7.0 Planning-Level Costs, Funding Approach, & Other Considerations

Planning-level costs were developed to evaluate economic sustainability and feasibility of the long-term management alternatives, which are key components of the project purpose and a consideration in the process to identify a preferred alternative. This chapter outlines the funding and governance strategy developed in coordination with the Funding and Governance Work Group, and other topics that are important to the decision-making process that are not otherwise captured in the technical analyses, but were identified during development of this Environmental Impact Statement (EIS).

7.1 WHAT IMPORTANT FACTORS ARE ASSUMED IN THE PLANNING-LEVEL COSTS?

The planning-level costs were developed by civil, environmental, and coastal engineers on the EIS Project Team and are considered a Class 4 estimate, by standards established by the Association for the Advancement of Cost Engineering based on the preliminary nature of the design elements in the EIS process. They reflect an accuracy variation of - (minus) 25% and + (plus) 35%. The planning-level costs include estimates for:

1. Design, permitting, and construction; and,
2. Maintenance dredging after construction (estimated for 30-years, consistent with the project time horizon).

In the Draft EIS, the planning-level cost estimates included a 3.5% annual escalation. In the Final EIS, escalation has been removed from the planning-level cost estimates given the impact that the COVID-19 pandemic has had on inflation and the associated uncertainty in escalating costs into the future. Removing escalation from the planning-level cost estimates allows for a more straight-forward analysis and

acknowledges that escalated cost-estimates would not be accurate given the continued uncertainty. The Funding and Governance Work Group also requested that planning-level cost estimates be reported in 2022 dollars to better support current budgetary planning, which is also done in 2022 dollars.

7.1.1 Design and Permitting

Costs for design and permitting are those required to advance conceptual design to a final design package. This includes all elements of a complete design (e.g., dredge design, design of the temporary coffercells to construct habitat areas, habitat areas and planting plans, boardwalks), site investigation (e.g., geotechnical explorations, detailed survey of existing features and utilities/outfalls, condition assessments of existing structures), and the associated specifications that will be required to construct and deliver the project in the next phase. Costs in this phase also include the effort to prepare comprehensive permit applications, coordinate with the governmental and agency partners with jurisdiction, and obtain the suite of environmental permits that will be required for construction and long-term management.

Costs for design and permitting are estimated at 10% to 12% of estimated construction costs. They are included in the estimated construction costs provided in Table 7.1.1.

Design and permitting would occur over an approximately 3- to 5-year duration and would begin as early as mid-**2023** contingent on funding. During the design and permitting phase, construction costs for the selected alternative would be refined, as design progressed.

7.1.2 Project Construction

Planning-level cost estimates for construction were developed based on costs to construct the primary elements of each alternative, including dredging, habitat areas, work at the 5th Avenue Dam (as needed for each alternative), and installation of the boardwalks, etc.

Across all action alternatives, sediment management is the project component with the greatest influence on the planning-level construction costs. Sediment dredged during construction will be entirely or mostly reused within the Project Area to create wetland and shoreline habitat. This beneficial reuse avoids construction costs associated with hauling the material off-site and disposing of it upland.

Construction could begin as early as **2026**, if design and permitting are completed in 3 years and if construction funding is obtained during the

design and permitting process such that there is no delay between project phases. If only partial funding has been obtained, Enterprise Services would evaluate whether phased construction could begin with discrete project elements while the remaining funding is pursued.

A construction duration of up to 8-years has been estimated for the action alternatives, at this conceptual design level. The contractor would identify opportunities to compress the schedule, as appropriate, which can also result in reduced construction costs.

7.1.3 Sediment Management for 30 Years after Construction

Planning-level estimates for sediment management (i.e., maintenance dredging) were estimated over the 30-year project time horizon, beginning after construction (approximately **2040** or later). Given the numerical modeling that was conducted for the EIS, the costs of recurring maintenance dredging can be estimated and represent the largest long-term maintenance cost. The long-term costs provided in Table 7.1.1 do not include other anticipated maintenance responsibilities, such as conditions within the alternative-specific adaptive management plans, habitat enhancement plans, or other operations and maintenance associated with restored recreation. Those requirements will be better understood during the design and permitting phase and can be estimated at that time.

It is assumed that the sediment removed during maintenance dredging in the Estuary and Hybrid Alternatives would be disposed at an allowable in-water location within the Puget Sound. This assumption is based on the suitable chemical quality of the Deschutes River sediment, which was sampled as part of the EIS analysis to get a representative understanding of sediment quality. The Deschutes River sediment would be naturally deposited in West Bay under the Estuary and Hybrid Alternatives and removed during recurring dredge events to avoid significant impacts to navigation and to maintain a working waterfront and recreational boating. Because sediment dredged under the Estuary and Hybrid Alternatives would be in a saltwater environment, there is low potential for freshwater aquatic invasive species persistence in deeper waters where dredging would occur. To evaluate the validity of this assumption, a survey was conducted for the Final EIS to determine whether New Zealand mudsnails have established in Budd Inlet, given their transport through the 5th Avenue Dam during high flow events. No New Zealand mudsnails were found during this survey. See the Aquatic Invasive Species Discipline Report (Attachment 8) for additional analysis and rationale that support the assumption that in-water disposal of

When would maintenance dredging begin?

For the Estuary and Hybrid Alternatives, maintenance dredging would begin approximately 5 to 6 years after construction is complete, which is not expected to be earlier than approximately 2040. For the Managed Lake Alternative, maintenance dredging would begin approximately 20 years after construction is complete, around 2050. See Chapter 2.0 (Section 2.5.1, Maintenance Dredging) for details.

dredged material from the Estuary and Hybrid Alternatives would not pose a risk relative to spreading invasive species.

Before future dredge events, sampling for chemical quality and invasive species would occur, in coordination with the DMMP, to confirm suitability of the dredged material for in-water disposal. Because there is inherent uncertainty in the composition of future dredged material, planning-level cost estimates are provided for both in-water and upland disposal, and both of these disposal options may be used during future dredge events.

Upland disposal is the only currently feasible disposal option for material dredged under the Managed Lake Alternative because invasive species are expected to persist in the freshwater environment, at high densities similar to existing conditions.

The planning-level costs associated with upland disposal assume transport to the upland site by truck, rather than by rail. However, transport by rail is not precluded. The feasibility of rail transport from the maintenance dredging events would depend on a number of factors, including equipment availability and whether or not the upland disposal location is adequately served by rail. Additionally, transport by rail requires a significant amount of land for temporary storage where dredged material would be placed and then loaded onto rail cars as they are available. Given that maintenance dredging would not occur for several decades, the availability of nearby suitable land could not be assumed, and neither could equipment availability or rail access. Transport by rail would be reevaluated in the future prior to maintenance dredging, where upland disposal is assumed, because it could reduce the estimated costs of sediment transport for disposal.

Sediment management is not the only cost associated with long-term maintenance, but it would account for the majority spending over a 30-year period after construction. Estimating it allows decision-makers to focus on the biggest cost differentiator between the long-term management alternatives.

Can sediment from the Managed Lake Alternative be disposed of in-water?

Existing environmental conditions and environmental regulations prohibit sediment from the Managed Lake Alternative from being disposed of in-water disposal due to the presence of the New Zealand mudsnail.

In response to comments received on the Draft EIS, cost estimates have been developed for in-water disposal of sediment dredged under the Managed Lake Alternative. Environmental conditions and/or environmental regulations would have to change for the sediment to be considered suitable for in-water disposal. Dredging would not occur sooner than the 2050s under the Managed Lake Alternative, and conditions could change in that time, although there is no current indication of changes in that direction.

7.1.4 Planning-Level Costs

The planning-level cost estimates presented in Table 7.1.1 have been developed based on the conceptual design components for the project alternatives (Chapter 2.0, Project Alternatives & Construction Approach). The accuracy of these construction and maintenance dredging estimates will increase as design is advanced further. **These planning-level cost estimates are shown in 2022 dollars.**

Table 7.1.1 Planning-Level Cost Estimates for the Project Alternatives (shown in 2022 dollars)

Project Alternative	Design, Permitting, & Construction Costs [1] *Design & Permitting: 2023 to 2026–28* *Construction: Starting no sooner than ~2026*	Maintenance Dredging Costs for 30 Years after Construction [2] *Starting no sooner than ~2040*	Total Costs of Construction + 30 Years Maintenance Dredging	Funding Source for Construction & Maintenance, per Funding and Governance Work Group Recommendation	Impact if There is a Funding Lapse after Construction	Potential Significant Additional Costs Not Associated with Construction or Maintenance Dredging
No Action	$0	$11–$19M [3]	$11–$19M	Construction: Not applicable Maintenance Dredging: USACE, Port of Olympia, and local marinas	Not applicable	Ongoing repairs and future replacement of the 5th Avenue Dam, if permits could be obtained. LOTT would need to invest in additional water quality treatment sooner to meet TMDL allocations provided by Ecology. Continued overland flooding events and associated costs to the City of Olympia, Port of Olympia, and other entities. These costs would be most significant under the No Action and Managed Lake Alternatives. Continued costs to address tribal impacts and ongoing costs from continued loss of ecosystem goods and services.
Managed Lake	$76–$136M	$141–$254M [4]	$217–$390M	Construction: State of Washington Maintenance Dredging: State of Washington	Reduced recreational opportunities in the North Basin; over many years, Capitol Lake would look similar to today meaning that the construction investment was not protected	Same as the No Action Alternative, but comparatively reduced long-term costs associated with the 5th Avenue Dam. Potential significant costs to compensate for tribal and ecological impacts.
Estuary	$137–$247M	$29–$52M [5]	$166–$299M [6]	Construction: State of Washington Maintenance Dredging: Shared funding provided by Funding and Governance Work Group members*	Impacts to navigation, working waterfront, and recreational boating in West Bay [7]	Flooding impacts and associated costs under the Estuary Alternative would be less significant than those under the No Action and Managed Lake Alternatives, and could be mitigated by actions included in the Olympia Sea Level Rise Response Plan.
Hybrid	$178–$320M	$43–$78M [5]	$221–$398M [8]	Construction: State of Washington Maintenance Dredging: unknown	Same as Estuary Alternative [9]	Same as Estuary Alternative, but reduced costs given the flood protection provided by the reflecting pool barrier wall.

Notes for Table 7.1.1 are provided on the following page.

* Through 2050, for increased maintenance dredging requirements above the No Action Alternative.

Notes for Table 7.1.1:

1 Potential additional costs associated with permit conditions for project construction have not been estimated at this time because they cannot be predicted with certainty. The planning-level cost estimates do not include potential costs associated with compensatory mitigation to offset potential temporary or permanent impacts to wetlands, fish, or other ecological functions. This could be required if the regulatory agencies do not consider the project benefits to outweigh the potential impacts (if the project is not considered "self-mitigating").

2 Costs for the adaptive management plans, habitat enhancement plans, and other operations and maintenance activities would be estimated during design and permitting once those requirements are better understood. Those long-term management costs are not included herein. The maintenance dredging cost estimates represent the largest long-term maintenance cost and help to differentiate the project alternatives.

3 This represents the estimated non-project costs associated with dredging-impacted areas of West Bay based on sedimentation rates and patterns modeled for the No Action Alternative, to maintain minimum depths for navigation and to meet the requirements of DNR leases with the private marinas. These costs assume that the Port of Olympia has remediated known contaminated sediment in West Bay and authorized depths have been reestablished in navigational areas during that effort. That dredging of contaminated accumulated sediment is not associated with this project, and those costs are not included in the $11 to $19M. The planned Port of Olympia-led dredging of contaminated sediments is also expected to enable the future dredged material to be disposed of in-water. Funding to dredge the volume of sediment consistent with the No Action Alternative would be the responsibility of the Port of Olympia, private marinas, and the USACE (USACE funding is subject to congressional approval).

4 Under the Managed Lake Alternative, project-related dredging would occur within the North Basin. That sediment is expected to be disposed of upland. This total cost reflects the assumed upland disposal, with truck transport. Rail transport could reduce costs from what is shown here, and feasibility of rail transport would be evaluated prior to maintenance dredging. It is possible for a small portion of the dredged material to be beneficially reused within the Capitol Lake Basin, if needed to replenish the habitat areas in the Middle Basin. In-water disposal, which is often a lower cost option compared to upland disposal, is currently prohibited due to the presence of the invasive New Zealand mudsnail. If environmental conditions or environmental regulations change in a way that would allow in-water disposal of the dredged sediment, the costs would be reduced to approximately $56 to $100M. Separately, non-project dredging paid for by separate entities would still be required in West Bay, consistent with the dredging costs that are estimated for the No Action Alternative.

5 These costs reflect the additional maintenance dredging costs beyond dredging costs that would be incurred under the No Action Alternative ($11 to $19M over 30 years) to avoid significant impacts to navigation, and to maintain a working waterfront and recreational boating in West Bay. As described in note 3 above, funding to dredge the volume of sediment consistent with the No Action Alternative would be the responsibility of the Port of Olympia, private marinas, and the USACE. Approximately 37% of the estimated costs for maintenance dredging would be to remove accumulated sediment from the FNC and Turning Basin, and that is the responsibility of the USACE. Therefore, it is assumed that 37% of these total maintenance dredging costs would be paid by USACE; these funds are subject to congressional approval. The additional/increased dredging requirements resulting from the Estuary Alternative would be jointly funded by members of the Funding and Governance Work Group, through 2050, and USACE.

6 Maintenance dredging costs over 30 years for the Estuary Alternative would increase to $157M to $283M if dredged material was determined not suitable for in-water disposal. However, based on findings in the EIS, the sediment is expected to be suitable for in-water disposal.

7 Sediment deposition would increase at the Olympia Yacht Club by approximately 4.5 inches per year, compared to the approximately 1.7 inches per year of sediment that would deposit under the No Action Alternative. If maintenance dredging was not conducted, access impacts are estimated at 10% of leased moorage in 6 years post-construction, 20% in 12 years, 30% in 18 years, 40% in 24 years, and 50% in 30 years. At the other private marinas, sediment deposition would increase by approximately 2.4 inches per year, compared to the approximately 0.8 inch per year of sediment that deposits under the No Action Alternative. If maintenance dredging was not conducted, access impacts are estimated at 10% of leased moorage in 12 years post-construction, 20% in 24 years, and about 25% after 30 years. At the Port of Olympia and Turning Basin, sediment deposition would increase by approximately 2.2 inches per year, compared to the approximately 0.8 inch per year of sediment that would deposit under the No Action Alternative. Within the project time horizon, this would result in operational impacts to the southern vessel berth. There would be less than 0.1-inch increase per year in the Federal Navigation Channel.

8 Maintenance dredging costs over 30 years for the Hybrid Alternative would increase to $242 to $436M if dredged material was determined not suitable for in-water disposal. However, based on findings in the EIS, the sediment is expected to be suitable for in-water disposal.

9 Sediment deposition would increase at the Olympia Yacht Club by approximately 6 inches per year, compared to the approximately 1.7 inches per year of sediment that would deposit under the No Action Alternative. If maintenance dredging was not conducted, access impacts are estimated at 10% of leased moorage in 5 years post-construction, 20% in 10 years, 30% in 15 years, 40% in 20 years, 50% in 25 years, and 60% in 30 years. At the other private marinas, sediment deposition would increase by approximately 3 inches per year, compared to the approximately 0.8 inch per year of sediment that would deposit under the No Action Alternative. If maintenance dredging was not conducted, access impacts are estimated at 10% of leased moorage in 10 years post-construction, 20% in 20 years, and 30% in 30 years. At the Port of Olympia and Turning Basin, sediment deposition would increase by approximately 2.8 inches per year, compared to the approximately 0.8 inch per year of sediment that would deposit under the No Action Alternative. Within the project time horizon, this would result in operational impacts to the southern vessel berth. There would be less than 0.1 inch increase per year in the Federal Navigation Channel.

7.2 WHAT ARE THE RECOMMENDATIONS FOR FUNDING CONSTRUCTION & LONG-TERM MANAGEMENT?

The Funding and Governance Work Group met throughout the EIS process to fulfill requirements of the Washington State Legislature, as outlined of ESHB 2380, to:

- Identify conceptual options and degree of general support for shared funding by state, local, and federal governments and potentially other entities; and to,
- Identify one or more conceptual options for long-term shared governance of a future management plan.

In 2021, the Funding and Governance Work Group decided that, after providing initial recommendations for a funding approach for all alternatives, their continued work should focus only on the Preferred Alternative, once it had been identified by Enterprise Services. The Funding and Governance Work Group was reconvened in early 2022 after Enterprise Services identified the Estuary Alternative as the likely preferred alternative for long-term management. In fall 2022, the Funding and Governance Work Group executed a Memorandum of Understanding to memorialize broad areas of conceptual agreement regarding shared funding and governance for long-term management of the Estuary Alternative. This document has been included as Attachment 23 of the Final EIS. The sections below provide the guiding principles that were used by the Funding and Governance Work Group in these discussions, document the recommended approach for construction funding, and outline the approach to shared funding and governance for long-term management of the Estuary Alternative.

7.2.1 Funding and Governance Guiding Principles

The following guiding principles for funding and governance were established collaboratively by the Funding and Governance Work Group in Phase 1.

Guiding Principles for Future Funding and Governance Model

1. Dedicated and secure funding sources
2. Those who contribute to the problem should participate in funding or paying for the solution
3. Those who benefit from the solution should participate in funding or paying for the solution
4. Shared distribution of costs
5. State participation
6. Watershed-wide in scale
7. Manageable governance
8. Commitment to a long-term collaborative process
9. Adequately resourced administration
10. Support the goals and objectives of the long-term management plan and the future of the overall watershed

The Funding and Governance Work Group used these guiding principles to develop recommendations regarding construction funding, and to develop preliminary cost allocations for maintenance dredging after construction of the Estuary Alternative. The guiding principles were also influential in the approach to focus shared governance on sediment management.

7.2.2 Construction Funding Recommendation

A primary recommendation of the Funding and Governance Work Group is for construction funding to be provided by the State of Washington. This reflects guiding principle #2, which states that those who contribute to the problem should participate in funding or paying for the solution. The State of Washington constructed the 5th Avenue Dam and has had the responsibility to maintain Capitol Lake over its lifetime. The 5th Avenue Dam and deferred maintenance have resulted in or contributed to the existing environmental impairments that must be resolved through project construction.

Enterprise Services intends to submit a capital request to the State of Washington for funding from the 2023–2025 biennium for design and permitting, which must occur before construction can begin. If design and permitting is funded, Enterprise Services will develop a funding strategy for construction and will pursue available funding. Construction funding will likely include a combination of federal and state grants and appropriations of taxpayer dollars.

Funding has not yet been secured for these project phases. Both design and permitting, and construction, will require a substantial appropriation of funds from the Washington State Legislature.

7.2.3 Long-Term Funding and Governance Requirements and Recommendations

As described above, the Funding and Governance Work Group provided initial recommendations for long-term funding and governance of the action alternatives in 2021, for inclusion in the Draft EIS. There recommendations were as follows:

- Managed Lake Alternative: long-term funding and governance should be the responsibility of the State of Washington given the similarity to status quo.[1]
- Estuary Alternative: shared funding and governance would be provided by members of the Funding and Governance Work Group for long-term maintenance of the Estuary Alternative given the shared benefit of estuary restoration and its dredging program.[2]
- Hybrid Alternative: no recommendation was provided for long-term funding and governance of the Hybrid Alternative.

In early 2022, the Funding and Governance Work Group reconvened to develop a more detailed plan for shared funding and governance of the Estuary Alternative, which had been announced as the likely Preferred Alternative. The areas of agreement for shared funding and governance are summarized in the following sections, and outlined in more detail in a Memorandum of Understanding, provided as Attachment 23 of the Final EIS. The Memorandum of Understanding outlines administrative goals of the signatories, initial responsibilities for operations and

[1] Under a Managed Lake Alternative, long-term funding and governance would be needed to implement activities from an adaptive management plan designed to achieve lake management objectives, such as seasonal treatment or mechanical harvesting of aquatic plants. Actions to meet lake management objectives would be the primary ongoing management commitment. Funding and governance would also ensure that maintenance dredging occurred at an approximately 20-year frequency to support recreation within the North Basin. Measures outlined in a Habitat Enhancement Plan would be implemented to maintain ecological functions.

[2] Under the Estuary and Hybrid Alternatives, the primary focus for long-term funding and governance would be sediment management in impacted areas of West Bay. Recurring maintenance dredging, at a 5- to 6-year frequency, is critical to avoid significant impacts to navigation in West Bay, and to maintain a working waterfront and recreational boating. Annual sediment monitoring would be conducted to ensure that dredging was responsive to actual environmental conditions. Funding would be needed to implement measures outlined in a Habitat Enhancement Plan. The freshwater reflecting pool of the Hybrid Alternative would also require ongoing adaptive management.

maintenance of the constructed assets of the estuary, and areas of agreement around the collection and contribution of funding toward maintenance dredging.

7.2.4 Framework for Shared Funding and Governance for the Estuary Alternative

Balancing its recommendation for the State of Washington to fund construction costs, based on guiding principal #2, the Funding and Governance Work Group has recommended that an equitable outcome would operationalize guiding principal #3 for the maintenance costs. Guiding principal #3 provides that those who benefit from the solution should participate in funding.

The Funding and Governance Work Group members have broadly agreed that conditions after estuary restoration and ongoing maintenance would produce public and private benefits, including:

- Achievement of project goals
- Protection of natural resources
- Maintenance of a working waterfront
- Maintenance of recreational boating
- Revenue through DNR leases and state/local taxes
- Provision of public amenities

Work to develop a cost allocation and governance approach for maintenance costs was specific to the Estuary Alternative after it was identified by Enterprise Services as the likely Preferred Alternative.

7.2.4.1 Long-Term Governance of the Estuary Alternative

Of the potential governance models the Funding and Governance Work Group evaluated, its members identified an Interlocal Agreement under Washington's Interlocal Cooperation Act (RCW 39.34) as best-suited for long-term governance of the Estuary Alternative. An Interlocal Agreement is a contract among its signatories for a specified purpose. An example of an entity organized through an interlocal agreement is LOTT (the LOTT Clean Water Alliance), which is an agreement among Lacey, Olympia, Tumwater, and Thurston County to manage and treat wastewater.

The Memorandum of Understanding (Attachment 23) outlines broad areas of conceptual agreement among the Funding and Governance Work Group members, which they intend to formalize in a full, binding

What is a governance model?

Governance models represent the type of government structure and reflect the interrelated relationships, factors, and other influences upon that structure. A governing body can be developed through a range of governance models, and based on what is being governed and the purpose of governance.

What governance models were evaluated by the Funding and Governance Work Group?

- Status quo (state governance)
- Special Purpose District
- Public Development Authority
- Interlocal Agreement
- Nonprofit
- Joint Municipal Utility Authority

See Chapter 7.0 of the Draft EIS for more detail on how these governance models were evaluated.

Interlocal Agreement following issuance of the Final EIS. The term of the Interlocal Agreement is expected to be through 2050, with opportunity for extension after 2050. An initial term through 2050 is seen to provide the following advantages:

- It aligns with the longest duration of existing private marina leases in West Bay, providing a consistent planning horizon for West Bay.
- It provides an explicit time period for the Interlocal Agreement, which addresses an inability for entities to commit to funding in perpetuity.
- It allows future iterations of an Interlocal Agreement to be adjusted based on findings of the maintenance dredging that occurs through 2050, and any other long-term maintenance obligations that may arise (beyond those outlined in Table 7.2.1).

In 2050, the members of the Funding and Governance Work Group would have options on how to move forward. These options include, but are not limited to, the following.

- Continue shared funding and governance past 2050, consistent with the original Interlocal Agreement.
- Include other parties into the Interlocal Agreement for shared funding and governance and make other adjustments as needed.
- If marinas elect to discontinue leases or relocate, reconsider whether there is an ongoing need for shared funding and governance.

During these negotiations, the Funding and Governance Work Group suggested that governance could be simplified if the ownership and maintenance of constructed assets were transitioned after construction. Upon transfer of a physical asset, the receiving Funding and Governance Work Group member would have full ownership in perpetuity, including all maintenance responsibility. This removes constructed assets from the scope of governance, and allows the focus to be solely on maintenance dredging. Table 7.2.1 provides the transfer of governance responsibilities that will be finalized in the Interlocal Agreement.

Table 7.2.1 Transfer of Governance Responsibilities

Funding and Governance Work Group Member/Receiving Entity	Constructed Asset/ Governance Responsibility
State of Washington	• Maintenance of infrastructure for boating, fishing, and recreation within Capitol Grounds • Maintenance of Middle Basin boardwalks • Staffing of decontamination stations • Contract management for maintenance dredging (including design, permitting, and construction) and annual sediment surveys for dredging at marinas and access area • Finance management of funds collected for maintenance dredging
Squaxin Island Tribe	• Participation in implementation of Habitat Enhancement Plan for constructed habitat in the 260-acre former lake basin
City of Olympia	• Maintenance of the new 5th Avenue Bridge
City of Tumwater	• Maintenance of the South Basin boardwalks
Port of Olympia	• Contract management for maintenance dredging (including design, permitting, and construction) and annual sediment surveys for dredging at port vessel berths, and coordination with USACE for FNC dredging
Thurston County	• None identified
LOTT Clean Water Alliance	• None identified

7.2.4.2 Funding for Maintenance Dredging under the Estuary Alternative

Funding and Governance Work Group members agree that there is a shared benefit from maintenance dredging along the eastern shoreline of West Bay. Maintenance dredging would avoid significant impacts to navigation, and support a working waterfront and recreational boating in West Bay, which have public and private benefits.

Given the shared benefit, the Funding and Governance Work Group has developed a cost allocation framework for maintenance dredging. The cost allocation framework divides the costs in two primary ways:

1. **USACE, Port of Olympia, and private marinas would provide funding for maintenance dredging costs equivalent to conditions under the No Action Alternative.** These entities

What is a cost allocation framework?

Cost allocation framework is a method for identifying and equitably assigning costs across entities to support an economically efficient outcome. Frameworks reviewed by the Funding and Governance Work Group included cost allocation by contribution/benefit ranking; by proxy variable; or equally across all entities.

have responsibility to contribute toward the intended outcome given the benefit they would receive. A contribution consistent with a formal maintenance dredging program under the No Action Alternative allows funding to be equal across all alternatives, avoiding an increase in maintenance costs to these entities as a result of the Estuary Alternative. Importantly, funding for maintenance dredging consistent with the No Action Alternative will be increased compared to historical dredging costs given new DNR lease conditions that require lessees to maintain specified minimum water depths within the marinas to minimize environmental impacts. The USACE, Port of Olympia, and private marinas have always provided funding for dredging to maintain their operations and would continue to do so under the No Action Alternative. It should be noted that USACE funding for maintenance dredging is subject to congressional approval.

2. **Members of the Funding and Governance Work Group and the USACE would provide funding for increased costs for maintenance dredging, above the No Action Alternative, as a result of estuary restoration.** This shared funding is contingent on receipt of funding from the USACE, Port of Olympia, and private marinas consistent with dredging needs of the No Action Alternative. Although there would be an increase in cost for the USACE to address the increased sediment in the FNC, the USACE historically provided funding for dredging in the Deschutes Estuary, between the late 1800s and mid-1950s, before the 5th Avenue Dam was constructed and to support navigation to the Port of Olympia and Olympia Yacht Club that were both operating in their existing locations.

The total estimated cost for maintenance dredging of increased sediment as a result of the Estuary Alternative, through 2050, is approximately $18 million. The recommended allocation of these costs across the Funding and Governance Work Group is equal, with the City of Olympia contributing 50% more than the other entities. The equal allocation of costs reflects that all Funding and Governance Work Group members benefit from estuary restoration and long-term maintenance, and that the difference across the benefit streams cannot be reasonably defined. The City of Olympia has an increased allocation because most of the estuary is within the City of Olympia and the working waterfront and recreational boating that would be maintained is entirely within downtown Olympia.

How was the cost estimate developed for maintenance dredging of increased sediment?

There could be up to 18 years between removal of the 5th Avenue Dam and 2050. This is the maximum amount of time for increased sediment conditions before 2050 given that design, permitting, and construction must occur first. *If design, permitting, and/or construction are delayed, this would reduce the duration of restored sediment conditions before 2050; but planning has been based around the longest potential duration of 18 years to increase certainty that funding is available.*

The planning-level cost estimates provided in Table 7.1.1 were prorated to an 18-year duration.

The high end of the cost estimates were used to increase certainty that funding is available.

In-water disposal costs were used because the Final EIS analysis concludes that the dredged sediment will likely be suitable for in-water disposal.

Consistent with Table 7.1.1, the costs for maintenance dredging equivalent to the No Action Alternative are not included in the $18M estimate.

The Funding and Governance Work Group members would begin to contribute funding annually, after Enterprise Services obtains funding for project construction. Making annual payments, beginning at that time, would allow the investment to grow for several years before the first maintenance dredging event, and would increase certainty that funding is available when it is needed at the 6-year frequency estimated for maintenance dredging under the Estuary Alternative.

The Funding and Governance Work Group remains committed to negotiating this agreement around shared costs toward a formal, binding Interlocal Agreement, as documented in the Memorandum of Understanding (Attachment 23). This would occur after Enterprise Services has made a final decision to implement the project; final decision-making will occur following issuance of the Final EIS.

7.3 WHAT OTHER FACTORS WERE CONSIDERED IN THE PROCESS TO IDENTIFY A PREFERRED ALTERNATIVE?

There are a few other important considerations not captured in the technical analyses provided in the EIS. These other considerations are listed below and are relevant to the project context, are helpful for stakeholders' understanding of the long-term management alternatives, or are important in the decision-making process.

- **Stakeholder Support**. The technical analyses help to support decision-making. The technical analyses do not unanimously point to one alternative over another; and there will always be a level of subjectivity in decision-making that cannot be resolved by the technical analyses. This has resulted and continues to result in strongly held positions across the community groups. The process to identify the Preferred Alternative incorporated feedback from engaged stakeholders specific to the relative ability of the long-term management alternatives to achieve long-term support. The Estuary Alternative had the broadest stakeholder support (see Table 8.3.1 in EIS Supporting Chapter 8). Importantly, implementation of any of the long-term management alternatives will improve water quality, sediment management, and ecological functions within the Capitol Lake – Deschutes Estuary compared to the No Action Alternative. It will also reopen the waterbody to active community use. Achieving these goals are important to all governmental partners, agencies, and community members, even though there is no single solution that is expected to satisfy every stakeholder and community member.

- **Tribal Consultation.** Consultation with and concurrence from local area tribes is an important part of the process to obtain a Department of the Army Permit from the USACE necessary for in-water work, including construction and dredging. As documented throughout the EIS, the Managed Lake Alternative would have a continued impact on Usual and Accustomed Fishing Grounds and Stations, and on the Deschutes Estuary, which has spiritual and cultural significance. The Managed Lake Alternative would perpetuate historic inequities, particularly for tribal populations that have experienced ongoing adverse effects from changes to the ecosystem since non-Indigenous settlement of the region including continued loss of connection to the natural environment. Tribal populations would disproportionately experience adverse impacts from the Managed Lake Alternative, raising environmental justice concerns. The Squaxin Island Tribe has stated that the Managed Lake Alternative would conflict with tribal treaty rights, and the Estuary Alternative is the only alternative that they support.
- **TMDL Compliance.** In June 2022, Ecology issued a Draft Water Quality Improvement Plan (also known as a TMDL) for the marine waters of Budd Inlet. As part of that work, Ecology conducted modeling that indicates that the Estuary Alternative is the only alternative that can meet water quality standards and comply with the TMDL allocations. Importantly, the work performed by Ecology is focused on the ability to meet water quality standards in Budd Inlet, whereas Enterprise Services was tasked by the legislature to select a preferred alternative for long-term management of the Capitol Lake – Deschutes Estuary, which must consider a range of other environmental impacts and benefits, in addition to changes in water quality within the Project Area.
- **West Bay Sediment Remediation.** The FNC is currently impacted by sediment accumulation and needs to be dredged to reestablish authorized depths and unrestricted navigation in the waterway. The accumulated sediment is currently impacting operations at the Port of Olympia, requiring vessels to light-load and sail on flood tides. Dredging has not been completed because this sediment is contaminated; there is known sediment contamination throughout lower Budd Inlet. The remediation of West Bay is needed not only to avoid impacts to commercial and recreational navigation; it is also a critical part of the

ongoing effort to improve the health of the Deschutes River Watershed and marine environment. The Port of Olympia is expected to lead the sediment remediation to address contamination in lower Budd Inlet and is currently in a process to characterize sediment and design the remediation approach. Based on coordination with the Port of Olympia, it is assumed that remediation of contaminated sediment will occur in the next 10 years, contingent on funding and Port of Olympia agreement to remediation responsibilities. This timing would increase certainty that remediation occurs before removal of the 5th Avenue Dam under the Estuary Alternative, which would release sediments into West Bay that are not expected to be contaminated (based on sampling completed for the EIS).

Specific to the Preferred Alternative, Figure 7.3.1 provides an overview of the estimated timing for implementation of the Estuary Alternative, and the separate sediment remediation in lower Budd Inlet. Dates provided in this figure assume that Enterprise Services decides to implement the project and all funding is received without delay. Completing the work in the assumed sequence shown in Figure 7.3.1 would provide the following benefits:

1. It focuses the Port-led remediation on existing accumulated/ contaminated sediment and avoids the need to remove additional sediment that will be deposited after the Estuary Alternative is constructed. This reduces the amount of contaminated sediment that must be remediated in Budd Inlet.
2. Following construction of the Estuary Alternative, it allows maintenance dredging in West Bay to be paid for by shared federal, state, and local funding, focused on removal of newly deposited sediment.
    - Newly deposited sediment is expected to be chemically and biologically suitable for in-water disposal.
    - Dredging sediment suitable for in-water disposal is easier to permit, less expensive to implement, and more certain to be completed.
3. It increases the likelihood of federal funding for future maintenance dredging in the FNC within West Bay.
    - USACE is regulatorily precluded from dredging in agency-designated contaminated areas but can provide funding for dredging if the dredged material is suitable for open water disposal, as is expected under the Estuary Alternative.

Figure 7.3.1 Potential Implementation Timeline for Estuary Alternative & Other Planned Actions in Project Area