Executive Summary

The City of Seattle (City), through the Seattle Department of Transportation (SDOT), is replacing the Elliott Bay Seawall along the shoreline of downtown Seattle. The seawall protects transportation infrastructure (i.e., sidewalks, streets, a pedestrian and bicycle trail, the Seattle Multimodal Terminal at Colman Dock, and a rail line) and adjacent upland areas, including critical utilities, residences, businesses, and parks. The harbor area in Elliott Bay is used for commerce and transportation by ferries, cruise ships, and commercial vessels, and for recreation by residents and visitors. The downtown Seattle waterfront is an important center of commerce and a recreational area for the entire region.

The existing seawall consists of three types of walls built between 1911 and 1936. Over time, these structures have deteriorated as a result of natural and physical processes. The seawall's degraded condition puts it at risk for significant damage from a major storm or seismic event. The new seawall will protect the shoreline and upland areas from erosion and damage due to coastal storms and seismic events, thus helping to preserve economic competitiveness and quality of life in Seattle and the region. It will also provide a solid foundation for the downtown Seattle waterfront, including projects being developed separately to create new transportation infrastructure and public spaces along the waterfront as part of the City's Waterfront Seattle Program.

Elliott Bay Seawall Project Vicinity

Availability of the Final Supplemental Environmental Impact Statement

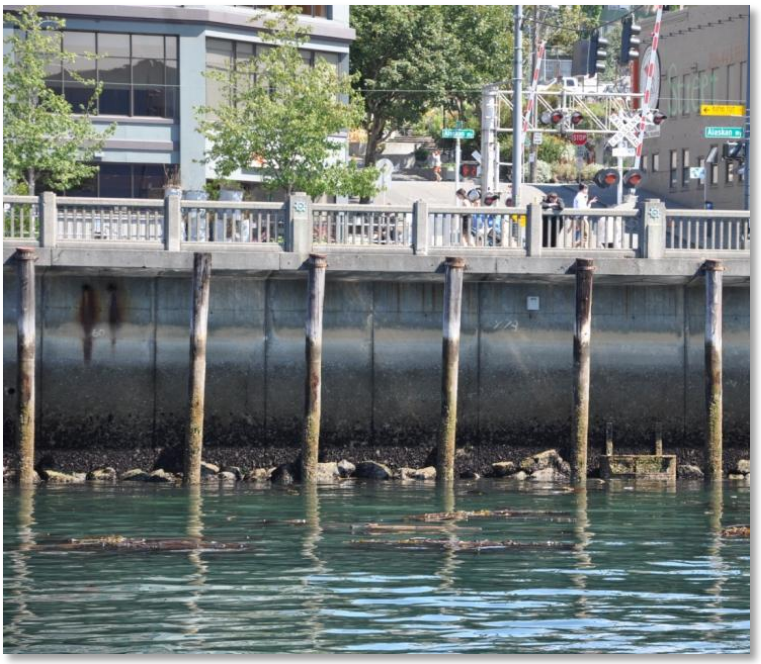
The Final SEIS is available online at *http://waterfrontseattle.org/seawall_project/environmental.aspx.* A CD with the complete document is included in the "In Focus" document inside the front cover of the printed Final SEIS.

Additional CDs of the Final SEIS, as well as printed copies of the Final SEIS and attachments, can be obtained by calling (206) 618-8584 or by sending an e-mail to seawallSEIS@seattle.gov.

Printed copies of the Final SEIS are available for $25.

Individuals requiring reasonable accommodation of any type, including language translation services, may call (206) 618-8584. Individuals who have a hearing impairment may call the Washington State Telecommunications Relay Service (TTY) at 711.

The project area extends along the downtown Seattle waterfront from S. Main Street to Broad Street. Elliott Avenue and Western Avenue delineate the eastern boundary; the western boundary extends into Elliott Bay and varies depending on the impacts being studied.



What is the project purpose?

The purpose of the Elliott Bay Seawall Project is to reduce the risks of coastal storm and seismic damage and to protect public safety, critical infrastructure, and associated economic activities along the downtown Seattle waterfront. The project will also improve the degraded ecosystem functions and processes of the Elliott Bay nearshore in the vicinity of the seawall.

The seawall holds the waterfront in place and supports Alaskan Way, including the sidewalk and the pedestrian and bicycle trail. It also protects utilities located east (landward) of its face. Due to deterioration over the past century, the seawall is at the end of its useful life and at risk of failure. Furthermore, it was not designed to withstand earthquakes, which are a continuing risk in the Puget Sound region.

Elliott Bay is an important link for juvenile salmon migrating from the Duwamish River to the Pacific Ocean. Within the project area, vital shallow-water habitat is limited, and migration along the shoreline can be difficult. Improving the degraded nearshore ecosystem will increase plant and animal diversity, enhancing habitat for salmon and other species.

What is the current status of the project?

Environmental review for the Elliott Bay Seawall Project was completed in spring 2013. Final design of the Central Seawall (shown as Phase 1 on the previous page) was completed in summer 2013, and the remaining project permits were secured shortly thereafter. Central Seawall construction began in November 2013 and is currently expected to be substantially complete in mid-2016.

Construction of the North Seawall (shown as Phase 2 on the map) will begin once funding is secured, but no earlier than fall 2016.

What is a Supplemental EIS and why was it prepared?

The State Environmental Policy Act (SEPA) requires the City, as the lead agency and project sponsor, to inform the public of the potential effects of the Elliott Bay Seawall Project on the built and natural environment.

A SEPA Environmental Impact Statement (EIS) for the project was completed in March 2013.

Following completion of the EIS, the City determined that a Supplemental EIS (SEIS) should be prepared. An SEIS is a document that adds information and analysis to an existing SEPA EIS. An SEIS may be prepared for a variety of reasons, including:

- The project has changed and may cause new or increased significant adverse environmental impacts that were not evaluated in the original EIS.
- New information indicates that new or increased significant environmental impacts are likely.

In December 2013 the City released a Draft SEIS that described design refinements, adjustments to construction sequencing and approach, and changes resulting from agreements made through the permitting process. The analyses provided in the Draft SEIS are incorporated by reference into this Final SEIS, because the alternatives and analysis have not been supplemented or modified. This Final SEIS includes an updated fact sheet, this executive summary, the responses to comments received on the Draft SEIS, in accordance with WAC 197-11-560(5), and the final mitigation measures.

The supplemental analysis will enable the City, with input from the public, regulatory agencies, and Native American tribes, to consider the environmental impacts of the project changes in conjunction with factors such as cost, schedule, and feasibility.

What project changes were evaluated in the Draft SEIS?

As noted above and described in the Draft SEIS, the City has identified a number of proposed changes to the design and construction of the Preferred Alternative evaluated in the Final EIS. These changes are not substantial enough to constitute a new project alternative for review, but rather are an update to the Preferred Alternative identified in the Final EIS. This “Updated Preferred Alternative” would still provide protection against coastal storms and seismic events by means of a new seawall. It remains the most cost-effective and least disruptive construction method. The three major project components described in the EIS, including a new seawall, improvements to aquatic habitat, and enhanced upland areas, are still integral to the project. A summary of the proposed changes is provided below, and a summary table is provided at the end of this section.

Construction Schedule

As described in the Draft SEIS, project construction is a complex and dynamic process that is susceptible to schedule changes due to changed field conditions, availability of materials, extreme weather events, and many other factors. To ensure that the Central Seawall replacement is completed on time, and in accordance with final agreements, construction is now likely to continue through the summers of 2014 and 2015.

Summer activities could range from minor utility and roadway work to jet grouting and seawall reconstruction. The City would strive to minimize impacts by limiting summer activities to confined areas to the greatest extent feasible and by implementing access and wayfinding measures as described in the EIS.

In addition to the elimination of summer shutdowns, most businesses on Piers 54, 55, 56, and 57 would close for a period of approximately 9 months, currently planned to extend from October 2014 through June 2015. Closure of the businesses during this period would allow construction to proceed more efficiently because of the reduced need for access. The Great Wheel, Argosy Cruises, and some retail businesses and restaurants on Pier 57 would remain open during this period, along with some office spaces.

With these modifications to the schedule, Central Seawall construction is anticipated to be substantially complete in mid-2016, the target completion date identified in the EIS. However, if unanticipated delays were to occur, it is possible that final construction activities could continue after that date until the project is completed.

Construction Methods and Sequence

The Updated Preferred Alternative would be built using the same construction techniques that were described in the EIS, but with some modifications to final design and construction. As described in Chapter 2 of the Draft SEIS, these changes are related to the following topics:

- Beginning as soon as summer 2014, ferry queuing would switch to south of the Seattle Multimodal Terminal at Colman Dock (see page 2-15 of the Draft SEIS).
- A temporary sheet pile containment wall would be used where feasible to isolate construction activities from Elliott Bay; other types of containment (e.g., a turbidity curtain) would be used when a sheet pile wall is not feasible. In several locations, portions of the temporary containment wall would be retained

after construction to provide additional stability for the habitat features (see page 2-15 of the Draft SEIS).

- Additional geotechnical reinforcements would be included beneath the Zone 1 habitat beach for added stability (see page 2-16 of the Draft SEIS).
- A larger area within the construction work zone would be dewatered to create drier conditions during construction. The water would be treated onsite (either on land or on a barge) before discharge (see page 2-16 of the Draft SEIS).
- Soil improvement would occur both from the roadway surface and within the excavated construction work zone (see page 2-18 of the Draft SEIS).
- A modified construction sequence has been developed to improve efficiencies. The main construction steps described in the EIS will still occur, but they may be in a different order in the overall construction sequence (see page 2-20 of the Draft SEIS).

What are the new or increased effects of the Updated Preferred Alternative?

Overall, the types of effects resulting from the Updated Preferred Alternative would be similar to those described for the Preferred Alternative in the EIS. This section summarizes the primary ways in which the construction impacts are expected to differ. No substantive changes to operational impacts are expected as a result of the Updated Preferred Alternative.

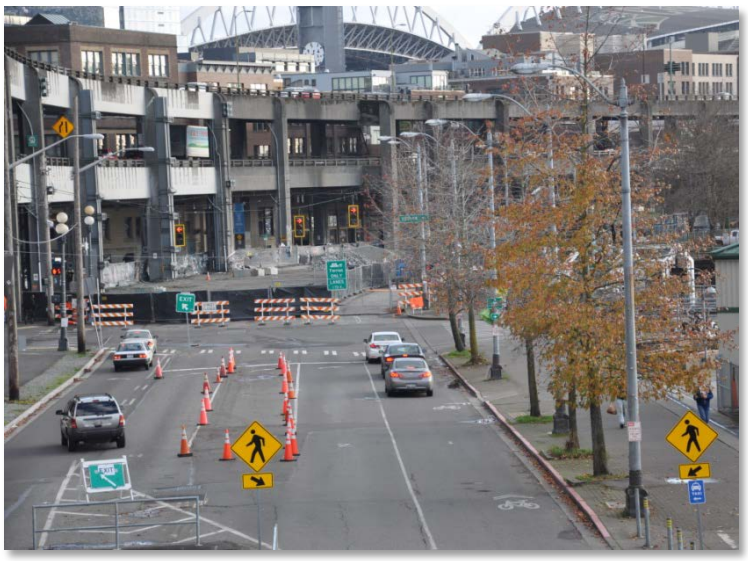
As discussed above, an SEIS *adds* information and analysis to an existing EIS; therefore, the Draft SEIS did not include an analysis of impacts that were already covered in the Final EIS, and elements of the environment that remain unchanged were not described. Similarly, because no new substantive changes have been proposed since the Draft SEIS and no new significant impacts have been identified, the Final SEIS does not include any new analyses. The impacts from the Draft SEIS summarized below are those that generated most of the substantive comments. The full analyses of all impacts of the Updated Preferred Alternative (provided in Chapter 3 of the Draft SEIS) are incorporated by reference.

Transportation

Impacts to traffic operations during construction are not expected to change due to the lack of a summer shutdown period, because summer traffic volumes were used in the EIS analysis. The primary change to the

transportation analysis would result from the revised ferry-queuing plan, currently planned to begin as early as summer 2014. Moving the queue to the area south of the Seattle Multimodal Terminal at Colman Dock could provide additional storage capacity and increase available parking in the project area. This change would also improve traffic on the Alaskan Way temporary roadway north of Yesler Way, although it is projected to slightly worsen the level of service at the intersection of S. Jackson Street with Alaskan Way.

As noted above, construction is a dynamic process and is susceptible to changes based on many factors, including the adjacency of other major infrastructure projects. The City continues to work with the Washington State Department of Transportation (WSDOT) and other agencies to reduce the impacts of concurrent construction and will maintain this coordination; however, if necessary, the City could modify the configuration of the ferry queuing plan to accommodate nearby projects and minimize overall impacts from concurrent construction.



Economics

To reduce the potential impacts from summer work, the City would phase construction activities to the greatest extent feasible to ensure that access to businesses and parking was provided during the summer. The impacts to local businesses may increase incrementally above the level of effect described in the Final EIS due to reduced access and disruption.

The proposed closure of restaurant and retail businesses on Piers 54 through 57 could result in lost revenues of approximately $11.1 to $18.6 million for these businesses. The City would compensate property owners for the lost access. Additionally, up to 245 employees could be temporarily laid off during the business closure.

Noise and Vibration

Pumps used to support the water treatment processes could generate sound levels of up to 90 A-weighted decibels (dBA) or more at 30 feet, which would be perceptible at all times during construction. At a distance of 250 feet, 90 decibels would drop to approximately 72 decibels. Mitigation would be used as necessary to reduce sound levels, in compliance with provisions of the Seattle Noise Ordinance.

Without the summer shutdown period, construction noise would continue during the summer months and could affect nearby businesses, residences, and visitors.

How have members of the public, regulatory agencies, and Native American tribes been involved in the process?

The Seawall team conducted outreach at 33 fair and festival days in 2013

Ongoing conversations and collaboration with the public, project stakeholders, Native American tribes, and federal, state, and local regulatory agencies have informed the development of the project since the inception of the environmental review process. Environmental scoping was conducted in summer 2010, and the City solicited comments on the Draft EIS from November 13 to December 13, 2012. The comment period on the Draft SEIS ran from December 13, 2013, to January 22, 2014. During each of these public comment periods, interested parties had the opportunity to share their concerns about the project and provide suggestions on the scope, content, and conclusions of the environmental analysis. All affected federal, state, and local agencies, Native American tribes, private organizations, and the public (including adjacent property owners) were invited to comment.

Ongoing discussions and collaboration with the public, project stakeholders, Native American tribes, and federal, state, and local regulatory agencies have continued since the beginning of the project, extending through the design process and into construction. Coordination has occurred through meetings, information exchange, and collaboration in the development of design refinements and construction method development.

What types of comments were received on the Draft SEIS?

Native American tribes, state and local agencies, organizations, businesses, and individuals commented on the Draft SEIS. Nine communications (letters or e-mails) were received in total. The main comment topics from these communications can generally be summarized into the following categories:

- Elimination of the summer construction shutdown
- Transportation effects and mitigation
- Noise and vibration effects and mitigation

An overview of the main comments, along with a summary of the City's responses, is provided below. A complete record of all of the comments and the City's response to each comment is provided in this Final SEIS.

Elimination of the summer construction shutdown

Several comments were received on the proposed elimination of the summer construction shutdown, expressing concern that impacts such as noise, dust, and interrupted access would continue during the busy summer season. Several comments stated that the economic viability of waterfront businesses relies on maintaining the waterfront as an attractive tourist destination.

To reduce the impacts from summer work, the City would phase construction activities to the greatest extent feasible to ensure that access to businesses and parking is provided during the summer. To encourage continued patronage of businesses during construction, the City has launched a comprehensive public information and communications effort, which will continue throughout construction in an effort to minimize impacts to waterfront businesses.

Transportation effects and mitigation

Switching ferry queuing to the south

The City received comments noting that pedestrian access to the King County Water Taxi, vehicle access to the Port of Seattle facilities at Terminal 46, and transit service on First Avenue S. may be affected by the relocation of ferry queuing to the south of the Seattle Multimodal Terminal at Colman Dock and associated changes in traffic operations.

Access will be maintained to the King County Water Taxi and Seattle Multimodal Terminal at Colman Dock throughout construction. The City will also maintain access to Terminal 46. The traffic analysis shows that some additional congestion would slightly worsen the level of service at the intersection of S. Jackson Street with Alaskan Way, but this change is not expected to significantly affect traffic operations in the area.

Maintaining access to the cruise terminal

Two commenters reiterated the importance of maintaining access to the cruise terminal for provisioning trucks and other business-related needs, and suggested that a cruise terminal access plan be prepared in coordination with these facilities. As demonstrated by the traffic analysis, no impacts to the cruise terminal are expected during Central Seawall construction. The City will continue to work with the Port of Seattle and its tenants to ensure that access is maintained to the cruise ship terminal throughout construction. Traffic control planning for the project will address the needs of all modes of travel to minimize impacts on traffic operations during all phases of construction.

Noise and vibration effects and mitigation

Many of the comments received on the Draft SEIS were related to potential noise levels from the water treatment system. As described in the Draft SEIS, the location of this system has not been finalized, but it could be sited on land or on a barge, with one potential barge location

being adjacent to Piers 62/63. Commenters expressed concern that noise from the water treatment system, if unmitigated, would have unacceptable effects on nearby residences, businesses, and visitors. Commenters also suggested that it might be more appropriate to use the City's major public project construction variance process rather than the temporary noise variances currently in use during construction.

As described in the Draft SEIS, the water treatment system will be designed to minimize noise levels to the greatest extent practicable. Specific mitigation for noise from the water treatment system will be identified once the system has been sited and designed, in accordance with the Seattle Noise Ordinance.

If noise levels from water treatment or from other construction activities are determined to be unacceptable, the Director of the City's Department of Planning and Development (DPD) has the authority to identify and require the implementation of additional noise mitigation measures or other permitting and approval processes, if appropriate.

How can members of the public, regulatory agencies, and Native American tribes stay involved in the process?

As noted above, coordination with project stakeholders has been continuous throughout the project. The City is committed to continued coordination to ensure that all stakeholders stay apprised of proposed project activities and overall progress. For example, the City continues to meet with stakeholders as relevant information (such as upcoming construction activities or phasing) becomes available. Weekly e-mails with project information are also distributed to an extensive list, including public, agency, and stakeholder contacts. In addition, a 24-hour hotline that connects directly to the project team has been established for comments or questions during project construction.

What is the relationship between the Elliott Bay Seawall Project and other projects in the area, and what coordination is underway?

The Elliott Bay Seawall Project is an independent project that will support the existing transportation infrastructure, protect the downtown Seattle waterfront from coastal storm and seismic damage, and provide a foundation for the future projects included in the Waterfront Seattle Program. The City is coordinating with WSDOT, the Port of Seattle, the waterfront business community, and other internal departments to minimize adverse effects due to construction and

operation of the Elliott Bay Seawall Project, both alone and in combination with other projects in the area. Close coordination will help ensure that adverse effects from these projects are minimized and that the undertakings are completed in a timely manner.

What are the next steps for the project?

Updates to the preferred alternative described in the Final SEIS will commence once environmental reviews are complete and the necessary approvals have been secured.

Businesses will remain open during construction (except for the 9-month temporary closure of most businesses on Piers 54 to 57, as described herein), and the waterfront will remain accessible to visitors and residents. Construction of the Central Seawall project is currently expected to be substantially complete in mid-2016. When construction is complete, the new seawall will stabilize the waterfront and reduce the risk of failure from seismic events and coastal storms, and it will serve as the foundation for projects being developed separately to create new transportation infrastructure and public spaces along the waterfront.

No further environmental documentation related to SEPA is expected at this time; however, if changes to design or construction are proposed in the future, the City will determine whether new or increased significant impacts could occur and will update the SEPA analysis if warranted.

Rendering of the seawall final condition with textured wall face panels

Table 1-1 Changes to the Preferred Alternative

Project Feature	Preferred Alternative	Updated Preferred Alternative
Project Design		
Seawall improvements	15-foot landward setback in Zones 1 and 2	No setback in Zone 1 and slightly reduced setback in Zone 2
Roadway improvements	Southern terminus at S. Washington Street	Southern terminus at S. Main Street
Habitat improvements	Extended habitat benches between each of the piers	Modifications to minimize adverse effects, accommodate operational constraints at the Seattle Multimodal Terminal at Colman Dock, and avoid conflicts with navigation
Construction Schedule		
Construction schedule	Target completion date: mid-2016 Two summer shutdown periods (Memorial Day – Labor Day 2014 and 2015)	Target completion date: mid-2016 Work will continue through summers to ensure timely completion of the project
Waterfront business closures	Potential temporary closure of two businesses	Closure of most businesses on Piers 54 to 57, currently planned for the 9-month off-peak period from October 2014 through June 2015
Pier access	Temporary access bridges to all piers as required throughout construction	Reduced number of temporary access bridges during construction
Construction Methods		
Ferry queuing	Ferry queuing provided on Alaskan Way, north of the Seattle Multimodal Terminal at Colman Dock, between Madison Street and Yesler Way	Beginning as soon as summer 2014, ferry queuing would switch to south of the Seattle Multimodal Terminal at Colman Dock
Temporary containment	Sheet pile containment wall would be installed prior to jet grouting and removed at the end of construction	Containment would be provided by sheet pile, turbidity curtain, and/or other methods as feasible and appropriate to protect water quality Where sheet pile is used for containment, it would be cut to allow a portion to remain as vertical support for the habitat bench in some areas
Zone 1 beach stability	Geotextile used to support aquatic materials and increase stability of existing soils	Geotextile and sheet piles to support aquatic materials and increase stability of existing soils
Water management	Intermittent dewatering in excavation zone landward of existing seawall	Up to continuous dewatering in all excavation areas behind containment wall
Soil improvement	Jet grouting from on top of the existing roadway prior to excavation	Jet grouting on top of existing roadway and from within an excavated work zone in some areas
Construction sequence	See Figure 2-10 in the Final EIS	See revised typical construction sequence example in Figure 2-7 of the Draft SEIS

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