Like other complex Superfund sites, the Lower Duwamish Waterway (LDW) Superfund site is a multi-phased process. Since LDW became a Superfund site in 2001, five Early Action Area (EAA) cleanups have focused on sediment hotspots (areas of highly contaminated mud on the river bottom). The EAAs are expected to reduce average PCB levels across the waterway by 50%. In 2014, EPA completed the study of the overall site and published a final cleanup plan (Record of Decision) for remaining contaminated sediments.

The Washington Department of Ecology is responsible for controlling sources of contamination to the LDW site. Ecology and EPA will continue coordinating their activities to ensure that sediment cleanup work does not become recontaminated to a level requiring additional cleanup.

This year, waterway users are being surveyed to make sure that changes in land use are factored into the cleanup design. In 2017 and 2018, testing of sediment, water, and seafood will be done to establish new baseline conditions. Over the coming years, EPA expects PRPs (parties potentially responsible for cleanup costs) to design and construct the remaining sediment cleanup and to monitor and maintain the site over time. As cleanup and source control continue, testing will be repeated to assess progress towards long-term cleanup goals.

For more information about the Record of Decision and next steps, please contact: Elly Hale • 206-553-1215 • hale.elly@epa.gov

During this and all phases of the cleanup, we will continue to work with and involve communities in the cleanup. One example of this is the formation of the Duwamish Roundtable. An organizing committee met in winter and spring of 2017 to plan the Roundtable. We will begin to recruit members to the Roundtable later in 2017. If you are interested in participating in the Roundtable, please contact: Julie Congdon • 206-553-2752 • congdon.julie@epa.gov

Come talk to us!

Coffee Chat
Monday, October 23, 2017
Drop in any time between 4 and 7 p.m.
All City Coffee, 1205 S Vale St, Seattle, WA 98108

Talk informally with project staff. Give your feedback on the cleanup.
Contact: Julie Congdon, US EPA • 206-553-2752 • 800-424-4372 ext. 2752 • congdon.julie@epa.gov
EPA’s Recent Cleanup Work in the Waterway

### Lower Duwamish Waterway

#### Early Action Area (EAA)

- **Lockheed West Seattle**
  - O’side the mouth of the Lower Duwamish Waterway, the Port of Seattle’s Superfund site is also being cleaned up. The cleanup will include approximately 300,000 cubic yards of contaminated sediment from 15 acres of contaminated land and the 40-acre site. In addition, debris will be removed from the shoreline and the sediment and all the fillings in the shipway will be removed. Fish activities will remain after the cleaning and are managed by the WDFW. Department of Health. Cleanup is scheduled to begin in 2018 and will be coordinated with tribal liaison to ensure tribal treaties. Lockheed Martin Company is conducting the work.
  - For more information, please contact Elly Hale at 206.553.4951.

- **Boeing Plant 2 EAA**
  - Cleanup of contaminated sediments was completed by Boeing in 2015, including creation of substantial new habitat areas along the Duwamish Waterway. Boeing continues to monitor the quality of the soil, or sediment, at the site. In the upland area of the facility, Boeing has completed the majority of source-level cleanups and installed stormwater treatment systems to control contaminations from entering the waterway. EPA will provide public notice and an opportunity to comment on a proposed Final Cleanup Plan, known as a Statement of Measures, for the site. Updates on the site are due in 2017. For more information, please contact Dave Bartus at 206.553.2804.

- **Jorgensen Forge 24-inch Pipe**
  - This underground pipe to an old outfall released PCBs. The pipe and contaminated dirt below the pipe were excavated in phases, in 2015 and 2017. The site has been closed to the public to allow for more monitoring around the site. For more information, please contact Ravi Sanga at 206.553.4092.

- **Earle M. Jorgensen Forge EAA**
  - WDFW is overseeing upland cleanup studies. EPA has been overseeing the early action area sediment cleanup. Some of the PCB-contaminated sediments and river bank dirt were removed in 2014. However, samples collected after the excavation found that some sediments were still contaminated. EPA is requiring REMI to evaluate additional cleanup work to address this sediment contamination. This evaluation will be described in a Supplemental Environmental Evaluation and Cost Analysis, which will evaluate ways to close up the remaining PCB contamination. For more information, please contact Laura Mullin at 206.553.1616.

- **Terminal 117 EAA**
  - The uplands and offshore sediments of Terminal 117 (T-117) and some streets and yards near the terminal were primarily contaminated with PCBs. EPA issued a cleanup plan for the T-117 site in 2010. The Port of Seattle and City of Seattle did the cleanup work, which replaced old and outdated stormwater controls and updated the storm drainage system. From 2012 to 2015, final site modifications, including permanent stormwater controls and grading the Duwamish and Donovan streets, were completed in 2017. The Port is developing habitat restoration plans. For more information, please contact Piper Peterson at 206.553.4951.

- **Rhone Poulsen**
  - The eastern half of the site has been cleaned up and is now owned by the Museum of Flight. Tomatoes, metals, and high pH affect groundwater, soil, and sediments throughout the western half of the site, known as the West Parcel. A groundwater pump-and-treatment system with a barrier wall currently contains much of the oil and groundwater contamination at the West Parcel. EPA is also working with the responsible parties to begin an onsite study to inject carbon dioxide into the groundwater to better understand the groundwater conditions. Information from this study and sampling along with prior investigations will be used to help determine alternatives (known as Remedial Measures) for cleaning up the West Parcel. For more information on this site, please contact Janet Littell at 206.553.0483.

### Carbon Amendment Study

The Carbon Amendment Pilot Study is testing how adding carbon to contaminated soils and sediments can help to reduce certain kinds of contamination. Carbon amendments can be used to enhance natural recovery in less contaminated areas of a site. For more information, please contact Ly Halke at 206.553.1215.

### 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 well controlled, cleanup of the river sediments can start. Ecology leads the effort to control sources of contamination from the land area surrounding the Lower Duwamish Waterway (LDW) Superfund site. Ecology is managing the cleanup sites through its normal cleanup process. 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 rather than remediating them. 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, please visit: http://www.ecy.wa.gov/content/docketStuff/brochure/lower_duwamish/south_duwamish.html.

### Cleanup of Contaminated Land in the Duwamish: Ecology’s Source Control Work

- **Boeing Electronics Manufacturing Facility (EMF)**
  - The groundwater beneath the site was contaminated with perchloroethylene (PCE), which breaks down to vinyl chloride and other chlorinated volatile organic compounds (VOCs). Groundwater treatment pilot testing has been ongoing since 1997. EPA is preparing a continuing treatment of groundwater to destroy the VOCs and will issue a cleanup plan in an Action Memorandum. For more information on this site, please contact L aurie Lauten at 206.553.1432.

### Remediation of Contaminated Sediments

- **SoDo**
  - Downstream from the Lower Duwamish Waterway, the East Waterway is part of the Harbor Island Superfund site. The sediment of the East Waterway is contaminated with PCBs and is being cleaned up under the Superfund program. Two EAAs (Duwamish/Diagonal Sewer Overflow [CSO] and the Norfolk CSO) were completed early on as part of a settlement with other federal agencies.

### EPA’s Recent Cleanup Work in the Waterway

For more information, please contact Laura Lauten at 206.553.0483.
What about fishing on the Duwamish?

Many people enjoy fishing on the Duwamish River. However, the resident seafood that live in the river year-round are not safe to eat. To get a better idea of who fishes on the river and their fishing practices, EPA completed the Fishers Study in 2016. Some of the key findings from the Study were:

- Fishing is an important activity for the wellbeing of fishers and creates a sense of community.
- Fishers on the Duwamish are very diverse, represented more than 20 ethnic/language groups.
- Fishers continue to consume and share their catch, including resident fish, crab and shellfish.
- The advisory information is hard to understand, and signs are not entirely effective in promoting safe fish consumption.
- Promoting healthy fish consumption must connect with the local fishing culture. Rather than asking “why don’t fishers follow the advisory?” the question should be reframed as “how do we meet the needs of the fishers to promote healthy fish consumption?”

In January 2017, EPA entered into a Cooperative Agreement (CA) with Public Health Seattle-King County to establish a community-based Healthy Seafood Consumption Institutional Control (IC) Program for the LDW Superfund Site. The CA establishes a community-based participatory process to develop culturally-appropriate IC tools that can be implemented throughout the cleanup of the LDW Superfund Site. The program will promote healthy seafood consumption before, during, and after the cleanup.

For more information about the Fishers Study and the next steps, please contact:

- **US EPA**: Rebecca Chu • (206) 553-1774 • chu.rebecca@epa.gov
- **Public Health Seattle & King County**: Sinang Lee • (206) 263-1192 • sinang.lee@kingcounty.gov

For the text of this poster, visit [http://go.usa.gov/x9GXw](http://go.usa.gov/x9GXw)
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 that come to the river because they visit the river for such a short time.


3. Help restore habitat, plant trees, and cleanup 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

For more information

Elly Hale, Remedial Project Manager, U.S. Environmental Protection Agency, Region 10
206-553-1215 • hale.elly@epa.gov

Julie Congdon, Community Involvement Coordinator, U.S. Environmental Protection Agency, Region 10
206-553-2752 • congdon.julie@epa.gov

For information on US Environmental Protection Agency’s work in the Lower Duwamish Waterway, please visit: https://yosemite.epa.gov/r10/cleanup.nsf/sites/lduwamish

To receive regular updates on EPA’s cleanup work, please contact Julie Congdon (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

For information on Washington Department of Ecology’s work in the Lower Duwamish Waterway, please visit: http://www.ecy.wa.gov/programs/tcp/sites_brochure/lower_duwamish/lower_duwamish_hp.html

To receive regular updates on Ecology’s cleanup work, you can subscribe to its email listserv for periodic updates on their source control and cleanup work in the Duwamish: http://listserv.wa.gov/cgi-bin/wa?SUBED1=DUWAMISH-RIVER-UPDATES&A=1

For information on the Community Advisory Group, please contact the Duwamish River Cleanup Coalition Technical Advisory Group (DRCC/TAG) at duwamishcleanup.org or contact@duwamishcleanup.org or 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 1-800-877-8339 and give the operator Julie’s phone number.