

Duwamish River Cleanup Coalition

Community Coalition for Environmental Justice • Duwamish Tribe • Georgetown Community Council • Green-Duwamish Watershed Alliance • ECOSS •
People for Puget Sound • Puget Soundkeeper Alliance • Washington Toxics Coalition • Waste Action Project

August 23, 2002

Ms. Allison Hiltner
U.S. Environmental Protection Agency
1200 Sixth Avenue, ECL-111
Seattle, WA 98101

**Re: Task 5: Draft Identification of Candidate Sites for Early Remedial Action –
Technical Memorandum: Data Analysis and Candidate Site Identification**

Dear Ms. Hiltner:

The Duwamish River Cleanup Coalition (DRCC) represents the Duwamish River Valley and greater Seattle community as EPA's Community Advisory Group for the Lower Duwamish Waterway (LDW) Superfund Site. DRCC also holds a Department of Ecology contract under the Washington State Public Participation Grant program to conduct community education, outreach and involvement programs related to the site cleanup. Our directing members are representatives of nine community, environmental, tribal and small business organizations affected by contamination and cleanup of the lower Duwamish River.

DRCC and our members have previously submitted comments on the Phase I Remedial Investigation, Ecological Risk Assessment and Human Health Risk Assessment, LDW National Priorities List site designation, Statement of Work, Public Participation Plans, Duwamish/Diagonal Way Combined Sewer Overflow Cleanup plan, and early drafts of the Remedial Investigation/Risk Assessment Problem Formulation, Effects and Exposure Assessment, Site Prioritization and Selection methodology, and associated technical memos. We are also currently reviewing LDWG's Draft Data Gaps Report and the Draft Public Health Assessment for the LDW being prepared by the Washington State Department of Health and ATSDR in response to the Superfund listing.

The following are our comments on the Lower Duwamish Waterway Group's (LDWG) **Draft "Early Action" Candidate Site Identification** document. We respectfully request that EPA and Ecology take these comments under consideration when determining the final early action cleanup site list for the Lower Duwamish Waterway Superfund Site.

GENERAL COMMENTS

The Draft “Early Action” Candidate Site Identification document (Site ID document) appears to have turned the guidance and approved methodology contained in the “Task 5 Technical Memorandum/Description of Candidate Site Selection Criteria” on its head. The EPA approved methodology for selecting early action candidate sites calls for overlaying CSL exceedances with the results of risk assessments in order to promulgate a complete listing of high-risk sites for consideration as early action cleanups. It was anticipated that CSL exceedances alone might not capture all high-risk contaminants and sites, and that the risk assessment results could serve to supplement the list of potential early action cleanups. Instead, the risk assessment appears to have been used to *screen out* known high-risk contaminants and sediment sites.

The two highest human health risks associated with LDW contaminated sediments are arsenic and carcinogenic PAHs. Arsenic showed few SQS exceedances in LDW sediments and only one CSL exceedance, yet the risk assessments found that arsenic was present in elevated levels in fish throughout the Duwamish, and that consumption of contaminated Duwamish River fish posed a high cancer risk to fishers and consumers. Rather than using these results to revisit the need for remediation of Duwamish River sediments and supplement the potential cleanup site list, LDWG ruled *out* the need for any arsenic cleanup in the Duwamish River because other areas of Puget Sound are similarly contaminated, concluding that we should thus *do nothing* to reduce risk to Duwamish River fish consumers. The definition of LDW sediment arsenic levels as equal to “background” is specious: “background” levels used for both sediments and fish tissue (HHRA Appendix b, page 157) included areas contaminated by other sources of arsenic that already are or should be the subject of separate cleanup actions.

In the case of carcinogenic PAHs, LDWG used “uncertainties” in the risk assessments to exclude consideration of existing data on sediment contamination in the river. Uncertainties associated with the risk assessments should not be used to screen out direct evidence of sediment contamination. Exactly the opposite was anticipated by EPA’s approved Task 5 Technical Memorandum: that risk assessments could serve to supplement information provided by sediment chemistry, not that the inability to successfully reach risk-based conclusions would then obliterate the value of existing data.

The Duwamish River Cleanup Coalition is extremely concerned that the Site Selection process is taking a wrong turn, and that precedence set here could have long-term impacts on the entire LDW site cleanup process. We request that EPA critically review the approach taken by LDWG and set the Lower Duwamish Waterway Superfund cleanup back on track.

ARSENIC CONTAMINATED SITES WRONGLY EXCLUDED

The Phase I LDW Remedial Investigation (RI) and Human Health Risk Assessment (HHRA) identifies current levels of arsenic contamination in the LDW sediments as the single greatest health risk to communities surrounding and using the lower Duwamish River. Specifically, LDWG determined that arsenic poses a 1 in 1,000 cancer risk to Duwamish River fishermen, and a borderline (2 in 1,000,000) cancer risk to children playing at riverfront parks and beaches. DRCC has previously submitted comments regarding these analyses and the potential for greater cancer risks than LDWG estimates in these documents, due to pre-existing body burdens, cumulative and synergistic effects, data gaps, and various uncertainties. Despite the shortcomings of the risk analyses performed, LDWG found that arsenic in the river poses an unacceptable cancer risk to people.

The Site ID document then proceeds to eliminate arsenic contaminated sediments from consideration for cleanup. The document further implies that LDWG's intent runs to the riverwide cleanup as a whole, not just to consideration of early action cleanup sites. LDWG's reasoning is that "background" levels of arsenic make cleanup of arsenic contaminated sediments in the LDW (1) not the fault of LDW sources, (2) not the responsibility of LDW property owners, and (3) ineffective to consider for cleanup. Each of these conclusions and the assumptions that they are based on are false.

- Current and historical sources of arsenic exist on the river
Numerous current and historical sources of arsenic have impacted the Duwamish River. Many of these sources are site-specific, e.g., they originate from site-specific sources and they do not affect sites outside of the vicinity of the LDW. Examples include arsenic-contaminated fill from ASARCO deposited on the river banks and used as fill throughout uplands immediately adjacent to the LDW; illegal and unpermitted discharges of arsenic contaminated sandblast grit from LDW shipyards; illegal and unpermitted discharges of arsenic contaminated material from cement manufacturers along the LDW; and historical and ongoing releases of arsenic from the Malarkey facility, among others.

- LDW property owners are responsible for arsenic dumping/deposition/fill on their land
Private landowners and the Port of Seattle have used or approved of dumping/deposition of arsenic contaminated fill material on the banks of the Duwamish River. Even in relatively "clean" areas, such as the riverbank opposite Kellogg Island and neighboring the newly restored Herring House park, arsenic contaminated fill is a discrete, site-specific source of arsenic contamination in the river. Rather than posing a ubiquitous, "area-wide" problem,

these are discrete sources of arsenic specifically attributable to site-specific events and properties.

- Arsenic in the LDW is higher than both “natural” and “anthropogenic” background for the area

Data exist in the PSAMP database to determine both sediment and fish tissue background for non-urban, *unimpacted* areas of Puget Sound. LDWG used background levels that reflect other, highly impacted areas of arsenic contamination, rather than a true background. The Department of Ecology and USGS have already compiled data showing Washington State arsenic background levels to be around 7ppm, and local King County levels to be closer to 2ppm.

Despite LDWG’s determinations with regard to the source and remediation potential of arsenic, which are refuted above, the decision about whether to proceed with cleanup of arsenic contaminated sites is not within LDWG’s charge. LDWG is specifically charged with presenting the findings of CSL exceedances, ecological risk-based exceedances, and human health risk-based exceedances, by Thiessen polygons. These findings are then to be overlaid to determine the final list of high-priority sites (see Figure 2). Nowhere in this document are the actual results of the CSL exceedance/risk-based priority sites presented. LDWG has applied a policy/management-based screen to the data prior to completion of the risk-based prioritization process. This is inappropriate and fails to fulfill LDWG’s obligations.

In addition, it is essential to communicate basic site-specific risk information regardless of EPA’s ultimate decisions about site appropriate cleanup actions. And finally, it is not LDWG’s task to determine the source (site-specific or area-wide) or to make final remedial decisions regarding arsenic contaminated sediments. The information must be presented to the public and EPA/Department of Ecology for the purposes of making such decisions.

PAH CONTAMINATED SITES WRONGLY EXCLUDED

The second greatest human health risk from LDW contaminated sediments is attributed to carcinogenic polycyclic hydrocarbons (cPAHs). LDWG excludes cPAH contaminated sediments from consideration as early action sites based on their conclusion that the findings have a high level of uncertainty (see our comments above). Again, the data need to be presented in the Site ID document, along with reference to the noted data uncertainties to help guide EPA’s final determination on the applicability and usability of the risk assessments for cPAHs in the early action site selection.

PCB SITES ARTIFICIALLY LIMITED TO TOP 5% BY AREA

PCBs are identified as the primary driver for cleanup of contaminated sediments in the LDW. Yet, PCB contaminated sites proposed for early action cleanup are limited to the top 5% of the LDW site by area. This artificial limit on proposed PCB cleanup sites runs counter to the stated purpose of the Early Action Cleanup process, where known risks “are considered to be sufficiently high that there is no need wait....to undertake remedial actions in those areas.” Despite having identified unacceptable risks to the environment and human health caused by PCB contamination, LDWG asserts that cleaning up more than 5% of contaminated sediments is not “manageable.” It is unclear whether this is asserted as a cost consideration or a logistical one, and in either instance is a newly-created management decision not approved or even considered in the previous documents outlining the site selection process. Further, it is a management decision, not a risk-based assessment. The entire list of potential risk-based PCB sites must be presented.

The 5% criterion presents an unnecessary and unacceptable ongoing risk to the environment and human health. Data exist for identifying additional sites for early action cleanup, identification of such sites is consistent with the stated purpose of Phase I, current LDWG members may be responsible parties for unidentified candidate sites, and the early cleanup of such sites may reduce risk to the environment and human health. It is unacceptable to apply an artificial limit on the identification of potential early action cleanup hotspots.

At least six locations at which total PCBs were within the top 5% by area were NOT proposed as early action cleanup sites by LDWG. These spots are just outside of Site 1: the Duwamish/Diagonal CSO cleanup site at river mile 0.5–0.6 (2), mid-channel at river mile 1.1–1.2 (1), just off Site 5: the Boeing Plant 2 cleanup site at river mile 3.3–3.4 (1 or 2), on the east bank south of Site 7 at river mile 3.7 (1), and at the Norfolk CSO around river mile 4.9 (1). Apparently, LDWG proposes that some of the top 5th percentile of PCBs in the river be left behind. This in addition to the arbitrary exclusion of several sites that are at least as contaminated as other sites proposed for cleanup (see below).

SUBJECTIVE/INCONSISTENT APPLICATION OF SITE CRITERIA

The Site ID document applies a criterion for site selection based on a minimum of three Theissen polygons showing CSL exceedances being in “close proximity” to each another (we note that LDWG did not actually provide a map showing the boundaries of the polygons AND the proposed candidate sites, making a direct comparison very difficult). Yet, sites were evaluated for cleanup that were clearly no closer and perhaps more widely distributed than sites that were not evaluated. No definition is given of what constitutes “close

proximity” and a basic comparison of sites on the maps provided reveal a subjective and inconsistent application of the standard. For example, Site 2 (which was later discarded) consists of a cluster of three CSL exceedances mid-channel at approximately river mile 1.4. Similar clusters of three CSL exceedances on (1) the east bank (north of Site 1) at river mile 0.3–0.4, (2) mid-channel at river mile 0.5–0.6, (3) at the mouth of Slip 3 at river mile 2.0–2.1, (4) at the head of Slip 6, and also possibly (5) on the east bank (south of Site 8) around river mile 3.9 and (6) at river mile 4.8–4.9 (the Norfolk CSO) were not evaluated. What constitutes “close” proximity (w/in 50 feet?, 100 meters?, half a mile?) and why were sites clearly as close to each other (or closer) as those in Site 2 not considered for early action site listing? The criterion is not defined and is subjectively and inconsistently applied. At least 4 and possibly 6 or more sites should have received the same consideration for early action listing as those presented in the document.

UNEVEN DATA DISTRIBUTION MAKE THEISSEN POLYGONS AND CLUSTER CRITERIA ARTIFICIAL

The distribution of sampling data points is not uniform throughout the river. LDWG uses Theissen Polygons intentionally in order to mask or compensate for this uneven distribution of data. But selection of early action sites does not take this uneven distribution into account, which may result in missing highly contaminated, high risk sites, despite available data indicating their potential importance as an early action cleanup site. Where sampling points are more widely distributed, there should be less reliance on the existence of a “cluster” of CSL exceedances in “close proximity,” and consideration should be given to a site based on other factors, such as the proportion or severity of CSL exceedances in a given area, or the ecological sensitivity or human use associated with a site. As an example, two data points exist in the slip immediately behind Turning Basin 3. One shows a CSL exceedance for PCBs, and one shows no exceedance. However, this is a highly sensitive ecological area, which has recently undergone restoration, and is also used as a hand boat launch by recreational river users (immediately in the area of the PCB CSL exceedance). In addition, a footbridge immediately adjacent to the area is frequently used by recreational and subsistence fishers. This site should receive additional consideration (1) because insufficient data exist to apply the 3-station cluster criteria (only two data points exist here), and (2) because it is a highly sensitive and potentially high-risk site for both ecological and human use (see comments below).

THE SITE CRITERIA MISS POTENTIAL HIGH RISK, EASILY MANAGABLE SITES

Numerous highly contaminated sites exist on the river that may be easily remediated, but are not included in the proposed early action site list because one or more site selection criteria exclude them from consideration. Again, consider the PCB hotspot identified at the restored hand boat launch site adjacent to Turning Basin 3. This site is of high ecological importance, receives a high volume of human traffic and contact as a result of hand boat launch use and frequent restoration activity, is next to a popular fishing spot, and is known to have high levels of PCBs, based on one of two data points collected in the slip. It is also well contained, fairly small, and owned by the Port of Seattle. Additional data collection, which could be undertaken as part of the Early Action RI/FS process, may show additional contaminated PCB spots and more accurately define the cleanup site boundaries. In fact, EPA commented on LDWG’s earlier drafts that exactly the kinds of considerations discussed above should be included in the selection of potential early action cleanup sites. The document fails to take these other factors into consideration, despite this earlier guidance.

CSL EXCEEDANCES & HIGH RISK SITES FOR BENTHIC INVERTEBRATES ARE EXCLUDED

The document states that “CSLs represent sediment concentrations above which there is an increased likelihood, but not a certainty, for adverse effects to benthic invertebrates” and that greater CSL exceedances and multiple CSL exceedances at a given point increase this risk. Yet no sites appear to have been considered on the basis of risk to benthic invertebrates alone, neglecting these in the early action site selection process. This goes against the point of the ERA and Early Action Cleanup process to eliminate sites with high ecological risks, and appears to disregard earlier comments and guidance LDWG received from EPA. In fact, EPA anticipated the possibility that the ecological risk assessment might serve to identify additional sites that did not exceed the CSL, rather than simply confirm or eliminate sites with CSL exceedances. As mentioned previously, even clusters of three or more CSL exceedances did not trigger consideration as an early action site in all cases.

LDWG FAILS TO PROVIDE ALL RELEVANT INFORMATION USED IN DETERMINING PROPOSED EARLY ACTION SITES

The document is missing several essential pieces of information that need to be included in the final report. The document states that maps were made of the CSL or ML exceedances of all COPCs. However, only maps for PCBs and BEHP are provided as “examples.” None of

the other maps (there is reference to another map folio) were distributed to the public for review.

IT IS NOT LDWG’S TASK TO EVALUATE POTENTIAL FOR PREVENTING RECONTAMINATION OR APPLYING OTHER MANAGEMENT DECISIONS

Sufficient information does not yet exist for LDWG to make a determination as to whether or not sources of recontamination can be controlled at most proposed sites. Further, this is a management decision that is not LDWG’s to make, but rather must be assessed and determined by the Department of Ecology and EPA once high priority sites are identified. This latter point is true of all management decisions, including Site 2’s consistency with MTCA, which should be determined by the Department of Ecology, not LDWG. With the exception of Site 2, this comment is academic, as other potential sites were not eliminated based on these criteria. However, if subsequent drafts include other potential sites that should have been included in the Early Action Candidate Site List, this point will once again apply.

THE DOCUMENT FAILS TO RECOGNIZE DIRECT EXPOSURE PATHWAYS FOR ECOLOGICAL RECEPTORS

Figure 2 on page 6 and the subsequent discussion in the Site ID document fail to recognize direct exposure pathways for ecological receptors. This approach is fallacious and fails to capture some very serious known risks, i.e., cPAH impacts on groundfish with direct dermal exposure. All benthic invertebrates, including crab, were identified as having a complete and significant direct dermal contact exposure pathway in the Phase I ERA (as were rooted aquatic plants). In addition, all bottomfish, juvenile chinook, shorebirds, and herons should be considered here, per DRCC’s comments on the Draft Phase I ERA.

THE DOCUMENT FAILS TO CONSIDER RECONTAMINATION POTENTIAL FROM INDUSTRIAL SOURCES

Section 3.2, pp 16–20, provides an Evaluation of Recontamination Potential, but fails to consider or even acknowledge the potential for recontamination from ongoing industrial sources (i.e., metals and PAHs from Duwamish Shipyard, where contamination already exists). A discussion of industrial source recontamination potential needs to be included.

DRCC anticipates preparing some additional comments, verbally or in writing, on the Draft “Early Action” Candidate Site Identification document. The volume of material contained in the document, or by reference in the RI, ERA and HHRA, and the magnitude of the problems

we see in this document, make compiling a complete and detailed comment letter within the time frame provided very difficult. We look forward to talking with EPA throughout its own review and comment period on the Site ID and associated draft documents, in order to more fully explain and detail our major concerns and understand EPA's own review and comment on LDWG's work to date.

Thank you again for the opportunity to provide early public comment on the Phase I RI, ERA, HHRA and Site ID document. We appreciate EPA's commitment to early and meaningful public involvement in the Lower Duwamish Waterway Superfund cleanup process.

Sincerely,

BJ Cummings
Community Coordinator