

A Business Solution Framework for Maximizing Eco-asset Values

New opportunities are arising for land holdings as federal, state, and local agencies turn towards market incentives to protect and manage environmental resources. These opportunities include: bank and trade systems; tax incentives; wetland and conservation banking; NRD credits; creative property easements; greenhouse gas and carbon sequestration; sustainable development; and conservation planning. In addition, the land can be retained or sold for agriculture, real-estate development, or alternative energy development.

A well-designed strategy for evaluating these potential values can increase revenue, reduce remediation costs and future liabilities, improve the corporate balance sheet, enhance the company's reputation with key stakeholders, and advance sustainability objectives.

Developing a sound management strategy to take advantage of these opportunities has significant challenges:

- Corporate objectives are often not clearly defined or articulated;
- Internal and/or external stakeholders have competing agendas and priorities;
- Complex, inter-related decisions need to be made;
- Trade-offs are difficult to quantify;
- Significant uncertainty exists about outcomes.

Our environmentally-focused business solutions framework helps clients evaluate property management options using the tangible and intangible criteria that are important to them. The approach uses multi-criteria decision analysis (MCDA), which identifies the value and costs of alternative management plans using a systematic, transparent process that reflects your goals and objectives. The MCDA framework provides a straightforward approach that helps companies maximize the value of their environmental assets.

The goals and culture of each company are unique; therefore, we customize our process to meet your needs. For illustrative purposes, we outline some of the key features of the approaches other clients have used. The approach can be used for a single site or a portfolio of sites.

Decision Framing—Creating a Shared Understanding of Program Objectives

We begin with a framing session that brings together all the key corporate team members including executives, engineers, scientists, lawyers, real-estate professionals, and regulatory staff. The framing meeting develops a shared understanding of the program objectives, uncertainties, key decisions, and corporate policies (Figure 1).



Figure 1

We also use a series of exercises to develop a model that will guide the evaluation of properties and strategies. These exercises allow companies to:

- Clarify program goals and objectives
- Estimate weight for each criterion (Figure 2)
- Establish consensus about process for evaluating eco-assets.

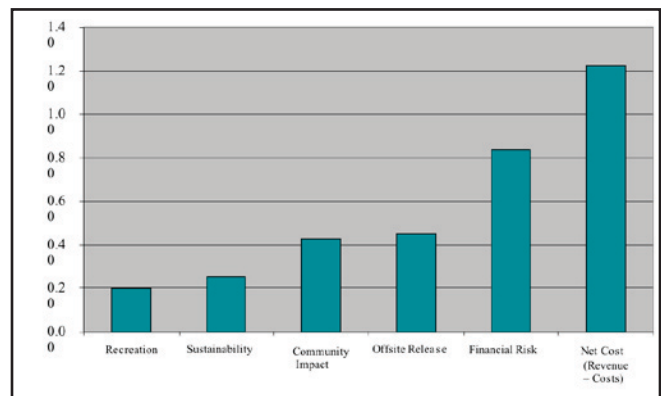


Figure 2

At the framing session, the project team also develops a preliminary suite of strategies tailored to site-specific needs, opportunities and corporate vision. (Figure 3). Additional data collection efforts may be designed as well to better evaluate whether some sites provide significant eco-asset opportunities

Alternative	East End Sale Decision	East End of Property	West End Sale Decision	West End – Clean-up Levels	West End of Property-Riparian Restoration
A	Donate for Park	Sell Wetland Credits	Retain	Risk-based	None
B	Retain	No Action	Before Remediation	Industrial	Some
C	Retain	Seek Wetland Credits	After Remediation	Residential	Significant

Figure 3: Example of a Strategy Table

The MCDA Model Results

The analysis goes beyond typical assessment of remediation costs and re-development potential. ENTRIX provides the expertise to estimate value that can be realized by using, or investing in, the ecosystem services provided by the properties. Properties with carbon sequestration potential, wetlands enhancement value, stream restoration, or conservation potential may actually be assets rather than liabilities. The value of these assets is established by developing individual projects for specific ecosystem services that create mitigation credits. The projects may also provide value by reducing tax liability and supporting the requirements of Financial Accounting Standards asset retirement obligations.

The MCDA identifies the strategy that maximizes the value for each site. Figure 4 shows the financial risk profile (cumulative probability of realizing each cost) of alternative strategies. However, cost is only one component of the decision. Figure 5 shows the multi-criteria score for each strategy. The MCDA includes all the criteria beyond cost that are important to the corporation.

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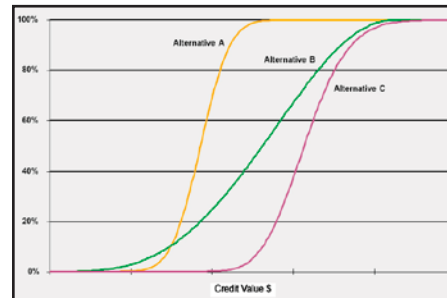


Figure 4 –Financial Risk Profiles

Alternative A has the lowest net cost and risk. The curve is the furthest to the left and is the most vertical, which means more certainty.

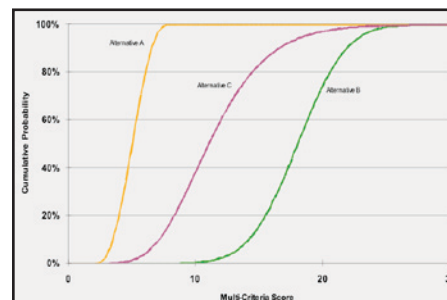


Figure 5 –Multi-criteria Scores

In this example, Alternative B is now the preferred alternative, because it has the highest score.

Further, the MCDA provides information about the key cost and value drivers. The tornado diagram (Figure 6) shows strategy features that have the largest impact on the potential financial costs.

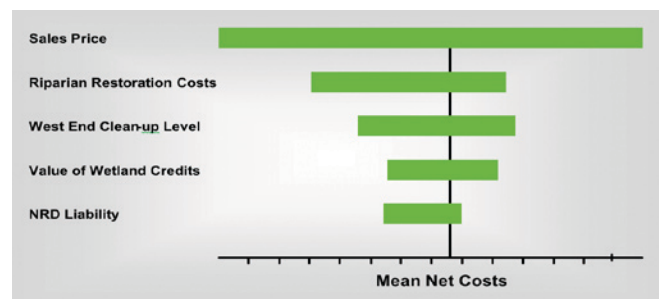


Figure 6 –Tornado Diagram

The MCDA provides the following benefits:

- Organizes client intuition and integrates their views into the analysis;
- Reveals trade-offs, cost drivers, and value opportunities
- Provides a systematic, transparent, decision making process
- Helps identify the strategy that best meets client's goals
- Provides bottom-line cost savings

As a result of the MCDA, managers and decision makers have been able to cost-effectively identify and measure the value of eco-assets, and maximize the value of their holdings based on criteria that are important to them.