

## Lower Duwamish Waterway Superfund Site



2019

# Cleanup Currents



## Progress Toward Design

2018 saw the completion of field work that the Lower Duwamish Waterway Group (LDWG) performed to characterize site-wide conditions in sediment, seafood, and water quality. The sampling of beach sediments (mud), sediments below low tide, and clams, gave us a fresh picture of the site now that 10 years have passed since data was collected for the Remedial Investigation and Feasibility Study.

During that time, source control work, cleaner sediment deposits from upstream, and early cleanup actions happened at Boeing Plant 2, Terminal 117, and Slip 4. The data report shows that average polychlorinated biphenyl (PCB) levels in surface sediments at the site have fallen by about half, and other contaminants also show reductions. A draft report evaluating the data collected will be finalized in 2019.

The LDWG in 2018 signed up to design the cleanup for the southern 2 miles of the Lower Duwamish Waterway site, called the Upper Reach. That means they will do pre-design sampling to refine areas where dredging, capping, or natural recovery is required and to support engineering designs and plans that construction contractors will use to do the cleanup work.

During 2019, LDWG's contractors are developing plans for pre-design sampling, with field work to happen in 2020 and 2021. The overall design process is expected to take until 2024.

For more information about the cleanup, please contact

**Elly Hale:** (206) 553-1215 • [hale.elly@epa.gov](mailto:hale.elly@epa.gov)

## Lower Duwamish Waterway Roundtable

The Roundtable had its first meeting in October 2018; at the second one in May 2019, EPA provided technical updates on the LDW cleanup, and sought members for the Roundtable Steering Committee. If you would like to assist in developing recommendations for the design and implementation of the sediment cleanup, consider participating in the Roundtable. The Roundtable will engage with EPA at key points in the design of the cleanup, starting with the Upper Reach.

For more information about the Roundtable and to find out how you can participate, please visit <https://www.duwamishwaterwayroundtable.org> where you can see Roundtable meeting materials, background information, training resources, and contact information for the Roundtable.

*If you are interested in participating in the Roundtable, please contact  
Julie Congdon: (206) 553-2752 • [congdon.julie@epa.gov](mailto:congdon.julie@epa.gov)*

# Fish Institutional Control Program

EPA's Fun to Catch, Toxic to Eat Program for the LDW Superfund Site uses innovative community-based approaches to promote safe seafood consumption. The program goal is to promote healthy, culturally appropriate actions when consuming seafood from the LDW Superfund Site. Public Health - Seattle & King County (Public Health) leads this program work on behalf of EPA. Public Health is developing EPA's Institutional Control (IC) plan for seafood consumption as part of the LDW Superfund Cleanup.

Highlights of the program include the June 2018 graduation of 23 Cambodian, Vietnamese and Latino fishing community members from Public Health's Community Health Advocates (CHA) training program. To graduate, the CHAs completed a 10-week training program. The CHAs build capacity within the community by promoting the fish consumption health messages, as well as empower the community by helping design and implement outreach tools used in promoting the health messaging.

In 2018 a total of 1,015 community members were reached during outreach in the target geographic area. One example of an outreach event is the CHAs partnering with LDWG to present about the seafood consumption advisory in Spanish, Vietnamese and Khmer on boat tours.

The CHAs helped design and test out several key tools to promote healthy fish consumption within their communities. This includes helping to design and pilot test Public Health's new program website. The website targets fishing families, including children. Fisher CHAs also helped co-design the latest "Go Fishing in King County" brochure. The brochure is a tool to identify fishing sites that overlays fishing rules with health advisory information. CHAs developed recipe cards for traditional ethnic fish meals featuring salmon as the healthier LDW fish choice. CHAs also developed digital short stories as a tool to promote the health messaging on social media platforms.

CHAs have also been helping Public Health and EPA develop the Fish Consumption IC Plan. This document captures recommendations from the Community Steering Committee on strategies to use to promote health messaging amongst fishers, fish preparers, women and children.

EPA anticipates that this plan will be finalized by October 2019.

For more information about the Fun to Catch, Toxic to Eat Program, please contact:

## US EPA:

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## Public Health Seattle & King County:

Sinang Lee

(206) 263.1192

[sinang.lee@kingcounty.gov](mailto:sinang.lee@kingcounty.gov)

**SAFE TO EAT**  
2-3 MEALS per week

**OR**

**LIMIT**  
1 MEAL per week

**OR**

**CAUTION**  
2 MEALS per month

**Meal Size**  
Adult Child  
One meal size is about the size and thickness of your hand.

**EVERYONE - DO NOT EAT RESIDENT FISH, SHELLFISH, or CRAB**  
Especially WOMEN who are or may become PREGNANT, NURSING MOTHERS, and CHILDREN.  
They have chemicals that can harm the growth and brain development of babies and children.

Crab, Starry flounder, Perch, Clams, Rockfish, Mussels, Sole

# What can I do?

1. The best way to avoid being exposed to contamination in the river is to **not eat** the resident fish that have the contaminants in their body. It is safe to eat salmon, because they visit the river for such a short time.
2. Help keep pollutants from getting into the river. Don't put oil and other pollutants into storm drains. Report spills.
3. Help restore habitat, plant trees, and clean up trash along the river at parks and on the shoreline by participating in Duwamish Alive and other volunteer events. For more information, please visit <http://www.duwamishalive.org>

*To learn more about how to get involved in the cleanup, please contact **Julie Congdon**:  
(206) 553-2752 • [congdon.julie@epa.gov](mailto:congdon.julie@epa.gov)*

## For more information

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For information on **US Environmental Protection Agency's work** in the Lower Duwamish Waterway, please visit: <https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=1002020>

To receive **regular updates** on EPA's cleanup work, please contact Julie Congdon ([congdon.julie@epa.gov](mailto:congdon.julie@epa.gov)) to subscribe to the **Duwamish cleanup listserv**.

Follow us on Facebook to stay informed about our cleanup activities and our programs related to the Duwamish area: [facebook.com/epaduwamish](https://www.facebook.com/epaduwamish)

For information on **Washington Department of Ecology's work** in the Lower Duwamish Waterway, please visit: <https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-sites/Toxic-cleanup-sites/Lower-Duwamish-Waterway>

For information on the **Community Advisory Group**, please contact the Duwamish River Cleanup Coalition/ Technical Advisory Group (DRCC/TAG) at [duwamishcleanup.org](http://duwamishcleanup.org) • [contact@duwamishcleanup.org](mailto:contact@duwamishcleanup.org)  
(206) 954-0218.

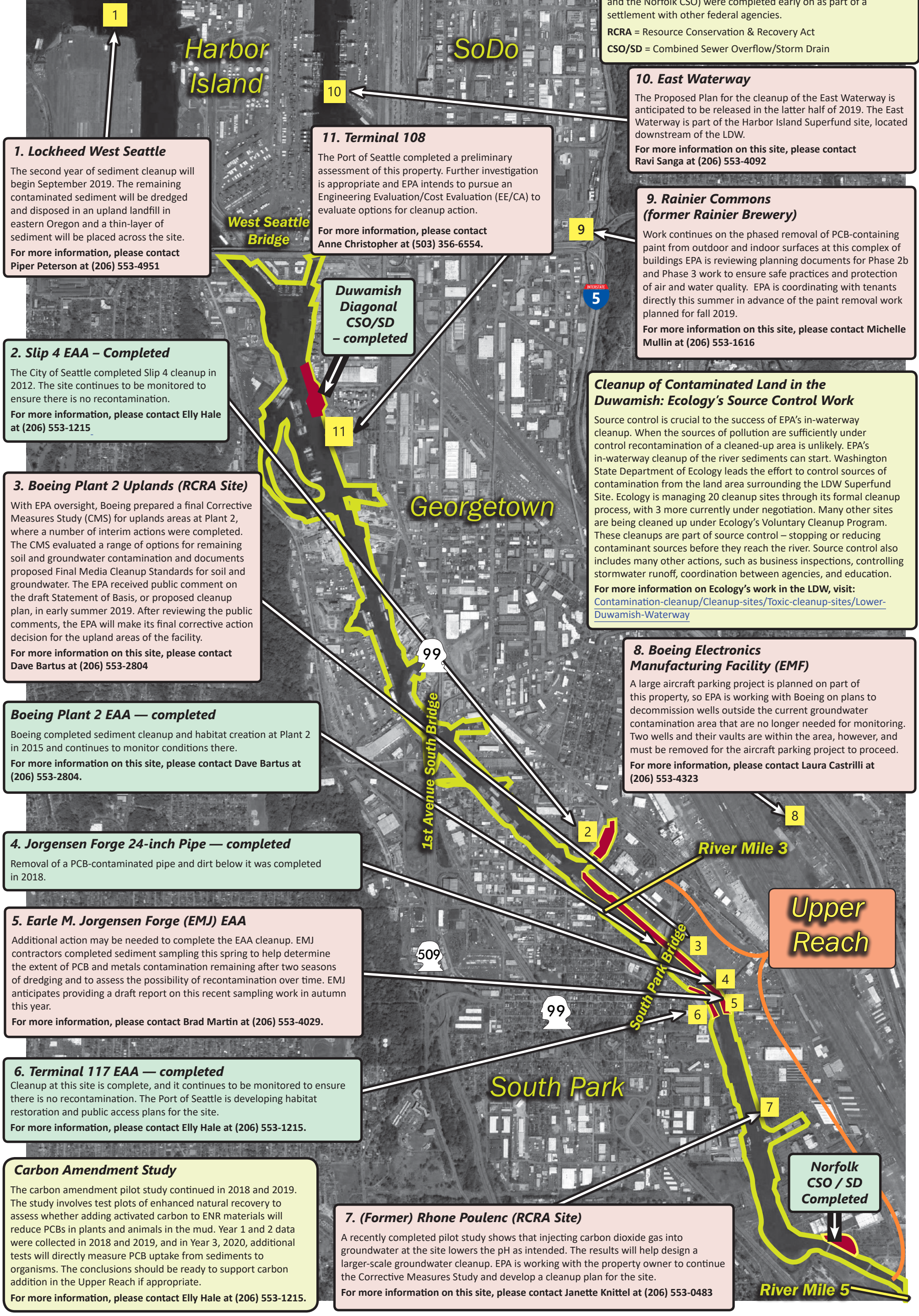
*EPA provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation, such as requiring information in a certain format (Braille, large print), please notify Julie Congdon, listed above. TDD or TTY users, please call (800) 877-8339 and give the operator Julie's phone number.*



# EPA's Recent Cleanup Work in the Lower Duwamish Waterway

**Lower Duwamish Waterway**  
**Early Action Area (EAA)**

**Acronyms**  
 LDW = Lower Duwamish Waterway  
 EAA = Early Action Area: One of five areas where early cleanup was needed to address high levels of sediment contamination. Two EAAs (Duwamish Diagonal Combined Sewer Overflow [CSO] and the Norfolk CSO) were completed early on as part of a settlement with other federal agencies.  
 RCRA = Resource Conservation & Recovery Act  
 CSO/SD = Combined Sewer Overflow/Storm Drain



**1. Lockheed West Seattle**  
 The second year of sediment cleanup will begin September 2019. The remaining contaminated sediment will be dredged and disposed in an upland landfill in eastern Oregon and a thin-layer of sediment will be placed across the site.  
**For more information, please contact Piper Peterson at (206) 553-4951**

**2. Slip 4 EAA – Completed**  
 The City of Seattle completed Slip 4 cleanup in 2012. The site continues to be monitored to ensure there is no recontamination.  
**For more information, please contact Elly Hale at (206) 553-1215**

**3. Boeing Plant 2 Uplands (RCRA Site)**  
 With EPA oversight, Boeing prepared a final Corrective Measures Study (CMS) for uplands areas at Plant 2, where a number of interim actions were completed. The CMS evaluated a range of options for remaining soil and groundwater contamination and documents proposed Final Media Cleanup Standards for soil and groundwater. The EPA received public comment on the draft Statement of Basis, or proposed cleanup plan, in early summer 2019. After reviewing the public comments, the EPA will make its final corrective action decision for the upland areas of the facility.  
**For more information on this site, please contact Dave Bartus at (206) 553-2804**

**Boeing Plant 2 EAA — completed**  
 Boeing completed sediment cleanup and habitat creation at Plant 2 in 2015 and continues to monitor conditions there.  
**For more information on this site, please contact Dave Bartus at (206) 553-2804.**

**4. Jorgensen Forge 24-inch Pipe — completed**  
 Removal of a PCB-contaminated pipe and dirt below it was completed in 2018.

**5. Earle M. Jorgensen Forge (EMJ) EAA**  
 Additional action may be needed to complete the EAA cleanup. EMJ contractors completed sediment sampling this spring to help determine the extent of PCB and metals contamination remaining after two seasons of dredging and to assess the possibility of recontamination over time. EMJ anticipates providing a draft report on this recent sampling work in autumn this year.  
**For more information, please contact Brad Martin at (206) 553-4029.**

**6. Terminal 117 EAA — completed**  
 Cleanup at this site is complete, and it continues to be monitored to ensure there is no recontamination. The Port of Seattle is developing habitat restoration and public access plans for the site.  
**For more information, please contact Elly Hale at (206) 553-1215.**

**Carbon Amendment Study**  
 The carbon amendment pilot study continued in 2018 and 2019. The study involves test plots of enhanced natural recovery to assess whether adding activated carbon to ENR materials will reduce PCBs in plants and animals in the mud. Year 1 and 2 data were collected in 2018 and 2019, and in Year 3, 2020, additional tests will directly measure PCB uptake from sediments to organisms. The conclusions should be ready to support carbon addition in the Upper Reach if appropriate.  
**For more information, please contact Elly Hale at (206) 553-1215.**

**11. Terminal 108**  
 The Port of Seattle completed a preliminary assessment of this property. Further investigation is appropriate and EPA intends to pursue an Engineering Evaluation/Cost Evaluation (EE/CA) to evaluate options for cleanup action.  
**For more information, please contact Anne Christopher at (503) 356-6554.**

**Duwamish Diagonal CSO/SD – completed**

**10. East Waterway**  
 The Proposed Plan for the cleanup of the East Waterway is anticipated to be released in the latter half of 2019. The East Waterway is part of the Harbor Island Superfund site, located downstream of the LDW.  
**For more information on this site, please contact Ravi Sanga at (206) 553-4092**

**9. Rainier Commons (former Rainier Brewery)**  
 Work continues on the phased removal of PCB-containing paint from outdoor and indoor surfaces at this complex of buildings EPA is reviewing planning documents for Phase 2b and Phase 3 work to ensure safe practices and protection of air and water quality. EPA is coordinating with tenants directly this summer in advance of the paint removal work planned for fall 2019.  
**For more information on this site, please contact Michelle Mullin at (206) 553-1616**

**Cleanup of Contaminated Land in the Duwamish: Ecology's Source Control Work**  
 Source control is crucial to the success of EPA's in-waterway cleanup. When the sources of pollution are sufficiently under control recontamination of a cleaned-up area is unlikely. EPA's in-waterway cleanup of the river sediments can start. Washington State Department of Ecology leads the effort to control sources of contamination from the land area surrounding the LDW Superfund Site. Ecology is managing 20 cleanup sites through its formal cleanup process, with 3 more currently under negotiation. Many other sites are being cleaned up under Ecology's Voluntary Cleanup Program. These cleanups are part of source control – stopping or reducing contaminant sources before they reach the river. Source control also includes many other actions, such as business inspections, controlling stormwater runoff, coordination between agencies, and education.  
**For more information on Ecology's work in the LDW, visit: [Contamination-cleanup/Cleanup-sites/Toxic-cleanup-sites/Lower-Duwamish-Waterway](http://Contamination-cleanup/Cleanup-sites/Toxic-cleanup-sites/Lower-Duwamish-Waterway)**

**8. Boeing Electronics Manufacturing Facility (EMF)**  
 A large aircraft parking project is planned on part of this property, so EPA is working with Boeing on plans to decommission wells outside the current groundwater contamination area that are no longer needed for monitoring. Two wells and their vaults are within the area, however, and must be removed for the aircraft parking project to proceed.  
**For more information, please contact Laura Castrilli at (206) 553-4323**

**7. (Former) Rhone Poulenc (RCRA Site)**  
 A recently completed pilot study shows that injecting carbon dioxide gas into groundwater at the site lowers the pH as intended. The results will help design a larger-scale groundwater cleanup. EPA is working with the property owner to continue the Corrective Measures Study and develop a cleanup plan for the site.  
**For more information on this site, please contact Janette Knittel at (206) 553-0483**

**Norfolk CSO / SD Completed**

**Upper Reach**