60% Remedial Design Basis of Design Report

Appendix K
Community Impacts Mitigation Plan for Lower Duwamish Waterway Middle Reach

Lower Duwamish Waterway Group

City of Seattle / King County / The Boeing Company

COMMUNITY IMPACTS MITIGATION PLAN FOR LOWER DUWAMISH WATERWAY MIDDLE REACH

For submittal to

U.S. Environmental Protection Agency
Seattle, WA

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TABLE OF CONTENTS

TABLES

FIGURES

ABBREVIATIONS

ANLMP	Air, Noise, and Light Monitoring Plan
BMP	best management practice
CIMP	*Community Impacts Mitigation Plan*
COCP	*Community Outreach and Communications Plan*
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CQAP	*Construction Quality Assurance Plan for the Lower Duwamish Waterway Middle Reach*
ENR	enhanced natural recovery
EPA	U.S. Environmental Protection Agency
LDW	Lower Duwamish Waterway
LDWG	Lower Duwamish Waterway Group
MIDP	Monitoring and Inadvertent Discovery Plan
MLLW	mean lower low water
PCB	polychlorinated biphenyl
QA	quality assurance
QC	quality control
RAA	remedial action area
RAWP	Remedial Action Work Plan
RD	remedial design
RM	river mile
Sediment QAPP	Construction Sediment Sampling Quality Assurance Project Plan
SMA	sediment management area
SR	State Route
WQMP	Water Quality Monitoring Plan

1 Introduction

The Lower Duwamish Waterway (LDW) has served as Seattle's major industrial corridor since the early 1900s. This resulted in the presence of chemical contaminants in its sediment, fish, and shellfish. Of the contaminants, most of the health risks come from polychlorinated biphenyls (PCBs), arsenic, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs), as well as dioxins and furans. Eating resident fish and shellfish, as well as contact with contaminated sediments, poses risks to human and environmental health. The contaminated sediment also creates risk to some animals that live in and use the waterway.

Since 2000, the Lower Duwamish Waterway Group (LDWG) has worked with the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology on a coordinated investigation of LDW sediments. In 2001, the EPA declared the LDW a Superfund site, and in 2014, it issued the sediment cleanup plan in its LDW Record of Decision (EPA 2014). The members of LDWG are the City of Seattle, King County, and The Boeing Company, and they will implement the cleanup action for the entire LDW under the oversight of the EPA.

The remedial (cleanup) construction of the LDW, supervised by the EPA, will extend over more than 10 years. It consists of three design and construction projects targeting the upper, middle, and lower reaches (i.e., segments), of the waterway. The cleanup began in the upper reach in fall 2024 and will progressively move downstream toward Harbor Island.

2 Overview

This section describes the purpose of this *Community Impacts Mitigation Plan* (CIMP) for the LDW middle reach. This includes an overview of community uses and environmental justice considerations for cleanup construction. It also briefly describes each of the LDW middle reach cleanup activities, including selected cleanup technologies, planned construction activities, and anticipated schedule.

2.1 Purpose of this Community Impacts Mitigation Plan

The CIMP builds upon the LDW upper reach CIMP (Anchor QEA and S&A Communications 2024) with additions of new or specific information that is relevant to the LDW middle reach. The purpose of this CIMP is to identify potential community impacts during LDW middle reach cleanup construction. It also outlines ways in which the EPA, members of LDWG, and the construction Contractor(s) (referred herein as Contractor) will work to address and manage impacts. LDWG, its representatives, and the EPA will use this information to address concerns about construction activities to the best of their ability.

The Contractor will conduct the primary in-water cleanup activities (dredging and excavation of contaminated sediments, as well as material placement) and will also manage a team of subcontractors and vendors that support the cleanup work, including upland transportation and disposal of dredged material, professional surveying, tugboat and barge support, quality control (QC), project schedules, conditions inspections, and landscaping.

This document is part of the Intermediate (60%) remedial design (RD) package that is being submitted to the EPA in July 2026. LDWG will review the CIMP annually and update it, if needed, after each construction season ends. Significant changes to mitigation strategies during a construction season will be shared on the project website (www.ldwg.org) and through other established communication channels.

2.2 Community Context and Environmental Justice

The Duwamish River has a rich history as Seattle's only river, and it continues to serve as a place for culture, recreation, wildlife, and commerce. It is the traditional land of the Duwamish People, past and present. The LDW is one of the locations of the Muckleshoot Indian Tribe's usual and accustomed fishing areas, and the Tribe uses the area for commercial net fishery for salmon, as well as ceremonial and subsistence fishery. The Suquamish Tribe also actively manages aquatic resources north of Spokane Street Bridge, just north of the LDW.

The Duwamish Valley is home to vibrant communities that deeply value the health and well-being of the people, fish, and habitat that make the Duwamish Valley home. The communities most affected by the

LDW cleanup are the Georgetown and South Park neighborhoods, Tribal members, waterway-dependent businesses, people who recreate on the river, and people who fish from the Duwamish River.

The neighborhoods in the Duwamish Valley have been disproportionately burdened by a variety of environmental and health impacts from pollution, including contamination in the LDW and other impacts associated with transportation, nearby industrial facilities, and the heavily urbanized landscape. An environmental justice analysis by the EPA that looked at communities living within 1 mile of the LDW (using 2000 census data) showed those living in the area have an increased exposure to pollutants, including diesel particulate matter, which is related to the proximity of high traffic and volume moving through their communities. They also have an increased cancer risk, as well as increased exposure to respiratory and neurological hazards (EPA 2016). Additionally, the community of South Park has been impacted by localized flood events regularly in recent years.

What Is Environmental Justice?

The EPA defined environmental justice 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, regulations, and policies. Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies.

Source: EPA 2016

2.2.1 Community Use Areas

The CIMP describes ways to reduce the impacts of cleanup activities in "community use areas." For the purposes of this CIMP, "community use areas" are defined as properties owned by the Cities of Seattle and Tukwila, King County, Port of Seattle, or Washington State. This includes rights of way, playgrounds, healthcare facilities, parks and trails, waterways, schools, and recreational or public areas that can be impacted by cleanup activities. Community use areas do not apply to private properties, both residential and commercial.

For the purposes of this document, "community" includes audiences that live, work, or play in the Lower Duwamish Valley. Broadly, the following are general audiences that LDWG will communicate with about middle reach cleanup construction:

- Tribes
- Community-based organizations
- Project neighbors
- Maritime industrial groups
- Local businesses and workforce

- Fishing community
- Recreational river and adjacent park users

A more detailed list of audiences will be included in the forthcoming Community Outreach and Communications Plan (COCP; to be prepared as part of Pre-Final [90%] RD).

2.2.2 Waterway Usage

The LDW supports a variety of usages, including the following:

- Tribal use and treaty rights
- Recreational boating, such as kayaking or canoeing
- Waterway users (waterfront property owners and their tenants; operators of commercial tug, barge, and cargo vessels; and marinas)
- Beach play and tribal clamming
- Existing public shoreline access
- Habitat for fish and wildlife (including a migration corridor for five species of salmon)
- Fishing

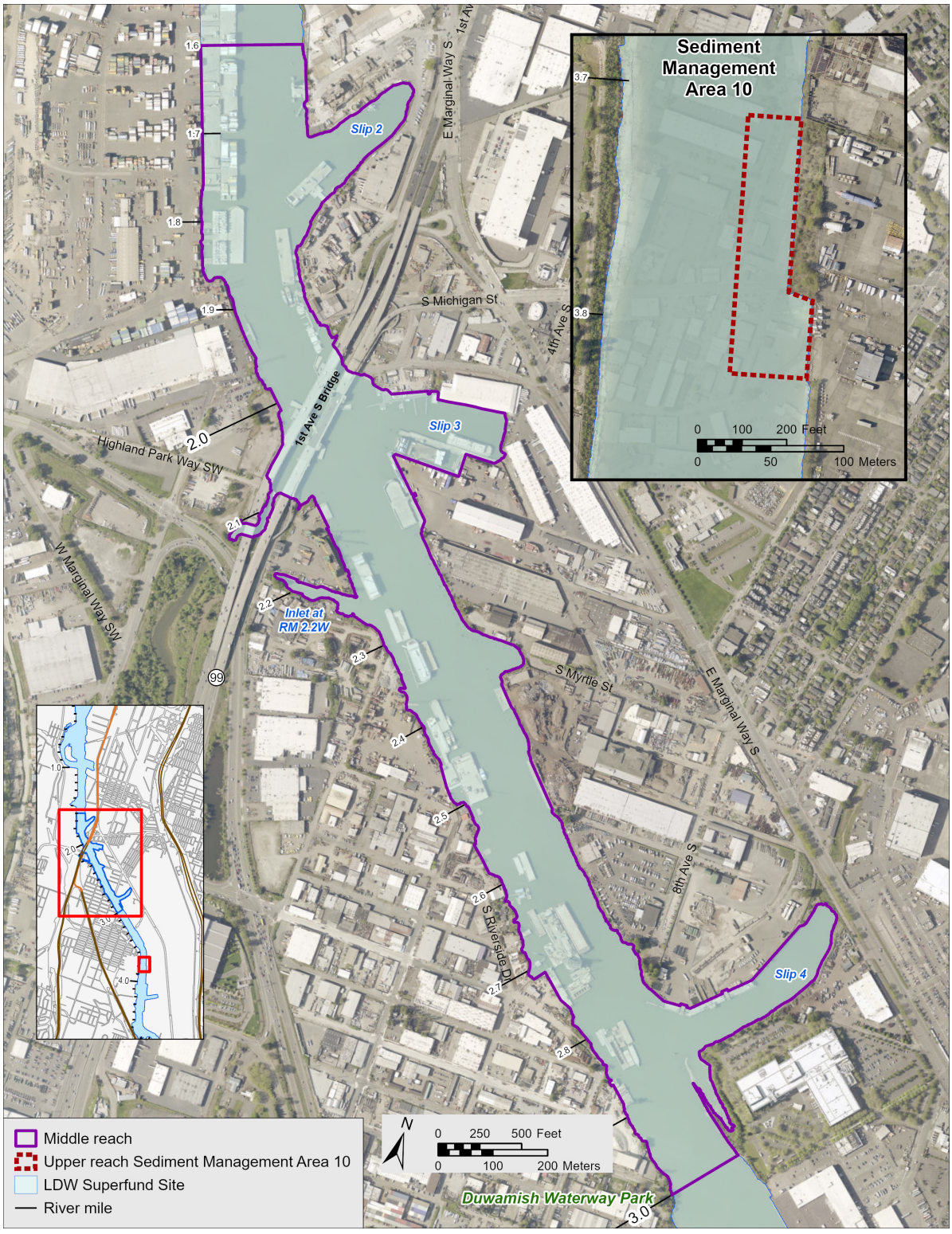
2.3 LDW Middle Reach Cleanup Description

The middle reach of the LDW extends from river mile (RM) 1.6 (just north of the State Route [SR] 99 1st Avenue South Bridge) to RM 3.0 (near the Duwamish Waterway Park; see Figure 2-1). In this segment, the banks of the LDW include private properties that support industrial and marine activities, as well as public properties that provide access, utility corridors, street ends, and bridge crossings.

The uplands surrounding the LDW middle reach are mixed use, with a heavy industrial and commercial presence. There are some residential areas and parks or open space. The southern extent of the LDW middle reach is bordered by the South Park neighborhood and Duwamish Waterway Park on the west bank. The Georgetown neighborhood borders on the east bank.

During the cleanup of the LDW middle reach, one area in the LDW upper reach, referred to as Sediment Management Area (SMA) 10, will also undergo cleanup (see Figure 2-1). This area was postponed for upland source control reasons. Upland property along this LDW upper reach cleanup area is private property located in the City of Tukwila.

Figure 2-1
LDW Middle Reach and Upper Reach SMA 10 of the Lower Duwamish Waterway Superfund Site

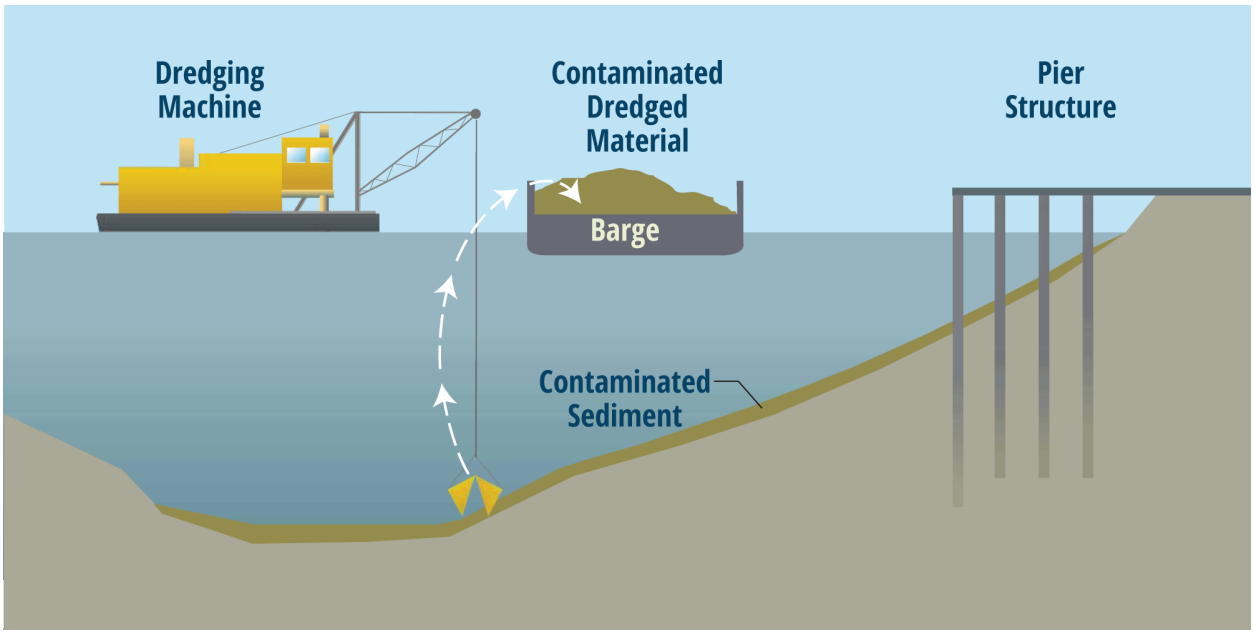


2.3.1 Selected Remedial Technologies

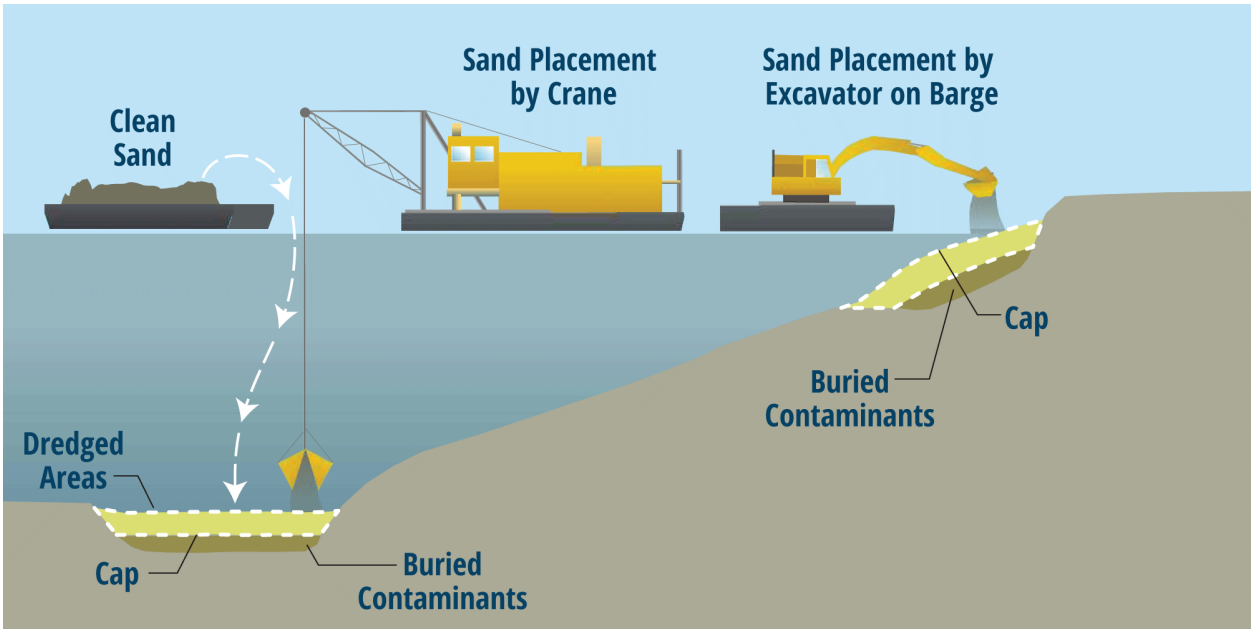
The remedial (cleanup) activities in the LDW middle reach include a combination of active and other remedial technologies outlined in this section. Active remedial activities include the use of construction equipment.

2.3.1.1 Active Remedial Technologies

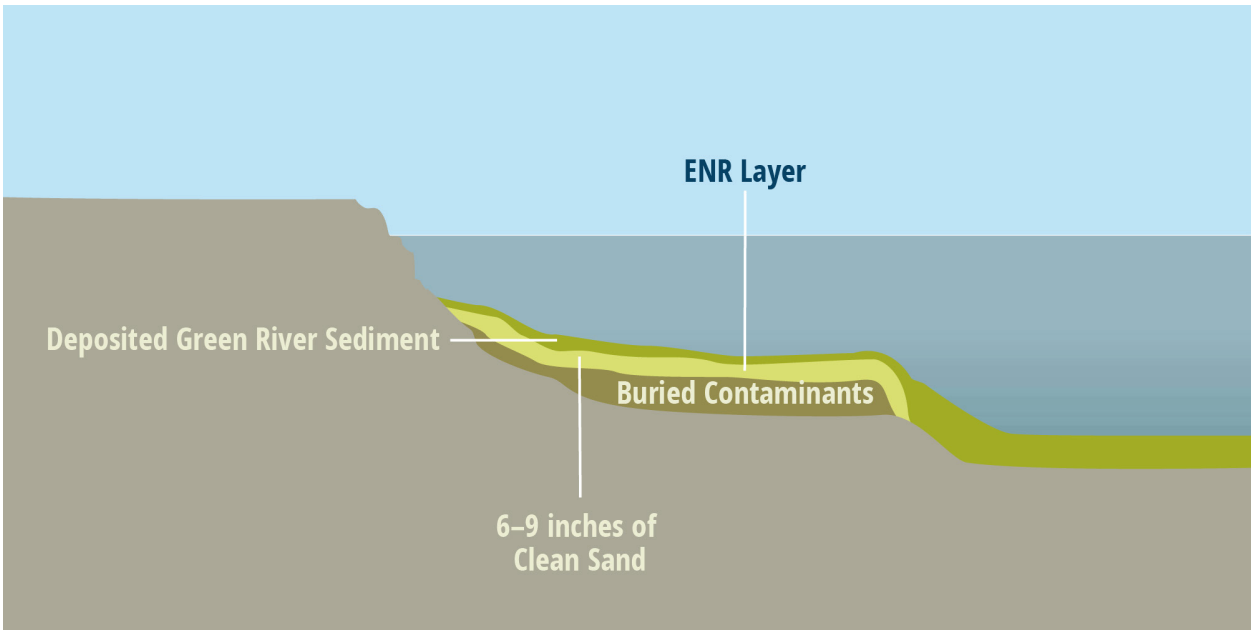
Dredging and excavation remove contaminated sediments from the waterway. Cleanup actions using dredging and excavation will generally occur working from upstream to downstream. After removal, dredged material will typically be moved by barge to a transloading facility. The dredged material is then transported from the transloading facility by rail or truck to the permitted landfill where it is disposed. For specific areas of the LDW middle reach where land-based excavation is required, excavated material will be placed directly into trucks for transportation to the transloading facility and then by rail to a permitted landfill.



Capping covers the contaminated sediments with engineered layers of sand, silt, gravel, and rock to contain and isolate the contamination.

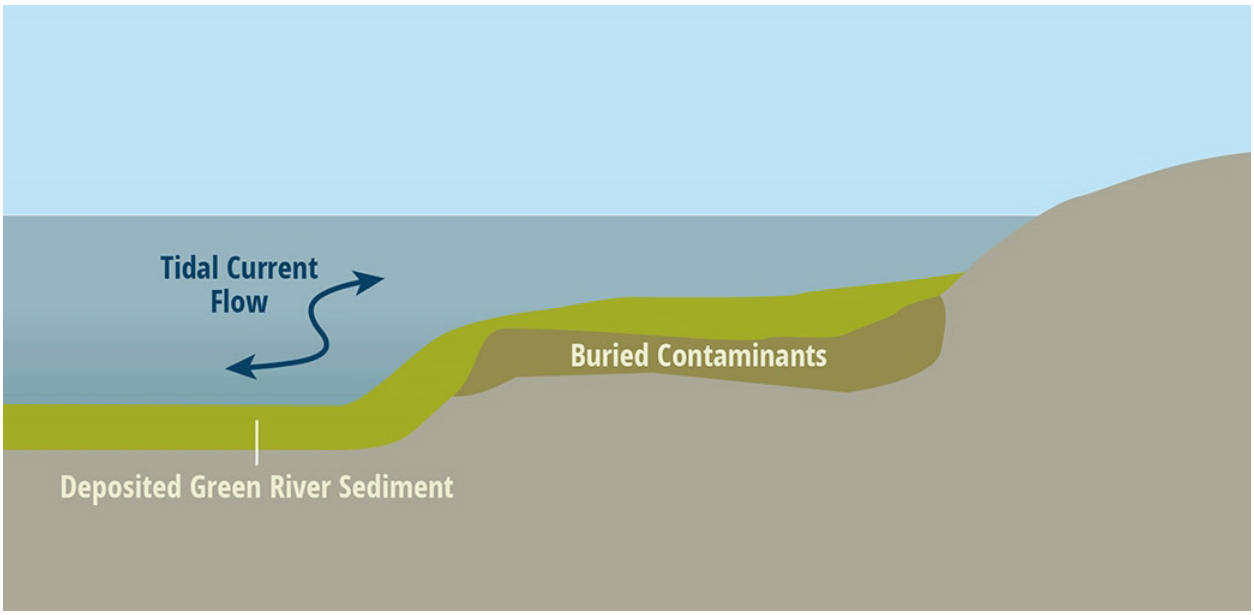


Enhanced natural recovery (ENR) uses a thin layer of clean sand over contaminated sediments to speed up the natural recovery process.



Location-specific technologies will also be used in areas with restricted access and/or with site-specific limiting conditions. This includes placement of ENR material that can be amended with activated carbon in: 1) areas where equipment cannot safely remove material (such as under piers, next to bulkheads, and riprapped or engineered shorelines); and 2) areas where dredging cannot be conducted to the full extent of contamination because of proximity to buried utilities. It also includes areas where dry excavation methods are preferred over open-water dredging to facilitate work outside of the in-water work window and to directly load hazardous material into containers for final disposal.

Monitored natural recovery relies on the movement of cleaner sediments from upriver to mix with low to moderately contaminated sediments in the waterway. This ultimately reduces contaminant concentrations in surface sediments. These sediments are monitored to measure contamination reduction over time.



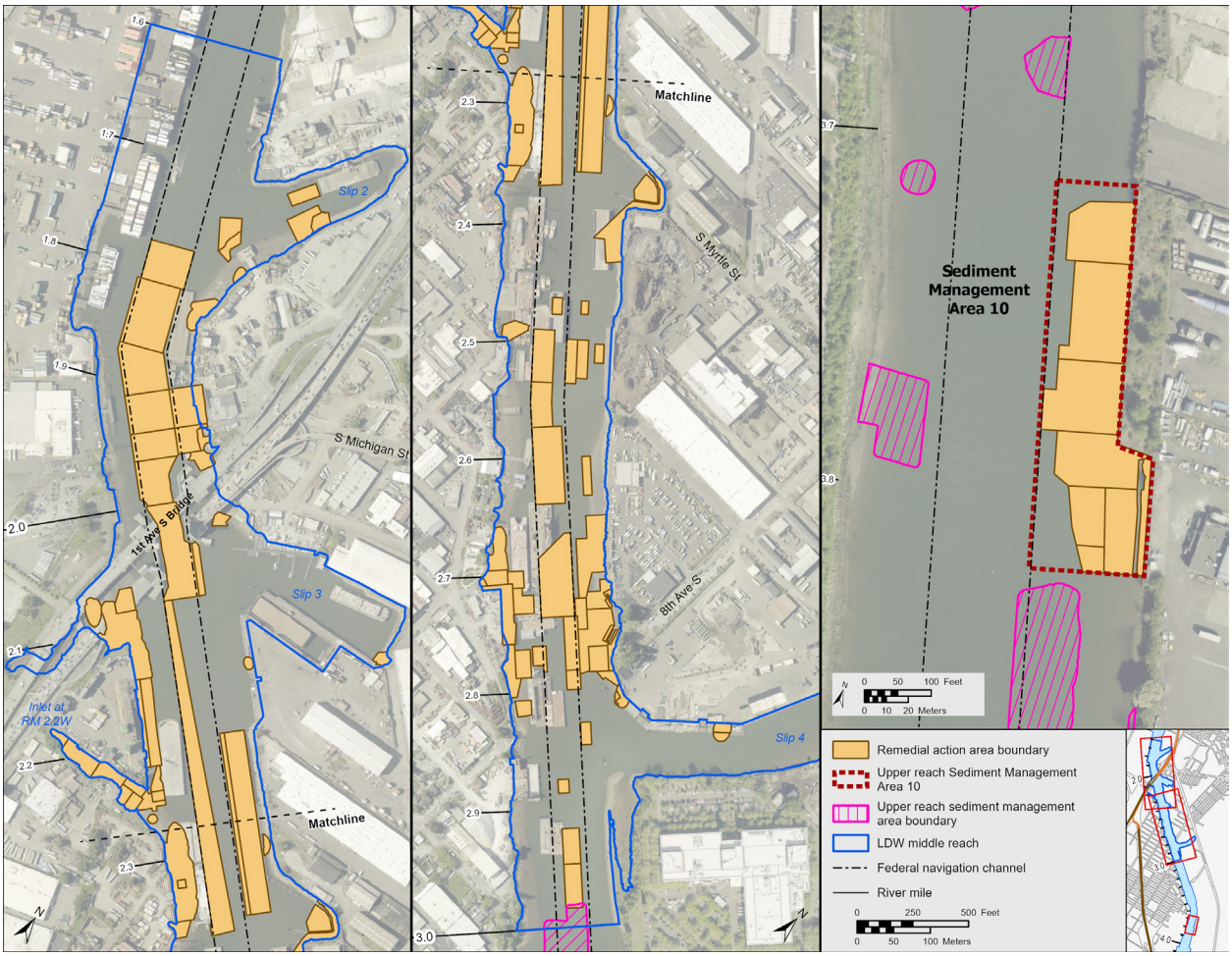
2.3.2 Planned Construction Activities

Construction activities that will occur as part of the LDW middle reach cleanup of remedial action areas (RAAs), as shown in Figure 2-2, include the following:

- Preparation of the upland site support areas used for staging equipment and materials: Setting up temporary facilities, staging equipment, and storing clean materials before use in construction
- Clearing and grubbing: Removing vegetation and debris to prepare the work site for remedial activities
- Removal of contaminated sediments: Via dredging and excavation methods

- Transload: Transferring materials (such as dredged sediment and debris) from one mode of transportation to another, such as from a barge or a truck to a train
- Transportation of contaminated materials: Transporting dredged sediment and debris from one location to another, including by barge, rail, or truck
- Containerization, transfer, and handling of hazardous materials: Containerizing all hazardous materials, directly loading into trucks, and transferring for transportation off site
- Disposal of contaminated materials: Disposing of dredge sediment and debris at off-site, permitted commercial landfills
- Placement of clean imported materials: Placing clean sand, gravel, and/or armor materials
- Survey and inspections: Documenting the condition of the work sites and surrounding areas, as well as the progress of construction before, during, and after construction
- Removal of derelict piles/structures, and debris: Removing derelict piles and structures and any debris to allow for dredging
- Monitoring and sampling during construction: Collecting sediment and water samples to confirm that dredging has removed the contaminated sediment as required by the design and that water quality is protected
- Installation of temporary cofferdam/shoring wall: Installing temporary structures to facilitate dry excavation in limited areas
- Installation of replacement piles and outfall erosion control: Replacing any Tribal fishing piles that are temporarily removed for construction access and installing outfall erosion control measures
- Site demobilization and cleanup: Removing construction equipment and materials from the work site and restoring the work site to pre-construction conditions

Figure 2-2
Remedial Construction Locations in the Middle Reach and Upper Reach SMA 10 of the Lower Duwamish Waterway



2.3.3 LDW Middle Reach Cleanup Activities Schedule

Procurement of Contractor(s) for the middle reach construction is expected to begin in late 2027. Upon contract award, the selected Contractor(s) will draft a Remedial Action Work Plan (RAWP), which will require EPA review and approval. In-water construction for the LDW middle reach is planned to take place from October through February each year, beginning in late 2028. Construction is expected to be continuous for approximately six to ten construction seasons (see Figure 2-3).

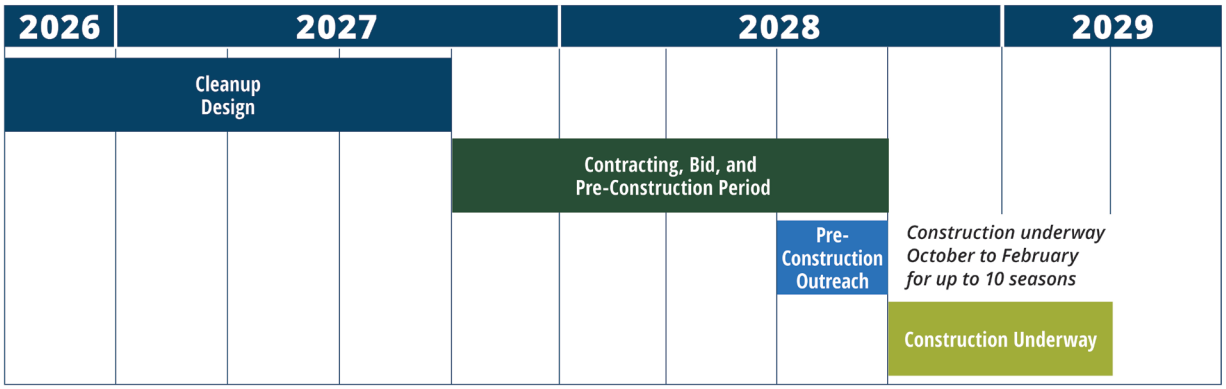
Per the Specifications, standard construction work hours are expected to be 7:00 a.m. to 7:00 p.m., Monday through Friday, and 9:00 a.m. to 7:00 p.m. on Saturdays. Nighttime in-water work is

anticipated to be required while working under or near the State Route (SR) 99 1st Avenue South Bridge (possibly requiring short-term bridge closures, not occurring during peak commute hours).

In addition, in-water work during the nighttime or on Sundays and legal holidays may be required to conduct intertidal work or bank excavation activities due to the timing of low tides. EPA coordination and approval will be required for those situations. In addition, any in-water work that is conducted during the weekends or nighttime will be subject to additional restrictions.

The implementation schedule for cleanup will be updated throughout construction based on the Contractor's working schedules and will be available to the public on the project website (see Section 5.4.1).

Figure 2-3
LDW Middle Reach and Upper Reach SMA 10 Cleanup Activities Schedule



3 Process for Identifying Construction Impacts During Design

This section describes the outreach and engagement process performed during design, which helped identify key community concerns about construction impacts from cleanup activities. This section also presents the known construction impacts and how those are addressed through the remedial design.

3.1 Community Outreach Performed

To understand the community's concerns about potential impacts during remedial construction, LDWG conducted engagement within Duwamish Valley communities in 2026. This generally included the neighborhoods of South Park and Georgetown. During this engagement, the LDWG team performed the following outreach tasks:

- Attended community meetings to share information and collect feedback
- Hosted an in-person drop-in session for the public to stop by and discuss their priorities for the LDW middle reach
- Distributed a mailer to properties in South Park and Georgetown that are within the LDW middle reach area
- Distributed flyers at community gathering hubs in South Park and Georgetown
- Conducted a community survey in English, Spanish, Vietnamese, and Khmer
- Posted on the King County Wastewater Treatment Division's Facebook page to promote engagement opportunities
- Emailed more than 280 people through the LDWG email newsletter listserv
- Emailed nearly 100 community organizations and businesses to share the survey opportunity

Additionally, throughout 2026, the LDWG design team has regularly communicated with waterway-adjacent property owners and business owners to obtain information to inform the middle reach design.

The CIMP also contains feedback received during upper reach design and construction outreach that applies broadly to both upper and middle reaches. The LDW upper reach CIMP can be viewed at www.ldwg.org. The feedback from these engagement efforts was used to inform development of this CIMP and will continue to be incorporated as necessary.

Because this CIMP focuses on mitigating concerns voiced by the community and recognizing the immense history of LDW engagement in the Duwamish Valley over the last two decades, content within this plan is heavily informed by previous engagement plans. This includes the *Lower Duwamish Waterway Superfund Site Community Involvement Plan* (EPA 2016) and feedback from the EPA's Lower Duwamish Waterway Roundtable event in 2025 (EPA 2026) and the U*pper Reach Community Impacts Mitigation Plan* (LDWG 2024a) and *Community Outreach and Communications Plans* (LDWG 2024b). Refer to Section 3.2 for a full list of resources from previous engagement efforts.

This CIMP presents the actions that the EPA and LDWG will take during construction to reduce impacts, where possible, on the community (e.g., residents, businesses, fishers, and waterway users) resulting from the continued LDW cleanup construction activities. This document will be updated during LDW middle reach construction as appropriate (between seasons) if new concerns arise.

3.2 Community Concerns Identified Through Engagement

Engagement with Duwamish Valley communities on the LDW cleanup has been an ongoing effort for more than 20 years. LDWG, federal, state, and local agencies, as well as local community groups such as the Duwamish River Community Coalition, have all conducted this engagement.

LDWG acknowledges the rich resources of data available through previous engagement efforts. The following is a list of resources reviewed and used for the compiling of community concerns and priorities on the following pages:

- Lower Duwamish Waterway Superfund Site Community Involvement Plan (EPA 2016)
- Lower Duwamish Waterway Fishers Study Data Report (Windward 2016)
- Community Roundtables (conducted by EPA in 2021, 2022, 2023, 2024, and 2025)
  - The Roundtable is a forum for those affected by the cleanup to provide input to the EPA during design and construction. The Roundtable provides an opportunity for participation by the following: federal, state, and local government agencies; environmental groups; residents; neighborhood associations and community-based organizations; fishers; recreational users; businesses; resource members; industry and labor; Tribes; Potentially Responsible Parties (government, and, separately, non-government); and community advisory groups.
- Health Impact Assessment (UW et al. 2013)
- The Duwamish Valley Cumulative Health Impacts Analysis (Gould and Cummings 2013)
- Duwamish Valley Climate Resilience Survey (SASPER 2023)
- Boeing Plant 2 Community Involvement Plan (EPA 2011)
- Terminal 117 Cleanup Community Health and Safety Plan Phase 1: Sediment and Upland Cleanup (Crete Consultants and EnviroIssues; 2012)

Table 3-1 outlines known community concerns related to LDW middle reach cleanup construction activities. Though LDWG asked the community for feedback about their construction cleanup concerns, some of the feedback received from the community in 2026 falls outside the scope of sediment cleanup activities. LDWG will share this feedback with the agency partners best positioned to address it. Please note that not all concerns listed in Table 3-1 have solutions or can be mitigated by the project.

Table 3-1
Community Concerns Identified Through Engagement

Note: Topics and themes expressed during previous cleanup engagement are retained in the following tables, with the addition of topics specific to LDW middle reach. See Section 5.3 for proposed mitigation measures for these topics.

Water Quality and Intertidal/Shallow Subtidal Habitat

Topic	General Theme of Community Feedback
Sediment resuspension management	• The community is concerned that sediment will be disturbed during construction activities and be carried to other parts of the river.
Intertidal and shallow subtidal habitat	• The community is concerned about intertidal habitat impacts from construction and impacts to vulnerable species in the mudflats. • The community wishes to prioritize habitat restoration in many places along the waterway.

Quality of Life and Other Community Impacts

Topic	General Theme of Community Feedback
Air quality, noise, light, and odor	• The community is concerned about air quality impacts, noise (including train noise), increased artificial light, and odor during construction.
Activities of people who live and gather in the area	• The community has concerns regarding restricted waterway and park access along the LDW middle reach during construction for residents and people experiencing homelessness. They also expressed concerns about possible contamination of shorelines and parks. • The community is concerned that construction may impact community festivals and gatherings. • The community is concerned about general flooding in the community. Related to cleanup activities, they are concerned about flooding during dredging work and concerns about direct exposure to disturbed sediment within flood waters. • The community is concerned about unexplained drone surveys being conducted near the neighborhoods in South Park and Georgetown due to privacy and safety concerns.
Private recreational moorage	• People living at or managing private moorage are concerned that construction will impact people who live aboard their boats with respect to noise, light, and wake created by construction vessels.
Fishers	• The community has concerns regarding accessibility of fishing sites during cleanup, exposure to contaminants while fishing, and the safety of consuming fish from the LDW during cleanup activities. • The community is concerned that cleanup activities will disrupt Tribal fishing and emphasize coordination.

Traffic

Topic	General Theme of Community Feedback
Maritime traffic	• Waterway businesses and recreational users have concerns about increased vessel traffic, navigating around cleanup equipment, access to shoreline properties via the waterway, vessel speeds, increased air quality issues associated with more vessels, and safety for users of small watercraft such as kayaks. • Kayakers have noted Duwamish Waterway Park and areas near 1st Avenue South Bridge as locations they hand launch. • The community has concerns about impacts on marine traffic using the federal navigation channel when cleanup equipment and barges are repositioning.
Roadway traffic	• The community has concerns about increased roadway traffic, parking impacts, road and SR 99 1st Avenue South Bridge closures (especially timing and duration), possible bus re-route impacts, increased air quality issues associated with more vehicles, and contamination tracking or spilling along haul routes, including those near the landfill.

Waterway Users

Topic	General Theme of Community Feedback
Shoreline access to waterway users	• The community has concerns regarding access being restricted at nearby boat ramps, launches, parks, and public access points. • Community members request access to alternative green spaces, if shorelines are inaccessible. • Community members emphasize the desire to retain or enhance tree canopy and improve community access points, greenspace, and trails generally along the waterway.

Economy and Jobs

Topic	General Theme of Community Feedback
Opportunities for living wage jobs	• The community wants the cleanup to generate local green jobs and ensure worker safety while limiting disruptions to maritime and industrial activities in the area. • The community is concerned about business impacts to water-dependent businesses, during and after cleanup.

Public Communications During Construction

Topic	General Theme of Community Feedback
Access to project information	• Community members desire clear, timely information about the project and potential construction impacts. • The community emphasizes the need to communicate directly with fishers regarding cleanup progress and that a seafood advisory remains in place. • The community requests information about how this project relates to other ongoing cleanup efforts in and around the project area, including upland cleanups.

Topic	General Theme of Community Feedback
Cataloguing complaints	• The community recommends having a system to catalogue community complaints during construction.

Notes:
LDW: Lower Duwamish Water
SR: State Route

3.3 Known Construction Impacts

In general, the public can expect the following during cleanup construction:

- Staging of equipment and materials: This includes setting up, organizing, and storing materials before use in construction.
- Construction equipment conducting dredging/excavation/placement and transporting materials on the waterway: This includes tugboats, dredge equipment on barges, and barges carrying clean materials or contaminated sediments to and from work areas.
- Tugs moving barges filled with contaminated sediments, containers, debris, or clean materials: Barges will transport dredged sediment and debris from the cleanup areas to a transload facility on the shore. At the facility, the dredged material will be offloaded (transferred onto land) and then transported using railcars to a permitted landfill. Sometimes the tugs will move barges with clean materials for placement in specific in-waterway cleanup areas.
- Work crews surveying, sampling, and conducting inspections: This entails people in smaller boats observing the work, surveying the river bottom, monitoring water quality, and collecting water and sediment samples. This is done to confirm that dredging is being conducted as required to comply with water quality standards and to confirm that construction has removed the contaminated sediment as required.
- Construction taking place during daytime hours and potentially during nighttime: Schedules may shift based on tides and the type of work being conducted. Artificial lighting may be used for safe work during dark hours.
- Construction equipment and pile driving activities generating noise during operations: Pile driving will be performed to: 1) replace piles that are temporarily removed for construction access (Tribal fishing piles or mooring dolphins); and 2) install a temporary wall at RM 2.2, at the west inlet. The temporary wall will help create a "dry" cleanup area so that sediment removal can be separated from the normal flow of the waterway. Because of this, cleanup work in this inlet will not be limited to the in-water construction season (October to February).
- Demolition of structures and debris removal: Crews potentially demolishing derelict structures and conducting debris removal.
- Trucks hauling contaminated sediments off site: Hauling may occur from specific cleanup areas to a facility to transfer the contaminated materials to railcars (for final transport to a permitted landfill).

- Workers monitoring for oily sheens and conducting procedures to capture oily sheens: Floating booms or other devices would be used to respond in the event of an observed sheen from cleanup construction.

Figure 2-2 (see Section 2.3.2) illustrates the specific areas where sediment contamination exists that will be cleaned up through LDW middle reach construction activities (including SMA 10 in the upper reach).

3.4 Construction Impacts Addressed During Remedial Design Process

As outlined in Table 3-1, the LDWG design team has identified community issues, concerns, and priorities prior to sediment cleanup to help reduce construction impacts to the extent possible. As part of the cleanup design process, the design team will develop a series of Contractor requirements in coordination with the EPA to mitigate and reduce construction impacts during cleanup implementation.

The construction specifications (referred herein as Specifications) are written documents for the Contractor that detail the work and describe specific materials to be used and procedures to follow. The Specifications also list specific regulatory requirements that the Contractor is required to follow during construction. The middle reach Specifications will be developed at Pre-Final (90%) RD and will outline specific requirements designed to reduce construction impacts.

4 Process for Identifying and Addressing Construction Impacts During Cleanup Activities

This section describes construction communications and outreach that will occur during the cleanup construction process to allow the community to voice new concerns that may arise during active construction. This section also presents the steps the project team (LDWG, its design consultant, and its construction management quality assurance [QA] team), with close coordination and oversight by the EPA, will take or direct the Contractor(s) to take to address community concerns during construction.

4.1 Community Outreach and Engagement Process

Throughout the construction process, the EPA and LDWG will actively monitor and listen to community concerns. Recognizing the importance of keeping the community informed and providing transparent communications, the EPA and LDWG have implemented various communications channels to allow the community's voices to be heard and their concerns considered. A key aspect of that approach involves regularly communicating with the community to provide updates on construction activities and to gather feedback should any issues occur.

Construction communications and outreach will be performed through various methods, including digital and in-person activities. The community will not only be informed of construction updates through these methods but will also be able to share questions and concerns with the project team through various platforms. Methods of communication and outreach are further described in the following subsections; however, this information will be further developed in the forthcoming COCP (to be developed at Pre-Final [90%] RD) and may be revised as the design and construction evolve.

To ensure language access, core communications materials will be translated into Spanish, Vietnamese, and Khmer. The following documents and materials will be translated:

- Important construction updates
- Project milestone announcements
- Upcoming meeting notices, should they occur
- Other materials, as needed

4.1.1 Digital Materials

Construction communications and outreach will be performed through various digital methods, such as the following:

- Website: A project-related website is maintained regularly with the most up-to-date construction information. The website has a page dedicated to construction and includes information on how the public can submit an email or call the project team. The website links to some materials that are translated into Spanish, Vietnamese, and Khmer.

- Email newsletter: The project team will distribute email newsletters on a regular basis (likely weekly from October through February) to provide progress updates on the construction. The email newsletters will include construction progress and milestones with clear descriptions of the cleanup activities alongside possible impacts, such as night work and bridge closures. Additionally, the newsletters will outline how to submit questions and concerns during construction and how the project team is addressing feedback from the community. Along with the email newsletter and website updates, the project team will share a weekly Environmental and Community Report that demonstrates how the Contractor is meeting environmental criteria.
- Phone line: A phone number is made public for community members to share questions and concerns about construction. The phone number will be displayed on construction notices, the website, and project email updates. This phone line will be monitored during construction work hours. Callers can leave a voicemail outside of the standard construction operating hours, or when outreach staff are unavailable, for a response the next business day.
- Email inbox: An email address is made public for community members to share questions and concerns about construction. A project team member will respond to all emails within 24 hours (on business days). The project email inbox is info@ldwg.org.
- Social media: As relevant and necessary, the project team may use social media platforms to share project updates and upcoming outreach opportunities with the community.

4.1.2 Physical Materials

Construction communications and outreach will be performed through various physical methods, such as the following:

- Notifications, door hangers, and flyers: When appropriate, the project team will develop plain-language notifications, door hangers, and flyers to reach the community as a notice of upcoming construction impacts. These resources are intended to be used for specific audiences on an as-needed basis. For example, they may be used if the project team anticipates upcoming temporary impacts that affect travelers on the 1st Avenue South Bridge or nearby residents who might experience increased noise. Materials would include translations into Spanish, Vietnamese, and Khmer.
- Educational signage at select public access points: The project team will develop and post educational signage about active construction at select public access locations that may be impacted by construction in the LDW middle reach or where construction activities are most visible. The locations have yet to be determined but may include Duwamish Waterway Park, Gateway Park North, or Duwamish River People's Park (for SMA 10). The signage will include a QR code to direct people to the project website. Signage would include translations into Spanish, Vietnamese, and Khmer.

4.1.3 Activities

Construction communications and outreach will be performed through various in-person activities, such as the following:

- Community events: The project team will participate in local community events such as festivals, fairs, and markets to interact with the community and provide an opportunity to ask questions and give feedback.
- Briefings with community groups or businesses: When requested, the project team will conduct informal briefings with various businesses, community-based organizations, and neighborhood associations in the immediate project area to provide updates and information about construction. These briefings will be tailored to the specific needs and interests of each group and may include presentations, question and answer sessions, and/or interactive activities.
- Office hours: The project team will host in-person office hours on a trial basis. This is an opportunity for members of the public to have direct access to project staff and ask questions. The cadence of office hours will be decided later; however, they will likely occur monthly between October and February.
- Boat tour: LDWG sponsors an annual boat tour hosted in collaboration with local community organizations, government, and project partners. This event provides an opportunity to demonstrate the multi-partner collaboration supporting the cleanup and share updates on cleanup progress.
- Collaboration with EPA events: The project team will coordinate with the EPA to participate in existing events, such as the LDW Community Roundtable, to reduce engagement requests put on the community.

4.2 Steps to Address Community Concerns During Construction

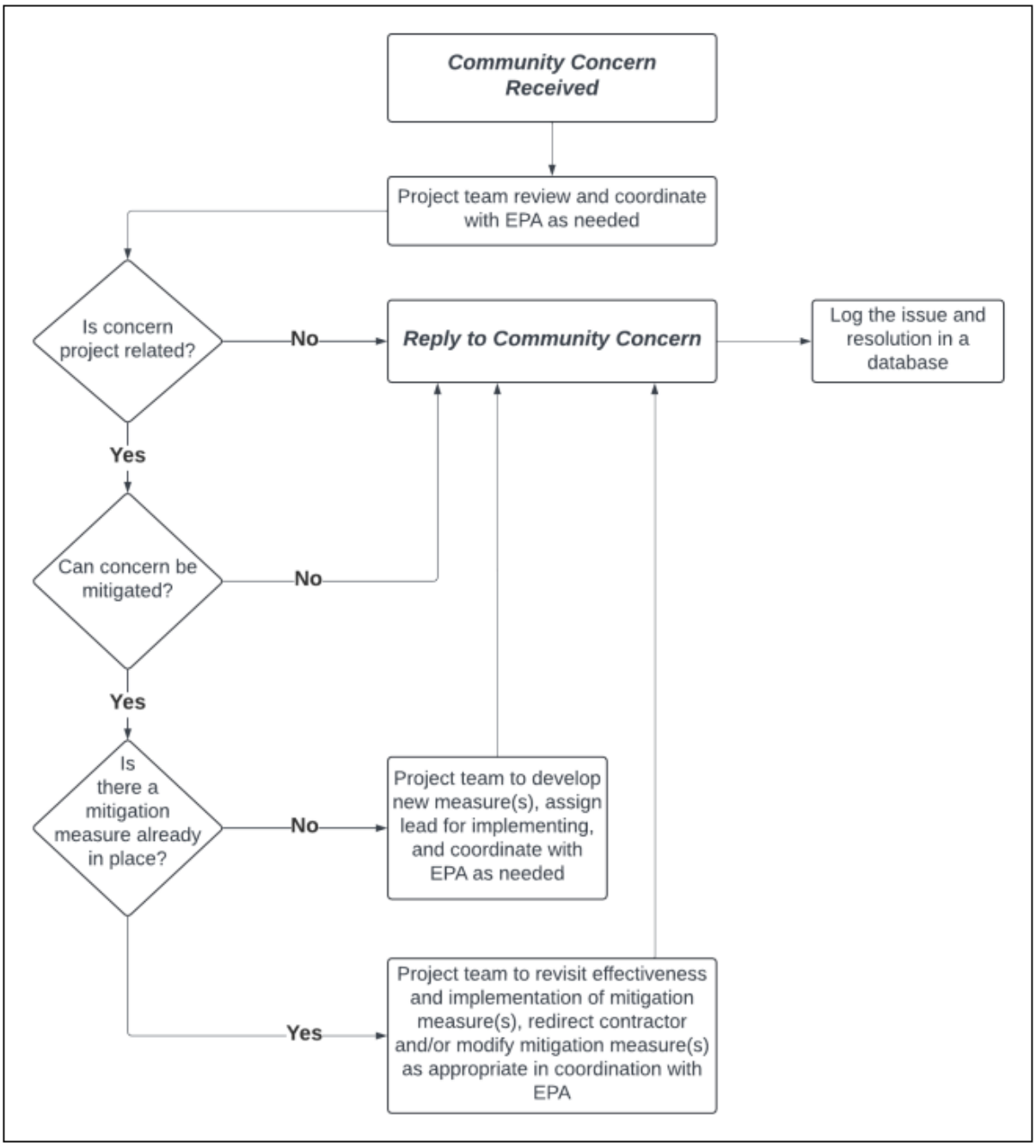
The EPA and LDWG have established a response process to promptly address topics or concerns received by the project team that necessitate further clarification or attention. Generally, the following steps will occur to respond to community concerns during construction:

1. Receive community concern: The project team may receive a community concern through email, telephone, community events, or other forms of communication, such as in-person outreach.
2. Project team review and evaluation: The project team will review, evaluate, and respond to all community concerns with applicable members of the project team as appropriate for the nature of the concern. Project representatives will follow the general process in Figure 4-1 to evaluate the nature of the concern, identify the mitigation lead (LDWG or the Contractor), and determine whether mitigation may need to be enhanced, revised, or developed.
3. Coordinate and respond: The project team will collaborate with the required team members or the EPA to respond to and resolve community concerns. The project team will follow up with the individual(s) who expressed the original concern to let them know what steps have been taken.

4. Log in database: The project team will log all concerns received and their resolutions in a project communications database. A summary of concerns received will be shared with the EPA. The project team will provide summary-level themes of community concerns on the project website through the Environmental and Community Report.

The flowchart (Figure 4-1) shows the general process and parties involved in screening and addressing community concerns received during construction.

Figure 4-1
Process for Addressing Community Concerns



5 Ways to Reduce and Manage Construction Impacts During Cleanup Activities

This section describes ways to reduce and manage identified impacts during cleanup activities through Contractor requirements as described in the forthcoming Specifications, environmental compliance monitoring activities, and best management practices (BMPs).

5.1 Environmental Compliance by the Contractor

This subsection describes the environmental protection measures and inspection activities that the Contractor will be required to implement during construction for the LDW middle reach remedial action implementation. The Contractor will be required to submit various environmental compliance plans, which will be prepared as part of its RAWP. A final EPA-approved RAWP will be in place prior to the start of construction activities. The RAWP will include an Environmental Protection Plan, which will describe the environmental protection measures and inspection activities that the Contractor will implement during construction. The Environmental Protection Plan will include the following documents, as required by the Specifications:

- Water Quality Protection Plan
- Erosion and Sediment Control Plan
- Stormwater Pollution Prevention Plan
- Water Management Plan
- Spill Prevention, Control, and Countermeasure Plan
- Air Pollution and Odors Control Plan
- Noise Control Plan
- Light Control Plan
- Personnel and Equipment Decontamination Plan
- Traffic Control Plan

5.2 Quality Assurance Inspection and Environmental Monitoring Program by Construction Management Quality Assurance Team

This subsection describes the QA inspection and environmental monitoring program for the LDW middle reach and SMA 10 remedial action implementation that will be conducted by the construction management QA team (an independent consultant team completing QA oversight during construction activities). The construction management QA team will inspect and monitor the Contractor's compliance with the contract documents. One objective of the program is to conduct environmental monitoring as required by the contract documents and to verify that the Contractor's work is being carried out in accordance with requirements and environmental monitoring plans.

Quality-of-life monitoring will occur during construction to reduce the effects of cleanup construction activities on the local community. Quality-of-life considerations include the following topics:

- Air, noise, and light quality
- Equipment and material transportation through residential areas
- Construction work hours

During construction, the construction management QA team will implement an environmental monitoring program as described in Table 5-1 that will include the following elements, as part of the *Construction Quality Assurance Plan for the Lower Duwamish Waterway Middle Reach* (CQAP; to be developed at Pre-Final [90%] RD):

- Water Quality Monitoring Plan (WQMP; Appendix A of the CQAP)
- Construction Sediment Sampling Quality Assurance Project Plan (Sediment QAPP; Appendix B of the CQAP)
- Air, Noise, and Light Monitoring Plan (ANLMP; Appendix C of the CQAP)
- Cultural resources monitoring as identified in the Monitoring and Inadvertent Discovery Plan (MIDP; Appendix D of the CQAP)

The construction management QA team will report monitoring results to the EPA and implement contingency or corrective actions as approved by the EPA as necessary. If new or unexpected community concerns are identified during construction, the project team will review and respond to the concerns in coordination with the EPA as shown in Figure 4-1 and provide information about how the concerns are being addressed on the project website.

In addition to environmental monitoring, the construction management QA team will perform QA inspection of the Contractor's work and will summarize construction QA activities in a Daily Weekly Field Report to the EPA, as required by the CQAP (to be developed with all associated appendices at Pre-Final [90%] RD). Table 5-1 identifies required construction inspection activities by the construction management QA team.

Table 5-1
Summary of Quality Assurance Inspection and Monitoring Requirements by Construction Activity

Construction Activity	Required Construction Inspection and Structures Monitoring Activities[1]	Required Environmental Monitoring Activities
Dredging and excavation	• Provide daily inspection. • Review Contractor's bathymetric and topographic surveys (progress and post-dredge). • Review Contractor's bucket plots, barge displacement tonnages, disposal weight tickets, and other QC documentation.	• Construction sediment sampling per Sediment QAPP • Water quality monitoring per WQMP • Cultural resources monitoring per MIDP • Air, noise, and light monitoring per ANLMP
Transloading, upland transportation, and disposal at transload facility	• Provide regular inspection of transload facility operations. • Conduct site visit of disposal facility, if requested.	• See Note 2
Material placement	• Provide daily inspection. • Review Contractor's bathymetric and topographic surveys (progress and post-material placement). • Review Contractor's bucket plots, placement tonnage estimates, and other QC information. • Review import material testing gradation and chemistry analytical results. • Inspect import material borrow facilities (as necessary). • Inspect amended cover mix for Specifications compliance.	• Water quality monitoring per WQMP • Air, noise, and light monitoring per ANLMP
Demolition and removal (identified debris and piling)	• Provide daily inspection. • Confirm that debris and pile removal are performed at correct locations. • Conduct structures monitoring.	• Water quality monitoring per WQMP • Air, noise, and light monitoring per ANLMP
Modifications of existing structures, outfalls, utilities, and pile installation	• Provide daily inspection. • Inspect pile installation. • Inspect outfall scour protection installation. • Inspect temporary shoring installation. • Inspect work to confirm Contractor does not impact existing structures and utilities. • Conduct structures monitoring.	• Air, noise, and light monitoring per ANLMP

Notes:

1. QA construction inspection, structures monitoring, and environmental monitoring activities that will be reported to the U.S. Environmental Protection Agency include Weekly Contractor Construction Reports and Weekly Field Activity Reports for QA documentation.
2. The Contractor's transload facility (to be identified in the Contractor's Remedial Action Work Plan) will be subject to monitoring requirements to meet its own permits (including Solids Waste Facility Permit, Industrial Stormwater General Permit, and Discharge Authorization).

ANLMP: Air, Noise, and Light Monitoring Plan

5.3 Mitigation for Potential Community Impacts

For each potential community impact included in Table 3-1 (see Section 3.2), this subsection will describe the Contractor's mitigation requirements, recommended BMPs, and monitoring to be performed to mitigate construction impacts during cleanup activities.

5.3.1 Sediment Resuspension Management

Mitigation to address sediment resuspension includes the following:

- Comply with BMPs: The project team recognizes that dredging will disturb sediment. The Contractor will be required to use BMPs to reduce potential impacts from this disturbance. BMPs are operational and engineering controls that aim to reduce construction environmental impacts and limit potential recontamination. At a minimum, the Contractor is required to implement the following BMPs as required by the Specifications:
  - Multiple "bites" by the dredge bucket on the sediment bed before rising to the surface will not be allowed so that the sediment bed disturbance by the bucket is reduced.
  - Closing of the dredge bucket on the bottom sediments (prior to ascension through the water column) will be required to limit resuspension.
  - Overfilling of the conventional clamshell and environmental dredge buckets will be prohibited. If overfilling is observed by the construction management QA team, measures (e.g., decrease the thickness cut of sediment from the bucket) will be taken to address this.
  - "Sweeping" (i.e., dragging a bucket or beam) or leveling of the sediment bed by pushing bottom sediments around with the dredge bucket to knock down high spots to achieve required elevations/thicknesses will be prohibited.
  - Interim underwater stockpiling of dredged material will be prohibited (i.e., taking small dredge cuts and temporarily stockpiling material at the mudline in a mound to allow the dredge operator to grab a fuller bucket).
  - Specific dredging procedures (e.g., top-to-bottom cuts) will be specified to limit the potential for slope failures and slope movement that would cause sediment resuspension.
  - Once out of the water, the dredge bucket will be moved reasonably quickly to the barge to reduce the amount of water that will drain out of the bucket back into the waterway.

  - Dumping of sediment from partially full or full dredge buckets back into the waterway will be prohibited.
  - Uneven filling and overfilling of barges beyond the required minimum freeboard will be prohibited to limit spillage from barges.
  - Dunking a dredge bucket into the waterway to clean off the bucket will be prohibited.
- All barges containing dredged materials will be required to be properly outfitted to filter dredge return water to meet the turbidity compliance criteria.
- Haul barges used to transport dredged sediment to the transloading facility will be watertight[1] and have fixed containment walls on all four sides, so material is not released into the river during transportation. Barge dewatering of dredged material within or adjacent to the dredging work areas is allowed and will use water filtration for the dredge return water.
- As an additional protective BMP to reduce potential suspended sediment transport when dredging, a rigid-frame silt curtain system may be required during dredging work for specific RAAs of the LDW middle reach (RAAs 21A and 31B through 31D, as required per the Specifications).
- Protect water quality: The Contractor is required to comply with Washington State water quality standards, and the construction management QA team will conduct water quality monitoring in accordance with the EPA-approved WQMP (Appendix B of the CQAP; to be developed at Pre-Final [90%] RD) during construction to determine whether construction operations need to be modified or BMPs need to be enhanced for compliance.
- Reduce contamination spread: The Contractor is required to control its work to reduce the potential for spreading contamination. This includes using tools such as an environmental (closed) dredging bucket as the primary technology for dredging, where feasible.

Environmental bucket

- Sample sediment post-dredging: After dredging, the construction management QA team will sample sediment in accordance with the EPA-approved Sediment QAPP (Appendix A of the CQAP; to be developed at Pre-Final [90%] RD). This will be done within

[1] The term "watertight" refers to non-turbid water discharging from the barge by seeping or weeping.

and outside the dredged area to determine where clean material placement is needed to address typical dredge-related residual contamination that has settled on the surface.

- Sheen management: In the event that a sheen is observed resulting from dredging operations, the Contractor will be required to conduct sheen management procedures and control measures, including the use of sheen recovery equipment (such as oil-containment booms and/or oil absorbent materials) and other adaptative management response actions.

5.3.2 Impacts on Intertidal and Shallow Subtidal Habitat

Mitigation to address impacts on intertidal and shallow subtidal habitat includes the following:

- Restore intertidal habitat post-construction: The Record of Decision requires that in habitat areas in intertidal and shallow subtidal areas, the remediated areas that before construction are above -10 feet mean lower low water (MLLW) elevation are returned to pre-construction surface elevations. The Contractor will place clean material to restore the sediment bed elevations to pre-construction elevations and to benefit fish foraging.

5.3.3 Impacts on Air Quality, Odor, Noise, and Light

Mitigation to address the impact on air quality, odor, noise, and light includes the following:

- Comply with federal, state, and local ordinances: The Contractor will be required to comply with applicable federal, state, and local ordinances for air quality, noise, and light.
- Comply with air pollution requirements: The Specifications will require the Contractor to incorporate green remediation principles into its construction activities to achieve improvements on the environmental footprint generated by the remedial action, especially associated with air emission impacts. For air pollution compliance, the Contractor must meet minimum EPA-Tier engine Specifications requirements based on each construction activity.
- Comply with BMPs:
  - Air quality: Examples of air quality specification requirements include the following BMPs:
    - Limit engine idling time of on-road vehicles (including delivery and haul trucks), before equipment engines are shut off, to 5 minutes maximum (not a requirement for heavy marine construction equipment or nearshore excavators).
    - Use clean diesel technologies in all off-road equipment (such as diesel oxidation catalysts, partial and full diesel particulate filters, and selective catalytic reduction).
    - Use electrically powered equipment or equipment that uses alternative fuels (e.g., biofuels and biodiesel blends) or fuel additives (e.g., emulsified diesel) over traditional fossil fuels, where practicable.
    - Employ effective fleet management by planning to reduce fuel consumption through efficient transportation routes, transfer of only full loads when feasible,

selection of appropriately sized vehicles, and encouragement of low-carbon commuting and travel by workers.
    - Provide preventative vehicle maintenance to ensure peak operating efficiency. When exhaust emissions are determined to be excessive by the construction management QA team (through visual observation or air monitoring that could be triggered when a community complaint is received or construction management QA oversight), the Contractor shall repair or replace equipment.
    - Where practicable, use low-carbon-emission construction materials (sheet pile and steel pipe piling).
- Dust control: The Contractor will be required to prevent the migration of dust particles from construction activities. Examples of dust management specification requirements include the following BMPs:
    - Wetting of excavation areas, unpaved traffic lanes, and soil stockpiles if needed for dust control.
    - Covering haul truck and railcar loads to prevent the release of dust-bearing materials during transport.
    - Cleaning of construction vehicles leaving the Contractor transload facility(ies) to remove dirt or dust from wheel treads and exterior.
    - Using work site controls such as ceasing above-water excavation during high winds or limiting the number and size of excavations occurring at one time.
    - Sweeping any paved on-site truck routes, loader paths, and loading and stockpiling areas daily during dry weather, or more frequently if needed.
- Odor: The Contractor will be required, per the Specifications, to transport dredged materials emitting odors off site as soon as practicable. In addition, covering on-site stockpiles will reduce odors. The Contractor is required to comply with applicable air quality regulations to address potential odors from remedial construction activities.
- Noise: The majority of the construction activities will be conducted over the water, and general construction noise will occur throughout the project due to the use of heavy equipment; however, it is anticipated that the noise created by remedial construction will be lower or comparable to other industrial noise that is currently present at the work areas. Based on past remediation projects conducted on the LDW (including the LDW upper reach seasons 1 and 2 construction), noise monitoring has shown that the anticipated equipment for the LDW middle reach cleanup will be consistent with noise levels of the industrial area. The Contractor will be required, per the Specifications, to comply with all local noise ordinances (Seattle Municipal Code Chapter 25.08 [410, 420, and 425] and Tukwila Municipal Code Chapter 8.22). As described in Section 5.1, a Noise Control Plan will be prepared by the Contractor, as part of its RAWP. The project team will encourage the community to call the project phone line if the community

suspects that the cleanup activities are causing excessive noise; if the noise levels due to LDW middle reach construction activities exceed maximum permissible levels, the project team will work with the Contractor to modify its operations, such as limiting work to overnight rather than evening or early morning hours (to the extent practicable) to reduce the nuisance to the extent practicable. In some cases, LDWG will offer accommodation during unavoidable noise events.

  - Light: Artificial lighting is expected to be used during early morning and evening work to illuminate work areas and provide safe working conditions, although work will be generally limited for overnight work. Lighting will be directed to the work area to reduce the amount of light that affects the nearby community. Lighting systems will be repositioned as necessary to reduce impact. The Contractor may propose working outside of standard work hours when work activities require certain tidal elevations or to reduce traffic impacts on the public (such as during extended bridge openings). The Contractor will be required, per the Specifications, to comply with all local light ordinances. As described in Section 5.1, a Light Control Plan will be prepared by the Contractor, as part of its RAWP.

- Monitoring before and during construction: As stated in Table 5-1, the construction management QA team will conduct air and noise monitoring for baseline conditions (before construction) and during construction (based on ongoing visual observations or community complaints), in accordance with the ANLMP (Appendix C of the CQAP).

5.3.4 Impacts on Activities of Nearby Communities and Businesses

Mitigations to address impacts on activities of nearby communities and businesses include the following:

- Limit activities that impact public access: Most construction activities will happen on the waterway, and private, controlled properties will be used for staging, so upland public access to parks and shorelines will not be restricted. Temporary restrictions on public access to water will occur at active construction locations when public access areas are within a 100-foot buffer of heavy construction equipment. However, the Contractor will store its equipment in designated location(s) that avoid restricting public access locations to the waterway users. It is anticipated that a minimum of 7 days' notice will be provided to the community regarding water access impacts.
- Interruptions to businesses: The project team will communicate with nearby affected businesses (that depend on the waterway and are located on the waterway adjacent to construction activities) through the methods identified in the forthcoming COCP. LDWG is directly coordinating with waterfront property owners where construction site access is needed to develop any required temporary construction easements or other agreements.
- Prioritize worker health and safety: Workers performing construction or oversight must follow a site-specific health and safety plan prepared by the Contractor, as part of its RAWP. The

Contractor is required to have a health and safety officer who will verify compliance with the plan. The construction management QA team also will be following its health and safety plans.

- Provide consistent cleanup outreach and communications: The project team will provide consistent communications about the cleanup and potential impacts, including educational signage at some public access points, the project website, regular emails to interested audiences, and ways for the nearby community to reach the project team should concerns arise. The project team will conduct visual inspections by boat of the shoreline areas adjacent to planned construction to determine whether homeless encampments are present. The project team is unaware of any existing homeless encampments adjacent to the RRAs; however, if encountered, the project team will communicate with the residents about potential impacts using established guidance and procedures of the City of Seattle and King County.
- Notify the community of drone survey activity when related to cleanup design or construction: In general, a drone survey team will typically work from public access areas, such as parks, or from private properties where they have permission to be. LDWG will notify the public in advance of cleanup-related drone survey work when it is occurring along the Duwamish through the website and emails to the community.

5.3.5 Impacts on Private Recreational Moorage Areas

Mitigation to address impacts on private recreational moorage areas includes the following:

- Provide advanced notice of weekend or nighttime work: The project team will notify affected moorage areas and people who live aboard their boats in advance of weekend or nighttime work that may impact them. Additional mitigation measures may be developed and implemented if nighttime work is unavoidable due to the need to work during low-tide periods.
- Comply with local navigation and speed requirements: Per the Specifications, the Contractor must comply with local regulations regarding navigation and LDW vessel speed limits. The Contractor will post signage at the upstream and downstream boundaries of the work site (RM 3.0 and 1.6, respectively) to request non-project vessels operate at a maximum speed of 7 knots while navigating through the work site.
- Coordinate overlapping construction activities, as needed: The Contractor will communicate with the project team regarding its planned work locations and schedule so that overlapping work, if identified, can be coordinated in advance.
- Comply with quality-of-life requirements: The Contractor will be required to comply with quality-of-life considerations, specifically air quality, odor, noise, and light (see Section 5.3.3).

5.3.6 *Impacts on Fishers and Fish*

Mitigation to address potential impacts on fish, people who fish from the LDW, marine mammals, and bird nesting include the following:

- Communicate with fishers and reaffirm the EPA's seafood consumption guidance: The EPA's Seafood Consumption Institutional Control Program for the LDW provides guidance to people who fish in the area about the potential risks associated with consuming resident fish and shellfish from the LDW and about safe alternatives. This program is known as "Safe to Catch, Toxic to Eat" (King County 2024). This remains in place during and beyond construction. The project team will continue to coordinate with the Community Health Advocates to provide in-language materials for fishers and point to the Safe to Catch, Toxic to Eat program as a reference during outreach.
- Only conduct heavy construction equipment activities during in-water work windows for fish protection: The LDW middle reach in-water construction schedule is established to limit impacts on certain fish species based on information from resource agencies (e.g., National Marine Fisheries Service-established fish work window).
- Coordinate with local Tribes regarding Tribal fishing: The project team is coordinating directly with the Muckleshoot Indian and Suquamish Tribes to reduce Tribal fishing impacts.
- Monitor the conditions of local fish: The Contractor is required to monitor for distressed or dying fish during cleanup construction and will stop work and immediately notify the project team if distressed or dying fish are observed within the vicinity of construction activities. Work will resume after the issue is addressed and upon acceptance from the project team.

Additional conservation measures to reduce effects on species listed under the Endangered Species Act will be included as part of the forthcoming Biological Assessment.

5.3.7 *Impacts on Maritime Traffic*

Mitigations to address impacts on marine traffic include the following:

- Develop Vessel Management Plan: The Contractor will be required, per the Specifications, to develop a Vessel Management Plan, as part of the RAWP, that describes the Contractor's process for planning and coordinating vessel movement and safe vessel transit. Construction operations are not stopped for recreational users. However, a site-specific safety buffer zone will be required to be established by the Contractor around in-water construction equipment to create a safe distance for recreational users.
- Monitor and adapt operations as needed to protect waterway users: The Contractor is required to continuously monitor work areas for the presence of waterway users (e.g., commercial and recreational users) and will warn them of work activities occurring

nearby. The Contractor is required to temporarily adjust activities, if necessary, to protect the safety of other waterway users.

- The Contractor will use a portable megaphone to communicate with waterway users and will monitor the area using work vessels to verify recreational waterway users maintain this distance and assist waterway users with moving farther away, if needed.
- There may be short periods of time when construction is occurring adjacent to a public waterway access point. During these times, recreational craft may not be able to pass safely, so access will be restricted until the Contractor completes the necessary work activity.
- Monitor and adapt operations as needed for nearby commercial vessels: The Contractor will be required, per the Specifications, to monitor and move its equipment for the passage of commercial vessels within the federal navigation channel and to prevent unsafe transit around the Contractor's equipment.
- Comply with local navigation and speed requirements: The Contractor must comply with regulations regarding navigation and waterway vessel speed limits (maximum of 7 knots).
- Construction schedule: The Contractor will provide a construction schedule to the project team. The project team will provide updates to the public as described in Section 4.1.

5.3.8 Impacts on Roadway Traffic

Mitigation to reduce construction truck traffic through local streets and other construction-related impacts to local roadway traffic includes the following:

- Utilize barge and rail transportation to limit truck traffic on roadways: Local truck traffic is reduced by using barges to transport dredged material to a transload facility, which will be identified by the Contractor in its RAWP. The dredged material will be required, per the Specifications, to be transported primarily by rail to a permitted landfill (which also will be identified by the Contractor in its RAWP).
- Identify and share haul routes and anticipated volume of trucks: In some locations, sediment excavation must be accomplished from the land and hauled by truck to the transload facility. Haul routes and the daily truck trips per day will be identified in the Traffic Control Plan of the Contractor's RAWP and will be shared with the community once finalized. The LDW middle reach remedial design will include pre-approved truck routes (on arterial routes where other commercial truck traffic occurs). If any additional routes are proposed by the Contractor, the Contractor is required, per the Specifications, to provide those to the project team and the EPA for review and approval; these will be shared with the community via the project website.
- Reduce parking impacts: The Contractor will park its vehicles on the street, on its property, or in designated areas on private property as identified in the Contractor's RAWP; therefore, significant parking impacts are not anticipated during remedial construction.
- Coordinate with the Washington State Department of Transportation and Seattle Department of Transportation and provide advance notice of prolonged bridge closures: The project team is

coordinating with the Washington State Department of Transportation on extended bridge closures for SR 99 1st Avenue South Bridge. The Seattle Department of Transportation may be coordinated with regarding surface street traffic impacts of any bridge closures. Extended bridge closures are defined as when the bridge is closed to people driving, walking, or biking that is longer in duration than what is needed for routine bridge openings for vessel passage. Extended bridge closures are needed to allow the cleanup actions to take place under and adjacent to the bridge. The cleanup design anticipates that extended bridge closures will occur at nighttime, or outside of peak commute hours, to reduce traffic interruptions. Extended bridge closure hours will be determined at Pre-Final (90%) RD. The Contractor is required to provide notice to the project team for extended bridge closures (when the bridge is closed to vehicles) at least 10 working days in advance. The Contractor will prepare a Road Closure and Detour Plan in the Contractor's RAWP to address extended bridge closures, which will be communicated in advance to the public. Notification to the public of any extended bridge closures will use varying methods, such as email newsletters, website updates, flyers, or notifications. Notifications will also be coordinated through partner agency platforms, such as King County Road Services' My Commute platform and King County Metro's transit alerts. In addition, a spotter will be required for work within 30 feet of the SR 99 1st Avenue South Bridge, and they will be responsible for advising the heavy equipment operator of any potential contact with any portion of the structure.

- Utilize best practices to prevent spills on roadways or rail lines: The Contractor is required to follow BMPs. For example, haul trucks or railcars (e.g., containers or gondolas) used to transport contaminated non-hazardous materials will be required to be covered by a secured liner or other approved method for upland transportation. In addition, haul trucks will have their wheels and exterior cleaned prior to leaving any upland staging area and the transload facility. If a spill occurs, the Contractor is required to clean it up in compliance with local, state, and federal regulations. These requirements apply throughout the entire haul route, including near and at the permitted landfill.
- Green transportation requirements: Per Specifications requirements, the Contractor may offer incentives for green methods of transportation (e.g., public transportation or carpooling) for its staff to reduce roadway traffic and air pollution emissions.

5.3.9 Impacts on Shoreline Access to Waterway Users

Mitigation to address impacts on waterway users from cleanup construction activities include the following:

- Reduce waterway property access impacts: Impacts to property access from the waterway will typically be short in duration and will be communicated with property owners to reduce potential impacts.

- Post-informational materials: Educational signage will be used at parks or public access points, as feasible, as described in Section 4.1.

5.3.10 Monitoring During Flooding Events

If flooding occurs while dredging is taking place, the construction management QA team will monitor the work to confirm that turbidity associated with the Contractor's operations is not being transported into flooded areas on land. Throughout the in-water work in the middle reach, the construction management QA team will collect water samples as needed and monitor conditions in real time near the in-water work and have the contractor adjust the work as necessary to limit potential exceedances. Turbidity, dissolved oxygen, temperature, and pH will be monitored for compliance with water quality standards. During flooding events, the construction management team will confer with the EPA on specific monitoring needs from in-water construction to protect the upland areas experiencing flooding.

5.4 Public Communications During Construction

Communication with the public will occur throughout construction activities. Concerns and complaints will be responded to using the approach detailed in Figure 4-1. The COCP, which will be developed at Pre-Final (90%) RD, will contain more detailed procedures for notifying the public about construction and coordinating responses to questions and concerns.

5.4.1 Access to Project Information

Actions that allow for public access to project information include the following:

- Provide regular updates: Construction communications will provide the public with updates on current construction progress and schedule; information on potential impacts and activities (including potential work outside of standard hours, noisy work, and potential nighttime SR 99 1st Avenue South Bridge closures); concerns and feedback the project team is receiving from the community; status of project environmental compliance; and ways to communicate with the project team. The website will be updated weekly, and the outreach team will send weekly email newsletters to the project list subscribers. The outreach team will provide as much advance notification of nighttime work as is feasible within the Contractor's schedule.
- Develop accessible project materials: Project materials will clearly state the project area and scope of the project to eliminate confusion between middle reach construction (including SMA 10) and separate upland and in-water cleanup, climate adaptation, and flooding reduction efforts. As described in Section 4.1, materials will be developed in plain language and be made available in multiple languages. All online content will meet Web Content Accessibility Guidelines 2.1, Level AA standards.

5.4.2 Cataloguing Complaints

Complaints will be catalogued using the following methods:

- Establish database to log community inquiries: The project team will document and track community questions, comments, and complaints as well as how they were resolved in a database.
- Share gathered community input regularly: The project team will summarize community feedback themes and project team responses or actions, as appropriate, on the project website.
- Monitor incoming calls and emails: The project team will manage a phone line and email during construction work hours. During construction work hours, the project team will respond to correspondence (via email or phone line) within 24 hours. Outside of construction work hours, callers can leave a voicemail for a response the next business day.
- Comments received on weekends will be responded to by Tuesday, 8:00 a.m. (schedule is subject to change around observed holidays).

5.5 Restoring Community Resources

As described in the Specifications, the Contractor will be required to do the following: 1) clean items affected by the work (including construction equipment [dredge buckets and haul barges]); 2) remove project-related waste materials from the work site, the staging and stockpile areas, and the transload facility; and 3) collect and appropriately dispose of decontamination waste from cleaning equipment after each construction season. Once the remedial action is completed, the Contractor will restore property (including haul routes) and the work site (such as habitat areas [above -10 feet MLLW] and affected infrastructure [if applicable]) to pre-construction conditions if damaged as a result of project work, as indicated in the Specifications and construction drawings.

In addition, vegetation that will need to be removed to facilitate access to a bank along the waterway will be replanted with native species as part of the construction activities. Bank reconstruction with vegetation plantings will be identified in one or more SMAs (to be determined at Pre-Final [90%]) RD).

6 Community Engagement Through Job Training, Apprenticeship, and Business Participation

The cleanup work includes elements to allow more small-business participation, including apprenticeship hires, and opportunities to participate in training that may be helpful in the hiring of local workers. This is accomplished by the types of programs described in this section.

The EPA has a program called the Superfund Job Training Initiative, which is designed to help community members impacted by a Superfund site to have training that may lead to work on the Superfund cleanup. The EPA has offered training to community members under this program for the LDW, starting with a pilot program in fall 2024. The pilot program involved coordination and partnerships with other job training organizations in the Seattle area. Given that jobs related to the LDW cleanup are limited in number, the program was designed to be relevant to other marine construction or environmental cleanup-related jobs as well.

The construction contract by the City of Seattle includes requirements related to its Community Workforce Development program. The Community Workforce Agreement is a labor agreement with targeted priority hiring requirements to include workers from the designated economically distressed areas, including the Duwamish Valley. This agreement is between the City and representatives of the Seattle-King County Building Trades Council, with targeted priority hiring requirements for journey-level and apprentice workers. A "priority hire worker" means an individual prioritized for recruitment, training, and employment opportunities because the individual is a resident in an economically distressed area, including the Duwamish Valley. The City of Seattle will work with the Contractor to implement these requirements in the contract. Based on experience in the upper reach, the City expects significant priority hire participation rates for journey-level and apprentice workers.

The construction contract by the City of Seattle also has requirements for Certified Small Contractors and Suppliers utilization to provide materials, supplies, and services. This supports small-business participation in the work. The City of Seattle contract for construction management support also results in significant participation of women- and minority-owned businesses in the project work.

Refer to http://www.ldwg.org/ for more information on priority hire and Women and Minority-Owned Business Enterprise participation in the cleanup to date.

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