



EPA invites public comments on the Jorgensen Forge Sediment Cleanup

Lower Duwamish Waterway Superfund Site

June 2021

EPA is taking public comments on a proposed cleanup plan for contaminated sediments in an early action area within the Lower Duwamish Waterway Superfund site. Work done in 2014 by the Earle M. Jorgensen Company left some of the targeted pollution in place. The company has proposed several cleanup options to EPA for the remaining pollution, and the public is encouraged to understand and comment on the cleanup options.

Comments will be accepted from June 29 until July 29, 2021

Email: Region10@epa.gov

Mail (comments must be postmarked by **July 29** and addressed as follows):

COMMENTS – Jorgensen Forge Supplemental EE/CA
U.S. Environmental Protection Agency Region 10
1200 6th Ave, Suite 155, MS 12-D12-1
Seattle, WA 98101

Jorgensen Forge is a steel and aluminum forging and distribution facility on the banks of the Lower Duwamish Waterway, and part of the Superfund site. It is located at 8531 East Marginal Way South in Tukwila, Washington. The riverbanks and sediments next to the facility are contaminated with toxic metals and PCBs that may pose a risk to people's health and to the environment. Some of the contaminated riverbanks and sediments were removed in 2014 before the larger Lower Duwamish Waterway Superfund cleanup began. The Jorgensen Forge site is next to other cleanup areas, including Boeing Plant 2 (north of Jorgensen), and across the Waterway from Terminal 117. Cleanup of the Jorgensen Forge facility that is located above the riverbank, in the upland area, is being led by the Washington Department of Ecology.

Under a series of agreements with the EPA, the Earle M. Jorgensen Company (EMJ), a prior landowner, has performed pollution investigations, analyses, and cleanup work at the site. Work undertaken at the site included:

- 2011 – EPA published its cleanup determination in an "Action Memorandum" describing cleanup activities required for the site. This document defined the cleanup levels needed to protect people's health and the environment and required the removal of all sediments and bank material that exceeded the cleanup level for PCBs.
- 2013-2014 – EMJ prepared removal design and removal action work plans detailing how EMJ would implement EPA's cleanup determination.
- 2014 – EMJ removed some of the contaminated sediments and riverbank material. EMJ then replaced these excavated and dredged areas with clean backfill materials. Samples collected during that time found subsurface, or deeper, contaminated sediments left in place above the cleanup levels.
- 2015 – EPA imposed \$216,500 in stipulated penalties for five separate violations of the approved work plans during the 2014 in-water cleanup activities, and for a late report submission.
- 2015-2016 – Surface sediments and sediment below the backfill was sampled to evaluate the area for any remaining PCB contamination. The samples found PCB concentrations in sediments that exceeded the cleanup goals.

Because the sampling data collected in 2015 and 2016 exceed the EPA's cleanup goals, EPA is requiring that EMJ evaluate additional cleanup work to address the remaining sediment contamination. This evaluation is described in a "Supplemental Engineering Evaluation and Cost Analysis."

Supplemental Engineering Evaluation and Cost Analysis

EMJ has submitted a Supplemental Engineering Evaluation/Cost Analysis (EE/CA) for EPA’s review. EPA is seeking public comment on this EE/CA before making the decision on how the remaining PCBs contamination will be addressed. This public comment period is for the Jorgensen Forge site only and does not include other cleanup areas on the Lower Duwamish Waterway.

The focus of this cleanup action is to address the remaining contamination left behind, below the backfill from the 2014 cleanup action. It does not include actions that will address contamination on the surface sediments, which will be addressed as part of future cleanup activities.

EPA will document and respond to all public comments in a Responsiveness Summary which will become part of the site’s Administrative Record and the Action Memorandum. EPA’s decision will be documented in an Action Memorandum that will describe the selected cleanup option to address any remaining health and environmental risks from the contaminated subsurface sediments.

A summary of the cleanup areas and proposed cleanup options are provided below. More detailed descriptions of the cleanup options are found in the Supplemental Engineering Evaluation/Cost Analysis (EE/CA). View online at <https://go.usa.gov/x6U3T> (PDF).

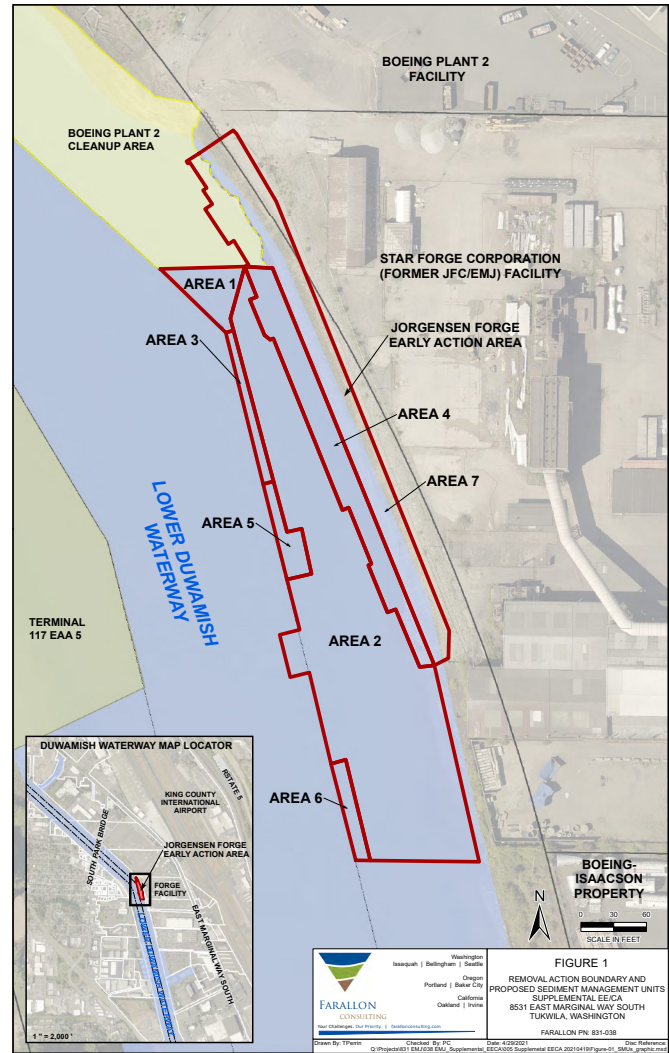
Cleanup Area	Summary of cleanup areas
1	PCBs were found in this area during recent sampling at some of the highest concentrations in the site. The PCBs are not predicted to migrate, or move, through the backfill. The area is located next to the navigation channel and the Boeing Plant 2 cleanup area. The depth to contamination averages approximately 9 feet.
2	PCBs were not found in this area during recent sampling. The nearby PCBs are not predicted to migrate through the backfill or sediments here. Part of this area is located next to the navigation channel and has an average backfill depth of approximately 5 feet.
3	PCBs were found here during recent sampling and modelling indicates that PCBs may migrate into the backfill. The area is located next to the navigation channel and has an average backfill depth of approximately 7 feet.
4	PCBs were found here during recent sampling. Modelling indicates that PCBs would not migrate into the backfill. This area has additional protective layers of armored backfill and carbon materials and has an average backfill depth of approximately 6 feet in the intertidal area.
5	PCBs were found during recent sampling and modelling indicates that PCBs could migrate into the backfill. The area is located next to the navigation channel and has an average backfill depth of approximately 2 feet.
6	PCBs were found during recent sampling, and modelling indicates that PCBs could migrate into the backfill. The area is located next to the navigation channel and has an average backfill depth of approximately 5 feet.
7	This shoreline area was not sampled in recent years. During earlier cleanup activities, contamination was removed, armored with backfill and carbon materials, and fish habitat materials were put in place. The area has an average backfill depth of approximately 5 feet.

The “Description of cleanup options” table (below) gives a brief description of the cleanup options in the Supplemental Engineering Evaluation/Cost Analysis. All options will involve long-term monitoring, and other protections will be put in place to prevent any remaining contamination from being disturbed.

For options that include contaminated sediments being removed (typically via dredging), there may be a short-term risk of PCBs being released into the water. These releases will be minimized by properly using the correct equipment and implementing best practices.

After dredging, clean backfill materials will be placed to recreate the natural shape of the river bottom and protect the cleanup areas. In some of the cleanup areas, the existing backfill will have to be removed before contaminated sediments are dredged. To do so requires careful planning and design because the areas where this may occur are located near other cleanup areas and/or the navigation channel, and there are in-water work timing restrictions in place to protect migrating salmon. These factors add time, cost, and risk to the cleanup activities, but will provide more long-term effectiveness and protections to people’s health and the environment.

EMJ has recommended Option #3B in the EE/CA. However, EPA will consider all the options and public comments during the review.



See a full-page version of this map on Page 5 of this fact sheet.

Cleanup option	Description of cleanup options
1	This option will not require additional cleanup, but it will require long term monitoring of the conditions in all cleanup areas at the site, and require that protections are put in place to prevent the remaining contamination from being disturbed or exposed to the river.
2	This option requires removal of contaminated sediment from Area 5 followed by backfill with clean material, long term monitoring, and putting protections in place to prevent the remaining contamination from being disturbed.
3A	This option requires all the actions required in option #2 and requires placement of a thin protective carbon barrier on Areas 3 and 6.
3B	This option requires that contaminated sediment is removed from Areas 3, 5, and 6, followed by backfill with clean material, long term monitoring, and putting protections in place to prevent the remaining contamination from being disturbed. EMJ recommends this option in the EE/CA.
4	This option requires that contaminated sediment is removed from Areas 1, 3, 5, and 6, followed by backfill with clean material, long term monitoring, and putting protections in place to prevent the remaining contamination from being disturbed. This is the most comprehensive option with the most complete cleanup of the remaining contamination.

EPA will evaluate the cleanup options based how well they:

- Protect people's health and the environment,
- Comply with state and local requirements,
- Provide long-term protection by minimizing residual risk,
- Reduce toxicity, mobility, or volume of hazardous material,
- Minimize short-term effects,
- Are feasible to implement,
- Consider the availability of required services and materials during implementation,
- Are acceptable to stakeholders.

Additionally, cost is considered with respect to the cleanup capital costs and the long-term operation and maintenance costs.

For more information:

View the Supplemental Jorgensen Forge EE/CA:

- <https://go.usa.gov/x6U3T> (PDF, 1121 pages)

The Jorgensen Forge cleanup is part of EPA's Lower Duwamish Waterway Superfund site.

For more information on our work:

- www.epa.gov/superfund/lower-duwamish

For questions or more information about EPA's work at the Jorgensen Forge sediment site contact:

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If you need materials in an alternative format, please contact Kay Morrison at 206-553-8321

TDD or TTY users, please call 800-877-8339 and give the operator Kay's phone number



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