Lower Duwamish Waterway Upper Reach Remedial Action

Environmental Mitigation Binder Revision 3

August 27, 2024

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Quality information

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Revision History

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Abbreviations

EMB	Environmental Mitigation Binder
EPA	U.S. Environmental Protection Agency
ESCP	Erosion and Sediment Control Plan
LDW	Lower Duwamish Waterway
PM	Project Manager
RAWP	Remedial Action Work Plan
RM	river mile
SMA	Sediment Management Area
Spill Plan	Spill Prevention, Control, and Countermeasure Plan
SWPPP	Stormwater Pollution Prevention Plan

1. Introduction

This Environmental Mitigation Binder (EMB) for the Lower Duwamish Waterway (LDW) Upper Reach documents the plans and procedures for environmental controls to be implemented during remedial construction activities for the upper reach of the Lower Duwamish Waterway Superfund Site (Site) in King County, Washington (**Figure 1**). Volume 3 of the RAWP is the Environmental Mitigation Binder.

The Lower Duwamish Waterway Superfund Site is a five-mile segment of Seattle's only river, the Duwamish. The Site extends 5 miles upstream from the southern tip of Harbor Island to just upstream of the Turning Basin, a federally authorized and maintained navigation feature. The LDW has been divided into three reaches - lower, middle, and upper - with the focus of this work being the remedial action of the upper reach. The upper reach has an average width of 540 feet and extends from Duwamish Waterway Park (river mile [RM] 3.0) to the southern end of the LDW at RM 5.0 near the bridge on South 102nd Street (**Figure 2**). The upland properties surrounding the LDW upper reach are mixed industrial, commercial, residential, and park/open space. The LDW is an actively used waterway for commercial shipping, tribal fishing activities, and recreational usage, including two marinas.

The remedial action for the upper reach is under the jurisdiction of U.S. Environmental Protection Agency (EPA) Region 10 and is being conducted under EPA oversight. In-water remedial construction activities will occur during an in-water work window (October 1 through February 15) over three construction seasons.

The general scope of work includes the following:

- Mobilization of construction equipment and materials;
- Site preparation activities, including construction and setup of the staging and stockpile area(s), temporary erosion and sediment controls, water collection and treatment management practices, utility disconnection, and clearing/grubbing;
- Dredging, excavation, potential contingency re-dredging, barge dewatering, in-water transportation, transloading, upland transportation and disposal of dredge material, dredge debris, identified debris, and piling from the Sediment Management Areas (SMAs);
- Placement of clean imported materials in and around the SMAs;
- Removal of pilings, bulkhead strengthening and reinforcement, replacing of piling with steel pipe, and installation of outfall energy dissipation structures; and
- Site restoration, cleanup, and demobilization.

1.1 Purpose

The purpose of this EMB is to document the plans and procedures for implementing required environmental controls, maintaining the environmental quality and protection during construction activities, and complying with applicable federal, state, and local statues, ordinances, and regulations. The following Site plans are incorporated in Volume 3 of the Remedial Action Work Plan (RAWP):

- **Appendix V** – Water Quality Protection Plan
- **Appendix W** – Erosion and Sediment Control Plan (ESCP)
- **Appendix X** – Stormwater Pollution Prevention Plan (SWPPP)
- **Appendix Y** – Water Management Plan
- **Appendix Z** – Spill Prevention, Control, and Countermeasures Plan (Spill Plan)
- **Appendix AA** – Air Pollution and Odors Control Plan
- **Appendix AB** – Noise Control Plan
- **Appendix AC** – Light Control Plan
- **Appendix AD** – Personnel and Equipment Decontamination Plan
- **Appendix AE** – Traffic Control Plan & Notification Plan

The following Site documents were used to prepare aspects of this EMB and appendices:

- Final (100%) Remedial Design Basis of Design Report (BODR) for Lower Duwamish Waterway Upper Reach (Anchor QEA, 2024);
    - BODR Volume II, Part I, Appendix A Water Quality Monitoring Plan (Anchor QEA, 2024)
    - BODR Volume II, Part I, Appendix C Air, Noise, and Light Monitoring Plan (Anchor QEA, 2024)
    - BODR Volume II, Part I, Appendix N Green Remediation Evaluation and Implementation Approach (Anchor QEA, 2024)
- Specification Section 01 33 00 (Submittals);
- Specification Section 01 35 29 (Health and Safety);
- Specification Section 01 35 43 (Environmental Procedures);
- Specification Section 01 35 44 (Green Remediation Requirements);
- Specification Section 01 41 00 (Environmental Regulatory Requirements);
- Specification Section 01 55 26 (Traffic Control);
- Specification Section 01 74 23 (Final Cleaning);
- Specification Section 31 25 00 (Erosion and Sediment Control);
- Specification Section 35 20 23 (Remedial Dredging, Barge Dewatering, and In-Water Transportation); and
- Specification Section 35 37 10 (Material Placement).

Work for the Site will be performed by PPM (remediation contractor) in accordance with the plans and specifications or as directed by the Project Representative to execute this Plan.

2. Project Organization

The project organizational structure and description of key roles and responsibilities is presented in the RAWP.

2.1 Key Personnel

Key personnel, including project title and contact information, are provided in the RAWP main text.

2.1.1 Certificates of Disposal

Certificates of disposal will be managed by Zach Jenkins of Waste Management. A copy of Zach Jenkins' resume is provided in the **RAWP Volume 1 Appendix A**.

2.1.2 Emergency Coordinator

The emergency coordinator will be available 24 hours per day to supervise and enforce compliance with this EMB. PPM's Project Manager, Matt Miller (24/7 phone number, 206-715-7466), will serve as the emergency coordinator. A copy of Matt Miller's resume and relevant certifications are provided in the **RAWP Volume 1 Appendix A**.

3. Environmental Issues

The EMB contains the plans PPM will implement to maintain environmental quality and protection during the remedial construction activities. Known and potential environmental issues include water quality and community quality of life (e.g. air, noise, light). These environmental issues are discussed in further detail in this section. The plans associated with this EMB are located in RAWP Volume 3.

Community concerns that arise during remedial construction activities will be reviewed with PPM, the Project Representative, and EPA (see Key Personnel in **Section 2.1**). Construction activities and procedures may be modified as practicable to address community concerns related to environmental issues.

3.1 Water Quality and Quality of Life

During the remedial construction activities, the independent quality assurance team (IQAT) will implement the requirements of the Water Quality Monitoring Plan (Anchor QEA, 2024). If the IQAT identifies a water quality exceedance, the Project Representative will notify EPA and PPM. PPM will coordinate with the Project Representative to implement corrective measures and best management practices (BMPs) as outlined in the Water Quality Protection Plan.

Remedial construction activities may affect the local community and result in quality of life concerns from the nearby community. Quality of life considerations and measures taken to reduce the effects of the remedial construction activities are described in this Section.

3.1.1 Water Quality Protection Plan

Dredging and material placement will generate short-term turbidity effects due to temporary resuspension of sediments in the water column. This may result in the release of contaminants of concern (COCs). PPM will implement the BMPs outlined in the Water Quality Protection Plan during remedial activities to prevent impacts to water quality.

3.1.2 Erosion and Sediment Control Plan

Remedial construction activities conducted above the Ordinary High Water elevation may contribute to soil erosion, runoff, and discharge of sediment laden waters from the Site. The Erosion and Sediment Control Plan (ESCP) provides requirements for BMPs to be implemented during work. PPM will implement the BMPs in accordance with the ESCP.

3.1.3 Stormwater Pollution Prevention Plan (SWPPP)

To prevent the escape of sediment and pollutants from the Site through stormwater runoff, a Stormwater Pollution Prevention Plan has been created. Each of the 13 Elements listed in the National Pollutant Discharge Elimination System Special Condition S9 are included along with all associated BMPs.

3.1.4 Water Management Plan

Water collection and treatment will be required for stormwater and water collected from stockpile areas. Additionally, water from other disturbed areas within the Duwamish Reload Facility where stormwater contacts Dredge Material, Dredge Debris, Identified Debris, Piling, or other potentially contaminated material is included. The Water Management Plan identifies potential sources of pollution and the methods to contain, collect, and treat all effluent drainage water, stormwater, or other forms of discharges from stockpiled materials.

3.1.5 Spill Prevention, Control, and Countermeasure Plan (Spill Plan)

During the duration of work, the Spill Plan contains the proper procedures for preventing the release of any potentially hazardous substances being used on the Work Site and the appropriate response should they occur.

3.1.6 Air Pollution and Odors Control Plan

The potential air quality impacts from Site activities on the adjacent community include: visible dust, fugitive odors, and diesel exhaust. PPM will perform all work in accordance with the Air Pollution and Odors Control Plan. The Air Pollution and Odors Control Plan identifies air quality prevention, mitigation, and control measures that PPM will implement during construction.

3.1.7 Noise Control Plan

PPM will perform all work in accordance with the Noise Control Plan. The Noise plan outlines prevention and mitigation measures to be implemented by PPM during remedial construction to minimize potential quality of life impacts associated with noise generating activities.

3.1.8 Light Control Plan

PPM will perform all work in accordance with the Light Control Plan. The light plan outlines prevention and mitigation measures to be implemented by PPM during remedial construction to minimize potential quality of life impacts associated with light generating activities.

3.1.9 Personnel and Equipment Decontamination Plan

Health and Safety requirements regarding personnel and equipment decontamination are described in the Personnel and Equipment Decontamination Plan. Included are locations where decontamination will be performed, along with the proper procedures and personal protective equipment (PPE) that should be used.

3.1.10 Traffic Control Plan

Transportation of equipment and materials through or near residential areas may cause short-term impacts to the community. In order to reduce the impacts to the community, PPM will utilize the routes and traffic control devices described in the Traffic Control Plan.

3.2 Work Hours

Per the specifications, standard work hours for the project are 7:00 am to 7:00 pm Monday through Friday, and 9:00 am to 7:00 pm on Saturdays. Due to the excavation requirements at SMA 5, noise generating equipment will be operated during low tide hours during excavation and engineered cap placement of SMA 5 which will generally be during the night time hours of 6:00 pm to 6:00 am.

In the event that work will need to occur outside of these hours, PPM will notify the Project Representative a minimum of 72 hours prior to the start of work and obtain written approval. The Project Representative will coordinate with EPA to grant approval of work outside of the standard working hours.

4. References

Anchor QEA, 2024. 100% Remedial Design Volume II, Part I Construction Quality Assurance Plan for Lower Duwamish Waterway Upper Reach. Anchor QEA. January 2024.