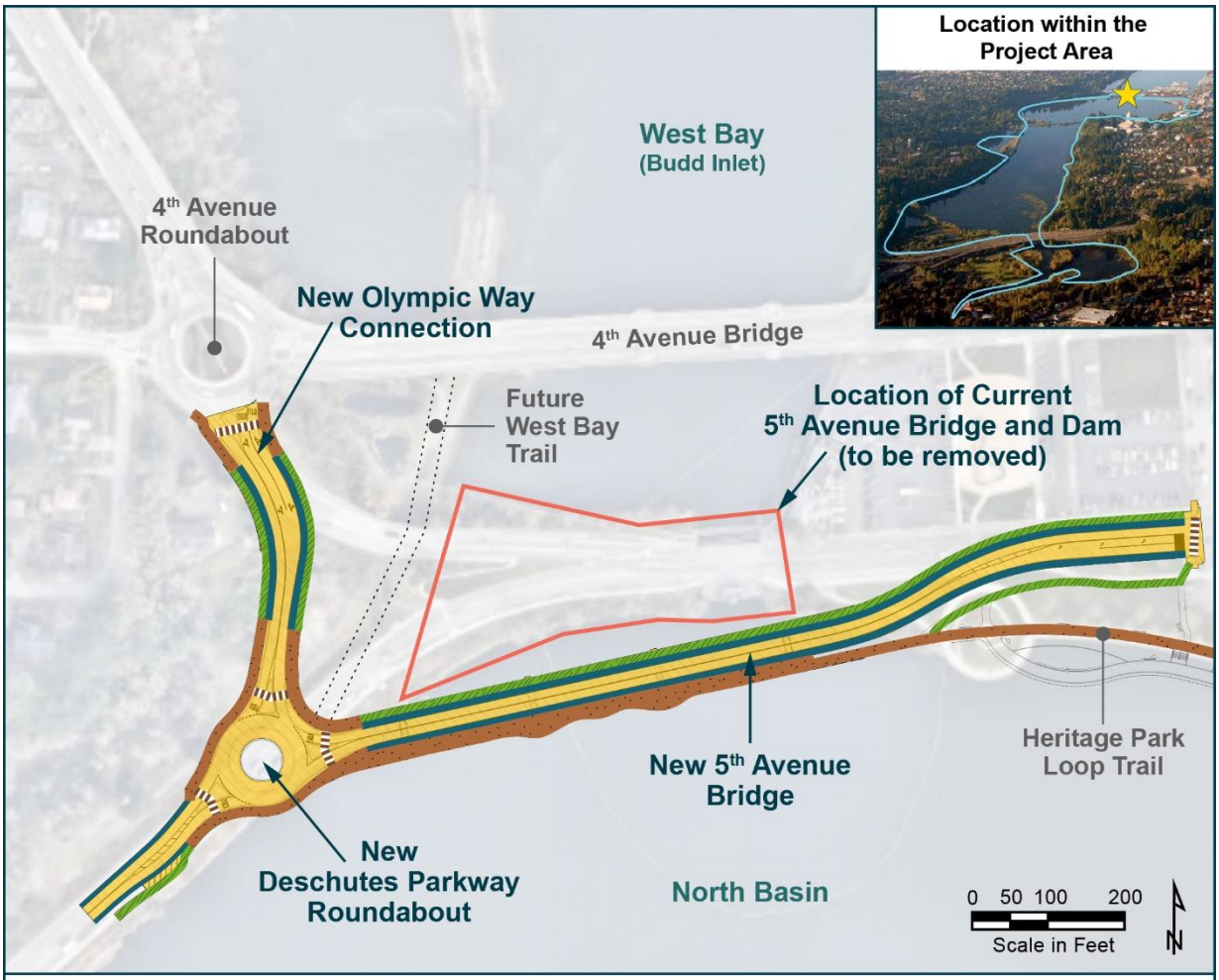
Under the updated design, the bridge would consist of three 177-foot-long spans resulting in a total length of approximately 530 feet, an approximately 30% reduction in length compared to the 2022 Final EIS. The bridge superstructure would be supported by two piers, each containing three 6-foot-diameter concrete columns on 10-foot-diameter concrete shafts. Bridge abutments would be constructed within the North Basin, and embankment fill would be placed between the abutments and existing shoreline to support the roadway approaches to the bridge. Positioning abutments waterward of the existing shoreline shortens the bridge and significantly minimizes the cost of the bridge. The updated bridge design keeps the minimum 500-foot opening for tidal flow and supports vehicular and nonvehicular travel lanes in both directions.

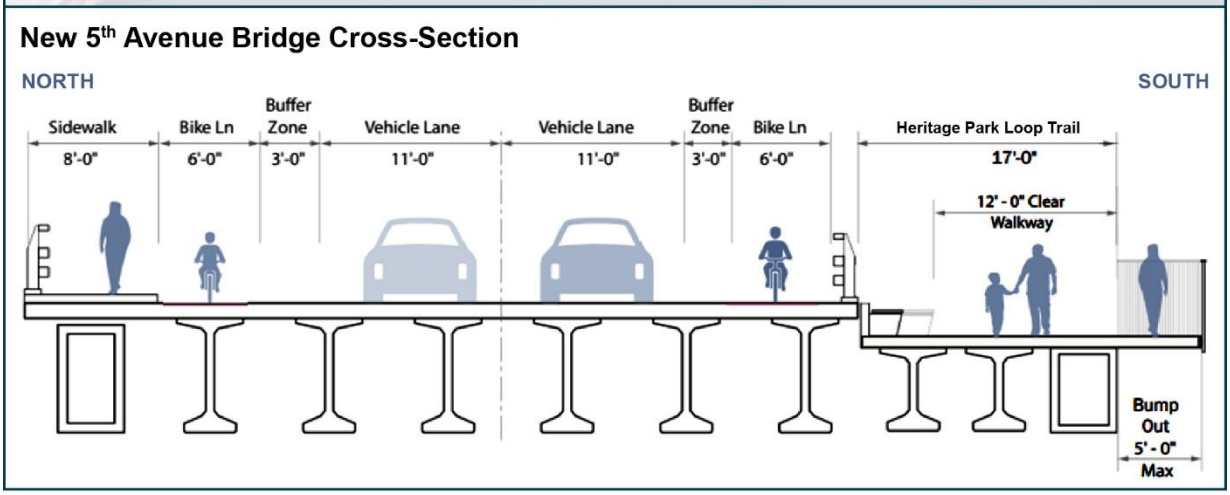
The new 5th Avenue Bridge roadway, pedestrian, and bicycle connections are shown on Figure 2.4.

2.5.1.3 Heritage Park Sea Level Rise Resiliency Improvements (Heritage Park Berm)

The preliminary design concepts included in the 2022 Final EIS did not include climate resiliency measures, but rising sea levels present long-term challenges for both the restored estuary and adjacent developed areas. At Heritage Park, the shoreline habitat would be constructed to elevation 17 feet NAVD 88 to raise the existing shoreline elevation by approximately 3 to 4 feet. This berm satisfies a key element of the City of Olympia's Sea Level Rise Response Plan (City of Olympia et al. 2019) by addressing a primary flooding pathway into downtown.

The new Heritage Park Berm would be integrated with estuarine habitat grading (Figure 2.5). The existing Arc of Statehood concrete wall would be buried within the habitat fill. Riprap and quarry spalls reused from the temporary earthen causeway (refer to Section 2.5.2.3) would be placed next to the base of the existing wall, with habitat fill materials (gravel and dredged material) placed above. The finished grade of the berm would range from 3 to 5 feet above the existing elevation of Heritage Park. The core of the berm would be constructed with low-permeability earth material sourced from dam removal or imported. The waterward side of the Heritage Park Berm would be a continuation of the estuarine habitat zones, including tidal high marsh, tidal scrub/shrub, tidal forested wetland, and riparian habitat. The subtle slope would provide room for habitat migration with sea level rise. To construct the mid-park section of the berm, a sheetpile wall would be installed approximately 6 feet waterward of the existing Arc of Statehood to allow placement of the habitat fill on top of the existing grade where the existing single-path trail would be reconstructed. With this design update, the Project would no longer include coating the Arc of Statehood seawall as was evaluated in the 2022 Final EIS for the Estuary Alternative.





Legend

- Proposed Roadway Realignment
- Sidewalk
- Bike Lane
- Shared-Use Path
- Crosswalk

Figure 2.4 Roadway, Pedestrian, and Bicycle Connections



Figure 2.5 Heritage Park Improvements

2.5.1.4 Tumwater Historic Brewery Flood Protection (Tumwater Brewery Berm)

An earthen berm, approximately 3 to 4 feet in height, would be installed along the perimeter of the gravel roadway at the historic brewery site (Figure 2.6). The berm would be designed to protect the brewery area and provide resiliency to flooding. The area floods under existing conditions during high river flows. In estuary conditions, without the berm, flooding would be more frequent in tidal storm events.

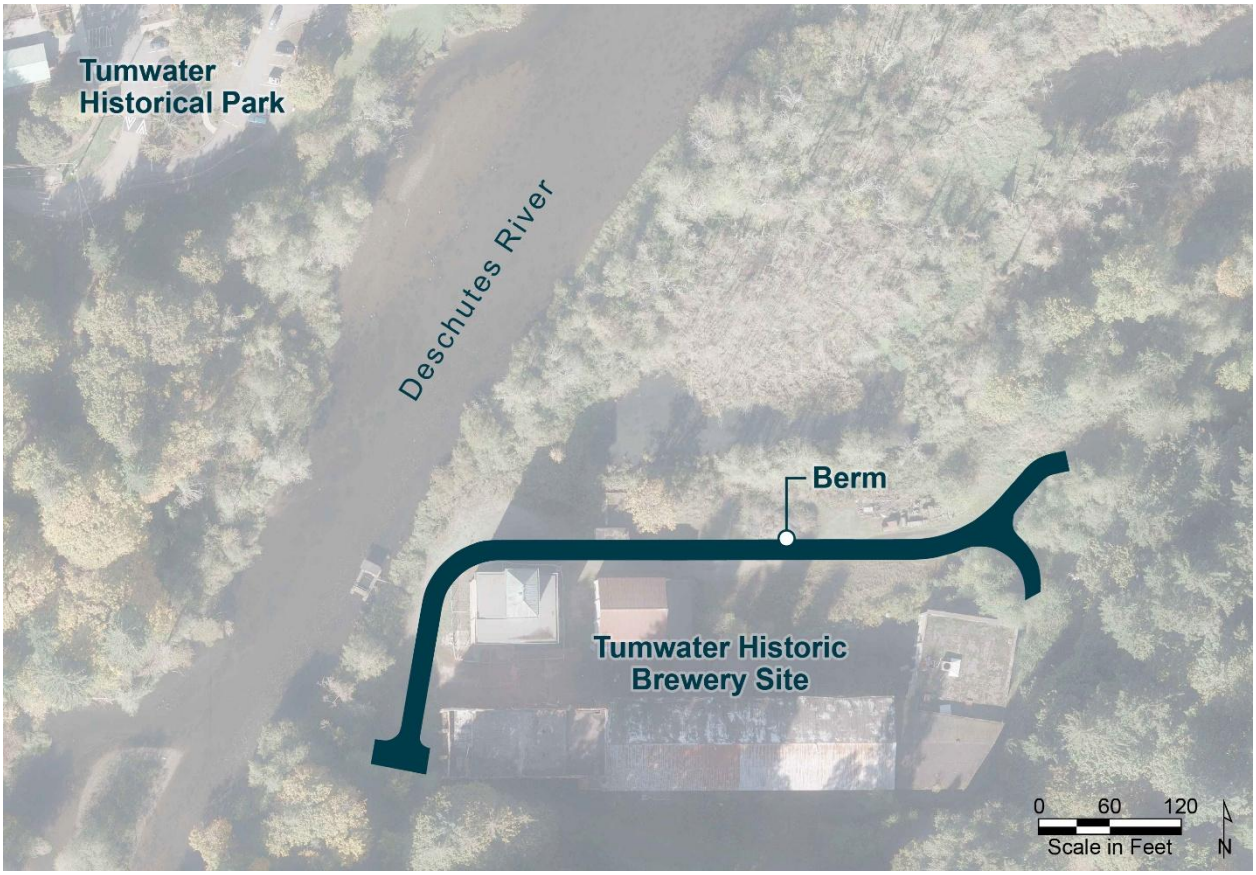


Figure 2.6 Tumwater Brewery Berm

2.5.1.5 Marathon Park Utility and Pedestrian Bridge Replacement

To adapt to anticipated marine water levels and tidal influence in the newly formed estuary, the Marathon Park Utility and Pedestrian Bridge (Figure 2.7) requires replacement. The Marathon Park Utility and Pedestrian Bridge would be replaced with a new bridge near the same location and with the same width and approximate length as the existing bridge. Decking would be precast concrete sections, with an Americans with Disabilities Act (ADA)-compliant surface. The precast superstructure would be supported by approximately 24 30-inch-diameter steel piles. Utility infrastructure would be replaced below the decking.



Figure 2.7 Photograph of Current Marathon Park Utility and Pedestrian Bridge

2.5.1.6 Dredging and Channel Design

The area proposed for dredging has expanded to the north of 5th Avenue, after removal of the existing dam. This is needed to tie the reestablished river channel into the bathymetry of West Bay.

Within this area, the shorelines between the new 5th Avenue Bridge and the existing 4th Avenue Bridge would also be reconstructed. Slopes would be armored with riprap and along much of the shoreline. Riprap would then be buried below habitat substrates and graded to optimize aquatic habitat value. This design approach maximizes the extent of elevations appropriate to support salt marsh vegetative communities. Along the western shoreline, the newly constructed habitat would connect to existing shoreline habitat at the 4th Avenue Bridge. Rock for scour protection would be placed at the existing 4th Avenue Bridge foundations.

To improve ecological functions within the channel section between 5th and 4th Avenues, and to simplify dam demolition, property on the eastern shoreline immediately north of 5th Avenue would be acquired and an existing structure demolished. This acquisition and demolition would allow the easterly shoreline to be softened and planted. For more information on property acquisition and a figure depicting parcels to be acquired, refer to Section 3.2.2.1.

Since the 2022 Final EIS, the river channel design has also been refined within the North and Middle Basins. This includes changes to the layout and dimensions of the channel to maximize ecosystem benefits while minimizing erosion during storms.

2.5.1.7 Infrastructure and Utility Refinements

The updated Project design includes measures to protect infrastructure and utilities from tidal forces and saltwater corrosion, which was identified in the 2022 Final EIS as a key mitigation measure to avoid long-term impacts to vulnerable utilities. Under the updated design, existing utility trestles next to the Percival Cove Bridge would be raised to protect utility lines from tidal estuary conditions. After completion of estuary grading, rounded cobble would be placed below the Percival Cove Bridge and scour protection rock would be installed to protect existing foundations of the existing BNSF Railroad Bridge. South of the Percival Cove Bridge, riprap slope protection would be added to the Deschutes Parkway SW embankment next to Percival Cove, as a buttress to add geotechnical stability to that slope to accommodate new tidal estuary conditions.

Up to 30 piles would be installed upstream of the BNSF Railroad Bridge as a debris barrier. The debris barrier would direct large debris, such as floating logs that are carried downriver, to the shoreline upstream of the BNSF Railroad Bridge. This debris barrier would protect the BNSF Railroad Bridge and other downstream infrastructure from damage.

Tidal connection to the basins at Capitol Lake Interpretive Center would be improved through installation of four box culverts, instead of creating an open channel with a boardwalk over the opening as proposed in the 2022 Final EIS. The box culverts would be open bottom with natural channel bed material. The existing walking path would be maintained above the box culverts. The culverts would be approximately 72 inches deep and approximately 20 feet wide and would be placed at the existing berm that separates Capitol Lake Interpretive Center from the Middle Basin.

2.5.1.8 Recreational Elements

The updated Project design keeps the recreational features that were evaluated in the 2022 Final EIS but includes several refinements to their design and extent. Some of the recreational elements described in the 2022 Final EIS, such as the boardwalks and fishing pier, would be constructed in a separate phase when future funding for those elements is acquired.

The length of the proposed boardwalks in the Middle and South Basins has been reduced, resulting in a reduced footprint within restored habitat areas. The Middle Basin boardwalk would be approximately 0.25 miles long, compared to the approximately 0.75-mile-long boardwalk described in the 2022 Final EIS. The boardwalk would connect to the existing Deschutes Parkway SW paved path system and would provide public access to the restored estuarine ecosystem. Visitors would have the opportunity to leave the Deschutes Parkway SW corridor and enter a variety of native habitat types along the west bank of the river. The boardwalk would traverse through forest, marsh, and mudflat while providing views to the Capitol, the river, and wildlife using the restored estuary.

The South Basin boardwalk would be approximately 0.20 miles long, slightly reduced from the approximately 0.25-mile-long boardwalk described in the 2022 Final EIS. The boardwalk would connect to the existing pathway network within Tumwater Historical Park. The boardwalk would bring visitors from the park into the riverine environment, providing public access to downstream views, wildlife viewing, fishing, and a potential view of Tumwater Falls.

The updated design also includes refinements to the trail system within Heritage Park to accommodate the proposed Heritage Park Berm. At the northern and southern portions of the park, a dual-path system would be constructed (see Figure 2.5). Approximately one-half of the existing North Basin Loop Trail width would be retained on the landward side of the berm, and a new elevated pathway, approximately 15 feet wide, would be constructed along the top of the berm. The elevated pathway would provide views of the estuary and would be connected to the lower pathway by a series of ramps and stairs, allowing users to move between the two elevations. The area between the pathways would accommodate terraced seating oriented toward the park's primary open space.

Between the northern and southern portions of Heritage Park, the North Basin Loop Trail would generally be elevated within its existing alignment rather than reconstructed as a dual-path system. This approach would preserve most of the existing promenade footprint and associated heritage trees while maintaining pedestrian circulation through the park.

A new water access feature has been added to the Project within Heritage Park. The water access is proposed between the nearby park access point at 7th Avenue SW and the parking lot off 5th Avenue. This feature is intended to provide opportunities for public access to the restored estuary from the shoreline. This access point is not intended to provide watercraft access to the North Basin, but watercraft access at Marathon Park is retained in the design as described in the 2022 Final EIS. The new water access feature at Heritage Park is shown on Figure 2.8.

Pathways, seating areas, and associated hardscape elements would generally be constructed of concrete to reduce long-term maintenance requirements. At lower elevations, the concrete surface would transition to basalt columns and boulders that would function as informal seating and provide opportunities for visitors to approach the water's edge.

The basalt columns would be organized to control where and how visitors may access the water without damaging the habitat. The wetlands next to the water access would be muddy and soft, so the basalt columns would provide access to the water for those comfortable and able enough to navigate them. Signage could also be used to warn about the risks of slippery and muddy surfaces.

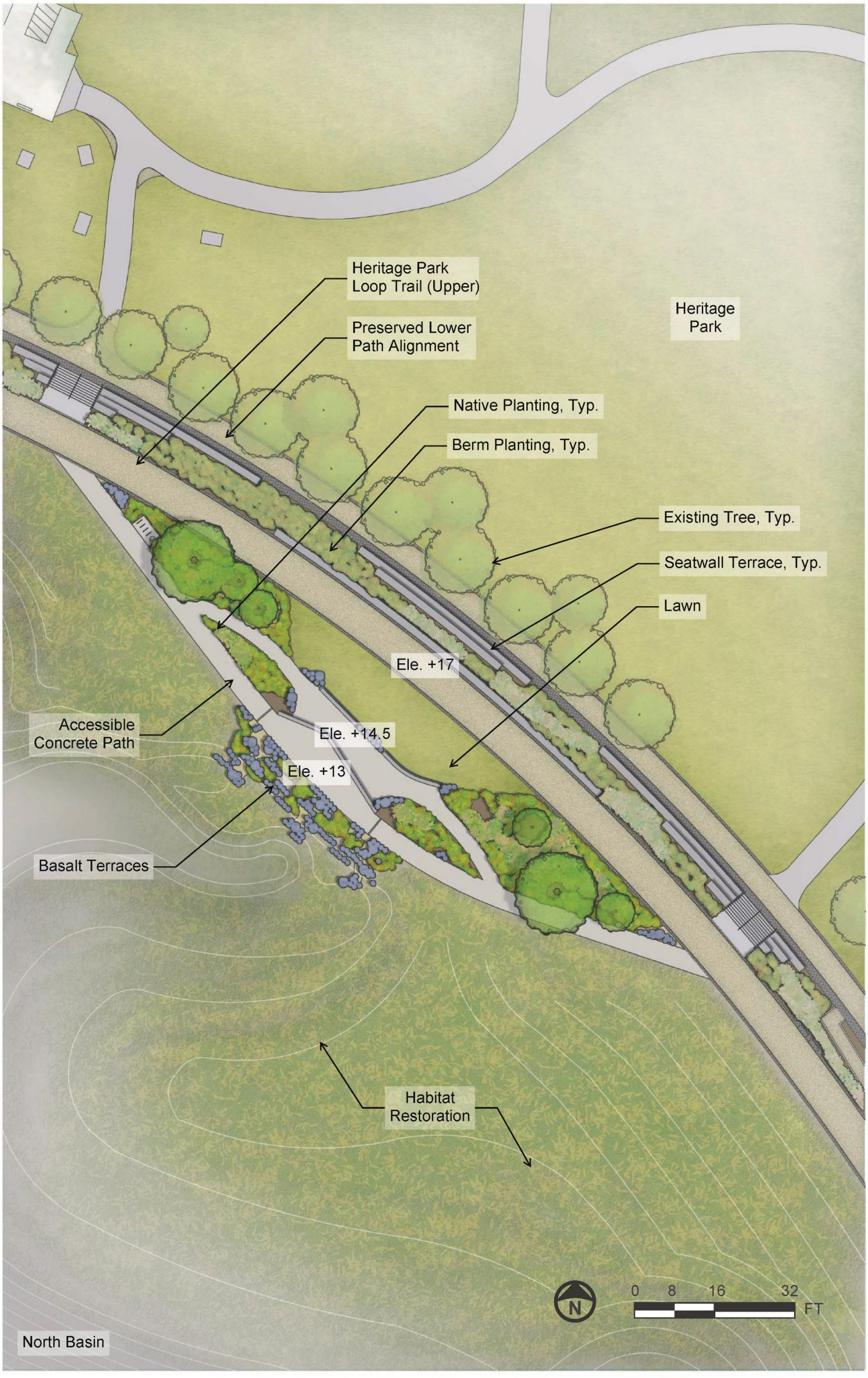


Figure 2.8 Heritage Park Water Access

2.5.2 Construction Activities

Since the 2022 Final EIS, the state hired a General Contractor/Construction Manager (Contractor). As a result, construction means and methods have been further developed and refined, providing a higher level of certainty regarding construction approach. Changes to construction means and methods are described in the following sections, including construction staging requirements, materials transport, and duration and dependencies.

2.5.2.1 Capitol Lake Draw Down

For the full duration of construction before dam removal, the Capitol Lake system would be drawn down to approximately elevation 0 feet NAVD 88, and the lake level would be maintained at this lower elevation with dam operations. This would facilitate year-round dredged material drying and habitat grading. This construction method had not been identified, or described, in the 2022 Final EIS; previously, all work within Capitol Lake Basin was assumed to occur in-water with the lake maintained at current levels.

2.5.2.2 River Channel Reestablishment and Habitat Development

The method of habitat construction has been updated since the 2022 Final EIS. Instead of sheetpile, the Project would use geotubes to create containment areas along the shorelines where dredged material (a mixture of water and sediment) would be pumped. The containment areas would allow solids to settle out, water to drain off, and the material to dry.

For the geotubes, an imported natural mix of unprocessed gravel would be trucked to shoreline staging and pumping locations, where it would be emptied into hoppers and pumped via pipelines into the geotubes. Use of imported gravel would increase the number of truck trips required for construction. To accommodate construction vehicles and additional trucks, Deschutes Parkway SW north of Lakeridge Drive would be closed for up to 3 years.

Containment areas would be constructed along the shoreline of both the Middle and North Basins. Dredged material would be sequentially discharged into multiple separate cells. It is expected to take approximately 1 year for dredged material within the cells to dry enough to be graded to form the habitat areas. When the material has sufficiently settled, the geotubes would be cut open and the geosynthetic fabric would be removed and disposed of off-site. The gravel would be graded into and along with the dried dredged material to create the habitat areas.

2.5.2.3 New 5th Avenue Bridge

A temporary earthen causeway would be constructed between the existing dam and the new bridge alignment. This causeway would be constructed with riprap, quarry spalls, and gravel that would be beneficially reused to construct habitat when the temporary causeway is removed. The temporary causeway would provide a platform for construction equipment to install the new bridge foundations and erect the bridge superstructure. Immediately south of the dam spillway, an opening in the causeway, sized to accommodate the dam spillways and fish ladder, would maintain channel flow through the dam.

The temporary causeway locations and bridge-specific staging areas are shown on Figure 2.9.

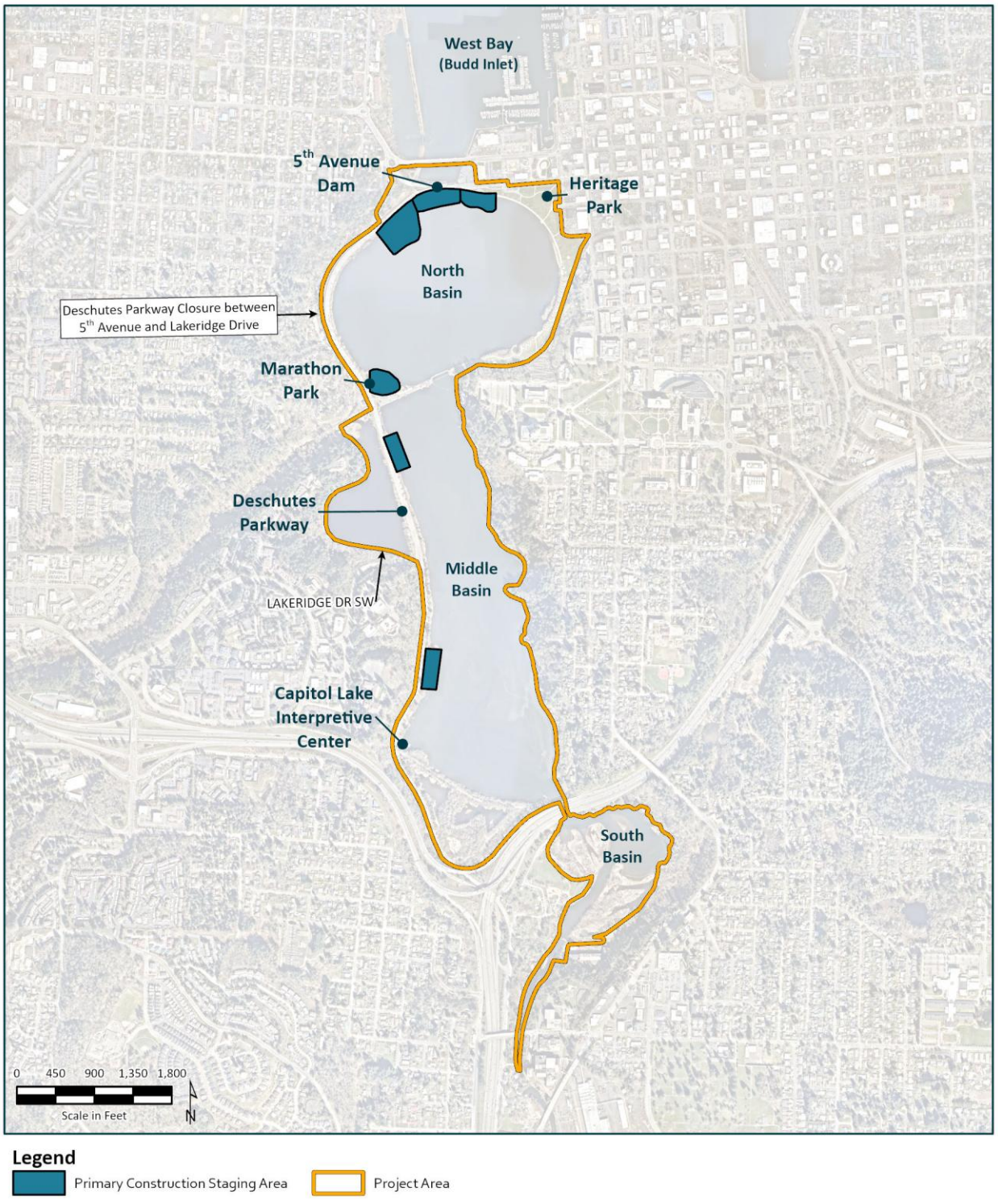


Figure 2.9 Primary Construction Staging Areas

2.5.2.4 Construction Staging

The primary staging locations during construction have been refined since the 2022 Final EIS and are provided in Figure 2.9. The 2022 Final EIS described primary staging areas at Marathon Park and from portable barges or on floats throughout the lake basin during dredging and habitat construction. Other staging locations described in the EIS included Tumwater Historical Park and the northwest embankment of the 5th Avenue Bridge. These two other staging areas may still be used.

In addition to the temporary causeway for 5th Avenue Bridge construction, the Contractor proposes new construction staging to support river channel dredging from two laydown areas constructed along the Middle Basin shoreline next to Deschutes Parkway SW. Each laydown area would be constructed from quarry spalls filled into the shoreline area up to the elevation of Deschutes Parkway SW. Temporary sheetpile would be driven into the uplands to enclose a hopper area at each laydown area, which would be used for gravel placement and pumping. Within the basin, temporary access routes may be constructed with quarry spalls and gravel, which would be regraded into the habitat areas when no longer required.

Within Heritage Park, disturbance of the existing park landscape would be minimized. Construction staging would generally be contained to the area between the trees that line the Arc of Statehood and the water's edge. Existing trees and lawn area landward of the existing Arc of Statehood shoreline pathway would not be disturbed.

Work at the Tumwater Historic Brewery would be accessed from Custer Way SW. Construction staging and laydown would be adjacent to the brewery building.

2.5.2.5 Materials Transport and Deschutes Parkway SW Road Closure

At the onset of construction, to support the river channel dredging and habitat construction, significant material must be imported to the site to construct staging areas and develop containment areas. This imported material would be delivered by large trucks traveling to and from the Project area. The use of geotubes instead of sheetpiles for construction of containment area for the shoreline habitat, the 5th Avenue Bridge abutments, and the addition of the Heritage Park Berm and Tumwater Brewery Berm, would result in substantially increased truck trips during construction. Approximately 47,000 truckloads are anticipated during construction of the Project due to these updated design and construction method elements.

The updated Project design would require Deschutes Parkway SW to be closed between Lakeridge Drive and 5th Avenue to all but local traffic, for up to 3 years during construction (additional information on haul routes and staging areas is provided in Section 3.4). This extended closure would be necessary to safely construct the new roundabout at the intersection of Deschutes Parkway SW, Olympic Street, and the new bridge approach. The Deschutes Parkway SW closure would interrupt the existing north–south travel corridor, creating a temporary dead-end condition on either side of the work area. Maintaining traffic through the work zone while constructing the roundabout would not be feasible due to space constraints, worker and public safety considerations, and the complexity of the roadway

improvements. The final construction sequencing has not yet been determined. Although portions of Deschutes Parkway SW could potentially be reopened during certain phases of construction, this SEIS conservatively assumes that the roadway segment could remain closed to through traffic for up to approximately 3 years.

It is expected that trucks would travel to and from the Project site on Deschutes Parkway SW, with an anticipated truck haul route to and from Highway 101 using Cooper Point Road, Evergreen Park Drive SW, Lakeridge Drive, and Deschutes Parkway SW. Trucks would use existing arterials. Truck routes would be coordinated with the Cities of Olympia and Tumwater.

2.5.2.6 Construction Duration and Dependencies

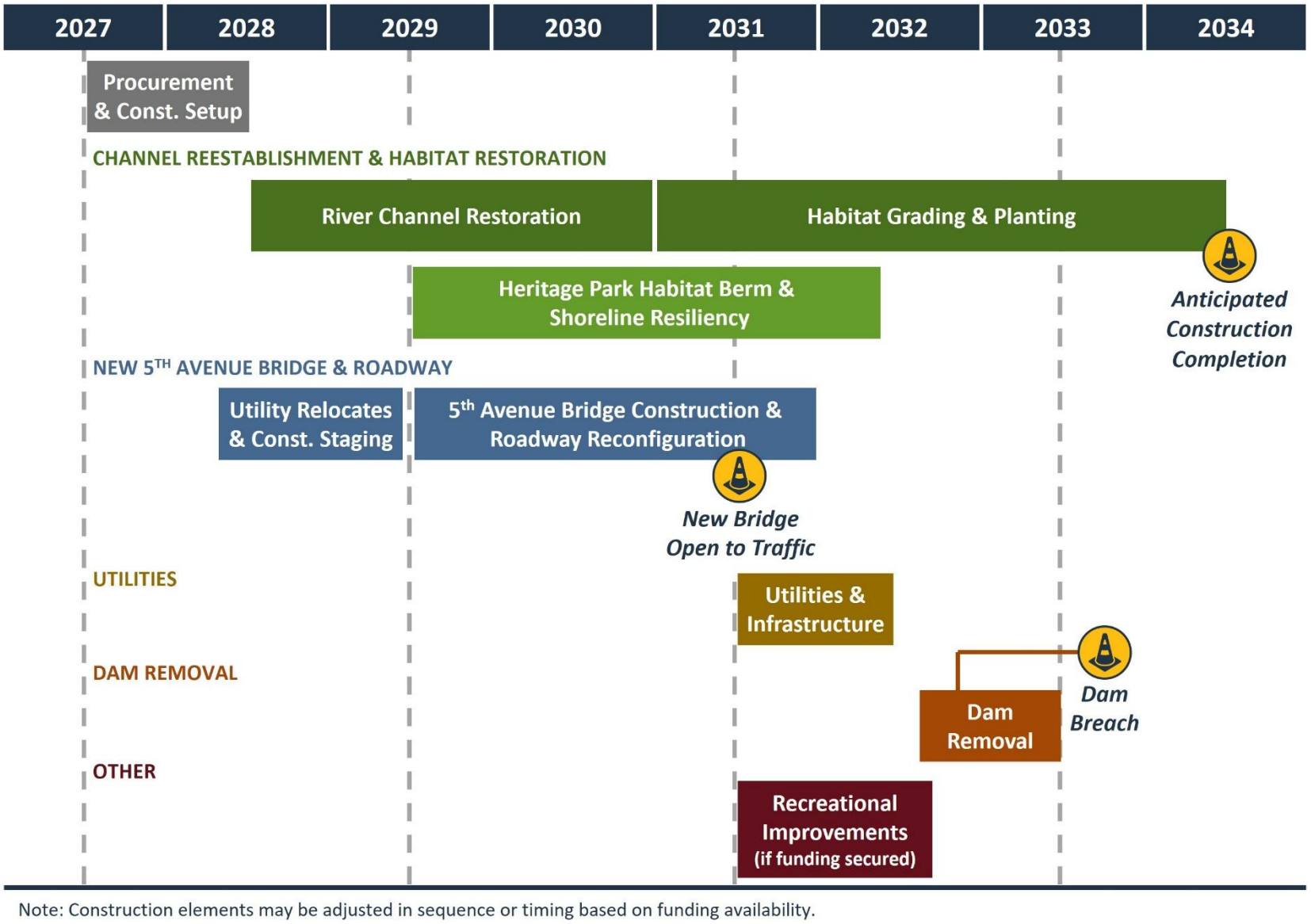
The Contractor estimates that construction can be completed in approximately 6 to 7 years, but the timeline will be influenced by funding availability. This is a slight reduction from the construction duration of up to 8 years outlined in the 2022 Final EIS.

Construction phasing is summarized below and on Figure 2.10. This is similar to the phasing assumed during the 2022 Final EIS and continues to require dredging and construction of the new 5th Avenue Bridge before dam removal.

Construction of staging areas and dredged material containment is an approximate 8-month process. Dredging would start after the first containment areas are in place and is expected to last 12 to 15 months. This schedule depends on capture and trucking of migrating adult salmon around the work area during this intensive dredging period (refer to Section 2.5.2.7). Capturing and trucking salmon during the year of highest dredging productivity would allow the dredging to continue without interruption of migration passage windows and would minimize harm to salmon while river channels are being reconstructed. In the construction years after completion of channel dredging, migrating salmon would be able to use the newly dredged channels, which would be protected during migration passage periods with water quality best management practices (BMPs).

Habitat grading would begin once initial dredged materials are dry enough to be reworked. It is assumed that this would be approximately 1 year after dredging begins. It is estimated that habitat grading could take up to 2 years to complete. Construction of the Heritage Park Berm would proceed in parallel with estuary grading. Most other elements (such as the new Marathon Park Utility and Pedestrian Bridge) would be constructed after completion of estuary grading but before breach of the dam.

Planting would be conducted after the dam is breached and tidal flows are restored to the estuary. Planting is expected to take approximately 1 year with multiple crews working simultaneously.



Note: Construction elements may be adjusted in sequence or timing based on funding availability.

Figure 2.10 General Construction Schedule

2.5.2.7 Fish Passage and In-Water Work Windows

The 2022 Final EIS described a conceptual construction schedule that assumed an extended in-water work window from June 1 to August 15 and November 15 to February 15 of each year, similar to the adjacent marine water in-water work window. After additional coordination with WDFW and the Squaxin Island Tribe, the in-water work window and approach to fish passage have been further refined as described below.

In all years except for the first year of construction when intensive dredging would occur, in-water work will be constrained to the in-water work windows when salmon are not migrating (May 30 to August 1 and November 15 to March 30, or adaptive windows based on salmonid presence).

During the primary year of dredging to reestablish the Deschutes River channels, the following approach would be implemented:

- During out-migration of juvenile salmonids, in-water work will be paused for a limited time (during April and May) to allow juvenile out-migration through the lake system. This pause of in-water work would be aligned with hatchery operations.
- During in-migration of adult salmonids, a system approved by WDFW and the Squaxin Island Tribe will be implemented to transport the migrating adults around the active dredging area, while allowing dredging to continue. This could involve protection of an isolated channel area for migration; hopper collection of fish at the dam, with trucking around the work area; or transfer of fish from the dam to a point upstream of the work area using a vacuum-assisted fish passage system. Upstream of the work area, the salmon would migrate naturally through Tumwater to the Tumwater Falls fish ladder and hatchery for sorting and management following the existing WDFW protocols.

2.6 No Action Alternative

SEPA requires that an EIS evaluate the No Action Alternative (WAC 197-11-440), against which the potential effects of the action alternatives can be evaluated and compared. For purposes of the No Action Alternative evaluation for this SEIS, the construction and operations proposed for the Project would not occur. Under the No Action Alternative, ecosystem processes would likely remain degraded and impaired. Without restoration, the site is expected to experience continued water quality issues, presence of invasive species, and altered hydrological and sedimentation processes.

2.7 Elements of the Environment Not Further Analyzed in This SEIS

For the following elements of the environment, the updated Project design and its potential impacts do not substantially change the analysis of significant impacts evaluated in the 2022 Final EIS.

2.7.1 Hydrodynamics and Sediment Transport

Water levels and sediment deposition would be very similar to those described for the Estuary Alternative in the 2022 Final EIS. The hydrodynamics and sediment transport numerical model developed for the EIS has been updated and shows that as design of the habitat areas has progressed, sediment deposition rates in West Bay are the same or less than presented in the 2022 Final EIS. The numerical model also shows that the extent of flooding has been reduced given the updated Project design, which intends to eliminate an existing flooding pathway in Heritage Park.

2.7.2 Navigation

Impacts and mitigation measures related to vessel navigation in West Bay would be the same as those described for the Estuary Alternative in the 2022 Final EIS. River channel dredging and channel shoreline reconstruction between the 5th Avenue Dam and 4th Avenue Bridge would not occur within the Federal Navigation Channel or otherwise affect vessel navigation in West Bay other than small craft that may occasionally transit under the 4th Avenue Bridge.

2.7.3 Water Quality

Long-term impacts and benefits of establishing an estuarine environment in the lake basin would be the same as described for the Estuary Alternative in the 2022 Final EIS. Short-term impacts during construction would be very similar to those described for the Estuary Alternative. The extent of construction activities in the Capitol Lake Basin and at the 5th Avenue Dam would be the same as described for the Estuary Alternative. The updated design includes additional river channel dredging north of the dam (between the 5th Avenue Bridge and 4th Avenue Bridge) that would result in additional short-term turbidity. Compliance with regulations, permit conditions, plans, and authorizations would avoid and minimize potential construction impacts on water quality. Construction-related mitigation is described in Section 5.3.6 of the 2022 Final EIS and includes preparation of a Water Quality Monitoring and Protection Plan that would be approved by regulatory agencies and implemented throughout construction.

2.7.4 Aquatic Invasive Species

Impacts and benefits associated with the effects of dam removal and saltwater reintroduction on aquatic invasive species populations and their potential spread would remain unchanged from those described for the Estuary Alternative in the 2022 Final EIS.

2.7.5 Wetlands

Wetland conditions and impacts would be very similar to those described in the 2022 Final EIS. A wetland delineation was completed subsequent to the 2022 Final EIS to support ongoing permitting. The results of the delineation are documented in the Critical Areas Report available on the Project website: https://deschutesestuaryproject.org/library/.

As described in the 2022 Final EIS, most wetland impacts would result from conversion of freshwater and open water wetlands to estuarine wetlands, tideflats, and riparian wetlands. Also as described in the 2022 Final EIS, a small area of wetlands would be filled for infrastructure-related Project elements, including new boardwalk and culvert infrastructure.

A permanent net loss of 0.5 acres or greater of wetlands was considered a significant impact in the 2022 Final EIS, if the wetland functions could not be replaced through mitigation. As a result of Project changes and refinements, additional small areas of wetlands totaling approximately 1.5 acres would be filled. Although greater than 0.5 acres of permanent impact, the Project would result in an overall ecological lift through the restoration of the existing freshwater lake to its historic estuarine and salt marsh habitat.

Currently, the freshwater wetlands located throughout the site are rated as Category II (high quality) or Category III (moderate quality) wetlands based on the Washington State Wetland Rating System and the functions they provide. Many of the wetlands are narrow, fragmented, lacustrine wetlands located along the shoreline of Capitol Lake. Estuarine wetlands are often categorized as Category I because they are rare, significant, irreplaceable, and sensitive to disturbance. It is likely that the restored wetlands would be classified as Category I wetlands, indicating the increased value of the system compared to existing conditions.

Overall, the Project would result in a conversion of approximately 13.6 acres of freshwater and open water wetlands to restored estuarine, salt marsh, and mudflat habitat. This habitat conversion would increase habitat structure and complexity with the establishment of five habitat zones, including tidal forested wetland, tidal scrub-shrub, tidal high marsh, tidal low marsh, and mudflat, where currently there is a uniform freshwater lake with only scattered small wetlands and riparian vegetation along the fringe. Additionally, there would be a substantial increase in habitat edge through the creation of islands and an undulating wetland shoreline, which would increase the interspersion of habitat. Edge habitats along the margins of estuaries are important areas for juvenile salmonids that remain in shallow water. As a result of the Project's overall ecological lift and enhanced habitat functions, impacts to the wetlands are considered mitigated and no new probable significant adverse impacts to wetlands are identified. Additional information is included in the Restoration Plan available on the Project website: https://deschutesestuaryproject.org/library/.

2.7.6 Environmental Health

Sediment sampling conducted since the 2022 Final EIS has continued to show that sediment quality throughout the lake, including the planned dredging areas, is good and does not exceed applicable contamination or cleanup criteria. Potential short-term construction-related impacts could include spills or releases of hazardous materials or exposure of workers to contamination. These short-term impacts, along with the long-term sediment quality conditions and associated mitigation measures discussed in Sections 4.11 and 5.12 of the 2022 Final EIS, would remain unchanged with the updated design.

2.7.7 Public Services and Utilities

The types of impacts and mitigation measures for public services and utilities would be the same as those described for the Estuary Alternative in Sections 4.13 and 5.13 of the 2022 Final EIS. As described in the 2022 Final EIS, three primary utility corridors (the 5th Avenue Dam, Marathon Park Utility and Pedestrian Bridge, and Deschutes Parkway SW) currently carry major conveyance infrastructure, including large-diameter sewer, domestic water, reclaimed water force mains, Puget Sound Energy natural gas, and electrical utilities.

As described in the 2022 Final EIS, long-term impacts on public services and utilities would mostly be associated with restoring tidal hydrology to the Capitol Lake Basin, which would introduce saltwater into locations where existing utility infrastructure is vulnerable to saline conditions. Corrosion of metal utility lines was identified as a key risk when these objects are exposed to saltwater. As described in the 2022 Final EIS, the Project team has been coordinating with local utility providers to identify corrosion risks and incorporate appropriate measures into final design to protect or replace utilities at risk of corrosion.

Existing utility lines attached under the Marathon Park Utility and Pedestrian Bridge (including sewer, reclaimed water, water, and electrical) would be replaced as part of the new Project bridge replacement. The new bridge design includes hanging the relocated utilities at higher elevations that minimize risk of corrosion. Utility lines would be temporarily removed from service while the bridge is being replaced. Any service disruption is anticipated to be minimal due to redundant services along the 5th Avenue Bridge. The Project team will continue to coordinate with utility providers during design and construction to incorporate appropriate measures to minimize service disruptions.

As design has progressed, the updated design includes a reduced number of outfall replacements through consolidating outfalls. This reduction in the number of outfalls in the system has the benefit of reducing the potential for erosion and the maintenance burden.

As described in the 2022 Final EIS, measures would be implemented to coordinate final construction plans for temporary utility reroutes and relocations with affected utility providers and to minimize service disruptions. With these measures in place, utility impacts under the Project would remain less-than-significant.

2.7.8 Economics

SEPA does not require the economic analysis of a proposal. However, economics was considered in the 2022 Final EIS because it was needed to support the overall decision-making process for long-term management of Capitol Lake – Deschutes Estuary.

Indirect short-term economic effects would be slightly different from the 2022 Final EIS only because of the difference in construction costs. Long-term economic effects would be the same as described in the 2022 Final EIS.

3.0 Affected Environment, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts

This section presents additional information for the following resource topics: Fish and Wildlife; Land Use, Shorelines, and Recreation; Visual Resources; Transportation; Air Quality; Cultural Resources; Tribal Resources; Environmental Justice; and Cumulative Impacts. These elements of the environment were selected for additional analysis to supplement the 2022 Final EIS.

The affected environment, impacts, mitigation measures, and significant unavoidable adverse impacts for each of these resource topics are described for the updated Project design.

For elements of the environment that were previously discussed in the 2022 Final EIS, a call-out box is provided with references where additional information can be found in the 2022 Final EIS.

3.1 Fish and Wildlife

This section describes any relevant updated information on fish and wildlife in the Project area and analyzes new or increased adverse impacts related to the updated Project design. The approach to analyzing fish and wildlife impacts produced by the Project was described in Sections 4.5 and 5.5 and Attachment 9, Fish and Wildlife Discipline Report, of the 2022 Final EIS. The Project area is generally consistent with the study area analyzed in the 2022 Final EIS.

Refer to the following sections for information on fish and wildlife in the 2022 Final EIS:

- Affected Environment: Section 3.5 (pages 3-68 to 3-81)
- Long-Term Impacts: Section 4.5 (pages 4-71 to 4-87)
- Construction Impacts: Section 5.5 (pages 5-17 to 5-28)
- Attachment 9 Fish and Wildlife Discipline Report

3.1.1 Affected Environment

As described in the 2022 Final EIS, construction of the 5th Avenue Dam in 1951 changed the Capitol Lake Basin from an estuary to a freshwater impoundment. This has limited passage for anadromous fish (fish that migrate from freshwater to and from the ocean) , created a barrier to tidal exchange, and altered natural hydrological and sediment transport processes.

Table 3.5.1 of the 2022 Final EIS lists the documented non-native and native fish species present in Capitol Lake and West Bay and their federal status under the Endangered Species Act. There have been no changes to information on fish presence and no changes to species status since the 2022 Final EIS.

Seven anadromous salmonid species may occur in or near the Capitol Lake Basin at different stages of their life history. Historically, use of the Project area by anadromous salmonids extended only to Tumwater Falls. No naturally reproducing native populations of Chinook salmon, steelhead, or bull trout are present within the Deschutes River because Tumwater Falls is a natural fish barrier. All anadromous salmonids produced in the Deschutes River watershed migrate through the fish ladders (fishway) at the 5th Avenue Dam and at Tumwater Falls.

In 2002, the fishway at the dam was retrofitted to meet WDFW fish passage criteria, but WDFW has reassessed and, as of 2025, considers the dam a 70% fish passage barrier.

All other existing habitat conditions and species present within the Project area remain consistent with what was described in the 2022 Final EIS.

3.1.2 Findings for the Updated Project Design

3.1.2.1 Long-Term Impacts

The 2022 Final EIS (Section 4.5) evaluated long-term impacts related to changes in habitat conditions, extent, and availability, including from new overwater structures such as boardwalks. Significant impacts were identified related to habitat changes affecting freshwater fish and bats that forage in Capitol Lake.

The updated design includes less overwater coverage and fewer piles because of reducing the length of boardwalks.

Long-term operational impacts on fish and wildlife remain **significant** on freshwater fish, Yuma myotis bats, and the Woodward Bay bat colony (little brown bats), consistent with the analysis presented for the Estuary Alternative in the 2022 Final EIS. Based on the analysis, the updated Project design would not contribute to those significant impacts, and all other long-term impacts on other species and habitat would remain less-than-significant.

3.1.2.2 Construction Impacts

The 2022 Final EIS (Section 5.5) evaluated construction impacts related to habitat disturbance, water quality changes, and noise, including underwater noise impacts associated with in-water, impact pile driving in Capitol Lake. All construction-related impacts of the Estuary Alternative were determined to be less-than-significant.

Analysis of underwater noise impacts considered the installation of 24-inch hollow steel piles and concluded that impact pile driving could generate peak sound levels of approximately 206 decibels (dB), which corresponds to the presumed single-strike injury threshold for fish identified in WSDOT guidance (WSDOT 2020). The 2022 Final EIS also concluded that impact pile driving within the lake would exceed fish disturbance thresholds and could exceed injury thresholds for fish exposed to underwater sound from multiple pile strikes.

Although there are fewer piles, the updated design includes additional impact pile driving beyond what was described for the Estuary Alternative in the 2022 Final EIS. Construction of

the Marathon Park Utility and Pedestrian Bridge replacement would require installation of approximately 24 steel piles (up to 30-inch diameter). Piles would be advanced using vibratory methods and potentially proofed with an impact hammer. In addition, up to 30 composite piles (up to 16-inch diameter) would be installed with an impact hammer upstream of the BNSF Railroad Bridge as a debris barrier.

The 2022 Final EIS predicted underwater sound levels from pile driving to substantially exceed disturbance thresholds for fish. However, those predictions assumed that all pile driving would be in-water, with open-water conditions and with direct line-of-sight propagation from the pile-driving source, and did not account for the effects of physical obstructions. Underwater sound waves are attenuated, reflected, or blocked by intervening landforms and structures. As a result, the 2022 Final EIS found that although fish throughout portions of the North Basin could experience behavioral disturbance from pile-driving activities, the extent and magnitude of those effects would vary depending on location and site-specific conditions. Fish located within the injury threshold zone could experience physical injury. The predictions in the 2022 Final EIS also did not account for the effects of BMPs and noise attenuation measures that would be implemented during construction.

As design and construction methods have progressed since the 2022 Final EIS, the construction approach now includes drawing down the lake level to allow for much of the work "in the dry." Under the updated design, hollow steel piles (up to 30-inch diameter) would be installed using vibratory methods and potentially proofed with an impact hammer. Compared to the 24-inch piles evaluated in the 2022 Final EIS, installation and proofing of 30-inch steel piles would be expected to generate somewhat greater underwater sound levels and slightly larger fish injury and disturbance zones. However, impact pile driving would remain limited to proofing activities, and many of the piles would be installed "in the dry" where there would be reduced sound propagation into the water. Although the increase in pile diameter may modestly increase peak sound levels and cumulative sound exposure, the nature, extent, and significance of the impact would remain generally consistent with the conclusions of the 2022 Final EIS. Impact pile driving of composite piles for the debris barrier would produce substantially less noise and less acoustic energy than impact pile driving of hollow steel piles, both in the air and underwater.

As described in the 2022 Final EIS, the Project would implement BMPs designed to reduce underwater noise generated by in-water impact pile driving. These measures may include air bubble curtains (confined or unconfined), temporary noise attenuation piles, air-filled fabric barriers, or other approved sound attenuation technologies. Properly designed and implemented attenuation systems have been shown to reduce peak underwater sound levels by approximately 2 to 38 dB, with most systems achieving reductions in the range of 5 to 20 dB (WSDOT 2020). The use of such measures, particularly in areas with relatively soft sediment, would be expected to substantially reduce underwater sound levels and associated fish injury zones.

As described in the 2022 Final EIS, with implementation of these BMPs, impacts on fish would be limited primarily to temporary behavioral responses, including avoidance of the immediate construction area and short-term disruption of normal movement or foraging activities. These

effects would be localized and temporary and would not be expected to result in population-level impacts. Consistent with the conclusions of the 2022 Final EIS, implementation of required BMPs and adherence to applicable in-water work timing restrictions would reduce construction-related underwater noise impacts to less-than-significant levels for anadromous fish species, including salmonids, as well as resident freshwater fish species.

The updated design would also substantially reduce the amount of sheetpile installation compared to the Estuary Alternative evaluated in the 2022 Final EIS. The 2022 Final EIS assumed extensive use of in-water sheetpile installation to create containment areas for habitat construction. Sheetpile installation for containment areas is no longer proposed; therefore, the total amount of sheetpile installation would be considerably less than previously analyzed. Although the updated design may require impact proofing of a greater number of individual sheetpiles, the overall quantity of sheetpile installation would be reduced and much of the sheetpile installation would occur "in the dry" instead of in-water.

The 2022 Final EIS concluded that underwater noise generated by vibratory installation of sheetpiles would not result in significant adverse impacts on fish. The 2022 Final EIS further noted that sound levels associated with impact installation of sheetpiles, although generally less than those associated with large-diameter steel piles, have been documented at or near the 206 dB fish injury threshold (WSDOT 2020). As such, impact proofing of sheetpiles would increase the potential for temporary behavioral disturbance and localized injury to fish close to pile-driving activities. However, as with installation of the permanent steel piles, implementation of noise attenuation measures, adherence to approved in-water work windows, and compliance with applicable permit conditions would substantially reduce these effects. Consistent with the conclusions of the 2022 Final EIS, impacts on anadromous and resident freshwater fish species resulting from vibratory installation and limited impact proofing of sheetpiles would be less-than-significant.

In summary, the updated Project design would result in a modest increase in underwater noise associated with installation and proofing of steel piles for new Project elements. The updated design may also require impact proofing of additional sheetpiles, although the overall amount of sheetpile installation would be substantially reduced relative to the Estuary Alternative evaluated in the 2022 Final EIS. These refinements would not introduce new impact mechanisms or substantially alter the extent, duration, or intensity of underwater noise effects previously described. As described in the 2022 Final EIS, implementation of noise attenuation measures, compliance with in-water work timing restrictions, and adherence to applicable permit conditions would minimize potential impacts on fish and fish habitat. In addition, pile-driving activities would occur upstream of the 5th Avenue Dam, which would remain in place during construction and is expected to attenuate sound transmission to downstream habitats, including West Bay, where fish and marine mammals may be present.

During in-migration of adult salmon, a system approved by WDFW and the Squaxin Island Tribe will be implemented to transport migrating adults around the active dredging, while allowing dredging to continue. Fish transport techniques have been developed to minimize potential

impacts to salmon during construction, though some mortality from transport of migration through the construction area may occur.

With compliance with in-water work timing restrictions, adherence to applicable permit conditions, and fish transport techniques designed to minimize potential impacts, impacts on fish and wildlife would remain **less-than-significant.**

3.1.2.3 Mitigation Measures

As described within the 2022 Final EIS, BMPs will be used during construction to reduce underwater noise generated by in-water impact pile driving. These measures may include air bubble curtains (confined or unconfined), temporary noise attenuation piles, air-filled fabric barriers, or other approved sound attenuation technologies.

An Adaptive Management and Monitoring Plan (previously referred to as a Habitat Enhancement Plan in Section 4.5.8.1 of the 2022 Final EIS) will be developed in coordination with WDFW and the Squaxin Island Tribe.

3.1.2.4 Significant Unavoidable Adverse Impacts

No new significant unavoidable adverse impacts to fish or wildlife have been identified associated with installation and proofing of steel piles or sheetpiles for new Project elements, or related to other Project design updates. **Significant unavoidable impacts** to freshwater fish, Yuma myotis bats, and Woodward Bay bat colony (little brown bats) would remain as described in the 2022 Final EIS.

3.1.3 Findings for the No Action Alternative

The No Action Alternative would not result in construction impacts to fish and wildlife because the Project would not be built. Under the No Action Alternative, the 5th Avenue Dam would remain. Potential long-term impacts would be related to limited ongoing maintenance of the 5th Avenue Dam and ongoing sedimentation of the Capitol Lake – Deschutes Estuary, because no sediment management strategies would be implemented. Impacts associated with limited ongoing maintenance would be less-than-significant. The lack of lake management to remove sediment and submerged aquatic vegetation would continue to impact habitat quality and use by aquatic and upland species.

3.2 Land Use, Shorelines, and Recreation

This section describes any relevant updated information on land use, shorelines, and recreation in the Project area and analyzes new or increased adverse impacts related to the updated Project design. The approach to analyzing land use, shorelines, and recreation impacts produced by the Project was described in Sections 4.8 and 5.8 and Attachment 12, Land Use, Shorelines, and Recreation Discipline Report, of the 2022 Final EIS. The Project area is generally consistent with the study area analyzed in the 2022 Final EIS.

Refer to the following sections for information on land use, shorelines, and recreation in the 2022 Final EIS:

- Affected Environment: Section 3.8 (pages 3-92 to 3-101)
- Long-Term Impacts: Section 4.8 (pages 4-109 to 4-127)
- Construction Impacts: Section 5.8 (pages 5-41 to 5-49)
- Attachment 12 Land Use, Shorelines, and Recreation Discipline Report

3.2.1 Affected Environment

The existing land use within the Project area is consistent with what was described in the 2022 Final EIS. A range of uses are present including open space supporting wildlife habitat and recreation, the Washington State Capitol Campus, commercial areas of downtown Olympia, transportation corridors, and residential uses. Zoning within the portion of the Project area located in the City of Olympia is the same as reported in the 2022 Final EIS; however, a portion of the Project area in the City of Tumwater has been rezoned from Single Family Low Density Residential (4 to 7 units per acre) to Low Density Residential (6 to 9 units per acre; City of Tumwater 2025a). This rezone does not change the residential land use of these areas.

The shoreline designations of Olympia and Tumwater are consistent with the 2022 Final EIS and have not been updated. Most of the shoreline around Capitol Lake is designated as Urban Conservancy. Other shoreline designations along Capitol Lake include Urban Intensity and Waterfront Recreation. Within West Bay, shoreline designations included Marine Recreation and Port Marine Industrial.

As described in the 2022 Final EIS, the study area contains numerous recreational resources. Parks along Capitol Lake are linked by a series of trails that extend around the North Basin from Heritage and Marathon Parks (North Basin Loop Trail). Other trails extend south along the west shore of the Middle Basin from Capitol Lake Interpretive Center to Tumwater Historical Park and Brewery Falls at Tumwater Falls. Figure 3.8.4 within the 2022 Final EIS shows recreational sites within the Project area.

3.2.2 Findings for the Updated Project Design

3.2.2.1 Long-Term Impacts

The 2022 Final EIS (Section 4.8) evaluated direct changes to land use and potential indirect impacts due to effects on recreation. Significant impacts were identified for land use and recreation impacts to private marinas, the Port, and the Federal Navigation Channel in West Bay if maintenance dredging does not occur as planned. Maintenance dredging was described as part of the Estuary Alternative to address sediment deposition affecting land and shoreline uses. With implementation of the proposed maintenance dredging, and with sediment monitoring identified as mitigation to inform dredging frequency and timing, the 2022 Final EIS found that impacts would be less-than-significant.

Land Use and Shorelines

After the 2022 Final EIS, DES and Project partners entered into a legally binding Interlocal Agreement. The Interlocal Agreement defines the governance responsibilities for each partner after the Deschutes Estuary is restored and commits to shared funding for sediment management in West Bay through 2050. The Interlocal Agreement formalizes maintenance dredging responsibilities, including sediment monitoring which was previously identified as a mitigation measure in the 2022 Final EIS. With the Interlocal Agreement, impacts within West Bay would be less-than-significant.

In addition to the property acquisition required for the new roadway connection between Deschutes Parkway SW and 4th Avenue described in Section 4.8.5.1 of the 2022 Final EIS, the updated design includes acquiring an additional property, located on the eastern shoreline immediately north of 5th Avenue (Figure 3.1). This property acquisition is needed to improve ecological functions within the restored river channel and to reduce the complexity of dam removal.

Along the eastern shoreline of the Middle Basin, habitat restoration is proposed within the waterward extent of five privately owned properties. Temporary construction easements would be executed with each of the property owners, allowing for dredging and material placement (Figure 3.1).

The property that would be acquired on the eastern shoreline north of 5th Avenue is currently occupied by a medical software sales/distribution company. This property may be used as a construction office during construction. After construction, the existing structure would be demolished and the site would be regraded and planted with native vegetation. In the long-term, the property would provide passive opportunities for viewing wildlife and the restored river channel.

The properties that would be accessed along the eastern shoreline of the Middle Basin are residential properties. Access and habitat restoration would occur only within the waterward extent of these parcels; access and impacts to upland uses are not proposed.

Property acquisition and any required relocation assistance would be conducted in accordance with Washington's Relocation Assistance law (RCW 8.26). The state would work with affected property owners and occupants to provide compensation and assistance as required by law.

Similar to the findings of the 2022 Final EIS, the property acquisitions would remove a limited amount of developed property (one additional commercial building) but would not substantially affect land use patterns, land use compatibility, or planned future development in the Project area. Converting developed shoreline property to habitat and open space would be consistent with restoration objectives and surrounding public shoreline uses. As a result, adverse impacts on existing or future land uses in the Project area are not expected.

Recreation

As described in Section 4.8.5.2 of the 2022 Final EIS, there would be qualitative differences in some recreational activities currently within the Project area. Most existing recreational activities in the Project area would remain given that recreation occurs in upland shoreline park spaces that would not be impacted by the Project. However, there would be some modifications, primarily to the shoreline areas of adjacent parks, that would provide some new recreational opportunities. The updated design includes additional recreational enhancements, including raising the shoreline along the eastern edge of the North Basin within Heritage Park for the new berm and modifying the boardwalks proposed in the Middle and South Basins.

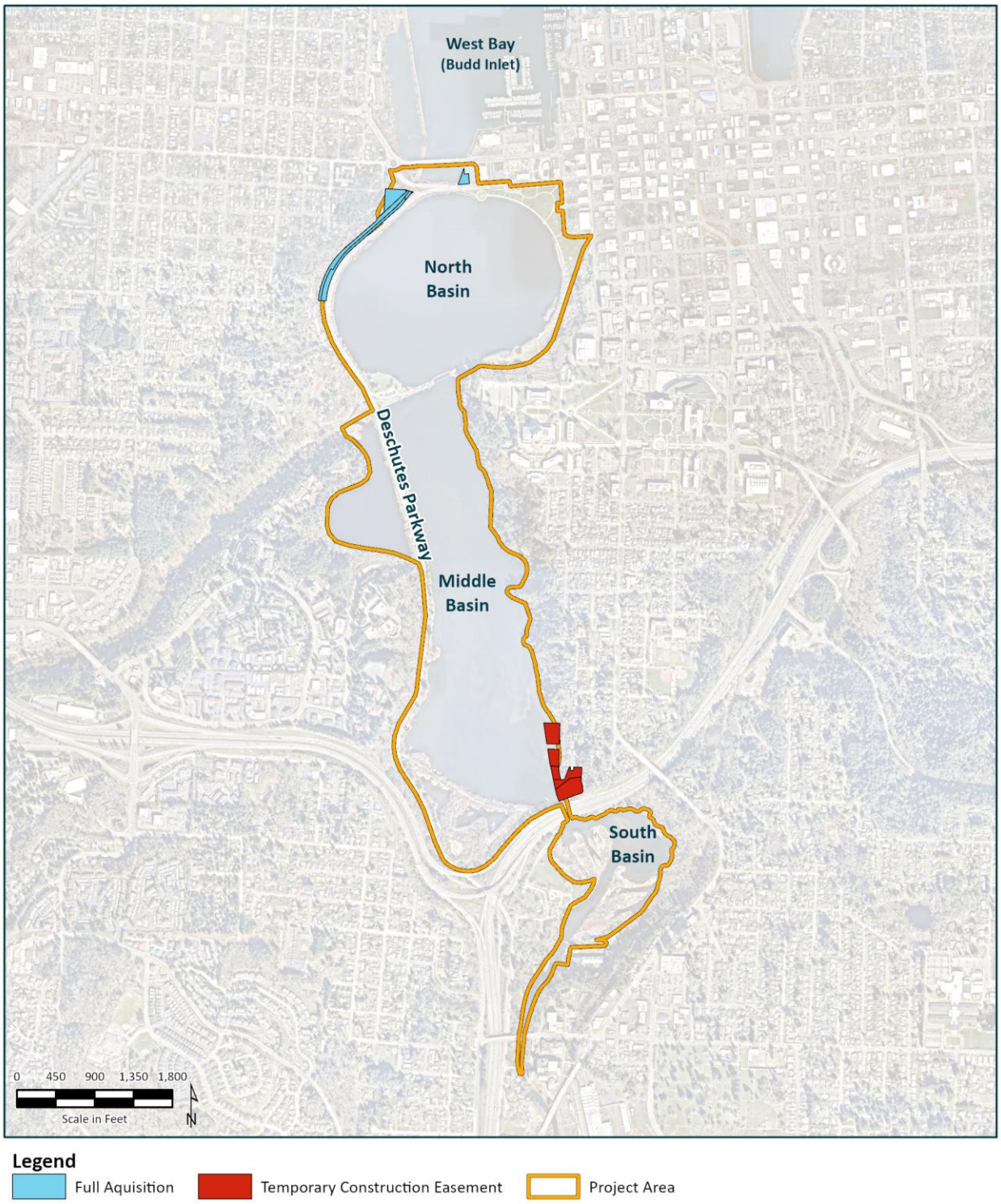


Figure 3.1 Property Acquisition and Temporary Easements

The shoreline of Heritage Park has to be elevated to eliminate an existing flooding pathway and increase resiliency to sea level rise. The modified pathway system associated with this shoreline modification is intended to maintain the shoreline trail associated with the recreational experience in Heritage Park. The shoreline trail would be elevated in largely the same configuration that exists today, with some additional trail connections and access points at the north and south ends of Heritage Park.

Figure 3.2 shows a cross section of the northern portion of the proposed Heritage Park Berm.

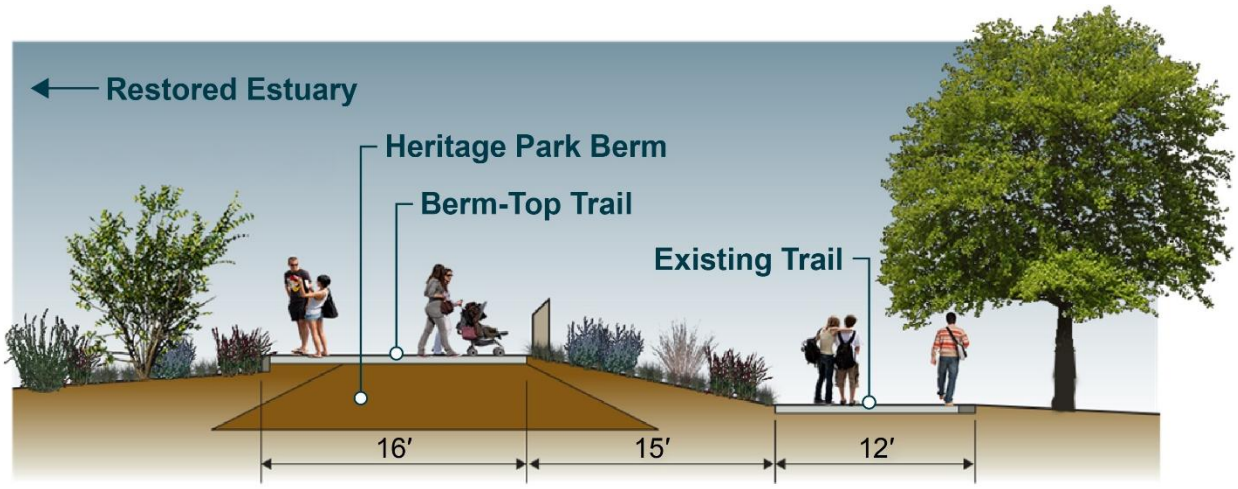


Figure 3.2 Heritage Park Berm Cross Section

The addition of a water access location would provide a new opportunity for visitors to experience the estuary from the water's edge while focusing access to a designated location. Focusing access to a designated location is intended to minimize potential impact on the restored habitat areas.

Some trail and park features along the Arc of Statehood within Heritage Park would be impacted by the raised shoreline elevation including the Washington County plaques and sculpted forms of the Western Washington Inlet and Eastern Washington Butte. The shoreline would be graded at the north and south ends to allow for future development of the inlet/butte features by others, if desired. The new northern terminus of the berm trail would be located at the Eastern Washington Butte and serve as a primary access point from the 5th Avenue Bridge and the northwestern portion of the Project area. The County plaques would be restored and reincorporated into the revised trail features.

Most of the existing promenade and associated heritage trees would be preserved, maintaining the pedestrian experience and direct access to the open lawn spaces within the park. The area between the parallel paths would also contain terraced seating facing the main public open space area of Heritage Park, which would support events in the park, provide areas to gather, and take advantage of the grade change between the two trails that define the berm.

The reduced length of the boardwalks in the Middle and South Basins would decrease the extent of overwater access in the restored habitat area compared to the facilities evaluated in the 2022 Final EIS. However, the boardwalk extent is still expanded from current conditions, with no boardwalk at these locations within the Middle or South Basins. The experience of overwater viewing described in the 2022 Final EIS would be maintained but in a smaller overall boardwalk network. The boardwalks would continue to provide opportunities for estuary viewing, wildlife observation, walking, and passive use. The boardwalks would maintain connections to the existing trail system and park facilities.

Overall, the Project would continue to provide a range of recreational opportunities comparable to those analyzed in the 2022 Final EIS. Recreational access or capacity within the Project area would not measurably change.

Consistency with Plans and Policies

The Project would remain consistent with the goals and policies of adopted land use plans as described for the Estuary Alternative in Section 4.8.5.3 of the 2022 Final EIS. The Project is also expected to be consistent with the City of Olympia and the City of Tumwater land use codes and Shoreline Master Programs (SMPs).

Updated modeling indicates that the Project would not result in an increase in the 100-year flood elevation and is therefore consistent with applicable no-rise requirements for floodways. Accordingly, the updated Project would not result in new or increased floodplain impacts relative to those evaluated in the 2022 Final EIS.

The Project consistency with applicable floodway and shoreline use and development standards would be confirmed during the permit review process.

Summary

The Interlocal Agreement formalizes maintenance dredging responsibilities, including sediment monitoring, which was previously identified as a mitigation measure in the 2022 Final EIS. With the Interlocal Agreement, impacts within West Bay would be less-than-significant. All other long-term impacts remain **less-than-significant**.

3.2.2.2 Construction Impacts

The 2022 Final EIS (Section 5.8) evaluated construction impacts related to temporary disruption of land and shoreline uses; temporary park and recreational access restrictions; and reduction in the quality of recreational resources due to construction noise, dust, or other factors. Significant impacts were identified related to duration of closures and disturbance at Marathon Park.

Land Use and Shorelines

As described within the 2022 Final EIS, during construction, there would be no change in land use surrounding Capitol Lake, except for at construction staging areas where public access to parks and public facilities would be reduced or restricted. Construction of the Heritage Park

Berm would limit the use of the Heritage Park shoreline for several years. The area of temporary closure during construction would be limited to the northern and southern ends and from the existing tree line to the water. The remainder of Heritage Park would remain open during construction. Although limited during Project construction, Heritage Park could continue to serve as a primary civic open space resource for the Capitol Campus, downtown Olympia, and the broader community.

Updated Project design elements occur primarily along the shoreline of Capitol Lake, which is a shoreline of statewide significance under the Shoreline Management Act and is regulated by the City of Olympia's SMP and the City of Tumwater's SMP. Within the City of Olympia, Project activities associated with the Heritage Park Berm, Marathon Park Utility and Pedestrian Bridge, and updated habitat elements include sheetpile wall installation, bridge removal and construction, and shoreline grading and fill placement. Additional activities, such as structure demolition, site regrading, and restoration, would occur on the parcel located on the eastern shoreline north of 5th Avenue within Olympia's West Bay shoreline jurisdiction.

Construction of the Tumwater Brewery Berm is not anticipated to impact the land use of the parcel because it contains the vacant Tumwater Historic Brewery and access to this area is not permitted to the general public. Within the City of Tumwater's shoreline jurisdiction, key construction activities associated with the Tumwater Brewery Berm include shoreline grading and fill placement. Updated Project design elements will be included in the shoreline permits required for the Project from the Cities of Olympia and Tumwater.

Although the updated Project design includes activities within an expanded footprint of Heritage Park and at new locations (Tumwater Brewery and on the parcel along the eastern shoreline north of 5th Avenue), the additional geographic extent of temporary disruptions is limited. The duration of construction would be reduced from up to approximately 8 years described in the 2022 Final EIS to 6 to 7 years. With the reduced Project construction duration, and the limited use of Heritage Park, the updated design would not contribute substantially to the overall impacts described in the 2022 Final EIS.

Recreation

The updated Project design would result in additional temporary disruptions to recreational access beyond those described in the 2022 Final EIS. Although the Heritage Park Berm construction would require closure of the shoreline trail for several years, pedestrian access through Heritage Park would be maintained (refer to Section 3.2.2.1 for a description of the impact to recreational use within Heritage Park). The connectivity of the North Basin Loop Trail would be disrupted for approximately 6 months during the replacement of the Marathon Park Utility and Pedestrian Bridge. Although additional staging areas along Deschutes Parkway SW, construction activity, and truck trips associated with channel dredging and habitat construction would not directly impact public parks and facilities, the increased presence of construction equipment, activities, and noise in the Project area may impact the recreational experience of some users during the 6- to 7-year construction period.

Construction of the Tumwater Brewery Berm is not anticipated to impact recreation because this area is privately owned and not currently accessible to the public.

Construction Noise and Vibration

In the cities of Olympia and Tumwater, construction activities are typically limited to daytime hours (7:00 a.m. to 10:00 p.m.), consistent with WAC 173-60. Construction noise is subject to more restrictive limits during nighttime hours (10:00 p.m. to 7:00 a.m.), and work outside standard hours may require special authorization or be limited by permit conditions.

Construction activities would generate temporary increases in noise levels due to operation of heavy equipment, vehicle use, and construction activities. The type and nature of construction noise would generally be the same as described in the 2022 Final EIS, but noise would be produced at a few different locations. As described in the 2022 Final EIS, the recreational experience of, and access to, Capitol Lake would be diminished in some locations because of equipment noise, full or partial closures of parks and trails, and other aesthetic effects. Noise and construction activity could detract from these users' enjoyment of the parks and trails. Conversely, construction can be a point of interest for others.

Construction equipment can be stationary (operating in one location, such as pumps and generators) or mobile (moving about the construction site, such as excavators, bulldozers, graders, loaders, and trucks). Heavy construction equipment (for example, for earth-moving activities) typically operates for short periods at full power followed by extended periods of operation at lower power, idling, or powered-off conditions. The loudest construction noise from updated Project elements would be generated from installing steel piles using impact hammers to proof piles at the Marathon Park Utility and Pedestrian Bridge and the boardwalks in the Middle and South Basins.

Common Noise Terms Explained

dB: Of the various metrics used to characterize sound, sound pressure level is the most common and is expressed in dB.

dBA: Frequency refers to the number of pressure wave cycles per second in a sound. The human ear is less sensitive to very high and very low frequencies than to mid-range frequencies. Therefore, sound level meters and noise modeling tools apply a frequency-weighting filter that reduces the contribution of frequencies outside the typical range of human hearing, producing measurements that better reflect perceived sound levels. Measurements made using this filtering system are expressed as A-weighted decibels (dBA; FHWA 2017; CDC 2024).

dBA Leq: Because environmental noise is constantly fluctuating (e.g., passing cars, machinery, quiet periods), a single snapshot of sound levels does not give an accurate picture of total noise exposure. The dBA Leq (A-weighted equivalent continuous sound level) calculates the constant noise level that would contain the exact same total sound energy as the actual fluctuating noise.

Typical construction equipment (such as excavators, loaders, generators, and impact hammer) generates noise levels ranging from approximately 70 to 100 dBA at 50 feet (FHWA 2006; FTA 2018). These levels attenuate with distance at a rate of approximately 6 dBA per doubling of distance. Compared to ambient noise levels of 50 to 70 dBA (typical of urban residential and urban mixed-use/roadway corridor setting), construction activities may result in intermittent increases of approximately 10 to 30 dBA to nearby receptors, depending on distance and equipment usage. These increases would be most noticeable during activities involving impact equipment (e.g., pile driving) or simultaneous operation of multiple pieces of heavy machinery. In areas near downtown Olympia and 5th Avenue with greater existing background levels, increases may be perceived as more limited.

Construction activities would increase roadway traffic volumes, particularly heavy truck traffic, along transportation corridors in and around the Project area. The primary haul route would include U.S. Highway 101 to Cooper Point Road, Evergreen Park Drive SW, Lakeridge Drive, and Deschutes Parkway SW, with additional construction-related trips distributed along designated truck routes within the cities of Olympia and Tumwater. For more information on truck haul routes and a figure depicting them, refer to Section 3.4.2.2. Heavy trucks generate greater noise levels than passenger vehicles due to engine noise, exhaust systems, and tire–pavement interaction. As a result, increases in the percentage of heavy vehicles can contribute disproportionately to overall traffic noise levels.

The magnitude of haul-related noise impacts would vary depending on existing traffic volumes, roadway characteristics, and closeness of sensitive receptors (such as residences, parks, and recreational areas) to the roadway. On greater-volume roadways like Cooper Point Road, the expected increase would generally be less than approximately 3 dBA Leq, a change that would be barely perceptible to most receptors. On moderate-volume roadways like Evergreen Park Drive SW, the expected increase would generally be less than 5 dBA Leq and would likely be noticeable to nearby receptors. On lower-volume or park-adjacent roadways like Lakeridge Drive and Deschutes Parkway SW, increases may approach 10 dBA Leq during peak haul periods, which would be considered disruptive.

Roadways with steep grades along the haul route like Lakeridge Drive would likely also experience additional noise impacts from truck braking when descending or a heavy engine load when ascending. In general, truck braking could add approximately 80 dBA Leq (sharp, intermittent noise) at a distance of 50 feet, and engine noise when ascending could add approximately 83 dBA Leq (TRB 1975; Jacobs Vehicle Systems 2000). However, open space is the predominant land use along the hill climb segment of Lakeridge Drive, and the nearest residential receptor is located over 100 feet from the roadway near the top of the grade. Nearby residential receptors along Deschutes Parkway SW would experience intermittent haul-truck noise during active haul periods. This noise would be similar to levels described for construction-related noise generated by Project activities within the Project area. Vibration-inducing construction equipment would include dozers, haul trucks, and impact and vibratory pile-driving equipment. Although construction activities would generate vibrations perceptible to people in the immediate vicinity of Project construction sites, vibratory energy dissipates

rapidly over short distances. For most construction activities associated with the Project (e.g., excavation, grading, hauling), vibration levels would be less than thresholds for structural damage and would be unlikely to be perceptible beyond short distances (generally less than approximately 50 to 100 feet). For high-vibration equipment such as impact pile drivers, perceptible vibration could occur at greater distances (potentially up to several hundred feet), and vibration levels could approach or exceed annoyance thresholds established by the Federal Transit Administration (approximately 65 vibration decibels) at nearby receptors (FTA 2018). Because no structures are immediately adjacent to the impact-pile-driving activity, no structural damage is anticipated within the Project area.

Construction-related noise and vibration impacts would be temporary and intermittent throughout the day but would be disruptive at times to park and trail users near Marathon Park and Heritage Park.

Summary

Evaluation of the updated Project indicates that construction impacts on recreational use due to construction noise and other disruptions remain **significant,** consistent with the analysis presented for the Estuary Alternative in the 2022 Final EIS. With the reduced overall Project construction duration, and the limited use of Heritage Park, the updated design would not contribute substantially to the overall impacts described in the 2022 Final EIS.

3.2.2.3 Mitigation Measures

The 2022 Final EIS identified the potential construction of a raised berm, floodwall, or floodgate as recommended in the Olympia Sea Level Response Plan for Heritage Park to mitigate the impacts of sea level rise but did not evaluate the potential impacts. The Project now includes the installation of the Heritage Park Berm as described in Section 2.5.1.3.

The following measures would reduce land use and recreational impacts associated with the updated Project design. These measures supplement the land use and recreation mitigation measures identified in the 2022 Final EIS.

- Prepare a Heritage Park Construction Access Plan. Before construction in Heritage Park, the Contractor would prepare and publish a Heritage Park Construction Access Plan. The plan will identify (a) the areas of Heritage Park that will be inaccessible during each phase of construction; (b) the anticipated schedule for restoration of each area to full public access; and (c) how park users, event organizers, and the public would be notified of access changes.
- Conduct preconstruction condition surveys for buildings or structures determined, through engineering judgment, to be within the zone of influence that may be susceptible to impacts from vibration-intensive activities. Monitor vibration levels where work occurs near sensitive structures.

3.2.2.4 Significant Unavoidable Adverse Impacts

No new significant unavoidable impacts to land use, shorelines, and recreation have been identified associated with the updated Project. Although the overall duration of construction has been reduced, impacts described in Section 3.2.2.2 and in the 2022 Final EIS would still span multiple years resulting in **significant unavoidable impacts** on recreation from noise, vibration, and other disruptions.

3.2.3 Findings for the No Action Alternative

Under the No Action Alternative, estuary restoration would not be completed. There would be no changes to existing or planned land uses within or surrounding the Project area. There would be no changes to the existing consistency with land use plans and policies. However, with no restoration activities, the No Action Alternative would not achieve restoration and enhancement goals listed in many of the applicable planning documents. There would also be no construction impacts on land use, shorelines, or recreation uses because no construction would occur.

As described in the 2022 Final EIS, there is a continued risk of significant flooding impacts on land use and recreation under the No Action Alternative. As a result of climate change, it is expected that flooding would be exacerbated, potentially affecting people's access to trails and other resources that provide recreational access.

3.3 Visual Resources

This section describes any relevant updated information on visual resources in the Project area and analyzes new or increased adverse impacts related to the updated Project design. The approach to analyzing visual resource impacts produced by the Project was described in Sections 4.10 and 5.10 and Attachment 14, Visual Resources Discipline Report, of the 2022 Final EIS. The Project area is generally consistent with the study area analyzed in the 2022 Final EIS.

Refer to the following sections for information on visual resources in the 2022 Final EIS:

- Affected Environment: Section 3.10 (pages 3-115 to 3-123)
- Long-Term Impacts: Section 4.10 (pages 4-139 to 4-162)
- Construction Impacts: Section 5.10 (pages 5-58 to 5-64)
- Attachment 14 Visual Resources Discipline Report

3.3.1 Affected Environment

There have been no changes to the visual character of the Project area since the 2022 Final EIS. As described in Section 3.10.1 of the 2022 Final EIS, no state regulations specifically direct the management of views or visual quality, but state Master Plans for the Capitol Campus do include goals relating to views of the water and Olympic Mountains from the North Overlook (Washington State General Administration 2006, 2009). At a local level, the Cities of Olympia and Tumwater have policy guidance related to a general preference for protecting public views

of the water, water's edge, and surrounding mountain views and for naturalistic design treatments but do not call out specific views that must be preserved aside from views of the Capitol Dome.

Within the North Basin, views from the east, north, and west perimeters of Capitol Lake include open water in the foreground and views of the Capitol Dome in the background. The North Basin can also be seen from the Capitol Campus, particularly from the North Overlook. The open water of the North Basin is also a defining visual feature at the southwest edge of downtown Olympia; views from taller buildings in downtown Olympia include the basin. As described in the 2022 Final EIS, the North Basin includes the following Landscape Similarity Zones: Heritage Park, Capitol Campus North Overlook, Deschutes Parkway SW, and Marathon Park. Exhibits 3.33 to 3.38 within the 2022 Final EIS show views of the North Basin from various vantage points within the Landscape Similarity Zones.

The 2022 Final EIS divided the Project area into Landscape Similarity Zones, with photographs depicting typical views in each zone. Visual simulations were prepared for key viewpoints within these zones and were included in Chapter 2 of the Final EIS. These simulations provided representative views that illustrated the different long-term management alternatives. With the Project changes and refinements, new artistic renderings (or simulations) have been prepared for the North Basin and for Heritage Park (refer to Section 3.3.2).

Within the Middle Basin, both the western and eastern shores appear heavily vegetated when viewed from a distance and form a naturalistic frame for the open water of the basin. Built elements such as bridges and the Capitol Campus Powerhouse are not dominant features within the landscape unless viewed up close. Like the North Basin, the Middle Basin is predominantly open water. There are overwater views of the Capitol Dome from viewpoints on the south and west sides of the basin. Trails at Percival Cove and the Capitol Lake Interpretive Center provide very different visual experiences where vegetation varies in height from very low to well overhead. As described in the 2022 Final EIS, the Middle Basin includes the following Landscape Similarity Zones: Deschutes Parkway SW, Capitol Lake Interpretive Center, and East Shore. Exhibits 3.39 to 3.41 in the 2022 Final EIS show views of the Middle Basin from various vantage points within the Landscape Similarity Zones.

The South Basin is the smallest of the basins and is dominated by views of riparian wetlands and forested areas, with the river channel and a small area of open water as a central spine. Tumwater Falls forms a natural and dramatic terminus to the viewshed at the southern end of the study area. Exhibits 3.42 to 3.43 in the 2022 Final EIS show views within the South Basin from two different vantage points.

3.3.2 Findings for the Updated Project Design

3.3.2.1 Long-Term Impacts

The 2022 Final EIS (Section 4.10) evaluated long-term visual resource impacts related to changed conditions in the restored estuary. Impacts were determined to be less-than-significant.

As described in the 2022 Final EIS, restoring the estuary would visually modify the Project area with 5th Avenue Dam removal and related system changes, habitat restoration, and the new 5th Avenue Bridge. The analysis of long-term impacts considered the degree of visual "unity," or the degree to which the landscape is composed of elements that are compatible with the dominant character of the landscape in terms of scale and contrast. For the Estuary Alternative, the 2022 Final EIS found that even with the substantial change in visual character that would result from restoring the estuary, the Project area would remain a unified and harmonious landscape as viewed from key viewpoints around the basin. No significant long-term adverse visual impacts were identified for the Estuary Alternative.

Figures 3.3 and 3.4 show artistic renderings of the North Basin of the restored estuary at mean tide and at low tide, looking north from the Capitol Campus North Overlook.

Within the North Basin, the Heritage Park Berm and replacement of the Marathon Park Utility and Pedestrian Bridge are new Project elements that were not analyzed within the 2022 Final EIS. Other Project changes/refinements within the North Basin include updates to the alignment and configuration of the new 5th Avenue Bridge, creation of edge habitat instead of habitat islands, and the new Heritage Park water access point.

Heritage Park is characterized by open lawn areas; established pedestrian pathways; and a line of mature, heritage trees. The Heritage Park Berm would introduce a new landform element into the formal civic landscape of Heritage Park, replacing an area of flat, manicured lawn transitioning directly to the lake surface via a low seawall (the Arc of Statehood). The berm would alter the relationship between the Heritage Park lawn and the water's edge.

Figure 3.5 shows an artistic rendering of the berm viewed from within Heritage Park and facing northwest.



Figure 3.3 North Basin at Mean Tide Artistic Rendering Looking North from the Capitol Campus North Overlook



Figure 3.4 North Basin at Low Tide Artistic Rendering Looking North from the Capitol Campus North Overlook



Figure 3.5 Heritage Park Berm and Northern Portion of Pathway Artistic Rendering Facing North

When viewing the Heritage Park Berm from various North Basin locations, such as Deschutes Parkway SW, Marathon Park Utility and Pedestrian Bridge, North Basin Overlook, and the new 5th Avenue Bridge, the elevated berm would appear as a subdominant feature that is harmonious with the estuary. Habitat areas along the estuary shoreline would dominate the foreground of views looking across the North Basin. The berm would be planted with native vegetation and flow into the coastal wetland habitat created as part of the estuary restoration. The scale and contrast of this change would be minimal in the context of the overall views available from North Basin viewpoint locations. Views from these viewpoint locations extend east over downtown Olympia, and include the Capitol Dome and forested slopes to the south of the campus. Overall views would be little affected by the berm.

Because the Heritage Park Berm would raise the shoreline elevation by 3 to 5 feet, the extent of the estuary visible from areas to the east may be reduced or eliminated in some locations. The berm would function as a low visual foreground element, partially screening views to the tidal estuary from the lower park elevations and from Water Street SW and 5th Avenue to the east. The berm would be vegetated with a mix of native grass and shrub species, consistent with a naturalistic shoreline aesthetic that can be found in other areas of Heritage Park. From the berm-top trail, viewers would gain an elevated, unobstructed vantage point across the estuary. Although the berm would partially obstruct views of open water from certain vantage points around Heritage Park, it would appear harmonious and visually compatible with the overall landscape setting.

The primary purpose of the berm is to protect critical infrastructure and downtown Olympia from flooding associated with sea level rise, storm surge, and extreme weather events. By reducing the frequency and extent of flooding, the berm would also minimize visual impacts related to inundation and flood damage in these areas.

The new Marathon Park Utility and Pedestrian Bridge would be consistent with the existing land use at approximately the same size and location as the current structure. It would maintain a comparable level of visual prominence within the landscape and is not expected to affect the visual character of the North Basin.

Impacts from the new 5th Avenue Bridge would be largely the same as those described in the 2022 Final EIS. The slight southward shift of the new 5th Avenue Bridge alignment would result in a slightly different visual angle to the bridge structure from north-facing Capitol Campus viewpoints. At the scale of the bridge shift, however, this change is not expected to materially alter the visual relationship.

Construction of habitat areas along the shoreline edge as opposed to habitat islands would create a more open and expansive landscape of the estuary for the viewer, including unobstructed views across the basin from the various shoreline viewpoints. The appearance of the habitat areas would be harmonious with the visual landscape of the restored estuary and consistent with the overall estuarine conditions proposed in the 2022 Final EIS.

The North Basin is anticipated to remain a unified and harmonious landscape when viewed from the North Overlook and other surrounding vantage points. Therefore, visual impacts associated with the Heritage Park Berm, replacement of the Marathon Park Utility and Pedestrian Bridge, and other Project changes would be less-than-significant.

Within the Middle Basin, Project changes include a reduction in the length of the boardwalk and the creation of habitat areas along the shoreline. Compared to the design evaluated in the 2022 Final EIS, the shorter boardwalk would result in fewer visible human-made structures extending over the water and a greater proportion of natural shoreline habitat. Although the revised design would provide somewhat less overwater viewing opportunity than the 2022 Final EIS design, it would provide substantially greater public access and viewing opportunities than current conditions through the combination of retained boardwalks, the Deschutes Parkway Trail, and shoreline viewing areas. As a result, the visual character and public visual experience would remain consistent with the impact conclusions presented in the 2022 Final EIS.

As described for the North Basin, the creation of habitat areas along the shoreline instead of the creation of habitat islands would result in more expansive and open views of the estuary for viewers. The approach to habitat restoration has been specifically designed to maintain important views to and from the Capitol. Low-growing plants will be selected for the Heritage Park Berm to avoid blocking views. The habitat island proposed with riparian vegetation has been designed along the western shoreline, outside of the primary north/south viewshed to the Capitol.

Within the South Basin, the approximately 2-foot-tall Tumwater Brewery Berm could be intermittently visible from Tumwater Historical Park, located west of Deschutes River, depending on topography and vegetation conditions. The berm would appear as a subordinate feature and would be visually harmonious with the surrounding landscape, appearing as a low, grass-covered rise.

Evaluation of the updated Project design indicates that long-term operational impacts on visual resources remain **less-than-significant,** consistent with the analysis presented for the Estuary Alternative in the 2022 Final EIS.

3.3.2.2 Construction Impacts

The 2022 Final EIS (Section 5.10) evaluated construction impacts on visual resources related to the presence of construction equipment and staging in the Project area and short-term changes to the landscape during construction. Given the duration of construction-related staging at Marathon Park and in-water construction and staging, construction impacts on visual resources were considered a significant impact.

Many construction impacts on the visual character of the Project area are similar in type to those described in the 2022 Final EIS. Visible elements of the Project during construction include construction equipment operating inside the basin and equipment and materials

occupying staging and construction areas. In addition, there would be short-term changes to the landscape during construction, such as grading, clearing, and replanting. Although the construction period is expected to be reduced, from up to approximately 8 years to approximately 6 to 7 years, this is still an extended period over which construction would affect the visual character of the Project area.

The updated design also introduces two notable new sources of construction visual impact that were not evaluated in the 2022 Final EIS: the several-year but temporary drawdown of the lake during construction and the use of large in-basin containment areas for dredged material, which are described as follows.

Under the updated design, the lake would be drawn down during construction, lowering water levels in the basin and exposing extensive areas along the shorelines of the Middle and North Basins. The 2022 Final EIS evaluated construction within the basin at its existing managed water level, such that open water would have remained the dominant visual feature of the Project area throughout most of the construction period. With the new drawdown construction method, the broad expanses of open water that currently define views from the Capitol Campus, Heritage Park, Deschutes Parkway SW, 5th Avenue Bridge, and surrounding public viewpoints would be substantially altered during much of the construction period. The open-water landscape that currently characterizes these views would be replaced by dredged material undergoing dewatering; dried sediment prepared for grading; and unvegetated, large slopes with newly established plantings within fenced restoration exclusion areas.

Because the open-water setting is a defining and highly valued element of the existing visual environment, its temporary loss would likely be the most noticeable construction-related visual change experienced by the public. The change would be visible from numerous vantage points on a sustained, daily basis. This impact was not analyzed in the 2022 Final EIS and is considered a significant adverse visual impact during construction. After completion of construction and reconnection of the basin to tidal influence, visual conditions would gradually transition to those associated with the restored estuary, including a mosaic of tidal channels, mudflats, open water, and vegetated shoreline habitats.

The updated design also changes how dredged sediment would be managed and how shoreline habitat would be created, with associated visual effects. The 2022 Final EIS evaluated creation of habitat as discrete islands contained by sheetpiles. Under the current design, dredged material would instead be placed in large containment areas, where it would settle and dewater for approximately 1 year before being regraded and planted to form shoreline habitat areas. During this period, the containment areas would appear as large, bermed expanses of turbid water or of bare, unvegetated dredged sediment. Because of their size and the extended period they would remain in place before regrading and planting, the containment areas would be a prominent visual feature, visible from Deschutes Parkway SW, Heritage Park, the Capitol Campus, and other public vantage points. These impacts are considered significant during construction; they are, however, temporary and would diminish as the containment areas are regraded, planted, and allowed to establish as vegetated shoreline habitat.

Construction of the Heritage Park Berm would result in construction activities within the park, which would contrast with the existing visual character of the park and convert a portion of the lawn to an active construction area. These impacts would be experienced by Heritage Park visitors, Capitol Campus employees, and viewers from Water Street SW and the North Basin shoreline on a sustained, daily basis throughout the Heritage Park construction phase, which is estimated to occur over 2 years. Staging for construction of the berm would be limited to areas at its north and south ends to limit the overall impact on the park use. These construction-phase impacts would be temporary and reversible. After construction completion, the staging areas and temporary fencing would be removed, disturbed areas would be replanted, and permanent park improvements would be installed.

The additional construction activities in Heritage Park may occur near, and during approximately the same time frame as, the construction of the new 5th Avenue Bridge and North Basin dredging activities. The combined visual effect of these overlapping construction activities would be cumulatively significant during peak construction. Viewers from the Heritage Park trail overlooks, the Arc of Statehood, and Water Street SW would simultaneously observe multiple construction fronts across the entire North Basin and Heritage Park shoreline, representing a substantial temporary alteration of the Capitol Campus visual setting.

In addition to the staging areas described in the 2022 Final EIS, staging for river channel dredging has been added in two areas within the Middle Basin along Deschutes Parkway SW. These staging areas are in areas that would be restored for shoreline habitat, before habitat creation. These staging areas would introduce additional visual impacts from the presence of heavy equipment, material stockpiles, contractor support facilities, and haul traffic. These staging areas would be visible to trail users and would diminish the quality of sequential views along the parkway to the Capitol Campus as viewers encounter the intermittently located staging areas.

The loop trail would remain open for most of the construction period, with brief closures to connect the new 5th Avenue Bridge, as described in the 2022 Final EIS, and to construct the new Marathon Park Utility and Pedestrian Bridge. Maintaining pedestrian connectivity through construction preserves the sequential view experience of walking along the North Basin, offering views from various vantage points. Construction of the new Marathon Park Utility and Pedestrian Bridge would result in an approximately 6-month closure of the southern portion of the trail. Within Heritage Park, pedestrians would be diverted from the Arc of Statehood portion of the trail into other parts of the park for the duration of construction. These closures and diversions would temporarily disrupt views from those locations. The Deschutes Parkway SW closures would not impact pedestrian access along the western side of the North Basin beyond typical construction detours.

The work areas for the 5th Avenue temporary earthen causeway and bridge approach were anticipated to be active construction zones in the 2022 Final EIS due to bridge replacement and river channel dredging activities. The addition of these staging and work areas represents an intensification of previously identified construction impacts.

The Project changes and refinements would contribute to the overall construction impacts described in the 2022 Final EIS, which were determined to be **significant,** and would introduce additional visual impacts at Heritage Park, along Deschutes Parkway SW, and—most notably—across the basin itself through the temporary lake drawdown and the in-basin containment areas. These impacts are, however, temporary and are consistent with the type and character of impacts associated with major infrastructure construction in urban environments.

3.3.2.3 Mitigation Measures

The following measures would reduce visual impacts associated with the updated Project design. These measures supplement, but do not replace, the visual resource mitigation measures identified in the 2022 Final EIS.

- Install temporary signage at key public viewpoints around Heritage Park that describes the Project, illustrates the anticipated post-construction visual conditions of the restored estuary, and acknowledges the temporary construction-related impacts.
- Plant disturbed areas as soon as feasible after construction.
- Design the Heritage Park Berm and water access point to maintain views and a feeling of connection from the park to the estuary.
- Continue to meet with and solicit input on the design of the Heritage Park Berm and water access point from the State Capitol Committee and Capitol Campus Design Advisory Committee.

3.3.2.4 Significant Unavoidable Adverse Impacts

Although mitigation measures described in Section 3.3.2.3 and in the 2022 Final EIS would be implemented to avoid or minimize adverse visual quality impacts from the construction and long-term operation of the Project, the extended duration of construction would result in **significant unavoidable adverse impacts** on visual quality.

3.3.3 Findings for the No Action Alternative

Under the No Action Alternative, there would be no construction impacts on visual resources because no construction would occur. In the long term, there would be an increased presence of vegetated wetlands within the lake as sediment continues to accumulate and the lake becomes shallower. It is also likely that impacts to aesthetics would worsen because of the continued increase in algae and aquatic plant populations over time. As a result of climate change, it is expected that flooding would be exacerbated, potentially affecting people's access to trails and other resources that provide visual access. Flooding would also cause temporary changes to the visual environment. These temporary changes are not anticipated to impact the long-term unity of the landscape and are considered less-than-significant.

3.4 Transportation

This section describes any relevant updated information on transportation in the Project area and analyzes new or increased adverse impacts related to the updated Project design. The approach to analyzing transportation impacts produced by the Project was described in Sections 4.10 and 5.10 and Attachment 16, Transportation Discipline Report, of the 2022 Final EIS. The Project area is generally consistent with the study area analyzed in the 2022 Final EIS.

Refer to the following sections for information on transportation in the 2022 Final EIS:

- Affected Environment: Section 3.12 (pages 3-133 to 3-136)
- Long-Term Impacts: Section 4.12 (pages 4-177 to 4-187)
- Construction Impacts: Section 5.12 (pages 5-71 to 5-82)
- Attachment 16 Transportation Discipline Report

3.4.1 Affected Environment

The affected environment is generally the same as described in the 2022 Final EIS and includes the existing facilities and services that support vehicular and nonmotorized travel within the transportation study area, including streets and transit, rail, pedestrian, and bicycle facilities.

3.4.1.1 Street Network

The street network in the Project area consists of a range of street classifications, including arterials, major collectors, neighborhood collectors, and local access streets. There have been no major changes to the street network shown on Figure 3.12.1 of the 2022 Final EIS, and average daily traffic within the Project area is expected to be generally the same as summarized in Table 4.1 of that document.

The 2022 Final EIS evaluated traffic operations based on level of service (LOS), a measure that grades intersection performance on a scale from A to F. LOS A represents the smoothest traffic flow with minimal delay; LOS F represents severely congested conditions with the longest delays. Both the City of Olympia and the City of Tumwater have adopted operational standards applicable to streets within their jurisdictions. The City of Olympia has adopted a minimum of LOS D or E for most major arterials and intersections. The City of Tumwater has adopted a minimum LOS D for all intersections and segments. WSDOT has established LOS D as the standard for state highways in urban areas, which applies to state highways within the Project area (City of Tumwater 2025b).

Based on updated information from the Cities of Olympia and Tumwater, the LOS at most key intersections within the Project area and along potential haul routes remains the same or better than what was shown in Figure 4.2 of the Transportation Discipline Report (Smith 2026; City of Tumwater 2025b). In Olympia, most intersections are operating at LOS A or B, with many intersections having improved in LOS since the 2022 Final EIS. In Tumwater, some of the

intersections within the Project area were reevaluated as part of Tumwater's 2025 Transportation Plan update (City of Tumwater 2025b). LOS at two of the evaluated intersections have degraded slightly and one has improved.

3.4.1.2 Parking

On-street parking in the vicinity of the Project area is generally the same as described in the 2022 Final EIS and consists of both unrestricted and time-restricted parking and private parking lots. Since the 2022 Final EIS, many of the newer models of parking meters have been upgraded to accept credit cards and support payment via mobile applications.

There have been no major changes to the Capitol Campus parking since the 2022 Final EIS.

3.4.1.3 Transit Network

The transit network that was described in the 2022 Final EIS reflected conditions before the COVID-19 pandemic and consisted of multiple bus routes that served the Project area via 4th Avenue or 5th Avenue. Since the 2022 Final EIS, Intercity Transit redesigned its bus network with goals of providing earlier and later service on high-capacity corridors, extending service to new areas, establishing high-frequency corridor routes, and enhancing commuter services (Intercity Transit 2024). The updated bus routes took effect on May 3, 2026, and are shown on Figure 3.6. Table 3.1 shows the new bus routes that serve the Project area via 4th Avenue and 5th Avenue, which are similar to the previous bus routes but now extend farther east across downtown Olympia.

Table 3.1 Bus Routes in Project Area

Bus Route Number	Route Descriptor	Frequency
4th Avenue Routes		
9X	Crosstown Express	Daily, every 16 to 30 minutes, depending on the day
30	Capitol Mall Drive	Daily, every 30 to 50 minutes, depending on the day
31	Conger Avenue/Capitol Mall	Daily, every 30 to 55 minutes, depending on the day
5th Avenue and Deschutes Parkway SW Routes		
24	Capitol Campus/South Puget Sound Community College	Weekdays, 30-minute frequency



Legend

Bus Route (Crosses 4th Ave Bridge) | Bus Route (Crosses 5th Ave Dam) | Bus Route

Project Area | XX Intercity Bus Route Number | Railroad

Source: Intercity Transit, 2026, Thurston County. Reflects May 2026 conditions.

Figure 3.6 Transit and Rail Network

3.4.1.4 Freight Network

Freight movement within the Project area includes both truck and rail movement. Except for local deliveries, trucks are generally restricted to those streets that have been designated as suitable for truck routes. Designated truck routes in the vicinity of the Project area are shown in Figure 4.1 of Attachment 16 of the 2022 Final EIS and remain unchanged under Olympia Municipal Code (OMC 10.48).

As described in the 2022 Final EIS, one railroad mainline crosses the Project area, as shown on Figure 4.4 of Attachment 16 of the 2022 Final EIS. This track is part of Olympia & Belmore Railroad (OYLO), which is operated by Genesee & Wyoming. OYLO also provides a link between the Port and the national rail freight network (BNSF Railway and Union Pacific Railroad lines).

3.4.1.5 Pedestrian and Bicycle Network

The Cities of Olympia and Tumwater support walking and cycling through pedestrian paths, sidewalks, public trails, bike lanes, bicycle-priority streets, and multiuse paths. The pedestrian and bicycle networks are shown on Figures 3.12.2 and 3.12.3 of the 2022 Final EIS and remain mostly unchanged.

3.4.2 Findings for the Updated Project Design

3.4.2.1 Long-Term Impacts

The 2022 Final EIS (Section 4.12) evaluated long-term impacts on transportation related to future maintenance dredging and disposal. Significant impacts associated with West Bay maintenance dredging were identified if on-road transport of dredged material is required.

Long-term impacts associated with the updated Project design would be similar to those described in Section 4.12 of the 2022 Final EIS. No adverse long-term impacts to the multimodal transportation network are anticipated.

As described in the 2022 Final EIS, the transportation system would be improved by the Project. The Project would construct a new 5th Avenue Bridge with a new roundabout at the intersection on the west end of the bridge connecting to Deschutes Parkway SW and Olympic Way NW. The current intersection at 5th Avenue/Deschutes Parkway SW/Olympic Way NW does not accommodate all traffic movements—turns between Olympic Way NW and Deschutes Parkway SW are prohibited by the steeply angled intersection. Those vehicles must use the street grid in downtown Olympia to make this connection. The proposed roundabout at the west end of the new bridge would accommodate all movements and travel paths.

The roundabout was evaluated in the 2022 Final EIS using a range of growth forecasts to determine the likely design configuration for the roundabout and test its resilience to traffic changes. In 2025, the Thurston Regional Planning Council (TRPC) undertook a modeling effort at the request of the City of Olympia to evaluate the effect of the new roundabout, as well as other major system changes that could affect area traffic volumes, including potential lane reductions (road diet) on Capitol Way. With no changes to the roadway system, afternoon/evening peak hour traffic volumes on Deschutes Parkway SW were expected to

increase by about 0.6% per year between 2018 and 2045, to a total volume of 744 vehicles per hour by 2045 (473 southbound and 271 northbound). The new roundabout is expected to increase volumes on Deschutes Parkway SW by providing a direct connection to and from Olympic Way NW that does not currently exist. With the roundabout and potential Capitol Way changes, afternoon/evening peak hour traffic volumes on Deschutes Parkway SW are expected to increase to just over 1,000 vehicles per hour by 2045 (715 southbound and approximately 300 northbound), an increase of approximately 270 vehicles per hour.

TRPC's 2045 traffic volume forecasts were used to assess the future roundabout operations using the Sidra Analysis methodology described in the 2022 Final EIS. The analysis shows that a single-lane roundabout would operate at LOS A during the afternoon/evening peak hour in 2045, which is consistent with the analysis performed for the 2022 Final EIS.

Same as the planning-level design in the 2022 Final EIS, the updated design for the 5th Avenue Bridge would have bicycle and pedestrian lanes, but in a slightly different configuration. The updated design includes 5-foot bike lanes with 3-foot buffers, as well as an 8-foot sidewalk on the north side of the bridge. On the south side of the bridge, the sidewalk has been expanded to a multiuse path (minimum width of 12 feet), extending beyond that in certain areas to accommodate seating and viewpoints of the restored estuary. As described in the 2022 Final EIS, the new bridge would extend the design life of a major element of Olympia's transportation network and support nonmotorized travel.

The primary long-term adverse transportation impact of the Project is associated with maintenance dredging in West Bay, as described in Section 4.12.3 of the 2022 Final EIS. Maintenance dredging downstream of the estuary would occur approximately every 6 years. Although it is likely that at least some of the sediment dredged during maintenance dredging events would be transported off-site by barge, the 2022 Final EIS conservatively assumed the entire volume of each dredging event would be hauled by truck and estimated that this activity could generate 1,350 truckloads in Years 6, 18, and 30 after dam removal and up to 21,910 truckloads in Year 24. There is no change to the anticipated dredging frequency or volume of sediment to be dredged because of the updated Project design.

Evaluation of the updated Project design indicates that long-term transportation impacts remain **significant** unless barge transport of dredged sediment is feasible, consistent with the analysis presented for the Estuary Alternative in the 2022 Final EIS.

3.4.2.2 Construction Impacts

The 2022 Final EIS (Section 5.12) evaluated transportation impacts related to construction truck trips, worker trips and parking, haul roues, and street closures, with impacts of the Estuary Alternative determined to be less-than-significant.

Consistent with the 2022 Final EIS, impacts are considered significant if construction activities would decrease roadway capacity (e.g., lane or street closure) or generate vehicle traffic, resulting in increase in average vehicle delay that would exceed locally adopted traffic operational standards.

Truck Haul Routes

The 2022 Final EIS described potential construction truck haul routes from the Project area to the regional highway system. For the updated Project design and consistent with the City of Olympia's preference to minimize truck traffic through downtown Olympia, the primary haul route is proposed for U.S. Highway 101 to Cooper Point Road, Evergreen Park Drive SW, Lakeridge Drive, and Deschutes Parkway SW (refer to Figure 3.7). Some traffic could still use other routes identified in the 2022 Final EIS.

In the 2022 Final EIS (Section 4.12.5), up to 20 trips per hour associated with maintenance dredging for the Managed Lake Alternative were considered significant because of the potential to degrade some intersections along downtown Olympia haul routes to LOS F during peak periods. The new construction approach, which would use Deschutes Parkway SW as the primary trucking route, would increase trucks on that route but would reduce use of arterial streets through downtown Olympia. The mitigation measure of restricting construction truck trips through downtown Olympia during the commuter peak periods is still recommended, which would reduce the construction traffic impact on downtown traffic operations to less-than-significant.

Construction Truck Trips

As described for the Estuary Alternative in the 2022 Final EIS, construction activities would require the mobilization of heavy equipment and transport of materials to the Project site. Tables 5.1, 5.3, and 5.4 of the Transportation Discipline Report, Attachment 16 of the 2022 Final EIS, provided a summary of truck trips for various construction activities, including export of some of the dredged material. Initial export of some dredged material was assumed for a small portion of the Estuary Alternative in the EIS; in the updated Project design, dredged material would be beneficially reused on-site. In total, approximately 900 truck trips related to material deliveries and initial export of dredged material were estimated for the Estuary Alternative. This activity was expected to occur over 65 weeks, resulting in an average of about 6 truck trips per day. In addition, the 2022 Final EIS described that demolition of the 5th Avenue Bridge and Dam would generate 30 truckloads of material per day or 60 truck trips per day. Spread out over the workday, this activity was expected to generate fewer than 10 truck trips per hour.

The updated Project design includes additional material deliveries associated with the geotube construction and other Project elements, as follows:

- Approximately 230,000 CY of natural unprocessed gravel from a local quarry for the geotubes
- Approximately 25,000 CY of imported fill for Heritage Park Berm construction
- Approximately 3,500 CY imported fill for Tumwater Brewery Berm construction
- Approximately 40,000 CY of embankment fill for the new 5th Avenue Bridge abutments

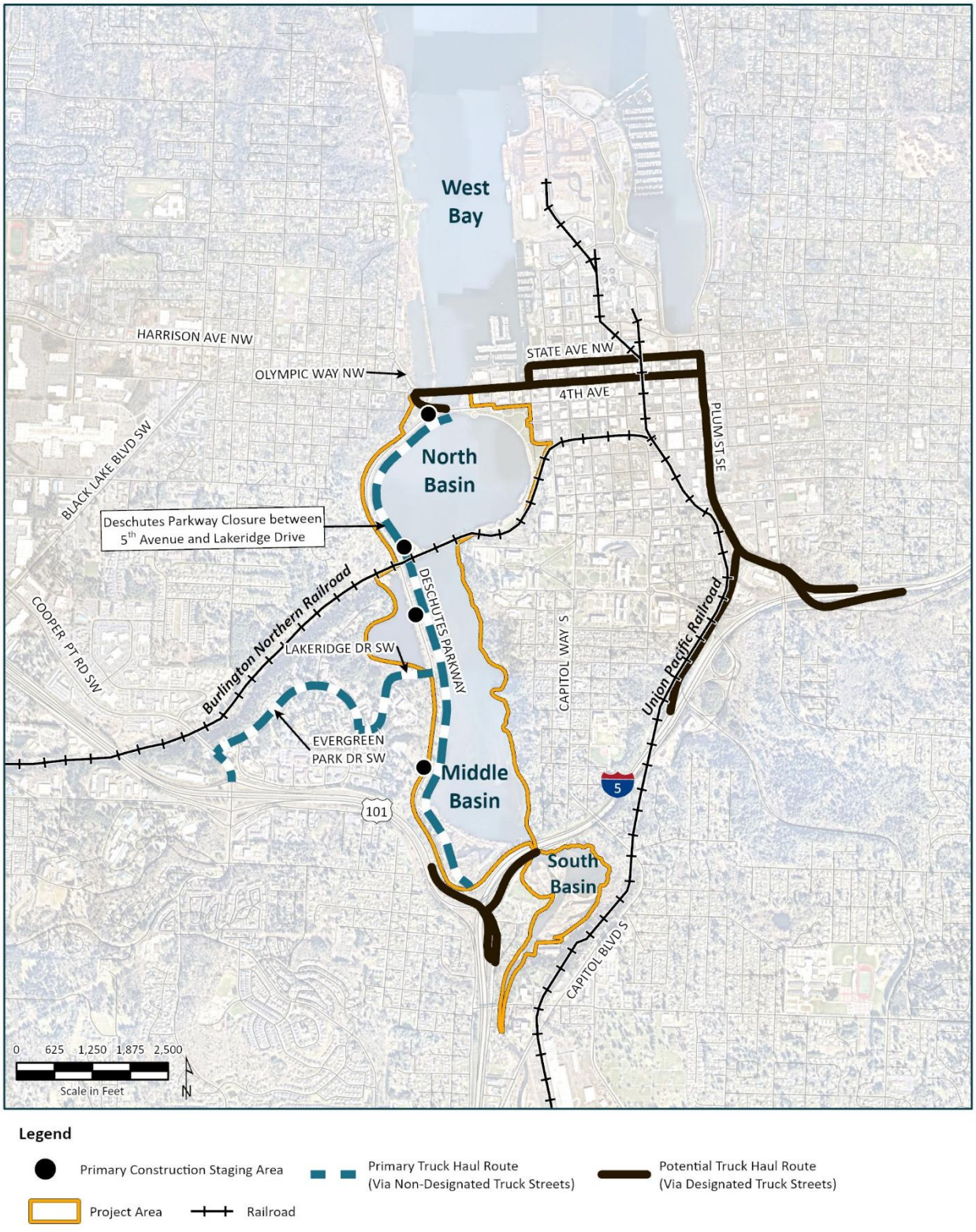


Figure 3.7 Potential Truck Haul Routes

Over the approximately 6- to 7-year construction period, the Project is expected to generate approximately 47,000 truckloads of imported and exported materials. Each truckload would result in two truck trips, consisting of one inbound trip and one outbound trip. The highest levels of truck activity are expected during overlapping construction phases associated with geotube construction, gravel import, utility relocations, and staging for bridge construction. During this period, which is expected to last approximately 52 weeks, the Project could generate up to approximately 105 truckloads per day (210 truck trips), averaging approximately 26 truck trips per hour and up to 40 truck trips during peak construction hours.

This level of truck traffic exceeds the approximately 10 peak-hour truck trips identified for the Estuary Alternative in the 2022 Final EIS. In addition, during portions of the dredging period, up to 4 truck trips per day could occur to transport migrating adult salmonids around active dredging areas.

The roadway network serving the potential haul routes currently operates at LOS C or better throughout the day, indicating that substantial available roadway capacity exists. Although construction truck traffic would temporarily increase traffic volumes along haul routes, the additional truck trips would represent a small proportion of total roadway traffic and would be dispersed throughout the day. Given the temporary nature of the activity, the limited duration of peak trucking operations, and the existing operating conditions on affected roadways, construction traffic is not expected to substantially degrade traffic operations or result in unacceptable congestion. Therefore, impacts on transportation operations from construction truck traffic would be less-than-significant.

Street Closure

The 2022 Final EIS described short-term closures of the 5th Avenue Bridge (partial lane or night and weekends only) and some short-term closures of Olympic Street during construction. These closures were expected to be 1 month or less. Under the updated Project design, similar to the 2022 Final EIS, the existing 5th Avenue corridor would remain open for traffic, with only minor closures for surface street connections. The short-term closures may increase from approximately 1 month to 2 or 3 months.

In addition to these closures, the updated Project design would require Deschutes Parkway SW to be closed between Lakeridge Drive and 5th Avenue to through traffic for up to 3 years during construction (open to local traffic only), as shown on Figure 3.7. This extended closure would be necessary to safely construct the new roundabout at the intersection of Deschutes Parkway SW, Olympic Street, and the new bridge approach. The Deschutes Parkway SW closure would interrupt the existing north–south travel corridor, creating a temporary dead-end condition on either side of the work area. Maintaining traffic through the work zone while constructing the roundabout would not be feasible due to space constraints, worker and public safety considerations, and the complexity of the roadway improvements.

The final construction sequencing has not yet been determined. Although portions of Deschutes Parkway SW could potentially be reopened during certain phases of construction,

this SEIS conservatively assumes that the roadway segment could remain closed to through traffic for up to approximately 3 years. Detoured vehicles and buses would be required to use alternative routes. This would increase travel time between the north and south ends of the lake, which would constitute a significant transportation impact. Mitigation measures are described in Section 3.4.2.3, including implementation of a Construction Traffic Management Plan (CTMP). When Deschutes Parkway SW is closed to through traffic, it is assumed vehicles traveling south to Tumwater or to Interstate 5 would likely detour through downtown Olympia to Plum Street SE or Capitol Way to Capitol Lake Boulevard. Vehicles traveling south to Highway 101 from downtown Olympia would likely use Plum Street SE to access southbound Interstate 5 to Highway 101 or use a detour route through West Olympia along Olympic Way NW, Harrison Avenue NW, and Black Lake Boulevard SW to Cooper Point Road SW. These potential routes add approximately 1 mile to the trip between the 5th Avenue Bridge and the southwest side of Capitol Lake. For northbound traffic traveling from Tumwater toward downtown Olympia, vehicles would likely follow the reverse routes. Detour routes would be identified as part of the CTMP development.

Pavement Impacts

As described in the 2022 Final EIS, increased truck activity generated by construction activities could degrade the pavement condition along the truck haul routes, particularly if a street that has not been designated as a truck street (such as Deschutes Parkway SW) is used regularly. The Project would generate more total truckloads than the alternatives evaluated in the 2022 Final EIS and proposes using U.S. Highway 101 to Cooper Point Road, Evergreen Park Drive SW, Lakeridge Drive, and Deschutes Parkway SW as the primary haul route. The Project would assess and restore any pavement affected by the Project on the truck haul routes that use non-designated truck streets.

Summary

The extended Deschutes Parkway SW closure and detour during construction would increase travel time between the north and south ends of the lake, which would constitute a new **significant impact.** All other impacts would remain less-than-significant, consistent with the Estuary Alternative from the 2022 Final EIS.

3.4.2.3 Mitigation Measures

The following measures from the 2022 Final EIS would also reduce transportation impacts associated with the updated Project design:

- Implement a CTMP and Traffic Control Plan that detail the measures needed to manage traffic during construction and features such as temporary roadway, lane, sidewalk, and bike facility closures; coning plans; traffic control plans including temporary signs, markings, and traffic control devices; truck haul routes; and contractor parking. Traffic control would follow established state and federal guidelines.
- Develop and implement a public communication strategy to give ample advance notice to residents and employers affected by the long-term closure of Deschutes Parkway SW and short-term closures at each end of the new 5th Avenue Bridge.

- Restore pavement damaged or degraded by construction-generated truck activity along truck haul routes using non-designated truck streets to preconstruction condition or better after the completion of construction activities.
- Restrict construction truck trips through downtown Olympia during the commuter peak periods when traffic volumes on the street system would be highest. These measures could vary based on seasonal fluctuations in traffic and parking patterns as appropriate.
- Provide adequate off-street parking in or near designated staging areas for construction-related vehicles.
- Prohibit construction staff from parking in nearby residential neighborhoods, in the Capitol Campus, and on downtown streets with either unrestricted or metered parking.

In addition to measures included in the 2022 Final EIS, the following measures would be implemented:

- In coordination with the City of Olympia, identify detours for vehicular, transit, bicycle, and pedestrian traffic during periods when Deschutes Parkway SW would be closed to traffic.
- Consult with local police, fire, and emergency response to establish emergency vehicle routes so general emergency management services are not compromised during the extended closure of Deschutes Parkway SW.
- Coordinate with Intercity Transit to reroute buses that would be displaced from Deschutes Parkway SW during road closure periods.

3.4.2.4 Significant Unavoidable Adverse Impacts

Mitigation measures described above would avoid or minimize the adverse traffic impacts identified for long-term operation.

During construction, the extended Deschutes Parkway SW closure and detour would increase travel time between the north and south ends of the lake, which would constitute a **significant unavoidable impact.**

During the closure of Deschutes Parkway SW, detoured vehicles and buses would be required to use alternate routes. This would increase travel time between the north and south ends of the lake.

3.4.3 Findings for the No Action Alternative

Under the No Action Alternative, the 5th Avenue Dam would be retained with limited repair and maintenance activities. As described in the 2022 Final EIS, the No Action Alternative would not include new facilities considered to be beneficial to the transportation network, such as replacement of the 5th Avenue Bridge or new boardwalks but would maintain the existing transportation network. Long-term impacts would be limited to occasional vehicle trips associated with ongoing dam maintenance, which would occur during off-peak times of the day and would be less-than-significant.

Under the No Action Alternative, the Project would not be constructed; therefore, there are no construction impacts associated with this alternative.

3.5 Air Quality

This section describes any relevant updated information on air quality in the Project area and analyzes new or increased adverse impacts related to the updated Project design. The approach to analyzing air quality impacts was described in Sections 4.7 and 5.7 and Attachment 11, Air Quality and Odors Discipline Report, of the 2022 Final EIS. The Project area is generally consistent with the study area analyzed in the 2022 Final EIS.

Refer to the following sections for information on air quality in the 2022 Final EIS:

- Affected Environment: Section 3.7 (pages 3-88 to 3-91)
- Long-Term Impacts: Section 4.7 (pages 4-97 to 4-109)
- Construction Impacts: Section 5.7 (pages 5-34 to 5-41)
- Attachment 11 Air Quality Discipline Report

3.5.1 Affected Environment

The affected environment is generally the same as described in the 2022 Final EIS and includes odor, air quality, greenhouse gases (GHGs) and global climate change, and carbon sequestration.

3.5.1.1 Odor

Odor within the Project area is similar to what was described in the 2022 Final EIS and includes natural odors from existing tideflats along Budd Inlet and human-caused odors such as smoke from woodstoves and burn piles, asphalt from a nearby asphalt plant, and other odors from nearby industrial activities.

3.5.1.2 Air Quality

Existing sources of air pollution in the vicinity of the Project area are from industrial-zoned areas and transportation corridors, which include marine diesel-fueled vessels and both diesel and gas vehicles on surrounding roadways, as were described in the 2022 Final EIS. The primary air pollutants of concern are nitrogen dioxide (NO_2), inhalable coarse (PM_{10}) and fine ($PM_{2.5}$) particulate matter. Other pollutants include ozone precursors (i.e., hydrocarbons and nitrogen oxides [NOx]), sulfur dioxide (SO_2), ozone, lead, and carbon monoxide (CO). The Project area remains in attainment for these pollutants.

The 2022 Final EIS describes that industrial and transportation sources are likely the largest contributors to ambient pollutant concentrations near the Project.

3.5.1.3 Greenhouse Gases and Global Climate Change

GHGs such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) contribute to climate change, as described in the 2022 Final EIS. In Washington, the transportation sector, including on-road, construction, airplanes, and vessels, accounts for nearly half of statewide emissions (Ecology 2026). Although air pollutant emissions may be temporary, GHGs accumulate in the atmosphere and trap heat for tens of thousands of years.

3.5.1.4 Carbon Sequestration

The 2022 Final EIS includes a description of "blue carbon" and the role of both freshwater and brackish wetlands in carbon sequestration. Although carbon is typically sequestered in wetland environments, methane emissions occur in marshes when anaerobic conditions allow microbes to decompose organic matter. According to the 2022 Final EIS, freshwater systems produce approximately 3 times the amount of methane of brackish systems, whereas saline wetlands emit negligible amounts of methane.

3.5.2 Findings for the Updated Project Design

3.5.2.1 Long-Term Impacts

The 2022 Final EIS (Section 4.7) evaluated long-term impacts on air quality and odor conditions related to future maintenance dredging in West Bay and long-term conditions in the restored estuary. Impacts were determined to be less-than-significant.

No changes to operational emissions or odor generation are anticipated with the updated Project design from what was described in the 2022 Final EIS. As described in the 2022 Final EIS, the Project would provide carbon sequestration associated with brackish wetland environments. Although not calculated in the GHG emissions estimates, the restored estuary would naturally capture and store carbon in vegetated marsh areas and would also produce less methane (another GHG) than the existing lake (or No Action Alternative).

Long-term operational impacts remain **less-than-significant,** consistent with the analysis presented for the Estuary Alternative in the 2022 Final EIS.

3.5.2.2 Construction Impacts

The 2022 Final EIS (Section 5.7) evaluated air quality and odor impacts from construction activities associated with earthwork, demolition, and deliveries of material and equipment. Impacts were determined to be less-than-significant.

Air quality is generally assessed in terms of whether air pollutant concentrations are in compliance with ambient air quality standards established to protect human health and welfare. For the analysis, the general conformity de minimis threshold limits for an area not meeting air quality standards were used for comparison, even though Thurston County does meet air quality standards. This provided a conservative threshold for the analysis.

As described in the 2022 Final EIS, dredging operations would be the primary source of construction emissions. Construction impacts associated with the updated Project design would

be similar to those described in Sections 5.7.2 and 5.7.4 of the 2022 Final EIS. Even with the increase in construction truck trips, the total annual emissions would remain very similar and less than general conformity de minimis thresholds. Table 3.2 summarizes the calculated air pollutant emissions, which incorporate the updated trucking volume. Appendix A provides the emissions factors and parameters.

Table 3.2 Air Pollutant Emissions

Pollutant	Project Emissions (tpy)	General Conformity De Minimis Thresholds (tpy)	Greater Than De Minimis?
Carbon monoxide	17.06	100	No
Nitrogen oxides	84.37	100	No
Volatile organic compounds	1.11	100	No
Sulfur dioxide	0.04	100	No
PM_{10}	1.43	100	No
$PM_{2.5}$	1.39	100	No

Note: Air emissions calculated using U.S. Environmental Protection Agency MOVES5 model.
Abbreviation: tpy = tons per year

Based on the analysis of updated air pollutant emissions, emissions would remain less than general conformity de minimis thresholds and therefore impacts would remain **less-than-significant,** consistent with the Estuary Alternative from the 2022 Final EIS.

For GHGs, there are no specific emission reduction requirements or targets applicable to the Project or the Project area, nor are there any generally accepted emission level "impact" thresholds that can be used to assess the potential significance of localized or global impacts related to GHG emissions. In terms of the level of GHG emissions associated with the increase in construction truck trips, this would remain negligible relative to regional impacts.

Statewide GHG reduction goals are codified in RCW 70A.45 and are relevant to any project with increases in GHG emissions. However, Project construction emissions have the potential to influence the rate of progression toward the state's GHG reduction goals. Washington State has established limits on GHG emissions (RCW 70A.45) and requires Ecology to report progress toward meeting those limits. The 2022 Greenhouse Gas Inventory reports that Washington produced about 96.1 million gross metric tons of carbon dioxide equivalents (CO_2e) in 2022 (Ecology 2026).

The GHG analysis completed for the 2022 Final EIS was updated based on the additional truck trips anticipated for construction. Construction of the updated Project would result in emissions of 17,057 metric tons of GHGs during the 6- to 7-year construction period. Combined GHG emissions from construction and 30-year operation of the Project would be 49,650 metric tons of CO_2e if upland disposal of maintenance dredging material is assumed, 25,968 metric tons of

CO_2e if in-water disposal is assumed. Appendix A provides the emissions factors and parameters.

Indirect air quality impacts and GHG emissions would arise from the manufacturing and transportation of construction materials, particularly steel and concrete. These supplier processes generate combustion-related air pollutants and GHGs from energy use and industrial chemical processes, such as cement production and steel fabrication. These indirect and upstream emissions, also called Scope 3 emissions, are not quantified in this SEIS. These emissions can be significant and can be mitigated by purchasing from low-carbon suppliers.

3.5.2.3 Mitigation Measures

The following measures from the 2022 Final EIS would also reduce air quality and odor impacts associated with the updated Project design:

- Require Tier 2 or better engines for off-road equipment
- Require model year 2007 or newer engines for heavy duty vehicles (except trucks that are operated less than 100 hours each year on this job)
- Require the use of biofuel B20, or offer contractor incentive for this fuel
- Require Contractor to have idle reduction plan or include a maximum idle time of 5 minutes in Project specifications; however, if equipment performance requires it in the colder months, extend idle times to achieve adequate equipment performance
- Require off-road machinery to have emissions reduction equipment (e.g., require Project sponsors and contractors to participate in Puget Sound Region Diesel Solutions, a program designed to reduce air pollution from diesel)
- Use carpooling or other trip-reduction strategies for construction workers
- Spray exposed soil with water or other suppressant to reduce emissions and deposition of particulate matter
- Pave or use gravel on staging areas and roads that would be exposed for long periods
- Cover trucks transporting materials, wet materials in trucks, or provide adequate freeboard (space from the top of the material to the top of the truck bed) to reduce emissions and deposition of particulate matter during transport
- Provide wheel washers to remove particulate matter that would otherwise be carried off-site by vehicles to decrease deposition of particulate matter on area roadways
- Cover dirt, gravel, and debris piles as needed to reduce dust and windblown debris
- If unanticipated odors occur after the transition to saltwater, stranded freshwater fish could be removed from the basin

3.5.2.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts related to air quality or odor are expected because of the updated Project design.

3.5.3 Findings for the No Action Alternative

As described in the 2022 Final EIS, Capitol Lake would remain a freshwater system under the No Action Alternative. The freshwater system under the No Action Alternative would likely have increased GHG emissions because freshwater wetlands within the system would emit methane, have reduced capacity to sequester (store) carbon in the soil, and have low potential for biomass storage.

Also as described in the 2022 Final EIS, there is a potential for increased odors from the No Action Alternative as algal growth continues to grow on the lake, which could result in earthy, musty odors. However, odor impacts are expected to remain less-than-significant given that these odor changes would be infrequent, short in duration, and with low intensity.

Under the No Action Alternative, the Project would not be constructed; therefore, there are no construction impacts associated with this alternative.

3.6 Cultural Resources

This section describes any relevant updated information on cultural resources in the Project area and analyzes new or increased adverse impacts related to the updated Project design. The regulatory context and methods for analyzing cultural resource impacts produced by the Project was described in Sections 4.9 and 5.9 of the 2022 Final EIS. The Project area is generally consistent with the study area analyzed in the 2022 Final EIS.

Refer to the following sections for information on cultural resources in the 2022 Final EIS:

- Affected Environment: Section 3.9 (pages 3-88 to 3-91)
- Long-Term Impacts: Section 4.9 (pages 4-97 to 4-109)
- Construction Impacts: Section 5.9 (pages 5-34 to 5-41)
- Attachment 13 Cultural Resources Discipline Report

3.6.1 Affected Environment

Cultural resources include archaeological and historic built environment resources as well as traditional cultural places (TCPs). These differ from Tribal Resources, which document the collective rights of the Tribe; include access to traditional accustomed areas; and address necessary periods for access to treaty-reserved resources for cultural practices, Tribal sovereignty, or treaty rights. However, some cultural resources may be of shared concern or significance.

Archaeological resources are places where past human activity has left physical traces. These traces include artifacts, deposits of debris, food remains (shells and bones), ruins of dwellings and other structures, and human remains and cemeteries. Historic built environment resources (historic resources) include buildings, structures, and landscape features built by people and

that remain in a functional state or operational readiness. Built environment resources typically must be at least 50 years old to be considered historic. TCPs are sites, structures, landscapes, or districts associated with cultural practices, beliefs, the sense of purpose, or existence of a living community that is rooted in that community's history or is important in maintaining its cultural identity and development as an ethnically distinctive people.

Cultural resources are often grouped together as "historic properties." Historic properties are those resources that due to their characteristics are listed in (or eligible for listing in) preservation registers such as the NRHP, the Washington Heritage Register, or local preservation registers. The cultural resources terminology used in this section is adopted primarily from the NRHP program because the program has extensive guidance on describing and evaluating historic properties. In addition, archaeological sites are protected under RCW 27.53 regardless of whether they are eligible for a preservation register.

Cultural resources within the Project area are described in detail in Section 3.9 and Attachment 13, Cultural Resources Discipline Report, of the 2022 Final EIS. This section provides a summary of that information, updated to reflect an additional survey that has occurred since the 2022 Final EIS. Information on Tribal resources is described in Section 3.7 of this SEIS.

3.6.1.1 Archaeological Resources

DAHP has created an Archaeological Risk Assessment Model to help determine the likelihood of precontact-era archaeological sites being present based on environmental factors. The DAHP model uses five categories of prediction: Low Risk, Moderately Low Risk, Moderate Risk, High Risk, and Very High Risk. Using these assessments of probability to understand the likelihood of encountering cultural resources in a location requires archival review of environmental and cultural sources. The model is intended to be used as an early planning tool to assist decision-makers, project managers, and planners in determining the level of effort that may be necessary to consider the archaeological resources that may be present. The Archaeological Risk Assessment Model also does not account for historical and recent landform changes that may impact the archaeological sensitivity of different portions of the Project area.

Given the shoreline setting of the Project area and its proximity to water, much of the Project area is classified under DAHP's Archaeological Risk Assessment Model as Very High to High Risk for the presence of precontact-era archaeological resources. Only in limited areas along the southern portion of the Middle Basin and west of the South Basin is archaeological risk classified as Moderate, Moderately Low, or Low Risk (DAHP 2025a). Buried and submerged Holocene-aged fluvial and estuarine deposits associated with the Deschutes River floodplain and estuary are present beneath the artificial fill and within Capitol Lake. Because this area is situated along river floodplains, and only a portion of the area has been subject to systematic archaeological survey, it is likely that the area contains more archaeological sites that have yet to be discovered, including some that may be deeply buried.

A records search of DAHP's Washington Information System for Architectural and Archaeological Records Data (WISAARD) was completed in December 2025 (DAHP 2025b).

Based on this records search, there are 22 recorded archaeological resources within the archaeological resources study area, an area encompassing a 0.25-mile buffer around the Project area of potential effect (Figure 3.8). These resources encompass a range of types and time periods, from precontact to ethnohistoric period occupation. Of these, there are seven recorded archaeological resources within, overlapping, or adjacent to the Project area. Most predevelopment landforms, where these resources are found, have been either submerged or buried under fill.

Since the 2022 Final EIS, archaeological surface survey and archaeological monitoring of geotechnical borings were completed to assess the potential for archaeological resources to be present within areas of Project-related ground disturbance. Archaeological monitoring (2024, 2025, and 2026) occurred for all 16 geotechnical borings (5 sonic borings and 11 mud rotary borings) and 22 sediment grab samples within the lake basin. The pedestrian surface survey (2024) included visual survey at 10- to 20-meter intervals within the Project area. The surface survey did not identify any archaeological resources and found the Project area to be heavily altered by past earthwork for construction of Capitol Lake and surrounding infrastructure. Within the sediment grab samples, sparse natural shell fragments and a single brick were observed, but no other cultural materials were identified during grab sampling. Archaeological monitoring of geotechnical investigations identified isolated historical debris in fill and shell layers of uncertain origin in estuarine deposits but did not observe any other cultural material. Additional subsurface testing is expected to be conducted as part of the Section 106 consultation process under the National Historic Preservation Act (NHPA; 54 U.S. Code [USC] 306108).

As described in the 2022 Final EIS, cultural resources within the Project area encompass a range of types and time periods, from precontact to ethnohistoric period occupation. Given the extensive and long-term use of the tidelands and tideflats, areas within the Deschutes Estuary and Budd Inlet have a high potential to contain archaeological sites with evidence for Indigenous hunting, gathering, and fishing, such as fish weirs and net weights. Historic archaeological sites related to area commercial and industrial development have also been documented. Such sites contain important information about the lives of Native Americans; Chinese and Chinese Americans; European Americans; and others who lived, worked, and frequented the Deschutes Estuary.

After preparation of the cultural resources analysis for the Draft SEIS, DNR and the Squaxin Island Tribe suggested the need for further review and recording of the Olympia Cedar Company sawmill and historic bridges in the Middle and South Basins. Additional background research is being conducted and physical features associated within these properties, including their historical significance and eligibility for listing in applicable historic registers, will be evaluated. Ecology and DES will review the additional information and, as appropriate, update the description and analysis of cultural resources in the Final SEIS. The 2022 Final EIS described four previously recorded, historic cemeteries within the broad EIS study area; one is located adjacent to the current Project area.

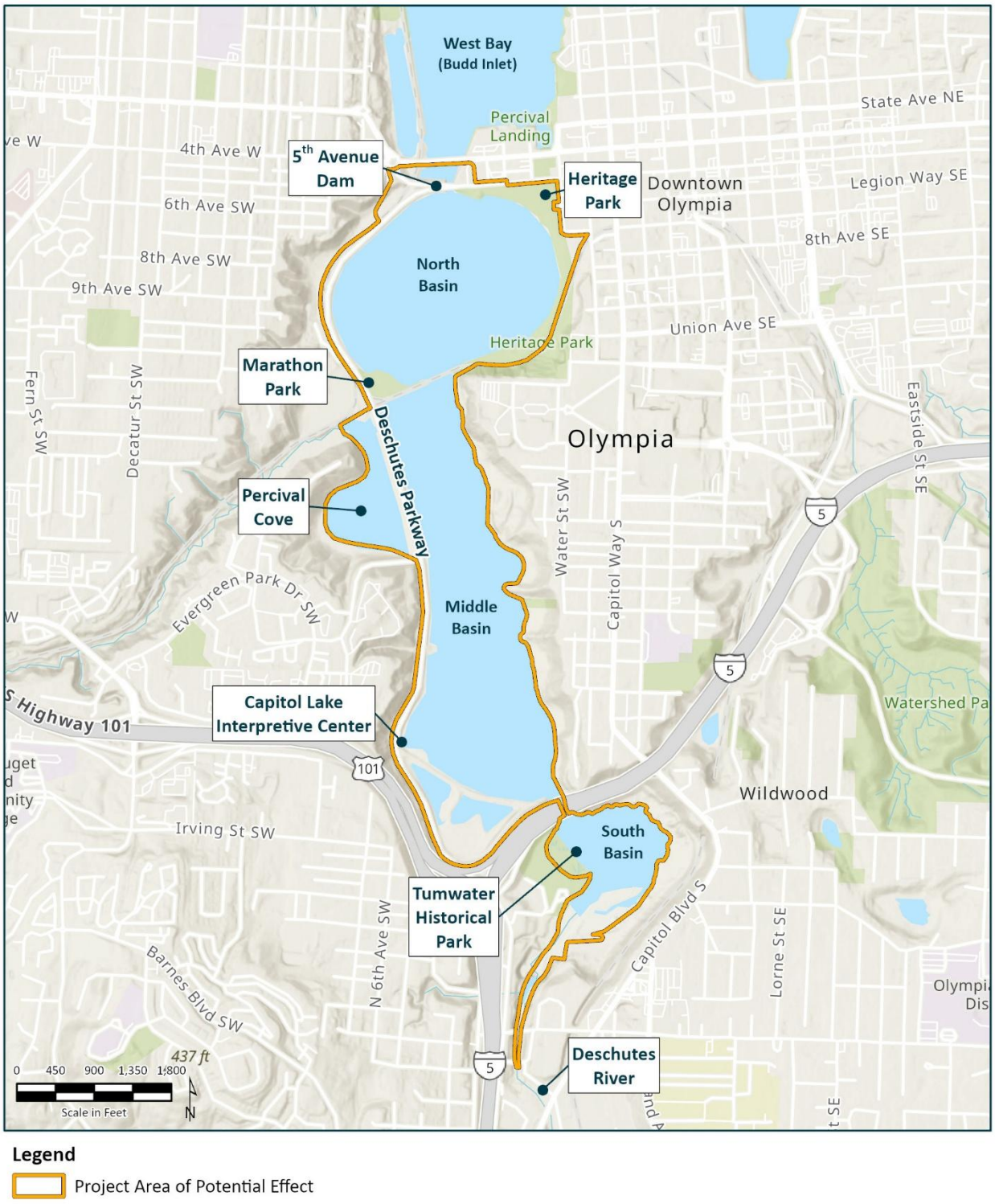


Figure 3.8 Project Area of Potential Effect

3.6.1.2 Historic Built Environment Resources

The 2022 Final EIS (Section 3.9.2.1) and the Cultural Resources Discipline Report describe the historic setting and background of the Project area. They also describe more than 100 recorded historic resources within the broad EIS study area. This inventory was the result of field surveys combined with information from previous historic resources investigations in the study area. There are 12 previously identified historic resources within the current Project area, all of which are 50 years old or older. As part of the EIS-related coordination, DAHP provided eligibility determinations within the Project area and determined the following historic resources eligible for listing in the NRHP:

- Olympic Street W Bridge (DAHP Property ID 721835)
- 5th Avenue Dam (DAHP Property ID 721094)
- 5th Avenue Bridge (DAHP Property ID 721097)

Architectural historians conducted a pedestrian survey and evaluated the following two additional resources in 2024 and 2025:

- Percival Creek Bridge (DAHP Property ID 727627; recommended eligible)
- Northern Pacific Railway – Deschutes River Bridge (DAHP Property ID 721098)

Because the Estuary Alternative evaluated in the 2022 Final EIS was not proposing potential direct or indirect impacts on these resources, they were not part of the 2021 DAHP eligibility determination review. Of these two additional resources, Percival Creek Bridge (commonly known as Percival Cove Bridge) is recommended as eligible for listing in the NRHP.

Historic resources within the Project area of potential effect are shown on Figure 3.9 and listed in Table 3.3.

Table 3.3 Historic Resources within the Project Area of Potential Effect

DAHP Property ID	Resource Name	Year Built	NRHP Eligibility Status
N/A	Tumwater Historic District (NRHP Listing No. 78002782; Smithsonian No. DT00169)	Varied	1978: Listed
N/A	Des Chutes Basin Project	Varied	2021: Determined Not Eligible
721094	5th Avenue Dam	1950	2021: Determined Eligible
721097	5th Avenue Bridge	1950	2021: Determined Eligible
721835	Olympic Street W Bridge	1958	2021: Determined Eligible
732401	Northern Pacific Railway, Tacoma Division – Grays Harbor Line	1898, 1905	2009, 2024: Determined Not Eligible
481556	Residence, 731 4th Avenue SW	1938	2021: Determined Not Eligible
700893	Capitol Lake – Deschutes Estuary	1948	2021: Determined Not Eligible
721834	Marathon Park	1971	2021: Determined Not Eligible
721837	Deschutes Parkway SW	1953	2021: Determined Not Eligible
727627	Percival Creek Bridge	1952	2022: Recommended Eligible
721098	Northern Pacific Railway – Deschutes River Bridge	1929	2021: Recommended Not Eligible

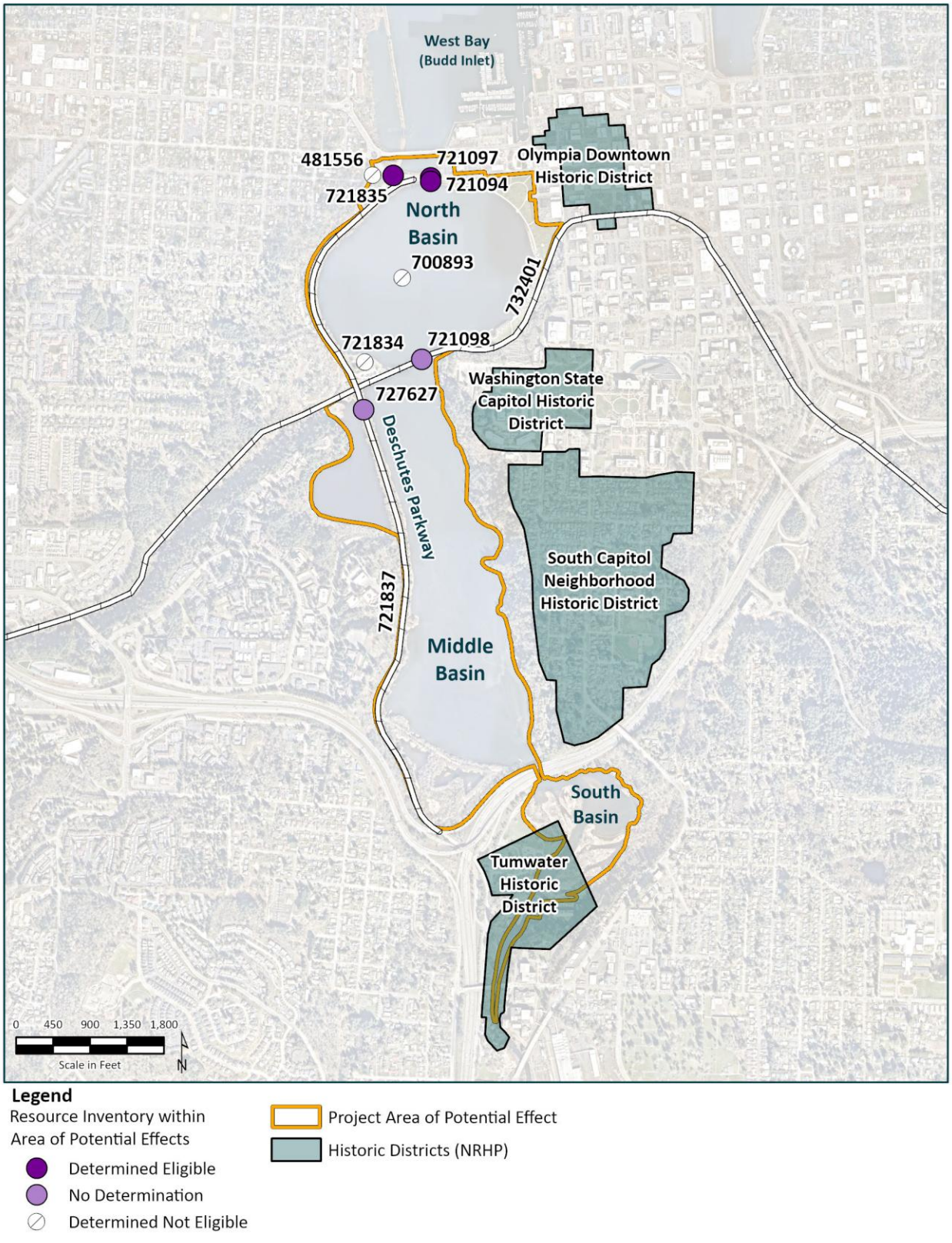


Figure 3.9 Historic Resources within the Project Area of Potential Effect

3.6.1.3 Traditional Cultural Places

TCPs are sites, structures, landscapes, or districts that are eligible for inclusion in NRHP based on their associations with the beliefs, customs, and practices of a living community. During the early planning phase in late 2019/early 2020, the Project team reached out to DAHP, the Chinese-American community, and the Squaxin Island Tribe to inquire whether the Project area might contain or overlap with TCPs. At that time, the Project team understood from DAHP that there was no formal determination of TCPs in the Project area and no restricted information in its database for any part of the Project area that may suggest the presence of TCPs. The Project team understood from the Chinese-American community that although there is a rich cultural history within the Project area, the community had not identified any culturally significant buildings, structures, or sites within the Project area to suggest nomination as a TCP. The Project team also understood at the time from the Squaxin Island Tribe that the Tribe had no records of any TCPs or Areas of Cultural Significance within the Project area.

As part of an earlier planning effort for the Capitol Lake Basin, a study was conducted in 2009 of cultural and spiritual values associated with future alternatives for the Capitol Lake Basin (Geller et al. 2009). The study was intended to identify the cultural and spiritual values associated with the Capitol Lake Basin held by a variety of stakeholders and to assess potential impacts on those values from proposed alternatives for Capitol Lake Basin at that time (Geller et al. 2009, p. 5). Values were identified through document review and interviews with stakeholders (Geller et al. 2009, p. 7), including representatives of the Squaxin Island Tribe.

The report is not a traditional cultural property report per se, in that it does not follow National Park Service Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties (Parker and King 1990), but it does contain some information regarding attitudes and experiences associated with the Capitol Lake Basin, which are summarized below. Based on coordination with stakeholder participants in the study during the preparation of the 2022 Final EIS, the 2009 report was considered to remain a valid representation; no new information was identified about the communities' current ties to the area.

The study documented that the Capitol Lake Basin was originally inhabited by the Steh-Chass people who occupied the area around Budd Inlet (Geller et al. 2009, p. 16). Steh-Chass references both the precolonization inlet and the Squaxin band that lived there. The Deschutes watershed continues to be used for ceremonial, subsistence, and commercial harvesting of natural resources and is a place of strong cultural and spiritual value. The Squaxin Island Tribe maintains value and significance of the area now covered by Capitol Lake as a provider, educator, connection to ancestors, and a source of meditative tranquility. In addition, the natural condition of the lake basin is valued for its own sake (Geller et al. 2009, p. 28). A prominent Tribal value linked to the basin is Gwitsawdit, which are sacred "teachings of the land" that describe the balance of life and value of nature and emphasize the interconnectedness of all aspects of the environment—an interconnectedness that the Squaxin Island Tribe states was disrupted by dam construction (Geller et al. 2009, p. 37). In its natural state, the basin provided water and mud for spiritual cleansing rituals, fish, shellfish, birds and eggs, medicinal plants, and materials (e.g., sweetgrass) for basket-weaving (Geller et

al. 2009, p. 29). The Tribe considers that a restored estuary could be an educational resource to teach about nature, land, and ancestors, because the area once was an important regional hub of Indigenous trade and transportation (Geller et al. 2009, p. 30).

3.6.2 Findings for the Updated Project Design

The analysis of potential impacts to cultural resources from the updated design follows the same methodology and approach used in Section 3.0 of the Cultural Resources Discipline Report (Attachment 13 of the 2022 Final EIS).

Refined design information regarding locations of ground disturbance and construction methods were compared to information about known historic properties to determine impacts.

The Section 106 consultation process under the NHPA is intended to evaluate potential effects to historic and cultural resources from a project undertaking.

Effects or Impacts

The terms "effect" and "impact" are used purposefully in this SEIS. The word "effect" is used when referring to the effects (e.g., adverse effect) the Project has on historic properties in a Section 106 framework, following implementing regulations 36 CFR 800.

The word "impact" is used when referring to specific long-term or construction impacts pursuant to SEPA (WAC 197-11-752).

The U.S. Army Corps of Engineers (USACE) is the lead federal agency for consultation under Section 106. Affected/interested agencies and Tribes will be considered Consulting Parties along with DAHP and the state. The SEPA Final SEIS will be updated based on the results of the Section 106 process, if available.

3.6.2.1 Long-Term Impacts

The 2022 Final EIS (Section 4.9) evaluated long-term impacts on cultural resources including from maintenance dredging, sedimentation, and flooding. Significant impacts were identified related to the removal of 5th Avenue Dam, 5th Avenue Bridge, and Olympic Street W. Bridge.

Archaeological Resources

As described in the 2022 Final EIS, long-term management of the restored estuary would not involve any ground-disturbing activities beyond dredging of sediment accumulated after dam removal (i.e., recent deposits) in navigational areas of West Bay. As a result, no archaeological resources would be affected and no mitigation measures would be necessary.

As described in the 2022 Final EIS, extreme tides and sea level rise could impact recorded and unrecorded archaeological resources if erosion or inundation occurred in areas containing such sites. If impacts occurred, there would be potentially significant impacts on archaeological resources. Within the Capitol Lake Basin, potentially submerged archaeological sites could

become exposed because of reestablishment of estuary function, which could lead to discovery, erosion, looting, or destruction of those sites.

Historic Built Environment Resources

Consistent with findings provided in the 2022 Final EIS, Project-related removal of the 5th Avenue Dam, the 5th Avenue Bridge, and the Olympic Street W Bridge would result in an adverse impact to these NRHP-eligible resources.

Project-related work along the Percival Creek Bridge and within the Tumwater Historic District would not result in adverse impacts to these NRHP-eligible resources. The Project would keep the Percival Creek Bridge, remove a modern trash rack and utility bridge along the eastern and western sides of the bridge, and install scour protection armor rock in the channel below the bridge. The Tumwater Brewery Berm is intended to protect the brewery area and would be installed within the footprint of an existing gravel drive around the perimeter of the property. The work does not result in physical destruction, damage, or change to characteristics of these resources and does not introduce visual elements that diminish the integrity of the resources such that they are no longer eligible for NRHP listing.

Traditional Cultural Places

If TCPs are identified as part of the Section 106 consultation process, potential effects and opportunities to mitigate for those effects would be evaluated in coordination with the Consulting Parties.

Summary

Significant impacts remain, related to the removal of eligible historic built environment resources. No new adverse impacts to the historic built environment have been identified as part of the updated Project design.

3.6.2.2 Construction Impacts

The 2022 Final EIS (Section 5.9) evaluated construction impacts on cultural resources associated with demolition, dredging/excavation, construction staging, construction traffic, and other activities. Impacts were determined to be less-than-significant except for potentially significant impacts if unrecorded archaeological resources are encountered during construction.

Archaeological Resources

Construction activities would remain within the same general area identified for the Estuary Alternative in the 2022 Final EIS. The extent of disturbance has been further refined as design has progressed. The areas of disturbance have been reviewed against information from the geotechnical borings, which provide information on the depth of modern fill and depth of native deposits, and against bathymetric surveys, which provide information on the depth of sediment accumulation over the historic mudline. Project-related ground disturbance is expected to remain within modern fill and sediment that has accumulated in the basin since construction of the 5th Avenue Dam in 1951. The exception to this is in an area of deep soil

mixing that is required for bridge and roadway construction. Deep soil mixing is a process of injecting cementitious material deep below the ground surface to improve soil stability. This process results in a slurry mixture of soil and water and does not produce intact deposits of subsurface materials.

The potential for construction impacts on cultural resources would generally be the same as described in the 2022 Final EIS. Project-related ground disturbance is largely confined to modern fill or recently accumulated sediment and therefore has low potential for encountering intact precontact archaeological resources. The Project has a greater potential to impact unrecorded archaeological resources in portions of the Project area where deep soil mixing would occur for bridge and roadway construction, in areas along Deschutes Parkway SW where construction would occur in existing utility/infrastructure trenches, and in limited areas where construction would occur in intact native soil. Archaeological monitoring, during recent geotechnical investigations, identified isolated historical debris in fill and shell layers of uncertain origin in estuarine deposits in one of the borings in the location of proposed deep soil mixing. No other potential cultural materials were observed. If cultural materials were present, they would be impacted by the ground improvements.

Historic Built Environment Resources

As described in Section 5.9.22 of the 2022 Final EIS, temporary construction impacts on historic resources could occur from traffic congestion, noise, dust, and access limitations. Measures to reduce construction impacts would be implemented, and impacts from temporary construction activities would be less-than-significant.

Summary

The potential for construction impacts on cultural resources would generally be the same as described in the 2022 Final EIS and would be **less-than-significant** unless unrecorded archaeological resources are encountered during construction, which could result in **potential significant impacts**.

3.6.2.3 Mitigation Measures

As described in Section 4.9.7.1 of the 2022 Final EIS, mitigation may be developed as part of the federal Section 106 of the NHPA consultation process, which requires resolution of adverse effects to historic properties (36 CFR 800.6). This is a separate, federal process outside of the state's SEPA process. Any significant adverse impacts to cultural resources not discussed during the Section 106 process may be addressed through the SEPA process or permitting.

No determination of adverse effects has been made yet for the potential impacts described in the previous sections. If USACE determines that the undertaking would result in adverse effects to historic properties, a Memorandum of Agreement, Memorandum of Understanding, or a change to the undertaking could be negotiated and could include mitigation measures for the adverse effects.

Significant adverse impacts to recorded cultural resources within the Project area may be discussed during the Section 106 process, with Tribes, during government-to-government consultation, and/or during subsequent federal or state permitting. No mitigation measures are proposed as part of this SEIS. Potential mitigation measures that could be implemented are described as follows.

Archaeological Resources

Potential mitigation measures for archaeological resources would generally be the same as described in Sections 4.9.7.1 and 5.9.6.1 of the 2022 Final EIS. Some of these measures have occurred or are ongoing, such as additional survey and monitoring of geotechnical investigations.

Given the ambiguous results of archaeological monitoring in one of the geotechnical borings, and after early coordination with the Squaxin Island Tribe and DAHP, Ecology and DES propose to conduct additional subsurface testing in the area of deep soil mixing to clarify the origin (cultural or noncultural) of the shell layers observed and to further assess the presence and extent of unrecorded archaeological resources that may be present within the area. The archaeological investigation would provide data for the Section 106 consultation process.

Before construction, Ecology and DES will coordinate with the federal lead agency, consulting Tribes, and DAHP, as appropriate, to confirm locations where archaeological monitoring is warranted during ground-disturbing activities. Archaeological monitoring by a qualified archaeologist consistent with the outcome of the Section 106 consultation process will be conducted in designated areas with a moderate to high potential for encountering archaeological deposits or cultural resources. Monitoring requirements, procedures, and reporting will be developed in coordination with the federal lead agency and Consulting Parties and documented before construction.

In addition, Ecology and DES would develop an Inadvertent Discovery Plan to be on-site and implemented during construction in the event of an unanticipated discovery of cultural resources. Project personnel will receive training in implementation of the Inadvertent Discovery Plan prior to onset of ground-disturbing work.

Historic Built Environment Resources

Although no new adverse impacts to the historic built environment have been identified as part of the updated Project design, additional information is available on the potential approach to mitigate for adverse impacts to the NRHP-eligible 5th Avenue Bridge, 5th Avenue Dam, and Olympic Street W Bridge that would be removed as part of estuary restoration. Ecology and DES propose to develop interpretive signage to document the history of these resources and of the Project area. This interpretive signage would be developed in coordination with the Squaxin Island Tribe and affected community groups. This effort could use and build on the historic context and background developed for this assessment.

3.6.2.4 Significant Unavoidable Adverse Impacts

No new significant unavoidable adverse impacts have been identified that are associated with the updated design. As described for the Estuary Alternative in the 2022 Final EIS, the **significant unavoidable adverse impacts** would include the following:

- Loss of the individually eligible 5th Avenue Dam through removal
- Loss of the individually eligible 5th Avenue Bridge through removal
- Loss of the individually eligible Olympic Street W Bridge through removal
- Impacts to historic resources from extreme tides and sea level rise

A determination of adverse effects will be made as part of the Section 106 process. If through the Section 106 process it is determined that the Project would adversely affect these or any other eligible resources, then potential impacts will be reviewed and discussed.

3.6.3 Findings for the No Action Alternative

Under the No Action Alternative, the limited maintenance and repair activities for the 5th Avenue Dam would not diminish the integrity of the essential physical features in a way that would affect its eligibility for listing in a historic register. Impacts would be less-than-significant. Ongoing maintenance would occur within the footprint of the existing structure or areas next to it that were previously disturbed during original dam construction. No impacts on protected archaeological resources are anticipated.

Continued and increased extreme river flooding within the Capitol Lake Basin could result in the loss of integrity of materials, design, and workmanship from damage to individually listed and designated buildings and part of the Downtown Olympia Historic District. Flooding could also impact low-lying properties within the Tumwater Historic District, including the 1906 Brewery Building, resulting in the loss of integrity of materials, design, and workmanship. These would be potentially significant impacts on historic resources.

3.7 Tribal Resources

For the purposes of this document, Tribal resources are the collective rights and access to traditional accustomed territories and times for gathering resources associated with a Tribe's time-immemorial stewardship, cultural practices, sovereignty, or formal protected reserved treaty rights. These resources may include access to and the exercising of practices related to plants, wildlife, shellfish, or fish used for commercial, subsistence, and cultural ceremonial purposes.

This section provides an overview of Tribal resources within the Project area and an analysis of construction and long-term impacts. The 2022 Final EIS described Tribal resources and impacts throughout several sections including sections on cultural resources, fish and wildlife, and economics. The information from the 2022 Final EIS is consolidated in this SEIS section and includes updated information based on input from the Squaxin Island Tribe.

3.7.1 Regulatory Context

Federal treaties, judicial decisions, laws, and regulations used for determining potential impacts on Tribal resources are summarized in Table 3.4.

Table 3.4 Regulations, Statutes, and Guidelines for Tribal Resources

Regulatory Program or Policy	Lead Agency	Description
Government-to-Government Relationship with Indian Tribes (RCW 43.376)	Ecology	Establishes Washington State's framework for maintaining government-to-government relationships with federally recognized Indian Tribes.
Centennial Accord Between the Federally Recognized Indian Tribes in Washington State and the State of Washington (GOIA 1989) and its implementation plan (GOIA 1999)	Ecology	Ecology collaborates and consults with Tribes in a government-to-government relationship to protect and manage shared natural resources.
Treaty of Medicine Creek of 1854	U.S. government and Native American Groups	Treaty between U.S. government and federally recognized Tribes. Articles include, but are not limited to, defining lands and territories ceded by signatories to the U.S. government, securing the rights of taking resources at Usual and Accustomed Areas, and the creation of Indian reservations.
NHPA of 1966 (Title 54 USC); Section 106 of the NHPA (36 CFR Part 800)	USACE	The NHPA established the management and preservation of historical and archaeological sites. Under this act, the NRHP, National Historic Landmarks List, State Historic Preservation Offices (SHPOs), and Tribal Historic Preservation Offices (THPOs) were created. Washington's SHPO is DAHP, which is the state agency that administers NHPA compliance in Washington. Procedures for implementing the NHPA are detailed in the Protection of Historic Places regulations. Section 106 of the NHPA requires federal agencies to consider the effects of project undertakings, project approvals, or project funding on historic properties. This process requires consultation with the relevant THPOs of Native American Tribes and Native Hawaiian organizations.
Procedures for State, Tribal, and Local Government Historic Preservation Programs (36 CFR Part 61)	DAHP and local governments	Federal regulation authorizing state and Tribal historic preservation programs and certifying local governments to carry out the purpose of the NHPA. This is the basis for City of Olympia and City of Tumwater historic preservation programs and ordinances.

Regulatory Program or Policy	Lead Agency	Description
Governor's Executive Order 21-02	DAHP	Enacted on April 7, 2021, Governor's Executive Order 21-02 requires state agencies implementing or assisting capital projects that are not otherwise subject to compliance with Section 106 of the NHPA and are using funds appropriated in the state's biennial Capital Budget to consider how projects may impact significant cultural and historic places. This process requires consultation with DAHP and affected Tribes.
Governor's Executive Order 25-10	DAHP	Governor's Executive Order 25-10 directs cabinet agencies to proactively and regularly engage with federally recognized Tribes. Agencies must consult Tribes early and often whenever policies, programs, or actions may affect Tribal interests. The order also requires agencies to recognize and incorporate Indigenous Knowledge, especially when decisions are based on the "best available science."
Washington Heritage Register (Senate Bill 363, RCW 27.34.200, WAC 25-12)	DAHP	Created in the March 19, 1971, Executive Session of the State of Washington Advisory Council on Historic Preservation and maintained by DAHP. Actions affecting resources listed on this register by any subdivision of state government or recipient of state funds must comply with SEPA and Governor's Executive Order 05-05.
Abandoned and Historic Cemeteries and Historic Graves (RCW 68.60)	DAHP	Relates to the preservation and protection of abandoned and historic cemeteries and graves including human remains.
Archaeological Sites and Resources (RCW 27.53)	DAHP	Relates to the conservation, preservation, and protection of archaeological sites and resources.
Archaeological Site Public Disclosure Exemption (RCW 42.56.300)	DAHP	Restricts the distribution of information about the location of archaeological sites to the public for the protection and preservation of those sites.
Human Remains (RCW 68.50)	DAHP	Relates to the protection, management, and processes in the care of human remains.
Indian Graves and Records (RCW 27.44)	DAHP	Relates to the protection, management, and processes in the care of Native American cemeteries, historic graves, and related records.
Archaeological Excavation and Removal Permit (WAC 25-48)	DAHP	Relates to procedures of application for and review processes of archaeological excavations and removals; permits are issued by DAHP.

Concurrent with the Washington SEPA review process, USACE, as federal lead agency, is conducting a review of the Proposed Action under the National Environmental Policy Act (NEPA). Pursuant to NEPA, USACE will consult under Section 106 of NHPA with Tribes, DAHP,

and the state (Applicant). As part of the Section 106 process, USACE is expected to assess potential impacts of the Proposed Action on Tribal resources, including potential impacts related to Tribal sovereignty and treaty rights. Also pursuant to NEPA, USACE is expected to consult under Section 7 of the federal Endangered Species Act with the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA) Fisheries.

3.7.2 Methodology

The analysis included the geographic extent of potential direct and indirect impacts to Tribal resources; this includes both the Project area and adjacent areas that could be affected by construction or operation of the Project.

Federally recognized Tribes are the best source of information about Tribal resources and potential impacts. The Squaxin Island Tribe provided scoping comments on the 2021 Draft EIS and comments on the 2022 Final EIS. Comments received from the Tribe on the 2021 Draft EIS emphasized the importance of restoring the estuary to achieve ecological and fish and wildlife restoration goals and to benefit the culture and lifeways of the Tribe. Importantly, the Tribe also affirmed that the restoration of the estuary was the only alternative that the Tribe supports and that the other alternatives that maintain the lake would conflict with Tribal treaty rights. Additional comments were received related to archaeological and historical cultural resources described in the 2021 Draft EIS Cultural Resources Discipline Report. These comments and responses are included in Attachment 22 of the 2022 Final EIS. To understand and verify potential Project impacts, Ecology and DES continue to engage with the Squaxin Island Tribe, which is the Tribe with Usual and Accustomed Fishing Grounds and Stations in the Project area. The Squaxin Island Tribe has had a partnering role on the Project as described in Section 1.11 of this SEIS. Coordination with the Squaxin Island Tribe has and will continue to include the following:

- Partnership on estuary restoration design and input on other design elements, construction approaches, 5th Avenue Bridge design, and recreational features
- Input on cultural uses, native plants, and shoreline access for the restored estuary
- Support on cultural resources review and archaeological investigations
- Advocacy and partnership in federal, state, and other funding pursuits
- Collaboration in regional partner meetings
- Formal and informal discussions at Tribal gatherings and Tribal Council meetings, as well as informal discussions with individual Tribal members, around aspects of Tribal history and stories to be incorporated into interpretive signage and art

A draft Cultural Resources Assessment was completed in 2026 (ESA and NW Vernacular 2026) and is a part of this process to provide information on cultural and historical resources to support Section 106 consultation. Geotechnical investigations have been monitored by Project archaeologists (2024, 2025, and 2026). Supplemental archaeological monitoring is anticipated in the future as part of the Section 106 process. Information from the assessment report is

referenced in this SEIS. Nonsensitive information from additional archaeological reports, additional investigations, or as provided by Tribes will be included in the Final SEIS.

Impacts on archeological sites and built environment resources are described in Section 3.6. Additional relevant information related to impacts on Tribal resources is also included in Section 3.7 and in sections and attachments discussing cultural resources, fish and wildlife, and economics in the 2022 Final EIS.

For this analysis, construction and operation activities are considered significant if they would permanently remove access to or diminish the value of traditional fishing, hunting, or gathering areas or eliminate a species of Tribal importance within the Project area through the loss of suitable habitat. At present, there is no access to the water body and its aquatic resources.

3.7.3 Affected Environment

The Deschutes Estuary is located within the ancestral lands of the Southern Coast Salish and Southwestern Coast Salish culture groups, which include, but are not limited, to the Squaxin sqʷáksədabš (people of the water), Nisqually dxʷsqʷaliʔabš (people of the river, people of the grass), and Upper Chehalis q'ʷay'áyił=q'. Descendants of these people are members of today's federally recognized Confederated Tribes of the Chehalis Reservation, Nisqually Indian Tribe, and Squaxin Island Tribe, as well as other Tribes and bands within the broader Southern and Southwestern Coast Salish culture groups. People of these Tribes have inhabited the area since time immemorial for habitation and resource gathering.

The Southern Coast Salish and Southwestern Coast Salish culture groups share similarities in language, subsistence patterns, structures, and other cultural practices. The area around Budd Inlet, and the people who lived there, are referred to as Steh-Chass stə́čásəbš. The proximity of the Deschutes Estuary to other inlets in South Puget Sound allowed other groups to make use of the waterways for travel, trade, and resource gathering. These other groups included, but are not limited to, groups from Noo-Seh-Chatl (Henderson Inlet), Squi-Aitl (Eld Inlet), T'Peeksin or Sawamish (Totten Inlet), Sa-Heh-Wa-Mish (Hammersley Inlet), Squawksin (Case Inlet Watershed), and S'Hotl-Ma-Mish (Carr Inlet Watershed; Hilbert et al. 2001; Spier 1936, pp. 33, 42; Squaxin Island Tribe 2017, 2018, 2026; Suttles and Lane 1990, p. 486; Wray 2015, pp. 89, 90). These groups comprise the bands of the Squaxin Island Tribe (Squaxin Island Tribe 2026).

3.7.3.1 Natural Resources and Tribal Use

Traditional use of the region has been organized around different resource environments, including marine; freshwater; and different terrestrial areas such as forests, prairies, and wetlands. Permanent and seasonal campsites were located at areas ideal for resource gathering, hunting, and travel access. Winter cedar plank house villages were often located in bays and inlets and at the mouths of rivers, river confluences, and terraces. Many of the fish, shellfish, and wildlife species in the Project area (particularly the salmonids) have significant cultural and economic value to area Tribes.

Traditional Southern Coast Salish diet relies heavily upon salmon and shellfish. Salmon, caught at the mouths and from the banks of fish-bearing rivers, were smoked or dried for the winter, yielding the bulk of food consumed in winter seasons. Smoked or dried salmon was frequently shared among groups. Historically, the inlets surrounding the southernmost portion of Puget Sound provided abundant marine resources; these include Steh-Chass (Budd Inlet), Squi-Aitl (Eld Inlet), Noo-Seh-Chatl (Henderson Inlet), Sa-Heh-Wa-Mish (Hammersley Inlet), T'Peeksin (Totten Inlet), Squawksin (Case Inlet Watershed), S'Hotl-Ma-Mish (Carr Inlet Watershed), and Little Skookum (Squaxin Island Tribe 2026). Spring and summer months were frequently spent at upland seasonal camps where fishing, hunting, and gathering of roots, bulbs, berries, and other plants occurred. Shelters in camps were less permanent than in villages, usually consisting of reed mat shelters.

The natural waterways of the Project area, including the Deschutes River and Percival Creek, along with other nearby rivers, lakes, and forests, provided fishing and hunting opportunities for resources such as salmon, beaver, waterfowl, deer, elk, bear, and other animals. The ethnographic record and oral tradition speak to the importance of the land, its resources, and fishing among Indigenous groups throughout the region (Adamson 1934; Haeberlin and Gunther 1930; Hilbert et al. 2001; Lane 1972a, 1972b; Smith 1941; Taylor 1974; Wray 2015). The record and oral traditions describe ceremonies and rites related to the resources and their procurement, including the First Salmon Ceremony. This ceremony celebrates the first catch of the season and ensures the fish return and remain an abundant resource for future seasons and generations. These ceremonies can include the use of traditional lands, preparation techniques, and distribution amongst Indigenous communities. Before the arrival of Euro-Americans, travel by canoe was the primary mode of transportation within Puget Sound, allowing groups to gather for trade, feasting, and ceremonial events. Cedar trees were fashioned into canoes, as well as yielding planks for houses and bark for fiber.

In its prior natural state before construction of the dam, the Deschutes Estuary provided fish, shellfish, birds and eggs, medicinal plants, and materials (e.g., sweetgrass) for basket-weaving, as well as water and mud for spiritual cleansing rituals. Because the ecosystem is no longer in its natural state, these resources do not exist in the same way. Fish, shellfish, and birds have decreased both within present-day Capitol Lake and the broader territories. Invasive species have crowded out sweetgrass, which is no longer available in Capitol Lake – Deschutes Estuary. In addition to access restrictions for Tribal members and the public, the interconnectedness of Capitol Lake with its environment was disrupted by construction of the 5th Avenue Dam.

Refer to Attachment 13, Cultural Resources Discipline Report, of the 2022 Final EIS for additional information on natural resources and Tribal use.

3.7.3.2 Traditional Cultural Places

Refer to Section 3.6.1.3 for information on TCPs.

3.7.3.3 Treaty of Medicine Creek

In 1854, Joel Palmer, Oregon Territory Superintendent of Indian Affairs, and Isaac I. Stevens, Washington Territory Governor and Superintendent of Indian Affairs, negotiated the Treaty of Medicine Creek with Indigenous people in the South Puget Sound region (Ecology 2009). Under this treaty, signed in December 1854 and ratified by the U.S. Senate in March 1855, lands in South Puget Sound stretching from the Cascades to the Black Hills and south to the Skookumchuck River were ceded to the U.S. government by the treaty signatories. This area includes the ancestral lands of the Squaxin Island Tribe and the Nisqually Indian Tribe (Ecology 2009). This treaty between the U.S. government and signatories recognized certain retained rights, including the following under Article 3:

> "The right of taking fish, at all usual and accustomed grounds and stations, is further secured to said Indians in common with all citizens of the Territory, and of erecting temporary houses for the purpose of curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses on open and unclaimed lands: Provided, however, That they shall not take shellfish from any beds staked or cultivated by citizens, and that they shall alter all stallions not intended for breeding-horses, and shall keep up and confine the latter." (1854 Treaty of Medicine Creek)

These retained treaty rights are referred to today as "Usual and Accustomed Areas" or "U&A areas" and have been subject to repeated litigation (Bernholz and Weiner 2008). In 1974, these rights were upheld in a landmark court case decided by Judge Boldt and upheld by the U.S. Supreme Court in 1979 (NWIFC 2020). The Washington State Attorney General's Office has summarized the adjudicated U&A areas for off-reservation treaty fishing rights of Western Washington Tribes based upon the findings of Judge Boldt and other sources, including court orders pertaining to U&A areas (Washington State Attorney General's Office 2007). No U&A areas are listed for the Confederated Tribes of the Chehalis Reservation, presumably because they are not signatories of the Treaty of Medicine Creek. The Attorney General's document identifies the following U&A areas for the Squaxin Island Tribe in the Project area:

- Shallow bays, estuaries, inlets, and open waters of the eastern straights of South Puget Sound
- Freshwater streams and creeks draining into those waters
- Saltwater north and west of the line drawn from Mahnckes Point (Kitsap Peninsula) to the westernmost point of McNeil Island bordering Pitt Passage then extending from Hyde Point on McNeil Island to Gibson Point on Fox Island and then extending from Fox Point on Fox Island to Point Fosdick on the Kitsap Peninsula, generally known as the Carr Inlet/Henderson Bay/Hale Passage

The U&A areas for the Squaxin Island Tribe as described above by the Attorney General's Office appear to coincide with the Project boundaries.

The Squaxin Island Tribe is a member of the Northwest Indian Fisheries Commission, which formed after the Boldt decision and provides natural resources management support to

member Tribes. Salmon and shellfish are among the most significant resources that contribute to the spiritual and cultural identity of the treaty Tribes. The traditional diet of the Southern Coast Salish relies heavily upon salmon but also includes other important saltwater, freshwater, and terrestrial resources. Historically, the inlets surrounding the southernmost portion of Puget Sound would have provided abundant resources. For further discussion, refer to Attachment 13, Cultural Resources Discipline Report, of the 2022 Final EIS. The Squaxin Island Tribe, along with other members of the Northwest Indian Fisheries Commission, has been actively involved in salmon recovery efforts throughout their U&A areas.

3.7.3.4 Tribal Fishing

Tribal commercial fisheries and harvests provide an important source of income for treaty Tribes in western Washington. Tribal shellfish fisheries alone generated an estimated $31.2 million in harvest value in 2023, in addition to revenues from Tribal salmon and other commercial fisheries (NWIFC 2024). Washington Tribes have treaty rights to fisheries within the state terrestrial and coastal waters, which allocate approximately half of the annual allowable catch to Tribes. Salmon fishery limits, both Tribal and non-Tribal, are governed by annual catch limits set through the annual North of Falcon process.

3.7.4 Findings for the Updated Project Design

The following sections describe the potential long-term and construction-related impacts to Tribal resources. The significance of potential adverse impacts to Tribal resources is best understood from within the cultural context of an impacted Tribe; that is, the significance of impacts depends on the expertise, knowledge, and perspectives of varying rights associated with the Tribes.

3.7.4.1 Long-Term Impacts

The Project design changes would not change or alter long-term impacts to Tribal resources as analyzed for the Estuary Alternative in the 2022 Final EIS. As described in the 2022 Final EIS, the removal of the dam and conversion back to an estuary environment would benefit Tribes by improving the abundance of species of importance, access to U&A areas, and access to areas of cultural and spiritual significance to Tribes.

Reintroducing tidal hydrology to the basin would benefit many of the species of importance to the Squaxin Island Tribe and Nisqually Indian Tribe, specifically salmon and shellfish, and potentially other fish and wildlife, as well as plants. The estuary conditions that would be reestablished under the Project would improve habitat diversity and water quality, which would benefit Chinook salmon and other salmon species spawned in other river basins that may use the estuary for feeding. Reestablishment of a functional estuary would also increase habitat for a variety of shellfish species. Increased yields of salmon, shellfish, and other species would benefit Tribes that rely on these species for subsistence and ceremonial and commercial purposes.

Removal of the dam would restore the interconnectedness of the estuary to the marine environment of Puget Sound. This would provide the Tribes with fishing access to the estuary, which is a U&A area established under the Treaty of Medicine Creek.

Restoration would also enhance opportunities for the Squaxin Island Tribe to exercise culturally important traditions within the Deschutes Estuary. Additionally, the restored estuary presents educational opportunities for Tribe members to provide the intergenerational continuation of traditional knowledge and for advancing restoration management techniques that could benefit future ecosystem restoration projects.

After construction, maintenance dredging in navigational areas of West Bay could result in some short-term and temporary impacts to Tribal resources by causing physical or behavioral responses in fish or by affecting aquatic habitat and potentially affecting access to fishing areas within West Bay during maintenance dredging cycles.

Potential impacts on Tribal resources would be limited to temporary restrictions on access to fishing areas during maintenance dredging events in West Bay and are considered **less-than-significant**. Maintenance dredging would not result in permanent adverse impacts to Tribe members' access to traditional hunting, fishing, or gathering areas or impact a species of Tribal importance.

3.7.4.2 Construction Impacts

Activities that could impact Tribal resources during construction include ground disturbance; soil compaction; and temporary water quality changes, restricted access, and degradation of visual quality. Other activities could cause noise and interruption of the landscape, habitats, and species.

Potential direct impacts on Tribal resources from construction activities are expected to be limited because most construction would occur within Capitol Lake, which is currently closed to fishing, and Capitol Lake and the surrounding upland ecosystem are no longer in their natural state. Tribal resources do not exist in the same way as they did historically before construction of the 5th Avenue Dam.

As described in Section 2.5.2.7, in all years, except for the first year of construction when intensive dredging would occur within Capitol Lake Basin, in-water work would be constrained to the in-water work windows when salmon are not migrating. Ecology and DES have partnered with the Squaxin Island Tribe and WDFW (co-managers of the state fisheries) to develop an approach for avoiding and minimizing impacts to migrating salmon during the primary year of dredging. During out-migration of juvenile salmonids, in-water work would be paused for a limited time (during April and May) to allow juvenile out-migration through the lake system. This pause of in-water work would be aligned with hatchery operations.

During in-migration of adult salmonids, a system approved by the Squaxin Island Tribe and WDFW would be implemented to transport the migrating adults around the active dredging area, while allowing dredging to continue. This could involve protection of an isolated channel

area for migration; hopper collection of fish at the dam, with trucking around the work area; or transfer of fish from the dam to a point upstream of the work area using a vacuum-assisted fish passage system. Upstream of the work area, the salmon would migrate naturally through Tumwater to the Tumwater Falls fish ladder and hatchery for sorting and management following existing WDFW protocols.

With compliance with in-water work timing restrictions, adherence to applicable permit conditions, and fish transport techniques designed to minimize potential impacts to salmon, impacts on Tribal resources are expected to be **less-than-significant.**

3.7.4.3 Mitigation Measures

An Adaptive Management and Monitoring Plan (previously referred to as a Habitat Enhancement Plan in Section 4.5.8.1 of the 2022 Final EIS) will be developed in coordination with the Squaxin Island Tribe. Additionally, as discussed in Section 3.7.2, coordination is ongoing with the Squaxin Island Tribe to address impacts to Tribal resources.

Mitigation associated with potential impacts on Tribal resources would be addressed directly with the Squaxin Island Tribe during government-to-government consultations as part of the permitting, regulatory, and consultation processes.

3.7.4.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to Tribal resources were identified due to construction or operation of the Project.

3.7.5 Findings for the No Action Alternative

Under the No Action Alternative, access to the water body and its aquatic resources would remain closed, including to access by Tribes. The continuation of current, limited management practices would not benefit species of importance to the Tribes, specifically salmon and shellfish. Fish habitat and productivity may also gradually decline over time due to transition to freshwater wetlands in the South and Middle Basins. The No Action Alternative would keep the current landscape of Capitol Lake, which does not provide cultural and spiritual significance to the Tribes and prohibits Tribal fishing upstream of the 5th Avenue Dam.

3.8 Environmental Justice

This section describes environmental justice considerations within the study area to assess the probable impacts associated with the updated Project and the No Action Alternative.

Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, rules, and policies. Environmental justice includes addressing disproportionate environmental and health impacts in all laws, rules, and policies with environmental impacts by prioritizing vulnerable populations, the equitable distribution of resources and benefits, and eliminating harm (RCW 70A.02.010(8)).

Vulnerable populations include, but are not limited to, racial or ethnic minorities, low-income populations, populations disproportionately impacted by environmental harms, and populations of workers experiencing environmental harms (RCW 70A.02.010(14)). Washington state studies and national studies have found that people of color and low-income people continue to be disproportionately exposed to environmental harms in their communities (RCW 70A.02.005(2)). This section discusses environmental justice relative to the following populations:

- Communities of color
- Low-income populations

Impacts to Tribal communities, including Tribal resources, are discussed in more detail in Section 3.7 of this SEIS.

3.8.1 Regulatory Context

The relevant state and federal statutes related to environmental justice and nondiscrimination are listed below.

- Title VI of the Civil Rights Act of 1964 (USC 42.2000d), as amended by the Civil Rights Restoration Act of 1987: Prohibits discrimination based on race, color, and national origin in programs and activities receiving federal financial assistance.
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency: Requires federal agencies to examine the services they provide, identify any need for services to those with limited English proficiency, and develop and implement a system to provide those services so persons with limited English proficiency can have meaningful access to them.
- Washington State Office of the Chief Information Officer Policy 188: Intended to assist the State of Washington in meeting its obligations under state and federal law to provide reasonable accommodation to employees and provide persons with disabilities an equal opportunity to participate in, and enjoy the benefits of, services, programs, or activities conducted by the state.
- Washington State Executive Order 05-03: Directs all state agencies to adopt the principles and practices of plain language (in other words, reader-friendly language).
- Washington State Environmental Justice (RCW 70A.02): Covered agencies must incorporate environmental justice into agency strategic plans and budget development processes, conduct environmental justice assessments, and report on environmental justice implementation progress of the statute.

3.8.2 Methodology

The study area for environmental justice includes all potentially affected populations residing in census block groups intersecting the Project area, to include all areas that could be affected by construction or operation of the Project. Figure 3.10 shows the environmental justice study area, including areas adjacent to construction areas, as well as areas adjacent to potential truck haul routes.

The study area intersects 13 block groups that are within 7 census tracts. Block groups are the smallest area for which detailed population data are reported by the U.S. Census Bureau and are therefore used as the primary geographic unit used within the analysis.

Census Geographic Areas

Census tracts are subdivisions of a county that average about 4,000 people. Tracts are designed to be relatively homogeneous in population characteristics, economic status, and living conditions at the time they are established.

Block groups are a subdivision of a census tract that generally includes 600 to 3,000 people.

Source: U.S. Census Bureau 2026

Guidance on environmental justice technical analyses methods and demographic data were gathered from the following sources:

- U.S. Census Bureau 2018–2022 American Community Survey (ACS) 5-year estimate data for race, individuals in households below twice the federal poverty level (low-income households), age, educational attainment, and limited English proficiency populations and percentages (U.S. Census Bureau 2023).
- Environmental Justice: Guidance Under the NEPA (Council on Environmental Quality 1997).
- Promising Practices for Environmental Justice Methodologies in NEPA Reviews (EJ IWG 2016).
- Final Guidance for Incorporating Environmental Justice Concerns in the U.S. Environmental Protection Agency's NEPA Compliance Analyses (USEPA 1998).

Data were gathered and analyzed to determine whether block groups in the study area constitute populations of people of color and/or low-income people.

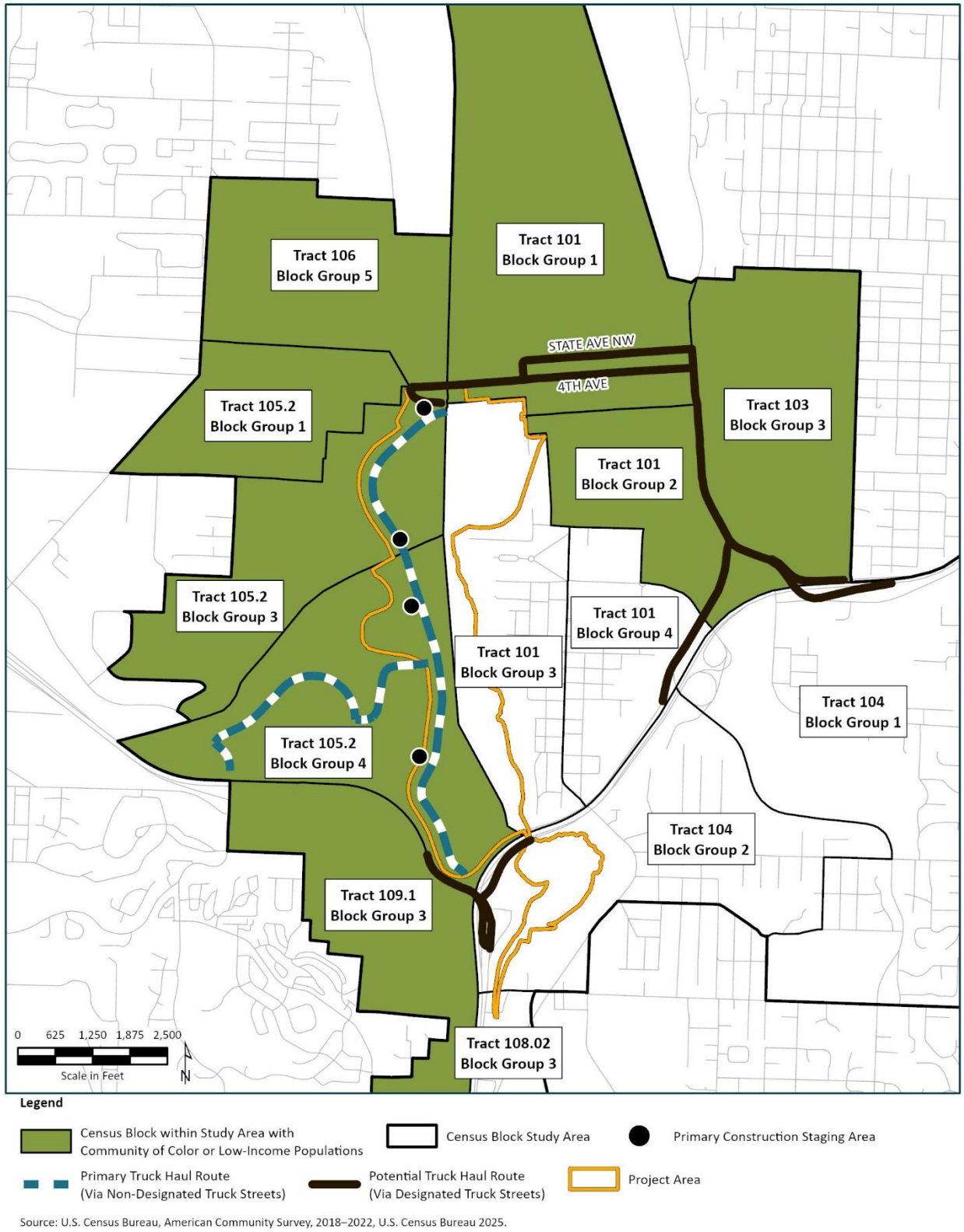


Figure 3.10 Environmental Justice Study Area

This analysis used 5-year population estimates from the U.S. Census Bureau 2018−2022 ACS to determine the people of color populations or low-income populations within the study area (U.S. Census Bureau 2023). Statewide population estimates were also provided for comparison (U.S. Census Bureau 2025). The population characteristics from each census block group within the study area were then compared to the population characteristics of Thurston County. The analysis included the following:

- Block groups were considered a population of color if the percentage of people of color within the block group is 10% greater than the percentage of people of color in Thurston County. Thurston County's percentage of population that are people of color is 28%; therefore, the threshold for a community of color in a block group is 30.8%.
- Block groups were considered a low-income population if the percentage of people living at or below twice the poverty level is greater than the percentage for Thurston County. Thurston County's low-income population percentage is 22%; therefore, the threshold for a low-income percentage is 22%.

Consistent with environmental justice guidance, the assessment focuses on whether minority and low-income populations would experience disproportionate human health, environmental, social, or economic effects.

The impacts from the updated Project and No Action Alternative were reviewed for each SEPA element of the environment analyzed in the 2022 Final EIS and this SEIS that has the potential to affect people. If significant adverse impacts to a resource area were identified, those impacts were further assessed for their potential to disproportionately affect communities of color and low-income populations. Potential impacts on people, whether or not they were identified as significant in the resource analyses, can also contribute to cumulative impacts with the potential to disproportionately affect communities of color and low-income populations.

3.8.3 Affected Environment

3.8.3.1 Communities of Color Populations

Of the 13 block groups considered, three are identified as communities of color when compared to the reference populations in Thurston County (Figure 3.11 and Table 3.5).

Table 3.5 Communities of Color in Study Area Block Groups

Reference Populations

Census Area	Total Population	Number of People of Color	Percentage of Population People of Color
Thurston County	294,772	82,525	28.0%
Washington State	8,001,020	2,650,028	33.1%

Block Groups within the Study Area

Tract	Block Group	Total Population	Number of People of Color	Percentage of Population People of Color
Tract 101	BG 1	660	121	18.3%
	BG 2	1,002	273	27.3%
	BG 3	759	207	27.3%
	BG 4	910	87	9.6%
Tract 103	BG 3	2,153	354	16.4%
Tract 104	BG 1	1,993	293	14.7%
	BG 2	618	67	10.8%
Tract 105.2	BG 1	1,703	533	31.3%
	BG 3	1,522	532	35.0%
	BG 4	971	168	17.3%
Tract 106	BG 5	2,014	612	30.4%
Tract 108.02	BG 3	1,399	285	20.4%
Tract 109.1	BG 3	1,585	676	42.7%

Source: U.S. Census Bureau 2023, 2025

Block group with percentage of population of people of color 30.8% or greater (10% greater than the percentage of people of color in Thurston County)

3.8.3.2 Low-income Populations

Of the 13 block groups considered, 7 are identified as having low-income populations when compared to the reference populations in Thurston County (see Figure 3.11 and Table 3.6).

Table 3.6 Low-income Populations in Study Area Block Groups

Reference Populations

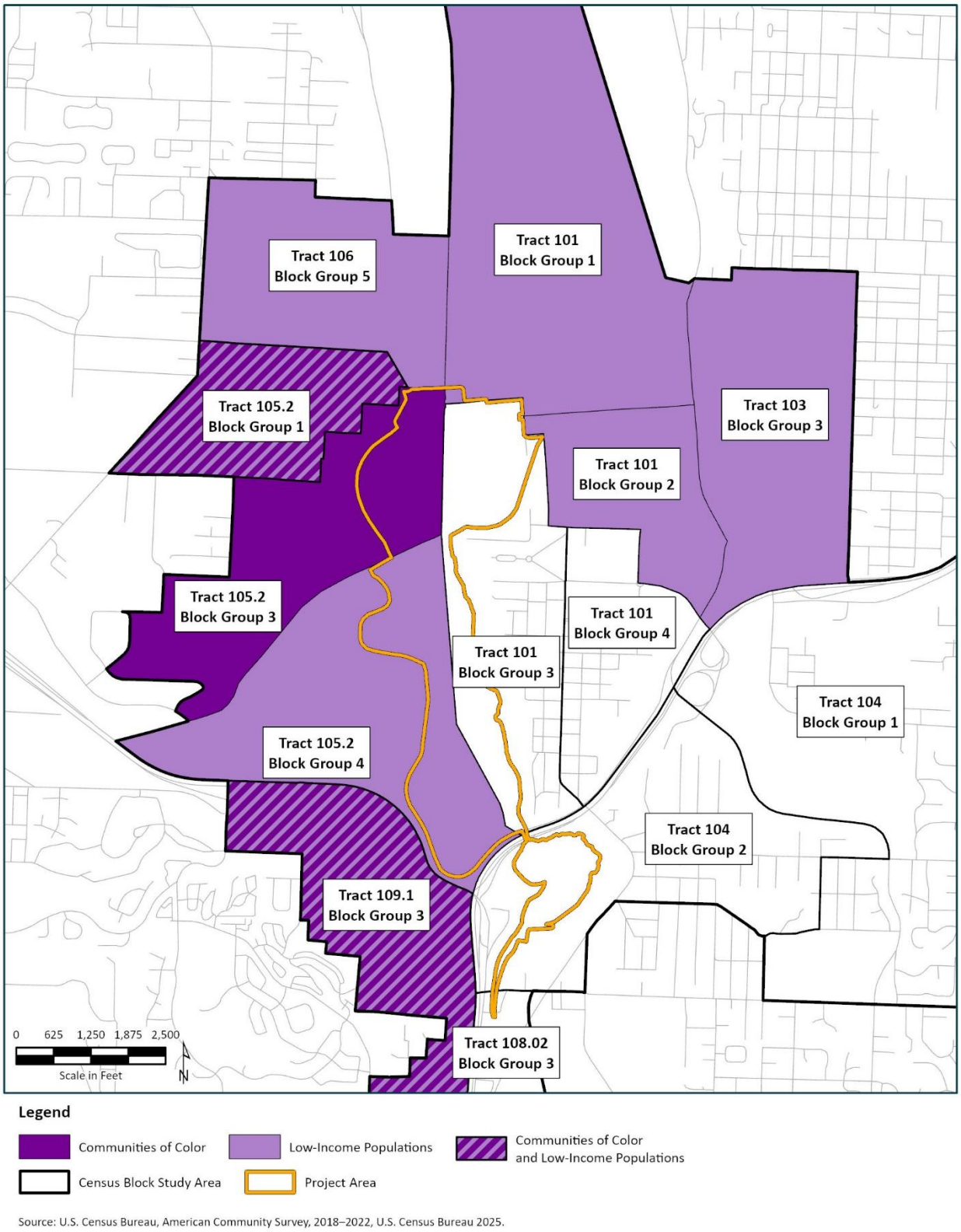
Census Area	Total Population	Number of Low-Income People	Percentage of Population Low Income
Thurston County	294,772	64,497	21.9%
Washington State	8,001,020	1,739,075	21.7%

Block Groups within the Study Area

Tract	Block Group	Total Population	Number of Low-Income People	Percentage of Population Low Income
Tract 101	BG 1	660	290	43.9%
	BG 2	1,002	411	41.0%
	BG 3	759	97	12.8%
	BG 4	910	181	19.9%
Tract 103	BG 3	2,153	577	26.8%
Tract 104	BG 1	1,993	52	2.6%
	BG 2	618	62	10.0%
Tract 105.2	BG 1	1,703	635	37.3%
	BG 3	1522	299	19.7%
	BG 4	971	310	31.9%
Tract 106	BG 5	2,014	970	48.2%
Tract 108.02	BG 3	1399	300	21.4%
Tract 109.1	BG 3	1585	500	31.5%

Source: U.S. Census Bureau 2023, 2025

Block groups identified as "low-income" due to total low-income percentage greater than the percentage in Thurston County



Source: U.S. Census Bureau, American Community Survey, 2018–2022, U.S. Census Bureau 2025.

Figure 3.11 Communities of Color and Low-income Populations within Block Groups Intersecting the Project Area

3.8.4 Findings for the Updated Project Design

This section describes the probable environmental justice impacts from the updated Project and No Action Alternative.

Mitigation measures identified to avoid, minimize, or reduce the identified impacts below the level of significance were also considered. Project impacts that would be effectively mitigated are not anticipated to result in disproportionate impacts on communities of color and low-income populations.

Construction and operation of the updated Project could result in impacts on Tribal resources and cultural resources. These impacts are discussed in Section 3.7 and Section 3.6, respectively, of this SEIS.

3.8.4.1 Long-term Impacts

Probable significant adverse impacts associated with the long-term operation of the updated Project were identified for fish and wildlife and transportation. Other impacts considered in this section due to their potential to affect human populations include land use, shorelines, and recreation; visual resources; air quality; and noise. These impact determinations were assessed for potential disproportionate impacts on communities of color and low-income populations as follows.

Fish and Wildlife

Removal of the dam would eliminate the freshwater lake and introduce tidal flows, improving ecological habitat conditions for salmon and other marine species. Significant unavoidable impacts were identified to freshwater fish species, as well as Yuma myotis bat and little brown bats at the Woodward Bay bat colony.

Freshwater fish in the Capitol Lake Basin do not support an active fishery. The lake is closed to water access, including fishing. No significant adverse impacts associated with fish species and habitats or wildlife species and habitats were identified that would impact people; therefore, **no disproportionate impacts** on communities of color or low-income populations are anticipated.

Land Use, Shorelines, and Recreation

Removal of the dam would improve water quality, sediment management, ecological functions, and opportunities for community use, thus improving recreation.

Removal of the dam would increase downstream sediment deposition in West Bay when compared to the No Action Alternative. Maintenance dredging, funded through the Interlocal Agreement, is intended to avoid significant impacts to navigation and to downstream stakeholders, including the Port, Olympia Yacht Club, and other West Bay marinas (One Tree Island Marina, Martin Marina, and Fiddlehead Marina). Recurring maintenance dredging in

these same areas was routine practice prior to dam construction; the proposed program therefore represents a resumption of historical sediment management in West Bay.

The Interlocal Agreement commits to annual bathymetric surveys of the navigational areas of West Bay. Dredging would be initiated based on established maintenance dredging triggers and observed rates of deposition rather than on modeling assumptions alone, allowing the program to adapt if actual deposition differs from predicted rates. With the Interlocal Agreement, land use, shoreline, and recreational impacts at private marinas and Port of Olympia and to navigation in West Bay would be less-than-significant.

Low-income populations are located within the block group that extends into the eastern shoreline of West Bay (Tract 101, Block Group 1) where the affected marinas are present. Recreational moorage and commercial shipping at the affected facilities are not resources on which low-income populations depend disproportionately.

With the commitments in the Interlocal Agreement, land use, shoreline, and recreational impacts would be less-than-significant. **No disproportionate impacts** on communities of color or low-income populations would occur.

Visual

Restoring the estuary would visually modify the Project area with 5th Avenue Dam removal and related system changes, habitat restoration, and the new 5th Avenue Bridge. However, even with these substantial changes in visual character, the Project area would remain a unified and harmonious landscape as viewed from key viewpoints around the basin. **No disproportionate impacts** on communities of color or low-income populations would occur.

Transportation

Same as described in the 2022 Final EIS, the updated Project would include construction of a new 5th Avenue Bridge and a new connection between Deschutes Parkway SW and Olympic Way. Provision of these new multimodal facilities would support many policies established by the City of Olympia that seek to support and improve pedestrian and bicycle travel throughout the city. They would also provide people with vehicular and transit connectivity between Olympic Way and Deschutes Parkway SW that do not exist today.

Maintenance dredging downstream in West Bay would occur at approximately 6-year intervals after dam removal. Where dredged material is suitable for in-water disposal, barge transport would avoid hauling dredged material by truck and no disproportionate impacts would occur. Because sediment suitability for in-water disposal cannot be determined in advance of each event, this analysis evaluates truck haul as the worst case scenario for analysis of transportation impacts.

Under the worst case scenario where all dredged sediment would need to be hauled by truck, approximately 110 to 670 truck trips per day over several weeks (depending on the maintenance dredging event) would travel from West Bay through downtown Olympia to

Interstate 5, passing through three block groups, within two census tracts (Tract 101, Block Groups 1 and 2, and Tract 103 Block Group 3). The census block groups are located in proximity to Interstate 5 indicating an existing elevated traffic-related burden. All three block groups include low-income populations. Haul traffic would add traffic congestion and pedestrian-safety burdens to a community already traffic-burdened. Therefore, **disproportionate impacts** on low-income populations would occur. With route restrictions, time-of-day limits, and advance notification, residual impacts are expected to be less-than-significant.

Air Quality and Noise

As described in the previous section for transportation, if haul trucks are used during maintenance dredging events, haul trucks would travel through block groups with low-income populations. The haul route would also be located within census block groups that are located adjacent to a major highway system (Interstate 5) indicating an existing elevated traffic-related burden. Because haul traffic would add diesel particulate and noise to a community already traffic-burdened, the impact would be disproportionately borne by low-income populations. Therefore, **disproportionate air quality and noise impacts** on low-income populations could occur during maintenance dredging events. With modern engine requirements, contractor idling plan, and other requirements listed in Section 3.8.4.3, residual impacts are expected to be less-than-significant.

3.8.4.2 Construction Impacts

Probable significant adverse impacts associated with construction activities were identified for land use, shorelines, and recreation; visual resources, and transportation. These impact determinations were assessed for potential disproportionate impacts on communities of color and low-income populations as follows.

Land Use, Shorelines, and Recreation

Marathon Park, which is within Block Group 3 of Census Tract 105.2, would be closed for approximately 3 years during construction. This would remove approximately 2 acres of free, publicly accessible waterfront open space. Residents of the adjacent block groups (Census Tract 105.2, Block Groups 3 and 4) may rely on walkable, no-fee open space to a greater degree than the reference community. Nearby alternative facilities provide comparable opportunities within walking or transit distance and include Capitol Lake Interpretive Center (18 acres), West Bay Park (17 acres), Percival Landing Park (3 acres), and Heritage Park (24 acres). A portion of Heritage Park would also be closed during construction, but the majority of the park would remain open. Because comparable access to no-fee open-space and recreational areas is in the general vicinity of Block Groups 3 and 4, **no disproportionate impacts** on communities of color or low-income populations are anticipated.

Remaining recreational uses around the basin would experience noise and vibration impacts during construction. Construction-related noise and vibration impacts would be temporary and occur intermittently throughout the day but would be disruptive at times to park and trail users and along haul routes where residential receptors are present. Adverse effects would be

experienced broadly across area recreational users. However, for residents of block groups who may rely on the basin's publicly accessible shoreline and trails as their primary open space, intermittent noise and vibration disruptions would compound the loss of recreational access described above.

Visual Resources

Multiyear construction would substantially alter the visual character of the basin, an impact determined significant in the 2022 Final EIS and Section 3.3 of this SEIS. Adverse visual effects would be experienced broadly by viewers across several areas, including the Capitol Campus, downtown, and surrounding neighborhoods. **No disproportionate impacts** on communities of color or low-income populations are anticipated. However, for residents of block groups who rely on the basin's publicly accessible shoreline and trails as their primary open space, degraded visual character would compound the loss of recreational access.

Transportation

The primary construction haul route would use a route to Hwy 101 from the west side of Capitol Lake Basin, which avoids downtown Olympia. The route traverses two block groups (Census Tract 105.2, Block Groups 3 and 4), one of which has a low-income population, and the other that has communities of color. Within block group 4 the percentage of low-income people is 31.9%, compared with 21.9% countywide and within block group 3 the percentage of communities of color is 35.0%, compared with 28.0% countywide. Other route options were evaluated; each would traverse block groups with comparable or greater low-income populations, and the proposed route was selected because it provides the most direct, and shortest route to Hwy 101.

The extended Deschutes Parkway SW closure and detour would increase travel time between the north and south ends of the lake during construction, which would constitute a significant unavoidable impact. Vehicle delay would be experienced across block groups. However, detoured traffic would be concentrated on a haul route from Hwy 101 to Cooper Point Road, Evergreen Park Drive SW, Lakeridge Drive, and Deschutes Parkway SW, increasing volumes through a block group with communities of color (Block Group 3 in Census Tract 105.2) and a block group with low-income populations (Block Group 4 in Census Tract 105.2). In addition, Intercity Transit route #24 would require rerouting, increasing scheduled transit and travel time, affecting riders who may be disproportionately low-income and without vehicle access. Mitigation identified in Section 3.8.4.3 would reduce but not eliminate these impacts. These haul route, detour-route and transit access impacts would be disproportionately borne by low-income populations. Therefore, **disproportionate and adverse transportation impacts** on communities of color and low-income populations could occur during construction.

Air Quality and Noise

As described above for transportation, the primary construction haul route would substantially traverse block groups with communities of color and low-income populations. Therefore, **disproportionate impacts** on communities of color and low-income populations are anticipated

during construction. These impacts would be minimized with modern engine requirements, contractor idling plan, and mitigation measures listed in Section 3.8.4.3.

3.8.4.3 Mitigation Measures

Implementation of the following mitigation measures proposed in Sections 3.4 and 3.5 of this SEIS would also reduce potential effects of the updated Project on communities of color and low-income populations:

Transportation

- Implement a CTMP and Traffic Control Plan that detail the measures needed to manage traffic during construction and features such as temporary roadway, lane, sidewalk, and bike facility closures; coning plans; traffic control plans including temporary signs, markings, and traffic control devices; truck haul routes; and contractor parking. Traffic control would follow established state and federal guidelines.
- Develop and implement a public communication strategy to give ample advance notice to residents and employers affected by the long-term closure of Deschutes Parkway SW and short-term closures at each end of the new 5th Avenue Bridge.
- Restrict construction truck trips through downtown Olympia during the commuter peak periods when traffic volumes on the street system would be highest. These measures could vary based on seasonal fluctuations in traffic and parking patterns as appropriate.
- In coordination with the City of Olympia, identify detours for vehicular, transit, bicycle, and pedestrian traffic during periods when Deschutes Parkway SW would be closed to traffic.
- Consult with local police, fire, and emergency response to establish emergency vehicle routes so general emergency management services are not compromised during the extended closure of Deschutes Parkway SW.
- Coordinate with Intercity Transit to reroute buses that would be displaced from Deschutes Parkway SW during road closure periods.

Air Quality

- Require Tier 2 or better engines for off-road equipment.
- Require model year 2007 or newer engines for heavy duty vehicles (except trucks that are operated less than 100 hours each year during Project construction).
- Require the use of biofuel B20, or offer contractor incentive for this fuel.
- Require contractor to have idle reduction plan or ensure that Project specifications have a maximum idle time of 5 minutes; however, in the colder months, if equipment requires, idle times may be extended to achieve adequate equipment performance.

- Require all off-road machinery to have emissions reduction equipment (e.g., require participation in Puget Sound Region Diesel Solutions, a program designed to reduce air pollution from diesel, by Project sponsors and contractors).
- Use carpooling or other trip-reduction strategies for construction workers.
- Spray exposed soil with water or other suppressant to reduce emissions and deposition of particulate matter.
- Pave or use gravel on staging areas and roads that would be exposed for long periods.
- Cover all trucks transporting materials, by wetting materials in trucks or providing adequate freeboard (space from the top of the material to the top of the truck bed), to reduce emissions and deposition of particulate matter during transport.
- Provide wheel washers to remove particulate matter that would otherwise be carried off-site by vehicles to decrease deposition of particulate matter on area roadways.
- Cover dirt, gravel, and debris piles as needed to reduce dust and wind-blown debris.

3.8.4.4 Significant Unavoidable Adverse Impacts

The assessment identified **significant unavoidable adverse impacts** associated with the haul routes and the extended Deschutes Parkway SW closure and detour that would disproportionately affect communities of color or low-income populations.

3.8.5 Findings for No Action Alternative

Under the No Action Alternative, the project would not be constructed; therefore, there are no construction impacts. This alternative does not represent a continuation of existing conditions. Conditions in the basin would continue to change over the planning horizon, and this analysis evaluates environmental justice effects against that projected trajectory rather than against present-day conditions. Full details of the No Action Alternative are included in Section 2.2.4 of the 2022 Final EIS. Some ongoing and worsening conditions related to the No Action Alternative may affect communities of color and low-income populations, as follows:

- **Hydrodynamics and Sediment Transport (Section 4.1.2, 2022 Final EIS)**: Under the No Action Alternative, the 5th Avenue Dam would remain in its current configuration. The dam gates would continue to control water levels in Capitol Lake by limiting when, and at what rate, water can leave the lake and flow into Budd Inlet. An ongoing risk of operational failure at the 5th Avenue Dam would remain under the No Action Alternative because only minor repair and maintenance activities for the 5th Avenue Dam are anticipated. The dam would continue to capture most of the sediments transported into the basin and limit the amount of sediment that discharges into Budd Inlet. Long-term accumulation of sediment would continue and would gradually reduce the depth of Capitol Lake.
- **Navigation (Section 4.2.2, 2022 Final EIS)**: Under the No Action Alternative, ongoing rates of sedimentation in West Bay would not change substantially. Maintenance

dredging by various entities would still occur but a maintenance dredging plan would not be implemented. Operational impacts to navigation would be less-than-significant, but over time could become significant if dredging is delayed again and causes navigational impacts, similar to existing conditions.

- **Water Quality (Section 4.3.2, 2022 Final EIS):** Under the No Action Alternative, current water quality conditions and trends in both the lake and in West Bay would persist. Eventually, there would be a significant impact on the lake from loss of open water habitat due to the transition from submerged aquatic plants to emergent plants along the shoreline. It is expected that water quality standards would continue to not be attained for dissolved oxygen in Budd Inlet.
- **Aquatic Invasive Species (Section 4.4.2, 2022 Final EIS):** Under the No Action Alternative, invasive aquatic plant species would continue to be contained and managed using methods aimed at maintaining low population densities. The risk for aquatic invasive species spreading from Capitol Lake under the No Action Alternative is expected to remain low.
- **Fish and Wildlife (Section 4.5.2, 2022 Final EIS):** Under the No Action Alternative, the 5th Avenue Dam would remain. Potential impacts would be related to limited ongoing maintenance of the 5th Avenue Dam and ongoing sedimentation of Capitol Lake, because no sediment management strategies would be implemented. The lack of lake management to remove sediment and submerged aquatic vegetation would continue to impact habitat quality and use by aquatic and upland species.
- **Wetlands (Section 4.6.2, 2022 Final EIS):** Under the No Action Alternative, sediment management strategies would not be implemented, and the basin would continue to accumulate sediment. Deepwater habitat areas would gradually transition to emergent, scrub-shrub, and forested wetlands—but the full transition to these vegetation wetland types would likely extend beyond the 30-year time horizon evaluated for the 2022 Final EIS. Overall, there would be a net gain in wetland functions (such as water quality and habitat) for these freshwater vegetated wetland areas.
- **Air Quality (Section 4.7.2, 2022 Final EIS):** Vehicle trips and equipment use associated with limited, ongoing maintenance of the 5th Avenue Dam would produce negligible air emissions. The No Action Alternative does not promote consistency with Guiding Principles in the 2018 Thurston Climate Adaptation Plan, which calls for identifying and leveraging climate change adaptation strategies and actions with mitigation co-benefits, such as reducing, capturing, and storing GHG emissions, along with enhancing resiliency for climate adaptation.
- **Land Use, Shorelines, and Recreation (Section 4.8.2, 2022 Final EIS):** Under the No Action Alternative, estuary restoration would not be completed. There would be no changes to existing or planned land uses. The No Action Alternative would not achieve restoration and enhancement goals listed in many of the applicable planning documents. Capitol Lake has been closed to public contact recreation since 2009 due to water quality conditions and the presence of New Zealand mudsnail. Under the No Action Alternative,

this closure would continue indefinitely. Access to other no-fee open-space and recreational areas is present within the general vicinity. Therefore, the continued closure would likely not be disproportionately borne by communities of color and low-income populations.

- **Visual Resources (Section 4.10.2, 2022 Final EIS):** There would be an increased presence of vegetated wetlands within the lake as sediment continues to accumulate and the lake becomes shallower. It is also likely that there would continue to be worsening impacts to aesthetics from the continued increase in algae and aquatic plant populations over time. As a result of climate change, it is expected that flooding would be exacerbated, potentially affecting people's access to trails and other resources that provide visual access. Flooding would also cause temporary changes to the visual environment. These changes are not anticipated to impact the long-term unity of the landscape and are considered less-than-significant.
- **Environmental Health (Section 4.11.2, 2022 Final EIS):** Under the No Action Alternative, there would be no construction- or operation-related impacts. There would be no changes to sediment quality. It is expected that the sediment inputs to the Capitol Lake Basin would remain as they are now, so the risk of reduced sediment quality is expected to be less-than-significant. Benthic organisms would continue to be affected by high sulfide concentrations.
- **Transportation (Section 4.12.2, 2022 Final EIS):** Under the No Action Alternative, the 5th Avenue Dam and 5th Avenue Bridge would be retained in their current configuration with limited repair and maintenance activities. In the last 30 years, the repair and maintenance activities have been limited to emergency or high-priority actions.
- **Public Services and Utilities (Section 4.13.2, 2022 Final EIS):** The No Action Alternative would not result in any operational impacts on public services. This alternative would not create additional recreation facilities or uses in the study area and would not attract additional visitors to the study area. As a result, it would not increase the demand for police services or other emergency responses, and there would be no impacts.

Under the No Action Alternative, there would be continued restrictions to recreational access to the water body. However, comparable access to no-fee open-space and recreational areas is in the general vicinity of Project area. Therefore, there would be **no disproportionate impacts** on communities of color or low-income populations that reside near Capitol Lake.

3.9 Cumulative Impacts

Cumulative impacts are effects that would result from the incremental addition of the proposed Project to the impacts from past, present, and reasonably foreseeable future actions. Cumulative impact can result from individually minor, but collectively significant, actions that occur over time. The purpose of cumulative impacts analysis is to make sure that decision-makers consider the full range of consequences for the proposed Project under expected future conditions.

This cumulative impacts analysis updates the analysis presented in Chapter 6.0 of the 2022 Final EIS, and was prepared in accordance with SEPA requirements (WAC 197-11-060) and also considered the federal Council on Environmental Quality approach for analyzing cumulative impacts.

The study area for cumulative impacts is based on the study areas for the resources analyzed in the 2022 Final EIS and this SEIS.

The future time frame for cumulative impacts considers actions that would have effects during the same time as effects of the proposed Project, which would primarily occur during construction. The 2022 Final EIS assumed construction of the proposed Project would begin in as early as 2028 and take up to 8 years to complete. Construction is still anticipated to begin as early as 2028 and take approximately 6 to 7 years to complete. The analysis considers approximate 30-year time horizon to the year 2064.

Current conditions are a result of past and present actions. The current conditions in the study area were used as the baseline existing environmental condition for the resource analyses in this SEIS, and are described as part of the affected environment for those resources. Therefore, past actions are not cumulatively considered again in this section for most sources. However, Tribes have noted that the resources in a particular study area may be part of a much larger integrated cultural network, and impacts can extend far beyond the study area in space and time. To analyze the full range of consequences of potential cumulative impacts to Tribal and cultural resources, some additional past and present actions are considered in this section.

3.9.1 Past, Present, and Future Actions for Cumulative Impact Analysis

The Deschutes Estuary has been connected to Native American Tribes since time immemorial for habitation and resource gathering. Over the past century and a half, urban development, shoreline modification, industrial and commercial uses, transportation infrastructure, and changes in water quality have progressively altered the basin and reduced the extent of native estuarine habitat available to support traditional Tribal resource use. The most substantial change occurred with construction of the 5th Avenue Dam in 1951, which blocked tidal exchange, converted the estuary into the freshwater impoundment known as Capitol Lake, and disrupted ecological processes that historically supported salmon, shellfish, and other culturally important resources. Subsequent management of the impounded water body, combined with continued regional development and habitat alteration, has contributed to long-term reductions in the availability, access, and ecological condition of resources important to Tribe's treaty-reserved rights, subsistence activities, and cultural practices.

Table 3.7 outlines the reasonably foreseeable future actions in the relevant geographic study areas and time frames, updated from Table 6.5.1 in the 2022 Final EIS. Only the actions that could impact resources considered in this SEIS were included in this analysis. The table notes the approximate location and status of these actions when such information was available. Note these other projects would be required to complete separate project-specific SEPA environmental reviews and permitting, as appropriate.

Table 3.7 Reasonably Foreseeable Future Actions

Project	Proponent	Location	Description	Schedule or Status	Contributing Activity (for cumulative impacts)
Olympia Sea Level Rise Collaborative Five-Year Work Plan	City of Olympia, Port of Olympia, LOTT Clean Water Alliance	Downtown Olympia, Capitol Lake/Heritage Park shoreline, Port peninsula, and West Bay	The Five-Year Workplan includes detailed actions to be implemented by the Olympia Sea Level Rise Response Plan (City of Olympia et al. 2025).	2026-2030 - includes projects started in 2025 which are projected to continue into later years	This plan could mitigate flooding and sea-level-rise impacts in the study area; individual implementation actions could contribute to local construction traffic.
Budd Inlet TMDL	Ecology	Budd Inlet marine waters and Deschutes River watershed including Capitol Lake	TMDL for dissolved oxygen in marine waters of Budd Inlet. Assigned allocations for all sources contributing toward dissolved oxygen depletion in Budd Inlet, including Capitol Lake.	EPA approved the final TMDL on December 16, 2022.	TMDL established under this plan is anticipated to result in positive outcomes for dissolved oxygen levels in Budd Inlet.
Deschutes River TMDL	City of Olympia	Various	Ongoing projects to address the TMDL include municipal stormwater retrofits, water quality treatment facilities, and tree planting.	Ongoing	Water quality improvements by individual projects.
Upper Deschutes River Restoration (Phases 2&3)	South Puget Sound Salmon Enhancement Group	Upstream of Capitol Lake	Installing large woody debris and stabilizing log jams across miles of stream channel, spanning river miles 31 to 41 (approximately 20 miles upstream of Capitol Lake)	2026-2027	Habitat improvements and potential to occur at the same time as Project construction.
Pioneer Park Riverbank Stabilization & Riparian Reforestation	City of Tumwater	Pioneer Park, Tumwater	In-water stabilization features along Deschutes River to reduce sediment loading	2026-2027	This Project could reduce fine sediment in Deschutes River.

Project	Proponent	Location	Description	Schedule or Status	Contributing Activity (for cumulative impacts)
Puget Sound Nutrient Reduction Project	Ecology	Entire Puget Sound	Collaborative effort with Puget Sound communities and stakeholders to address human sources of nutrients. Converted to a voluntary agreement in June 2025.	Implementation is ongoing. LOTT Clean Water Alliance independently completed a $30M biological-nutrient-removal upgrade in 2023.	This Project could reduce nutrients in the Deschutes River.
Deschutes Watershed Restoration and Enhancement Plan: WRIA 13 Deschutes Watershed	Ecology	Deschutes River watershed	The plan estimates the potential consumptive impacts of new permit-exempt domestic groundwater withdrawals on instream flows over 20 years (2018 to 2038) and identifies projects and actions to offset those impacts and provide a net ecological benefit to the watershed.	Implementation is ongoing.	Implementation of the plan is anticipated to result in habitat improvements by individual projects.
Tumwater Valley Regional Stormwater Facility	City of Tumwater Department of Public Works	Thurston County parcel #33870000300, adjacent to the Deschutes River, between Interstate 5 and the Tumwater Valley Municipal Golf Course	Convert approximately 4 acres of an existing wetland to a stormwater facility to provide water quality treatment to runoff before entering the Deschutes River. The system will treat approximately 100 acres of runoff.	Construction after 2027, pending funding acquisition.	Stormwater facility could improve water quality and decrease sediment entering the system. Could potentially contribute to local construction traffic during the time frame of Project construction.

Project	Proponent	Location	Description	Schedule or Status	Contributing Activity (for cumulative impacts)
Budd Inlet Contaminated Sediment Cleanup (Site ID 2245)	Port of Olympia	Inner Budd Inlet	Cleanup of contaminated sediments in inner Budd Inlet (including West Bay) from multiple industrial uses. A 2023 Amendment 2 substantially expanded the scope of required cleanup actions and directed preparation of an interim action plan.	Cleanup expected through approximately 2030.	Cleanup activities in West Bay could occur at the same time as 5th Ave Dam removal, channel dredging, and bank stabilization.
Solid Wood Inc (Site ID 4228)	City of Olympia	Inner Budd Inlet	Cleanup of contamination from past wood processing activities. Draft Interim Action Plan under review.	Interim Cleanup Action anticipated to start in 2027.	Cleanup activities could occur at the same time as Project.
Sites listed on Confirmed and Suspected Contaminated Sites List	Ecology	Capitol Lake, Inner Budd Inlet	Many sites are listed in the vicinity of the Project.	Sites on the Confirmed and Suspected Contaminated Sites List are in various stages; awaiting cleanup, cleanup started, or no further action.	Cleanup activities could occur at the same time as sediment removal.
West Bay Restoration & Park Master Plan	City of Olympia	West shoreline of West Bay within Budd Inlet; immediately north of the Capitol Lake dam	Master plan for West Bay habitat restoration, park, and trail features. Combining ecological restoration of the site's various ecosystems with a multiuse trail and increased passive recreation opportunities The park will expand from its current 4-acre developed area to an additional 13 acres of restored habitat and developed park on Budd Inlet.	In planning stage.	The Project could provide ecological improvements and recreation opportunities in the study area.

Project	Proponent	Location	Description	Schedule or Status	Contributing Activity (for cumulative impacts)
4th Avenue Infrastructure and Sewer Upgrades	City of Olympia	4th Avenue between the bridge and Water Street SW	Street repair and reconstruction project to extend the life of the roadway; includes sewer line upgrades.	Ongoing through early 2030s.	Potential to contribute to local construction traffic during time frame of Project construction.
West Bay Yards	West Bay Development Group, LLC	1210 West Bay Drive NW; west shoreline of West Bay (Budd Inlet), former Hardel Plywood facility	Mixed-use waterfront redevelopment with five buildings over a two-level parking structure: 478 residential units; cafes, restaurants, and other commercial/retail amenities (approximately 20,965 sq ft); and 823 parking stalls. Includes shoreline restoration (sand and gravel beach), an elevated public plaza, public access through and around the site, and a waterfront trail.	Application under City of Olympia review since 2021; SEPA DNS issued January 23, 2026; appeal pending Hearing Examiner hearing; Shoreline-restoration construction estimated 12–16 weeks once permitted.	Could contribute to local construction traffic and in-water/over-water work in West Bay that could occur at the same time as Project construction; shoreline restoration could provide ecological improvements and public access in the study area.
Capitol Way / Capitol Boulevard Improvements	City of Olympia	Capitol Way and Capitol Boulevard between Union Avenue (Olympia) and Carlyon Avenue (Tumwater)	Resurfacing and reconfiguration of the Capitol Way / Capitol Boulevard corridor from 4 lanes to 3 lanes, with improved facilities for walking, biking, transit, and driving per the City's 2021 Transportation Master Plan	Early scoping; design 2026; construction 2028–2030 pending funding.	Potentially contribute to local construction traffic during time frame of Project construction; could affect downtown traffic patterns and access to the Capitol Campus and Capitol Lake Basin.

Project	Proponent	Location	Description	Schedule or Status	Contributing Activity (for cumulative impacts)
Tumwater Craft District (anchor Market Building and phased buildout)	Craft District; City of Tumwater	Multi-structure development immediately south of the Old Olympia Brewery, Tumwater Brewery District	A three-story, approximately 30,000-square-foot anchor building housing Heritage Distilling Co. and the South Puget Sound Community College brewing/distilling program. Planned phased buildout includes a Market Building (multiple food, beverage, and retail vendors), additional brewery/cidery/winery space, restaurants, offices, and an approximately 2,000-person open-air amphitheater.	Initial Heritage Distilling/South Puget Sound Community College building and Market Building open, with phased buildout ongoing.	Could contribute to localized construction traffic in the vicinity of the proposed Project.

3.9.2 Cumulative Impacts by Resource

Consistent with the purpose of this SEIS, the cumulative impacts evaluation is limited to environmental resources for which the updated Project design would change the nature or extent of impacts disclosed in the 2022 Final EIS. For resources where the updated Project would not alter cumulative impact findings presented in the Final EIS, those analyses are not repeated, and the findings of the Final EIS remain valid.

3.9.2.1 Fish and Wildlife

Through compliance with approved in-water work windows, other permit conditions, and with implementation of the mitigation measures described in Section 3.1, there would be less-than-significant impacts on salmon and other anadromous fish from construction of the updated Project. Construction impacts would be short term and would vary depending on the project activity. Significant unavoidable long-term impacts to freshwater fish, Yuma myotis bats, and the Woodward Bay bat colony (little brown bats) would remain as described in the 2022 Final EIS.

Several reasonably foreseeable future actions include shoreline restoration, sediment remediation, or in-water work that could occur during the Project construction period. Although construction of some of these projects could overlap with Project construction, these projects would occur at different locations, would be regulated through similar permit requirements and BMPs, and would generally involve localized, temporary disturbances. Consequently, the combined effects would not be expected to substantially increase the magnitude, geographic extent, or duration of impacts beyond those described for the Project.

Many of the projects listed also have the potential to improve conditions for fish and wildlife that use estuarine ecosystems. As described in Section 6.6.3.2 of the 2022 Final EIS, implementation of the Deschutes River TMDL, Capitol Lake/Budd Inlet TMDL, and Puget Sound Nutrient Reduction projects is expected to reduce nutrient loading to study area water bodies, improve dissolved oxygen levels, and improve conditions for fish and other aquatic species. Restoration projects along the Deschutes River associated with the Watershed Restoration and Enhancement Program would improve and increase the amount of habitat available for fish and other aquatic species. Stormwater facility and retrofit projects would improve water quality in the Project area, improving aquatic habitat. Collectively, these actions are expected to improve habitat quality within the lower Deschutes River and Budd Inlet over the long term.

Overall, the impacts associated with the updated Project design, when combined with the impacts of the projects listed in Table 3.7, would not contribute to overall cumulative effects on fish and wildlife beyond those identified for the Project in the 2022 Final EIS.

3.9.2.2 Land Use, Shorelines, and Recreation

Significant unavoidable impacts described in the 2022 Final EIS would remain as a result of construction-related noise, vibration, and other disruptions. These impacts would be temporary and occurring intermittently throughout the day but would be disruptive at times to park and

trail users near Marathon Park and Heritage Park. With the reduced overall project construction duration, and the limited use of Heritage Park, the updated Project design would not contribute substantially to the construction-related impacts described in the 2022 Final EIS.

Construction of West Bay Yards, and other planned projects included in Table 3.7, would potentially occur at the same time as Project construction. If construction of any of those projects also disrupts recreational access, this could contribute to short-term impacts on recreational resources in the general area. Traffic congestion surrounding park areas could also increase as a result of the combined effect of detours, closures, and new traffic patterns.

The Interlocal Agreement formalizes maintenance dredging responsibilities in West Bay, including sediment monitoring, which was previously identified as a mitigation measure for long-term impacts in the 2022 Final EIS. With the Interlocal Agreement, long-term impacts within West Bay would be less-than-significant. All other long-term land use, shoreline, and recreational impacts remain less-than-significant.

The design updates evaluated in this SEIS would result in localized changes in property acquisition, but would not affect land use patterns, land use compatibility, or planned or future uses identified in the study areas. Modified recreational features at Heritage Park would provide equivalent recreational trails and other features and enhanced recreational opportunities at the new water access. Overall, the Project would continue to provide a range of recreational opportunities comparable to those analyzed in the 2022 Final EIS.

In summary, the updated Project, in combination with the activities described above, could contribute to cumulative impacts on land use, shorelines, and recreation when construction is underway. The updated Project design would not substantially change the Project's contribution to cumulative land use, shoreline, or recreation impacts identified in the 2022 Final EIS, and no new significant cumulative impacts are anticipated.

3.9.2.3 Visual Resources

The Project changes and refinements would contribute to the overall construction impacts described in the 2022 Final EIS, which were determined to be a significant unavoidable impact, and would introduce additional visual impacts at Heritage Park, along Deschutes Parkway SW, and across the basin itself through the temporary lake drawdown and creation of the in-basin containment areas.

Although several redevelopment projects are planned within Olympia and Tumwater, most would occur in developed urban settings and would not substantially overlap the temporary visual changes associated within the Project. If construction of West Bay Yards construction or contaminated sediment cleanup activities in West Bay were to occur at the same time as certain Project activities, such as 5th Avenue Dam demolition or channel dredging activities, viewers could experience multiple visible construction areas within the waterfront setting. The updated Project, in combination with the activities described above, could contribute to cumulative impacts on visual resources when construction is underway. Cumulative

construction-period visual impacts could therefore be significant during periods of overlapping construction.

Evaluation of the updated Project design indicates that although the Project would still change the visual character of the water body, long-term operational impacts on visual resources remain less-than-significant, consistent with the analysis presented for the Estuary Alternative in the 2022 Final EIS. The updated Project design would retain important views to and from the Capitol Campus and would establish a visually unified landscape.

Over the long term, the Project and other reasonably foreseeable actions would collectively change the visual character of the waterfront around the Capitol Lake Basin and West Bay. Other reasonably foreseeable actions, including West Bay Yards and implementation of the West Bay Restoration & Park Master Plan, would introduce additional development, shoreline restoration, public access, and recreational features along the West Bay waterfront. Future sea-level rise adaptation actions may also result in additional changes to shoreline areas, although the location and design of some future improvements are not sufficiently defined to evaluate their visual effects in detail. These actions would cumulatively contribute to the long-term evolution of the visual character of the waterfront. However, the updated Project would retain important views to and from the Capitol Campus and would establish a visually unified landscape. Consistent with the 2022 Final EIS, the updated Project design is not expected to make a considerable contribution to adverse long-term cumulative impacts on visual resources.

3.9.2.4 Transportation

The updated Project design would contribute to increased transportation impacts during the approximately 6- to 7-year construction duration. The extended Deschutes Parkway SW closure and detour during construction would increase travel time between the north and south ends of the lake, which would constitute a new significant and unavoidable impact. All other transportation impacts during construction were found to be less-than-significant with implementation of mitigation measures.

Several reasonably foreseeable projects could occur during the same period and affect portions of the transportation network used by Project construction traffic or traffic detoured during the Deschutes Parkway SW closure. These include the Capitol Way/Capitol Boulevard improvements; 4th Avenue infrastructure and sewer upgrades; West Bay Yards; and other planned roadway, utility, and development projects.

The potential for cumulative construction impacts would be greatest if other construction activities affect roadways used as detour routes during the Deschutes Parkway SW closure. Other construction projects could also generate truck traffic or temporary roadway restrictions on portions of the local transportation network. If these activities overlap, the combined effects could increase traffic congestion and travel delay beyond those associated with the Project alone. Coordination of construction schedules, detour routes, and traffic management among the Project, local jurisdictions, and other projects would reduce the potential for overlapping transportation impacts.

As described in the 2022 Final EIS, the Project and other reasonably foreseeable transportation improvements would alter circulation and multimodal connectivity in the study area. The new roundabout would provide a direct connection between Olympic Way NW and Deschutes Parkway SW that does not currently exist, and other planned improvements would modify nearby roadway, bicycle, pedestrian, and transit facilities. Since the 2022 Final EIS, future traffic modeling was performed that accounts for regional growth and potential changes to Capitol Way (refer to Section 3.4). This modeling indicates that the new roundabout would continue to operate at an acceptable LOS through 2045. Accordingly, the Project, in combination with reasonably foreseeable growth and transportation-system changes, is not expected to result in significant cumulative impacts to long-term roadway operations.

Maintenance dredging in West Bay would continue to have the potential to generate substantial truck traffic if dredged material is transported off-site by truck, as described in the 2022 Final EIS. Other transportation or development activities could occur concurrently with future maintenance dredging events and could add traffic to affected routes; however, the specific projects and transportation conditions that would coincide with individual dredging events over the approximately 30-year cumulative-effects horizon cannot be reliably predicted. The updated Project does not change the anticipated frequency or volume of maintenance dredging or its contribution to long-term transportation impacts.

Overall, the updated Project would contribute to temporary cumulative transportation impacts during periods of overlapping construction but is not expected to result in additional significant long-term cumulative transportation impacts beyond those associated with maintenance dredging identified in the 2022 Final EIS.

3.9.2.5 Air Quality

Because air quality and GHG impacts cannot be isolated from influences outside the Project (i.e., the effects of past, present, and reasonably foreseeable future actions), they inherently occur in the context of emissions from past, present, and reasonably foreseeable future actions. The updated Project and reasonably foreseeable future actions that require construction would temporarily generate air pollutant and GHG emissions from construction equipment, trucks, and other sources. Several reasonably foreseeable actions could overlap portions of the Project's approximately 6- to 7-year construction period, including contaminated sediment cleanup in Budd Inlet; West Bay Yards; roadway and utility improvements; and other development, cleanup activities, and restoration projects in Olympia and Tumwater.

Because detailed construction schedules, equipment fleets, and daily activity levels are unavailable for most reasonably foreseeable future actions, quantitative combined emissions cannot be reliably estimated. However, emissions from these projects would also be temporary, dispersed and regulated under applicable federal, state and local air quality requirements.

Project construction and operation emissions would not exceed the National Ambient Air Quality Standards, and mitigation measures and best practices would minimize air quality impacts, thus minimizing the Project's contribution to cumulative adverse effects on air quality. Accordingly, although the updated Project would contribute to cumulative construction-period emissions, it is not expected to make a considerable contribution to a significant adverse cumulative air quality impact.

Over the long term, periodic maintenance dredging in West Bay would generate air pollutant and GHG emissions from dredging equipment and transportation of dredged material. Other development, transportation, maintenance, and construction activities would also generate emissions within the study area over the approximately 30-year cumulative-effects horizon. However, the specific activities that would coincide with individual maintenance dredging events cannot be reliably predicted. Long-term Project air quality impacts associated with maintenance dredging and other operational activities would remain less-than-significant, consistent with the 2022 Final EIS.

Greenhouse gas emissions are cumulative in nature because their effects are associated with global atmospheric concentrations rather than localized emissions. The updated Project would contribute GHG emissions during construction and future maintenance dredging, and the restored estuary would also provide long-term carbon sequestration in vegetated brackish wetland habitat and would produce less methane than the existing lake. Although the Project would incrementally contribute to cumulative GHG emissions, the updated design does not change the long-term air quality impact conclusion presented in the 2022 Final EIS.

3.9.2.6 Cultural Resources

No new long-term adverse impacts to the historic built environment have been identified as part of the updated Project design. Significant unavoidable impacts remain related to removal of eligible historic built environment resources. Impacts from extreme tides and sea level rise are reduced with the addition of the Tumwater Brewery Berm.

The potential for construction impacts on cultural resources would generally be the same as described in the 2022 Final EIS. The Project has a potential to impact unrecorded archaeological resources in portions of the Project area where deep soil mixing would occur. Impacts remain less-than-significant unless unrecorded archaeological resources are encountered during construction in which case impacts would be potentially significant.

Historic built environment resources in the study area have been and could continue to be altered or removed as a result of redevelopment, infrastructure improvements, deterioration, and other activities. The Project's removal of three NRHP-eligible resources would contribute to the cumulative loss or alteration of historic built environment resources in the study area. Therefore, the Project, in combination with past, present, and reasonably foreseeable future actions, would contribute to cumulative effects on historic built environment resources. Except for areas where deep soil mixing would occur, Project-related ground disturbance is confined to modern fill or recently accumulated sediment and therefore has low potential for encountering

intact precontact archaeological resources. In the study area, past and ongoing development and natural elements have reduced the information potential and cultural value of prehistoric- and ethnographic-period cultural resources. Significant, undocumented, buried archaeological materials may be present in the area that could be damaged or destroyed by grading or excavation associated with reasonably foreseeable actions. However, given the limited potential for the Project to impact unrecorded archaeological resources, Project-related activities are not expected to make a considerable contribution to cumulative effects on important undocumented cultural resources. Monitoring during Project excavation in certain areas may be considered in coordination with the Squaxin Island Tribe.

The updated Project, in combination with the activities described above, could contribute to cumulative impacts on cultural resources.

3.9.2.7 Tribal Resources

For the purposes of this SEIS, Tribal resources refers to the collective rights and access to traditional areas and times for gathering resources associated with a Tribe's time immemorial stewardship, sovereignty, or formally protected reserved treaty rights. Further details on Tribal resources can be found in Section 3.7.

Potential long-term impacts on Tribal resources would be limited to temporary restrictions on access to fishing areas during maintenance dredging events in West Bay and are considered less-than-significant. Maintenance dredging would not result in permanent adverse impacts to Tribe members' access to traditional hunting, fishing, or gathering areas or impact a species of Tribal importance. With compliance with in-water work timing restrictions, adherence to applicable permit conditions, and fish transport techniques designed to minimize potential impacts to salmon, construction impacts on Tribal resources are also expected to be less-than-significant.

To analyze the full range of consequences of potential cumulative impacts to Tribal rights, interests, and resources, as well as cultural resources, some additional past and present actions were considered in this analysis. The Tribes and their resources have been repeatedly impacted by past actions.

Prior to Euro-American settlement, the Capitol Lake Basin was the Deschutes Estuary, a highly productive tidal ecosystem that supported the Squaxin Island Tribe's subsistence, cultural, and spiritual practices. The estuary and surrounding shoreline provided access to salmon, shellfish, waterfowl, and other fish and wildlife resources. The Steh-Chass village, located near present-day downtown Olympia, served as an important place for habitation, trade, fishing, and cultural gatherings. Tribal traditions, including salmon harvest and associated ceremonial practices, were closely tied to the estuary's ecological functions and seasonal abundance.

Over the past century and a half, urban development, shoreline modification, industrial and commercial uses, transportation infrastructure, and changes in water quality have progressively altered the basin and reduced the extent of native estuarine habitat available to support

traditional Tribal resource use. The most substantial change occurred with construction of the 5th Avenue Dam in 1951, which blocked tidal exchange, converted the estuary into the freshwater impoundment today known as Capitol Lake, and disrupted ecological processes that historically supported salmon, shellfish, and other culturally important resources. Subsequent management of the impounded water body, combined with continued regional development and habitat alteration, has contributed to long-term reductions in the availability, access, and ecological condition of resources important to the Squaxin Island Tribe's treaty-reserved rights, subsistence activities, and cultural practices.

As described in Section 3.7, removal of the dam and conversion back to an estuary environment would benefit Tribal resources by improving habitat and the abundance of species of importance and by improving access to U&A areas and areas of cultural and spiritual significance to Tribes.

Contributing activities and cumulative impacts discussed in Sections 3.9.2.1 through 3.9.2.6 for impacts on various natural and built environment resources may contribute to cumulative impacts on Tribal resources.

Mitigation associated with potential impacts on Tribal resources could be addressed directly with federally recognized Tribes during government-to-government consultations as part of the permitting, regulatory, and consultation processes. The updated Project, in combination with the activities described above, would contribute to cumulative impacts to Tribal resources.

3.9.2.8 Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

As described in Section 3.8, disproportionate and adverse transportation impacts on communities of color and low-income populations could occur during Project construction as a result of traffic detours and changes in transit access. If maintenance dredging material requires truck transport, recurring dredging events could also result in disproportionate and adverse transportation, air quality, and noise impacts on low-income populations along affected haul routes.

Several reasonably foreseeable future actions could involve construction activities during portions of the Project construction period. Where construction traffic associated with these actions uses the same roadways or affects the same communities as Project construction traffic and detours, these activities could temporarily add to traffic congestion, access limitations, noise, and other transportation-related burdens. In particular, projects in and around downtown Olympia and West Bay could overlap with portions of Project construction and affect some of the same transportation network.

Over the long term, maintenance dredging would occur intermittently, at approximately 6-year intervals. Whether other reasonably foreseeable activities would occur in the same

locations and at the same time as individual maintenance dredging events cannot be predicted. If such activities generate substantial truck traffic or other similar effects during a maintenance dredging event, they could add to transportation, air quality, and noise burdens experienced by low-income populations along affected haul routes.

Accordingly, the updated Project, in combination with reasonably foreseeable future actions, could contribute to cumulative impacts that are disproportionately experienced by communities of color and low-income populations during periods of overlapping construction activity or maintenance dredging.

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5.0 Distribution List

The following parties were notified of availability of the Draft SEIS.

Federal:

- National Marine Fisheries Service
- U.S. Senators Patty Murray and Maria Cantwell
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- U.S. Representative Marilyn Strickland (10th Congressional District)

Tribes:

- Confederated Tribes of the Chehalis Reservation
- Nisqually Indian Tribe
- Squaxin Island Tribe

Washington State Government:

- Capitol Campus Design Advisory Committee
- Capitol Campus tenants
- Department of Agriculture
- Department of Archaeology and Historic Preservation
- Department of Children, Youth, and Families
- Department of Commerce
- Department of Corrections
- Department of Fish and Wildlife
- Department of Health
- Department of Labor & Industries
- Department of Licensing
- Department of Natural Resources
- Department of Social and Health Services
- Department of Transportation
- Employment Security Department
- Governor's Office of Indian Affairs
- Office of Financial Management
- Office of the Attorney General
- Office of the Governor
- Office of the Insurance Commissioner
- Office of the Lieutenant Governor
- Office of the Superintendent of Public Instruction
- Parks and Recreation Commission
- Puget Sound Partnership
- Recreation and Conservation Office (Invasive Species Council)
- Secretary of State
- State Auditor's Office
- State Capitol Committee
- State Supreme Court
- State Treasurer
- Utilities and Transportation Commission
- Washington State Legislature
- Washington State Patrol
- Washington Technology Solutions

Local and Regional:

- City of Lacey
- City of Olympia
- City of Tumwater
- LOTT Clean Water Alliance
- Olympic Region Clean Air Agency (ORCAA)
- Port of Olympia
- Thurston County
- Thurston Regional Planning Council

Community and Organizations:

- Alliance for a Healthy South Sound
- Association of Washington Businesses
- Bats About Our Town
- Capital Lakefair
- Capitol Campus facility planners
- Capitol Lake Improvement and Protection Association
- Capitol Land Trust
- Cascadia Research
- Chambers of Commerce for Olympia, Thurston, Tumwater, Lacey
- Deschutes Estuary Lake Idea
- Deschutes Estuary Restoration Team
- Dragon Boat Association
- Ducks Unlimited
- Eastside Neighborhood Association
- Experience Olympia & Beyond
- Fiddlehead Marina
- Friends of Deschutes Estuary
- Friends of Seattle's Olmsted Parks
- Friends of the Waterfront
- Martin Marina
- Nisqually River Foundation
- North Capitol Campus Heritage Park Development Association
- Northwest Climate Adaptation Science Center
- Olympia Council of Neighborhood Associations
- Olympia Downtown Alliance
- Olympia Wooden Boat Association
- Olympia Yacht Club
- One Tree Island Marina
- Potentially affected property owners and parties who commented on the 2022 Final EIS and provided mailing addresses
- Recreational Boating Association of Washington
- South Capitol Neighborhood Association
- South Puget Sound Salmon Enhancement Group
- South Sound Bird Alliance
- South Sound Estuary Association
- South Sound Group of Sierra Clubs
- Southwest Olympia Neighborhood Association
- The National Association for Olmstead Parks
- Thurston Conservation District
- Thurston County Chamber of Commerce
- Thurston County League of Women Voters
- Thurston Economic Development Council
- Trout Unlimited
- University of Washington Climate Impacts Group
- Upper Eastside Neighborhood Association
- Washington Environmental Council

Other Distribution:

- Ecology's SEPA Register
- Ecology and DES email distribution lists for the Project
- Published legal notices and public and media notifications
- Ecology's website

The following locations received copies of the SEIS for public access and review:

Lacey Timberland Library
500 College St SE, Lacey, WA 98503
360-491-3860

Olympia Timberland Library
313 8th Avenue SE, Olympia, WA, 98501
360-352-0595

Tumwater Timberland Library
7023 New Market Street, Tumwater, WA, 98501
360-943-7790

Washington State Library
6880 Capitol Blvd SE, Tumwater, WA 98501
360-704-5200

West Olympia Timberland Library
625 Black Lake Blvd SW, Olympia, WA 98502
360-764-4440

Washington Department of Ecology
300 Desmond Drive SE, Lacey WA 98503
360-407-6000

Appendix A
Air Emissions Factors and Parameters

Updated SEIS Construction Emissions

Pollutant	Project Emissions (tpy)	General Conformity De Minimis Thresholds (tpy)	Greater than *De Minimis* ?
CO	17.06	100	No
NOx	84.37	100	No
VOC	1.11	100	No
SO_2	0.04	100	No
PM_{10}	1.43	100	No
$PM_{2.5}$	1.39	100	No

Greehouse Gas	Project Emissions (metric tons)	Global Warming Potential (AR6)
CO_2	16783.2	1
CH_4	0.22	29.8
N_2O	0.98	273
CO_2e	17,057	

Notes: Assumes global warming potential values taken from IPCC AR6 -- CO2 value of 1, CH4 value of 29.8, and a N2O value of 273. These GWPs represent an updated from the original EIS. GWPs provide for a method of unifying how GHG emissions are quantified across numerous greenhouse gases and provide a CO2 equivalent value. Note updated calcualtions assume 907,185 grams per metric tonne.

Original EIS Construction Emissions - Estuary Alternative

Pollutant	Project Emissions (tpy)	General Conformity De Minimis Thresholds (tpy)	Greater than *De Minimis* ?
CO	17.73	100	No
NOx	84.74	100	No
VOC	1.17	100	No
SO_2	0.05	100	No
PM_{10}	1.51	100	No
$PM_{2.5}$	1.43	100	No

Greehouse Gas	Project Emissions (metric tons)	Global Warming Potential (AR4)
CO_2	17109.0	1
CH_4	0.19	25
N_2O	0.71	298
CO_2e	17,324	

Notes: Assumes global warming potential values taken from IPCC AR -- CO2 value of 1, CH4 value of 25, and a N2O value of 298. These GWPs represent the values used at the time of the original EIS. GWPs provide for a method of unifying how GHG emissions are quantified across numerous greenhouse gases and provide a CO2 equivalent value. The original calculations assumed 907,000 grams per metric tonne.

Comparison of Onroad Emission Factors Between the 2022 EIS and the SEIS

Vehicle Type	Pollutant	EIS Emission Factors (g/mi)	Updated Emission Factors (g/mi)	Percentage of EIS Efs (Update/EIS)
Light Commercial Truck	CO	2.061	0.595	29%
	NOx	1.090	0.438	40%
	SO2	0.005	0.001	18%
	VOC	0.183	0.068	37%
	PM10	0.089	0.015	17%
	PM25	0.056	0.014	25%
	CO2	551.084	247.710	45%
	CH4	0.021	0.014	66%
	N2O	0.002	0.028	1810%
Single Unit Short-haul Truck	CO	0.891	0.511	57%
	NOx	2.496	0.644	26%
	SO2	0.009	0.001	16%
	VOC	0.255	0.091	36%
	PM10	0.258	0.013	5%
	PM25	0.124	0.012	10%
	CO2	1025.014	418.515	41%
	CH4	0.050	0.037	74%
	N2O	0.002	0.057	2452%
Combination Short-haul Truck	CO	0.827	0.888	107%
	NOx	3.695	1.424	39%
	SO2	0.014	0.003	19%
	VOC	0.196	0.060	30%
	PM10	0.236	0.013	6%
	PM25	0.125	0.012	10%
	CO2	785.270	785.270	100%
	CH4	0.042	0.012	28%
	N2O	0.002	0.111	5788%

Note: The updated emission factors were develoepd using MOVES5, with a focus on Thurston County fleets.

Comparison of Onroad NOx Emissions between the 2022 EIS and the SEIS Using Updated Emission Factors

Equipment	Vehcile Type	EIS Hours	EIS Miles	Updated Miles	EIS NOx Emissions (tons)	Updated NOx Emissions (tons)	Percent Change
On Hwy Flatbed Truck 20K	Single Unit Short-haul Truck	500	30,000	57,417	0.083	0.041	49%
LD Truck 4x2 1.75t	Light Commercial Truck	250	15,000	28,709	0.018	0.014	77%
LD Truck 4x2 1t	Light Commercial Truck	64,097	3,845,820	7,360,546	4.622	3.552	77%
LD Truck 4x4 1.75t	Light Commercial Truck	698	41,860	80,115	0.050	0.039	77%
LD Truck 4x4 Crw 1.75t	Light Commercial Truck	4,582	274,940	526,209	0.330	0.254	77%
On Hwy End Dump 10-12cy	Single Unit Short-haul Truck	4,719	283,119	541,864	0.779	0.385	49%
On Hwy Truck 70K	Combination Short-haul Truck	1,582	94,924	181,675	0.387	0.285	74%
On Hwy Water Tanker 4K gal	Single Unit Short-haul Truck	313	18,785	35,952	0.052	0.026	49%
On Hwy Water Tanker 2.5K gal	Single Unit Short-haul Truck	70	4,200	8,038	0.012	0.006	49%
Dump Truck, 12 C.Y., 400 H.P.	Single Unit Short-haul Truck	34	2,069	3,959	0.006	0.003	49%

SEIS Total Onroad Mileage
8,824,486

Notes: The Updated mileage is based on total mileage of 8,824,486 across the full project lifetime. These miles were allocated to the different equipment types using the same allocation as the original EIS.

Onroad Emission Calculations from 2022 EIS

Equipment	Vehicle Type	EIS Miles	Updated Miles	EIS Emissions: CO	EIS Emissions: NOx	EIS Emissions: VOC	EIS Emissions: SO2	EIS Emissions: PM10	EIS Emissions: PM25	EIS GHG Emissions: CO2	EIS GHG Emissions: CH4	EIS GHG Emissions: N2O
On Hwy Flatbed Truck 20K	Single Unit Short-haul Truck	30,000	57,417	0.03	0.08	0.01	0.0003	0.009	0.004	33.90	0.0017	0.0001
LD Truck 4x2 1.75t	Light Commercial Truck	15,000	28,709	0.03	0.02	0.00	0.00008	0.0015	0.0009	9.11	0.0004	0.0000
LD Truck 4x2 1t	Light Commercial Truck	3,845,820	7,360,546	8.74	4.62	0.78	0.02	0.378	0.236	2336.21	0.0905	0.0066
LD Truck 4x4 1.75t	Light Commercial Truck	41,860	80,115	0.10	0.05	0.01	0.0002	0.004	0.003	25.43	0.0010	0.0001
LD Truck 4x4 Crw 1.75t	Light Commercial Truck	274,940	526,209	0.62	0.33	0.06	0.0014	0.027	0.017	167.02	0.0065	0.0005
On Hwy End Dump 10-12cy	Single Unit Short-haul Truck	283,119	541,864	0.28	0.78	0.08	0.0027	0.081	0.039	319.89	0.0157	0.0007
On Hwy Truck 70K	Combination Short-haul Truck	94,924	181,675	0.09	0.39	0.02	0.0014	0.025	0.013	82.17	0.0044	0.0002
On Hwy Water Tanker 4K gal	Single Unit Short-haul Truck	18,785	35,952	0.02	0.05	0.0053	0.0002	0.005	0.0026	21.22	0.0010	0.0000
On Hwy Water Tanker 2.5K gal	Single Unit Short-haul Truck	4,200	8,038	0.004	0.01	0.0012	0.00004	0.0012	0.0006	4.75	0.0002	0.0000
Dump Truck, 12 C.Y., 400 H.P.	Single Unit Short-haul Truck	2,069	3,959	0.002	0.006	0.0006	0.00002	0.0006	0.0003	2.34	0.0001	0.0000

Note: The Updated mileage is based on total mileage of 8,824,486 across the full project lifetime. These miles were allocated to the different equipment types using the same allocation as the original EIS.
Emissions are presented in tons.

Onroad Emission Calculations Using Updated Emission Factors and Activity for SEIS

Equipment	Vehicle Type	EIS Miles	Updated Miles	Updated Emissions: CO	Updated Emissions: NOx	Updated Emissions: VOC	Updated Emissions: SO2	Updated Emissions: PM10	Updated Emissions: PM25	Updated GHG Emissions: CO2	Updated GHG Emissions: CH4	Updated GHG Emissions: N2O
On Hwy Flatbed Truck 20K	Single Unit Short-haul Truck	30,000	57,417	0.03	0.04	0.01	0.0001	0.001	0.001	26.49	0.0024	0.0036
LD Truck 4x2 1.75t	Light Commercial Truck	15,000	28,709	0.02	0.01	0.00	0.00003	0.0005	0.0004	7.84	0.0004	0.0009
LD Truck 4x2 1t	Light Commercial Truck	3,845,820	7,360,546	4.82	3.55	0.56	0.01	0.124	0.114	2009.82	0.1149	0.2274
LD Truck 4x4 1.75t	Light Commercial Truck	41,860	80,115	0.05	0.04	0.01	0.0001	0.001	0.001	21.88	0.0013	0.0025
LD Truck 4x4 Crw 1.75t	Light Commercial Truck	274,940	526,209	0.34	0.25	0.04	0.0005	0.009	0.008	143.68	0.0082	0.0163
On Hwy End Dump 10-12cy	Single Unit Short-haul Truck	283,119	541,864	0.31	0.38	0.05	0.0008	0.008	0.007	249.98	0.0222	0.0339
On Hwy Truck 70K	Combination Short-haul Truck	94,924	181,675	0.18	0.29	0.01	0.0005	0.003	0.002	157.26	0.0024	0.0222
On Hwy Water Tanker 4K gal	Single Unit Short-haul Truck	18,785	35,952	0.02	0.03	0.0036	0.0001	0.001	0.0005	16.59	0.0015	0.0023
On Hwy Water Tanker 2.5K gal	Single Unit Short-haul Truck	4,200	8,038	0.005	0.01	0.0008	0.00001	0.0001	0.0001	3.71	0.0003	0.0005
Dump Truck, 12 C.Y., 400 H.P.	Single Unit Short-haul Truck	2,069	3,959	0.002	0.003	0.0004	0.00001	0.0001	0.0001	1.83	0.0002	0.0002

Note: The Updated mileage is based on total mileage of 8,824,486 across the full project lifetime. These miles were allocated to the different equipment types using the same allocation as the original EIS.
Emissions are presented in tons.

Table 5.7 SEIS Construction-related Updates to Overall GHGs

Project Emissions by Disposal Scenario	Components	CO_2	CH_4	N_2O	Lifespan Emissions	Annual Emissions
Upland Disposal	Construction	16,783	6.68	267	49,650	1,655
	Operation	32,418	29.42	145		
In-Water Disposal	Construction	16,783	6.68	267	25,968	866
	Operation	8,782	0.96	128		

Table 5.7 2022 EIS Overall GHGs

Project Emissions by Disposal Scenario	Components	CO_2	CH_4	N_2O	Lifespan Emissions	Annual Emissions
Upland Disposal	Construction	17,190	4.87	210.14	49,998	1,667
	Operation	32,418	29.42	145		
In-Water Disposal	Construction	17,190	4.87	210.14	26,316	877
	Operation	8,782	0.96	128		