

NATIONAL RESEARCH COUNCIL ASSESSMENT OF SEDIMENT DREDGING AT SUPERFUND SITES

In 2007, the National Research Council (NRC) published a document titled *Sediment Dredging at Superfund Megasites; Assessing the Effectiveness*. In this study, the NRC was commissioned by a group of federal agencies to serve as an objective voice in evaluating the effectiveness of dredging as a remedial option at contaminated sediment sites. The committee was charged to develop recommendations that would facilitate scientifically based and timely decision-making for sites in the future. The committee examined experience at 26 dredging projects and evaluated whether, after dredging, cleanup goals were met. It was found that dredging has encountered systematic difficulties in achieving specified cleanup goals. The inability to achieve desired cleanup levels was associated primarily with “residual” contamination that typically results from dredging operations or from leaving contaminated sediment exposed after dredging. Site assessments also revealed that contaminants can be released into the water during dredging and can have short-term adverse effects on the aquatic biota. Residual contamination and contamination release are inevitable during dredging and should be explicitly considered in estimating risk reduction.

The report thus concluded: “The committee envisions that some combination of dredging, capping (or covering), and natural recovery will be involved at all megasites. In situ treatments may also be required at many sites. Thus, all remedial approaches should be considered in the site evaluation, and the interaction among the various approaches should be well understood. Dredging for mass removal itself may be attractive from the viewpoint of the public, but it alone does not necessarily produce risk reduction. A better appreciation of the existing risks before dredging and what is required to achieve desired risk reduction, both in the short term and in the long term, is needed.”

References

Sediment Dredging at Superfund Megasites; Assessing the Effectiveness, National Academies Press, Washington, DC, 2007. <http://www.epa.gov/superfund/health/conmedia/sediment/pdfs/dredging.pdf>