

# Increasing Environmental Department Profitability: Risk (Newsletter)\*

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Risk is arguably the most mis-understood concept. This mis-understanding is reflected in environmental risk being monetized with surety bonds and in naive and harmful concepts such as the Precautionary Principle and one-size-fits-all chemical maximum concentration limits. Environmental departments often hold much of their company's risk costs as long-term liabilities which reduce available cash for operations and expansion. There is much that environmental departments can do to reduce environmental risk and the associated costs.

Risk has two components: the likelihood of occurrence and the cost if the risk occurs. Risk also has three aspects applied to each component: identification, analysis, and management.

Environmental statutes and regulations focus on the second risk component: the estimated cost of damage should the risk occur. This focus is seen in constraints, limits, and monitoring requirements in permits, in the amount of reclamation bonds, and in the difficulties in having bonds released. While we cannot quickly change environmental statutes and regulations there is much that can be done to reduce permit constraints, bond amounts, and time until the bonds are released.

Environmental risk identification is broadly assumed by regulators and the public and should be specifically and carefully described and quantified by environmental departments. For example, degradation of surface waters should be identified basin-by-basin, even by individual stream reaches, relative to specific designated beneficial uses. Regulations often list several designated beneficial uses for large areas of a drainage basin while a stream draining a project location might have only one, or none, of those uses present. Permit applications, for NEPA documents, water discharge permits, or site closure should include detailed identification of potential risks that are specific to each operational area or drainage basin.

When specific risks have been identified they are analyzed for the likelihood of occurrence and the effects on specific designated beneficial uses should the risk occur. This is a vital step for two reasons: to suggest developmental or

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operational changes that reduce the likelihood of occurrence and to understand in detail the undesired impacts should it occur. Do not assume that regulators will do as thorough an analysis of risk as you do; they do not have the vested interests that you have. Detailed environmental risk analysis is based on comprehensive understanding of the geography, chemistry, biology, and ecology of the local ecosystems. Extensive and well documented analyses of the likelihood of occurrence, the impacts that would occur, and their mitigation costs should be included in all permit applications. When describing these analyses it is imperative that the communication be clearly understood by non-technical readers in order to be effective. These analyses can substantially reduce permit conditions and compliance monitoring costs.

The third risk aspect, management, can be the most difficult to get right because it is a continuing process, unlike initial identification and analysis. Environmental risk management is a comprehensive process and has the potential to significantly reduce environmental and financial liabilities. Bond and other cost reductions lessen environmental department expenses and increase its contributions to corporate profits.

Risk management must be tied to the specifics of the first two stages with the dual goals of reducing likelihood of occurrence and the extent of deleterious impacts. Avoidance of occurrence is better and cheaper than cleaning up or making amends; it requires commitment and cooperation of everyone, not just environmental department staff. However, trained environmental staff who anticipate and avoid occurrences find themselves moving away from crisis management, reducing stress levels, and gaining more professional satisfaction.

Understanding risk components and effectively identifying, analyzing, and managing them benefits everyone. There is almost always room for improvements and the gains exceed the costs.

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