

Small Party Issues in Large Sediment Site Allocation: A Technical Framework for Decision-Making

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Background/Objectives. Large contaminated sediment sites often involve multiple parties with remediation funded through an allocation process. These parties often include entities that are likely to have a minimal role in contributing to the contamination, with their potential impacts not evident in the sediment data. For such parties, even a small allocated percentage of what are typically large remediation costs can be significant and the cost to defend such claims large. A technical framework is proposed to address these particular risks and support small parties' decision-making regarding their options in allocation for these large sediment sites.

Approach/Activities. Quantifying small party contributions requires identification of the remedial cost drivers, the major contaminant sources for the overall site, and the specific contaminant release scenarios for the small parties and largest contributors to contamination. It also needs an understanding the mass transport of remedy-driving contaminants: do contaminants move in the waterway or remain on parties' doorstep? These processes need to be evaluated through assessing the physical flow of the waterway, understanding the site history, and tested using forensic analysis of the site data. With uncertainties in the data and history, sensitivity analyses allow assessment of what unknowns create the greatest uncertainty in the allocation and whether that uncertainty is relevant. The results of this work is integrated into the cost allocation process by generating an estimated property-specific contaminant mass contribution, and its relationship to remedy cost components and their estimated costs. A summary case history is provided to illustrate the application of the framework and outcomes.

Results/Lessons Learned. Identification of parties' relative contributions lead to important determinations regarding the overall liability at large sediment sites. Individual parties' costs are driven both by the overall remedial costs ("the total pie") and the share of the costs attributable to an individual party ("the size of the slice"). Where contributions and releases are smaller, the total liability is can be driven by the nature of the allocation process and the transaction costs rather than the actual allocated costs. Application of the framework in the allocation process shows promise in effectively addressing the risks inherent to predicted small contributors at large multi-party sediment sites.