



# CLEANUP RECOMMENDATIONS

DRCC/TAG has commissioned an independent technical review of EPA's Proposed Cleanup Plan, the supporting studies, and the evaluation of alternatives.

The following recommendations are designed to strengthen the environmental and health protections of the cleanup, reduce the plan's uncertainty, and ensure greater permanence of the Duwamish River cleanup action.

**1. Remove all moderately and highly contaminated sediments**, instead of burying them in place under a cap or relying on an "enhanced" natural recovery.

*This will provide greater health protections, decrease uncertainty, and ensure that the cleanup is permanent by removing toxic wastes from the river.*

**2. Kick-start recovery of areas with remaining low-level contamination** by adding a thin layer of clean material instead of relying entirely on highly uncertain natural processes.

*This "enhanced natural recovery" will provide greater health protections, speed recovery, and increase certainty that the cleanup will work.*

**3. Include controls on ongoing pollution sources**, including from upriver, in the final cleanup order instead of relying on a separate, unenforceable plan.

*This will provide greater health protections, increase certainty that the cleanup will work, and result in a cleaner river.*

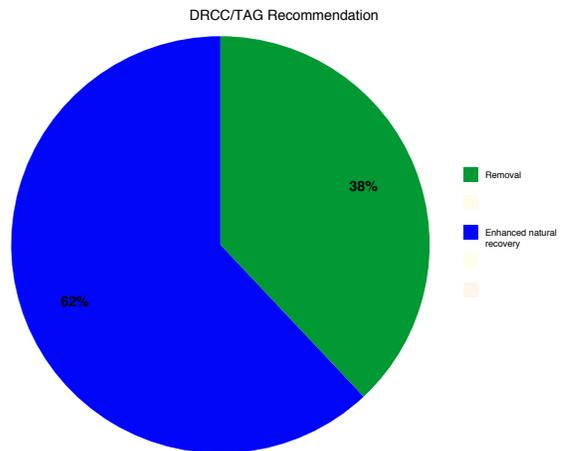
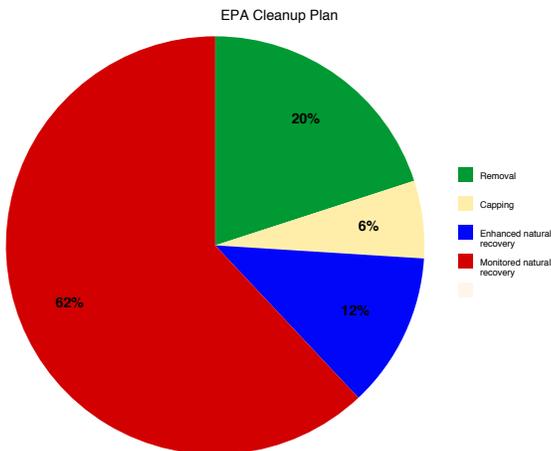
**4. Ensure that efforts to discourage fishing are culturally-appropriate and don't further harm people's health** by working with affected community members to develop alternatives to eating local fish until cleanup goals are met.

*This will prevent unintentional harmful health effects of fishing advisories, and promote health equity in the affected communities.*

**6. Establish a Pollution Prevention & Mitigation Fund for as long as the site's health impacts last**, to be funded by responsible parties and managed by the affected communities in order to reduce ongoing health impacts until recovery is complete.

*This will reduce and mitigate cumulative health impacts caused by toxic pollution from the site.*

**7. Hire local!** – Employment and income are some of the most important factors that influence health; local residents who are directly affected by the site should benefit from job opportunities created by the cleanup.



Estimated Cost / Time ≥ \$305 Million / 17 Years

Estimated Cost / Time ≤ \$500 Million / 13 Years

## Frequently Asked Questions (FAQs)

### *Will DRCC/TAG's cleanup recommendations result in a cleaner river than EPA's proposed plan?*

**Yes.** EPA's evaluation of the cleanup alternatives assumes that all plans will result in the same level of cleanup in the end, because the models EPA used to predict the result is based on past levels of pollution loading from upriver. However, DRCC/TAG's recommendations include integrating a pollution source control plan that includes reducing upriver sources. This will lower incoming pollution loads and result in a cleaner river. How much cleaner depends on the extent and success of pollution source control efforts, but the goal is to reach health-protective standards or "background" levels in Puget Sound.

### *Will DRCC/TAG's recommended cleanup cost more than EPA's plan?*

In the **short term, yes**, but in the **long term, probably not**. The range of cleanup options EPA studied cost from \$210 to \$810 million. The plan EPA's selected is estimated to cost \$305M, at the low end of the cost range. However, two potentially significant costs are not included in EPA's cost estimates. (1) Maintaining and monitoring areas with buried contamination will be required for many decades, and possibly forever, but EPA only accounts for the anticipated costs for a limited number of years. The same is true for the costs of "institutional controls" to prevent people from eating resident fish from the river. (2) EPA acknowledges that it is very uncertain whether much of its cleanup plan will be effective. Monitored natural recovery is the largest part of EPA's plan, but is also the least certain method to work. EPA says if its plan does not meet the goal of protecting the environment and human health, additional cleanup actions may be necessary. These potential additional costs have not been included in EPA's cost estimate, because they are not yet known. DRCC/TAG's recommendations are designed to minimize this uncertainty and ensure that the cleanup is final. DRCC/TAG's recommended plan is estimated to cost ~\$500M, in the middle of the cost range, but will likely also include savings that reduce that cost, such as less maintenance and monitoring, and less intrusive institutional controls.

### *Will DRCC/TAG's recommended cleanup take longer?*

**No.** DRCC/TAG's recommendations will meet cleanup goals faster – in an estimated 13 years, as compared to 17 years predicted for EPA's plan. This means that we can protect the environment and people's health faster. In addition, more removal of moderately and highly contaminated sediment will provide greater long-term protection. We also have the choice to complete cleanup even more quickly. The current time estimates assume that only two dredges will be actively cleaning up the river at any one time, but cleanup can be completed more quickly if we employ more dredges to increase the pace of removal.

### *Will doing more active cleanup cause unmanageable impacts on the river's communities?*

**No.** Any construction project will have impacts that need to be managed to avoid disruption, but these impacts can be minimized and mitigated to ensure that the affected communities are not overly burdened by the cleanup. The University of Washington School of Public Health, Just Health Action, and DRCC/TAG have completed a Health Impact Assessment (HIA) of the proposed cleanup plan, which includes recommendations to ensure that impacts to the community are minimized and benefits – such as jobs created by the cleanup – are maximized. The HIA can be found on the UW School of Public Health web site at: [deohs.washington.edu/hia-duwamish](http://deohs.washington.edu/hia-duwamish).

For more information on DRCC/TAG's recommended cleanup plan, please visit our web site or contact us at:

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