

## LITIGATION STRATEGY : Back in Vogue

### INTRODUCTION

*For years, strategic thinking was pushed as a way to maximize revenues and minimize losses. Then the trend of downsizing and minimizing legal expenditures put investment in strategic thinking on hold, and a minimal “shoot from the hip” attitude toward litigation became more common.*

*Strategic thinking is now making a comeback because investment in understanding the big-picture has proven valuable to the bottom line. This newsletter provides case studies to show where early development of strategies determined the value of various environmental litigation matters.*

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Uncertainties in environmental litigation can be complex and daunting. They can obscure the nature, extent, and cost of a cleanup remedy or business and property damages; the allocation of liability among multiple parties; and the scope of insurance coverage. Important decisions concerning litigation strategy and settlement must be made in the face of uncertainty. Because the best decisions are the most informed ones, litigation choices can benefit from the use of strategic tools to identify and quantify the major uncertainties in a case.

People often confront uncertainty with rough techniques such as using a mid-point between a “high” and “low” estimate, focusing on the “most likely” outcome to the exclusion of other important possibilities, or by simply relying on instincts. In contrast, strategic management of litigation requires a logical structure to address uncertainty. Decision analysis is an effective management tool developed for this purpose, emphasizing a complete risk profile of possible outcomes and their expected value when weighted by relative likelihood.

The benefits of decision analysis are illustrated below in four examples:

- A** In a case involving potential liability at a Superfund site, decision analysis was used to translate diverse uncertainties with respect to cleanup costs, legal issues, and allocation of liability into a profile of expected exposure.
- B** In a case involving multiple parties and contamination of a water supply, decision analysis was used to develop and assess alternative settlement and litigation strategies.
- C** In a large class-action suit where liability and damages were highly uncertain, decision analysis was used to evaluate whether to settle or continue litigation.
- D** While managing a portfolio of cases, decision analysis was used to assess the risks associated with litigating one select case to obtain favorable precedent or settling each case individually to avoid unfavorable precedent.

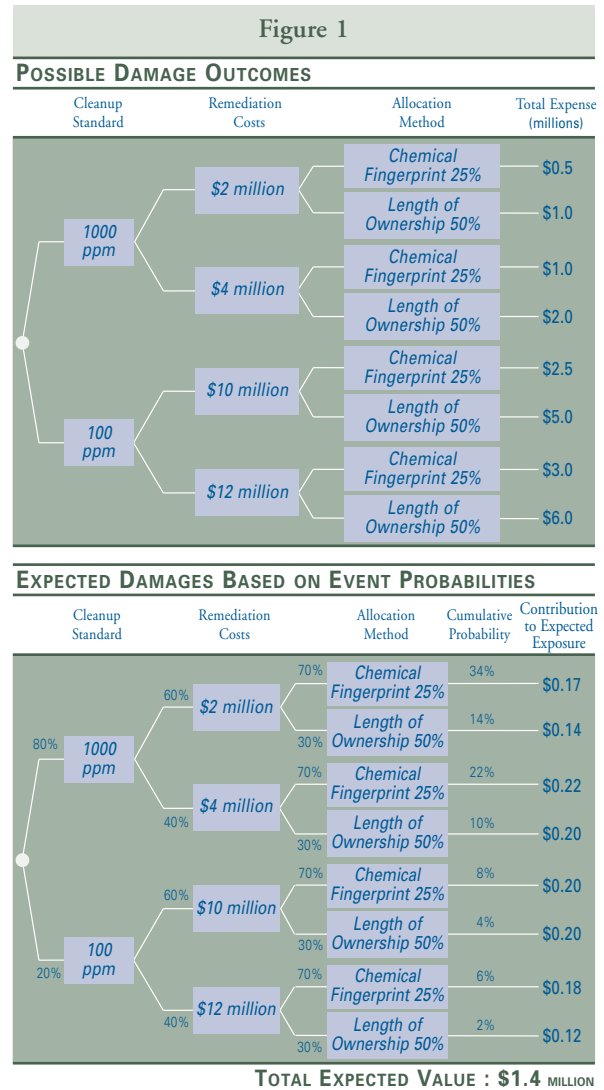
**A** EVALUATING STRATEGIES FOR A COMPLEX CLEANUP LIABILITY CASE

Decision analysis proved valuable in a complex environmental case involving damages to business and property. The plaintiff was the owner and operator of a petroleum product storage business. When local officials discovered contamination and ordered cleanup, the plaintiff sued the prior owner of the business for contribution. Multiple claims included CERCLA, a claim under state cleanup statutes, and common law claims that the contamination of the plaintiff's property constituted trespass and nuisance. The damage claims were also complex; they included claims for cleanup costs, litigation costs, damage to the business, a depressed value for the property, and punitive damages. The issues were complicated by disputed evidence over the relative amounts of contamination contributed by each party.

In light of these uncertainties it was extremely difficult to evaluate the proper settlement value of the case. The gap between the plaintiff's total claims and the zero damages alleged by the defendant was several million dollars. Counsel for the defendant believed that the plaintiff's total damage claim was unrealistic, yet some risk of an unspecified damage award was undeniable. Was a proper settlement half-way between the negotiating positions of the parties? Or was it significantly more or less than that?

A diagram of the relationship among various uncertainties in the case proved extremely useful in simplifying and structuring the case. The diagram took the form of an "event or decision tree" which identified possible outcomes to uncertain events as connecting branches. Recovery of cleanup costs, for example, was subject to uncertainties concerning the required cleanup standards, the costs under each standard, and the allocation of liability among the parties. Figure 1 diagrams all three categories together in a simplified event tree.

Development of the event tree in Figure 1 considers and combines uncertainty on three separate issues to identify a total of eight possible damage outcomes, ranging from \$0.5 to \$6 million. The next step is to develop a risk profile for the case by assigning probabilities to each of these outcomes. The bottom half of Figure 1 repeats the event tree with the percentage likelihoods assigned to the possible outcomes. The cumulative likelihood for each of the eight possible cost outcomes is the product of the percentage probabilities



of the path preceding it on the tree. The *expected value* of the case is the sum of each possible outcome weighted by its likelihood of occurring, or \$1.4 million.

Figure 2 plots each of the outcomes depicted in Figure 1 against its total probability of occurrence to summarize in one graph the potential exposure at the site. Some points become evident. First, the expected exposure of \$1.4 million is far closer to the minimum possible outcome of \$500,000 than to the maximum of \$6 million, indicating the danger of simply focusing on the "average" between the high and low cost estimates. Second, the analysis also shows the danger of focusing on the single most likely outcome. Although an outcome of one million dollars is more likely than the others, it is a misleading focal point for the case because its total likelihood is less than 50% and it ignores the possibility of significantly higher outcomes.

**Figure 2 Probability Distribution of Damage Outcomes**

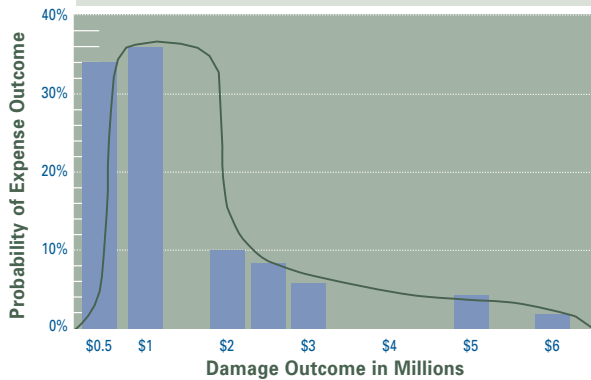
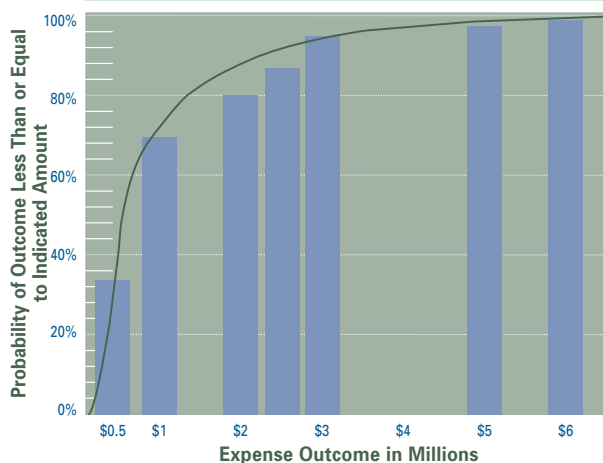


Figure 3 includes the data in Figure 2 and presents the cumulative likelihood of outcomes below specified levels. It shows, for example, that the likelihood of an outcome at or below \$2 million is approximately 80%. Plotting cumulative probabilities provides a simple way of evaluating and communicating risk.

**Figure 3 Cumulative Distribution of Damage Outcomes**



In the case that inspired this example, the decision analysis incorporated expertise and knowledge from a variety of sources to handle the complex problem of exposure to damages. Experts who had negotiated with state regulators contributed their knowledge to estimate the relative likelihood of different cleanup standards. Engineering expertise was used to develop the range of potential cleanup cost estimates and their likelihood. A combination of scientific, economic, and legal expertise contributed to the

assessment of possible allocation outcomes and their likelihoods. When complete, the analysis accounted for far more possibilities than considered in Figures 1 and 2. Litigation costs, the prospect of prevailing on various claims, the expected damage award for the business and property, and even the possibility of punitive damages were included in an estimate of the optimal settlement value. The analysis provided a comprehensive, logical structure for integrating the inputs from different disciplines to yield an entire risk profile for the case.

The analysis contributed several valuable insights. First, it provided a useful framework for evaluating the full extent of the plaintiff's claims and for negotiating settlement. The analysis identified and quantified the specific uncertainties that rendered the full damage claims unlikely and established an internal target for settlement negotiations.

Second, the analysis also revealed that the case was actually simpler and less threatening than it initially appeared. The availability of multiple legal claims had initially appeared to provide a significant advantage for the plaintiff. However, once the various liability claims, damage claims, and underlying uncertainties were analyzed through event trees, areas of significant overlap and correlation became apparent. Several claims were shown to have less impact than suspected because they only affected specific subsets of the damages. Serious double-counting among damage items by the plaintiff was also uncovered. Correlation among multiple claims was also identified, reducing their individual significance.

Finally, the analysis allowed litigators to identify and focus on the issues of greatest importance. The defendant, for example, felt strongly that certain actions taken by the plaintiff prior to commencement of cleanup were unreasonable. The litigators as a consequence had focused on presenting arguments about those actions. However, the analysis revealed that this issue had minor financial impact on the case. The litigators therefore refocused their efforts on what was found to be the most important issue: limiting remediation costs by controlling the cleanup technique and fighting for application of the appropriate standards. As a result, the defendant ultimately repurchased the property, thereby assuming complete control over the cleanup in exchange for a vastly reduced settlement amount.

## B ASSESSING STRATEGIES INVOLVING NATURAL RESOURCE DAMAGE CLAIMS

In a case involving contamination of groundwater by a hazardous waste site, decision analysis was applied to evaluate a responsible party's litigation and settlement options. The company faced several law suits involving CERCLA, nuisance, and natural resource damage claims. Because the impacted groundwater was used as a water supply, the company needed to evaluate the relative merits of supplying alternative water to affected and non-affected areas and of purchasing the surrounding properties. Furthermore, remediation costs depended on two highly uncertain variables: the extent and timing of groundwater treatment. Other potential costs involved litigation costs, punitive damages, and natural resource damage awards.

The event tree in this case was extremely complex and contained thousands of branches. As the event tree was developed, four major litigation and settlement strategies became apparent:

1. Litigate all issues.
2. Buy surrounding properties and litigate all issues.
3. Supply alternative water to affected areas only, and litigate all remaining issues.
4. Supply water to both affected and unaffected properties, and settle all claims.

Each of these strategies involved a known minimum cost outcome for litigation and remediation, as shown in Table 1. From these figures, it would appear that the first strategy had the lowest certain costs and was therefore optimal. However, when the full event tree was completed and probabilities were assigned to consider uncertainties, the expected costs of the various strategies collapsed into a relatively narrow range between \$16 and \$18 million. But the *risks* associated with the various strategies were very different. Table 1 shows how the settlement strategy offered a high likelihood (80%) of total costs under \$16 million and virtually zero probability of exceeding \$32 million. The other strategies, however, were more likely to exceed \$16 million, and posed significant risk of exceeding \$32 million. The higher initial costs of the "Settle" strategy were therefore offset by lower litigation and treatment costs and a significantly lower risk (probability) of the extreme litigation, treatment, and damage cost outcomes occurring.

**Table 1 - Costs and Risk of Litigation and Settlement Strategies**

	Known Minimum Cost (\$M)	Expected Cost (\$M)	Likelihood Cost <\$16M	Likelihood Cost >\$32M	Maximum Cost (\$M)
1. Litigate	\$1.50	\$18.5	25%	20%	\$50.7M
2. Buy Properties/ Litigate	\$4.30	\$17.6	40%	15%	\$41.2M
3. Supply Water to Affected Areas/ Litigate	\$7.70	\$17.2	45%	10%	\$38.3M
4. Supply Water to Expanded Area/ Settle	\$9.95	\$16.8	80%	0%	\$27.0M

## C EVALUATING SETTLEMENT OF A CLASS ACTION INVOLVING PERSONAL INJURY AND PROPERTY DAMAGES

In a complex class action involving a groundwater plume, the consensus of the litigators was that the client had "a very good case." The client was accused of creating a plume of contaminated groundwater, but no credible evidence of any damage had yet been advanced by the plaintiffs. Nevertheless, evaluating the case was extremely difficult. The case was best characterized as a lottery ticket (*i.e.*, an "all or nothing outcome"): the client was confident that plaintiffs had little chance of prevailing. On the other hand, if the plaintiffs' claims were realized, then the damage award would be enormous. The situation was ripe for decision analysis both because of the complex uncertainties and because traditional methods of valuation were clearly inadequate. The low chance of a plaintiff victory meant that consideration or selection of a mid-point value between zero damages and the plaintiffs' claims would clearly overstate the settlement value. The "most likely" outcome was zero damages but some prospect of an enormous award could not be ignored in calculating the settlement value. A probabilistic analysis was therefore warranted as the complexity of the case required that uncertainties be logically analyzed.

The groundwork for the analysis involved an extensive meeting with the company's general counsel, outside legal counsel, and experts to develop and quantify the issues involved and their impact on the case. The case's claims, arguments, and potential findings were explored. Counsel contributed its expertise by developing consensus probabilities for winning or losing each argument.

The process identified two important issues. First, the event trees required thorough analysis of the plaintiffs' damage theories. The process revealed a major flaw in the plaintiffs' theory which, even if certain factual allegations were sustained, would nevertheless result in significantly reduced damages. On the other hand, what had previously been perceived as a "minor" claim was found to significantly impact the value of the litigation. As a result, counsel adjusted its litigation strategy to focus upon this claim. The completed analysis identified the most important issues from the perspective of the client's exposure, summarized their impact on the case, and recommended specific future steps. Most importantly, it translated the client's inputs and assessments into a target settlement value given current knowledge of the case. Informed of the risks, the client chose to reject the plaintiffs' settlement demands and bear the risk of continuing to trial. Shortly thereafter, counsel obtained a dismissal of the case on pre-trial motions.

#### **D** ANALYZING STRATEGIES FOR MANAGING A PORTFOLIO OF CASES

Risk is a significant factor to consider in managing a portfolio of cases. Differing strategies can change both the risk of a litigation portfolio and its expected value. Decision analysis explores the risk characteristics of different strategies and helps inform the choice among them. For example, litigators faced with a portfolio of similar cases have the typical dilemma of whether to focus the litigation effort on one select case in order to obtain favorable precedent for the remaining cases, or to approach and settle each case individually in order to *avoid* unfavorable precedent. In environmental litigation, this choice can arise if a party faces litigation at several sites or from numerous parties alleging bodily injury/property damage involving similar legal issues with respect to causation, contractual indemnification, liability, or insurance coverage.

At first glance the advantages of focusing on one case from the portfolio seem obvious. The litigator can often maximize litigation value by selecting an optimal forum, selecting a case from the portfolio where the issues are particularly clear, or focusing top

resources on the exploration of one case with unusual depth. Approaching all cases separately, by contrast, risks dispersion of legal resources and litigating in unfamiliar or disadvantageous fora. Furthermore, other strategic considerations appear to favor focusing on a select case from the portfolio. Flexing legal muscle on one case can serve to intimidate adverse parties on other cases in the portfolio. By contrast, once a strategy of widespread settlement becomes apparent, adverse parties may become inflexible in the hope they can hold out for high offers.

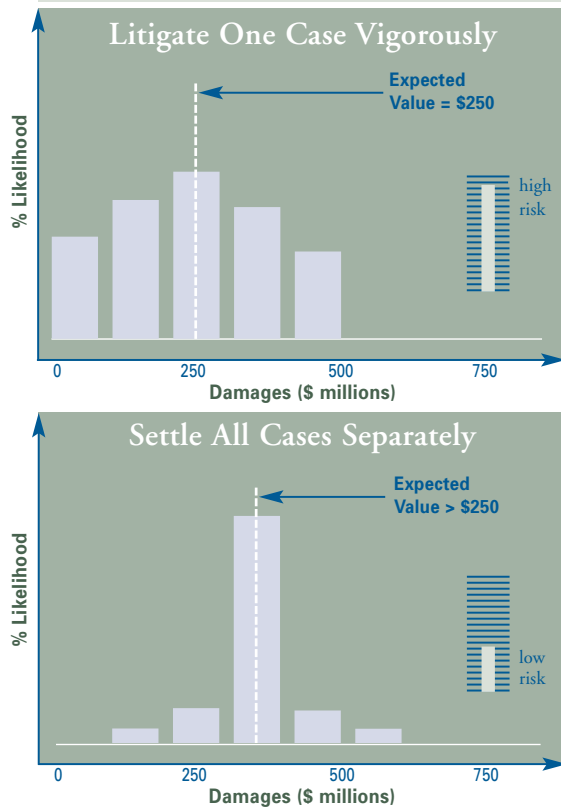
Decision analysis, however, can be used to identify and evaluate an important aspect that is rarely considered explicitly in the trade-off among strategies. The settlement strategy can reduce risk by preserving the diversification value of multiple cases. Diversification means that good and bad outcomes in multiple cases will tend to offset each other if resolved independently.

The diversification value of a portfolio is reduced by the strategy of focusing on one case for its precedential value. Diversification value is lost because the strategy threatens the independence of cases. The goal of the strategy is precisely to make *all* cases dependent on the outcome of the preferred case.

The trade-off between the two strategies therefore appears to involve obtaining a more favorable expected value by focusing on one case while assuming more risk in exchange. Choosing can be extremely difficult, especially as the relative merits of each strategy will depend on the client's attitude towards risk, the number of cases in the portfolio, the probability of winning each case, the perceived advantage in choice of forum, and other variables. If the probability of winning is overwhelming, then at the margin the value of diversification will be considerably less than when the odds of winning are even.

Decision analysis can be used to identify and measure the trade-offs between strategies. Figure 4 shows how each strategy yields a distinct distribution of possible litigation outcomes. The advantages of focusing on one case, for example, are measured by its more favorable expected value relative to the settlement option. However, the settlement option provides diversification value, as shown by the rather narrow distribution of potential outcomes. An outcome in the middle of the distribution is extremely likely and the probability of straying from that area is minimal. By contrast, litigating one case to generate a precedent will reveal a significantly broader range of potential outcomes with similar likelihood.

Figure 4 - Distribution of Potential Outcomes for a Portfolio of Cases Under Different Litigation Strategies



Decision analysis can therefore be a useful tool for portfolio management. Risk differences between alternative choices are often not apparent. Decision analysis forces the logical exploration of trade-offs among strategies and can illustrate their impact by measuring expected values and risk. Although the examples we depict are simplified for illustration, decision analysis is sufficiently flexible to incorporate the myriad of strategic considerations and the complexities of real-world situations. In fact, the incorporation of diverse factors that affect a problem is precisely its goal.

## CONCLUSION

Decision analysis is a useful tool for strategically managing complex environmental litigation. It helps determine the optimal settlement value of a case. Its flexibility allows the litigation team to integrate issues and expertise from a variety of disciplines that are pertinent to the litigation, such as engineering estimates, legal opinions, and economic analysis of costs and damages. The logical discipline of decision analysis often reveals new issues of significance or guides the litigation team to refocus on areas with maximum promise. Sometimes it facilitates settlement by identifying advantageous settlement options; at other times it justifies proceeding to trial. Finally, by explicitly addressing risk, decision analysis helps inform strategic choices in managing a litigation portfolio.

## RELATED *BRATTLE* ARTICLES

*The Brattle Group* has published several articles on litigation risk assessment associated with environmental, toxic tort, product liability, and insurance claims, including:

*Evaluating Environmental Costs: Accounting for Uncertainties*

*Using Decision Analysis to Manage Environmental Costs*

*Valuation of Contaminated Property - Considering the Uncertainties in Brownfields Development*

*Damages Valuation and Settlement Analysis for Mass Toxic Tort and Product Liability Claims*

*Breaking the Impasse: Structured Analysis to Mediate Insurance Disputes*

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