Remedy Optimization and Adaptive Management

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Risk management principles and methods are increasingly being used to support decision-making within contaminated sediment projects. Decisions made by project managers must balance the risks posed by action/inaction against the benefits resulting from their action/inaction. In seeking to manage risks associated with their projects, project managers must be able to justify, using quantitative information, the selection of specific risk management actions in terms of risk reduction benefits. Related objectives include reducing controversy, conflict, and project delays while simultaneously increasing the credibility of the decision-making process. Effective management of risk requires methods for distinguishing and integrating technical (science, engineering, economics) and social information relevant to a decision in a structured, transparent, and quantitative manner. Risk-informed decision making can be supported through the use of formal optimization methods and decision analysis techniques which provide the means for quantitatively distinguishing alternative remedial strategies in terms of overall benefit. Examples of these methods will be used to illustrate the benefits of quantitative approaches to support decision making.