Lower Duwamish Waterway

SHARP Report — Part 1 of 2

Go to cleanup history

• SHARP first assessment	v2024.04.03	Ecology Info	
• SHARP rating	Critical	ERTS	n/a
• SHARP date	4/5/2024	CSID	1643
• EJFlagged?	✔ – No Override	FSID	42927743
• LD confidence level	high	VCP	n/a
• Cleanup milestone	cleanup action plan	UST ID	n/a
• Assessor	Kim Wooten	LUST ID	n/a

This section is blank if this is the first SHARP

Assessment Media	Scores	Confidence	Additional Factors	
Indoor air	D4	high	multiple chemical types	✔
Groundwater	D4	high	risk to off-site people	✔
Surface water	A1	high	climate change impacts	✔
Sediment	A1	high	plant/animal tissue data	✔
Soil	A1	high		

Location and land use info

Duwamish River Mile 0.0-5.0, Seattle and Tukwila, King County, 98106, 98108, and 98134

Parcel(s)	182404HYDR, 192404HYDR, 302404HYDR, 292404HYDR, 322404HYDR, 332404HYDR, 042304HYDR
Responsible unit	NWRO
Land use	Mixed use

Sources reviewed

WA Department of Ecology. June 2016. Lower Duwamish Waterway Source Control Strategy.

US EPA. November 2014. Record of Decision, Lower Duwamish Waterway Superfund Site.

additional reports available - see links to documents in summary below

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Primary census tract	Associated census tracts
53033011200	53033009900, 53033009300, 53033010800, 53033010900, 53033026300, 53033026400

Local demographics comments

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There are a total of 7 census tracts that are adjacent to the River in the area of the site. All 7 tracts have an EHD rank of 9 or 10. There is more variability in the tracts in the state percentiles for the demographic measures, and supplemental demographic index ranges between the 42nd and 92nd percentile.

The tract with the highest demographic and supplemental demographic indexes was selected as the primary tract. This tract includes the South Park neighborhood, an identified overburdened community, resulting in a high confidence level.

Source/source area description

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The primary sources of sediment contamination in the East Waterway are associated with historical commercial and industrial uses, where chemicals were released to the environment in a variety of ways, including spills, leaks, dumping, and inappropriate management practices. These chemicals entered the Duwamish River through a variety of pathways including discharges, surface water runoff, groundwater migration, dumping/leaking materials into the waterway, waterway operations and traffic, atmospheric deposition, transport of contaminated sediments, and soil bank erosion.

Soil comments

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Soil considered in this assessment is located along the shoreline of the River, in areas that may be above what is technically defined as sediment, but that may be accessible to people, plants, and animals. It does not include all of the contaminated upland soil on other cleanup sites evaluated in distinct SHARP assessments.

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Groundwater comments

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Contaminated groundwater that may impact this site is evaluated in the SHARP assessements for the other upland sites.

Surface water comments

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The Duwamish River in the area of the site and downgradient of the site is considered marine water, and is not a viable drinking water source. The site area is used for recreation, including fishing.

Sediment comments

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Site contamination includes chemicals on the Persistant, Bioaccumulative, and Toxic (PBT) list. Contamination has been confirmed through analytical chemistry and bioassays. Fish and shellfish, which may be harvested and consumed, are present on site.

Indoor air comments

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Contamination that may impact indoor air for buildings located upland of the River is evaluated in the SHARP assessements for the other upland sites.

Additional factors comments

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no comments

Site contamination and cleanup history

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The Lower Duwamish Waterway site is an EPA-led cleanup that covers 5 miles of the Duwamish River (River). The site is defined as the in-water portion of the River, and is primarily a sediment site. Many additional cleanup sites have historically contributed to contamination of the sediments; conditions on these sites are addressed in the SHARP assessments for those sites, and not within this assessment.

Site investigations completed to date have identified multiple chemicals present in the sediment that require cleanup, including polychlorinated biphenyls (PCBs), carcinogenic and non-carcinogenic polycyclic aromatic hydrocarbons (PAHs), dioxins/furans, phthalates, mercury, arsenic, and other metals.

Cleanup of the site is being done in sections of the River, referred to as the Upper, Middle, and Lower Reaches. The selected remedy involves a combination of technologies: dredging, capping, enhanced natural recovery, and monitored natural recovery. The Upper Reach, located at the farthest upstream portion of the site, is the first Reach where cleanup actions will be done. Design of the Upper Reach cleanup is nearing completion at the time of this SHARP assessment, with cleanup scheduled to begin in late 2024. Cleanup of each Reach will take a few years to complete.

There are 5 locations within the site where early actions were completed. These areas were selected because cleanup of a relatively small area resulted in a substantial decrease in the overall amount of contamination within the site. These areas are known as Duwamish/Diagonal Way, Slip 4, Boeing Plant 2/Jorgenson Forge, Terminal 117, and Norfolk CSO.

Overflow - Site contamination and cleanup history

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The full history of the Lower Duwamish Waterway, both in terms of use and cleanup, is too extensive to be captured with much detail in this summary. More information can be found in the documents and document repositories in the References section, as well as on Ecology's website at https://ecology.wa.gov/spills-cleanup/contamination-cleanup/cleanup-sites/lower-duwamish-waterway (documents available electronically can also be accessed at https://apps.ecology.wa.gov/cleanupsearch/site/1643) and EPA's site webpage (https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=1002020).

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04/05/2024

SHARP First Assessment

Critical SHARP Rating

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Conceptual site model

SHARP